

**INFORMATION Redacted PURSUANT TO THE FREEDOM OF  
INFORMATION ACT (FOIA), 5 U.S.C. 552(B)(6)**

PE12-019

FORD

9-4-2012

APPENDIX B

F PG 8

G PG 22

H PG 60

J PG 155

K PG 160

L PG 162

M PG 301

N PAG 304

P PG 306

Q PG 312

PE12-019

FORD

9-4-2012

APPENDIX B

Search Criteria

**2001 through 2004 Ford Escape  
Failure of the Throttle to Return to Idle When the Accelerator Pedal is Released based on  
Speed Control or Accelerator Cable**

**OWNER REPORTS**

As the agency is aware, within FCSD's North American Customer Service Operations, there is a Customer Relationship Center (CRC) that is responsible for facilitating communication between customers, dealerships and Ford Motor Company. Among other things, the CRC handles telephonic, electronic, and written inquiries, suggestions, informational requests, and concerns ("contacts") from Ford and Lincoln-Mercury vehicle owners about their vehicles or sales and service experience. The contacts are handled by CRC customer service representatives who enter a summary of the customer contact into a database known as CuDL (Customer Data Link). Certain contacts, such as letters from customers, are entered into the CuDL database. Those that were entered into the earlier MORS II system were also microfilmed. More recently, the records in MORS III/CuDL are imaged and stored electronically.

The CRC assigns to each vehicle-related contact report a "symptom code" or category that generally characterizes the nature of the customer contact or vehicle concern, as described by the owner. The CRC does not undertake to confirm the accuracy of the description provided by the owner; they simply record what is reported. Therefore, given the complexity of the modern motor vehicle, it is Ford's experience that a significant percentage of owner contacts do not contain sufficient information to make a technical assessment of the condition of the vehicle or the cause of the event reported. Accordingly, although MORS contact reports may be useful in identifying potential problems and trends, the records are not the empirical equivalent of confirmed incidents and/or dealership's diagnosis. In the interest of responding promptly to this inquiry, Ford has not undertaken to gather the electronic images related to these contacts because of the largely duplicative nature of the information contained in the images, as well as the time and the burden associated with locating and producing those documents. The pertinent information related to those contacts generally would be included in the contact reports obtained from the CuDL system. To the extent that those documents exist, they are characterized in the comments of MORS III contact reports. Upon request, Ford will attempt to locate any specific items that are of interest to the agency.

In responding to this information request, Ford electronically searched CuDL using the following criteria:

Model Year: 2001 through 2004

Subject Vehicle: Ford Escape manufactured for sale or lease in the United States, District of Columbia, Puerto Rico, Northern Mariana Islands, Guam, American Samoa and the Virgin Islands.

Date Parameters: January 1, 2000 through July 17, 2012 (the date of this inquiry)

Types of Contacts: All, including suspended data, canceled contacts and inquiries

MORS III Symptom Code(s):

Symptom Category	Symptom Code	Symptom Description
Driveability	612XXX	Surge, All
Driveability	617XXX	Slow return to idle, All
Driveability	619XXX	Fast idle, All
Driveability	620XXX	Engine speed-up/flare, All
Driveability	624XXX	Accelerator pedal, All
Electrical	2050XX	Horn/speed control, Other, All
Electrical	2052XX	Horn/speed control, Speed Control, All
Engine	4999XX	General engine concern, Other, All

MORS III Reason Code(s):

Reason Code	Description
07	Legal Contacts

**LEGAL CONTACTS**

Beginning in early 2008, most consumer complaints and all legal claim processing has been centralized in OGC within the Consumer Litigation team. A transition has occurred such that all legal contacts (including those formerly handled by "Litigation Prevention") are coordinated through this team.

Prior to the transition, there was a Consumer Affairs Department within FCSD that managed customer concerns, which could not be resolved by the Customer Relationship Center (CRC). Among other things, the Consumer Affairs Department had a section, known as "Litigation Prevention," that handled a variety of informal (i.e., non-litigation) claims, such as property damage claims or attorney demand claims.

The Litigation Prevention section had been centralized in the Consumer Affairs Department since 1995, in Dearborn, Michigan. Prior to that time, Litigation Prevention personnel operated on a regional basis. For matters that the Litigation Prevention section handled, there were typically paper files that reflected the handling, investigation and resolution of property damage claims.

The claims, known as "Legal Contacts" are entered into the CuDL database that the CRC uses to enter other customer communications. When a customer contact is designated as a Legal Contact, it is so indicated near the top of the contact report.

**FIELD REPORTS**

Within FCSD, there is a Vehicle Service & Programs Office that has overall responsibility for vehicle service and technical support activities, including the administration of field actions. That Office is the primary source within Ford of vehicle concern information originating from Ford and Lincoln-Mercury dealerships, field personnel, and other sources. The information is maintained in a database known as the Common Quality Indicator System (CQIS). The CQIS database includes reports compiled from more than 40 Company sources (e.g., Company-owned vehicle surveys, service technicians, field service and quality engineers, and technical hot line reports, etc.) providing what is intended to be a comprehensive concern identification resource. As with MORS contact reports, CQIS reports are assigned a "symptom code" or category that generally reflects the nature of the concern.



In responding to this information request, Ford electronically searched CQIS using the following criteria:

In July 2011, FCSD launched a new coding system for the CQIS database. All reports maintained in the CQIS database prior to the coding change have been re-coded using the new CQIS coding system.

Model Year: 2001 through 2004

Subject Vehicle: Ford Escape manufactured for sale or lease in the United States, District of Columbia, Puerto Rico, Northern Mariana Islands, Guam, American Samoa and the Virgin Islands.

Base Part Number(s):  
 9A758 – Accelerator Cable Assembly  
 9A825 – Speed Control Cable Assembly  
 9E926 – Throttle Body Assembly

Date Parameters: January 1, 2000 through July 17, 2012 (the date of this inquiry)

Symptom Code(s):

Symptom Category	Symptom Code	Symptom Description
Driver Aides and Information	2220XX	Speed Control, Unknown, All
Driver Aides and Information	222200	Speed Control, Performance, Unknown
Driver Aides and Information	222224	Speed Control, Performance, Disengage
Driver Aides and Information	222232	Speed Control, Performance, Gains Speed
Driver Aides and Information	222ZXX	Speed Control, Not Listed, All
Start/Run/Move	4451XX	Pedals, Accelerator, All
Driving Performance	5515XX	Idle Quality, Fast, All
Driving Performance	558XXX	Engine Surge, All
Driving Performance	559XXX	Unintended Acceleration, All

**OASIS MESSAGES**

FCSD is responsible for communicating a variety of vehicle and service information, such as warranty information for up to the past 360 days, Extended Service Plan part coverage information, and technical repair information, to North American Ford and Lincoln-Mercury dealers. This information is communicated primarily through OASIS, which serves as an electronic link between Ford Motor Company and the dealers. OASIS covers all North American Ford and Lincoln-Mercury cars and light trucks, and medium and heavy-duty Ford trucks, for the ten most current model years. Technical diagnostic and repair information on OASIS is contained in Special Service Messages (SSMs) and Technical Service Bulletin (TSBs) titles and brief summaries. It should be noted that dealers cannot access brief summaries.

SSMs and TSB titles are coded in OASIS by model year and vehicle line, and may be coded to other specific vehicle attributes (body style, engine code, or vehicle identification number) and

one or more OASIS Service Code(s). The dealers with access to OASIS usually search for information on the database by entering a VIN and the applicable Service Codes. SSMs and TSB titles that become inactive or superseded continue to be accessible by Ford employees, but no longer are accessible by the dealers. Dealers also are able to determine the recalls applicable to a particular vehicle by searching a particular VIN in OASIS. Recall information available on OASIS cannot be searched by Service Codes.

In July 2011, FCSD launched a new coding system for OASIS. All active SSMs and TSB titles have been re-coded using the new OASIS coding system. All inactive and superseded SSMs and TSB titles are still maintained under the old coding system.

In responding to this information request, Ford searched Global OASIS using both the new and old OASIS service codes for active, inactive, and superseded TSB titles and SSMs using the following search criteria:

Model Year: 2001 through 2004

Subject Vehicle: Ford Escape manufactured for sale or lease in the United States, District of Columbia, Puerto Rico, Northern Mariana Islands, Guam, American Samoa and the Virgin Islands.

Date Parameters: January 1, 2000 through July 17, 2012 (the date of this inquiry)

OASIS Service Code(s):

Symptom Category	Symptom Code	Symptom Description
Driveability	612XXX	Surge, All
Driveability	617XXX	Slow return to idle, All
Driveability	619XXX	Fast idle, All
Driveability	620XXX	Engine speed-up/flare, All
Driveability	624XXX	Accelerator pedal, All
Electrical	2050XX	Horn/speed control, Other, All
Electrical	2052XX	Horn/speed control, Speed Control, All
Engine	4999XX	General engine concern, Other, All
Driver Aides and Information	2220XX	Speed Control, Unknown, All
Driver Aides and Information	222200	Speed Control, Performance, Unknown
Driver Aides and Information	222224	Speed Control, Performance, Disengage
Driver Aides and Information	222232	Speed Control, Performance, Gains Speed
Driver Aides and Information	222ZXX	Speed Control, Not Listed, All
Start/Run/Move	4451XX	Pedals, Accelerator, All
Driving Performance	5515XX	Idle Quality, Fast, All
Driving Performance	558XXX	Engine Surge, All
Driving Performance	559XXX	Unintended Acceleration, All

OASIS 2 and Global OASIS are not capable of performing electronic word searches, so the search results are reviewed manually to determine their applicability to the alleged defect in the subject vehicles.

The OASIS database also contains Broadcast Messages. Typically, these messages are directed to all dealerships and either are notifications of new SSMs/TSBs, or announcements with non-technical information (for example, "the Dealer Hotline will be closed today"). Broadcast Messages cannot be searched by OASIS service codes, and can be retrieved only while active (approximately 2 to 4 days). Ford has not undertaken to search for Broadcast Messages because Ford expects that any responsive information obtained with such a search generally would be non-substantive in nature or duplicative of the information obtained with the TSB title and SSM search described above.

### **INTERNAL SERVICE MESSAGES**

FCSD, as part of its technical support activities, maintains fleet and technical telephone "hotlines." During the early stages of Ford's efforts to identify and resolve potential vehicle concerns, hotline personnel may draft Internal Service Messages (ISMs) on CQIS for their internal use. The ISMs are assigned a CQIS "symptom code" or category that generally reflects the nature of the concern. An ISM can form the basis for an oral response over the technical hotline to an inquiry from an individual dealer or fleet technician. The ISMs, however, are not made available electronically to fleets and dealers. Therefore, although ISMs are not "issued" to dealers like OASIS messages, Ford is construing this request broadly to include ISMs that may be related to the alleged defect in the subject vehicles.

In responding to this information request, Ford searched CQIS for active ISMs using the following search criteria:

Model Year: 2001 through 2004

Subject Vehicle: Ford Escape manufactured for sale or lease in the United States, District of Columbia, Puerto Rico, Northern Mariana Islands, Guam, American Samoa and the Virgin Islands.

Date Parameters: January 1, 2000 through July 17, 2012 (the date of this inquiry)

CQIS Symptom Code(s):

Symptom Category	Symptom Code	Symptom Description
Driver Aides and Information	2220XX	Speed Control, Unknown, All
Driver Aides and Information	222200	Speed Control, Performance, Unknown
Driver Aides and Information	222224	Speed Control, Performance, Disengage
Driver Aides and Information	222232	Speed Control, Performance, Gains Speed
Driver Aides and Information	222ZXX	Speed Control, Not Listed, All
Start/Run/Move	4451XX	Pedals, Accelerator, All
Driving Performance	5515XX	Idle Quality, Fast, All
Driving Performance	558XXX	Engine Surge, All
Driving Performance	559XXX	Unintended Acceleration, All

The CQIS database in which the ISMs reside is not capable of performing word searches, so the search results were reviewed manually to determine their applicability to the alleged defect in the subject vehicles.

**FIELD REVIEW COMMITTEE**

Ford's Field Review Committee reviews all potential field service actions, including safety recalls and customer satisfaction programs, and recommends appropriate actions to corporate management. A Vehicle Service & Programs representative serves as Secretary to the Field Review Committee. Following approval of a field service action, the Vehicle Service & Programs Office prepares and launches the action. A representative copy of the communication to Ford's dealers, fleets, and Regional offices announcing the field service action is maintained in the Field Review Committee files.

**WARRANTY**

Ford's Analytical Warranty System (AWS) contains warranty claims and vehicle information for model years 1991 and forward for North America, and model years 1992 and forward for Europe.

Ford performed a search of AWS for potentially responsive reports using the following search criteria:

Model Year: 2001 through 2004

Subject Vehicle: Ford Escape manufactured for sale or lease in the United States, District of Columbia, Puerto Rico, Northern Mariana Islands, Guam, American Samoa and the Virgin Islands.

Base Part Number(s):  
 9A758 – Accelerator Cable Assembly  
 9A825 – Speed Control Cable Assembly  
 9E926 – Throttle Body Assembly

Customer Concern Code(s):

CCC	Description
A25, V23	Speed control engagement troubles
A26, V23	Speed control disengagement troubles
D11, V40	Engine idles too fast
D36, V52	Engine hesitates/surges when accelerating
D41, V52	Engine hesitates/surges at steady speed
D52, V44	Accelerator pedal troubles

PE12-019

FORD

9-4-2012

APPENDIX F

Extended Warranty

**Vehicle** = 2011 Ford Escape

**Engine Code** = 1(3.0L) & B (2.0L)

<b>Part Number</b>	<b>Part Description</b>	<b>Extended Coverage</b>
9A758	Accelerator Cable	PremiumCare Only
9A825	Speed Control Cable	ExtraCare and PremiumCare









		<b>New Contract Counts</b>											
		<b>2001 - 2004 Ford Escape</b>											
<b>Coverage</b>		<b>Plan Year</b>											
<b>Time</b>	<b>Mileage</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	
<b>EXTRACARE</b>	<b>3 Years</b>	48000	0	34	21	16	0	0	0	0	0	0	
		60000	0	46	39	23	1	0	0	0	0	0	
		61000	1	2	1	0	0	0	0	0	0	0	
		75000	0	74	32	18	0	0	0	0	0	0	
		76000	0	0	5	0	0	0	0	0	0	0	
		100000	0	73	47	27	3	1	0	0	0	0	
	<b>4 Years</b>	48000	0	90	97	40	6	5	0	0	0	0	
		60000	1	142	106	54	9	0	0	0	0	0	
		75000	1	168	146	75	14	1	0	0	0	0	
		100000	0	274	289	125	19	1	0	0	0	0	
	<b>5 Years</b>	36000	0	47	50	25	6	3	1	0	0	0	
		48000	0	106	86	46	9	1	0	0	0	0	
		60000	6	2104	1298	568	98	26	1	0	0	0	
		75000	10	2942	2752	1261	190	44	2	0	0	0	
		100000	2	1110	1149	495	112	10	0	0	0	0	
	<b>6 Years</b>	36000	0	76	63	23	9	6	1	0	0	0	
		48000	0	105	119	70	17	4	0	0	0	0	
		60000	3	1142	1112	542	126	64	5	0	0	0	
		75000	1	1822	2628	1553	434	146	6	0	0	0	
		100000	1	639	496	267	95	20	0	0	0	0	
	<b>7 Years</b>	36000	0	0	17	11	2	6	0	0	0	0	
48000		0	0	40	15	2	2	0	0	0	0		
60000		0	170	104	67	14	10	2	0	0	0		
75000		0	199	228	273	70	31	3	0	0	0		
100000		0	0	82	50	23	5	2	0	0	0		

		<b>New Contract Counts</b>										
		<b>2001 - 2004 Ford Escape</b>										
<b>Coverage</b>		<b>Plan Year</b>										
<b>Time</b>	<b>Mileage</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>PREMIUMCARE</b>	<b>3 Years</b>	48000	0	86	109	85	2	1	0	0	0	0
		60000	0	148	173	54	5	2	0	0	0	0
		75000	1	394	176	103	18	4	2	0	0	0
		76000	0	9	3	0	0	0	0	0	0	0
		100000	0	149	145	68	7	0	0	0	0	0
		101000	0	1	2	0	0	0	0	0	0	0
	<b>4 Years</b>	48000	0	187	300	109	23	14	1	0	0	0
		60000	1	274	358	161	23	4	0	0	0	0
		61000	0	1	0	0	0	0	0	0	0	0
		75000	0	546	565	283	66	13	2	0	0	0
		100000	2	494	600	242	50	7	0	0	0	0
		101000	0	0	1	0	0	0	0	0	0	0
	<b>5 Years</b>	36000	0	125	155	75	18	21	1	0	0	0
		48000	0	260	400	183	35	21	2	0	0	0
		60000	5	3632	3924	1663	252	84	8	0	0	0
		75000	17	6131	8637	3785	745	193	6	0	0	0
		100000	1	2012	2643	1097	242	38	0	0	0	0
		101000	0	0	5	1	0	0	0	0	0	0
<b>6 Years</b>	36000	1	345	367	192	52	65	14	0	0	0	
	48000	0	388	490	298	68	44	9	0	0	0	
	60000	4	3075	4544	2359	642	354	29	0	0	0	
	75000	4	4175	6829	3793	1096	485	41	0	0	0	
	100000	1	2137	1628	689	293	66	5	0	0	0	
<b>7 Years</b>	36000	0	0	121	60	27	16	3	0	0	0	
	48000	0	0	191	86	31	17	2	0	0	0	
	60000	0	434	493	237	73	61	7	1	0	0	
	75000	0	588	722	368	137	73	8	0	0	0	
	100000	0	0	270	186	86	53	5	0	0	0	









		<b>New Contract Counts</b>											
		<b>2001 - 2004 Ford Escape</b>											
<b>Coverage</b>		<b>Plan Year</b>											
<b>Time</b>	<b>Mileage</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	
<b>EXTRACARE</b>	<b>3 Years</b>	48000	0	4	3	0	0	1	0	0	0	0	0
		60000	0	7	0	0	0	0	0	0	0	0	0
		75000	0	6	2	0	0	0	0	0	0	0	0
		100000	0	14	5	0	0	0	0	0	0	0	0
	<b>4 Years</b>	48000	0	5	2	3	0	0	0	0	0	0	0
		60000	0	7	2	1	0	0	0	0	0	0	0
		75000	0	11	9	3	1	0	0	0	0	0	0
		100000	0	26	16	3	0	0	0	0	0	0	0
	<b>5 Years</b>	36000	0	5	1	2	0	0	0	0	0	0	0
		48000	0	7	0	0	0	0	0	0	0	0	0
		60000	0	241	83	17	4	0	0	0	0	0	0
		75000	0	354	206	53	4	1	0	0	0	0	0
100000		0	92	47	12	0	0	0	0	0	0	0	
<b>6 Years</b>	36000	0	3	0	2	0	0	0	0	0	0	0	
	48000	0	10	0	0	0	0	0	0	0	0	0	
	60000	0	98	52	16	3	1	0	0	0	0	0	
	75000	0	169	140	45	9	1	0	0	0	0	0	
	100000	0	52	23	8	5	0	0	0	0	0	0	
<b>7 Years</b>	36000	0	0	1	0	0	0	0	0	0	0	0	
	48000	0	0	2	0	0	0	0	0	0	0	0	
	60000	0	9	1	0	0	0	0	0	0	0	0	
	75000	0	12	6	13	2	1	0	0	0	0	0	
	100000	0	0	4	2	2	0	0	0	0	0	0	



		New Contract Counts											
		2001 - 2004 Ford Escape											
Coverage		Plan Year											
Time	Mileage	2000	2001	2002	2004	2005	2006	2007	2009	2010	2011	2012	
PREMIUMCARE	3 Years	48000	0	6	7	0	0	0	0	0	0	0	0
		60000	0	9	3	3	0	0	0	0	0	0	0
		75000	0	10	8	4	0	0	0	0	0	0	0
		100000	0	9	6	0	0	0	0	0	0	0	0
	4 Years	48000	0	8	8	2	1	0	0	0	0	0	0
		60000	0	18	11	2	1	0	0	0	0	0	0
		75000	0	29	21	1	0	0	0	0	0	0	0
		100000	0	34	22	7	1	0	0	0	0	0	0
	5 Years	36000	0	4	3	4	0	0	0	0	0	0	0
		48000	0	22	8	7	1	0	0	0	0	0	0
		60000	0	303	143	44	4	1	0	0	0	0	0
		75000	1	451	285	85	12	3	2	0	0	0	0
		100000	1	139	87	39	4	1	0	0	0	0	0
	6 Years	36000	0	8	9	0	1	0	0	0	0	0	0
		48000	0	20	5	2	0	1	0	0	0	0	0
		60000	1	177	123	57	9	4	0	0	0	0	0
		75000	0	208	209	78	18	9	1	0	0	0	0
		100000	0	114	43	17	6	1	1	0	0	0	0
	7 Years	36000	0	0	0	1	0	0	0	0	0	0	0
		48000	0	0	3	2	0	0	0	0	0	0	0
		60000	0	21	8	5	2	1	0	0	0	0	0
		75000	0	25	21	7	2	0	0	0	0	0	0
		100000	0	0	6	4	1	0	1	0	0	0	0

		<b>Used Contract Counts</b>											
		<b>2001 - 2004 Ford Escape</b>											
<b>Coverage</b>		<b>Plan Year</b>											
<b>Time</b>	<b>Mileage</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	
<b>EXTRACARE</b>	<b>1 year</b>	12000	0	1	3	4	4	2	0	0	0	0	0
	<b>2 Years</b>	24000	0	0	8	24	21	17	3	0	0	0	0
	<b>3 Years</b>	36000	0	2	25	40	23	9	3	4	3	0	0
	<b>4 Years</b>	48000	0	2	8	12	15	7	1	1	2	1	0

		<b>Used Contract Counts</b>											
		<b>2001 - 2004 Ford Escape</b>											
<b>Coverage</b>		<b>Plan Year</b>											
<b>Time</b>	<b>Mileage</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	
<b>PREMIUMCARE</b>	<b>1 year</b>	12000	0	0	0	1	1	0	0	0	0	0	0
	<b>2 Years</b>	24000	0	0	6	21	14	7	5	0	0	0	0
	<b>3 Years</b>	36000	0	0	5	19	22	6	2	0	0	0	0
	<b>4 Years</b>	48000	0	0	6	2	2	0	0	1	2	0	0

PE12-019

FORD

9-4-2012

APPENDIX G

FSA 00S18

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**SAFETY RECALL  
00S18**

**DEMONSTRATION/DELIVERY HOLD - Advance Announcement of Safety  
Recall 00S18: Certain Model Year Escape Vehicles - Speed Control Cable  
and Servo Replacement**

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*Ford Motor Company*

Ann O'Neill  
Director  
Vehicle Service and Programs  
Ford Customer Service Division

Ford Motor Company  
P.O. Box 1904  
Dearborn, Michigan 48121

July 2000

**To:**  
All Ford and Lincoln Mercury Dealers

**Subject:**  
**DEMONSTRATION/DELIVERY HOLD - Advance Announcement of Safety Recall 00S18:**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement

**AFFECTED VEHICLES**

Certain 2001 model year Escape vehicles equipped with V-6 engine and speed control, built at the Kansas City Assembly plant from October 22, 1999 through July 26, 2000.

**REASON FOR THIS DELIVERY HOLD ANNOUNCEMENT**

Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control servo clutch.

Additionally, there is the potential for water to enter those units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with the function of the speed control.

Either condition could potentially not allow the throttle to return to idle when disengaging the speed control. If the speed control is used and either of the above conditions are present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**Do not drive, demonstrate, deliver or perform pre-delivery inspection on any vehicles affected by this recall until this repair has been performed.**

Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to a buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$ 1,100 per vehicle.

Service repair instructions and parts requirements for Safety Recall 00S18 are currently under development.

VIN's will be activated on OASIS by Monday, July 31, 2000.

Affected vehicles are to be released from this hold only when the appropriate service repair has been completed.

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

---

*Ford Motor Company*

Ann O'Neill  
Director  
Vehicle Service and Programs  
Ford Customer Service Division

Ford Motor Company  
P.O. Box 1904  
Dearborn, Michigan 48121

July 2000

**To:**  
All Ford and Lincoln Mercury Dealers

**Subject:**  
**DEMONSTRATION / DELIVERY HOLD - Advance Announcement Update of Safety Recall 00S18:** Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement

**RE:**

DEMONSTRATION / DELIVERY HOLD - Advance Announcement Safety Recall 00S18, Dated July 28, 2000

**AFFECTED VEHICLES**

Certain 2001 model year Escape vehicles equipped with V-6 engine and speed control, built at the Kansas City Assembly plant from October 22, 1999 through July 26, 2000.

**UPDATE INFORMATION**

Due to further review required on the subject issue, the complete dealer bulletin will not be released today. Additionally, VIN's will not be released on OASIS as originally stated.

Update information, if necessary, will continue to be communicated to the dealers via QCDealer.com and via OASIS broadcast messages.

**Do not drive, demonstrate, deliver or perform pre-delivery inspection on any vehicles affected by this recall until this repair has been performed.**

Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to a buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$ 1,100 per vehicle.

Affected vehicles are to be released from this hold only when the appropriate service repair has been completed.

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

**SAFETY RECALL  
00S18  
Advance Announcement Update - August  
2000**

**DEMONSTRATION / DELIVERY HOLD - Advance Announcement of Safety  
Recall 00S18: Certain 2001 Model Year Escape Vehicles - Speed Control  
Cable and Servo Replacement**

*Ford Motor Company*

**Service Recall Bulletin**

August 2000

**To:**  
All Ford and Lincoln Mercury Dealers

**Subject:**  
DEMONSTRATION / DELIVERY HOLD - Advance Announcement of Safety Recall 00S18: Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement  
DEMONSTRATION / DELIVERY HOLD - Advance Announcement of Safety Recall 00S19: All 2001 Model Year Escape Vehicles - Steering Wheel Retention Quality Issue

**UPDATE INFORMATION**

This communication is forwarded to advise dealers that parts procurement is continuing on an expedited basis to support both Safety Recall programs. Service instructions have been completed and will be released with a complete dealer bulletin on Monday, August 14, 2000.

Parts will initially be sent to those dealers with 2001 model year Escape vehicles that have been delivered to customers. Due to the significance of the particular safety issues, dealers are strongly encouraged to contact owners of delivered units and request the return of the vehicles until repairs can be made.

**AFFECTED VEHICLES**

**Safety Recall 00S18:** Certain 2001 model year Escape vehicles equipped with V-6 engine and speed control, built at the Kansas City Assembly plant from October 22, 1999 through July 26, 2000.

**Safety Recall 00S19:** All 2001 model year Escape vehicles built at the Kansas City Assembly Plant from April 17, 2000 through July 26, 2000.

**REASON FOR THIS DELIVERY HOLD ANNOUNCEMENT**

**Safety Recall 00S18:** Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control function.

Additionally, it is possible for water to enter those units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with the speed control function.

Either condition may possibly not allow the throttle to return to idle when disengaging the speed control. If the speed control is used and either of the above conditions are present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**Safety Recall 00S19:** Affected vehicles are equipped with a steering wheel retention nut that may 1) be installed with an improper orientation or 2) have improper hardness characteristics. A steering wheel retention nut installed with the incorrect orientation may cause a fracture of the steering column shaft. A steering wheel retention nut with improper hardness characteristics may have fractured during the assembly process.

Either condition may possibly allow the steering wheel to separate from the steering column shaft. If steering wheel retention is compromised, loss of steering control could result, which could potentially lead to a vehicle crash.

Do not drive, demonstrate, deliver or perform pre-delivery inspection on any vehicles affected by this recall until this repair has been performed.

Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to a buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$ 1,100 per vehicle.

Affected vehicles are to be released from this hold only when the appropriate service repair has been completed.

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

**SAFETY RECALL  
00S18  
Dealer Bulletin - 08/15/2000**

**DEMONSTRATION/DELIVERY HOLD - Safety Recall 00S18: Certain 2001  
Model Year Escape Vehicles - Speed Control Cable and Servo  
Replacement**

*Ford Motor Company*

**Service Recall Bulletin**

August 2000

**To:**  
All Ford and Lincoln Mercury Dealers

**Subject:**  
**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18:** Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement

**AFFECTED VEHICLES**

Certain 2001 model year Escape vehicles equipped with V-6 engine and speed control option, built at the Kansas City Assembly Plant from April 17, 2000 through July 24, 2000.

**SAFETY CONCERN**

Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control function.

Additionally, it is possible for water to enter the servo on units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with speed control function.

Either condition may not allow the throttle to return to idle when the speed control is used. If either of the above conditions is present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**SERVICE ACTION**

Dealers are to inspect and replace, if necessary, both the speed control cable and the servo to correct this condition.

Do not drive, demonstrate, deliver or perform pre-delivery inspection on any vehicles affected by this recall until this repair has been performed.

**Attachments**

**Attachment I**

- Administrative Information

**Attachment II**

- Labor Allowances
- Parts Ordering Information

**Attachment III**

- Technical Information

**QUESTIONS?**

Claims Information: 1-800-423-8851  
Other (Dealer Only) Recall Questions: 1-800-325-5621

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

**ATTACHMENT I**  
**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18**

**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**OASIS**

OASIS will be activated for this Safety recall. You must use OASIS to determine if a vehicle is eligible for this recall.

**PLEASE NOTE**

**Correct all vehicles in stock before delivery. Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$1,100 per vehicle.**

**PROMPTLY CORRECT**

Promptly correct all affected vehicles on your dealer VIN list which you will receive in the Ford Dealer Consolidated Communicator (FDCC). Also, correct other eligible vehicles which are brought to your dealership.

**DEALER-OWNER CONTACT**

Immediately contact any affected owner whose name is not on the list. Give the owner a copy of the Owner Letter and schedule a service date.

**REGIONAL CONTACT**

Advise regional office if an owner:

- cannot be contacted.
- does not make a service date.

**CLAIMS PREPERATION AND SUBMISSION**

- Enter claims using DWE.
- Refer to ACESII manual for claims preparation and submission information.

**RENTAL CARS**

Rental vehicles are not authorized for Safety Recall 00S18.

**ATTACHMENT II**  
**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18**

**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**LABOR ALLOWANCES**

Description	Labor Operation	Labor Time
Inspection	00S18A	0.2 Hours
Replace Speed Control Cable and Servo	00S18B	0.4 Hours
Administrative Allowance	Misc. Expense COde "ADMIN"	0.1 Hours

**PARTS REQUIREMENTS**

**Parts Odering Information**

Parts will not be direct shipped for this recall. Order your parts requirement through the Recall Hotline (1-800-325-5621). Parts will be shipped Priority Next Day delivery.

Part Number	Description	Quantity
YL8Z-9A825-AA	Cable, Speed Control	1
YL8Z-9C735-EA	Servo, Speed Control	1

**NOTE:**

Removed parts must be mutilated and properly scrapped to prevent their use on another vehicle.

**ORDER INFORMATION DOR/COR**

DOR/COR number 50172 identifies parts ordered for this campaign through the Recall Hotline (1-800-325-5621).

#### DEALER PRICE

For latest prices, refer to:

- DOES II
- Updated Price Book

#### EXCESS STOCK RETURN

Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.

#### ATTACHMENT III

#### 2001 ESCAPE SPEED CONTROL CABLE AND SERVO REPLACEMENT

### 2001 ESCAPE SPEED CONTROL CABLE AND SERVO REPLACEMENT

AFFECTED VEHICLE: 2001 MODEL YEAR ESCAPE EQUIPPED WITH V-6 ENGINE AND SPEED CONTROL

#### INSPECTION PROCEDURE

1. Locate the speed control actuator (passenger side, top of fenderwell).
2. Separate the speed control cable cap from the speed control actuator as follows. See Figure 1.
  - Depress the speed control cable cap-retaining tab.
  - Rotate the speed control cable cap in a counterclockwise direction and separate the cap from the actuator. Do not disengage the cable from the actuator.

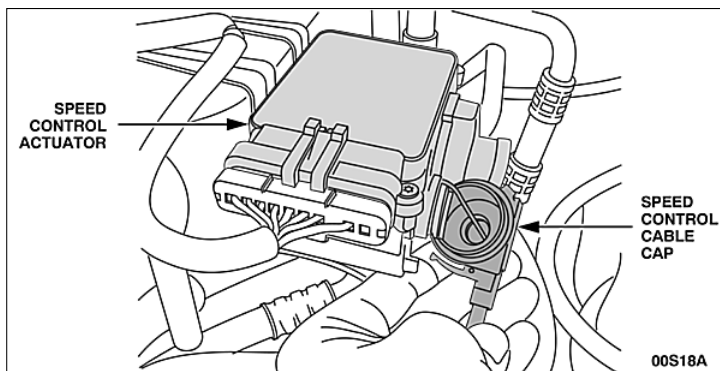


FIGURE 1

3. Locate the character (letter or number) on the speed control cable cap, as shown in the illustration. See Figure 2.
  - A. Vehicles with letter A, B, C, or D or number 1 or 2 **DO NOT** require any repair. Reconnect the speed control cable cap to the speed control actuator. Return the vehicle to the customer.
  - B. Vehicles with either number 3 or 4 will require replacement of the speed control actuator and the speed control cable. Refer to the service procedures in section 310-03 of the appropriate Workshop Manual.

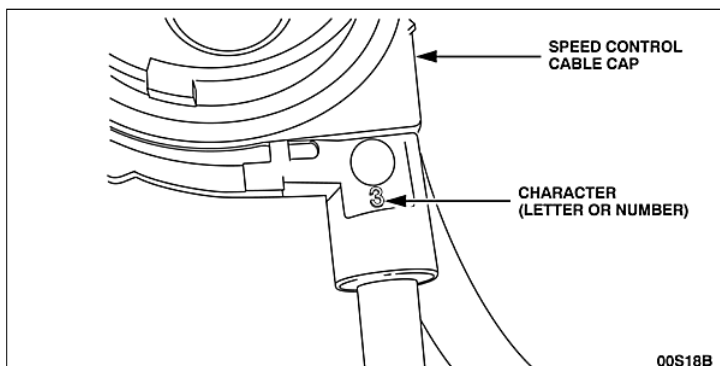


FIGURE 2

Ford Motor Company  
P.O. Box 1904  
Dearborn, Michigan 48121  
1-800-392-3673

*Ford Motor Company*

August 2000

Mr. John Sample  
123 Main Street



Anywhere, USA 12345  
Your Vehicle Identification Number: 12345678901234567

This notice is being sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Ford Motor Company has decided that a defect that relates to motor vehicle safety exists in certain 2001 model year Escape vehicles equipped with the V-6 engine and speed control option.

We apologize for this situation and want to assure you that with your assistance we will correct this condition. Our commitment, together with Ford dealers, is to provide you with the highest level of service and support possible.

**What the safety issue is...**

Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control function.

Additionally, it is possible for water to enter the servo on units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with speed control function.

Either condition may not allow the throttle to return to idle when the speed control is used. If either of the above conditions is present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**What Ford Motor Company and your dealer will do...**

Your dealer will inspect and replace, if necessary, both the speed control cable and the servo. Owners who are affected by this recall are requested to return their vehicle to their dealer for this service.

**How long will it take?**

The time needed for this repair is less than one-half day. However, due to service scheduling issues, your dealer may need your vehicle for a longer period of time.

**What we are asking you to do...**

Call your dealer without delay. Ask for a service date and whether parts are in stock for Safety Recall 00S18.

If your dealer does not have the parts in stock, they can be ordered before scheduling your service date. Parts would be expected to arrive within a week after ordering.

When you bring your vehicle in, show the dealer this letter. If you misplace this letter, your dealer will still do the work, free of charge.

**If you've changed address or sold the vehicle...**

Please fill out the enclosed prepaid postcard and mail it to us if you have changed address or sold the vehicle.

**If you have concerns...**

If you have trouble getting your vehicle repaired promptly and without charge, please contact the Ford Motor Company Customer Assistance Center and one of our representatives will be happy to assist you:

CALL: (800) 392-3673  
(800) 232-5952 (TDD for the Hearing Impaired)

Office Hours: 8:00 AM - 11:00 PM (Monday-Friday) ET  
9:00 AM - 6:00 PM (Saturday) ET

**OR**

you may contact us through the internet at:

[www.ownerconnection.com](http://www.ownerconnection.com)

Our current response time to internet inquiries is three business days.

You may also send any complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street S.W., Washington, D.C. 20590, or call the toll free Auto Safety Hotline at 1-800-424-9393 (Washington, D.C. area residents may call 1-202-366-0123).

**Quality Care service is there for you all year round.**

Quality Care is the commitment of Ford Motor Company and its dealerships to provide you with a superior service and ownership experience. While we regret the inconvenience caused by this program, we stand committed with our dealers to assist you with all of your automotive service needs. With our nationwide dealer network, we're here to ensure you receive Quality Care service so that your vehicle maintains peak performance throughout your ownership experience.

We pride ourselves on becoming the world's leading consumer company for automotive products and services. Thank you for your attention to this important matter.

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

SAFETY RECALL  
00S18

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**SAFETY RECALL  
00S18  
DEMONSTRATION / DELIVERY HOLD -  
Safety Recall 00S18-S1**

**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo  
Replacement**



**Service Recall Bulletin**

August 2000

**To:**  
All Ford and Lincoln Mercury Dealers

**Subject:**  
**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18-S1:** Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement

**REASON FOR SUPPLEMENTAL INFORMATION - ADDITIONAL UNITS ADDED: BUILD DATE RANGE EXPANDED**

An additional 393 units have been identified as being affected by Safety Recall 00S18 and the build date range has been expanded to include vehicles built from January 31, 2000. Note change to affected vehicles in the following section, AFFECTED VEHICLES.

**AFFECTED VEHICLES**

Certain 2001 model year Escape vehicles equipped with V-6 engine and speed control option, built at the Kansas City Assembly Plant from January 31, 2000 through July 24, 2000.

**SAFETY CONCERN**

Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control function.

Additionally, it is possible for water to enter the servo on units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with speed control function.

Either condition may not allow the throttle to return to idle when the speed control is used. If either of the above conditions is present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**SERVICE ACTION**

Dealers are to inspect and replace, if necessary, both the speed control cable and the servo to correct this condition.

Do not drive, demonstrate, deliver or perform pre-delivery inspection on any vehicles affected by this recall until this repair has been performed.

**Attachments**

**Attachment I**

- Administrative Information

**Attachment II**

- Labor Allowances
- Parts Ordering Information

**Attachment III**

- Technical Information

**Customer Notification Letter**

**QUESTIONS?**

Claims Information: 1-800-423-8851  
Other (Dealer Only) Recall Questions: 1-800-325-5621

Sincerely,

Ann O'Neill  
Director  
Vehicle Service and Programs

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**ATTACHMENT I  
DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18-S1: Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

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**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**OASIS**

OASIS will be activated for this Safety recall. You must use OASIS to determine if a vehicle is eligible for this recall.

**PLEASE NOTE**

Correct all vehicles in stock before delivery. Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$1,100 per vehicle.

**PROMPTLY CORRECT**

Promptly correct all affected vehicles on your dealer VIN list which you will receive in the Ford Dealer Consolidated Communicator (FDCC). Also, correct other eligible vehicles which are brought to your dealership.

**DEALER-OWNER CONTACT**

Immediately contact any affected owner whose name is not on the list. Give the owner a copy of the Owner Letter and schedule a service date.

**REGIONAL CONTACT**

Advise regional office if an owner:

- cannot be contacted.
- does not make a service date.

**CLAIMS PREPARATION AND SUBMISSION**

- Enter claims using DWE.
- Refer to ACESII manual for claims preparation and submission information.

**RENTAL CARS**

Rental vehicles are not authorized for Safety Recall 00S18.

**ATTACHMENT II**

**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18-S1: Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**LABOR ALLOWANCES**

Operation Description	Labor Allowances	Labor Operation
Inspection	0.2 Hours	00S18A
Replace Speed Control Cable and Servo	0.4 Hours	00S18B
Administrative Allowance	0.1 Hours	Misc. Expense Code "ADMIN"

**PARTS REQUIREMENTS**

**Parts Ordering Information**

Parts will not be direct shipped for this recall. Order your parts requirement through the Recall Hotline (1-800-325-5621). Parts will be shipped Priority Next Day delivery.

Part Number	Description	Quantity
YL8Z-9A825-AA	Cable, Speed Control	1
YL8Z-9C735-EA	Servo, Speed Control	1

**NOTE:**

Removed parts must be mutilated and properly scrapped to prevent their use on another vehicle.

**ORDER INFORMATION DOR/COR**

DOR/COR number 50172 identifies parts ordered for this campaign through the Recall Hotline (1-800-325-5621).

**DEALER PRICE**

For latest prices, refer to:

- DOES II
- Updated Price Book

**EXCESS STOCK RETURN**

Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.

**ATTACHMENT III**

**DEMONSTRATION / DELIVERY HOLD - Safety Recall 00S18-S1: Certain 2001 Model Year Escape Vehicles - Speed Control Cable and Servo Replacement**

**2001 ESCAPE SPEED CONTROL CABLE AND SERVO REPLACEMENT**

**AFFECTED VEHICLE:** 2001 MODEL YEAR ESCAPE EQUIPPED WITH V-6 ENGINE AND SPEED CONTROL

**INSPECTION PROCEDURE**

1. Locate the speed control actuator (passenger side, top of fenderwell).
2. Separate the speed control cable cap from the speed control actuator as follows. See Figure 1.
  - Depress the speed control cable cap-retaining tab.
  - Rotate the speed control cable cap in a counterclockwise direction and separate the cap from the actuator. Do not disengage the cable from the actuator.

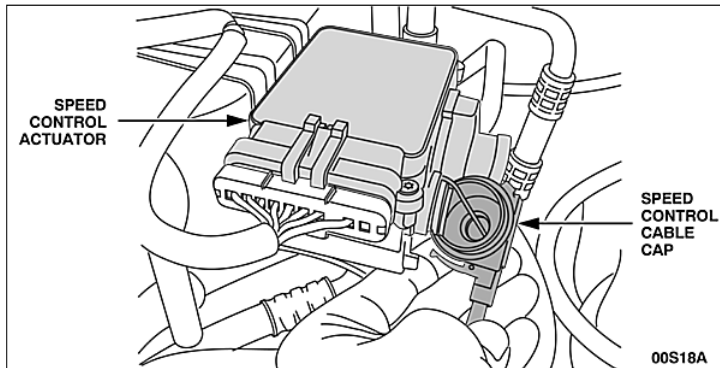


FIGURE 1

3. Locate the character (letter or number) on the speed control cable cap, as shown in the illustration. See Figure 2.
  - A. Vehicles with letter A, B, C, or D or number 1 or 2 **DO NOT** require any repair. Reconnect the speed control cable cap to the speed control actuator. Return the vehicle to the customer.
  - B. Vehicles with either number 3 or 4 will require replacement of the speed control actuator and the speed control cable. Refer to the service procedures in section 310-03 of the appropriate Workshop Manual.

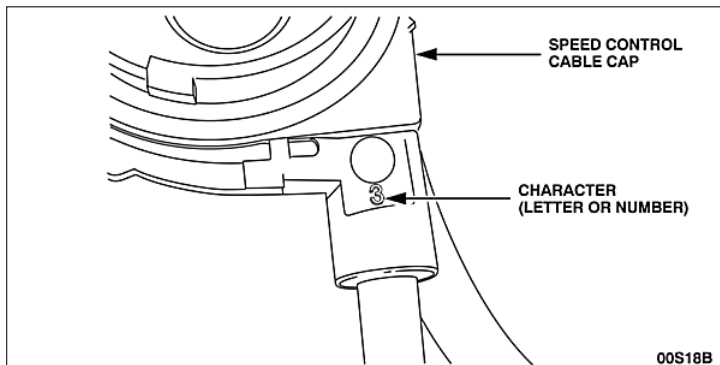


FIGURE 2

Ford Motor Company  
 P.O. Box 1904  
 Dearborn, Michigan 48121  
 1-800-392-3673  
[www.ownerconnection.com](http://www.ownerconnection.com)

*Ford Motor Company*

August 2000

Mr. John Sample  
 123 Main Street  
 Anywhere, USA 12345

Your Vehicle Identification Number: 12345678901234567

This notice is being sent to you in accordance with the requirements of the National Traffic and Motor Vehicle Safety Act.

Ford Motor Company has decided that a defect that relates to motor vehicle safety exists in certain 2001 model year Escape vehicles equipped with the V-6 engine and speed control option.

We apologize for this situation and want to assure you that with your assistance we will correct this condition. Our commitment, together with Ford dealers, is to provide you with the highest level of service and support possible.

**What the safety issue is...**

Affected vehicles are equipped with a speed control cable that may have a cracked or missing speed control cable servo cap locating tab. The potential exists for the locating tab to enter the servo clutch cavity and interfere with the speed control function.

Additionally, it is possible for water to enter the servo on units that contain a cracked or missing servo cap locating tab. This water could eventually cause corrosion that could potentially interfere with speed control function.

Either condition may not allow the throttle to return to idle when the speed control is used. If either of the above conditions is present, a stuck throttle could result, which could potentially lead to a vehicle crash.

**What Ford Motor Company and your dealer will do...**

Your dealer will inspect and replace, if necessary, both the speed control cable and the servo. Owners who are affected by this recall are requested to return their vehicle to their dealer for this service.

**How long will it take?**

The time needed for this repair is less than one-half day. However, due to service scheduling issues, your dealer may need your vehicle for a longer period of time.

**What we are asking you to do...**

Call your dealer without delay. Ask for a service date and whether parts are in stock for Safety Recall 00S18.

If your dealer does not have the parts in stock, they can be ordered before scheduling your service date. Parts would be expected to arrive within a week after ordering.

When you bring your vehicle in, show the dealer this letter. If you misplace this letter, your dealer will still do the work, free of charge.

**If you've changed address or sold the vehicle...**

Please fill out the enclosed prepaid postcard and mail it to us if you have changed address or sold the vehicle.

**If you have concerns...**

If you have trouble getting your vehicle repaired promptly and without charge, please contact the Ford Motor Company Customer Assistance Center and one of our representatives will be happy to assist you:

CALL: (800) 392-3673  
(800) 232-5952 (TDD for the Hearing Impaired)

Office Hours: (Eastern Standard Time)  
Monday-Friday: 8:00 am - 11:00 pm  
Saturday: 9:00 am - 6:00 pm

or you may contact us through the Internet at:

**[www.ownerconnection.com](http://www.ownerconnection.com)**

Our current response time to Internet inquiries is three business days.

You also may send a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S. W., Washington, D. C. 20590 or call the toll free Auto Safety Hotline 1-800-424-9393 (Washington, D. C. area residents may call 1-202-366-0123).

**Quality Care service is there for you all year round.**

Quality Care is the commitment of Ford Motor Company and its dealerships to provide you with a superior service and ownership experience. While we regret the inconvenience caused by this program, we stand committed with our dealers to assist you with all of your automotive service needs. With our nationwide dealer network, we're here to ensure you receive Quality Care service so that your vehicle maintains peak performance throughout your ownership experience.

We pride ourselves on becoming the world's leading consumer company for automotive products and services. Thank you for your attention to this important matter.

Sincerely,



Ann O'Neill  
Director  
Vehicle Service and Programs

SAFETY RECALL  
00S18-S1

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Published By: Recall/Service Programs Department  
Ford Customer Service Division

PE12-019

FORD

9-4-2012

APPENDIX G

FSA 04S25



Frank M. Ligon  
Director  
Service Engineering Operations  
Ford Customer Service Division

Ford Motor Company  
P. O. Box 1904  
Dearborn, Michigan 48121

October 6, 2005

**TO:** All U.S. Ford and Lincoln Mercury Dealers

**SUBJECT:** Safety Recall 04S25: **Update**  
All 2002 through 2004 Model Year Left Hand Drive (LHD) Escape Vehicles Equipped  
with 3.0L Engines  
Accelerator Cable Replacement

**RE:** Safety Recall 04S25 dated December 2004

**New! REASON FOR THIS UPDATE**

*The purpose of this update is to inform dealers that updated illustrations and a warning have been added to the technical instructions (Attachment III) to help prevent damage to the speed control cable while performing the accelerator cable replacement procedure. In addition, warranty edits have been incorporated to prevent the payment of related damage claims for speed control cable replacement.*

**AFFECTED VEHICLES**

All 2002 through 2004 model year LHD Escape vehicles equipped with 3.0L engines and built at the Kansas City and Ohio Assembly Plants from Job #1 2002 through Job Last 2004. Affected vehicles are identified in OASIS. In addition, for a list of vehicles assigned to your dealership, visit <https://web.fsavinlists.dealerconnection.com>. This information was available on December 09, 2004.

**REASON FOR THIS SAFETY RECALL**

In some of the affected vehicles, it may be possible for the accelerator cable liner to migrate out of the accelerator cable conduit. If the liner migrates out of the conduit, the liner may prevent the throttle from returning to the idle position and may result in elevated engine speeds while driving. An unexpected increase in engine idle speed may increase stopping distance and may result in a vehicle crash without warning.

**SERVICE ACTION**

At no charge to the vehicle owner, dealers are to replace the accelerator cable with a newly designed cable, which was made available to dealers the week of 12/06/2004. This must be performed on all of the affected vehicles in your new vehicle inventory as well as vehicles that have been delivered to customers.

**PLEASE NOTE:**

Federal law requires dealers to complete any outstanding safety recall service before a new vehicle is delivered to the buyer or lessee. Violation of this requirement by a dealer could result in a civil penalty of up to \$5,000 per vehicle. Correct all vehicles in your new vehicle inventory before delivery.

**New! ATTACHMENTS**

Attachment I:            *Administrative Information*  
Attachment II:          Labor Allowances and Parts Ordering Information  
Attachment III:        *Technical Information*  
Customer Notification Letter

**QUESTIONS?**

Claims Information: ..... 1-800-423-8851  
Special Service Support Center (Dealer Only) Questions: ..... 1-800-325-5621

Sincerely,



Frank M. Ligon



Safety Recall 04S25  
All 2002 - 2004 Model Year LHD Escape Vehicles Equipped with 3.0L Engines  
Accelerator Cable Replacement

**OASIS ACTIVATED?** Yes, OASIS was activated on December 07, 2004.

**FSA VIN LIST ACTIVATED?** Yes

Available through FMCDealer.com or at <https://web.fsavinlists.dealerconnection.com> on December 09, 2004. Owner names and addresses were available on January 17, 2005.

NOTE: Your FSA VIN list may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this recall is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this recall action.

**STOCK VEHICLES**

Correct all affected units in your new vehicle inventory before delivery.

**SOLD VEHICLES**

- Owners of affected vehicles will be directed to dealers for repairs.
- Immediately contact any of your affected owners whose vehicles are not on your VIN lists but are identified in OASIS. Give the owner a copy of the Customer Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.

**TITLE BRANDED / SALVAGED VEHICLES**

Affected title branded and salvaged vehicles are eligible for this Field Service Action.

**New! RELATED DAMAGE**

If a related damage condition exists that you believe to be caused by the covered condition, call the Special Service Support Center to request approval **prior** to the repair of any related damage. Requests for approval after completion of the repair will not be granted.

*Note: Related damage claims will not be accepted for speed control cable replacement. Please review the revised technical instructions/illustrations found in Attachment III.*

**ADDITIONAL LABOR TIME**

- If a condition exists that requires additional labor to complete the repair, call the Special Service Support Center to request approval **prior** to performing any additional labor. Requests for approval after completion of the repair will not be granted.
- If you encounter aftermarket equipment or modifications to the vehicle, which might prevent the repair of the covered condition, call the Special Service Support Center.

Safety Recall 04S25  
All 2002 - 2004 Model Year LHD Escape Vehicles Equipped with 3.0L Engines  
Accelerator Cable Replacement

**OWNER REFUNDS**

- Ford Motor Company is offering a refund for owner-paid repairs covered by this recall if the repair was performed prior to the date indicated in the reimbursement plan, which is posted with this bulletin. This plan is also available to owners through the Customer Relationship Center (CRC). The CRC will direct owners to seek reimbursement through authorized dealers or, at their option, directly through Ford Motor Company at P.O. Box 6251, Dearborn, MI 48121-6251.
- Dealers are also authorized to refund owner-paid emergency repairs that were performed away from an authorized servicing dealer after the end date specified in the reimbursement plan. Refund claims that include other non-covered repairs, or those judged by Ford to be excessive, will not be accepted for reimbursement.
- **This safety recall must still be performed, even if the customer has paid for a previous repair. Claiming a refund will not close out the VIN for this recall.**
- Refund Claiming Information (Submit on separate repair line.)
  - Program Code: 04S25
  - Misc. Expense: REFUND
  - Misc. Expense: ADMIN
  - Misc. Expense: 0.2 Hrs.

**RENTAL VEHICLES**

The use of rental vehicles is not authorized for this program.

**CLAIMS PREPARATION AND SUBMISSION**

- Enter claims using Direct Warranty Entry (DWE).
- Refund or related damage must be claimed on a repair line that is separate from the repair line on which the FSA is claimed.
- "MT" labor should be submitted on a separate repair line with the related damage flag checked.
- Refer to ACESII manual for claims preparation and submission information.

Safety Recall 04S25  
All 2002 - 2004 Model Year LHD Escape Vehicles Equipped with 3.0L Engines  
Accelerator Cable Replacement

**LABOR ALLOWANCES**

Description	Labor Operation	Labor Time
Replace Accelerator Cable - 3.0L Engine	04S25B	0.4 Hour

**PARTS REQUIREMENTS / ORDERING INFORMATION**

Parts will not be direct shipped for this program. Order your parts requirements through normal order processing channels.

Part Number	Description	Quantity
5L8Z-9A758-AA	Accelerator Cable – 3.0L DOHC Engine	1

The DOR/COR for this program is 50336. This number identifies parts ordered for this recall through the Special Service Support Center (1-800-325-5621).

**DEALER PRICE**

For latest prices, refer to DOES II.

**PARTS RETENTION AND RETURN**

Follow the provisions of the Warranty and Policy Manual for "Parts Retention and Return Procedures."

**CLAIM HANDLING PROCEDURE FOR RETURNING PRIOR LEVEL ACCELERATOR CABLES**

**Immediate Purge Required-----YL8Z-9A758-AD Accelerator Cable – 3.0L**

Prepare and submit a PCS claim as described below:

- DO NOT ship the parts until Return Authorization is granted.
- The return authorizations will include shipping addresses.

**PCS CLAIM INSTRUCTIONS**

When you create your PCS claim, use the following information for the REASON CODE, SHIPPER NBR, and LINE EXPLANATION fields:

- REASON CODE: GB
- SHIPPER NBR: 04S25
- LINE EXPLANATION: Purge Required

When preparing your PCS claim, list the part number being returned on the claim, and indicate the quantity of that part number being returned. Your PCS claim must be submitted by January 31, 2005. Claims filed after this date will be denied.

**EXCESS STOCK RETURN**

Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.

PE12-019

FORD

9-4-2012

APPENDIX G

FSA 12S37



Michael A. Berardi  
Director  
Service Engineering Operations  
Ford Customer Service Division

Ford Motor Company  
P. O. Box 1904  
Dearborn, Michigan 48121

August 22, 2012

**TO:** All U.S. Ford and Lincoln Dealers

**SUBJECT:** **Safety Recall 12S37 - Supplement #1**  
Certain 2001-2004 Model Year Escape Vehicles with 3.0L Engine and Speed Control Engine Cover Modification

**REF:** **Safety Recall 12S37**  
Dated July 26, 2012

**New! REASON FOR THIS SUPPLEMENT**

- Provide repair instructions for engine cover modification.
- Announce that parts to modify the engine cover are available in limited supply and provide details of the seed stock plan.
- Supply claim information to ensure full payment to dealers, including when an interim repair was performed.
- Expand Dealer Q & A

**AFFECTED VEHICLES**

Certain 2001 through 2004 model year Escape vehicles equipped with 3.0L engine and speed control built at the Kansas City Assembly Plant from Job #1 2001 through Job Last 2004 and the Ohio Assembly Plant from Job #1 2004 through Job Last 2004. Affected vehicles are identified in OASIS. In addition, for a list of vehicles assigned to your dealership, visit <https://web.fsavinlists.dealerconnection.com>. This information will be available on July 26, 2012.

**REASON FOR THIS SAFETY RECALL**

In some of the affected vehicles, there may be inadequate clearance between the engine cover and the speed control cable, which could allow the throttle to stick when the accelerator pedal is fully or almost-fully depressed, increasing the risk of an accident.

**New! SERVICE ACTION**

**Engine Cover Modification:**

*Dealers are to install a revised rear stud and grommet assembly, and also trim the engine cover using a rotary burr type tool.*

**Interim Repair:**

*If parts are not available, dealers are to disconnect and secure the speed control cable away from the throttle linkage and provide the owner with a copy of the "Customer Information Sheet".*

This service must be performed on all affected vehicles at no charge to the vehicle owner.

**OWNER NOTIFICATION MAILING SCHEDULE**

Owner Letters are expected to begin mailing on August 3, 2012. Dealers should repair any affected vehicles that arrive at their dealerships, whether or not the customer has received a letter.

**New! ATTACHMENTS**

- Attachment I: Administrative Information*
- Attachment II: Labor Allowances and Parts Ordering Information*
- Attachment III : Technical Information*
- Attachment IV: Dealer Q & A*
- Acknowledgement of Interim Service Offer
- Customer Information Sheet
- Owner Notification Letter

**QUESTIONS & ASSISTANCE**

Special Service Support Center (Dealer Assistance Only) .....1-800-325-5621  
Special Service Support Center (Parts Ordering) .....1-800-207-2444

Sincerely,



Michael A. Berardi

**Safety Recall 12S37 - Supplement #1**  
Certain 2001-2004 Model Year Escape Vehicles with 3.0L Engine and Speed Control  
Engine Cover Modification

**OASIS ACTIVATED?**

Yes, OASIS will be activated on July 26, 2012.

**FSA VIN LIST ACTIVATED?**

Yes, FSA VIN list will be available through <https://web.fsavinlists.dealerconnection.com> on July 26, 2012. Owner names and addresses will be available by August 24, 2012.

**NOTE:** Your FSA VIN list may contain owner names and addresses obtained from motor vehicle registration records. The use of such motor vehicle registration data for any purpose other than in connection with this recall is a violation of law in several states, provinces, and countries. Accordingly, you must limit the use of this listing to the follow-up necessary to complete this recall.

**STOCK VEHICLES**

- Use OASIS to identify any affected vehicles in your used vehicle inventory.

**SOLD VEHICLES**

- Owners of affected vehicles will be directed to dealers for repairs.
- Immediately contact any of your affected customers whose vehicles are not on your VIN list but are identified in OASIS. Give the customer a copy of the Owner Notification Letter (when available) and schedule a service date.
- Correct other affected vehicles identified in OASIS which are brought to your dealership.

**TITLE BRANDED / SALVAGED VEHICLES**

Affected title branded and salvaged vehicles are eligible for this recall.

**RELATED DAMAGE**

If a related damage condition exists that you believe to be caused by the covered condition, call the Special Service Support Center to request approval **prior** to the repair of any related damage. Requests for approval after completion of the repair will not be granted. Ford Motor Company reserves the right to deny coverage for related damage in cases where the vehicle owner has not had this recall performed on a timely basis.

**Safety Recall 12S37 - Supplement #1**  
Certain 2001-2004 Model Year Escape Vehicles with 3.0L Engine and Speed Control  
Engine Cover Modification

**ADDITIONAL LABOR TIME**

- If a condition exists that requires additional labor to complete the repair, call the Special Service Support Center to request approval **prior** to performing any additional labor. Requests for approval after completion of the repair will not be granted.
- If you encounter aftermarket equipment or modifications to the vehicle which might prevent the repair of the covered condition, call the Special Service Support Center.

**OWNER REFUNDS**

Refunds are not authorized for this program.

**RENTAL VEHICLES**

The use of rental vehicles is not authorized for this program.

**New! CLAIMS PREPARATION AND SUBMISSION**

- Enter claims using Direct Warranty Entry (DWE).
- Refer to ACESII manual for claims preparation and submission information.
- Related damage must be claimed on a repair line that is separate from the repair line on which the FSA is claimed. Related damage requires prior approval from the Special Service Support Center.
- "MT" labor should be submitted on a separate repair line with the related damage flag checked. "MT" labor requires prior approval from the Special Service Support Center.
- ***If an interim repair (12S37J) was performed, it must be submitted for payment before the final repair (12S37B) is submitted for payment. Labor operation 12S37B is a final repair and will close the safety recall for the specified VIN.***



**Safety Recall 12S37 - Supplement #1**  
Certain 2001-2004 Model Year Escape Vehicles with 3.0L Engine and Speed Control  
Engine Cover Modification

**New! LABOR ALLOWANCES**

**PARTS ARE AVAILABLE:**

Description	Labor Operation	Labor Time
Install a revised rear stud and grommet assembly, and also trim the engine cover.	12S37B	0.3 Hours

**PARTS ARE NOT AVAILABLE:**

Description	Labor Operation	Labor Time
Disconnect and secure the speed control cable away from the throttle linkage <b>NOTE: This is an interim repair only and will <u>not</u> close Safety Recall 12S37.</b>	12S37J*	0.2 Hours

\* When claiming this labor operation, it must be submitted for payment before the final repair is submitted for payment. See "Claims Preparation and Submission".

**New! PARTS REQUIREMENTS / ORDERING INFORMATION**

Part Number	Description	Quantity
4L8Z-6C519-A	Rear Stud and Grommet Assembly	One part per vehicle

We have been working closely with our suppliers to accelerate parts availability. Listed below are the details for the seed stock plan. We will continue to pursue additional service part capacity

<b><u>4L8Z-6C519-A Rear Stud and Grommet Assembly</u></b>		
Dealer Involved Vehicles*	Seed 1 Week of 08/27/12	<b>Dealers will receive a DOES II message or supplement to this bulletin when more parts become available through open order or additional seeds.</b>
0 to 29	None	
30 to 119	20 Stud & Grommet Assemblies	
120 to 219	40 Stud & Grommet Assemblies	
220 to 339	80 Stud & Grommet Assemblies	
340 to 499	100 Stud & Grommet Assemblies	
500 & up	160 Stud & Grommet Assemblies	

\* This column indicates the number of affected vehicles assigned to each dealer. Dealers will need to access <https://web.fsavinlists.dealerconnection.com> to determine the total number of affected vehicles assigned to their dealership in order to calculate the number of parts that they will receive under the Seed Stock Program.

**Safety Recall 12S37 - Supplement #1**  
Certain 2001-2004 Model Year Escape Vehicles with 3.0L Engine and Speed Control  
Engine Cover Modification

**New! PARTS REQUIREMENTS / ORDERING INFORMATION (Continued)**

**NOTE:** *If an emergency repair is required and parts are not available, contact the Special Service Support Center (1-800-325-5621), please be prepared to provide P&A Code, owner name and VIN.*

*Questions regarding parts should be directed to the Special Service Support Center Parts Order Line (1-800-207-2444) or E-mailed to: [Ford@Renkim.com](mailto:Ford@Renkim.com).*

*The DOR/COR number for this recall is 50480.*

**New! DEALER PRICE**

*For latest prices, refer to DOES II.*

**New! EXCESS STOCK RETURN**

*Excess stock returned for credit must have been purchased from Ford Customer Service Division in accordance with Policy Procedure Bulletin 4000.*

PE12-019

FORD

9-4-2012

APPENDIX G

FSA 12S37 Tech Info

## CERTAIN 2001-2004 MODEL YEAR ESCAPE VEHICLES EQUIPPED WITH 3.0L ENGINE AND SPEED CONTROL — ENGINE COVER MODIFICATION

### **NEW** OVERVIEW

In some of the affected vehicles, there may be inadequate clearance between the engine cover and the speed control cable, which could allow the throttle to stick when the accelerator pedal is fully or almost fully depressed, increasing the risk of an accident.

*Dealers are to install a revised rear stud and grommet assembly, and also trim the engine cover using a rotary burr type tool. If parts are not available to modify the engine cover, dealers are to perform the Interim Repair.*

### TABLE OF CONTENTS

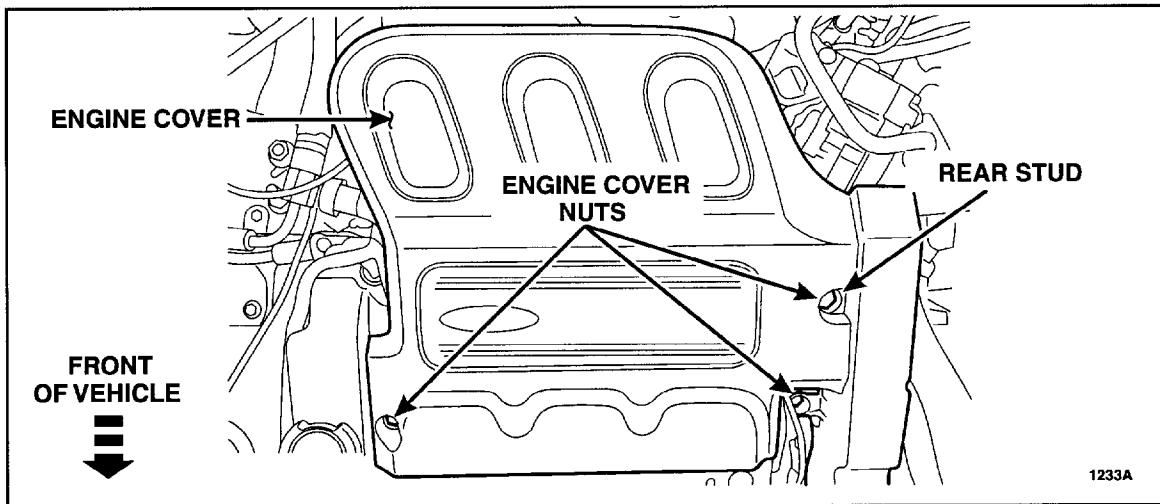
<b>I. ENGINE COVER MODIFICATION .....</b>	<b>Page 2</b>
<b>II. INTERIM REPAIR .....</b>	<b>Page 4</b>



**NEW** I. ENGINE COVER MODIFICATION

**NOTE:** If stud and grommet assemblies are not available, proceed to "Interim Repair" on page 5.

1. Remove the three nuts and the engine cover. See Figure 1.



**FIGURE 1**

2. **NOTICE:** Do not bend the speed control cable. The throttle cable bracket must be positioned aside or damage to the speed control cable may occur.

Check to see if the speed control cable has been previously disconnected.

- If the speed control cable is connected, proceed to step 3.
- If the cable is disconnected, reconnect the speed control cable to the throttle body before proceeding to step 3. To reconnect the cable:
  - a. Loosen the RH throttle cable bracket bolt and remove the LH cable bracket bolt.
  - b. Rotate the bracket to allow enough clearance for the speed control cable to be removed.
  - c. Remove the speed control cable from under the bracket and connect the cable to the throttle body.
  - d. Reposition the throttle cable bracket and tighten both bracket bolts to 10 Nm (89 lb-in).



3. Remove the original rear stud and grommet assembly from the LH valve cover and install the *new* stud and grommet assembly. See Figure 2.

- Tighten the *new* stud and grommet assembly to 10 Nm (89 lb-in).

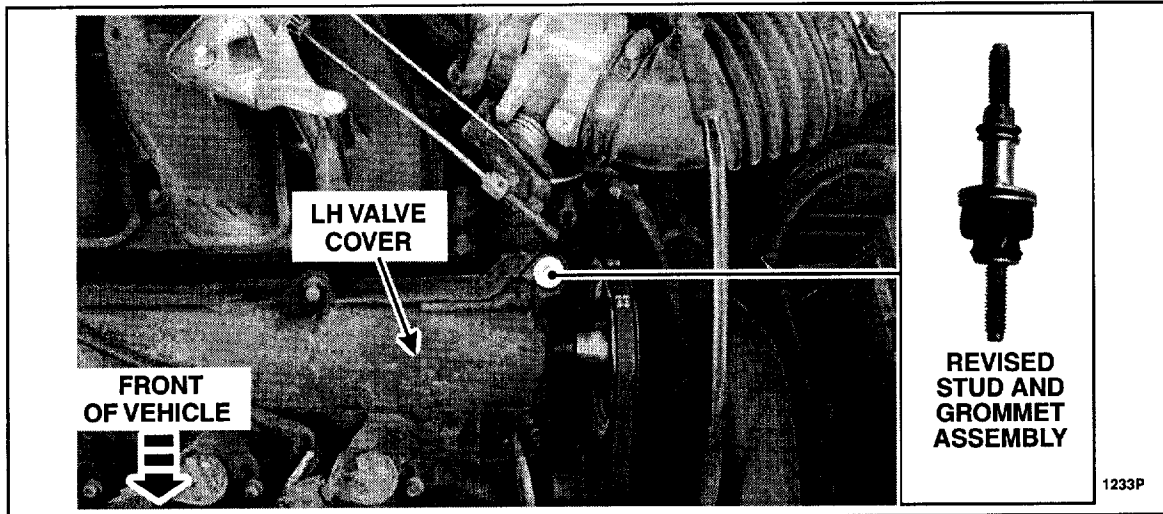


FIGURE 2

**NOTE:** The engine cover already has a relief to accommodate the drive belt tensioner. This relief needs to be trimmed to provide additional clearance.

4. Mark a guide line on the engine cover that is approximately 10mm (3/8") larger than the original opening. See Figure 3.

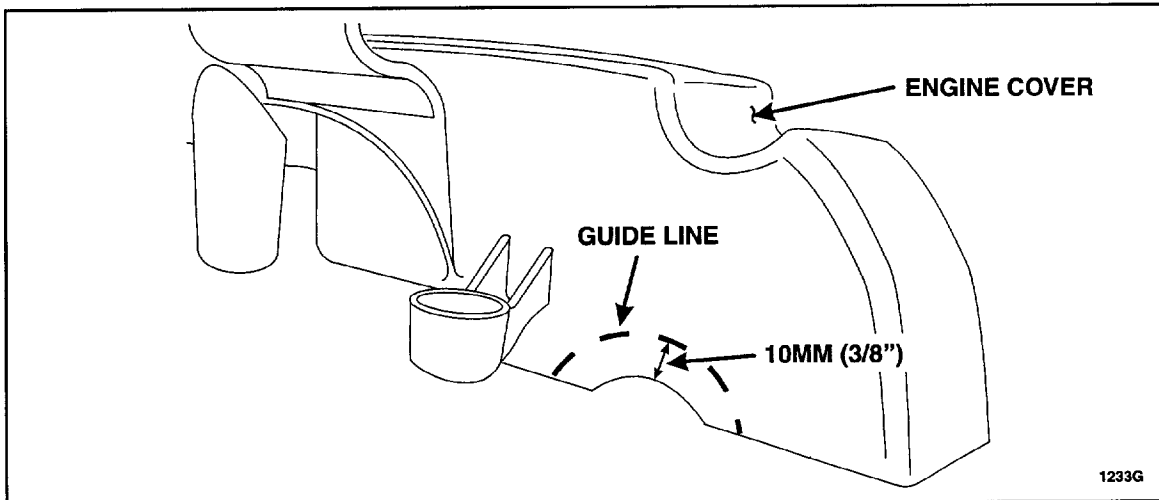
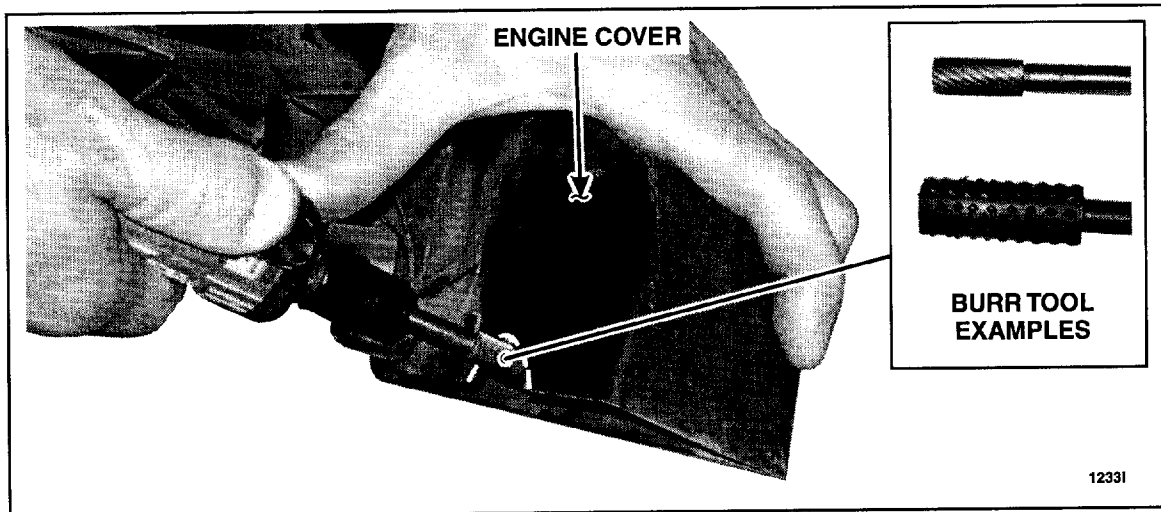


FIGURE 3



**NOTE:** Do not use hand tools or abrasive discs to cut the engine cover (hand tools will crack the engine cover and abrasive discs will melt the cover). Only high speed rotary burr tools should be used to modify the engine cover.

- Using a rotary burr tool, modify the engine cover by increasing the opening over the drive belt tensioner to the previously made guide line. See Figure 4.



**FIGURE 4**

- Reinstall the engine cover and tighten the three nuts. See Figure 1.

- Tighten the engine cover nuts to 6 Nm (53 lb-in).

- Return the vehicle to the customer.



## II. INTERIM REPAIR

1. Remove the three nuts and the engine cover. See Figure 1.

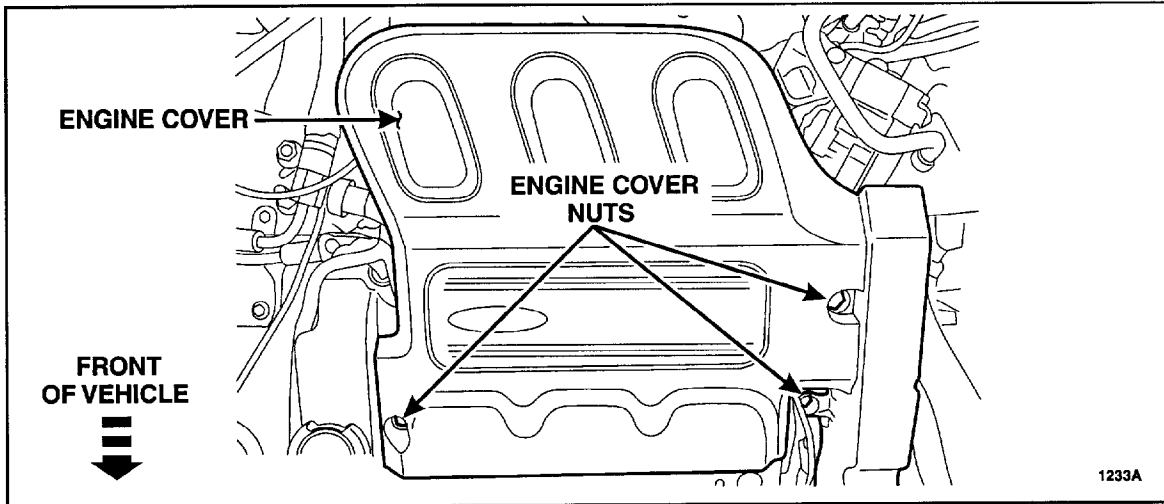


FIGURE 1

2. Slide the speed control cable off of the throttle body lever nail head. See Figure 2.

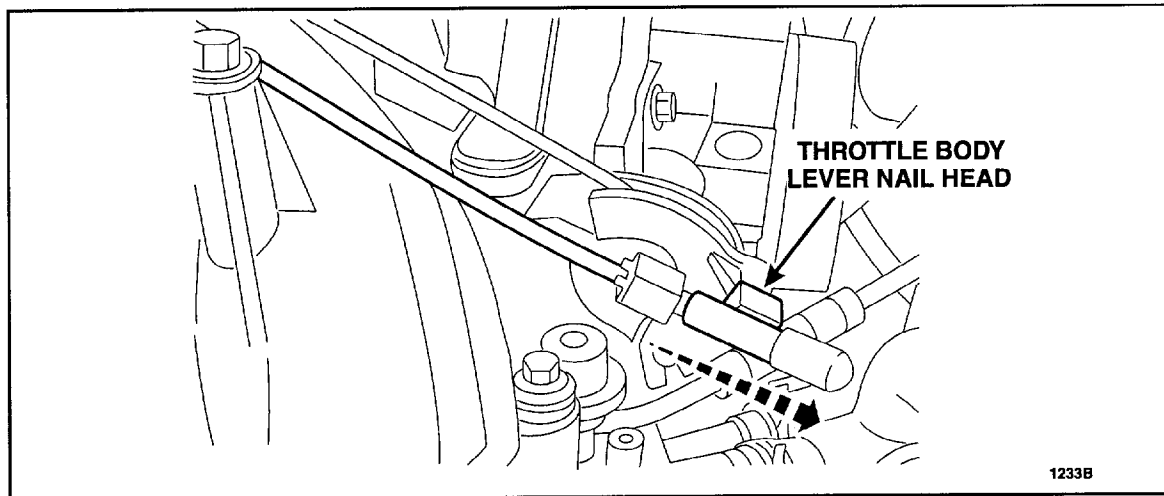


FIGURE 2





- Loosen the RH throttle cable bracket bolt and remove the LH throttle cable bracket bolt. See Figure 3. Rotate the bracket to allow enough clearance for the speed control cable to be positioned under the bracket.

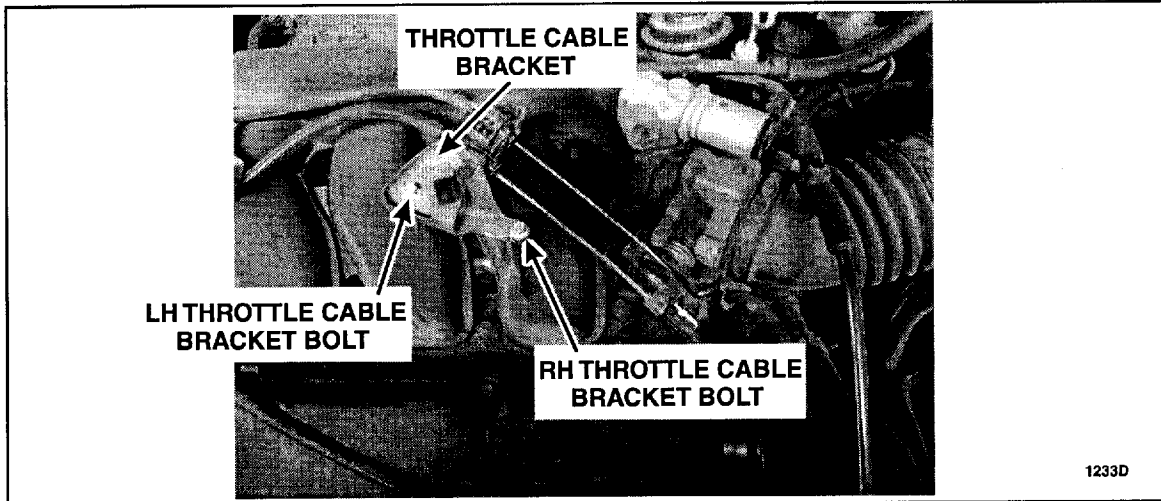


FIGURE 3

**NOTICE:** Do not bend the speed control cable in order to route it under the throttle cable bracket. The throttle cable bracket must be positioned aside or damage to the speed control cable may occur. See Figure 4.

- Route the speed control cable under the bracket as shown in "correct installation" below. See Figure 4.

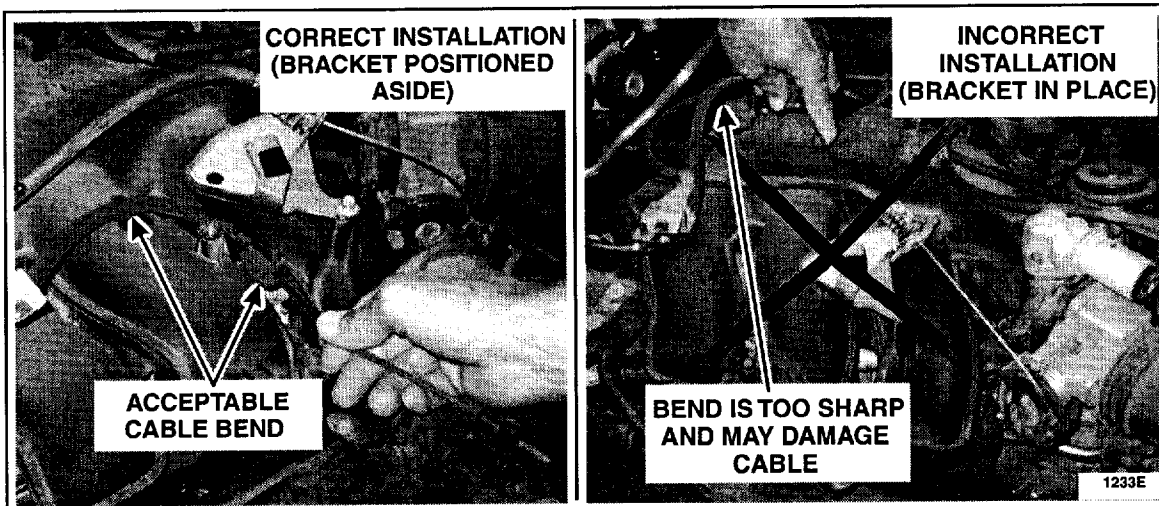
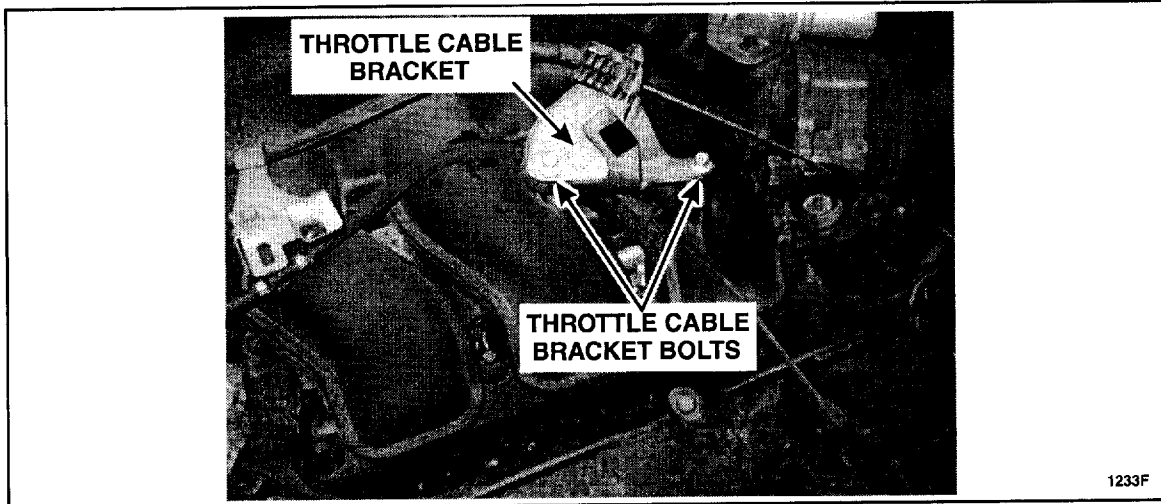


FIGURE 4



5. Reposition the throttle cable bracket and tighten both bolts. See Figure 5.

- Tighten the throttle cable bracket bolts to 10 Nm (89 lb-in).



**FIGURE 5**

6. Reinstall the engine cover and tighten the three nuts. See Figure 1.

- Tighten the engine cover nuts to 6 Nm (53 lb-in).

7. Return the vehicle to the customer and provide them with a copy of the Customer Information Sheet.



PE12-019

FORD

9-4-2012

APPENDIX G

SSM 15573 Final

**Article Number:** 15573

**Article Type:** S

**Global Concern Number:**

**Market(s):**

Area Code	Geo Sales Area	Date of Activation	Date of Deactivation
NA	***	01/29/2002	01/29/2012

**Title:**

THROTTLE BODY ICING - REPROGRAM PCM

**Text:**

SOME 2001 ESCAPE VEHICLES BUILT BEFORE 3/5/2001 EQUIPPED WITH A 3.0L DURATEC ENGINE MAY EXHIBIT ICING IN THE THROTTLE BODY. THIS MAY BE CAUSED BY CONDENSATION CONTAINED IN COMBUSTION GAS ENTERING THE INTAKE MANIFOLD, EITHER THROUGH PCV SYSTEM AND/OR EGR SYSTEM AND WHERE AMBIENT TEMPERATURES REACH 30-40 DEGREES BELOW ZERO. TO SERVICE, REPROGRAM THE PCM TO THE LATEST LEVEL CALIBRATION. REFER TO TSB 02-01-01 FOR THE PCM CALIBRATION INFORMATION CHART.

**Vehicles:**

2001 ESCAPE (00130)

**Symptom Code:**

600000 DRIVEABILITY  
606000 DRIVE-PERFORMANCE  
608000 DRIVEABILITY RUNS ROUGH  
609000 DRIVEABILITY MISSES  
610000 DRIVEABILITY BUCK/JERK  
611000 DRIVEABILITY HESITATION/STUMBLE  
611500 DRIVEABILITY HESITATION/STUMBLE - ACCELERATION  
614000 DRIVEABILITY LACK/LOSS OF POWER  
614500 DRIVEABILITY LACK/LOSS OF POWER - ACCELERATION

**Global Customer Symptom Codes:**

Category	Q1	Q2	Q3	Full Code
Driving Performance				5****
Driving Performance	Runs Rough			550***
Driving Performance	Runs Rough	Acceleration		5502**
Driving Performance	Runs Rough	Acceleration	Cold	550212
Driving Performance	Runs Rough	Cruise/ Steady Speed		5503**
Driving Performance	Runs Rough	Cruise/ Steady Speed	Cold	550312
Driving Performance	Lack/Loss of Power			554***
Driving Performance	Lack/Loss of Power	Acceleration		5542**
Driving Performance	Lack/Loss of Power	Acceleration	Cold	554212
Driving Performance	Hesitates/Stumble			557***
Driving Performance	Hesitates/Stumble	Acceleration		5572**
Driving Performance	Hesitates/Stumble	Acceleration	Cold	557212
Driving Performance	Engine Surge			558***
Driving Performance	Engine Surge	Acceleration		5582**
Driving Performance	Engine Surge	Acceleration	Cold	558212

PE12-019

FORD

9-4-2012

APPENDIX G

SSM 15800 Final

**Article Number:** 15800

**Article Type:** S

**Global Concern Number:**

**Market(s):**

Area Code	Geo Sales Area	Date of Activation	Date of Deactivation
AP	***	04/12/2002	07/30/2002
NA	***	04/12/2002	07/30/2002
SA	***	04/12/2002	07/30/2002
WD	***	04/12/2002	07/30/2002

**Title:**

ESCAPE 3.0L HIGH ACCELERATOR PEDAL EFFORT OFF IDLE

**Text:**

SOME 2001-2002 3.0L ESCAPE MAY EXHIBIT A HIGH ACCELERATOR PEDAL EFFORT JUST OFF IDLE OR TIP-IN. ENGINEERING IS CURRENTLY INVESTIGATING THIS CONDITION TO DETERMINE ROOT CAUSE THROUGH THE QUICKER SERVICE FIX (QSF) PROCESS. ADDITIONAL INFORMATION IS EXPECTED TO BE RELEASED BY EARLY THIRD QUARTER 2002. PLEASE CONTINUE TO SUBMIT EDSR'S AND TO MONITOR OASIS FOR UPDATED INFORMATION.

**Vehicles:**

2001-2002 ESCAPE (00130)

**Symptom Code:**

404000 ENGINE FUEL SYSTEM CONCERNS  
499000 ENGINE BASIC ENGINE  
610000 DRIVEABILITY BUCK/JERK  
610500 DRIVEABILITY BUCK/JERK - ACCELERATION  
611500 DRIVEABILITY HESITATION/STUMBLE - ACCELERATION  
612000 DRIVEABILITY SURGE  
612500 DRIVEABILITY SURGE - ACCELERATION

PE12-019

FORD

9-4-2012

APPENDIX G

SSM 16116 Final

**Article Number:** 16116

**Article Type:** S

**Global Concern Number:**

**Market(s):**

Area Code	Geo Sales Area	Date of Activation	Date of Deactivation
AP	***	08/09/2002	10/01/2003
NA	***	08/09/2002	01/24/2006
SA	***	08/09/2002	10/01/2003
WD	***	08/09/2002	01/24/2006

**Title:**

2001-2003 ESCAPE 3.0L - THROTTLE BODY SERVICE REPLACEMENT / TRANSMISSION VENT HOSE BRACKET INSTRUCTIONS

**Text:**

IF REPLACING A THROTTLE BODY ON A 2001-2003 ESCAPE EQUIPPED WITH A 3.0L ENGINE, REMEMBER TO REMOVE THE TRANSMISSION VENT HOSE SECURING BRACKET BOLT AND POSITION THE TRANSMISSION VENT HOSE AND BRACKET ASIDE. WHEN NEW THROTTLE BODY IS INSTALLED, RE-POSITION TRANSMISSION VENT HOSE AND BRACKET AND INSTALL THE BOLT AND TIGHTEN TO 10 NM (89 LB-IN).

**Vehicles:**

2001-2003 ESCAPE (00130)

**Symptom Code:**

404000 ENGINE FUEL SYSTEM CONCERNS  
490000 ENGINE PUBLICATION REVISIONS/UPDATES  
499000 ENGINE BASIC ENGINE  
610000 DRIVEABILITY BUCK/JERK  
610500 DRIVEABILITY BUCK/JERK - ACCELERATION  
611000 DRIVEABILITY HESITATION/STUMBLE  
611500 DRIVEABILITY HESITATION/STUMBLE - ACCELERATION  
612000 DRIVEABILITY SURGE  
612500 DRIVEABILITY SURGE - ACCELERATION  
619400 DRIVEABILITY IDLE - FAST IDLE



PE12-019

FORD

9-4-2012

APPENDIX H

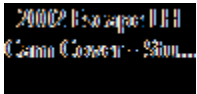
Non Con - Illustrations

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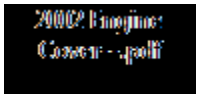
**From:** Forbes, Bob (.)  
**Sent:** Tuesday, July 17, 2012 5:04 PM  
**To:** Lirette, David (D.F.)  
**Subject:** 2002-2004 Escape LH Cam Cover - Longer StudBolts...~10mm taller

Dave,  
Can you come up with a M5 StudBolt solution....~10mm Taller....so the Engine Cover could be ~10mm higher off the Engine?

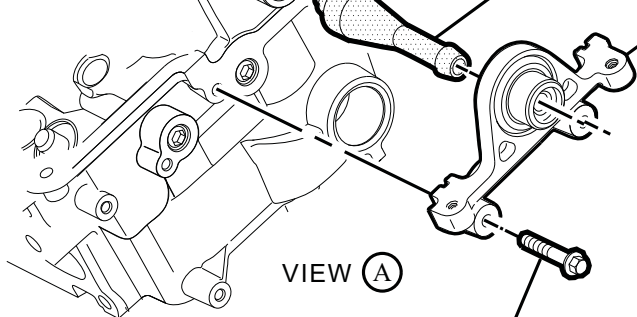
-YL8E-6A505-CE Cam Cover-LH pictured in 543:



-Engine Cover installed per 1271 Illustration:



Regards,  
Bob Forbes.....Global Engine Engineering-Dearborn.....Intake Systems & Engine NVH Covers  
Design Engineer  
Ford Motor Company  
Cell 313-805-9869



-6B293-  
RETAINER ASY-  
CAMSHAFT REAR SEAL  
**NOTE:**  
INSTALL PRIOR TO  
CAMSHAFT COVER ASY  
**NOTE:**  
USE A PILOT TOOL  
TO PROTECT "LIP"  
FROM DAMAGE.

**NOTE:**  
SEE FRAME 21A FOR  
TORQUE SEQUENCE.

LEFT SIDE \_\_\_\_\_ S  
RIGHT SIDE \_\_\_\_\_ TY

VIEW (A)

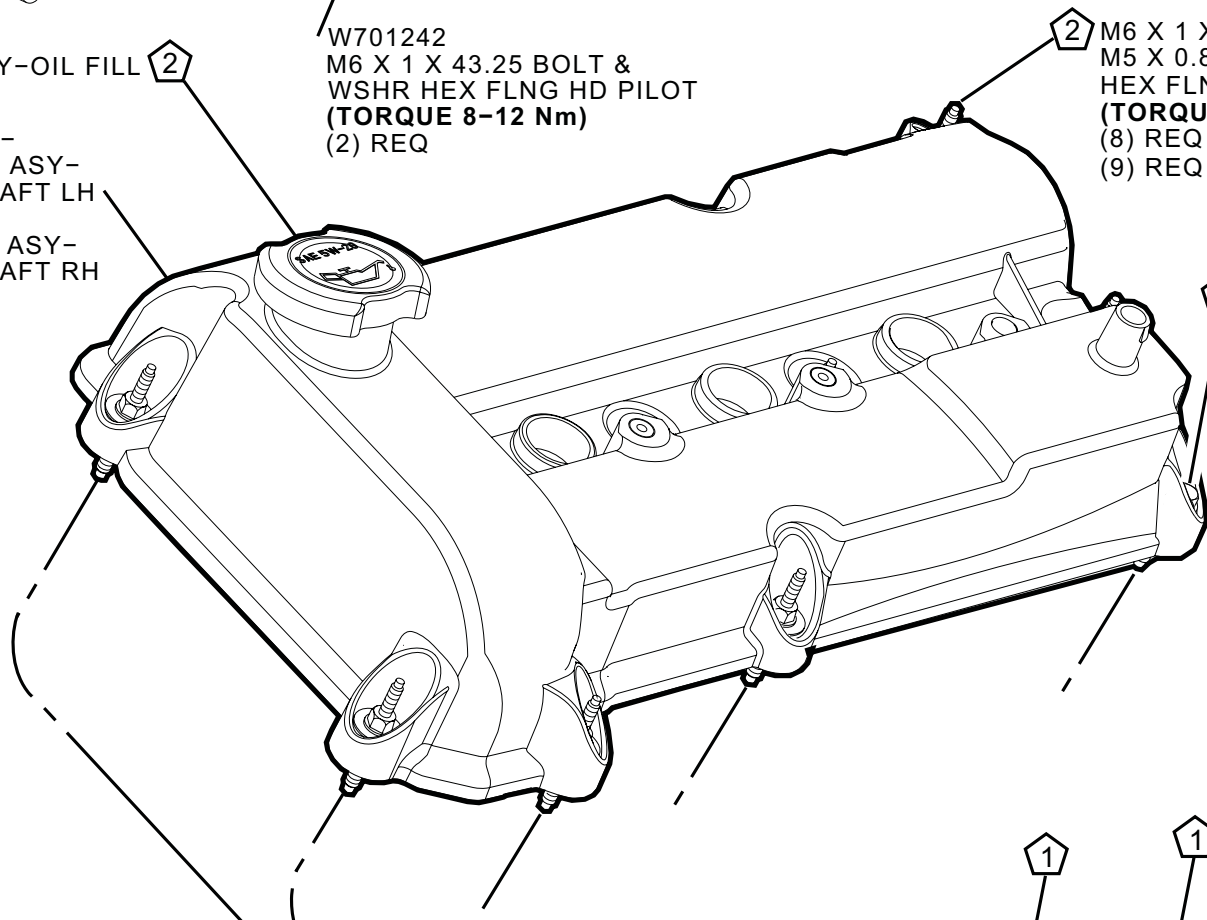
CAP ASY-OIL FILL (2)

W701242  
M6 X 1 X 43.25 BOLT &  
WSHR HEX FLNG HD PILOT  
(TORQUE 8-12 Nm)  
(2) REQ

(2) M6 X 1 X 34/  
M5 X 0.8 X 21 STUD  
HEX FLNG PILOT  
(TORQUE 8-12 Nm)  
(8) REQ (LH)  
(9) REQ (RH)

-6A505-  
COVER ASY-  
CAMSHAFT LH  
-6582-  
COVER ASY-  
CAMSHAFT RH

(2) M6 X 1 X 34 E  
HEX FLNG PI  
(TORQUE 8-1  
(3) REQ (LH)  
(1) REQ (RH)



(1) **NOTE:**  
APPLY (8mm) DIAMETER DROP  
OF WSE-M4G323-A6 SEALER  
TO FRONT COVER GASKET  
INTERSECTION (6) PLACES  
(2 PER RH VALVE COVER ASY).  
(4 PER LH VALVE COVER ASY).

(1) (RETAINER ASY-  
CAMSHAFT RE

(COVER ASY-  
FRONT)

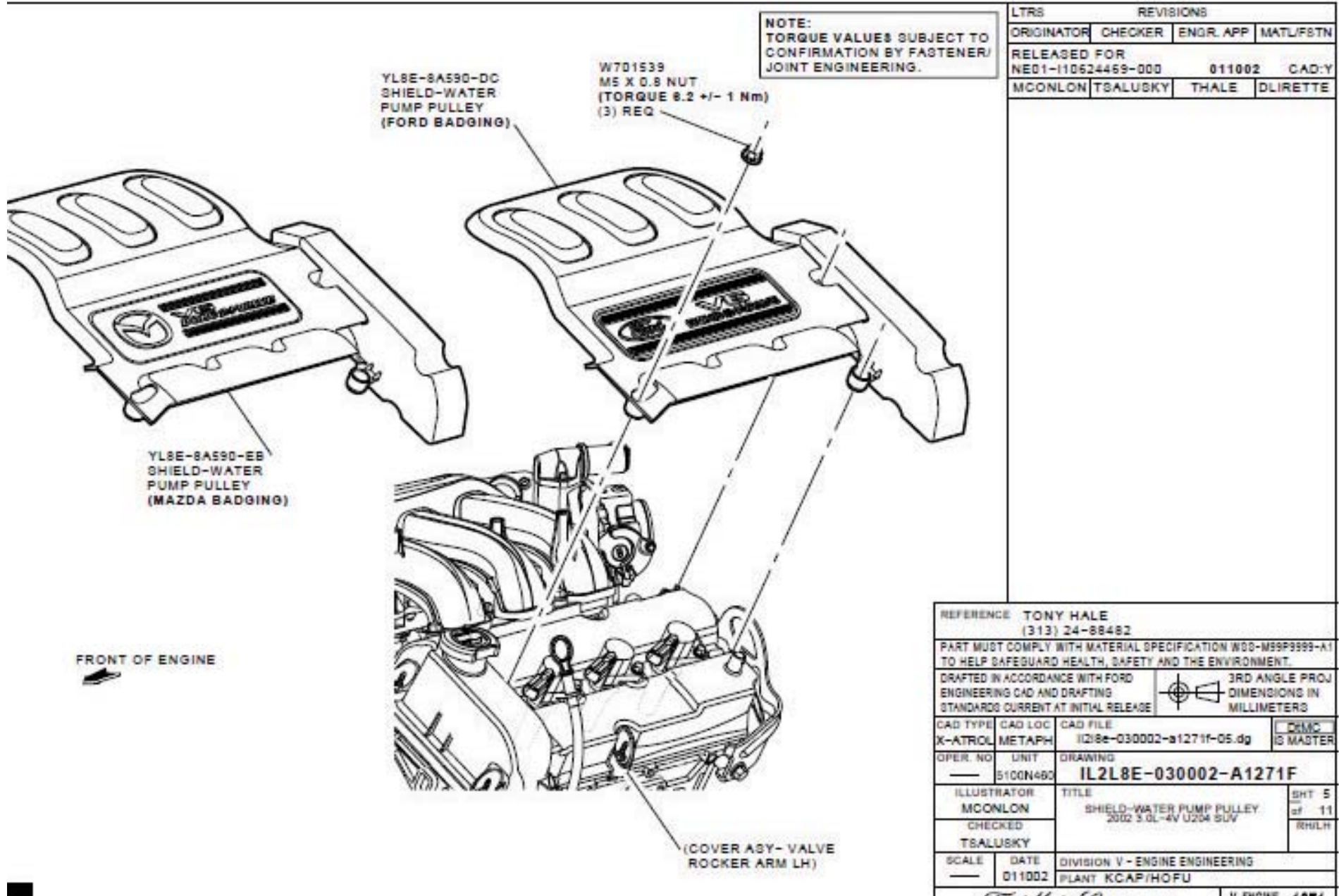
**NOTE:**  
TORQUE ALL VALVE COVER  
FASTENERS WITHIN (6)  
MINUTES OF APPLYING  
WSE-M4G323-A6 SEALER  
WHEN (6) MINUTE CRITERIA  
CANNOT BE MET: **PRE-TORQUE**  
ALL FASTENERS TO (3 Nm)

(HEAD  
CYLI

FRONT OF ENGINE

PE12-019 001617

\*\*\*\*\*2002



**NOTE:**  
TORQUE VALUES SUBJECT TO  
CONFIRMATION BY FASTENER/  
JOINT ENGINEERING.

YL8E-8A590-DC  
SHIELD-WATER  
PUMP PULLEY  
(FORD BADGING)

W7D1539  
MS X 0.8 NUT  
(TORQUE 8.2 +/- 1 Nm)  
(3) REQ

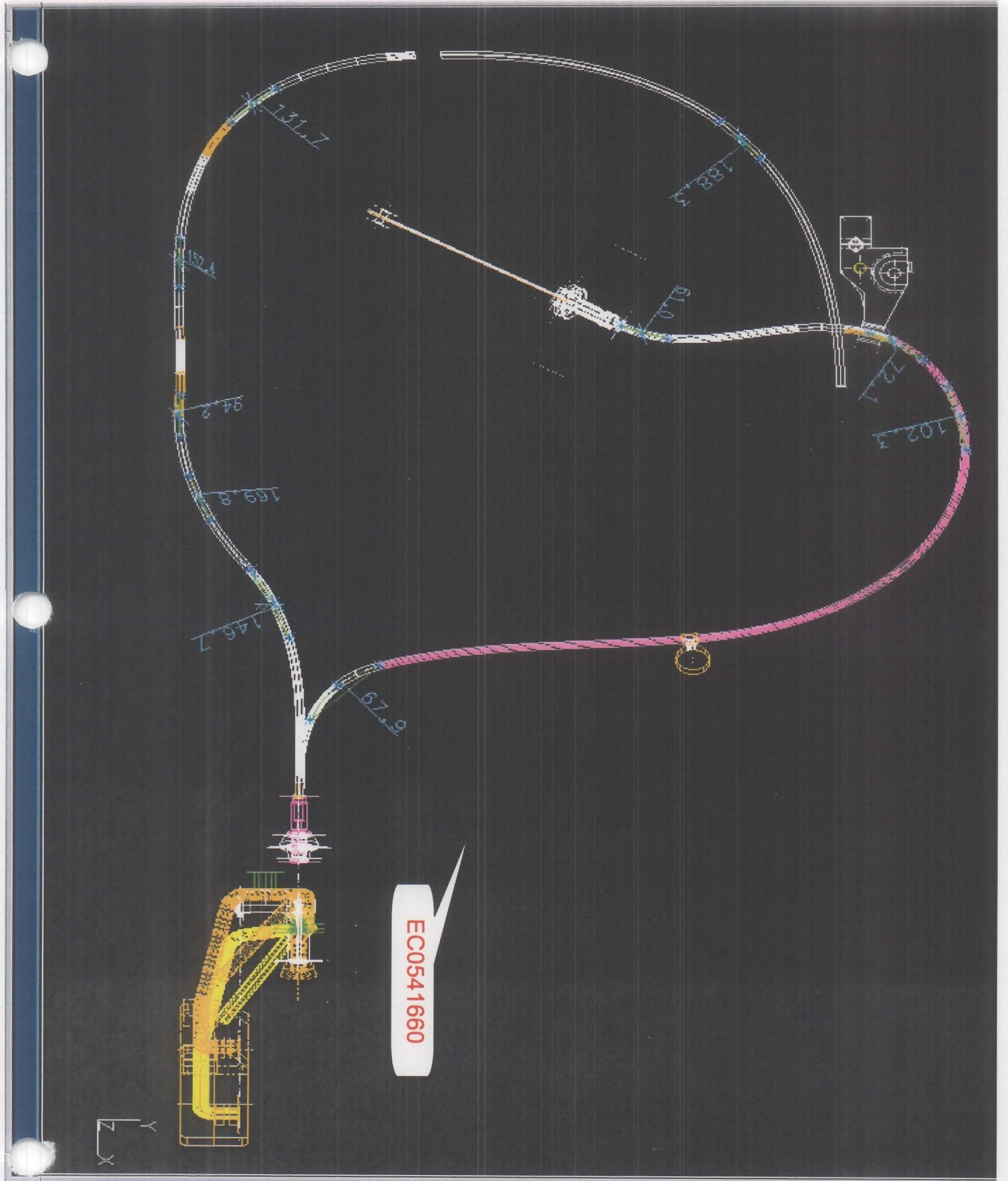
YL8E-8A590-EB  
SHIELD-WATER  
PUMP PULLEY  
(MAZDA BADGING)

(COVER ASY- VALVE  
ROCKER ARM LH)

FRONT OF ENGINE

LTRS		REVISIONS	
ORIGINATOR	CHECKER	ENGR. APP	MATL/FSTN
RELEASED FOR		011002	CAD:Y
NE01-110624469-000			
MCONLON	TSALUSKY	THALE	DLIRETTE

REFERENCE		TONY HALE (313) 24-88482	
PART MUST COMPLY WITH MATERIAL SPECIFICATION W00-M99P9999-A1 TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT.			
DRAFTED IN ACCORDANCE WITH FORD ENGINEERING CAD AND DRAFTING STANDARDS CURRENT AT INITIAL RELEASE		3RD ANGLE PROJ DIMENSIONS IN MILLIMETERS	
CAD TYPE	CAD LOC	CAD FILE	<input type="checkbox"/> DIMC <input checked="" type="checkbox"/> IS MASTER
X-ATROL	METAPH	IL2L8E-030002-a1271f-05.dg	
OPER. NO	UNIT	DRAWING	
---	5100N480	<b>IL2L8E-030002-A1271F</b>	
ILLUSTRATOR	TITLE		SHT 5 of 11
MCONLON	SHIELD-WATER PUMP PULLEY 2002 3.0L-4V U204 SUV		RHLH
CHECKED			
TSALUSKY			
SCALE	DATE	DIVISION V - ENGINE ENGINEERING	
---	011002	PLANT KCAP/HOFU	



EC0541660

X  
Y  
Z



---

**From:** Abbasi, Basel (B.A.)  
**Sent:** Monday, March 31, 2003 10:12 AM  
**To:** Vazquez, Francisco (F.M.)  
**Cc:** Bess, Raynard (R.); Liposky, Lawrence (L.J.); McCarthy, Fran (F.); Weber, Michael (M.J.)  
**Subject:** Here is the area of the cable to look at while you're at the Ficosa Plant

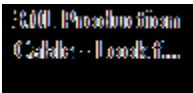
Francisco,(cable STA)

Based on our phone conversation, here is a picture of the 3.0L Escape current production accel cable which points out the area to look at close while you are at the Ficosa plant.

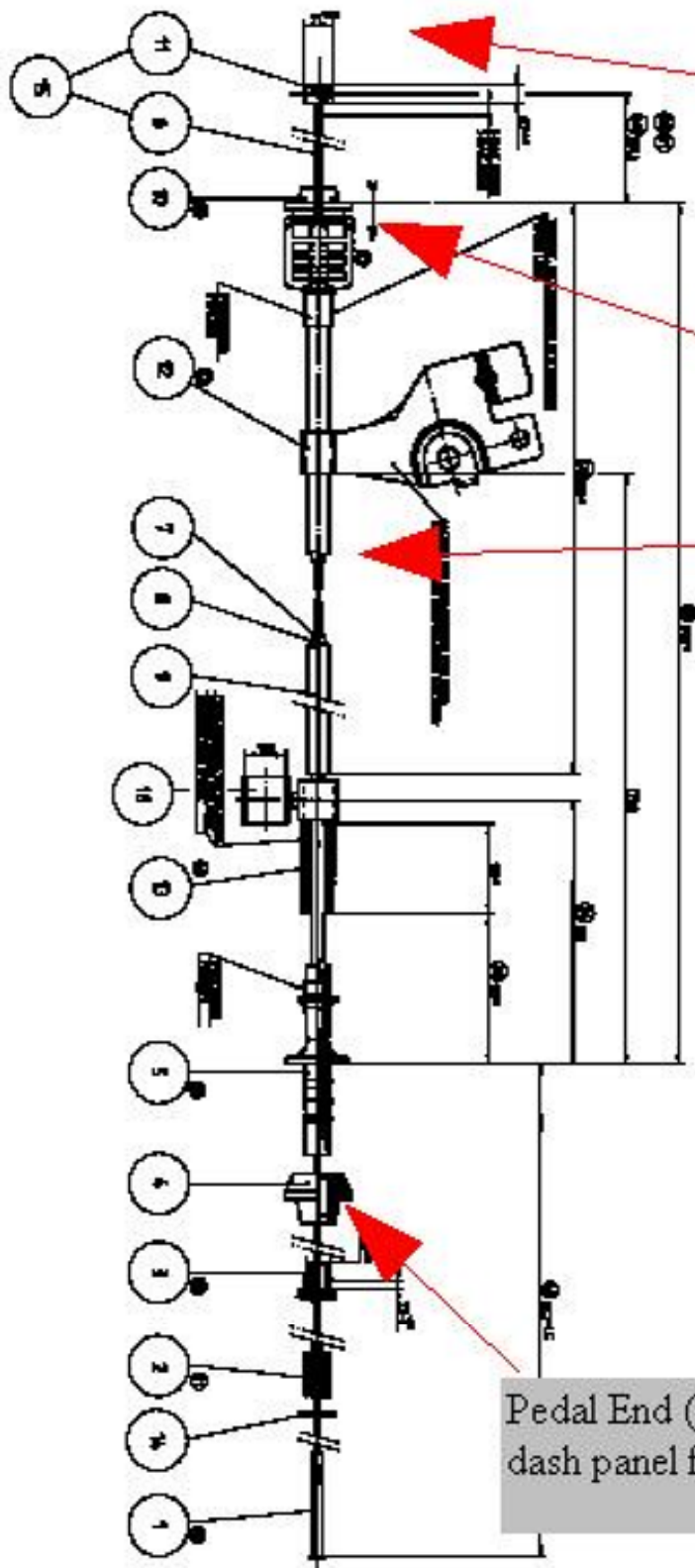
The issue we are primarily looking at is the core wire near the throttle body end. (see picture)

One way to do this, (in addition to the things you normally look for), would be to watch a cable going through the entire process and seeing if there is any opportunity to nick the core wire or somehow damage it to the point where its so small, that no one would notice, but it would cause a problem down the road.

Thanks for the help with this!



Basel Abbasi  
Escape-U204 Design & Release  
Accelerator & Speed Control System  
Outfitters Stationary Components  
(313)-59-41866



Throttle Body End

Issue we are looking for is with the core wire in this area. (Between the 2 arrows)

Pedal End (This end has the rubber dash panel fitting)

3.0L Current Production Escape  
YL84-9A758-AF

**From:** [Liebling, Douglas \(D.E.\)](#)  
**To:** [Abbasi, Basel \(B.A.\)](#)  
**Subject:** Tribute Throttle Cable  
**Date:** Tuesday, July 27, 2004 9:48:24 AM  
**Attachments:** [Tribute Thr Cable\\_040727.basel](#)

---

See attached. (Change file extension from "basel" to "zip", then open.)

There are a variety of files included; stuff I used to try to gauge scope/scale of issue, including part sales ("41660" is base PN for Tribute throttle cable).

Since this is not really authorized data sharing, please be careful how you use it and whom you share it with.

I still haven't been able to use ECI effectively to extract data related to this topic.

**Doug Liebling**

**Product Support Engineer**

**MNAO-Kansas City Assy. Plant**

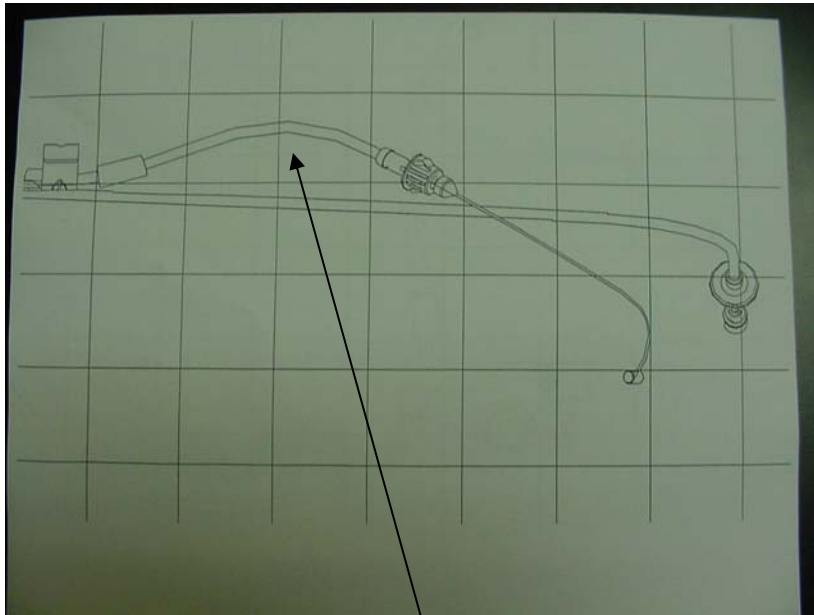
**Mark all packages "General Stores: SUV PVT!"**

**8121 N.E. Hwy. 69, Claycomo, MO 64119**

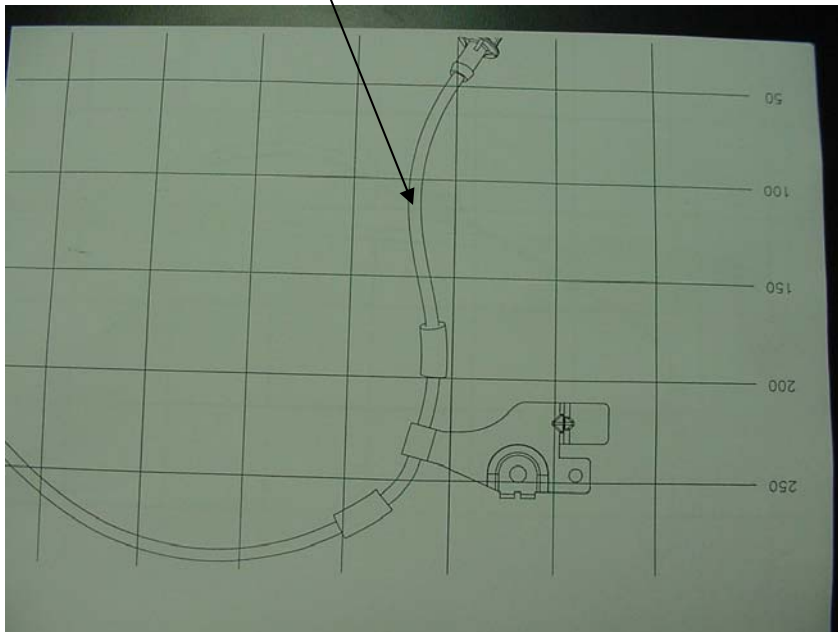
**Ph: 816.459.1623 Fax: 816.459.1728**

**dlieblin@mazdausa.com, dlieblin@ford.com**





No sharp bend in routing provided by Mazda



PE12-019

FORD

9-4-2012

APPENDIX H

Non Con - Vehicle Inspections

---

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, April 07, 2005 12:41 PM  
**To:** Naro, Kevin (K.S.)  
**Cc:** Liposky, Lawrence (L.J.); Patel, Bharat (B.J.); Abbasi, Basel (B.A.); Peeler, Tom (T.H.);  
Burke, Pauline (P.F.)  
**Subject:** RE: Out of Control Vehicle!  
**Attachments:** FW: Assignment 05-070 Inspection of 2004 Escape Throttle Cable

Hi Kevin,

Please call me after you take a glance at the attached document.

After analyzing the pictures, our conclusion is that this vehicle was abused. Normally, the accelerator pedal should not touch the floor mats. The witness marks indicate that the accelerator pedal was pushed beyond normal use, bending the attachment arm, and touching the floor mat. In this situation, the pedal can catch on the floor mat causing the unintended acceleration noted by the customer.

Is this vehicle still available for us to look at?

Thank you.

*Pauline Burke*  
*Critical Concern Engineer - North American Car*  
*Master Black Belt*  
*Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807*

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-----Original Message-----

**From:** Naro, Kevin (K.S.)  
**Sent:** Thursday, March 17, 2005 4:14 PM  
**To:** Burke, Pauline (P.F.)  
**Subject:** RE: Out of Control Vehicle!

Dale Jarrett Ford  
88 Dale Jarrett Blvd.  
Indian Trail, North Carolina 28079  
Ph. 704-283-8521

We are buying it back through my counterpart Jane Evans in the Chicago region that contacts Wheels, the lease management company that technically owns the unit.

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, March 17, 2005 4:07 PM  
**To:** Naro, Kevin (K.S.)  
**Cc:** Burke, Pauline (P.F.); Peeler, Tom (T.H.)  
**Subject:** FW: Out of Control Vehicle!

Hi Kevin,

We cannot find this vehicle. Do you have any idea where it is? Barb Lowe suggested that you were buying it back.

I would like to have our Field Quality Engineer examine it as soon as possible. Could you please help us locate it?

Thank you very much.

**Pauline Burke**

**Critical Concern Engineer - NAC**

**Master Black Belt**

**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Burke, Pauline (P.F.)

**Sent:** Wednesday, March 16, 2005 12:01 PM

**To:** 'Barb.Lowe@Scotts.com'

**Cc:** Burke, Pauline (P.F.); Peeler, Tom (T.H.)

**Subject:** FW: Out of Control Vehicle!

Hello Barb,

Could you please have someone take this vehicle to the dealership, DALE JARRETT FORD, for a Ford representative to inspect?

If you call them at (704) 283-8521, and speak to the Service Manager, they will have a rental vehicle waiting for you.

Please let me know when the vehicle will be taken in.

Thank you very much.

**Pauline Burke**

**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Lowe, Barb [mailto:Barb.Lowe@Scotts.com]

**Sent:** Thursday, March 10, 2005 11:31 AM

**To:** Naro, Kevin (K.S.)

**Subject:** FW: Out of Control Vehicle!

**Importance:** High

Kevin - more info for you.

**Barb Lowe**

**The Scotts Company**

**937/644-7459**

-----Original Message-----

**From:** Mainess, Mike

**Sent:** Thursday, March 10, 2005 4:16 AM

**To:** Lowe, Barb; Gearhart, Beverley

**Cc:** Pace, Dan; Kincaid, Nelson

**Subject:** FW: Out of Control Vehicle!

**Importance:** High

[REDACTED],

As per our phone conversation yesterday, please read the below from my SMM [REDACTED]. As we discussed in January and again yesterday, it appears there is a major...major problem with [REDACTED] company vehicle. As [REDACTED] writes below, he no longer feels safe driving his Ford Escape company vehicle.

**Mike Mainess**  
**District 15 Manager**  
**Scotts Home Center Team**

-----Original Message-----

**From:** [REDACTED]  
**Sent:** Wednesday, March 09, 2005 11:37 PM  
**To:** Mainess, Mike; Pace, Dan  
**Subject:** Out of Control Vehicle!  
**Importance:** High

**Mike & Dan,**

Last night March 8th 2005 around 10:05pm while driving to my Lancaster, SC Depot on Hwy 521 to work an over-nighter, the 2004 Ford Escape that I drive begin to **Accelerate Out of Control Again** just as I approached an intersection to stop. I was traveling at about 55mph when this happen. The SUV started to accelerate to speeds over 75mph in a matter of seconds. To avoid running the intersection I was literally standing on my brakes, as I was doing that the truck shifted to the right causing me to veer into the ditch on the right side of the road causing both the front and rear tires on the passenger side of the vehicle to blow. When the Hwy Patrolman came he said that the trail of **skid marks was about 200 plus feet long** before I went off the road. Mike& Dan this is **not** the first time that this vehicle has done this and is a **MAJOR CONCERN** to the point that **I Don't Feel Safe at All driving this vehicle**. I have service records from **FOUR** different times that this Escape has been in the shop after almost causing me to wreck.

**Vehicle ID # 1FMYU02184K [REDACTED]**  
**2004 Ford Escape**

**May 5, 2004 (Repaired Date)**

On Monday May 4th 2004 10:00am I was traveling down Hwy 485S going about 60mph when my Ford Escape begin to accelerate to speed in excess of 85mph as I was exiting up off the Providence Rd exit. Without being able to slow down I had to run across the intersection (threw a red light) and down the ramp on the other side of the Hwy before I could get the vehicle to stop about a mile down the Hwy later. I call Wheels and they arranged for the truck to be fixed by a local Ford dealer. The dealers service record stated: **CUSTOMER STATES THROTTLE STICKS ON ACCELERATION; ROAD TESTED TO VERIFY. LED TO REMOVE AND REPLACE THROTTLE BODY ASSEMBLY PER STICKING AT TIMES. REMOVED AND REPLACED, CORRECTED CONCERN.**

**November 15, 2004 (Repaired Date)**

On Sunday November 14th 2004 My family and I were traveling up Hwy 485N going about 65mph when my Ford Escape begin to accelerate to speeds in excess of 90mph. This time I was pulled over by a Hwy Patrol that was setting on the opposite side of the Hwy and turned around to come after me. It took me several miles to slow the vehicle down. This made the Hwy Patrol very angry at me as he walked up to the car. When I explained to him that I could not slow the SUV down he said "SURE" and wrote me a ticket for going 81mph in a 65mph zone. The Patrolman stated that the DA would dismiss the ticket if I was telling the truth! I call Wheels and once again they had the vehicle taken to a local Ford Dealer. The dealers service record stated: **CUSTOMER STATES ACCELERATOR STICKING. WILL ACCELERATE EVEN WHEN LETTING OFF GAS. ROAD TESTED AND VERIFIED CONCERN REMOVED T-BODY AND CK CABLE OPERATION REPLACED THROTTLE-BODY.**

**January 19, 2005 (Repaired Date)**

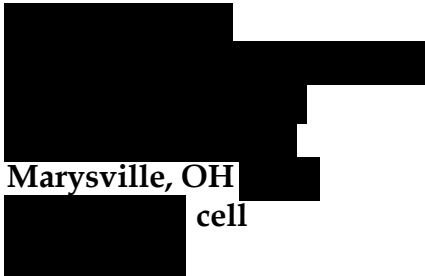
On Tuesday January 18th 2005 while sitting at a light the engine started to rev very high and as the light changed my Ford Escape took off as soon as I pressed the accelerator and continued to climb to speeds over 50mph. I was able to get it to stop by shutting the SUV off, and standing on the brakes before hitting the vehicle in front of me. Once again I called

Wheels and they arranged for the vehicle to go to the Ford dealer. The dealer's service record stated: **CUSTOMER STATED THROTTLE STICKING ENGINE RUNNING WIDE OPEN. REPLACED ACCELERATOR & CABLE. RECALL WORK DONE.**

**This is a VERY SERIOUS ISSUE. I no longer allowed my family to ride in this vehicle after the Second time the Throttle/Cable/Accelerator mal-functioned and now I NO LONGER FEEL SAFE driving this SUV. I think that something needs to be done to reach a conclusion on this problem with this vehicle! It is NOT SAFE and I'm Very Lucky that something MORE SERIOUS or FATAL has not happen to My Family or Myself or even worst Someone else on the road. Please help me address this on going issue!**

I have included pictures of the passenger side tires and the throttle cable that broke from the latest problem on the night of January 8th 2005. I also have detailed service records that show that there has been Clearly a Problem with this vehicle. I have been trying not to complain about this vehicle but this last time has been Enough for Me. Also today when I showed up to the Dealership today to pick up my rental car there was a gentleman in a suit that said he was a Ford Motor Company Rep. He want to engage me in conversation about this vehicle. He had all the service records with him. I told him " You should contact Scotts or Wheels to get your questions answered". The gentleman continued to apologize to me for my troubles and then left.

<<DSCF0135.JPG>> <<DSCF0136.JPG>> <<DSCF0137.JPG>> <<DSCF0138.JPG>> <<DSCF0139.JPG>>





TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005

TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005





TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005

TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005

ACCELERATOR PEDAL

WHITNESS MARKS



TOM PEELER FQE ATLANTA

1FMYU02184K [REDACTED]

3/18/2005



WITNESS MARKS AT  
ACCELERATOR PEDAL  
ON CARPET AT FULL  
THROTTLE

TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005

WHITNESS MARKS FROM ACCELERATOR  
PEDAL ROD AT WIDE OPEN THROTTLE.



TOM PEELER FQE ATLANTA  
1FMYU02184K [REDACTED]  
3/18/2005

---

**From:** Burke, Pauline (P.F.)  
**Sent:** Friday, April 08, 2005 8:48 AM  
**To:** Liposky, Lawrence (L.J.); Abbasi, Basel (B.A.)  
**Subject:** FW: Assignment 05-070 Inspection of 2004 Escape Throttle Cable

Fyi ...

**Pauline Burke**  
**Critical Concern Engineer - North American Car**  
**Master Black Belt**  
**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Peeler, Tom (T.H.)  
**Sent:** Friday, April 08, 2005 8:02 AM  
**To:** Burke, Pauline (P.F.)  
**Subject:** RE: Assignment 05-070 Inspection of 2004 Escape Throttle Cable

Picture "D" is the plastic engine cover on top of the engine. It looked like the cover had been pulled up to take the pictures the driver had taken that were sent in his e-mail.

Tom Peeler  
Field Quality Engineer, Atlanta  
Service Engineering Operations  
Ford Customer Service Division  
[tpeeler@ford.com](mailto:tpeeler@ford.com)  
770-632-1105  
770-632-1106 fax  
678-358-8758 cell

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, April 07, 2005 12:44 PM  
**To:** Peeler, Tom (T.H.)  
**Cc:** Burke, Pauline (P.F.)  
**Subject:** FW: Assignment 05-070 Inspection of 2004 Escape Throttle Cable

Tom,

What is picture 4 showing me? What part is cracked here?

Thanks.

**Pauline Burke**  
**Critical Concern Engineer - North American Car**  
**Master Black Belt**  
**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** McDonald, Joseph (J.)



**Sent:** Monday, March 21, 2005 2:06 PM  
**To:** Burke, Pauline (P.F.); Abbasi, Basel (B.A.)  
**Subject:** FW: Assignment 05-070 Inspection of 2004 Escape Throttle Cable

FYI

-----Original Message-----

**From:** Peeler, Tom (T.H.)  
**Sent:** Monday, March 21, 2005 1:50 PM  
**To:** McDonald, Joseph (J.)  
**Subject:** Assignment 05-070 Inspection of 2004 Escape Throttle Cable

Inspected 2004 Escape (1FMYU02184K [REDACTED]) at Dale Jarrett Ford for alleged run away condition. The following were noted in the inspection:

- No DTC codes were recorded
- Accelerator pedal looked normal with no interference problem from carpet (pic a)
- Top of accelerator pedal rod and cable going thru bulkhead looked normal (pic b)
- Spacing between brake pedal and accelerator pedal was about 72 mm
- Vehicle has cruise control and looked normal
- The throttle cable was router properly (pic c)
- The engine cover was broken on the drivers side in the middle. Looked like it was broken when the cover was pulled up to take pictures. (pic d)
- Whiteness marks where the accelerator pedal made contact with the carpet at full throttle (pic e & f)
- Witness marks where the accelerator pedal rod contacted the ring around the steering column at full throttle (pic g)

The throttle cable that was replaced under service action 04S25 is being returned to Basel Abbasi. I did not drive the vehicle as it had the space saver spare tire on the right rear.

<< File: 4KA61406 A.JPG >> << File: 4KA61406 B.JPG >> << File: 4KA61406 C.JPG >> << File: 4KA61406 D.JPG >> << File: 4KA61406 E.JPG >> << File: 4KA61406 F.JPG >> << File: 4KA61406 G.JPG >>

Tom Peeler  
Field Quality Engineer, Atlanta  
Service Engineering Operations  
Ford Customer Service Division  
[tpeeler@ford.com](mailto:tpeeler@ford.com)  
770-632-1105  
770-632-1106 fax  
678-358-8758 cell

**From:** [Basler, Carl \(C.F.\)](#)  
**To:** [Abbasi, Basel \(B.A.\)](#)  
**Cc:** [Basler, Carl \(C.F.\)](#)  
**Subject:** HERTZ-INSPECT-  
**Date:** Tuesday, March 02, 2004 10:01:31 AM  
**Attachments:** [Vehicle\\_InspectionHERTZ.doc](#)

---

BASEL--I AM SENDING THE INSPECTION REPORT--I NEED A FAX NUMBER  
FOR THE REST OF THE FILE.  
HAVE A NICE DAY--CARL

Carl F. Basler--Field Serv. Eng.  
FORD MOTOR CO. (FCSD)  
K.C.REG/ST.LOUIS MAL.  
Phone-314-569-4479  
HMOF/Fax-314-845-9997  
[cbasler@ford.com](mailto:cbasler@ford.com)





## Vehicle Inspection Report

Customer Name: [REDACTED] Date of Inspection: 2/3/04  
Dealership: HERTZ-ST. LOUIS AIRPORT VIN # 1FMYU93184K [REDACTED]  
City & State: ST. LOUIS, MO. Vehicle Year/Type: 04-ESCAPE  
Inspection By: C F BASLER-FSE-K.C.REGION Mileage: 5067  
DSB Case #: NONE:

**Customer's Concerns: (List all on customer's application)**  
CUSTOMER ALLEDGED THAT WHEN PASSING ANOTHER CAR THE THROTTLE STUCK OPEN, AND CAUSED UNIT TO SPEED UP TO 110 MPH.—SEE LETTER FOR DETAILS--

**Inspection/Test Performed/Results: (List all customer concern's separately)**  
UNIT WAS INSPECTED AND TESTED BY [REDACTED] ON 12/10/03-AT 661 MILES—COULD NOT VARYFY CONCERN—SEE RO #21556776 FOR DETAILS-  
UNIT AGAIN INSPECTED ON 2/3/04 BY CF BASLER-FSE-FORD MOTOR CO-FCSD-KC.REG-ST.LOUIS MAL—AGAIN COULD NOT VARYFY ANY ABNORMAL CONCERNS.  
ALL THROTTLE AND LINKAGE AND PEDAL COMPONENTS INSPECTED, NO ABNORMAL CONCERNS VARYFIED. TEST DRIVE UNIT FOR THROTTLE RESPONSE AND OVERALL UNIT PERFORMANCE—UNIT PERFORMED OK-UNIT MEETS DESIGN INTENT WHEN COMPARED TO LIKE UNITS.

**Repairs Performed: (Per concern)**  
NO FORMAL REPAIRS WERE PERFORMED ON THIS DATE, OR AFTER PREVIOUS INSPECTION BY THE [REDACTED]. NO CONCERNS WERE VARYFIED.

**Conclusion: NO FURTHER ACTION WAS TAKEN AND THE UNIT WAS RELEASED TO BE PUT BACK IN SERVICE—PLEASE ADVISE IF I CAN BE OF FURTHER ASSISTANCE.**

---

Name C.F.BASLER  
Title FSE/FCSD  
Region KANSAS CITY

REGION

*WHEN REPLYING VIA E MAIL, PLEASE USE THE "FORWARD" OPTION, NOT "REPLY"*

---

**From:** Burke, Pauline (P.F.)  
**Sent:** Friday, July 01, 2005 8:53 AM  
**To:** Liposky, Lawrence (L.J.); Abbasi, Basel (B.A.)  
**Cc:** Burke, Pauline (P.F.)  
**Subject:** RE: Accel. cable

**Importance:** High

Here is the accident report.



If you can give me an interpretation this morning, I can forward it to Tom King who will handle it with the fleet company. His team works next week.

Thanks so much. Have a great holiday.

**Pauline Burke**  
**Critical Concern Engineer - North American Car**  
**Master Black Belt**  
**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Liposky, Lawrence (L.J.)  
**Sent:** Friday, July 01, 2005 5:37 AM  
**To:** Burke, Pauline (P.F.)  
**Subject:** RE: Accel. cable

ok

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, June 30, 2005 3:49 PM  
**To:** Liposky, Lawrence (L.J.)  
**Cc:** Burke, Pauline (P.F.)  
**Subject:** RE: Accel. cable

Tom just left a message that he will send it tomorrow. The lady that has it has left for the day.

**Pauline Burke**  
**Critical Concern Engineer - North American Car**  
**Master Black Belt**  
**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, June 30, 2005 2:34 PM  
**To:** Liposky, Lawrence (L.J.)

**Subject:** Accel. cable

Tom King (TKING1) is faxing me the report. I'll send it to you. His number is 1-313-3376741. He will need your expert opinion on the incident so that he can respond to the fleet customer.

***Pauline Burke***

***Critical Concern Engineer - North American Car***

***Master Black Belt***

***Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807***

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**Mini-FAX Transmittal**      Date: 7-1      Pages: 3

TO: Pauline Burke      FROM: Alma Taylor

BLDG.      RM.      BLDG.      RM.

TELEPHONE      TELEPHONE 317-1862

FAX NO. 86312      FAX NO.

B-ALISO VIEJO

0002

201795

### MOTIVE ENGINEERING

3085 Playa Ave. • Costa Mesa, California, 92626  
Phone (714) 444-3224 • Fax (714) 444-3084

June 14, 2005

TO: Alma Taylor  
 From: Jane Evans.  
 3 pgs.  
 Re: wheels request

Gallagher Bassett  
 Attn: Mr. Charles Landis  
 PO Box 32840  
 Laguna Hills, CA  
 92654

File Name: [REDACTED]  
 Claim Number: [REDACTED]

### VEHICLE INSPECTION

Vehicle Make: Ford  
 Model: Escape 2004  
 VIN: 1FMCU02104K [REDACTED]  
 Miles: 28,587

Gragory J. Barnett, Consultant, was retained to inspect the subject vehicle specifically to ascertain the cause and origin of an alleged unwanted sudden acceleration from the engine that caused the collision that occurred on the date of loss. The assignment was to include an assessment of any subrogation issues.

On 6/13/05 this expert proceeded to American Collision Center located at 18822 Parthenia St., Northridge, CA. where the subject vehicle was produced for inspection.

The subject vehicle had been involved in a major frontal collision to the left. It appears that the subject vehicle struck a parking lot pole. There was considerable yellow paint transfer at the site of a dent consistent with a round pole. The core support was bent to the point that the air filter and air intake boot were kinked.

First, the accelerator cable and pedal were inspected. There was no sinking or other damage

JUN 22 2005 1:22PM  
06/20/05 12:58 FAX

WHEELS INV. WHAT VERT

GB-ALISO VIEJO

MINO. 0770 11.2

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Claim Number: [REDACTED]  
Page Number 2

observed. The floor mat was mounted correctly.

Next, the engine was briefly started. The engine was observed to have a runaway idle. The idle would "roll" unevenly from high rpms to lower rpms.

Next, the air filter assembly was removed. The air intake boot was removed from the throttle body and the engine cover was removed from the top of the engine. The manifold absolute pressure sensor was left connected but sitting off to the side. The throttle plate was observed to be in the closed position and the accelerator cable was not pinched or sticking. The interior of the throttle body at the throttle butterfly had a fairly heavy accumulation of carbon.

Next, the engine was started again. Now, the engine would achieve target idle as the proper amount of intake air was being drawn into the engine because the air intake boot was no longer kinked causing a partial blockage. However, the ring of carbon on the throttle body was causing the idle to stay slightly high when the engine rpms were raised. The engine would rev up normally but when the accelerator cable was returned to the idle position, the idle air control (IAC) would cause the engine rpms to drop slowly from 1800 to the target idle of about 1000 rpms. Further, the idle would "roll" up and down eventually stalling the engine out. This test was repeated a total of 5 times. Each test had the same result.

Next, the PCM was scanned for any fault codes. There were no codes stored indicating a historic fault with the IAC. The problem is not with the IAC directly. The carbon build-up on the throttle body butterfly is interfering with the ability of the engine to achieve target idle.

There is a very small amount of space between a throttle butterfly and the inside diameter of a throttle body (or carburetor). This tiny space allows for the approximate amount of air required for the engine to idle by bypassing air around the throttle butterfly when the throttle is in the closed position. The idle air is then trimmed to the engine's exact needs with a stopper motor called the IAC. When the carbon inside the throat of the throttle body interferes with the gross amount of air required to keep the engine idling, then the engine computer detects this and responds by increasing intake air by opening the IAC. The "rolling" idle condition is caused by the IAC opening too far then closing too much as idle rpm target is exceeded then not met. This condition also causes the engine to stay at higher rpms longer without returning to idle. This

Another condition that can occur when an IAC malfunctions in this manner is the expansion factor of a heated engine. IE: The carbon ridge can cause the throttle butterfly to stick open slightly raising engine rpms as high as 2000 rpms. This condition many times will not occur when the engine is cold but can occur when the engine has fully heated the throttle body. IE: Butterfly opens but won't close all the way because the ridge of carbon has expanded just enough to cause sticking. This can also be a contributing factor that occurs intermittently in a sudden acceleration concern. Usually, an engine has been having trouble with the idle for

Claim Number: [REDACTED]  
Page Number 3

several operating hours before the IAC begins to act up. The carbon build-up occurs over many thousands of miles.

After inspecting the subject vehicle this expert formed the following opinions:

1) There is evidence to support the conclusion that the engine was having a sticking throttle and rolling idle in the timeframe immediately preceding the collision that occurred on the date of loss. As noted above, the engine would intermittently stick at 1800 rpm then work it's way down slowly to target rpm or below target rpm then stall out when tested.

If the engine did not return to idle when the accelerator was released, this could easily be interpreted by the driver as a "runaway" or "sudden" acceleration. The brake system may not be capable of stopping this great of a load from the powertrain.

2) Carbon build-up inside a throttle body or carburetor is a normal occurrence of internal combustion engine. All engines have this condition occur to some degree. Some engines have a greater fuel standoff operational problems (causes the carbon) than do others. It is a standard maintenance to clean the throttle body with the proper spray cleaner for most manufacturers. This expert reserves opinion on the viability of any subrogation issues until the recommended practices from Ford for the subject vehicle are examined.

3) There is no evidence to indicate a stuck accelerator pedal or cable has occurred.

The opinions expressed in this report are based upon direct observation, personal measurements taken, testing and/or a review of the available evidence. This expert reserves the right to add to, subtract from, or modify any existing opinion in the event that additional evidence becomes available.

Respectfully Submitted,



Gregory J. Barnett, MSME, ASE  
Automotive and Heavy Truck Consultant

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**From:** Engle, James (J.J.)  
**Sent:** Wednesday, July 18, 2012 2:53 PM  
**To:** Fronckowiak, Todd (T.M.); Wickenheiser, Francis (F.J.); Ott, David (D.J.); Taylor, Mark (M.K.)  
**Subject:** FW: 2001 Ford Escape Police Report  
**Attachments:** Case 12-21970 pg 4.jpg; Case 12-21970 pg 1.jpg; Case 12-21970 pg 3.jpg; Case 12-21970 pg 2.jpg; IMG-20120619-00105.jpg; IMG-20120619-00108.jpg; IMG-20120619-00129.jpg; IMG-20120619-00130.jpg; IMG-20120619-00131.jpg; IMG-20120619-00101.jpg; IMG-20120619-00139.jpg; IMG-20120619-00104.jpg

I will be inspecting in the 7/30 7/31 timeframe in Texas. This info was sent to Ford from the same plaintiff attorney handling the Bloom case. Bill Grier said that a NHTSA rep may also attend the investigation

**Jim Engle**

Design Analysis Engineer  
WHQ 116-A5  
One American Road  
Dearborn, MI 48126  
Desk: 313-323-1084, Cell: 734-306-9555

---

**From:** Grier, William (W.M.)  
**Sent:** Wednesday, July 18, 2012 2:47 PM  
**To:** Engle, James (J.J.)  
**Subject:** FW: 2001 Ford Escape Police Report

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If you have received it in error, please delete it immediately and notify the sender.

**REDACTED FOR PRIVILEGE**

Bill Grier  
Ford Motor Company  
Office of the General Counsel  
(313) 248-2348 (office)  
(313) 623-0212 (mobile)  
(866) 934-4058 (fax)  
[wgrier@ford.com](mailto:wgrier@ford.com)

---

**From:** Iman R. Soliman [mailto:Iman.Soliman@bowmanandbrooke.com]  
**Sent:** Thursday, July 12, 2012 8:04 PM  
**To:** Savage, Jennifer (J.A.); Grier, William (W.M.)  
**Subject:** FW: 2001 Ford Escape Police Report

Jennifer:

Iman R. Soliman  
Senior Counsel  
Bowman and Brooke LLP  
2901 N. Central Ave., Ste. 1600  
Phoenix, AZ 85012  
Direct: 602.643.2316  
Fax: 602.248.0947

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**From:** Boatman, Robert W. [mailto:RWB@gknet.com]  
**Sent:** Thursday, July 12, 2012 4:45 PM  
**To:** Iman R. Soliman  
**Cc:** Clark, Shannon L.; McGroder, Patrick J.  
**Subject:** FW: 2001 Ford Escape Police Report

Iman,

We have been contacted in another stuck throttle Ford Escape case. We are planning to inspect the vehicle, which is just outside Houston. Please let me know who I should contact to coordinate the inspection. I believe the Grahams have been in contact with Ford, so this case should be in their system.

This message and any of the attached documents contain information from the law firm of Gallagher & Kennedy, P.A. that may be confidential and/or privileged. If you are not the intended recipient, you may not read, copy, distribute, or use this information, and no privilege has been waived by your inadvertent receipt. If you have received this transmission in error, please notify the sender by reply e-mail and then delete this message. Thank you.

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Texas Peace Officer's Crash Report - Code Sheet

Numbered Fields on the CR-3 Refer to the Numbered Lists on this Code Sheet. Each list includes the codes that may be entered on the form and the description of each code.

COMMERCIAL MOTOR VEHICLE	<b>28. Vehicle Operation</b> 1 = Interstate Commerce 2 = Intrastate Commerce 3 = Not in Commerce 4 = Government 5 = Personal	<b>29. Carrier ID Type</b> 1 = US DOT 2 = TxDOT 3 = ICC/MC 96 = None 98 = Other (Explain in Narrative)	<b>30. Roadway Access</b> 1 = Full Access Control 2 = Partial Access Control 3 = No Access Control	<b>31. Vehicle Type</b> 1 = Passenger Car 2 = Light Truck 3 = Bus (9-15) 4 = Bus (>15) 5 = Single Unit Truck 2 Axles 6 Tires 6 = Single Unit Truck 3 or More Axles 7 = Truck Trailer 8 = Truck Tractor (Bobtail) 9 = Tractor/Semi Trailer 10 = Tractor/Double Trailer 11 = Tractor/Triple Trailer 98 = Other (Explain in Narrative) 99 = Unknown Heavy Truck	<b>32. Hazardous Material Class Number</b> 1 = Explosives 2 = Gases 3 = Flammable Liquids 4 = Flammable Solids 5 = Oxidizers and Organic Peroxides 6 = Toxic Materials and Infectious Substances 7 = Radioactive Materials 8 = Corrosive Materials 9 = Miscellaneous Dangerous Goods
	<b>33. Cargo Body Style</b> 1 = Bus (9-15) 2 = Bus (>15) 3 = Van/Enclosed Box 4 = Cargo Tank 5 = Flatbed 6 = Dump 7 = Concrete Mixer	8 = Auto Transporter 9 = Garbage Refuse 10 = Grain Chips Gravel 11 = Pole 13 = Intermodal 14 = Logging	15 = Vehicle Towing Another Vehicle 97 = Not Applicable 98 = Other (Explain in Narrative)	<b>34. Trailer Type</b> 1 = Full Trailer 2 = Semi-Trailer 3 = Pole Trailer	
FACTORS AND CONDITIONS	<b>35. Sequence of Events</b> 1 = Non-Collision: Ran Off Road 2 = Non-Collision: Jackknife 3 = Non-Collision: Overtum Rollover 4 = Non-Collision: Downhill Runaway 5 = Non-Collision: Cargo Loss Or Shift 6 = Non-Collision: Explosion Or Fire 7 = Non-Collision: Separation of Units 8 = Non-Collision: Cross Median/Centerline 9 = Non-Collision: Equipment Failure 10 = Non-Collision: Other 11 = Non-Collision: Unknown 12 = Collision Involving Pedestrian 13 = Collision Involving Motor Vehicle in Transport 14 = Collision Involving Parked Motor Vehicle 15 = Collision Involving Train 16 = Collision Involving Pedalcycle 17 = Collision Involving Animal 18 = Collision Involving Fixed Object 19 = Collision With Work Zone Maintenance Equipment 20 = Collision With Other Movable Object 21 = Collision With Unknown Movable Object 98 = Other (Explain in Narrative)				
	<b>36. Factors and Conditions</b> 1 = Animal on Road - Domestic 2 = Animal on Road - Wild 3 = Backed without Safety 4 = Changed Lane when Unsafe 14 = Disabled in Traffic Lane 15 = Disregard Stop and Go Signal 16 = Disregard Stop Sign or Light 17 = Disregard Turn Marks at Intersection 18 = Disregard Warning Sign at Construction 19 = Distraction in Vehicle 20 = Driver Inattention 21 = Drove Without Headlights 22 = Failed to Control Speed 23 = Failed to Drive in Single Lane 24 = Failed to Give Half of Roadway 25 = Failed to Heed Warning Sign 26 = Failed to Pass to Left Safely 27 = Failed to Pass to Right Safely 28 = Failed to Signal or Gave Wrong Signal 29 = Failed to Stop at Proper Place 30 = Failed to Stop for School Bus 31 = Failed to Stop for Train 32 = Failed to Yield ROW - Emergency Vehicle 33 = Failed to Yield ROW - Open Intersection 34 = Failed to Yield ROW - Private Drive 35 = Failed to Yield ROW - Stop Sign 36 = Failed to Yield ROW - To Pedestrian 37 = Failed to Yield ROW - Turning Left 38 = Failed to Yield ROW - Turn on Red 39 = Failed to Yield ROW - Yield Sign 40 = Fatigued or Asleep 41 = Faulty Evasive Action 42 = Fire in Vehicle 43 = Fleeing or Evading Police 44 = Followed Too Closely 45 = Had Been Drinking 46 = Handicapped Driver (Explain in Narrative) 47 = Ill (Explain in Narrative) 48 = Impaired Visibility (Explain in Narrative) 49 = Improper Start from Parked Position 50 = Load Not Secured 51 = Opened Door into Traffic Lane 52 = Oversized Vehicle or Load 53 = Overtake and Pass Insufficient Clearance 54 = Parked and Failed to Set Brakes 55 = Parked in Traffic Lane 56 = Parked without Lights 57 = Passed in No Passing Lane 58 = Passed on Right Shoulder 59 = Pedestrian FTYROW to Vehicle 60 = Unsafe Speed 61 = Speeding - (Over Limit) 62 = Taking Medication (Explain in Narrative) 63 = Turned Improperly - Cut Corner on Left 64 = Turned Improperly - Wide Right 65 = Turned Improperly - Wrong Lane 66 = Turned when Unsafe 67 = Under Influence - Alcohol 68 = Under Influence - Drug 69 = Wrong Side - Approach or Intersection 70 = Wrong Side - Not Passing 71 = Wrong Way - One Way Road 72 = Cell/Mobile Phone Use 73 = Road Rage 98 = Other (Explain in Narrative)				
<b>37. Vehicle Defects</b> 5 = Defective or No Headlamps 6 = Defective or No Stop Lamps 7 = Defective or No Tail Lamps 8 = Defective or No Turn Signal Lamps 9 = Defective or No Trailer Brakes 10 = Defective or No Vehicle Brakes 11 = Defective Steering Mechanism 12 = Defective or Slick Tires 13 = Defective Trailer Hitch 98 = Other (Explain in Narrative)	<b>38. Weather Condition</b> 1 = Clear 2 = Cloudy 3 = Rain 4 = Sleet/Hail 5 = Snow 6 = Fog 7 = Blowing Sand/Snow 8 = Severe Crosswinds 98 = Other (Explain in Narrative) 99 = Unknown	<b>39. Light Condition</b> 1 = Daylight 2 = Dark, Not Lighted 3 = Dark, Lighted 4 = Dark, Unknown Lighting 5 = Dawn 6 = Dusk 98 = Other (Explain in Narrative) 99 = Unknown	<b>40. Entering Roads</b> 2 = Three Entering Roads - T 3 = Three Entering Roads - Y 4 = Four Entering Roads 5 = Five Entering Roads 6 = Six Entering Roads 7 = Traffic Circle 8 = Cloverleaf 97 = Not Applicable 98 = Other (Explain in Narrative)		
<b>41. Roadway Type</b> 1 = Two-Way, Not Divided 2 = Two-Way, Divided, Unprotected Median 3 = Two-Way, Divided, Protected Median 4 = One-Way 98 = Other (Explain in Narrative)	<b>42. Roadway Alignment</b> 1 = Straight, Level 2 = Straight, Grade 3 = Straight, Hillcrest 4 = Curve, Level 5 = Curve, Grade 6 = Curve, Hillcrest 98 = Other (Explain in Narrative) 99 = Unknown	<b>43. Surface Condition</b> 1 = Dry 2 = Wet 3 = Standing Water 4 = Snow 5 = Slush 6 = Ice 7 = Sand, Mud, Dirt 98 = Other (Explain in Narrative) 99 = Unknown	<b>44. Traffic Control</b> 2 = Inoperative (Explain in Narrative) 3 = Officer 4 = Flagman 5 = Signal Light 6 = Flashing Red Light 7 = Flashing Yellow Light 8 = Stop Sign 9 = Yield Sign 10 = Warning Sign	11 = Center Stripe/Divider 12 = No Passing Zone 13 = RR Gate/Signal 15 = Crosswalk 16 = Bike Lane 17 = Marked Lanes 18 = Signal Light With Red Light Running Camera 96 = None 98 = Other (Explain in Narrative)	



Texas Peace Officer's Crash Report (Form CR-3 1/1/2010)

Mail to: Texas Department of Transportation, Crash Records, P.O. Box 149349, Austin, TX 78714. Questions? Call (512) 486-5780

Refer to Attached Code Sheet for Numbered Fields

\*=These fields are required on all additional sheets submitted for this crash (ex.: additional vehicles, occupants, injured, etc.).

IDENTIFICATION & LOCATION

\*Crash Date (MM/DD/YYYY) 06/08/2012 \*Crash Time (24HRMM) 1306 Case ID 2012-21970 Local Use

\*County Name \*City Name Outside City Limit

In your opinion, did this crash result in at least \$1,000 damage to any one person's property? Latitude Longitude

ROAD ON WHICH CRASH OCCURRED \*1 Rdwy. Sys. IH \*Hwy. Num. 10 2 Rdwy. Part 2 Block Num. 4110 3 Street Prefix E \*Street Name IH-10 4 Street Suffix HWY

Crash Occurred on a Private Drive or Road/Private Property/Parking Lot Toll Road/Toll Lane Speed Limit 50 Const. Zone Yes No Workers Present Yes No Street Desc.

INTERSECTING ROAD, OR IF CRASH NOT AT INTERSECTION, NEAREST INTERSECTING ROAD OR REFERENCE MARKER At Int. Yes No 1 Rdwy. Sys. LR Hwy. Num. 2 Rdwy. Part Block Num. 7000 3 Street Prefix Street Name JOHN MARTIN 4 Street Suffix RD

Distance from Int. or Ref. Marker 50 FT MI 3 Dir. from Int. or Ref. Marker Reference Marker Street Desc. RRX Num.

Unit Num. 1 5 Unit Desc. 1 Parked Vehicle Hit and Run LP State TX LP Num. BBB331 VIN 1FMYU03171K

Veh. Year 2001 6 Veh. Color WHI Veh. Make FORD Veh. Model FORD ESCAPE (UTILITY) 7 Body Style SV Pol., Fire, EMS on Emergency (Explain in Narrative if checked)

8 DL/ID Type 1 DL/ID State TX DL/ID Num. 9 DL Class C 10 CDL End. 96 11 DL Rest. A DOB (MM/DD/YYYY)

Address (Street, City, State, ZIP) 12526 MYSTERY LN BAYTOWN, TX 77523

VEHICLE, DRIVER, & PERSONS

Table with columns: Person Num., 12 Psn. Type, 13 Seat Position, Name: Last, First, Middle, 14 Injury Severity, Age, 15 Ethnicity, 16 Sex, 17 Eject, 18 Restr., 19 Airbag, 20 Helmet, 21 Sol., 22 Alc. Spec., Alc. Result, 23 Drug Spec., 24 Drug Result, 25 Drug Category. Rows 1-3.

Owner/Lessee Name & Address BAYTOWN, TX

Proof of Fin. Resp. Yes No Expired Exempt 26 Fin. Resp. Type 27 Vehicle Damage Rating 1 10 " F D " 6 27 Vehicle Damage Rating 2 Vehicle Inventoried Yes No

Fin. Resp. Name AMICA Fin. Resp. Num. 930442-1088 Towed By HWY 90 TOWING Towed To 5552 N MAIN ST, BAYTOWN, TX

Unit Num. 5 Unit Desc. Parked Vehicle Hit and Run LP State LP Num. VIN

Veh. Year Veh. Color Veh. Make Veh. Model 7 Body Style Pol., Fire, EMS on Emergency (Explain in Narrative if checked)

8 DL/ID Type DL/ID State DL/ID Num. 9 DL Class 10 CDL End. 11 DL Rest. DOB (MM/DD/YYYY)

Address (Street, City, State, ZIP)

VEHICLE, DRIVER, & PERSONS

Table with columns: Person Num., 12 Psn. Type, 13 Seat Position, Name: Last, First, Middle, 14 Injury Severity, Age, 15 Ethnicity, 16 Sex, 17 Eject, 18 Restr., 19 Airbag, 20 Helmet, 21 Sol., 22 Alc. Spec., Alc. Result, 23 Drug Spec., 24 Drug Result, 25 Drug Category. Rows 1-3.

Owner/Lessee Name & Address

Proof of Fin. Resp. Yes No Expired Exempt 26 Fin. Resp. Type 27 Vehicle Damage Rating 1 27 Vehicle Damage Rating 2 Vehicle Inventoried Yes No

Fin. Resp. Name Fin. Resp. Num. Towed By Towed To



Numbered Fields on the CR-3 Refer to the Numbered Lists on the Code Sheet. Each list includes the codes that may be entered on the form and the description of each code.

Law Enforcement and TxDOT Use ONLY. Form CR-3CS 1/1/2010

<b>IDENTIFICATION AND LOCATION</b>	<b>1. Roadway System</b> IH = Interstate US = US Highway SH = State Highway FM = Farm to Market RR = Ranch Road RM = Ranch to Market BI = Business Interstate BU = Business US BS = Business State BF = Business FM SL = State Loop TL = Toll Road	<b>2. Roadway Part</b> 1 = Main/Proper Lane 2 = Service/Frontage Road 3 = Entrance/On Ramp 4 = Exit/Off Ramp 5 = Connector/Flyover 98 = Other (Explain in Narrative)	<b>3. Street Prefix, Direction from Int. or Ref. Marker</b> N = North NE = Northeast E = East SE = Southeast S = South SW = Southwest W = West NW = Northwest	<b>4. Street Suffix</b> RD = Road ST = Street DR = Drive AVE = Avenue BLVD = Boulevard PKWY = Parkway LN = Lane FWY = Freeway HWY = Highway WAY = Way TRL = Trail LOOP = Loop	EXPY = Expressway CT = Court CIR = Circle PL = Place PARK = Park CV = Cove
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<b>5. Unit Description</b> 1 = Motor Vehicle 2 = Train 3 = Pedalcyclist 4 = Pedestrian 5 = Motorized Conveyance 6 = Towed/Trailer 7 = Non-Contact 98 = Other (Explain in Narrative)	<b>6. Vehicle Color</b> BGE = Beige BLK = Black BLU = Blue BRZ = Bronze BRO = Brown CAM = Camouflage CPR = Copper GLD = Gold GRY = Gray GRN = Green MAR = Maroon MUL = Multicolored	ONG = Orange PNK = Pink PLE = Purple RED = Red SIL = Silver TAN = Tan TEA = Teal (green) TRQ = Turquoise (blue) WHI = White YEL = Yellow 98 = Other (Explain in Narrative) 99 = Unknown	<b>7. Body Style</b> P2 = Passenger Car, 2-Door P4 = Passenger Car, 4-Door PK = Pickup AM = Ambulance BU = Bus SB = Yellow School Bus FE = Farm Equipment FT = Fire Truck MC = Motorcycle SV = Sport Utility Vehicle	PC = Police Car/Truck PM = Police Motorcycle TL = Trailer, Semi-Trailer, or Pole Trailer TR = Truck TT = Truck Tractor VN = Van 98 = Other (Explain in Narrative) 99 = Unknown	<b>8. Driver License/ID Type</b> 1 = Driver License 2 = Commercial Driver Lic. 3 = Occupational 4 = ID Card 5 = Unlicensed 98 = Other 99 = Unknown
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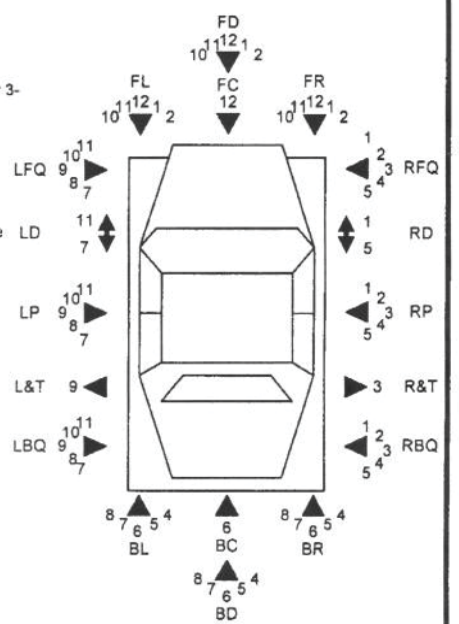
<b>9. Driver License Class</b> A = Class A AM = Class A and M B = Class B BM = Class B and M C = Class C CM = Class C and M M = Class M 5 = Unlicensed 98 = Other/Out of State 99 = Unknown	<b>10. Commercial Driver License Endorsements</b> H = Hazardous Materials N = Tank Vehicles P = Passengers S = School Bus T = Double/Triple Trailer X = Tank Vehicle with HazMat 5 = Unlicensed 96 = None 98 = Other/Out of State 99 = Unknown	<b>11. Driver License Restrictions</b> A = With Corrective Lenses B = LOFS Age 21 or Over C = Daytime Only D = Not to Exceed 45 MPH E = No Expressway Driving F = Must Hold Valid Learner Lic. to MM/DD/YY G = TRC 545.424 Applies until MM/DD/YY H = Vehicle Not to Exceed 26,000 lbs GVWR I = Motorcycle Not to Exceed 250 CC J = Licensed Motorcycle Operator Age 21 or Over in Sight K = Moped	L = Vehicle w/c Air Brakes - Applies to Vehicles Requiring CDL M = CDL Intrastate Commerce Only N = Ignition Interlock Required O = Occ./Essent. Need DL-No CMV-See Court Order P = Stated on License Q = LOFS 21 or Over Vehicle Above Class B R = LOFS 21 or Over Vehicle Above Class C S = Outside Rear View Mirror or Hearing Aid	T = Automatic Transmission U = Applicable Prosthetic Devices V = Applicable Vehicle Devices W = Power Steering X = Vehicle Not to Exceed Class C Y = Valid TX Vision or Limb Waiver Req'd. Z = Valid Fed. Vision or Limb Waiver Req'd. 5 = Unlicensed 96 = None 98 = Other/Out of State 99 = Unknown
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<b>12. Person Type</b> 1 = Driver 2 = Passenger/Occupant 3 = Pedalcyclist 4 = Pedestrian 5 = Driver of Motorcycle Type Vehicle 6 = Passenger/Occupant on Motorcycle Type Vehicle 98 = Other (Explain in Narrative) 99 = Unknown	<b>13. Seat Position</b> 1 = Front Left 2 = Front Center 3 = Front Right 4 = Second Seat Left 5 = Second Seat Center 6 = Second Seat Right 7 = Third Seat Left 8 = Third Seat Center 9 = Third Seat Right	10 = Cargo Area 11 = Outside Vehicle 13 = Other in Vehicle 14 = Passenger in Bus 16 = Pedestrian, Pedalcyclist, or Motorized Conveyance 98 = Other (Explain in Narrative) 99 = Unknown	<b>14. Injury Severity</b> A = Incapacitating Injury B = Non-Incapacitating Injury C = Possible Injury K = Killed N = Not Injured 99 = Unknown	<b>15. Ethnicity</b> W = White B = Black H = Hispanic A = Asian I = Amer. Indian/ Alaskan Native 98 = Other 99 = Unknown	<b>16. Sex</b> 1 = Male 2 = Female 99 = Unknown	<b>17. Ejected</b> 1 = No 2 = Yes 3 = Yes, Partial 97 = Not Applicable 99 = Unknown
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<b>18. Restraint Used</b> 1 = Shoulder and Lap Belt 2 = Shoulder Belt Only 3 = Lap Belt Only 4 = Child Seat, Facing Forward 5 = Child Seat, Facing Rear 6 = Child Seat, Unknown 7 = Child Booster Seat 96 = None 97 = Not Applicable 98 = Other (Explain in Narrative) 99 = Unknown	<b>19. Airbag</b> 1 = Not Deployed 2 = Deployed Front 3 = Deployed, Side 4 = Deployed, Rear 5 = Deployed, Multiple 97 = Not Applicable 99 = Unknown	<b>27. Vehicle Damage Rating</b> In most cases, enter in the format XX-ABC-Y, where XX-ABC-Y, where ABC is the Damage Description 2- or 3-letter code), and Y is the Damage Severity (0-7).
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<b>20. Helmet Use</b> 1 = Not Worn 2 = Worn, Damaged 3 = Worn, Not Damaged 4 = Worn, Unk. Damage 97 = Not Applicable 99 = Unknown if Worn	<b>21. Solicitation</b> Y = Solicit N = No Solicit	<b>22. Alcohol Specimen Type</b> 1 = Breath 2 = Blood 3 = Urine 4 = Refused 96 = None 98 = Other (Explain in Narrative)	In special cases, use: VB-1 = vehicle burned, NOT due to collision VB-7 = vehicle catches fire due to the collision TP-0 = top damage only VX-0 = undercarriage damage only MC-1 = motorcycle, moped, scooter, etc. NA = Not Applicable (Farm Tractor, etc.)
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<b>23. Drug Specimen Type</b> 2 = Blood 3 = Urine 4 = Refused 96 = None 98 = Other (Explain in Narrative)	<b>25. Drug Category</b> 2 = CNS Depressants 3 = CNS Stimulants 4 = Hallucinogens 6 = Narcotic Analgesics 7 = Inhalants 8 = Cannabis 10 = Dissociative Anesthetics 11 = Multiple Drugs (Explain in Narrative) 97 = Not Applicable 98 = Other Drugs (Explain in Narrative) 99 = Unknown	<b>24. Drug Test Result</b> 1 = Positive 2 = Negative 97 = Not Applicable 99 = Unknown	<b>26. Financial Responsibility Type</b> 1 = Liability Insurance Policy 2 = Proof of Liability Insurance 3 = Insurance Binder 4 = Surety Bond 5 = Certificate of Deposit with Comptroller 6 = Certificate of Deposit with County Judge 7 = Certificate of Self-Insurance
--	---	--	---





DISPOSITION OF INJURED/KILLED	Unit Num.	Prsn. Num.	Taken To	Taken By	Date of Death (MM/DD/YYYY)	Time of Death (24HRMM)
	1	2		TREATED AT	THE SCENE	
1	3		TREATED AT	THE SCENE		

Unit Num.	Prsn. Num.	Charge	Citation/Reference Num.

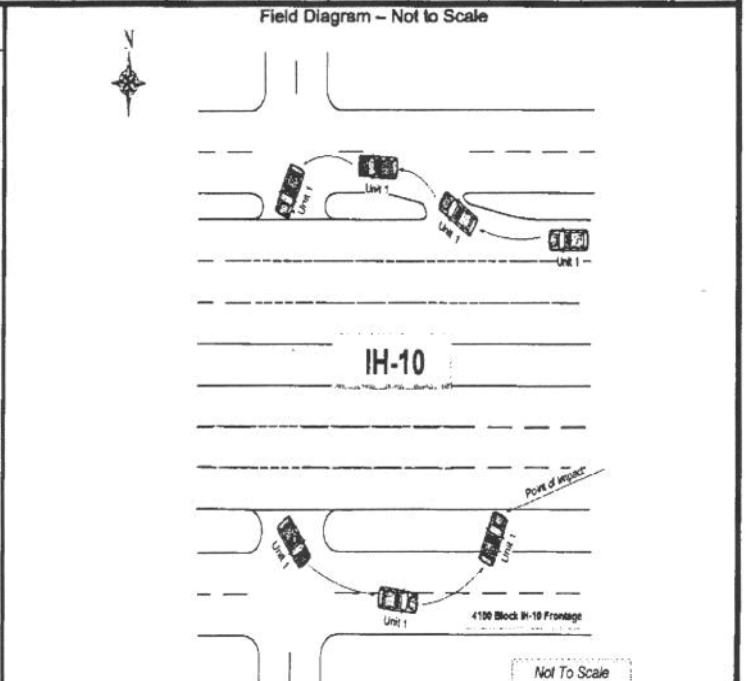
Damaged Property Other Than Vehicles	Owner's Name	Owner's Address

Unit Num.	<input type="checkbox"/> 10,001+ LBS.	<input type="checkbox"/> TRANSPORTING HAZARDOUS MATERIAL	<input type="checkbox"/> 9+ CAPACITY	28 Veh. Oper.	29 Carrier ID Type	Carrier ID Num.
Carrier's Corp. Name			Carrier's Primary Addr.			
30 Rdw. Access	31 Veh. Type	<input type="checkbox"/> RGWW <input type="checkbox"/> GVWR	HazMat Released	<input type="checkbox"/> Yes <input type="checkbox"/> No	32 HazMat Class Num.	HazMat ID Num.
33 Cargo Body Style	Trailer 1 Unit Num.	<input type="checkbox"/> RGWW <input type="checkbox"/> GVWR	34 Trlr. Type	Trailer 2 Unit Num.	<input type="checkbox"/> RGWW <input type="checkbox"/> GVWR	34 Trlr. Type
Sequence Of Events	35 Seq. 1	35 Seq. 2	35 Seq. 3	35 Seq. 4	Total Num. Axles	Total Num. Tires

FACTORS & CONDITIONS	38 Contributing Factors (Investigator's Opinion)				37 Vehicle Defects (Investigator's Opinion)				Environmental and Roadway Conditions						
	Unit Num.	Contributing	May Have Contrib.		Contributing	May Have Contrib.			38 Weather Cond.	39 Light Cond.	40 Entering Roads	41 Roadway Type	42 Roadway Alignment	43 Surface Condition	44 Traffic Control
1	98				10	98			1	1	98	4	1	1	98

**Investigator's Narrative Opinion of What Happened**  
(Attach Additional Sheets if Necessary)

UNIT 1 WAS TRAVELING WESTBOUND IN THE 4100 BLOCK OF IH-10. THE DRIVER OF UNIT 1 ADVISED SHE NOTICED HER GAS PEDAL REMAINED DEPRESSED AS SHE LIFTED HER FOOT OFF OF IT. SHE ADVISED SHE ATTEMPTED TO PUSH THE BRAKE PEDAL WITH BOTH FEET BUT THE VEHICLE WOULD NOT SLOW. SHE ADVISED SHE TOOK THE JOHN MARTIN RD EXIT BECAUSE THERE WERE LARGE TRUCKS ON THE FREEWAY AND SHE APPLIED HER EMERGENCY BRAKE TO ATTEMPT TO SLOW THE VEHICLE. THE VEHICLE BEGAN TO SLOW, BUT NOT IN TIME. SHE ADVISED THERE WAS TRAFFIC IN FRONT OF HER ON THE WESTBOUND FEEDER OF IH-10 SO SHE TURNED SOUTH ON JOHN MARTIN RD, THEN TURNED EASTBOUND ON THE IH-10 FEEDER. THE DRIVER ADVISED SHE WAS AFRAID OF THE DITCH ON HER RIGHT HAND SIDE, SO SHE TURNED THE VEHICLE TO THE LEFT AND ATTEMPTED TO DRAG THE VEHICLE ALONG THE FREEWAY WALL TO MAKE IT SLOW GRADUALLY, BUT SHE TURNED TO SHARPLY AND THE FRONT STRUCK THE WALL IN FULL FORCE, DEPLOYING BOTH AIRBAGS AND BRINGING THE VEHICLE TO A HALT. UPON MY ARRIVAL, I OBSERVED HER GAS PEDAL WAS STILL DEPRESSED ALL THE WAY TO THE FLOOR AND HER EMERGENCY BRAKE LEVER WAS RAISED ALL THE WAY. THE WRECKER DRIVER ARRIVED ON SCENE AND ADVISED HE BELIEVED THERE WAS A RECALL IN EFFECT FOR THE GAS PEDAL OF THAT PARTICULAR VEHICLE.



Time Notified (24HRMM) 1 3 0 7	How Notified DISPATCH	Time Arrived (24HR:MM) 1 3 1 1	Report Date (MM/DD/YYYY) 0 6 / 0 8 / 2 0 1 2
Invest. <input checked="" type="checkbox"/> Yes Comp. <input type="checkbox"/> No	Investigator Name (Printed) Turner, B.	ID Num. 108	District/Area 1 0
ORI Num. T X 1 0 1 0 1 0 0	*Agency BAYTOWN POLICE DEPARTMENT		

















**Ford**  
**V6**  
**DOHC 24-VALVE**













**From:** Engle, James (J.J.)  
**Sent:** Monday, June 25, 2012 3:12 PM  
**To:** Taylor, Mark (M.K.); Wickenheiser, Francis (F.J.)  
**Subject:** Escape Speed Control Cable



Call: [redacted] j.j.Engle  
Call: [redacted] j.j.Engle  
[redacted] j.j.Engle  
[redacted] j.j.Engle

[redacted] r 516789 - 2003 Escape - 1FMYU93153K [redacted] - Recall performed 12/22/2004 Incident date 8/8/2005

[redacted] D003859 - 2004 Escape - 1FMCU93104K [redacted] - Recall performed 12/1/2005 Incident 7/19/2007

[redacted] e D035414 - 2004 Escape - 1FMCU92124D [redacted] - Recall performed 2/12/2005 Incident date 11/7/2010

[redacted] D047859 - 2002 Escape - 1FMCU04142K [redacted] - Recall performed 1/7/2005 Incident date 1/27/2012

**Jim Engle**

Design Analysis Engineer  
WHQ 116-A5  
One American Road  
Dearborn, MI 48126  
Desk: 313-323-1084, Cell: 734-306-9555

REDACTED FOR PRIVILEGE

REDACTED FOR PRIVILEGE







PE12-019

FORD

9-4-2012

APPENDIX H

Non Con - Field  
Communications

-----Original Message-----

**From:** Esch, Becky (B.)  
**Sent:** Tuesday, August 10, 2004 12:58 PM  
**To:** Burke, Pauline (P.F.)  
**Cc:** Cheff, Amy (A.B.); Muter, Doreen (D.J.)  
**Subject:** 04X34 - Final "Prelim" Volumes Run

Pauline: Here is what we have in NAVIS for 04X34 - the Escape / Tribute Accelerator Cable Issue - I think the following should provide you with all your team will need for the 14D:

**Total Population = 655,683 (of which 157,361 are Mazda Tributes)**

	2002	2003	2004	Total
Ford Escape	189,343	185,482	123,497	498,322
Mazda Tribute	65,897	56,707	34,757	157,361

**Here is the plant information - build dates by plant for Job #1 02 thru Job Last 04:**

<u>Plant</u>	<u>Model Year</u>	<u>Earliest Production Date</u>	<u>Latest Production Date</u>
HIROSHIMA ASSEMBLY PLANT-JAPAN	2002	29-Jan-2002	29-Jan-2002
HIROSHIMA ASSEMBLY PLANT-JAPAN	2003	13-Jun-2003	22-Jul-2003
HIROSHIMA ASSEMBLY PLANT-JAPAN	2004	02-Aug-2003	12-Sep-2003
HOFU ASSEMBLY PLANT	2002	20-Aug-2001	26-Jul-2002
HOFU ASSEMBLY PLANT	2003	02-Aug-2002	13-Jun-2003
KANSAS CITY PLANT BUILD	2002	30-May-2001	19-Jul-2002
KANSAS CITY PLANT BUILD	2003	23-Apr-2002	06-Jun-2003
KANSAS CITY PLANT BUILD	2004	28-Apr-2003	19-Dec-2003
KARMANN PLANT BUILD	2002	05-Nov-2001	27-Nov-2001
KARMANN PLANT BUILD	2003	16-Aug-2002	13-Jun-2003
OHIO ASSEMBLY PT BUILD	2004	01-May-2003	23-Jan-2004

**Engine Breakdown by Escape / Tribute & Plant:**

<u>WERS_Vehicle_Line_Desc</u>	<u>Brand_Cd</u>	<u>WERS_Engine_FmlyFeat_Desc</u>	<u>WERS_Plant_FmlyFeat_Desc</u>	<u>'Count'</u>
FORD ESCAPE / MAZDA TRIBUTE	Ford	ZETEC 2.0L DOHC EFI NA I4 G*LC MOD 3.0L DOHC EFI NA V6	HIROSHIMA ASSEMBLY PLANT- JAPAN	13
FORD ESCAPE / MAZDA TRIBUTE	Ford	G*NAAO	HIROSHIMA ASSEMBLY PLANT- JAPAN	206
FORD ESCAPE / MAZDA TRIBUTE	Ford	ZETEC 2.0L DOHC EFI NA I4 G*LC MOD 3.0L DOHC EFI NA V6	HOFU ASSEMBLY PLANT	732
FORD ESCAPE / MAZDA TRIBUTE	Ford	G*NAAO	HOFU ASSEMBLY PLANT	913
FORD ESCAPE / MAZDA TRIBUTE	Ford	MOD 3.0L DOHC EFI NA V6	KANSAS CITY PLANT BUILD	451022
FORD ESCAPE / MAZDA TRIBUTE	Ford	G*NAAO	KANSAS CITY PLANT BUILD	19899
FORD ESCAPE / MAZDA TRIBUTE	Mazda	ZETEC 2.0L DOHC EFI NA I4 G*LC MOD 3.0L DOHC EFI NA V6	KANSAS CITY PLANT BUILD	141374
FORD ESCAPE / MAZDA TRIBUTE	Mazda	G*NAAO	KANSAS CITY PLANT BUILD	15987
FORD ESCAPE / MAZDA TRIBUTE	Ford	ZETEC 2.0L DOHC EFI NA I4 G*LC MOD 3.0L DOHC EFI NA V6	KARMANN PLANT BUILD	1299
FORD ESCAPE / MAZDA TRIBUTE	Ford	G*NAAO	KARMANN PLANT BUILD	2407
FORD ESCAPE / MAZDA TRIBUTE	Ford	Engine Code = Blank	KARMANN PLANT BUILD	1
FORD ESCAPE / MAZDA TRIBUTE	Ford	MOD 3.0L DOHC EFI NA V6	KARMANN PLANT BUILD	
FORD ESCAPE / MAZDA TRIBUTE	Ford	G*NAAO	OHIO ASSEMBLY PT BUILD	21830
				<b>655683</b>

## Market & MY B-down Rpt:

<u>Hub</u>	<u>Country</u>	<u>2002</u> <u>MY</u>	<u>2003</u> <u>MY</u>	<u>2004</u> <u>MY</u>	<u>Total</u>
FORD ASIA-PACIFIC	TAIWAN	100	0	0	100
FORD NORTH AMERICA	CANADA	15122	17590	9483	42195
FORD NORTH AMERICA	MEXICO	7182	7233	3850	18265
FORD NORTH AMERICA	UNITED STATES	157543	150542	105437	413522
FORD OF EUROPE	AUSTRIA	0	1	0	1
FORD OF EUROPE	GERMANY	1698	2053	722	4473
FORD OF EUROPE	GREECE	566	1360	1497	3423
FORD OF EUROPE	NORWAY	0	24	80	104
FORD OF EUROPE	SWEDEN	0	0	68	68
FORD OF EUROPE	SWITZERLAND	1570	1760	251	3581
FORD OF EUROPE	UNITED KINGDOM	998	801	70	1869
FORD OF EUROPE	RUSSIAN FEDERATION	440	620	217	1277
FORD OF EUROPE	TURKEY	0	2	0	2
FORD OF EUROPE	ICELAND	0	1	21	22
FORD OF EUROPE	KAZAKHSTAN	0	0	5	5
FORD OF EUROPE	UKRAINE	1	2	0	3
FORD SOUTH AMERICA	ARGENTINA	66	0	0	66
FORD SOUTH AMERICA	COLOMBIA	72	0	0	72
FORD SOUTH AMERICA	ECUADOR	30	0	0	30
FORD SOUTH AMERICA	VENEZUELA	43	0	0	43
MAZDA	UNITED STATES	65897	56707	34757	157361
WORLDWIDE DIRECT MARKET OPRNS	CHILE	479	541	2	1022
WORLDWIDE DIRECT MARKET OPRNS	CAMBODIA	0	2	0	2
WORLDWIDE DIRECT MARKET OPRNS	FRENCH POLYNESIA	0	13	12	25
WORLDWIDE DIRECT MARKET OPRNS	KOREA, REP OF (South)	301	288	60	649
WORLDWIDE DIRECT MARKET OPRNS	ANTIGUA & BARBUDA	3	0	0	3
WORLDWIDE DIRECT MARKET OPRNS	ARUBA	14	57	0	71
WORLDWIDE DIRECT MARKET OPRNS	BAHAMAS	91	155	80	326
WORLDWIDE DIRECT MARKET OPRNS	BELIZE	8	7	2	17
WORLDWIDE DIRECT MARKET OPRNS	CAYMAN ISLANDS	29	21	0	50
WORLDWIDE DIRECT MARKET OPRNS	COSTA RICA	14	30	20	64
WORLDWIDE DIRECT MARKET OPRNS	DOMINICAN REPUBLIC	112	35	6	153
WORLDWIDE DIRECT MARKET OPRNS	EL SALVADOR	21	29	11	61
WORLDWIDE DIRECT MARKET OPRNS	GUATEMALA	10	18	18	46
WORLDWIDE DIRECT MARKET OPRNS	HAITI	5	1	0	6
WORLDWIDE DIRECT MARKET OPRNS	HONDURAS	8	29	17	54
WORLDWIDE DIRECT MARKET OPRNS	NETHERLANDS ANTILLIES	96	111	79	286
WORLDWIDE DIRECT MARKET OPRNS	NICARAGUA	8	3	1	12
WORLDWIDE DIRECT MARKET OPRNS	PANAMA	0	0	19	19
WORLDWIDE DIRECT MARKET OPRNS	LEBANON	4	0	0	4
WORLDWIDE DIRECT MARKET OPRNS	BAHRAIN	30	59	5	94
WORLDWIDE DIRECT MARKET OPRNS	KUWAIT	165	37	119	321
WORLDWIDE DIRECT MARKET OPRNS	QATAR	29	6	13	48
WORLDWIDE DIRECT MARKET OPRNS	SAUDI ARABIA	0	5	0	5
WORLDWIDE DIRECT MARKET OPRNS	UNITED ARAB EMIRIATES	54	50	1	105
WORLDWIDE DIRECT MARKET OPRNS	ANGOLA	6	16	8	30
WORLDWIDE DIRECT MARKET OPRNS	GABON	2	0	0	2
WORLDWIDE DIRECT MARKET OPRNS	GHANA	7	7	12	26

WORLDWIDE DIRECT MARKET OPRNS	SENEGAL	0	2	0	2
WORLDWIDE DIRECT MARKET OPRNS	AMERICAN SAMOA	6	7	2	15
WORLDWIDE DIRECT MARKET OPRNS	GUAM	19	0	0	19
WORLDWIDE DIRECT MARKET OPRNS	NORTHERN MARIANA ISLANDS	1	9	2	12
WORLDWIDE DIRECT MARKET OPRNS	PUERTO RICO	2108	1708	1277	5093
WORLDWIDE DIRECT MARKET OPRNS	VIRGIN ISLANDS (US)	282	247	30	559
					<b>655683</b>

Regards,

**Becky Esch**

Ford North America FSA Coordinator

FCSD, Recall & Service Programs

DSCII / Ph: 313-32-30731 Fax: 313-84-51024

besch1@ford.com

**From:** Esch, Becky (B.)  
**Sent:** Wednesday, December 01, 2004 10:18 AM  
**To:** Burke, Pauline (P.F.); Liposky, Lawrence (L.J.); Carver, Norman (N.B.); Drever, Donald (D.C.); Esch, Becky (B.); Froehlich, Jose (J.); Gniewek, Kenneth (K.J.); Johnson, Justin (J.R.); Johnson-Allen, Darla (D.J.); Kinley, Kristen (K.L.); Kizyma, Dave (D.E.); Moroz, Brian (B.T.); Ott, David (D.J.); Pattee, Wyman (R.W.); Shore, John (J.); Souchock, Peter (P.D.); White, Shannon (S.R.); Williams, Trevor (T.G.); Yu, Dave (D.)  
**Cc:** Muter, Doreen (D.J.); Goebel, Ken (K.M.); Patel, Bharat (B.J.)  
**Subject:** 04S25 Final Volumes

**Importance:** High

All: Below are the final volumes for 04S25 (04X34) - 2002-2004 Escape LHD 3.0L Accelerator Safety Recall. This information should be inputted into the 14D for finalization of this document. Thank you, Pauline and Larry.

Criteria:  
 02-04MY Escapes  
 3.0L  
 LHD Only

*\*\*\*Note: The Mazda Tribute volume is 141,374 and is **not** included in the below Ford Final Volumes. Also note, that per information from Mazda, 216 KD units produced at Hofu and Hiroshima (150 Ford and 66 Mazda) are also potentially affected by this program.\*\*\**

**Total 02-04MY LHD Escapes w/3.0L = 470,245**

**MY B-down:**

2002 = 177,949  
 2003 = 176,876  
 2004 = 115,420  
 Total = 470,245

**Market B-down Rpt:**



04X34MarketBDown  
 .xls (19 KB)

**Production Dates by MY by Plant for 02-04MY Escapes w/3.0L:**

<u>Plant</u>	<u>Model Year</u>	<u>Earliest Production Date</u>	<u>Last Prod Date</u>
KANSAS CITY PLANT BUILD	2002	30-May-2001	19-Jul-2002
KANSAS CITY PLANT BUILD	2003	23-Apr-2002	06-Jun-2003
KANSAS CITY PLANT BUILD	2004	28-Apr-2003	19-Dec-2003
OHIO ASSEMBLY PT BUILD	2004	01-May-2003	23-Jan-2004

**Counts by Plant:**

<u>Plant</u>	<u>Brand</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>Total</u>
KANSAS CITY PLANT BUILD	FORD	177949	176876	94738	449563
OHIO ASSEMBLY PT BUILD	FORD	0	0	20682	20682
<b>Total</b>		177949	176876	115420	470245

Regards,

Becky Esch

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

Vehicle Count By Country  
Global FSA: 00010252 - 02-04MY ESCAPE/TBIBUTE ALL MARKETS, ALL ENGINES BOTH PLANTS

ROI	Country	2002 MY	2003 MY	2004 MY	Total
FORD - NORTH AMERICA	CANADA	12366	16423	9218	38007
FORD - NORTH AMERICA	MEXICO	7153	7217	3842	18212
FORD - NORTH AMERICA	UNITED STATES	152983	148556	100125	401664
EUROPE - CENTRALISED MARKETS	AUSTRIA	0	1	0	1
EUROPE - CENTRALISED MARKETS	GERMANY	657	646	178	1481
EUROPE - CENTRALISED MARKETS	GREECE	77	66	140	283
EUROPE - CENTRALISED MARKETS	NORWAY	0	0	7	7
EUROPE - CENTRALISED MARKETS	SWEDEN	0	0	68	68
EUROPE - CENTRALISED MARKETS	SWITZERLAND	911	1021	144	2076
EUROPE - CENTRALISED MARKETS	UNITED KINGDOM	0	2	0	2
EUROPE - NON-CENTRALISED MKTS	RUSSIAN FEDERATION	379	271	122	772
EUROPE - REST OF EUROPE	ICELAND	0	1	21	22
EUROPE - REST OF EUROPE	KAZAKHSTAN	0	0	5	5
EUROPE - REST OF EUROPE	UKRAINE	1	0	0	1
FORD - SOUTH AMERICA	COLOMBIA	36	0	0	36
FORD - SOUTH AMERICA	VENEZUELA	16	0	0	16
WDMO - AFFILIATES	CHILE	337	360	1	698
WDMO - AP	KOREA, REP OF (South)	301	216	50	567
WDMO - CCA	ANTIGUA & BARBUDA	3	0	0	3
WDMO - CCA	ARUBA	11	4	0	15
WDMO - CCA	BAHAMAS	1	18	7	26
WDMO - CCA	BELIZE	1	0	1	2
WDMO - CCA	CAYMAN ISLANDS	27	21	0	48
WDMO - CCA	COSTA RICA	9	18	8	35
WDMO - CCA	DOMINICAN REPUBLIC	40	10	5	55
WDMO - CCA	EL SALVADOR	13	15	8	36
WDMO - CCA	GUATEMALA	10	18	18	46
WDMO - CCA	HAITI	3	0	0	3
WDMO - CCA	NETHERLANDS ANTILLIES	42	46	47	135
WDMO - CCA	NICARAGUA	0	1	0	1
WDMO - CCA	PANAMA	0	0	19	19
WDMO - FME	BAHRAIN	30	59	5	94
WDMO - FME	KUWAIT	165	37	119	321
WDMO - FME	LEBANON	4	0	0	4
WDMO - FME	QATAR	29	6	13	48
WDMO - FME	SAUDI ARABIA	0	5	0	5



Vehicle Count By Country

Global FSA: 00010252 - 02-04MY ESCAPE/TBIBUTE ALL MARKETS, ALL ENGINES BOTH PLANTS

WDMO - FME	UNITED ARAB EMIRIATES	54	50	1	105
WDMO - SSA	ANGOLA	6	16	8	30
WDMO - SSA	GABON	2	0	0	2
WDMO - SSA	GHANA	7	7	12	26
WDMO - SSA	SENEGAL	0	2	0	2
WDMO - US FED SAFETY ACT	AMERICAN SAMOA	6	6	0	12
WDMO - US FED SAFETY ACT	GUAM	15	0	0	15
WDMO - US FED SAFETY ACT	NORTHERN MARIANA ISL/	0	3	0	3
WDMO - US FED SAFETY ACT	PUERTO RICO	1996	1507	1198	4701
WDMO - US FED SAFETY ACT	VIRGIN ISLANDS (US	258	247	30	535
		177949	176876	115420	470245

---

**From:** Shipp, Terri (T.L.)  
**Sent:** Wednesday, December 01, 2004 9:20 AM  
**To:** Beaudoin, Craig (C.A.)  
**Cc:** Liposky, Lawrence (L.J.); Abbasi, Basel (B.A.); Conrad, James (J.A.)  
**Subject:** FW: 04S25 Assigned - Escape Accelerator Cable

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Craig,

I did not realize that STA was handling PAC paper for 04S25. I sent the note below to Nemo Villarruel from Car Critical Concerns. The contacts for the Accelerator Control D&R activity are: Larry Liposky, Basel Abbasi and Jim Conrad.

Thanks,

*Terri Shipp*

Ford Motor Company  
P/T Components and Concern Resolution Department  
NAE P/T Campaign Prevention Specialist  
(Phone) 313-33-73831 / (Fax) 313-62-16020  
Cube 1AF12, MD #3, FPC-A  
[tshipp@ford.com](mailto:tshipp@ford.com) <<mailto:tshipp@ford.com>>  
[www.ford.com](http://www.ford.com) <<http://www.ford.com>>  
<http://pm1001.fpc.ford.com/t362/CampaignPreventionHP.html>

-----Original Message-----

**From:** Shipp, Terri (T.L.)  
**Sent:** Monday, November 29, 2004 4:15 PM  
**To:** Villarruel, Nemesio (N.)  
**Cc:** Liposky, Lawrence (L.J.); Abbasi, Basel (B.A.); Conrad, James (J.A.)  
**Subject:** FW: 04S25 Assigned - Escape Accelerator Cable

Nemo,

For the PAC paper, please schedule the kick off meeting with Larry Liposky, Basel Abbasi, Jim Conrad and myself. If possible, will you schedule the meeting before December 9. I have a whole bunch of vacation left and I am going to be out of the office from December 9 to January 3.

Thanks,

*Terri Shipp*

Ford Motor Company  
P/T Components and Concern Resolution Department  
NAE P/T Campaign Prevention Specialist  
(Phone) 313-33-73831 / (Fax) 313-62-16020  
Cube 1AF12, MD #3, FPC-A  
[tshipp@ford.com](mailto:tshipp@ford.com) <<mailto:tshipp@ford.com>>  
[www.ford.com](http://www.ford.com) <<http://www.ford.com>>  
<http://pm1001.fpc.ford.com/t362/CampaignPreventionHP.html>

-----Original Message-----

**From:** Esch, Becky (B.)  
**Sent:** Monday, November 29, 2004 3:32 PM  
**To:** Leone, Susan (M.); Wolfe, Brian (B.C.); Klarr, Jerry (G.T.); Liposky, Lawrence (L.J.)  
**Cc:** Amin, Mike (M.J.); Badges, Robert (R.S.); Balint, Gary (G.S.); Bardeleben, Rosemary (R.); Barnaby, Terry (T.L.); Berezansky, Beth (B.M.); Bird, Luther (L.D.); Black, Stuart (S.); Bracchieri, Fausto (F.); Brush, Tara (.); Burke, Pauline (P.F.); Carlisle, Shawn (S.K.); Carver, Norman (N.B.); Castleberry, Brett (B.A.); Catalano, Martino (M.); Cheff, Amy (A.B.); Christensen, Kris (K.S.); Cieglo, David (D.V.); Cischke, Sue (Susan M.); Clavell, Emilio (E.); Clayton, Chris (C.N.); Czarnik, Lisa (L.M.); Deering-Thornton, Zandr (Z.F.); DeLisle, Bobbi (R.); Desmet, Sue (S.M.); Drever, Donald (D.C.); Edie, Mark (M.D.); Esch, Becky (B.); Falahee, Tom (T.M.); Foster, Tom (T.E.); Froehlich, Jose (J.); Garrett, Dave (D.M.); Gilden, Rebecca (R.M.); Gilhool, Jennifer (J.); Giuliano, Mark (M.P.); Gniewek, Kenneth (K.J.); Goebel, Ken (K.M.); Goeser, Louise (L.K.); Habian, Mitchell (M.J.); Hakun, Dennis (D.M.); Hansen, Thayne (T.); Hilding, Robert (R.J.); Hirtzel, Rich (R.J.); Jaeger, Sharon (S.A.); Jendrusch, Tom (T.D.); Johnson, Justin (J.R.); Johnson, Warren (W.K.); Johnson-Allen, Darla (D.J.); Khan, Mohammad (M.); King, Rowland (R.S.); Kinley, Kristen (K.L.); Kiser, Kurt (K.W.); Kizyima, Dave (D.E.); Kopeika, Charles (C.R.); Leese, Alvin (A.); Liberatore, Robin (R.L.); Ligon, Frank (F.M.); Logel, Jay (J.D.); Lorenz, Gary (G.L.); Lough, Don (D.J.); Maeroff, Bruce (B.J.); Mardell, Mitch (M.P.); Masura, Gordon (G.P.); Matsui, Steven (S.N.); Miller, Tracy (T.L.); Mimikos, Marcy (M.A.); Moroz, Brian (B.T.); Muter, Doreen (D.J.); Neuman, June (J.M.); Nevi, Ray (R.A.); O'Donnell, Ed (E.A.); Olvera, Rene (R.); Oswalt, Greg (G.G.); Patel, Bharat (B.C.); Patel, Bharat (B.J.); Philliben, Agnes (.); Plante, Paul (P.G.); Ribeiro, Fernando (F.M.); Roberts, Michael (M.J.); Runyan, Silvana (C.S.); Shipp, Terri (T.L.); Shore, John (J.); Souchock, Peter (P.D.); Starling, William (W.H.); Tomlinson, Ron (R.J.); Villarruel, Nemesio (N.); Vondale, James (J.P.); Waxer, Donald (D.D.); Weller, Helen (H.); White, Michelle (M.E.); White, Shannon (S.R.); Wilkins, Linda (L.A.); Woodring, Chris (C.A.); Yu, Dave (D.)  
**Subject:** 04S25 Assigned - Escape Accelerator Cable

**Field Service Action Assigned:** 04S25  
**Reference:** 04X34 (For Recall & Service Programs Dept. Use Only)  
**FRC Date:** 29-Nov-2004  
**Vehicles Affected:** 2002-2004 Escape 3.0L LHD  
**Concern Description:** Accelerator Cable  
**Supplier Resp:** Yes  
**14-D Author:** Lawrence Liposky

The supplier, Ficosa, will be responsible for reviewing Prevent Action closure per FAF 03-170-03 and FAF 03-170-04 with Susan Leone, Director, STA North America, and FCSD no later than January 29, 2005.

This review will focus on implementation of Prevent Action (Step 13) requiring evidence of incorporation and overall quality of event including systemic root cause and appropriate prevent action selection to capture lessons learned.

Please contact Bharat Patel for further information and direction. Provide Dennis Hakun (DHAKUN) with actual Prevent Action Closure Date (required for campaign metrics) and an electronic copy of the Prevent Action closure review paper. We request that the GCE CPS include the Field Service Action number & root cause information in their Fresh Eyes check list as appropriate.

Regards,

Becky Esch

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

**From:** [Esch, Becky \(B.\)](#)  
**To:** [Burke, Pauline \(P.F.\)](#)  
**Subject:** FW: 04S25 Final Volumes  
**Date:** Thursday, December 02, 2004 8:30:49 AM

---

Typo fixed...red update below.

Regards,

Becky Esch

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Wednesday, December 01, 2004 1:28 PM  
**To:** Esch, Becky (B.)  
**Cc:** Burke, Pauline (P.F.)  
**Subject:** RE: 04S25 Final Volumes

Hi Becky,

The table looks odd because  $448,265 + 20,682 = 468,947$  not  $470,245$ .

### Counts by Plant:

Plant	Brand	2002	2003	2004	Total
KANSAS CITY PLANT BUILD	FORD	177949	176876	94738	449563
OHIO ASSEMBLY PT BUILD	FORD	0	0	20682	20682
Total		177949	176876	115420	470245

*Pauline Burke*

*Critical Concern Engineer - NAC*

*Master Black Belt*

*Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807*

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*for any purpose other than the conduct of business with Ford is expressly prohibited.*

-----Original Message-----

**From:** Esch, Becky (B.)  
**Sent:** Wednesday, December 01, 2004 10:18 AM  
**To:** Burke, Pauline (P.F.); Liposky, Lawrence (L.J.); Carver, Norman (N.B.); Drever, Donald (D.C.); Esch, Becky (B.); Froehlich, Jose (J.); Gniewek, Kenneth (K.J.); Johnson, Justin (J.R.); Johnson-Allen, Darla (D.J.); Kinley, Kristen (K.L.); Kizyma, Dave (D.E.); Moroz, Brian (B.T.); Ott, David (D.J.); Pattee, Wyman (R.W.); Shore, John (J.); Souchock, Peter (P.D.); White, Shannon (S.R.); Williams, Trevor (T.G.); Yu, Dave (D.)  
**Cc:** Muter, Doreen (D.J.); Goebel, Ken (K.M.); Patel, Bharat (B.J.)

**Subject:** 04S25 Final Volumes

**Importance:** High

All: Below are the final volumes for 04S25 (04X34) - 2002-2004 Escape LHD 3.0L Accelerator Safety Recall. This information should be inputted into the 14D for finalization of this document. Thank you, Pauline and Larry.

Criteria:  
02-04MY Escapes  
3.0L  
LHD Only

*\*\*\*Note: The Mazda Tribute volume is 141,374 and is **not** included in the below Ford Final Volumes. Also note, that per information from Mazda, 216 KD units produced at Hofu and Hiroshima (150 Ford and 66 Mazda) are also potentially affected by this program.\*\*\**

**Total 02-04MY LHD Escapes w/3.0L = 470,245**

**MY B-down:**

2002 = 177,949  
2003 = 176,876  
2004 = 115,420  
Total = 470,245

**Market B-down Rpt:**

<< File: 04X34MarketBDown.xls >>

**Production Dates by MY by Plant for 02-04MY Escapes w/3.0L:**

Plant	Model Year	Earliest Production Date	Last Prod Date
KANSAS CITY PLANT BUILD	2002	30-May-2001	19-Jul-2002
KANSAS CITY PLANT BUILD	2003	23-Apr-2002	06-Jun-2003
KANSAS CITY PLANT BUILD	2004	28-Apr-2003	19-Dec-2003
OHIO ASSEMBLY PT BUILD	2004	01-May-2003	23-Jan-2004

**Counts by Plant:**

Plant	Brand	2002	2003	2004	Total
KANSAS CITY PLANT BUILD	FORD	177949	176876	94738	448265
OHIO ASSEMBLY PT BUILD	FORD	0	0	20682	20682
<b>Total</b>		177949	176876	115420	470245

Regards,

Becky Esch

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs

DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

**From:** [Patel, Bharat \(B.J.\)](#)  
**To:** [Burke, Pauline \(P.F.\)](#)  
**Subject:** FW: NHTSA Notification Letter - 04S25  
**Date:** Tuesday, December 07, 2004 1:24:53 PM  
**Attachments:** [04S25.pdf](#)

---

FYI - this is the official communication from ASO to NHTSA to comply to the part 573 requirement. I noticed a typo on the last line with respect to the reimbursement date - I believe it should state 2005 and not Jan 2004. We don't need to do anything. ASO is in the process of correcting with NHTSA.

***Bharat J. Patel***

Critical Concerns Manager - NAC

Phone / Fax: 313-248-6188;

Text Pager: 313-795-3457 or [bpatel7@ford.com](mailto:bpatel7@ford.com); Rm. 1GB061, Building #1, MD#1124

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*for any purpose other than the conduct of business with Ford is expressly prohibited"*

-----Original Message-----

**From:** Brush, Tara (.)

**Sent:** Tuesday, December 07, 2004 9:17 AM

**To:** Patel, Bharat (B.J.); Geraghty, Brian (B.J.); Kopeika, Charles (C.R.); Sabaitis, Christine (C.R.); Kizyma, Dave (D.E.); Yu, Dave (D.); Ott, David (D.J.); Ray, Glenn (G.E.); Oswald, Greg (G.G.); Ridenour, Jack (J.); Vondale, James (J.P.); Logel, Jay (J.D.); Gilhool, Jennifer (J.); Berenter, Joel (J.R.); Froehlich, Jose (J.); Christensen, Kris (K.S.); Kiser, Kurt (K.W.); Wilkins, Linda (L.A.); Mardell, Mitch (M.P.); Souchock, Peter (P.D.); Nevi, Ray (R.A.); Cassel, Reem (R.A.); Ruth, Richard (R.R.); Biskup, Robert (R.T.); Pheiffer, Bob (R.J.); Kirkish, Sarah (S.L.); Sweeney, Stephanie (S.L.); Trujillo, Thomas (T.G.); Green, Timothy (T.A.); Falahee, Tom (T.M.); Williams, Trevor (T.G.)

**Subject:** NHTSA Notification Letter - 04S25

Attached please find the above mentioned document. Please contact Scott Bauer with any questions.

Respectfully,

*Tara Brush*

Global Automotive Safety Compliance

Internal Investigations Coordinator

Phone: 33-71920 Fax: 59-42268

[tbrush@ford.com](mailto:tbrush@ford.com)

# Ford Motor Company

James P. Vondale, Director  
Automotive Safety Office  
Environmental & Safety Engineering

December 6, 2004

DISPOSE of Copies (Black Stamped) by:	2024
RETAIN Record Copy (Red Stamped) Thru:	
Schedule Number:	27-03

Mr. Kenneth N. Weinstein  
Associate Administrator for Safety Assurance  
National Highway Traffic Safety Administration  
400 Seventh Street, S.W.  
Washington, D.C. 20590

Dear Mr. Weinstein:

Subject: Ford Recall No. 04S25 – Certain 2002 through 2004 Model Year Ford Escape Vehicles Built With 3.0L V6 Engines – Accelerator Cable Replacement

## Summary

- Ford Action – Ford Motor Company (Ford) is conducting a voluntary safety recall involving certain 2002 through 2004 model year Ford Escape vehicles built with 3.0L V6 engines manufactured from May 30, 2001 through January 23, 2004, to replace the accelerator cable.
- Number of Vehicles Involved – Approximately 470,245 vehicles in the United States and Federalized Territories.
- Affect on Vehicle Operation – The accelerator cable inner liner may migrate out of the conduit at the dash panel end fitting and may come in contact with the accelerator pedal assembly. Under certain circumstances the pedal may not return to the fully released position.
- Service Procedure – Owners will be instructed to take their vehicles to a Ford or Lincoln-Mercury dealer to have the accelerator cable replaced.

Attached is the detailed information required by the applicable portions of 49 CFR Part 573 - Defect and Non-Compliance Information Report.

Sincerely,

  
James P. Vondale

Attachment





49 CFR Part 573 - DEFECT INFORMATION REPORT  
04S25 – CERTAIN 2002 THROUGH 2004 MODEL YEAR FORD ESCAPE VEHICLES

Pursuant to Part 573 of Title 49 of the Code of Federal Regulations, Defect and Noncompliance Reports, Ford Motor Company submits the following information concerning a safety recall action that it is voluntarily initiating.

573.6 (c) (2) - Potentially Affected Vehicles

Vehicles potentially affected are 2002 through 2004 model year Ford Escape vehicles with 3.0L V6 engines built at the Kansas City and Ohio Assembly Plants from May 30, 2001 through January 23, 2004, as identified by specific VIN numbers.

Because these vehicles are not produced in VIN order, information as to the applicability of this action to specific vehicles can best be obtained by either calling Ford's toll-free line (1-800-392-3673) or by contacting a local Ford or Lincoln-Mercury dealer who can obtain specific information regarding the vehicles from the Ford On-line Automotive Service Information System (OASIS) database.

573.6 (c) (3) - Estimated Population of Vehicles Potentially Affected

Approximately 470,245 vehicles in the United States and Federalized Territories.

573.6 (c) (4) - Estimated Percentage of Affected Vehicles with the Defect Condition

All of the subject vehicles may experience the condition.

573.6 (c) (5) - Description of the Defect

The accelerator cable inner liner may, over time, migrate out of the conduit at the dash panel fitting during vehicle operation. The liner may migrate to the point that it contacts the accelerator pedal arm (part of the accelerator pedal assembly). Under these conditions the liner may prevent the pedal from fully returning, which may not allow the throttle body to fully return to the "idle" position. Typically the condition results in a progressive increase in the "idle" speed if liner migration continues over time, but may cause a more sudden increase if a greater portion of the cable moves at one time.

573.6 (c) (6) - Chronology of Events

On March 30, 2004, the Ford Critical Concern Review Group was notified by engineering of reports of alleged elevated engine idle speed on Ford Escape vehicles built with 3.0L V6 engines. Analysis conducted in June, 2004 on 25 warranty returned accelerator cables identified 12 cables that exhibited some level of inner liner migration out of the conduit at the dash panel fitting. None of these 12 cables caused elevated engine "idle" speed. Further analysis determined that if the liner continues to migrate sufficiently, it may contact the pedal assembly and prevent the throttle from returning to idle.

To obtain additional information Ford conducted a review of customer vehicles in September, 2004. Subsequent analysis of the parts from these vehicles also identified some cables with minimal amounts of liner migration. There were no allegations of elevated engine idle speeds for these vehicles.

In November, 2004, a complete review of field reports, warranty claims, and production data was conducted and found a number of alleged high "idle" incidents for 2002 and 2003 model year vehicles. No design or manufacturing process changes at the supplier have been identified at this time that would account for this condition or differentiate performance based on model year.

573.6 (c) (8) - Service Program

Dealers will be instructed to replace the accelerator cable.

There will be no charge to owners for this service. Mailing of owner notification letters will begin on January 17, 2004 and be completed on or before January 19, 2004. Ford's general reimbursement plan for the cost of remedies paid for by vehicle owners prior to notification of a safety recall was provided to the agency on February 28, 2003.

573.6 (c) (9) - Press statement and Dealer/Owner Letters

Ford does not at this time plan to make a statement to the media concerning the subject matter of this action. A copy of the Notification letters to dealers and owners from Ford will be forwarded to the agency when available.

573.6(c) (11) - Recall Number

Ford has assigned recall number 04S25 to this action.

573.13 (c) (2) - Ending Date for Reimbursement Eligibility

The ending date for reimbursement eligibility for cost of remedies paid for by vehicle owners per Ford's general reimbursement plan is January 29, 2004.

**From:** [Muter, Doreen \(D.J.\)](#)  
**To:** [Abbasi, Basel \(B.A.\)](#); [Liposky, Lawrence \(L.J.\)](#)  
**Cc:** [Muter, Doreen \(D.J.\)](#)  
**Subject:** FW: Recall 04S25  
**Date:** Friday, January 28, 2005 12:26:42 PM

---

Basel, do you have a picture of the liner walk out with the cable still installed in the vehicle?

Since we launched 04S25 we are getting more claims from customers saying they were involved in an accident do the the accelerator cable issue. Our direction to the dealers were to check the cable to see if the liner has walked. I would like to provide the Field Service Engineers (FSE) with a picture as a guide.

***Doreen J. Muter***

Service Engineering Operations  
Recall & Service Programs  
Diagnostic Service Center II, Cube 795  
Phone/Fax #:313-248-1414  
dmuter@ford.com

-----Original Message-----

**From:** Bradcoski, Brian (B.P.)  
**Sent:** Friday, January 28, 2005 11:31 AM  
**To:** Muter, Doreen (D.J.)  
**Cc:** Fonseca, Lourdes Nearon (L.C.)  
**Subject:** FW: Recall 04S25

Doreen,

I suspect you're probably in a better position to answer this question than I am.

Brian Bradcoski  
FCSD Product Concern Engineer - **ESCAPE** and **ESCAPE HYBRID**  
Diagnostic Service Center II, Room 548  
1800 Fairlane Drive  
Allen Park, MI 48101  
Phone & Fax (313) 32-23344

-----Original Message-----

**From:** Fonseca, Lourdes Nearon (L.C.)  
**Sent:** Friday, January 28, 2005 11:23 AM  
**To:** Bradcoski, Brian (B.P.)

**Subject:** Recall 04S25

Brian,

One of the Memphis Field Service Engineers directed me to you with this question as he was unable to determine with certainty. Will a visual inspection of the part in question determine if there was an actual failure in recall 04S25? In other words, if I get a customer who alleges he was involved in an accident and claims recall 04S25 caused the accident, will Ford dealerships be able to determine by looking at the part and see the malfunction? Thanks for any help!

Have a great day!

**Lourdes Fonseca-Nearon**

**Ford Motor Company**

**Consumer Affairs**

**Litigation Prevention Dept.**

Memphis and Southwest Legal Analyst

Phone:313-845-4583

Fax:313-845-5668



## Program Specification Sheet

**Program Number**                      04S25                      04X34  
**DOR #**                                      50336  
**Program Description / Background**    2002-2004 3.0L Escape accelerator cable. Customer could experience pedal efforts that increase and elevated RPM as issue continues to develop

**Bulletin on Web, when could Call Center expect inquiries?**    Bulletin to dealers 12/6    Seed to begin week of 12/6    Owner Letters 1/14/05    Free Order of parts 1/31/05 est.

Published Part Number	Description	QTY	Available When	Primary, Related / Ancillary	Current DLR NET
5L8Z-9A758-AA	Accel Cable 3.0L	1	now	P	10.58
2L8Z-9E926-AB	Throttle Body 3.0L	1	now	R	75.53
YL8Z-9E728-A	3.0L Bracket #2	1	Soon	R	TBD

**Kit BOM (cut from DNFA)** None - single part replacement

### Specifications

**Seed Stock Description**                      We would like to seed stock dealers beginning the week of 12/6/04. Seed plan is to place orders for dealers based on Fair Share of inbound material.

**Seed Stock Control spec's.**                      We will seed 65% of all inbound material leaving remaining material for build up of inventory. Stock order will need to be placed on Tuesday / Wednesday / Thursday / Friday only and spreading the PDC seed over three days equally. Each depot will retain the balance of the 65% seeded stock and accumulate inventory. This accumulated inventory will not be used for seed calculations. Renkim will need to confirm daily if material is "available" at each depot prior to placing seed orders.

**Order Type**                                      Stock                                      Release all orders ASAP

**Stock location**                                      All DPA HVC's

**Dealer Order Controls - 1**                      Seed stocking is expected to end in early January and free orders will be opened in late January 2005.

**Dealer Order Controls - Max Order QTY**                      Part orders to the Call Center will be for both involved and non-involved VINS. Non-involved orders are limited to 1. Orders for parts beyond seed will need prior approval from Ford.

**Motorcraft Involvement**                      This program has no FAD involvement

**FOC Process**                                      FOC will handle orders through the use of weekly dealer MAX order QTY's

Seed Stock QTY's	Dealer Size	Initial Number to be shipped	Subsequent Seeds	Comments
	0-50	2	2	
	51-100	5	2	
04X34 Accel Cable.xls		1		11/30/2004

## Program Specification Sheet

101-200	8	5
200-400	20	10
401+	35	20

DOES II Messages Y - Please advise dealers when an order is placed and QTY of seed stock being sent. PS&L will issue a Broadcast Message on DOESII when dealers can order as needed - Free Order date expected in late January 2005.

Special Program Requirements Advise dealers owner mailings are not expected to be sent until 1/14/05.

### Contact Information

Program Manager	John Shore	<a href="mailto:Jshore@Ford.com">Jshore@Ford.com</a>	734 266-9789
Program Analyst	Amy Cheff	<a href="mailto:Acheff@Ford.com">Acheff@Ford.com</a>	734 266-9911
RS&P Manager	Ken Goebel	<a href="mailto:Kgoebel@Ford.com">Kgoebel@Ford.com</a>	313 337-2791
RS&P Analyst	Doreen Muter	<a href="mailto:Dmuter@Ford.com">Dmuter@Ford.com</a>	313 248-3501

General Q&A What do we tell dealers if parts are not available. This is a coordinated response with RS&P.

**From:** [Linda Webster](#)  
**To:** [Esch, Becky \(B.\)](#)  
**Cc:** [Clair, David \(D.A.\)](#); [Michele Smith](#); [Philliben, Agnes \(.\)](#); [Roberts, Michael \(M.J.\)](#); [Sheila Hayes](#); [Sturm, Shannon](#); [Berezansky, Beth \(B.M.\)](#); [Case, Robert \(R.G.\)](#); [Catalano, Martino \(M.\)](#); [Froehlich, Jose \(J.\)](#); [Habian, Mitchell \(M.J.\)](#); [Moroz, Brian \(B.T.\)](#); [Rocha, Angelica \(A.\)](#)  
**Subject:** Re: 04S25 - Ford North America  
**Date:** Monday, January 10, 2005 1:21:03 PM  
**Attachments:** [LWebster.vcf](#)

---

Becky,

F.Y.I. The letters will mail on 1/18/05 due no U.S.P.S. delivery on the 17th (observed holiday). Thanks!

"Esch, Becky (B.)" wrote:

Renkim Team: Below is the owner file release(s) for 04S25 for Ford North America. Per Doreen's direction and the tracking sheets she is looking at a begin mail date of Jan. 17th. The final/approved owner letter was forwarded to the Renkim Team in mid December. The WDMO Owner File, All Fleet, and CAN Dir files will be sent via a future communication.

Ford North America - Owner Release FTP Location #1:

USA - 373,675  
MEX - 18,211  
CAN - 35,392

RENKOWN  
CSGC.PROD.CS0191F1.RENKIM.OWNER.G0889V00

Ford North America - Owner Release FTP Location #2:

USA - 3,655  
MEX - 0  
CAN - 0

RENKOWN  
CSGC.PROD.CS0191F1.RENKIM.OWNER.G0890V00

Regards,

*Becky Esch*

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
[besch1@ford.com](mailto:besch1@ford.com)

---

**Full Name:** Linda Webster  
**Last Name:** Webster  
**First Name:** Linda  
**Job Title:** Account Manager  
**Department:** (734) 374-8315  
**Company:** Renkim Corporation

**Business Address:** 13333 Allen Road  
Southgate, MI 48195

**Business:** (734) 374-8315

**E-mail:** lwebster@renkim.com  
**E-mail Display As:** Linda Webster (lwebster@renkim.com)



**From:** [Esch, Becky \(B.\)](#)  
**To:** [Esch, Becky \(B.\)](#); [Clair, David \(D.A.\)](#); ["Linda Webster"](#); ["Michele Smith"](#); [Philliben, Agnes \(.\)](#); [Roberts, Michael \(M.J.\)](#); ["Sheila Hayes"](#); ["Sturm, Shannon"](#)  
**Cc:** [Berezansky, Beth \(B.M.\)](#); [Case, Robert \(R.G.\)](#); [Catalano, Martino \(M.\)](#); [Froehlich, Jose \(J.\)](#); [Habian, Mitchell \(M.J.\)](#); [Moroz, Brian \(B.T.\)](#); [Rocha, Angelica \(A.\)](#); [Brandt, Debby \(D.L.\)](#); [Muter, Doreen \(D.J.\)](#)  
**Subject:** RE: 04S25 - Remaining File Releases  
**Date:** Monday, January 10, 2005 4:05:49 PM

---

Renkim Team: Here are the remaining file releases for 04S25 - CAN Dlr, All Fleets, and WDMO Owner.

[CAN Dealer File Release: Count = 35,392 CAN VINs](#)

SADEALER  
CSGC.PROD.CS0191F1.RENKIM.SADEALER.G0881V00

[Fleet File Release \(FAP, FSAO, WDMO had Zero Fleet VIN Counts - Below location has FNA only Fleet VINs\)](#)

FNA - USA = 39,121  
MEX = 0  
CAN = 9,845

SAFLEET  
CSGC.PROD.CS0191F1.RENKIM.SAFLEET.G0882V00

[WDMO Owner File Release: 6,258 WDMO VINS in a number of countries....if country list is needed please request and I will send you the list out of GCamp.](#)

RENKOWN  
CSGC.PROD.CS0191F2.RENKIM.OWNER.G0272V00

Regards,

*Becky Esch*

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

-----Original Message-----

**From:** Esch, Becky (B.)  
**Sent:** Monday, January 10, 2005 1:18 PM  
**To:** Clair, David (D.A.); Esch, Becky (B.); Linda Webster; Michele Smith; Philliben, Agnes (.); Roberts, Michael (M.J.); Sheila Hayes; Sturm, Shannon  
**Cc:** Berezansky, Beth (B.M.); Case, Robert (R.G.); Catalano, Martino (M.); Froehlich, Jose (J.); Habian, Mitchell (M.J.); Moroz, Brian (B.T.); Rocha, Angelica (A.)

**Subject:** 04S25 - Ford North America

Renkim Team: Below is the owner file release(s) for 04S25 for Ford North America. Per Doreen's direction and the tracking sheets she is looking at a begin mail date of Jan. 17th. The final/approved owner letter was forwarded to the Renkim Team in mid December. The WDMO Owner File, All Fleet, and CAN Dlr files will be sent via a future communication.

Ford North America - Owner Release FTP Location #1:

USA - 373,675  
MEX - 18,211  
CAN - 35,392

RENKOWN  
CSGC.PROD.CS0191F1.RENKIM.OWNER.G0889V00

Ford North America - Owner Release FTP Location #2:

USA - 3,655  
MEX - 0  
CAN - 0

RENKOWN  
CSGC.PROD.CS0191F1.RENKIM.OWNER.G0890V00

Regards,

Becky Esch

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
besch1@ford.com

**From:** [Esch, Becky \(B.\)](#)  
**To:** [Burke, Pauline \(P.F.\)](#)  
**Cc:** [Muter, Doreen \(D.J.\)](#)  
**Subject:** RE: Esc/Trib Requested Veh Volumes  
**Date:** Friday, July 23, 2004 1:50:35 PM  
**Attachments:** [04X34MarketMYBdown.xls](#)

---

**Pauline:** Here is the info you requested for 04X34 based on this criteria:

Criteria Grouping(s):

VIN GROUP: AA - All 02-04 Escape / Tribute  
LAST MODIFIED: 23-JUL-2004 09:34 AM BY BESCH1  
MODEL YEAR(S): 2002, 2003, 2004  
VEHICLE LINE(S): FORD ESCAPE / MAZDA TRIBUTE

**655,683** is now the total population for 2002-2004.

Here is the Market and MY breakdowns:

Regards,

*Becky Esch*

Ford North America FSA Coordinator  
FCSD, Recall & Service Programs  
DSCII / Ph: 313-32-30731 Fax: 313-84-51024  
[besch1@ford.com](mailto:besch1@ford.com)

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Friday, July 23, 2004 9:33 AM  
**To:** Esch, Becky (B.)  
**Cc:** Burke, Pauline (P.F.)  
**Subject:** RE: Esc/Trib Requested Veh Volumes

Hi Becky,

I need the updated extract without 2001 for the 14D. Could you please send it to me with the market breakdown.

Thanks!

*Pauline Burke*  
*Critical Concern Engineer - NAC*  
*Phone/Fax: (313) 248-6312*  
*Text Pager (313) 795-3807*

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-----Original Message-----

**From:** Burke, Pauline (P.F.)

**Sent:** Thursday, July 15, 2004 4:10 PM  
**To:** Esch, Becky (B.)  
**Cc:** Burke, Pauline (P.F.); Liposky, Lawrence (L.J.); Muter, Doreen (D.J.); Shore, John (J.)  
**Subject:** RE: Esc/Trib Requested Veh Volumes

Hi Becky,

In our Tech. Review today, we determined that 2001 model year was not affected. Could you reproduce the extract without 2001 please? Also show the markets affected.

Thank you so much.

**Pauline Burke**  
**Critical Concern Engineer - NAC**  
**Phone/Fax: (313) 248-6312**  
**Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Esch, Becky (B.)  
**Sent:** Thursday, June 17, 2004 12:59 PM  
**To:** Muter, Doreen (D.J.); Liposky, Lawrence (L.J.); Burke, Pauline (P.F.)  
**Cc:** Shore, John (J.)  
**Subject:** Esc/Trib Requested Veh Volumes

Doreen: Per your request, below is the info I sent to Doug White re: Escape/Trib Volumes:

	2001	2002	2003	2004	Total
<b>Ford Escape</b>	182,747	189,343	185,482	123,497	681,069
<b>Mazda Tribute</b>	71,486	65,897	56,707	34,757	228,847

Engine B-down:

2.0L - 67,036

3.0L - 839,307

No NAVIS Code in Engine Position = 3,573 Volume

**Build Dates by Plant and MY - Job#1 thru Job Last:**

Plant	Model Year	Earliest Production Date	Latest Production Date
HIROSHIMA ASSEMBLY PLANT-JAPAN	2002	29-Jan-2002	29-Jan-2002
HIROSHIMA ASSEMBLY PLANT-JAPAN	2003	13-Jun-2003	22-Jul-2003
HIROSHIMA ASSEMBLY PLANT-JAPAN	2004	02-Aug-2003	12-Sep-2003
HOFU ASSEMBLY PLANT	2001	12-Jan-2001	04-Jul-2001
HOFU ASSEMBLY PLANT	2002	20-Aug-2001	26-Jul-2002
HOFU ASSEMBLY PLANT	2003	02-Aug-2002	13-Jun-2003

KANSAS CITY PLANT BUILD 2001	22-Oct-1999	01-Aug-2001
KANSAS CITY PLANT BUILD 2002	30-May-2001	19-Jul-2002
KANSAS CITY PLANT BUILD 2003	23-Apr-2002	06-Jun-2003
KANSAS CITY PLANT BUILD 2004	28-Apr-2003	19-Dec-2003
KARMANN PLANT BUILD 2001	09-Mar-2001	09-Mar-2001
KARMANN PLANT BUILD 2002	05-Nov-2001	27-Nov-2001
KARMANN PLANT BUILD 2003	16-Aug-2002	13-Jun-2003
OHIO ASSEMBLY PT BUILD 2004	01-May-2003	23-Jan-2004

Regards,

Becky Esch

Ford North America FSA Coordinator

FCSD, Recall & Service Programs

DSCII / Ph: 313-32-30731 Fax: 313-84-51024

besch1@ford.com

Vehicle Count By Country

Global FSA: 00010252 - D. WHITE - 2001 - 2004 ESCAPE ALL MARKETS AND ALL ENGINES AND BOTH PLANTS

Hub	Country	2002 MY	2003 MY	2004 MY	Total
FORD ASIA-PACIFIC	TAIWAN	100	0	0	100
FORD NORTH AMERICA	CANADA	13102	16999	9437	39538
FORD NORTH AMERICA	MEXICO	7154	7217	3842	18213
FORD NORTH AMERICA	UNITED STATES	159590	151194	105513	416297
FORD OF EUROPE	AUSTRIA	0	1	0	1
FORD OF EUROPE	GERMANY	1698	2052	722	4472
FORD OF EUROPE	GREECE	566	1360	1497	3423
FORD OF EUROPE	NORWAY	0	24	83	107
FORD OF EUROPE	SWEDEN	0	0	68	68
FORD OF EUROPE	SWITZERLAND	1569	1757	250	3576
FORD OF EUROPE	UNITED KINGDOM	999	804	68	1871
FORD OF EUROPE	RUSSIAN FEDERATION	440	620	217	1277
FORD OF EUROPE	TURKEY	0	2	0	2
FORD OF EUROPE	ICELAND	0	1	21	22
FORD OF EUROPE	KAZAKHSTAN	0	0	5	5
FORD OF EUROPE	UKRAINE	1	2	0	3
FORD SOUTH AMERICA	ARGENTINA	66	0	0	66
FORD SOUTH AMERICA	COLOMBIA	72	0	0	72
FORD SOUTH AMERICA	ECUADOR	30	0	0	30
FORD SOUTH AMERICA	VENEZUELA	43	0	0	43
FORD SOUTH AMERICA	CHILE	479	541	2	1022
MAZDA	CANADA	1	0	0	1
MAZDA	UNITED STATES	65896	56707	34757	157360
WORLDWIDE DIRECT MARKET OPRNS	CAMBODIA	0	2	0	2
WORLDWIDE DIRECT MARKET OPRNS	FRENCH POLYNESIA	0	13	12	25
WORLDWIDE DIRECT MARKET OPRNS	KOREA, REP OF (South)	301	288	60	649
WORLDWIDE DIRECT MARKET OPRNS	ANTIGUA & BARBUDA	3	0	0	3
WORLDWIDE DIRECT MARKET OPRNS	ARUBA	14	57	0	71
WORLDWIDE DIRECT MARKET OPRNS	BAHAMAS	91	155	80	326
WORLDWIDE DIRECT MARKET OPRNS	BELIZE	8	7	2	17
WORLDWIDE DIRECT MARKET OPRNS	CAYMAN ISLANDS	29	21	0	50
WORLDWIDE DIRECT MARKET OPRNS	COSTA RICA	14	30	20	64
WORLDWIDE DIRECT MARKET OPRNS	DOMINICAN REPUBLIC	112	35	6	153
WORLDWIDE DIRECT MARKET OPRNS	EL SALVADOR	21	29	11	61
WORLDWIDE DIRECT MARKET OPRNS	GUATEMALA	10	18	18	46
WORLDWIDE DIRECT MARKET OPRNS	HAITI	5	1	0	6
WORLDWIDE DIRECT MARKET OPRNS	HONDURAS	8	29	17	54
WORLDWIDE DIRECT MARKET OPRNS	NETHERLANDS ANTILLIE	96	111	79	286
WORLDWIDE DIRECT MARKET OPRNS	NICARAGUA	8	3	1	12
WORLDWIDE DIRECT MARKET OPRNS	PANAMA	0	0	19	19
WORLDWIDE DIRECT MARKET OPRNS	LEBANON	4	0	0	4
WORLDWIDE DIRECT MARKET OPRNS	BAHRAIN	30	59	5	94
WORLDWIDE DIRECT MARKET OPRNS	KUWAIT	165	37	119	321
WORLDWIDE DIRECT MARKET OPRNS	QATAR	29	6	13	48
WORLDWIDE DIRECT MARKET OPRNS	SAUDI ARABIA	0	5	0	5
WORLDWIDE DIRECT MARKET OPRNS	UNITED ARAB EMIRIATE	54	50	1	105
WORLDWIDE DIRECT MARKET OPRNS	ANGOLA	6	16	8	30
WORLDWIDE DIRECT MARKET OPRNS	GABON	2	0	0	2
WORLDWIDE DIRECT MARKET OPRNS	GHANA	7	7	12	26
WORLDWIDE DIRECT MARKET OPRNS	SENEGAL	0	2	0	2
WORLDWIDE DIRECT MARKET OPRNS	AMERICAN SAMOA	6	7	2	15
WORLDWIDE DIRECT MARKET OPRNS	GUAM	19	0	0	19
WORLDWIDE DIRECT MARKET OPRNS	NORTHERN MARIANA ISL	1	9	2	12
WORLDWIDE DIRECT MARKET OPRNS	PUERTO RICO	2107	1664	1255	5026
WORLDWIDE DIRECT MARKET OPRNS	VIRGIN ISLANDS (US	284	247	30	561

**From:** [Catalano, Martino \(M.\)](#)  
**To:** [Green, Jeffrey \(J.T.\)](#)  
**Subject:** RE: Safety Recall 04S25 - Program Update  
**Date:** Tuesday, October 11, 2005 9:55:45 AM

---

If you agree , I will record it as a supplement for Canada .

Regards,

*Martino Catalano*  
*F.S.A Dept.*  
*Ford of Canada*  
*Tel: 905-845-2511 ext. 1091*  
*Fax: 905-845-7069*

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-----Original Message-----

**From:** Green, Jeffrey (J.T.)  
**Sent:** Tuesday, October 11, 2005 9:46 AM  
**To:** Catalano, Martino (M.)  
**Subject:** RE: Safety Recall 04S25 - Program Update

[Martino](#),  
You're right. I think we should because a bulletin was posted.

Regards,

*Jeff Green*  
FSA Coordinator, N.A.  
Recall/Service Programs  
(313)32-30731

-----Original Message-----

**From:** Catalano, Martino (M.)  
**Sent:** Tuesday, October 11, 2005 9:40 AM  
**To:** Green, Jeffrey (J.T.)  
**Subject:** RE: Safety Recall 04S25 - Program Update

Hi Jeff , do we plan on recording launch and release history for this update , in Gcamp?

Regards,

*Martino Catalano*  
*F.S.A Dept.*  
*Ford of Canada*  
*Tel: 905-845-2511 ext. 1091*

Fax: 905-845-7069

Confidentiality Note: This electronic message contains confidential information which may be legally privileged or otherwise protected from disclosure. This information is intended for the use of the addressee only. If you are not the intended recipient, you are hereby notified that any disclosure, copying, distribution, printing or any other use of, or any action in reliance on, the contents of this electronic message is strictly prohibited. If you have received this communication in error, please notify the sender by telephone at the number noted above and destroy the original message.

-----Original Message-----

**From:** Green, Jeffrey (J.T.)

**Sent:** Thursday, October 06, 2005 4:43 PM

**To:** Marketing Associates; Yu, Dave (D.); Alvarez, Lauri (L.L.); Badges, Robert (R.S.); Baker, Donna (D.J.); Balint, Gary (G.S.); Berezansky, Beth (B.M.); Brandt, Debby (D.L.); Brush, Tara (.); Carver, Norman (N.B.); Case, Robert (R.G.); Castleberry, Brett (B.A.); Castleberry, Robert (R.); Catalano, Martino (M.); Centa, John (J.R.); Christensen, Kris (K.S.); Clair, David (D.A.); Dandrea, Jan (J.M.); Esch, Becky (B.); Gerstenberger, Mark (M.R.); Gleba, Ralph (R.G.); Goebel, Ken (K.M.); Gray, Neil (N.); Green, Jeffrey (J.T.); Griffith, S.; Habian, Mitchell (M.J.); Hayes, Sheila (S.); Higgins, Dennis (D.M.); Highe, Stanley (S.); Hirtzel, Rich (R.J.); Hinstead, Tamara (T.L.); Hugill, Marsha (M.J.); Jackson, Samuel (S.R.); Johnson, Justin (J.R.); Kaercher, Don (D.F.); Kennel, Ryan (R.J.); Kinley, Kristen (K.L.); Kiser, Kurt (K.W.); Leese, Alvin (A.); Masura, Gordon (G.P.); Moroz, Brian (B.T.); Nyquist, Stephen (S.J.); Oswald, Greg (G.G.); Patel, Bharat (B.J.); Philliben, Agnes (.); Rickett, Michael (M.W.); Rivera, Santos (S.); Roberts, Michael (M.J.); Serman-Drewicz, Sue (S.T.); Shore, John (J.); smith, Michele; Sslib, M. (M.); Webster, Linda; Wooten, Richard (R.L.)

**Subject:** Safety Recall 04S25 - Program Update

**Program Update:** Safety Recall 04S25 - All 2002 through 2004 Model Year Left Hand Drive (LHD) Escape Vehicles Equipped with 3.0L Engines

### Accelerator Cable Replacement

<< OLE Object: Microsoft Photo Editor 3.0 Picture >> **REASON FOR THIS UPDATE**  
*The purpose of this update is to inform dealers that updated illustrations and a warning have been added to the technical instructions (Attachment III) to help prevent damage to the speed control cable while performing the accelerator cable replacement procedure. In addition, warranty edits have been incorporated to prevent the payment of related damage claims for speed control cable replacement.*

This Dealer Bulletin has been posted to the Ford Internet at the following web address:

<https://www.fordtechservice.dealerconnection.com/wsl.asp?flavor=dealers&link=002&param=04S25>

The "What's New" announcement on FMCDealer.com has been posted at the following web address:

<http://www.fmcdealer.com>

Advise FCSD Regional Office if a dealer reports that an affected vehicle is not at the location shown in our (Ford Motor Company) records.

Regards,

*Jeff Green*

FSA Coordinator, N.A.



Recall/Service Programs  
(313)32-30731

**From:** [Bacigaluppi, Dario \(D.B.\)](#)  
**To:** [Pereira, Gerardo \(G.\)](#); [Bridi, Julio Daniel \(J.D.\)](#); [Pereira, Joaquim Arruda \(.\)](#); [Hansen, Thayne \(T.\)](#); [Rodriguez, Gustavo \(G.\)](#)  
**Cc:** [Green, Jeffrey \(J.T.\)](#)  
**Subject:** RE: Safety Recall 04S25 - Program Update  
**Date:** Tuesday, October 11, 2005 1:08:16 PM

---

En Argentina los 3 modelos de Escape comercializados hasta el año 2001 (XLS 4x2, XLT 4x2 y XLT 4x4) estaban equipados con el motor 2.0L Zetec, no el 3.0L.

Best Regards,

***Darío A. Bacigaluppi***

Parts & Service Engineering Supervisor  
Customer Service Division  
Ford Argentina S.C.A.  
:(54) 11 4756-9472  
:(54) 11 4756-8887  
: dbacigal@ford.com

### ¿Sentiste un Ford últimamente?

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-----Original Message-----

**From:** Pereira, Gerardo (G.)  
**Sent:** 07/10/2005 6:28 PM  
**To:** Bridi, Julio Daniel (J.D.); Pereira, Joaquim Arruda (.); Hansen, Thayne (T.); Rodriguez, Gustavo (G.)  
**Cc:** Green, Jeffrey (J.T.); Bacigaluppi, Dario (D.B.)  
**Subject:** RE: Safety Recall 04S25 - Program Update

**En Venezuela estamos afectados.**

**Cuando este FSA salio inicialmente, nosotros generamos un programa de servicio local para atender las unidades afectadas, ahora estamos actualizandolo con la informacion nueva que recibimos.**

-----Original Message-----

**From:** Bridi, Julio Daniel (J.D.)  
**Sent:** Viernes, 07 de Octubre de 2005 05:19 p.m.  
**To:** Pereira, Joaquim Arruda (.); Hansen, Thayne (T.); Pereira, Gerardo (G.); Rodriguez, Gustavo (G.)  
**Cc:** Green, Jeffrey (J.T.); Bacigaluppi, Dario (D.B.)  
**Subject:** RE: Safety Recall 04S25 - Program Update

**Lo estamos viendo con Dario**

**Julio D. Bridi**  
**FCSD - Service Operations Mger.**

Tel: (54 011) 4756 9459 Fax (54 011) 4756 9542  
E-mail : dbridi1@ford.com

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-----Original Message-----

**From:** Pereira, Joaquim Arruda (.)  
**Sent:** Thursday, October 06, 2005 9:41 PM  
**To:** Bridi, Julio Daniel (J.D.); Hansen, Thayne (T.); Pereira, Gerardo (G.); Rodriguez, Gustavo (G.)  
**Cc:** Green, Jeffrey (J.T.)  
**Subject:** RE: Safety Recall 04S25 - Program Update

Please pay attention for this. You should be affected.Tks!

**Joaquim A. de Arruda Pereira**  
Service Engineering Operations Manager  
Phone: 55-11-4174 4122  
*Ford Motor Company Brasil*  
**FordServiço ao Cliente**  
Bom atendimento é Original de Fábrica

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-----Original Message-----

**From:** Green, Jeffrey (J.T.)  
**Sent:** Thursday, October 06, 2005 5:35 PM  
**To:** Weller, Helen (H.); Balint, Gary (G.S.); Bridi, Julio Daniel (J.D.); Esch, Becky (B.); Goebel, Ken (K.M.); Gottumukkala, Raju (R.); Hansen, Thayne (T.); Johnson, David (D.J.); King, Rowland (R.S.); Oogjes, Dirk (D.A.); O'Reilly, John (J.A.); Pereira, Gerardo (G.); Pereira, Joaquim Arruda (.); Rocha, Angelica (A.); Rodriguez, Gustavo (G.); Santiago, Eduardo (S.)  
**Cc:** Yu, Dave (D.); Brush, Tara (.); Case, Robert (R.G.); Catalano, Martino (M.); Green, Jeffrey (J.T.); Linda Webster; Michele Smith; Moroz, Brian (B.T.); Philliben, Agnes (.); Roberts, Michael (M.J.)  
**Subject:** Safety Recall 04S25 - Program Update

All:

A program update has been done to 04S25. Please see reason below.

<< OLE Object: Microsoft Photo Editor 3.0 Picture >> **REASON FOR THIS UPDATE**  
*The purpose of this update is to inform dealers that updated illustrations and a warning have been added to the technical instructions (Attachment III) to help prevent damage to the speed control cable while performing the accelerator cable replacement procedure. In addition, warranty edits have been incorporated to prevent the payment of related damage claims for speed control cable replacement.*

-----Original Message-----

**From:** Esch, Becky (B.)

**Sent:** Monday, December 13, 2004 9:51 AM

**Subject:** RE: Update: US Customer Letter 04S25 (Announcement of Field Service Action)

All: Directly below is the US Customer Letter for 04S25 - All 2002 through 2004 Model Year LHD Escape Vehicles Equipped with 3.0L Engines Accelerator Cable Replacement. The US Customer Letter was scheduled to mail on 17-Jan-2005.

<< File: Escape Accel Cable Customer Letter w sig.doc >>

-----Original Message-----

**From:** Esch, Becky (B.)

**Sent:** Tuesday, December 07, 2004 5:11 PM

**Subject:** Announcement of Field Service Action 04S25

## Announcement of Field Service Action 04S25

**To:** All Ford Regional Hubs

**Date:** 6-Oct-2005

**FSA Approved By:** North American Field Review Committee

**FSA Number - Type:** 04S25 - Safety Recall

**FSA Description:** Accelerator Cable Replacement

**Dealer Action:** Dealers are to replace the accelerator cable with a newly designed cable.

**Affected Vehicles:** All 2002 through 2004 Model Year LHD Escape Vehicles Equipped with 3.0L Engines

**Affected Regions & Trustmarks:**

Ford of Europe: Y  
Ford North America: Y  
WDMO: Y  
Ford South America: Y  
Ford Asia Pacific: Y (Not per N.A. Produced NAVIS Extract, but Mazda Plants may have KD FAP units.)

Mazda: Y  
Jaguar: N  
Land Rover: N

**Parts Contact:** John Shore (jshore@ford.com <<<mailto:jshore@ford.com>>>)

**Launch Dates:** USA Dealer Bulletin: 7-Dec-2004  
USA Customer Letter: 17-Jan-2005  
USA Dealer Bulletin Program Update 6-Oct-2005

**Program Coordinator:** John Centa (jcenta1@ford.com)

**Attached is the USA Dealer Bulletin & Technical Instructions:**

<< File: 04S25 Tech Instructions Update posted 10-00-2005.pdf >> << File: 04S25 Dealer Bulletin Update posted 10-00-2005.doc >>

**From:** [Kishter, Lauren \(L.\)](#)  
**To:** [Green, Jeffrey \(J.T.\)](#); [Wilson, Mark \(M.E.\)](#); [Esch, Becky \(B.\)](#); [Kinley, Kristen \(K.L.\)](#); [Kraus, Douglas \(D.M.\)](#); [Leifson, Kirk \(K.V.\)](#); [Lloyd, Donald \(D.\)](#); [Macy, Robert \(R.J.\)](#); [Margeson, Joan \(J.E.\)](#); [McClure, Sandy \(.\)](#); [Pearce, Catherine \(C.A.\)](#); [Russell, DeAnna \(L.\)](#)  
**Cc:** [Goebel, Ken \(K.M.\)](#); [Habian, Mitchell \(M.J.\)](#); [Roberts, Michael \(M.J.\)](#); [Esch, Becky \(B.\)](#); [Centa, John \(J.R.\)](#)  
**Subject:** RE: Safety Recall 04S25 Program Update - Early Warning  
**Date:** Thursday, October 06, 2005 4:27:26 PM

---

[04S25 is published to FMCDealer.](#)

Lauren Kishter  
FCSD Content Manager  
FMCDealer.com, MCDistributor.com  
541-593-0241  
lkishter@ford.com

-----Original Message-----

**From:** Green, Jeffrey (J.T.)  
**Sent:** Thursday, October 06, 2005 1:25 PM  
**To:** Green, Jeffrey (J.T.); Kishter, Lauren (L.); Wilson, Mark (M.E.); Esch, Becky (B.); Kinley, Kristen (K.L.); Kraus, Douglas (D.M.); Leifson, Kirk (K.V.); Lloyd, Donald (D.); Macy, Robert (R.J.); Margeson, Joan (J.E.); McClure, Sandy (.); Pearce, Catherine (C.A.); Russell, DeAnna (L.)  
**Cc:** Goebel, Ken (K.M.); Habian, Mitchell (M.J.); Roberts, Michael (M.J.); Esch, Becky (B.); Centa, John (J.R.)  
**Subject:** RE: Safety Recall 04S25 Program Update - Early Warning

[This FSA program update has posted to PTS. Please post to FMCDealer.](#)

Regards,

*Jeff Green*  
FSA Coordinator, N.A.  
Recall/Service Programs  
(313)32-30731

-----Original Message-----

**From:** Green, Jeffrey (J.T.)  
**Sent:** Thursday, October 06, 2005 10:20 AM  
**To:** Kishter, Lauren (L.); Wilson, Mark (M.E.); Esch, Becky (B.); Kinley, Kristen (K.L.); Kraus, Douglas (D.M.); Leifson, Kirk (K.V.); Lloyd, Donald (D.); Macy, Robert (R.J.); Margeson, Joan (J.E.); McClure, Sandy (.); Pearce, Catherine (C.A.); Russell, DeAnna (L.)  
**Cc:** Goebel, Ken (K.M.); Habian, Mitchell (M.J.); Roberts, Michael (M.J.); Esch, Becky (B.); Centa, John (J.R.); Green, Jeffrey (J.T.)  
**Subject:** Safety Recall 04S25 Program Update - Early Warning

We are posting the following update to Field Service Action 04S25 today (Thursday, October 6):

TO: All U.S. Ford and Lincoln Mercury Dealers

SUBJECT: Safety Recall 04S25: **Program Update** - All 2002 through 2004  
Model Year Left Hand Drive (LHD) Escape Vehicles Equipped with 3.0L Engines  
Accelerator Cable Replacement

Regards,

*Jeff Green*

FSA Coordinator, N.A.  
Recall/Service Programs  
(313)32-30731

**From:** [Liebling, Douglas \(D.E.\)](#)  
**To:** [Burke, Pauline \(P.F.\)](#); [Muter, Doreen \(D.J.\)](#)  
**Subject:** RE: T-cable Instruction artwork  
**Date:** Thursday, December 02, 2004 9:12:04 AM

---

John Jennings (graphic illustrator for this recall) called me this morning.

He thinks he has what my Publications guys need.

If it gets more complicated, I'll let you know.

thanks!

**Doug Liebling**  
**Product Support Engineer**  
**MNAO-Kansas City Assy. Plant**  
**Mark all packages "General Stores: SUV PVT!"**  
**8121 N.E. Hwy. 69, Claycomo, MO 64119**  
**Ph: 816.459.1623 Fax: 816.459.1728**  
**dlieblin@mazdausa.com, dlieblin@ford.com**

-----Original Message-----

**From:** Burke, Pauline (P.F.)  
**Sent:** Thursday, December 02, 2004 8:11 AM  
**To:** Muter, Doreen (D.J.)  
**Cc:** Liebling, Douglas (D.E.)  
**Subject:** FW: T-cable Instruction artwork

Hi Doreen,

Can you please help Doug?

Thanks.

**Pauline Burke**  
**Critical Concern Engineer - NAC**  
**Master Black Belt**  
**Phone/Fax: (313) 248-6312; Text Pager (313) 795-3807**

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-----Original Message-----

**From:** Liebling, Douglas (D.E.)  
**Sent:** Wednesday, December 01, 2004 8:01 PM  
**To:** Burke, Pauline (P.F.); Kaercher, Don (D.F.); Minakami, Akio (A.)  
**Subject:** T-cable Instruction artwork

Hi Folks,

Can anyone help me obtain the original art files for the t-cable repair instructions? (attached)

My publications dept. requires it for our recall documents.



I know you aren't the people to ask, but maybe you can pass this on to someone more directly connected to this topic.

thanks,

D. Liebling

Tribute Product Support Engineer-KCAP

816.459.1623

**From:** [Goebel, Ken \(K.M.\)](#)  
**To:** [Jackson, Samuel \(S.R.\)](#)  
**Cc:** [Green, Jeffrey \(J.T.\)](#)  
**Subject:** RE: Web Translation Complete for R04S25/US/EN/IE  
**Date:** Wednesday, June 29, 2005 10:49:58 AM

---

Approved

Ken Goebel  
Program Manager, Recall & Service Programs, FCSD  
Ph. 313-33-72791, FAX 313-84-51024, DSC2, Rm. 803  
kgoebel@ford.com

-----Original Message-----

From: Jackson, Samuel (S.R.)  
Sent: Wednesday, June 29, 2005 9:20 AM  
To: Goebel, Ken (K.M.)  
Cc: Green, Jeffrey (J.T.)  
Subject: FW: Web Translation Complete for R04S25/US/EN/IE

Ken

Ready to Review.

Jeff

You will need to approve after Ken reviews.

-----Original Message-----

From: Siplus, G (G.)  
Sent: Wednesday, June 29, 2005 9:17 AM  
To: Jackson, Samuel (S.R.); Philliben, Agnes (.); Roberts, Michael (M.J.); Foster, Tom (T.E.); Green, Jeffrey (J.T.)  
Subject: Web Translation Complete for R04S25/US/EN/IE

Field Service Action Number: 04S25

Field Service Action Title:

Safety Recall - All 2002 through 2004 Model Year Left Hand Drive (LHD) Escape Vehicles Equipped with 3.0L Engines - Accelerator Cable Replacement  
market US, language EN

This book has finished translating without errors. It will be available to view within 30 minutes on the QA server <http://19.90.178.21/testing>.

**From:** [Centa, John \(J.R.\)](#)  
**To:** [Jackson, Samuel \(S.R.\)](#); [Green, Jeffrey \(J.T.\)](#)  
**Subject:** RE: Web Translation Complete for R04S25/US/EN/IE  
**Date:** Thursday, October 06, 2005 1:50:01 PM

---

Right you are.. Roll that beautiful bean footage!

-----Original Message-----

From: Jackson, Samuel (S.R.)  
Sent: Thursday, October 06, 2005 1:31 PM  
To: Centa, John (J.R.)  
Subject: RE: Web Translation Complete for R04S25/US/EN/IE

Give it a few min's then check it, takes time to update sometimes.

-----Original Message-----

From: Centa, John (J.R.)  
Sent: Thursday, October 06, 2005 1:29 PM  
To: Jackson, Samuel (S.R.)  
Subject: RE: Web Translation Complete for R04S25/US/EN/IE

Are you sure? It does not appear bold when I look at it from the link below??? This is not a huge deal. Just let me know if it can't be done..

-----Original Message-----

From: Jackson, Samuel (S.R.)  
Sent: Thursday, October 06, 2005 1:25 PM  
To: Centa, John (J.R.); Green, Jeffrey (J.T.)  
Subject: FW: Web Translation Complete for R04S25/US/EN/IE

Ready to review (Note is now bold)

-----Original Message-----

From: Siplus, G (G.)  
Sent: Thursday, October 06, 2005 1:23 PM  
To: Jackson, Samuel (S.R.); Philliben, Agnes (.); Roberts, Michael (M.J.); Foster, Tom (T.E.); Green, Jeffrey (J.T.)  
Subject: Web Translation Complete for R04S25/US/EN/IE

Field Service Action Number: 04S25

Field Service Action Title:

Safety Recall - All 2002 through 2004 Model Year Left Hand Drive (LHD) Escape Vehicles Equipped with 3.0L Engines - Accelerator Cable Replacement market US, language EN This book has finished translating without errors. It will be available to view within 30 minutes on the QA server <http://19.90.178.21/testing>.

## 2002 THROUGH 2004 MODEL YEAR LHD ESCAPE VEHICLES EQUIPPED WITH 3.0L ENGINES — ACCELERATOR CABLE REPLACEMENT

### SERVICE PROCEDURE

#### ACCELERATOR CABLE REMOVAL

1. From inside the vehicle, disconnect the accelerator cable from the pedal.
2. Remove the engine appearance cover, if equipped.

**NEW**

**CAUTION:** Damage to the speed control cable may result if the throttle body cam is rotated by lifting up on the speed control cable or the speed control cable connector end. When disconnecting the accelerator cable from the throttle body, rotate the throttle body cam only by lifting up on the cam itself. See Figure 1.

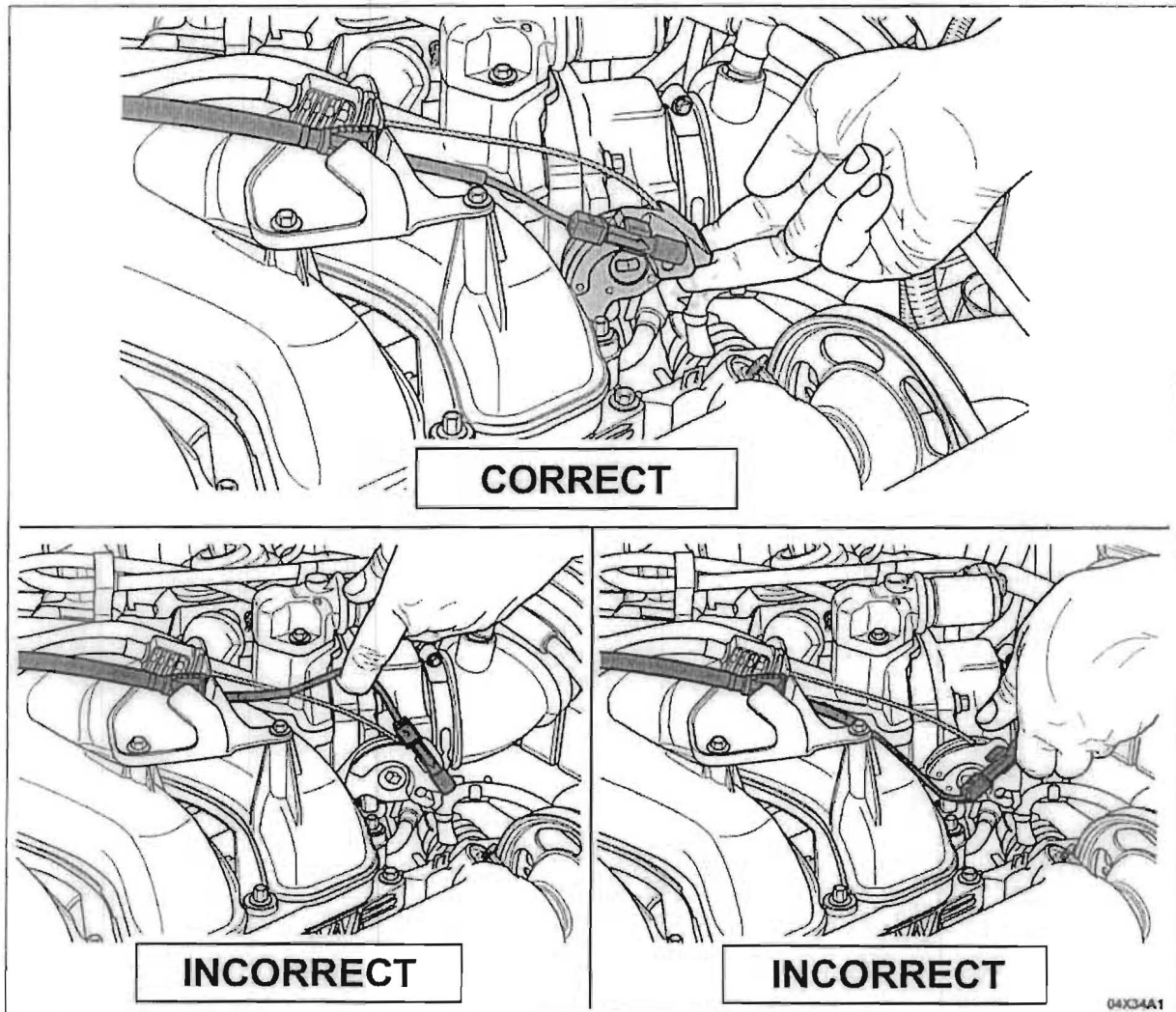
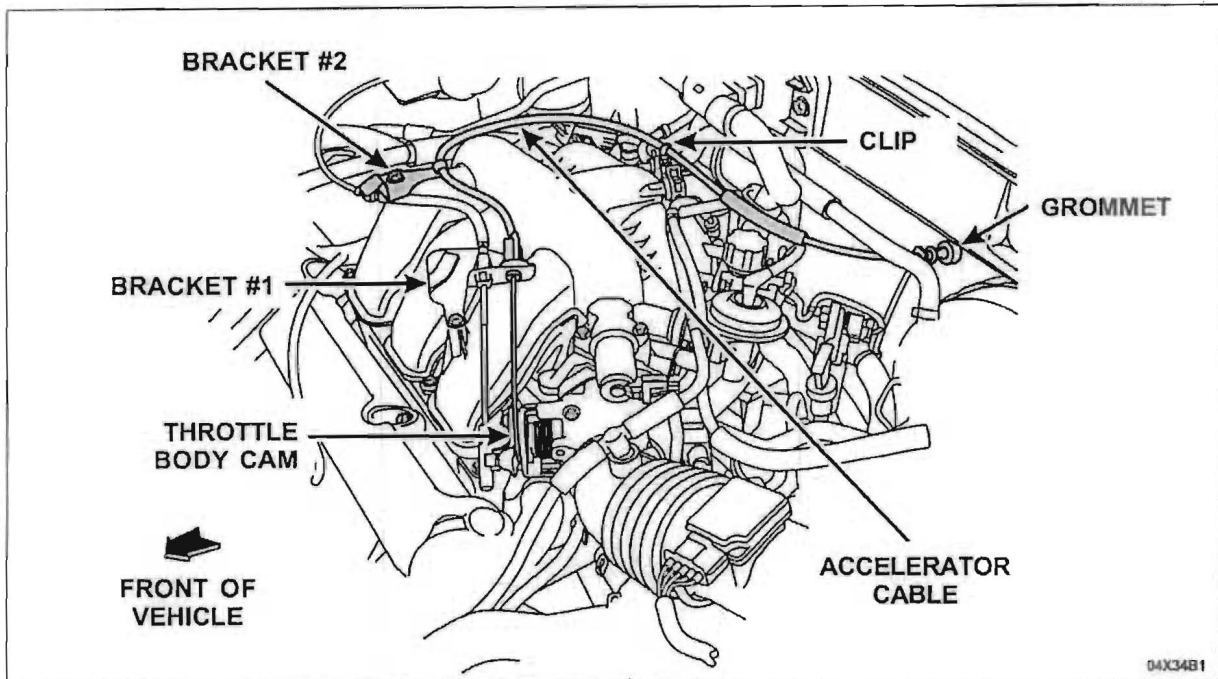


FIGURE 1



CPR © 2005 FORD MOTOR COMPANY  
DEARBORN, MICHIGAN 48121  
10/05

3. Disconnect the accelerator cable as follows: See Figure 2.

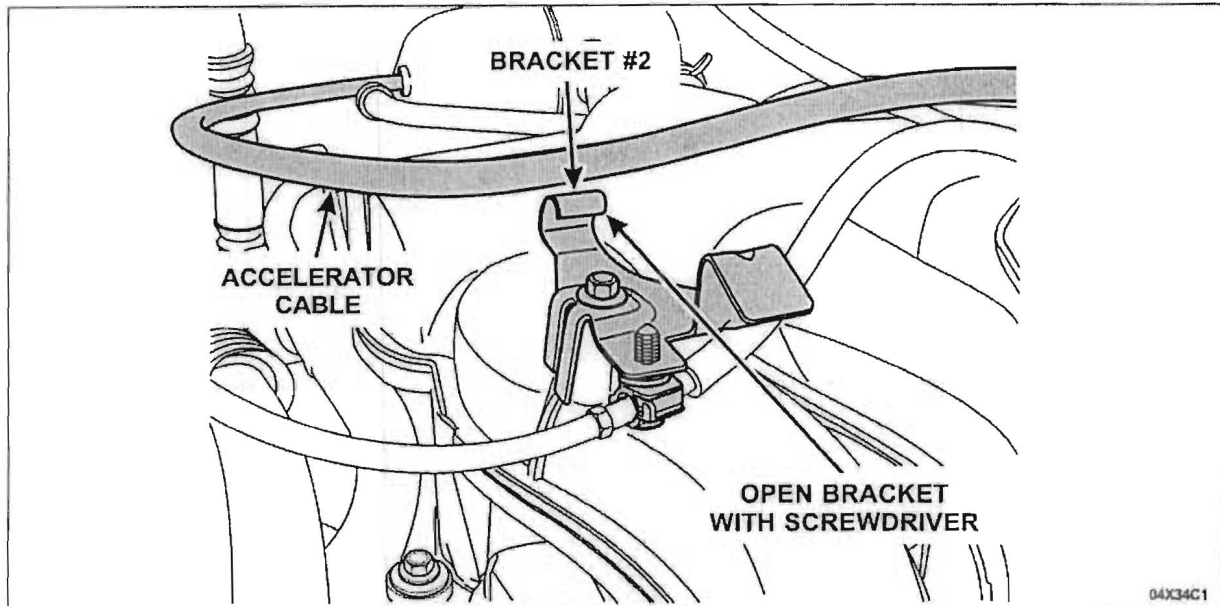


**FIGURE 2**

- A) Disconnect the cable by rotating the throttle body cam and sliding the cable barrel out of the cam.
- B) Remove the accelerator cable from bracket #1 by turning the cable housing 45 degrees either way and pulling it from the bracket.



- C) Open bracket #2 with a screwdriver and remove the accelerator cable from the bracket.  
See Figure 3.



**FIGURE 3**

- D) Detach the accelerator cable from the clip located on the brake booster vacuum hose.  
E) Disengage the grommet at the dash panel and remove the accelerator cable from the vehicle.



## ACCELERATOR CABLE INSTALLATION

1. Feed the *new* cable through the dash panel and fully seat the grommet.
2. Install and connect the accelerator cable as follows:
  - A) Connect the cable to the throttle body by rotating the cam and sliding the cable barrel into the cam.
  - B) Attach the accelerator cable to the clip located on the brake booster vacuum hose.
  - C) Secure the accelerator cable to bracket #1 by inserting it and rotating the cable housing 45 degrees to lock it in place.
  - D) Position the accelerator cable in bracket #2 and, using a suitable tool, bend down the tab to retain the cable while ensuring the cable moves freely in the bracket. See Figure 4.

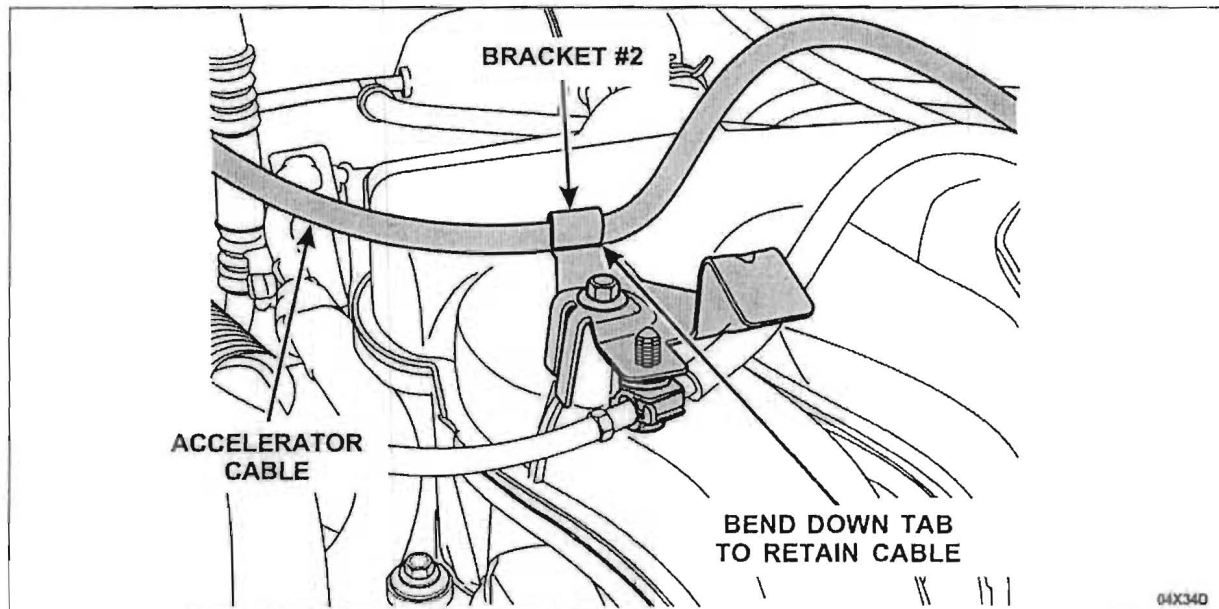


FIGURE 4

3. Connect the accelerator cable to the pedal.
4. Install the appearance cover, if equipped.
5. Check for free movement of the accelerator pedal and that there is no binding.



PE12-019

FORD

9-4-2012

APPENDIX J

Privilege Log



**PE12-019  
PRIVILEGE LOG**

<b>Bates Range</b>	<b>Document Type</b>	<b>Document Author(s)</b>	<b>Document Recipient(s)</b>	<b>Document cc's</b>	<b>Document Date</b>	<b>Document Description</b>	<b>Privilege (Basis of Claim)</b>
PE12-019 000181-000183	Email	(1) John Wnuk, Ford Employee; (2) Jennifer Gilhool, Office of the General Counsel Attorney; (3) Daile Taliaferro, Office of the General Counsel Attorney; (4) Jennifer Gilhool, Office of the General Counsel Attorney; (5) Donald Drever, Ford Employee; (6) Charles Kopeika, Ford Employee	(1) Jennifer Gilhool, Office of the General Counsel Attorney; Daile Taliaferro, Office of the General Counsel Attorney; (2) John Wnuk, Ford Employee; Daile Taliaferro, Office of the General Counsel Attorney; (3) John Wnuk, Ford Employee; (4) Daile Taliaferro, Office of the General Counsel Attorney; John Wnuk, Ford Employee; (5) Jennifer Gilhool, Office of the General Counsel Attorney; Kris Christensen, Ford Employee; Charles Kopeika, Ford Employee; (6) Donald Drever, Ford Employee; Jennifer Gilhool, Office of the General Counsel Attorney; Kris Christensen, Ford Employee	(2) Lawrence Liposky, Ford Employee; (3) Lawrence Liposky, Ford Employee; Jennifer Gilhool, Office of the General Counsel Attorney; Donald Drever, Ford Employee; (4) Lawrence Liposky, Ford Employee; Donald Drever, Ford Employee; (5) Daile Taliaferro, Office of the General Counsel Attorney; John Wnuk, Ford Employee; Lawrence Liposky, Ford Employee; (6) Daile Taliaferro, Office of the General Counsel Attorney; John Wnuk, Ford Employee; Lawrence Liposky, Ford Employee	(1) 11/29/04; (2) 11/30/04; (3) 11/30/04; (4) 11/30/04; (5) 11/30/04; (6) 11/30/04	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting legal advice. Produced in redacted form.	Attorney Client Privilege
PE12-019 001517-001529	Email with attachment	Pauline Burke, Ford Employee	Basel Abbasi, Ford Employee		11/19/2004	E-mail correspondence between Ford Employees that contains privilege attachments which reflect legal impressions and advice from Ford's Office of the General Counsel. Produced in reacted form.	Attorney Client Privilege/Attorney Work Product

**PE12-019  
PRIVILEGE LOG**

**APPENDIX J**

<b>Bates Range</b>	<b>Document Type</b>	<b>Document Author(s)</b>	<b>Document Recipient(s)</b>	<b>Document cc's</b>	<b>Document Date</b>	<b>Document Description</b>	<b>Privilege (Basis of Claim)</b>
PE12-019 001530-001534	Email	(1) Kevin Naro, Ford Employee; (2) Tom King, Ford Employee	(1) Tom King, Ford Employee; Jay Logel, Office of the General Counsel Attorney; Kenneth Meier, Ford Employee; (2) Gary Blakely, Ford Employee	(1) William Walsh, Ford Employee; Kevin Naro, Ford Employee; (2) Bharat Patel, Ford Employee; Brian Bradcoski, Ford Employee; Jay Logel, Office of the General Counsel Attorney	(1) 3/10/05; (2) 3/11/05	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting legal advice. Produced in redacted form.	Attorney Client Privilege
PE12-019 001535-001536	Email	Daniel Pierce, Ford Employee	Raymond Nevi, Ford Employee; Tom Bazil, Ford Employee; Ken Goebel, Ford Employee; Emily Frascaroli, Office of the General Counsel Attorney		5/2/2012	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel and requesting legal advice. Produced in reacted form.	Attorney Client Privilege
PE12-019 001537-001541	Email	(1) Kevin Naro, Ford Employee; (2) Tom King, Ford Employee	(1) Tom King, Ford Employee; Jay Logel, Office of the General Counsel Attorney; Kenneth Meier, Ford Employee; (2) Gary Blakely, Ford Employee	(1) William Walsh, Ford Employee; Kevin Naro, Ford Employee; (2) Bharat Patel, Ford Employee; Brian Bradcoski, Ford Employee; Jay Logel, Office of the General Counsel Attorney	(1) 3/10/05; (2) 3/11/05	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting legal advice. Produced in redacted form.	Attorney Client Privilege
PE12-019 001542-001543	Email with attachment	Keith Love, Ford Employee	Pauline Burke, Ford Employee; Basel Abbasi, Ford Employee	Jennifer Gilhool, Office of the General Counsel Attorney; Peter Souchock, Ford Employee	11/17/2004	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting legal advice. Produced in reacted form.	Attorney Client Privilege
PE12-019 001544-001553	Email with attachment	(1) Kevin Naro, Ford Employee; (2) Tom King, Ford Employee	(1) Tom King, Ford Employee; Jay Logel, Office of the General Counsel Attorney; Kenneth Meier, Ford Employee; (2) Gary Blakely, Ford Employee	(1) William Walsh, Ford Employee; Kevin Naro, Ford Employee; (2) Bharat Patel, Ford Employee; Brian Bradcoski, Ford Employee; Jay Logel, Office of the General Counsel Attorney	(1) 3/10/05; (2) 3/11/05	E-mail correspondence between Ford Employees and Ford's Office of the General Counsel requesting legal advice. Produced in redacted form.	Attorney Client Privilege

**PE12-019  
PRIVILEGE LOG**

**APPENDIX J**

<b>Bates Range</b>	<b>Document Type</b>	<b>Document Author(s)</b>	<b>Document Recipient(s)</b>	<b>Document cc's</b>	<b>Document Date</b>	<b>Document Description</b>	<b>Privilege (Basis of Claim)</b>
PE12-019 001554-001567	Email with attachment	(1) Pauline Burke, Ford Employee; (2) Jennifer Gilhool, Office of the General Counsel Attorney	(1) Jennifer Gilhool, Office of the General Counsel Attorney; (2) Bharat Patel, Ford Employee	(1) Pauline Burke, Ford Employee	(1) 10/13/04; (2) 10/18/04	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting and receiving legal advice. Produced in redacted form.	Attorney Client Privilege/Attorney Work Product
PE12-019 001568-001570	Email	Daniel Pierce, Ford Employee	Raymond Nevi, Ford Employee; Tom Bazil, Ford Employee; Ken Goebel, Ford Employee; Emily Frascaroli, Office of the General Counsel Attorney		5/2/2012	E-mail correspondence between Ford Employees and Ford's Office of the General Counsel and requesting legal advice. Produced in redacted form.	Attorney Client Privilege
PE12-019 001644-001657	Email with attachment	(1) Iman Soliman, Ford's Outside Counsel; (2) Bill Grier, Office of the General Counsel Attorney	(1) Jennifer Savage, Office of the General Counsel Attorney; Bill Grier, Office of the General Counsel Attorney; (2) Jim Engle, Ford Employee		(1) 7/12/12; (2) 7/18/12	E-mail correspondence between Ford's Outside Counsel, Office of the General Counsel and Ford Employee regarding a legal claim. Produced in redacted form.	Attorney Client Privilege
PE12-019 001658-001662	Email with attachment	James Engle, Ford Employee	Mark Taylor, Ford Employee; Francis Wickenheiser, Ford Employee		6/25/2012	E-mail correspondence between Ford Employees that contains privileged attachments created at the request of Ford's Office of the General Counsel. Produced in redacted form.	Attorney Client Privilege/Attorney Work Product
PE12-019 002944-002953	Email with attachment	Pauline Burke, Ford Employee	Jennifer Gilhool, Office of the General Counsel Attorney	John Wnuk, Ford Employee; Bharat Patel, Ford Employee; Pauline Burke, Ford Employee; Lawrence Liposky, Ford Employee; Basel Abbasi, Ford Employee	12/3/2004	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel and requesting legal advice.	Attorney Client Privilege

**PE12-019  
PRIVILEGE LOG**

**APPENDIX J**

<b>Bates Range</b>	<b>Document Type</b>	<b>Document Author(s)</b>	<b>Document Recipient(s)</b>	<b>Document cc's</b>	<b>Document Date</b>	<b>Document Description</b>	<b>Privilege (Basis of Claim)</b>
PE12-019 002954	Email	John Wnuk, Ford Employee	Jennifer Gilhool, Office of the General Counsel Attorney; Diale Taliaferro, Ford Employee	Lawrence Liposky, Ford Employee; Basel Abbasi, Ford Employee	11/30/2004	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel and regarding legal advice.	Attorney Client Privilege
PE12-019 003613-003622	Email with attachment	Daniel Pierce, Ford Employee	Raymond Nevi, Ford Employee; Jay Logel, Office of the General Attorney; Thomas Falahee, Office of the General Counsel Attorney		4/26/2012	E-mail correspondence between Ford Employee and Ford's Office of the General Counsel requesting legal advice. Produced in redacted form.	Attorney Client Privilege
PE12-019 003929-003930	Email with attachment	Lawrence Liposky, Ford Employee	Jerry Klarr, Ford Employee	Terri Shipp, Ford Employee; Basel Abbasi, Ford Employee; Lawrence Liposky, Ford Employee; Tom Gielegem, Ford Employee; James Conrad, Ford Employee	11/30/2004	E-mail correspondence between Ford Employees reflecting legal advice received from Ford's Office of the General Counsel. Produced in reacted form.	Attorney Client Privilege
PE12-019 005465-005590	Photographs	James Engle, Ford Employee			6/20/2012	Vehicle inspection photographs taken by request of Ford's Office of the General Counse.	Attorney Work Product
PE12-019 005591-005672	Photographs	James Engle, Ford Employee			5/4/2011	Vehicle inspection photographs taken by request of Ford's Office of the General Counse.	Attorney Work Product

PE12-019

FORD

9-4-2012

APPENDIX K

Part Change Log and Part Sales

### Parts Change Log and Part Sales

**Speed Control Cable Assy**

Model Year	Incorporated into Veh Production	Removed from Veh Production	Design change related to alleged defect	Design change not related to alleged defect	Engineering Part Number	Service Part Number	Released for Service	Removed from Service
2001-2002	2001MY	2002MY			YL8F-9A825-AE	YL8Z-9A825-AA	2001MY	
2003-2004	2003MY	2004MY		Slug material changed from stainless to carbon steel	3L84-9A825-AA	YL8Z-9A825-AA	2001MY	

**SERVICE PARTS**

**PART SALES**

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12	Feb-12	Mar-12	Apr-12	May-12	Jun-12	Jul-12	Aug-12
1287	300	718	1402	1912	2639	3677	3716	2802	2367	141	172	185	192	128	219	202	181	171	181	201	144	196	135	252	208	145	129	188	168	128	136	140	163	124	163	128	163	127	209	272	17

**Accelerator Cable Assy**

Model Year	Incorporated into Veh Production	Removed from Veh Production	Design change related to alleged defect	Design change not related to alleged defect	Engineering Part Number	Service Part Number	Released for Service
2001-2004	2001MY	2001MY			YL84-9A758-AE	YL8Z-9A758-AD	12/7/2004
2001-2004	NA	NA	released for recall 04S25		5L84-9A758-AA	5L8Z-9A758-AA	12/7/2004

61	395	733	2108	5001	451770	27642	14487	6778	3804	484	359	364	293	236	254	219	232	168	231	254	349	299	304	322	240	266	191	180	266	152	195	229	252	471	337	287	182	213	240	421	101
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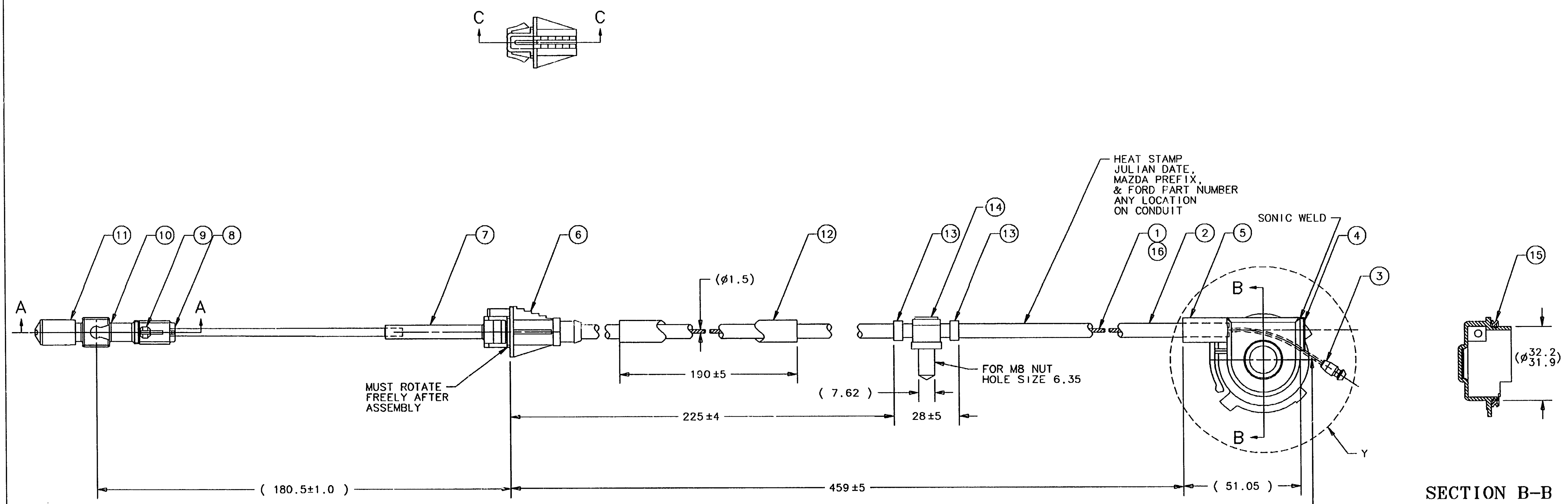
PE12-019

FORD

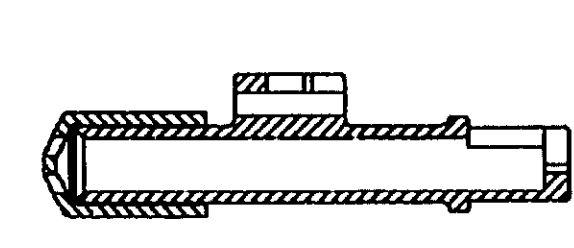
9-4-2012

APPENDIX L

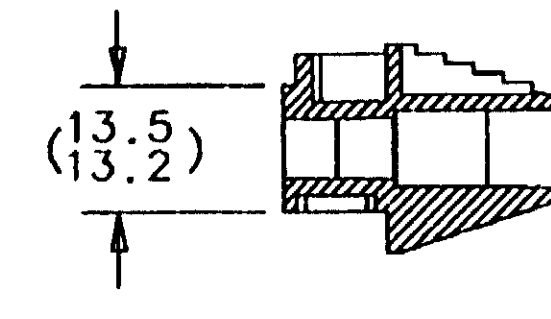
Raw Data



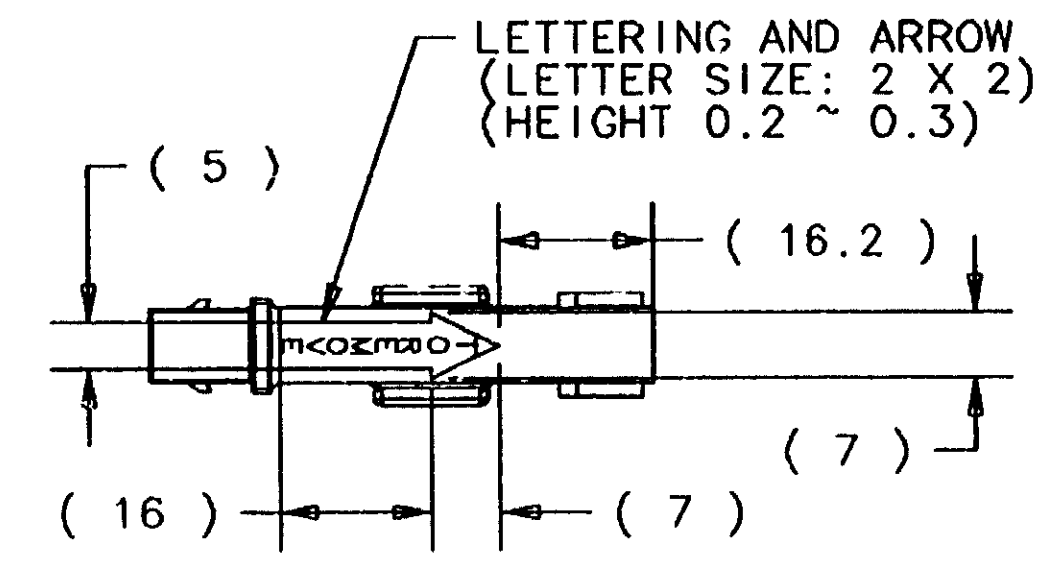
MEASURE 180.5±1.0 AFTER ITEM ① (NIPPLE END) IS POSITIONED IN SERVO GAUGE WHILE A 44.0 N 14.5 Kgf TENSILE FORCE IS APPLIED TO ITEM ② (SERVO HOUSING) TO ENSURE THE CONDUIT IS STRAIGHT AND TAUGHT AND A 22.0 N 12.25 Kgf FORCE IS APPLIED IN THE OPPOSITE DIRECTION TO ITEM ③ (CONNECTOR).



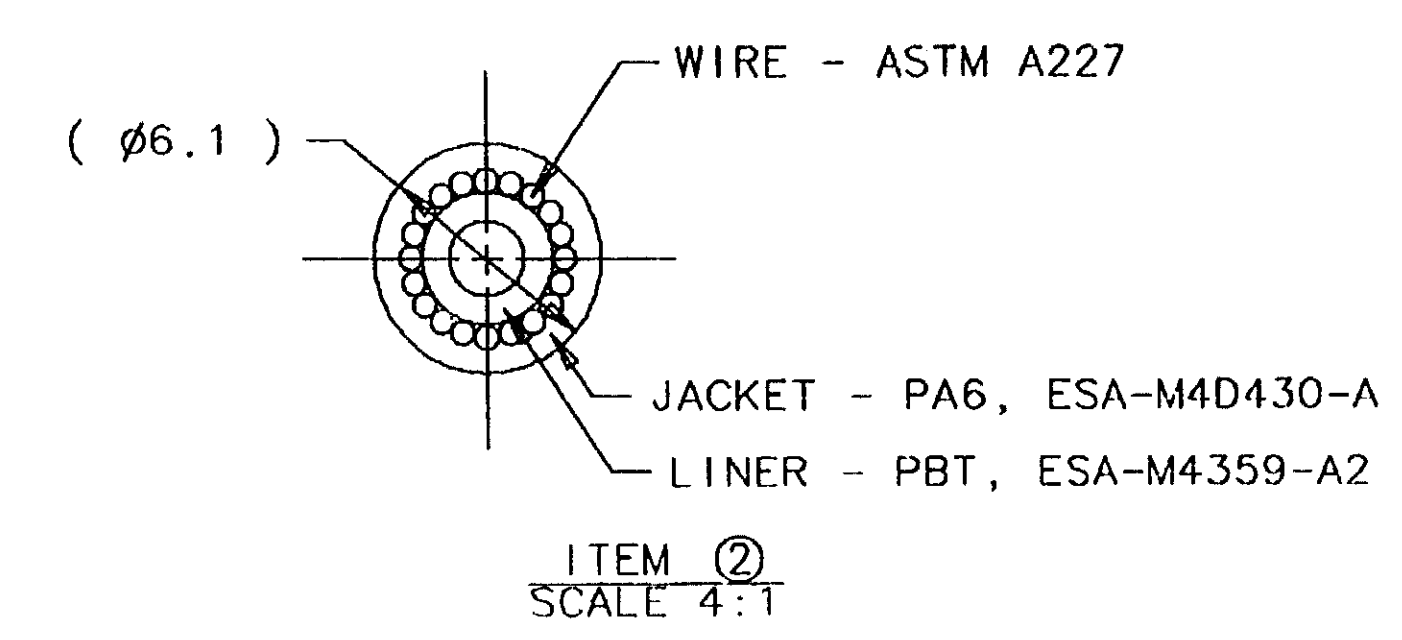
SECTION A-A



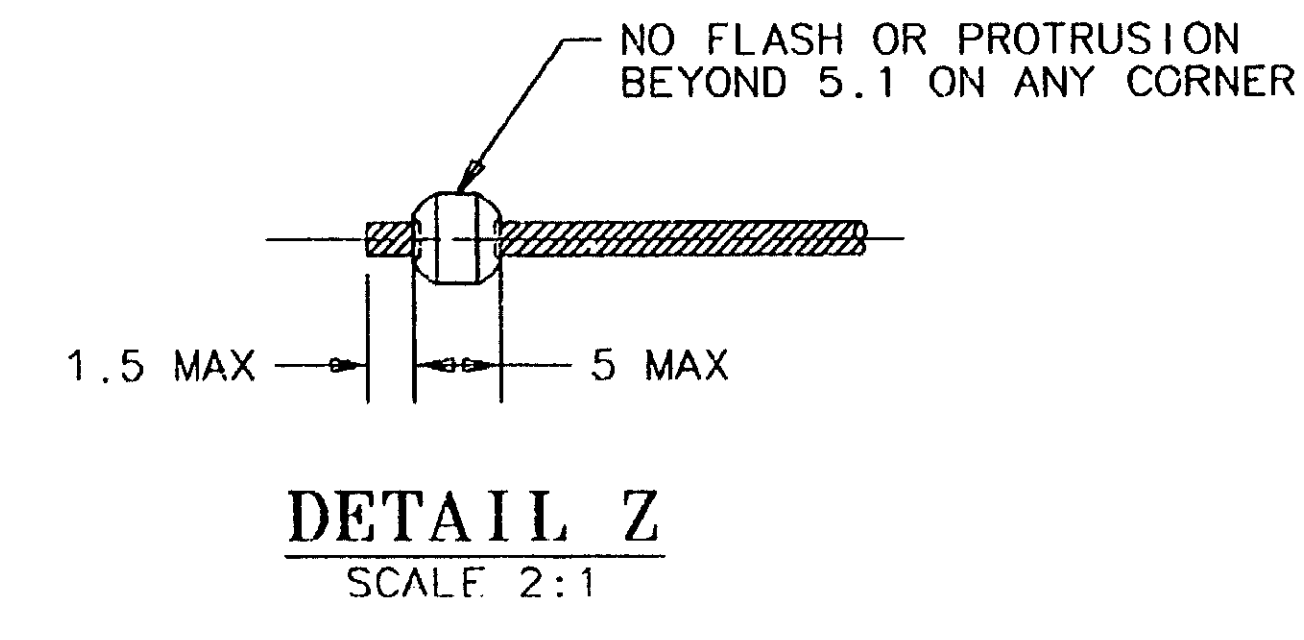
SECTION C-C



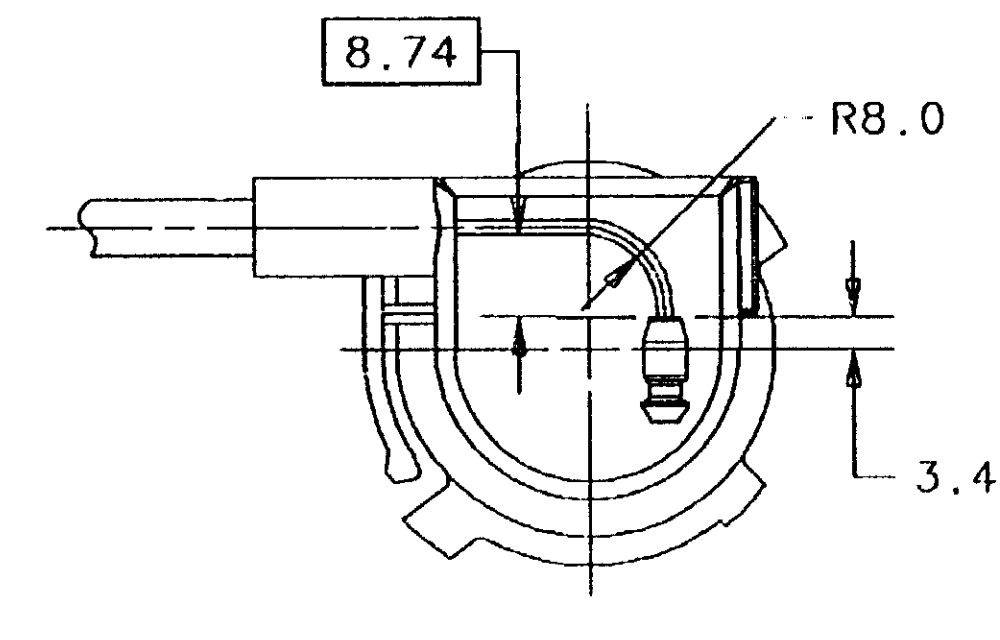
DETAIL OF ITEM ⑤ (180° FROM MAIN VIEW)



ITEM ② SCALE 4:1



DETAIL Z SCALE 2:1



VIEW Y

SYM	QTY	PART NO.	DESCRIPTION	MATERIAL
16	AR	E155 OR EQUIVALENT	LUBRICATION	(SILICONE OIL)
15	1	AK69010	SEAL	F5VF-9A896-AA
14	1	AQ99049	CLIP	WSK-M4D578-A
13	1	AQ40259	CLAMP	SAE 1008-1010
12	1	A919347	PROTECTOR	AS1M D 1056 2A2
11	1	AK79007	COVER	SAE J1839 PA0121
10	1	AY99004	CONNECTOR	ESA-M4D287-B
9	1	AN49004	NIPPLE END	SAE J403 (1117 OR EQUIVALENT)
8	1	AY99005	GUIDE TUBE	ESA-M4D430-A
7	1	YC49023	CASING CAP	WSK-M4D648-A
6	1	AC59044	FRONT HOUSING	ESA-M4D379-B
5	1	YC49022	SERVO HOUSING	ESA-M4D287-B
4	1	AK79004	HOUSING PLUG	WSK-M4D287-B
3	1	ZK49003	NIPPLE END	AS1M B86 AC43A
2	1	S066610-H	CONDUIT	PA6, ESA-M4D430-A
1	1	915240	CORE	SAE J405 30302 OR 30304

BILL OF MATERIAL

NOTES:

ALL GRAPHIC MEASURED DATA IS BASIC (NO TOLERANCE) AND IS TO BE TAKEN FROM DATA FILE 3L84-9A825-A AT ITS LATEST RELEASE DATE.

FOR THE PURPOSES OF GEOMETRIC DIMENSIONING AND TOLERANCING, ALL DIMENSIONAL INFORMATION CONTAINED IN THE CAD MODEL IS BASIC.

SURFACES MUST BE FREE OF IMPERFECTIONS THAT AFFECT FUNCTION OR FIT OF A PART.

SIGNIFICANT CHARACTERISTICS ARE IDENTIFIED ON THE CONTROL PLAN

MINIMUM PULL OFF STRENGTH OF CORE END FITTINGS: 360.0 N 136.7 Kgf

CORROSION PROTECTION FOR SERVICE PARTS MUST COMPLY WITH FORD CUSTOMER SERVICE DIVISION (FCSD) PACKAGING AND SHIPPING GUIDE.

FOR ENGINEERING APPROVED SOURCE, SEE THE WERS ENGINEERING NOTICE.

FOR CURRENT RELEASE STATUS SEE THE WERS ENGINEERING NOTICE.

CHANGES AFFECTING DESIGN COMPOSITION OR PROCESSING OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION REQUIRE PRIOR APPROVAL FROM FORD PRODUCT ENGINEERING. REFER TO 05-9000.

SILICONE OIL LUBRICANT: VISCOSITY 225 cSt FOR APPROVED SILICONE OIL SEE ENGINEERING RELEASE.

MATERIAL RECYCLE CODE PER SAE J1344 NOT FEASIBLE DUE TO CONSTRUCTION.

PART MUST COMPLY WITH MATERIAL CONTROL, BLACK/GREY BOX PROGRAM. WSS-M9923-B.

PART MUST CONFORM TO ES-F8VF-9A825-AA-1/12/00

FOR ADDITIONAL GENERAL NOTES SEE ES-YF12-1294-AA.

▲ ARE MAZDA REVISIONS

REVISIONS			
ORIGINATOR	CHECKER	ENGR APP	MATL APP
RELEASED 3L84-9A825-AA			
ML00-E-11393481-000		DATE: 020826	
B-UPTAIN	GROBERTS	RCOLLEY	MKOWACZYK

**HI-LEX CONTROLS INC.**

ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE SPECIFIED

SCALING OF DRAWING PROHIBITED

DATE: 020819

DESIGNED BY: B-UPTAIN

DRAWN BY: GROBERTS

CHECKED BY: RCOLLEY

APPROVED BY: MKOWACZYK

TITLE: ACTUATOR ASY-SPEED CONTROL

SCALE: 1:1

4FA8047

REV	ECN NO.	DATE	REV SYM	NOTE	BY
0	02J-0178	02.09.03	A	MATERIAL CHANGE FOR 2003	INAKASHI

SPEC. DWG	COLOR	QUALITY	TREATMENT	MES P.
Y		A		

DWG DATE	SCALE	EST. MASS	THICKNESS	MATERIAL
02.09.03				

DESIGNED	DRAWN	DWG. NO.	PART NO.
		EC05 66 311F	

MULT. DWG	SUBSCRIPT	FRM	SHY	SIZE
			1/1	A1

DESIGN	DETAIL	TITLE	SHI
B-UPTAIN	B-UPTAIN	ACTUATOR ASY-SPD CONTROL	1 OF 1

SCALE	DATE	DIVISION	PLANT
1:1 & NOTED	020819	V315	

3L84-9A825-AA

ACTUATOR ASY-SPD CONTROL

DATE: 020819

DIVISION: V315

PLANT:

▲ ARE MAZDA REVISIONS

*Ford Motor Company*

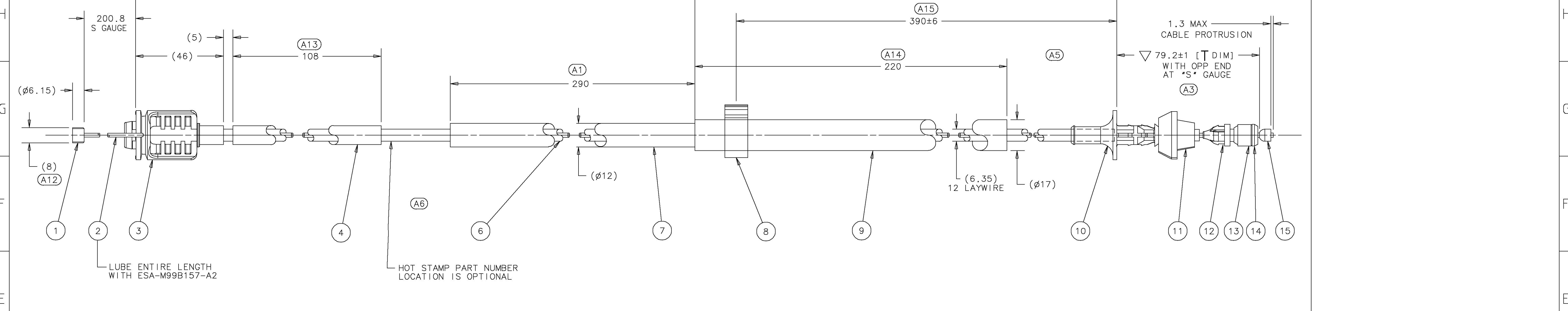
DRW 511: ATD



RELEASED  
 ML00-E-11671155-000 20040701 (Y)  
 A-LANGRE MAFATA BABBASI MAFATA

A1 290 WAS 355±10  
 A2 985±6 WAS 970±6  
 A3 79.2±1 WAS 81.2±1  
 A4 290±8 WAS (235)  
 A5 REMOVED DIM 175±5  
 A6 2X REMOVED P/N 056P-A1406  
 A7 ITEM 4 P/N WAS 016P-S1020  
 A8 ITEM 7 P/N WAS 946P-A9107  
 A9 ITEM 10 P/N WAS 996P-A2025  
 A10 ITEM 1 P/N WAS 931F-A9601  
 A11 ADDED DIM 415±5  
 A12 (8) WAS (12)  
 A13 108 WAS 140±10  
 A14 220 WAS 200±10  
 A15 390±6 WAS 335±6  
 A16 ITEM 9 P/N WAS 966P-C9104  
 ML00-E-11543180-071 20040930 (Y)  
 A-LANGRE PFOLIAN BABBASI KCARON

B1 REVISED NOTES  
 B2 REMOVED DIM 290±8  
 ML00-E-11708922-000 20041010 (Y)  
 A-LANGRE PFOLIAN BABBASI KCARON



LUBE ENTIRE LENGTH WITH ESA-M99B157-A2  
 HOT STAMP PART NUMBER LOCATION IS OPTIONAL

FOR ENGINEERING APPROVED SOURCE  
 SEE THE WERS ENGINEERING NOTICE.  
 MANUFACTURER TO ESTABLISH PRODUCT  
 ENGINEERING APPROVED CONTROL PLAN  
 FOR CURRENT RELEASE STATUS SEE THE WERS  
 ENGINEERING NOTICE  
 CABLE CORE WIRE MUST BE CLEAN AND FREE OF DIRT  
 AND OTHER FOREIGN MATERIAL PRIOR TO APPLICATION  
 OF LUBE AND INSERTION INTO CONDUIT  
 CORROSION PROTECTION FOR SERVICE PARTS MUST COMPLY  
 WITH FORD CUSTOMER SERVICE DIVISION (FCSD) PACKAGING  
 AND SHIPPING GUIDE  
 CHANGES AFFECTING DESIGN, COMPOSITION OR PROCESSING  
 OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION  
 REQUIRE PRIOR APPROVAL FROM FORD PRODUCT ENGINEERING.  
 REFER TO QS 9000.  
 MUST CONFORM TO FORD ENGINEERING SPEC  $\nabla$ ES-F5TA-9A758-AA

PART MUST COMPLY WITH WSS-M99P23-B MATERIAL CONTROL FOR  
 BLACK/GREY BOX PROGRAMS. MATERIAL SPECIFICATIONS SHALL  
 BE REVIEWED BY THE RELEASING ENGINEER & THE AFFECTED  
 MATERIALS ENGINEERING ACTIVITY, RETAINED BY THE SUPPLIER  
 AND AVAILABLE UPON REQUEST.

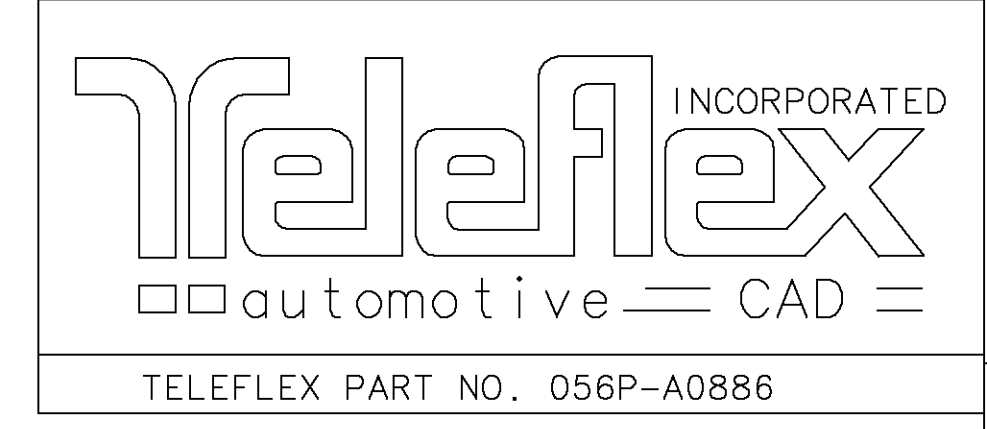
MATERIALS DEFINED BY ES/WS-M CALL-OUTS REQUIRE PRIOR  
 ENGINEERING APPROVAL. SEE FORD MOTOR COMPANY ENGINEERING  
 MATERIAL APPROVED SOURCE LIST.

FERROUS PARS MUST CONFORM TO WSS-M99A3-A

$\nabla$  CONTROL ITEM - THE  $\nabla$  ALSO IDENTIFIES  
 CRITICAL CHARACTERISTICS DESIGNATED  
 BY THE CROSS FUNCTIONAL TEAMS DEVELOPING  
 THE PRODUCT. THESE AND ADDITIONAL CRITICAL  
 CHARACTERISTICS IDENTIFIED BY THE PROCESS REVIEWS.  
 MUST APPEAR ON THE CONTROL PLANS ACCORDING TO  
 QS-9000. THESE CONTROL PLANS REQUIRE  
 ENGINEERING APPROVAL.

QUAN	ITEM	PART NO	DESCRIPTION
1	15	066T-A9828	SLUG-PEDAL
1	14	976T-A9731	SEAT-PEDAL
1	13	976T-A9732	ISOLATOR-PEDAL
1	12	976T-A9730	PEDAL RETAINER
1	11	931F-A9701	GROMMET
1	10	056P-A2027	END FITTING-DASH
1	9	936P-C9115	SLEEVE-PROTECTION
1	8	036T-C8713	LOCATOR CLIP
1	7	956P-C9117	SLEEVE-PROTECTION
1	6	893P-A9107	CONDUIT
1	5	REMOVED	BRACKET
1	4	6-6266-22	SLEEVE-PROTECTION
1	3	046P-A1428	END FITTING-ENGINE
1	2	16155	CABLE
1	1	931F-A9604	SLUG

(A9)  
 (A16)  
 (A8)  
 (A6)  
 (A7)  
 (A10)



REFERENCE			
PART MUST COMPLY WITH MATERIAL SPECIFICATION WSS-M99P9999-A1 TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT			
DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 16		3RD ANGLE PROJ DIMENSIONS ARE IN MILLIMETERS	
CAD TYPE	CAD LOC.	CAD FILE	DTMC IS MASTER
I-IDEAS	METAPH	5L84-9A758-A	
OPER. NO.	UNIT	DRAWING	
---	---	$\nabla$ 5L84-9A758-AA	
DESIGN AML	DETAIL AML	TITLE	SHT 1 OF 1
---	---	CA ASY - ACEL PDL TO CARB THROT	
CHECKED	SAFETY		
---	---		
SCALE	DATE	DIVISION	PLANT
1:1	20040701	Y130	
FORD MOTOR COMPANY			





# Engineering Specification

## I. GENERAL

This specification pertains to the accelerator cable assembly which controls the engine throttle operation.

This engineering specification is a supplement to the released drawing on the above part and all requirements herein must be met in addition to all other requirements of the part drawing. Minimum measures necessary for demonstrating compliance to these requirements are given in each section.

The engineering tests, sample sizes and test frequencies contained within this specification reflect the minimum values established to provide a regular evaluation of conformance to design intent. The engineering test program is intended as a supplement to normal material inspections, dimensional checking and in-process controls. The engineering test program should in no way adversely influence adherence to other more statistically significant inspection operations. Q1 suppliers may implement different test sample sizes and frequencies providing these changes have been included in an alternate Control Plan approved by the design responsible Product Engineering Office and concurred by SQA.

## II. PRODUCTION VALIDATION AND IN-PROCESS TESTS

Compliance with all of the requirements in this section must be demonstrated as follows:

- A. Production Validation (PV) - PV test must be completed satisfactorily with parts from production tooling (and processes where possible) before ISW approval and authorization for shipment of production parts can be effected. Parts must be revalidated completely per Section V whenever and change is made which may affect part function and performance.
- B. In-Process Tests, Phase 1 (IP-1) - IP-1 tests may be implemented only after process capability has been established. Tests must be completed with production parts on a continuing basis. Samples for these tests must be selected on a random basis to represent the entire production population as much as possible. In the event that any portion of these test are not met, Ford Q-101 Section III, E, 3 for "ES Test Performance Requirement" shall be invoked.



# Engineering Specification

## TABLE OF TESTS

**When                      Product Verification    In-Process IP-1**

Test Description	ES Test Number	Accel Cable Style	Product Verific.	In-Process	Minimum Sample Size <u>1/</u>	Stat. <u>2/</u> Acceptance Criteria	Min. <u>1/ 3/</u> Sample Size and Frequency	Stat. <u>2/</u> Acceptance Criteria
Accel. Life Test	III.1	All	Yes	-	6	All must pass		
Cable Assembly Check	III.2	All	Yes	Yes	100%	All must pass	100%	All must pass
Conduit Liner Presence Verification	III.3	All	Yes	Yes	100%	All must pass	100%	All must pass
Pedal Retainer Pull Through	III.4	All	Yes	-	6	All must pass	-	-
Metal End Fitting Integrity	III.5	As required by design	Yes	-	3	All must pass	-	-
Spring Load Verification	III.6	Ball Stud Style	Yes	Yes	6	All must pass	5 pcs 2x/shift/ final assembly machine <u>4/</u>	All must pass
Cable Deflection Test	III.7	All	-	Yes	-	-	3 pcs. at beginning and end of each conduit lot <u>6/</u>	All must pass
Cable End Fitting Orientation	III.8	All	-	Yes	-	-	Same as above	All must pass
Cable Efficiency Test	III.9	All	Yes	Yes	6	All must pass	6 pcs/shift selected at random throughout the shift <u>5/</u>	All must pass
Spring Fatigue Test	III.10	Ball Stud Style	Yes	Yes	50	All must pass	50 spring lot	All must pass
Accel Cable Abuse Test	III.11	Ball Stud Style	Yes	-	10	All must pass	-	-
Conduit Crush Test	III.12	All	Yes	-	6	All must pass	-	-
Cable Thermal Distortion Test	III.13	ALL	Yes	-	6	All must pass	-	-
Ball Socket Insertion / Removal Load	III.3.14	Ball Stud Style	Yes	Yes	10	All must pass	10 pcs/ lot	All must pass

FRAME 3 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

For symbol (x) definitions, see the chart on the following page.  
Tests #12 and #13 are only required for new conduit constructions.

1/ Sample size is to be a minimum requirement and must represent a cross section of new part numbers or a single part number if only a single cable is new. At least one (1) cable for each different part number is to be included.	4/ A final assembly machine is defined as a machine that secures the pedal arm pivot ball or stop.
2/ Data reduction techniques for calculating reliability acceptance values are contained in Section IV.	5/ At least one (1) cable of each different part number produced during the shift is to be included.
3/ Refer to section III.C for permissible grouping of part numbers.	6/ The production from one line for eight (8) hours or 50,000 pieces whichever is less.

### III. TEST PROCEDURES AND REQUIREMENTS

#### 1. Accelerated Life Test - Refer to Figure I.

##### A. Introduction

The purpose of this test is to verify the performance, in terms of component failure, wear and efficiency, of the cable assemblies while cycling at normal and overload conditions. A common cable conduit routing is used for test regardless of the cable part number. Routing requirement is to be in accordance with that shown in View A.

##### B. Acceptance Limits

It is considered a failure when cable efficiency is less than 80% initially or after testing or yielding, breaking, slipping or loosening of any part occurs on the cable assembly. With the exception of efficiency checks (Section F.), the above failure conditions are to be checked daily throughout testing.

##### C. Test Frequency

At least six (6) cables are to be selected at random and tested.

##### D. Test Fixture and Loads - Refer to Figure VII.A.

- 1) A minimum six (6) station fixture is to be used for this test. Each station is to have its own cycle counter and be capable of being adjusted separately for different length cables.
- 2) The cycling mechanism is to be adjustable to compensate for cable core wire stretch. Also, a sensing device is to be included on each station to insure that correct displacement is maintained for the WOT overtravel of 0.8 - 2.3mm.

##### E. Test Conditions



# Engineering Specification

- 1) Cycle speed = 30cpm
- 2) Test Duration = 500,000 cycles

## F. Efficiency Measurement Procedure

Efficiency measurement is to be done as depicted in Figure I, View B. and in accordance with the procedure outlined in Figure VII.B. for Type III routings.

## G. Records

The following information must be kept for each cable tested:

- |                                       |                         |
|---------------------------------------|-------------------------|
| -Part number                          | -Date code              |
| -Part numbers in group (see C. above) | -Test cycles completed  |
| -Sample number                        | -Efficiencies           |
| -Fixture number                       | -Technician's signature |

## 2. Cable Final Assembly Check

### A. Introduction

The purpose of this automatic checking fixture is to cycle each completed cable assembly produced to verify function, returnability, various critical dimensions and proof loads. A chart of the checking fixture requirements follows:

Item	Function	Failure	Fixture Reaction				Remarks
			A	B	C	D	
1 ▽	"C" dimension check	Core stop located outside of dimensional tolerance or missing.	Yes	Yes	Yes	Yes	FMVSS 124 requirement - insures against core stop holding throttle of idle.
2 <u>A/</u>	Spray silicone fluid on spring guide.	Fluid not spraying	Yes	Yes	Yes	Yes	
3 ▽ <u>A/</u>	Cycle cable from free to solid length of the spring or bottom out the spring guide in the dust tube and utilizing the spring for return. Return is to be from .20 to .50 second.	Return is: -quicker than .20 second -slower than .50 second.	Yes	Yes	Yes	Yes	FMVSS 124 requirement - insures against hesitation and masking of hesitation by too quick of a return (sling shotting). Return is to be at a constant rate.
4 ▽	Pull cable core and fitting at 556N (124 lbs.) load minimum.	-Fittings pull off or slip beyond "A" dimension -Fittings are at less than "A" dimension. <u>1/</u>	Yes	Yes	Yes	Yes	<u>1/</u> "A" dimension or "T" dimension when applicable, has to be adjusted to compensate for inherent stretch due to load.
5 ▽	Pull conduit end fittings at 222N (50 lbs.) load minimum	-Fittings pull off or slip beyond "B" dimension -Fittings are at less than "B" dimension	Yes	Yes	Yes	Yes	FMVSS 124 requirement - return impeded by fitting pulling off. Subassembly pull off load of 356N for the metal dash fitting is not voided by this check load.
6	Stamp date code on conduit	Any of the 5 checks not completed satisfactorily.	Yes	Yes	Yes	Yes	If cables are rejected and the components are used again, the date control continuity must be maintained.

FRAME 5 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

7	Eject cable automatically from the fixture	Any of the above six functions are not completed satisfactorily.	Yes	Yes	Yes	Yes	Automatic counters are to be part of the checker and must register the total cables checked and the number of rejects for each of the above items. Records must be maintained (at each checking fixture for each fixture and shift) of rejects and actions taken.
---	--	--	-----	-----	-----	-----	---

A/ - For accelerator cables with integral compression springs

- A Shuts down
- B Manual cable removal required
- C Date code omitted
- D Press "Reset" to activate

NOTE: For cable assemblies without integral compression return springs perform only items 1 (when applicable), 4, 5, 6 and 7.

### B. Test Frequency

All cable assemblies produced must be checked on this fixture prior to being shipped.

### C. Cable Packaging Requirements

Cables must be packaged in a telescoping box.

### D. Ball Stud Fixture Design

See Figure VIII for shape and dimensions of ball socket fixture pin.

## 3. Accelerator cable Conduit Inner Liner Presence Verification

Verification of the presence of the conduit Teflon liner is to be done initially at the liner flat wire wrap machine. A minimum of 152mm of liner must protrude beyond the flat wire wrap at both ends of the spool after each production run.

Additional techniques are to be employed at subsequent in-process operations to insure that liner is present throughout the full length of the conduit for all conduit styles. Verification is to be included in the supplier's control plan.

## 4. Pedal Retainer Pull Through Test

Plastic seat is to be installed in a fixture hole that is 9.525/9.652mm diameter and is 1.752/1.9.05mm thick with a 1.778/2.286mm slot to permit entry of the cable core. Plastic seat must withstand a minimum pull load of 1000 N (225 lbs.) without the end fitting pulling through. Rate of pull is to be no greater than 76mm per minute.

NOTE: Complete cable assemblies are not necessary for the above test.

## 5. Metal End Fitting Integrity - Refer to Figure II

### A. Introduction



## Engineering Specification

The purpose of this test is to verify the fatigue characteristics and retention capability of the conduit dash panel end fitting and nylon bushing where applicable.

### B. Acceptance Limits

It is considered a failure when the nylon bushing becomes dislodged or yielding, breaking, slipping or loosening of the end fitting or any component part of the end fitting occurs.

### C. Test Frequency

Samples to be selected at random and tested per quantities outlined in **Section II**.

### D. Test Instrumentation

- 1) Air or hydraulic cylinder capable of applying a cyclic 356 N load minimum.
- 2) Load cell or force gauge to measure cable loads. The load cell/force gauge must be calibrated on a regular scheduled basis using dead weights. Records of the calibration must be maintained.
- 3) Brush recorder to monitor and permanently record cable load.
- 4) Heat lamp with a thermocouple and controller capable of automatically maintaining 82°/94°C at the dash panel end fitting.
- 5) Thermocouple read out.

### E. Test Fixture and Procedure

- 1) A minimum of a one (1) station fixture is to be used for this test. The stations are to have individual cycle counters and be capable of being adjusted separately for different length cables.
- 2) Cables are to be mounted to simulated dash panel and engine brackets that are in line at a linear distance of 38mm less than the test samples print "B" dimension (-9A758-).
- 3) Cable throttle attachment fitting is to be secured to a simulated throttle lever/cam attachment that is mounted to a stationary bracket at a distance determined by the cable drawing "S" dimension (-9A758-).
- 4) Actuating cylinder is to be attached to the core wire at the accelerator pedal end through the load cell and apply an in-line cycle pull load of 356 N minimum.
- 5) Thermocouple is to be attached to and make direct contact with the end fitting at the area of the fitting to conduit crimp.
- 6) End fitting to be stabilized at temperature and allowed to soak for 10 minutes minimum prior to applying cyclic load.

### F. Test Conditions

FRAME 7 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA





## Engineering Specification

- 1) Cycle speed - 125 to 150 CPM.
- 2) Core wire load - 310 - 355 N (70 - 80 lbs.)
- 3) End fitting temperature - 82°-94°C.
- 4) Test Duration - 50,000 cycles

### 6. Accelerator Cable Assy. Spring Load Verification (W & Z) - Refer to Fig. III.

#### A. Introduction

The purpose of this test is to verify that the return force of the completed accelerator cable assembly meets the design intent. (For accelerator cables with integral compression springs.)

#### B. Acceptance Limits

It is considered a failure if the load, when measured according to the following procedure, does not conform to the "W" limits when compressed to within the "Z" dimensions as required by the specified assembly drawing (-9A758-).

Each hour of production must be identifiable to the final assembly machine as well as the hour in which it was produced until the associated five (5) piece sample has passed the spring load verification. Treatment of one (1) hour's production of a final assembly machine in which a sample failure has occurred is to be in accordance with the procedure outlined in Q101 (III, E, 3).

#### C. Checking Frequency

Samples are to be selected at random and tested at a rate of five (5) pieces per 4 hrs. per final assembly machine prior to final assembly check.

#### D. Test Instrumentation

- 1) Load cell to measure cable loads. The load cell capacity is not to exceed 112 N (25 lbs.) and must be calibrated on a regularly scheduled basis using dead weights. Records of calibration must be maintained.
- 2) Digital read out.

#### E. Test Fixture and Procedure

- 1) Fixture - A one (1) station fixture is to be used for this test and conform to the following parameters:
  - a. Accelerator cable is to be mounted in a horizontal position between fixture blocks that will apply a spring load of 22-45 N (5 - 10 lbs.) to the engine bracket and/or dash panel fitting to insure the conduit assumes a straight routing.



## Engineering Specification

- b. Fixture blocks are to be relieved to insure clearance to any end fitting radius or irregularities due to staking or other manufacturing operations.
- c. Engine bracket fixture block is to have a locating pin to accept the cable assembly mounting hole to insure the same installation from cable to cable.
- d. A load cell is to be mounted on the centerline of the cable assembly and ride on a shaft(s) piloted by ball bearing bushings to minimize friction.
- e. Load cell to accelerator cable is to have a point contact to preclude introducing a non-concentric loading.
- f. The load cell is to be actuated through a spring having an approximate 45 N (10 lbs.) load by a cam or toggle type lever to insure a constant repetitive load from cable to cable. The load cell will contact the cable at the core wire end fitting.

### 2) Procedure

- a. Silicone in quantities equal to that dispensed at the 100% checking fixture is to be applied to the spring and spring guide.
- b. The cable is to be cycled by hand to full spring collapse five (5) times prior to test.
- c. Install cable assembly in fixture.
- d. Actuate the cable two (2) times to its "Z" dimension and return it to its "C" dimension.
- e. Actuate the cable to "Z" dimension and determine acceptance or rejection by digital read-out.

## 7. Cable Deflection Test - Refer to Figures IV.A. and B.

### A. Introduction

The purpose of this test is to verify that the deflection of the cable conduit and core wire as an assembly meet design intent.

### B. Acceptance Limits

It is considered a failure when the cable deflection exceeds 7.0mm (Figure IV.A.) or .608% (Figure IV.B.) of the overall length when using the optional test procedure at 173 N (39 lbs.) minimum applied load or yielding, breaking or slipping of any component part of the cable occurs.

### C. Test Frequency - Refer to Figure IV.A.

Samples to be selected and tested at the beginning and end of each spool of conduit per quantities outlined in Section II. The test cables are to be complete assemblies having the following basic dimensions: "A" dimension of  $1149.5 \pm 1.5$ mm; "B" dimension of  $960.0 \pm 2.0$ mm; and "C" dimension of  $136.7 \pm 3.2$ mm. (Refer to -9A758- drawings for definition of A, B, and C dimensions.)



# Engineering Specification

## D. Test Instrumentation

- 1) A 173.5 N (39 lbs.) weight to apply the load.
- 2) A 4.45 N (1 lb.) pre-load connector weight required to zero the dial indicator.
- 3) A dial indicator to measure cable deflection in 0.0254mm or smaller increments.

## E. Test Fixture and Procedure

- 1) A vertically mounted dead weight fixture as shown must be used for this test.
- 2) Cables are to be mounted to simulated dash panel and engine bracket supports that are in line at a linear distance of 922mm. The dash fitting gasket is to be removed and both fittings are to be firmly seated against the dash panel and engine bracket supports. (Supports should be made as rigid as possible since their deflection may add to the deflection measurements.)
- 3) The cable return spring dust cover or cable cam fitting is to be attached to a carburetor ball stud or cam style attachment that is mounted to a stationary bracket at a distance of 124mm. The cable spring (if applicable) is to be collapsed or removed so its load does not act on the dust cover.
- 4) The weights are to be attached to the core wire at the accelerator pedal end (either to the plastic retainer or end slug) to apply an in-line pull load as shown.
- 5) Position the dial indicator as shown, load the cable core wire initially with the 4.45 N pre-load connector weight. Pull down and release the 4.45 N weight by hand several times and then zero the dial indicator once the indicator stabilizes. Attach the 173 N weight to the connector weight. Flex the cable conduit side to side several times by hand until the dial indicator shows no further increase in deflection.

NOTE: Do not allow the 173 N weight to rotate for it may yield a higher, unrealistic deflection measurement. With the cable and weights at rest and the indicator stabilized, read the indicator for cable deflection.

## F. Optional Test Frequency, Fixture and Procedure - Refer to Figure IV.B.

- 1) Samples are to be selected at the beginning and end of each shift's production or part number production in the event that a part number shall run less than a shift. The test cables will be the same dimensions as the part number to be run. The test cables shall be assembled in the same manner as production parts.
- 2) A vertically mounted dead weight fixture as shown. This fixture must be adjustable to produce a "B" dimension equal to 96% of the cable drawing "B" dimension and a "C" dimension equal to 91% of the cable drawing "C" dimension (-9A758-).
- 3) Cables are to be mounted to simulated dash panel and engine bracket supports that are in line at a linear distance "B". The dash fitting gasket is to be removed and both fittings are to be firmly seated against the dash panel and engine bracket supports. (Supports should be made as rigid as possible since their deflection may add to the deflection measurements.)



## Engineering Specification

- 4) The cable throttle attachment fitting is to be secured to a simulated throttle lever/cam that is mounted to a stationary bracket at a distance "C". On a cable assembly with an integral compression spring, the spring is to be collapsed or removed so its load does not act on the dust cover.
- 5) The weights are to be attached to the core wire at the accelerator pedal end (either to the plastic retainer or end slug) to apply an in-line pull load as shown.
- 6) Position the dial indicator as shown; load the cable core wire initially with the 4.45 N pre-load connector weight. Pull down and release the 4.45 N weight by hand several times and then zero the dial indicator once the indicator stabilizes. Attach the 173 N minimum weight to the connector weight. Flex the cable conduit side to side several times by hand until the dial indicator shows no further increase in deflection. NOTE: Do not allow the 173 N weight to rotate for it may yield a higher, unrealistic deflection measurement. With the cable and weights at rest and the indicator stabilized, read the indicator for cable deflection.

### 8. Cable End Fitting Orientation Test - Refer to Figures V.A. and B.

#### A. Introduction

The purpose of this test is to verify that the cable and fitting orientation will remain in the design intended orientation when installed in a vehicle. The orientation is to be based on the cable dimensions specified in 8.C. regardless of other cable lengths in production.

#### B. Acceptance Limits

It is considered a failure when the fitting alignment angle  $G^\circ$  is greater than  $G^\circ + 30^\circ/-30^\circ$  when routed as defined below.

#### C. Test Frequency - Refer to Figure V.A.

Samples are to be selected at the beginning and end of each spool of conduit per quantities outlined in Section II. The test cables are to have the following basic dimensions: "B" dimension of  $960 \pm 2.0$ mm and angle  $G^\circ$  equal to  $90^\circ \pm 10^\circ$  (-9A758-). The test cables can be partial assemblies or just the conduit with end fittings secured to the ends of the conduit.

#### D. Test Instrumentation

None required.

#### E. Test Fixture and Procedure

- 1) A minimum of one (1) station fixture is to be used for this test.
- 2) The rear conduit fitting is to be secured to a simulated dash panel then routed to a simulated bracket as shown. The front conduit fitting is to be permitted to rotate unrestricted and then placed in the engine bracket in its natural position for measurement of angle "G".

#### F. Optional Test Frequency, Fixture and Procedure - Refer to Figure V.B.



# Engineering Specification

- 1) Samples are to be selected at the beginning and end of each shift's production or part number production in the event that production of a given part number shall run less than a shift. The test cables will have the same "B" dimension and "G" angle as the part number being run at the time of testing. The test cables shall have the end fittings secured in the same manner as production parts.
- 2) A minimum of one (1) station fixture is to be used for this test. The fixture is to be adjustable to obtain the following:

"X" dimension = 36.1% of the "B" dimension

"Y" dimension = 27.4% of the "B" dimension

## 9. Accelerator Cable Efficiency Check - Refer to Figures VII.B, C, D, and E.

### A. Introduction

This test measures the cable efficiency under constant load and constant cable speed conditions as shown in Figure VII.B. It is used to verify that the accelerator cable maintains the required efficiency when routed in its "in-vehicle" position. This test is to be conducted on cables routed as shown in Figures VII.C, D and/or E per coordinates shown on part drawing (-9A758-).

### B. Acceptance Limits

The accelerator cable when routed per coordinates must show an efficiency of not less than that specified on the part drawing (-9A758-) or 80%, whichever is greater.

### C. Test Frequency

A minimum of six (6) samples are to be selected randomly from each shift. At least one (1) cable for each different part number produced during the shift is to be included.

### D. Equipment and Procedure - Refer to Figure VII.B.

## 10. Cable Return Spring Fatigue Test

### A. Object

To determine if the "as received" cable return springs comply with the design intent which requires the spring to cycle from the spring height at the "C gage" dimension, through a 39mm compressive travel. (For accelerator cables with integral compression springs.)

### B. Equipment

1. An automatic device capable of cycling the spring for one million cycles with a 39mm stroke.



# Engineering Specification

- At least a 10 station spring fixture. Springs are to be supported during cycling by rods or by using the accelerator cable end tube and guide tube.

## C. Procedure

- Select at random, springs from each log shipment of cable return springs per Q-101 guidelines.
- Check the following dimensions - inside diameter, wire diameter, number of coils, spring load at the "C gage" and "C gage" + 39mm heights, spring rate, and free length.
- Install the springs in a cycle fixture capable of compressing the cable spring from the spring heights defined above.
- Cycle speed = 2 - 6 cycles/second at room temperature.
- Test Duration = 1,000,000 cycles
- Failure is determined if any spring breaks prior to one million cycles. Treatment of a lot in which a sample failure occurs is to be in accordance with the procedure outlined in Q-101. Parts on test must be checked daily for the above failure conditions.

## 11. Accelerator Cable Abuse Test (For accelerator cables with integral compression springs.)

### A. Object

To determine if the cable function can be adversely affected by the following conditions:

- Misaligned cable socket - 15mm lateral offset at the ball stud in the idle position. Offset is to be obtained by twisting the cable flange mounting surface.
- Cable disconnected at the ball stud and bent 90° to the engine bracket attachment.

### B. Requirements

- The cable function must not be adversely affected with 15mm of misalignment after a 10 hour soak at 275°F (135.1°C) followed by a 30 minute soak at room temperature (50° to 110°F / 10° to 43.4°C). The cable must not be cycled during or between the soak periods.

After the soak, the cable shall be checked for cable efforts and returnability per III2.A.3. Cycle the cables per III 1 A-G. Upon completion, evaluate per III 2.A.3.

- The cable function must not be adversely affected (no distortion of the spring guide) and failure must not occur to any component when the cable spring end is bent 90° (min.) after a minimum soak of 30 minutes at temperatures of -40°F (-40°C) and room temperature (50° to 110°F / 10° to 43.4°C).

After each soak, manually displace the ball socket of the cable a minimum of 90° relative to the engine bracket conduit fitting and return it to the straight position. Repeat the cycle 3 times at each temperature. Check the cables for efforts and returnability. Cycle the cable as described in III 1 A-G. Upon completion, evaluate per III 2.A.3.

FRAME 13 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

## C. Equipment

1. Temperature controlled chamber -35° to -45°F (-37.2° to -42.8°C).
2. A heat source to maintain a temperature range of 265° - 285°F (129.4° - 140.6°C).
3. Test fixture - See figures 1T/2T.

## 12. Cable Conduit Crush Strength

### A. Object

To determine the force required to crush the cable conduit such that the return of the core wire is prevented without external aid.

### B. Requirements

The conduit must withstand a force of 1334N (300 lbs.)min. distributed over a length of 69.8mm before any perceptible restriction of the core wire axial movement occurs.

### C. Equipment

1. A test machine capable of accurately applying and recording load. The minimum rate of load application is to be 111.2 N (25 lbs.) per second.
2. A fixture for retaining the conduit and applying force. See Figure 4T.

### D. Conditions

1. Position the conduit under guides to insure that the conduit is centered under the ram throughout the entire load application. Remove any curvature in the conduit between the guides. Record the effort required to move the core wire 25.4mm (1 in.).
2. Constantly move the core wire while applying the load to determine when restriction first occurs. Record the load when restriction is first recorded. All subsequent loadings should be at the same section of the cable.
3. Remove the load to determine if the core wire returns to its original position. The cable return force shall be provided solely by the cable's own compression spring. If the cable does not have a compression spring, a spring with characteristics similar to previous designs shall be used. Record the findings.
4. Once the minimum restriction load is determined via the above steps, increase the load in increments of at least 10% of the minimum load. After each incremental increase, check the effort to move the cable 25.4mm (1 in.) and note the amount that the cable return. Remove all of the load and measure the efforts and returnability. Run the test until the core wire fails to return when the total load is removed. Record the findings at each load.
5. Crush a new cable to 80% of the failure load and then cycle per III 1.A-G.



## 13. Cable Thermal Distortion Test

### A. Object

To determine the compressive strength of a conduit design as a function of load and temperature.

### B. Equipment

1. Load cell(s) capable of monitoring cable core loads up to 356N (80 lbs.)
2. A chart recorder to determine the cable core load.
3. An automatic device able to apply the required cable load.
4. An environmental chamber capable of sustaining a temperature range of -40°F to 400°F (-40°C to 204.6°C).

### C. Conditions

1. Maximum temperature = 275°F (135°C)
2. Minimum temperature = -40°F (-40°C)
3. Constant core wire load of 356N (80 lbs.)
4. Soak time incremental temperature - 15 minutes
5. There shall be no distortion of the conduit or breakthrough of the lay wires at temperatures of 275°F (135°C) or below.

### D. Procedure

1. A six station fixture as shown in figures 1T/2T consisting of: a hydraulic cylinder to apply the required cable load of 356N (80 lbs.), a calibrated load transducer and strip chart recorder to determine and maintain the required load, and fixture couplings between the accelerator cables / load applicator/ and reaction stand. An environment chamber able to enclose the entire cable conduit and sustain a temperature range of -40°F to 400°F (-40°C to 204.6°C). The curved guide tube may extend outside the chamber.
2. Each accelerator cable is to be mounted to simulated dash panel and engine bracket. The ball stud or cam attachment is to be fastened to a rigid bracket so as to allow maximum cable core loading to be transferred to the conduit.
3. After the cables are installed in the test fixture and the temperature is stabilized at -40°F (C), the cable is to be loaded to 356N (80 lbs.). The cable is then soaked at temperature for 15 minutes. After the soak period, the cables are to be inspected for excessive conduit distortion or breakthrough of the lay wires. If there are no failures, the temperature is at 25°F (-3.8°C) increments and the above procedure repeated at each new temperature up to 275°F. If failure occurs below the maximum temperature, a new sample will be cycled at 25°F (3.8°C) below the failure temperature in the manner described





# Engineering Specification

below. Cycle per III 1.A-G except from 9.0N to 111N (2 - 25 lbs.) until failure or 100,000 cycles is achieved. Check efficiencies before and after cycling. Failure is when the cable fails to return or degrades per III 2.A.3.

## E. Items to be Tested

1. Six accelerator cables per conduit design.
2. When more than one vendor supplies a component, six samples from each vendor must be tested.

## F. Completed Samples

After each sample has completed testing, it is to be labeled with the following information:

- Test completion date
- Test order number
- Sample number
- Maximum Temperature
- Vendor or other identification

## 14. Ball Socket Insertion / Removal Load Procedures

### A. Introduction

The purpose of this procedure is to apply consistency to the method for measuring ball socket insertion and removal loads from the ball stud.

### B. Acceptance Limits

The insertion loads shall be less than or equal to 111 Newtons upon the first insertion to the ball stud. The removal loads shall be greater than or equal to 67 Newtons upon the third removal cycle.

### C. Test Frequency

Test minimum of 10 samples from a random sample of 100 or per production lot.

### D. Test Instrumentation and Equipment

1. Chantillon DFM 100 force meter or equivalent whose calibration has been certified according to local ISO 9000 procedures. Gauge must have peak load measurement capability.
2. Calipers whose calibration has been certified according to local ISO 9000 procedures.
3. Ford service tool recommended for removing ball socket from ball stud.
4. Appropriate fixture for mounting ball stud.

### E. Test Fixture and Procedure

1. One station fixture will be sufficient for this test.
2. Verify correct dimension of ball stud per Ford design guidelines with calibrated calipers.



# Engineering Specification

3. Attach appropriate fixture to force meter.
4. Zero out gauge.
5. Set measuring device to record peak load.
6. Grease ball socket with chassis grease (SAE # tbd).
7. Insert ball socket on to ball stud.
8. Record peak insertion load. Load must be less than or equal to 111 Newtons.
9. Remove ball socket with Ford recommended service tool.
10. Insert ball socket onto stud.
11. Remove ball socket with Ford recommended service tool.
12. Insert ball socket onto stud.
13. Remove ball socket with Ford recommended service tool and record peak removal load which must be less than or equal to 67 Newtons.
14. Repeat steps 1 – 13 as required per Section C above.

## IV. RELIABILITY ANALYSIS METHODS

Following are the methods for reducing the test data to compute the reliability values.

- A. Test the number of samples specified in Section II per the requirements of Section III.
- B. If any requirement is not met invoke Q-101, Section III, E, 3 for "ES Test Performance Requirements."

## V. REVALIDATION REQUIREMENTS

For any change in processing or sourcing, the entire PV program must be successfully completed.

Any changes in materials or supplies must be revalidated in accordance with Ford Q-101.

Changes in design, composition or processing from part previously approved for production requires prior engineering approval.

### Running Change Re-Validation

	<u>Process Change</u>	<u>Material Change</u>	<u>New Supplier</u>
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III.1 *	See Q-101	See Q-101
III.2	See Q-101	See Q-101
III.4	See Q-101	See Q-101



# Engineering Specification

## Subsequent Year Re-Validation

## Carryover Design

- III.1
- III.2
- III.4

\* Revalidation is not required for cable length changes or for use of existing currently approved parts or processing.

## **VI. LOT DEFINITION**

A lot is defined as a day's production of cable assemblies with the same part number or 5000 assemblies of the same part number, whichever quantity is less.

## **VII. RECORD RETENTION**

Recording and record retention shall conform to Ford Q-101 "Records". Copies of Product Validation (Section II) are to be forwarded to the appropriate design engineer.

## **VIII. INSTRUCTIONS AND NOTES**

### **A. Operating Temperature Range**

The cable assembly is to operate smoothly without seizure or sticking from -40°C to 135°C when routed as in "Accelerated Overload Life Test". (This testing is currently conducted by Ford Design Engineering per Test Procedure CEO-10.02-LT-2 and 2/3 or DVT LT-10.02-1.1).

### **B. Conduit Liner Cleanliness**

Inside diameter of the plastic liner must be free of any foreign material except for the specified internal lubricant. A minimum sample of six (6) completed cable assemblies are to be selected at random from each week's production for analysis. The cables are to be disassembled without damaging the total length of liner in each. Each liner is then split and observed under 30x magnification for contaminants. Actions are to be taken immediately to eliminate the sources(s) of contamination. Actions taken are to be recorded along with the cable assemblies part number and date code. The liner samples are to be kept for review for one (1) year.

### **C. Core Wire Cleanliness**

Core wire strand (7x7, 7x19) must be free of any foreign material except for the specified internal lubricant. To aid in cleanliness the core wire strand must be cleaned for a minimum of 15 minutes in a continuous flow of 1, 1, 1trichloroethane or in an ultrasonic cleaner with Chem Crest Ultrasonic Detergent (LN005291). Stacking of core wires in a bath must be such to prevent blocking by each other that may prevent cleaning. Core wires not used immediately after cleaning are to be stored in closed containers.

A minimum of twelve (12) core wire samples are to be selected at random from each week's production and a quantitative analysis made to determine if foreign material is present. Foreign material includes particles



# Engineering Specification

of the core wire material that may have separated during swaging of the OD of the core wire. Actions are to be taken immediately to eliminate the source(s) of contamination. Actions taken are to be recorded along with the part number of cable assemblies that would have used the core wire. The core wire samples are to be kept for review for one (1) year.

## D. Verification of Heat Treatment Specification

Verification of the heat treat specification will conform to procedures established by Q-101 except as follows: A 3-sigma capability study will be performed on a minimum of 25 samples of tube and clip assemblies and spring guides, as required by paragraph 2.3 of Q-101. The process will be considered unacceptable if more than 5% of the values, established by the 3-sigma capability projections, are above or below the print tolerance limits.

Additionally, no individual sample shall be above or below the print tolerance by more than 2 points on the Rockwell 15N scale. Records must be maintained for a period of one (1) year.

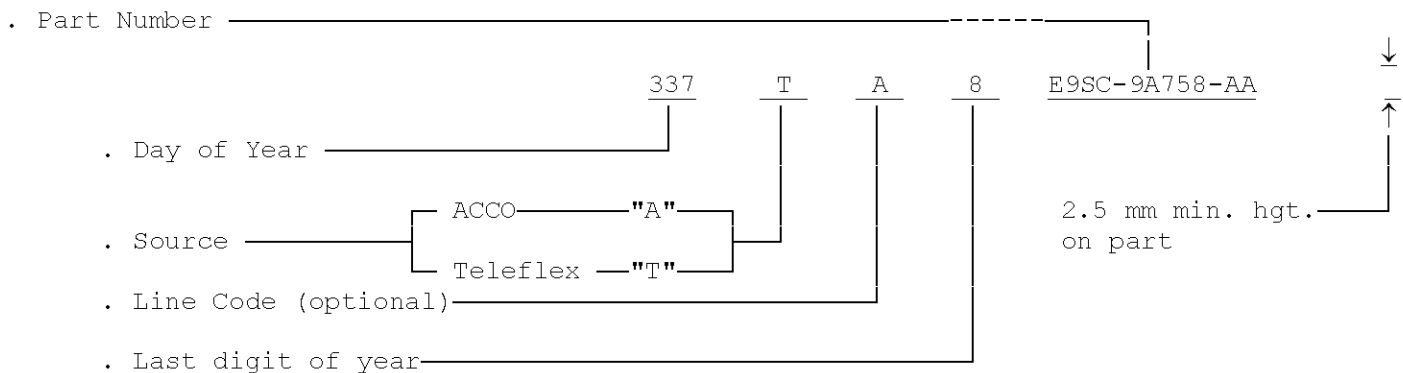
Refer to Section II for treatment of failures.

## E. Spring Guide Nylon Coating Adhesion

Adhesion of the spring guide nylon coating must meet the requirements as stated on -9F654- drawing and/or ∇ ES-E6AC-9A758-AA, Frame 2.

## F. Date Control Number

All accelerator cable assemblies shall be marked with a date code in the area shown on the drawing. The identification shall be legible, permanently imbedded in white in the cable plastic jacket and must contain the information shown below:



Records are to be maintained by the supplier for cross-referencing the date code with respect to the following:

- A. Date
- B. Cable assembly and all of its components by part number.
- C. Design and process changes.
- D. Number of assemblies produced by part number.
- E. Shipping dates and Ford Motor Company assembly plants to which cables were shipped.



# Engineering Specification

## G. Supplier Requirements

The supplier is required to provide the Accelerator Controls Group, Ford Motor Company, a complete set of detail drawings and documentation of compliance to Q101, Section III. and IV. prior to starting of production. All subsequent changes and changes made between prototype and production stages must comply with Q101, Sections III. and IV. and must have written Ford Engineering approval prior to incorporation (Refer to Section V.). Changes include process, material, resourcing, specifications and designs. As any of these are changed, documents/drawings must be forwarded to Ford Engineering as soon as they are completed and before the changes are implemented. Supplier drawings must include the Designer, Checker and Engineer signatures and dated.

Omissions or changes made by the Supplier not specifically agreed upon by Ford Engineering in writing do not void past or present applicable drawing and specification requirements.

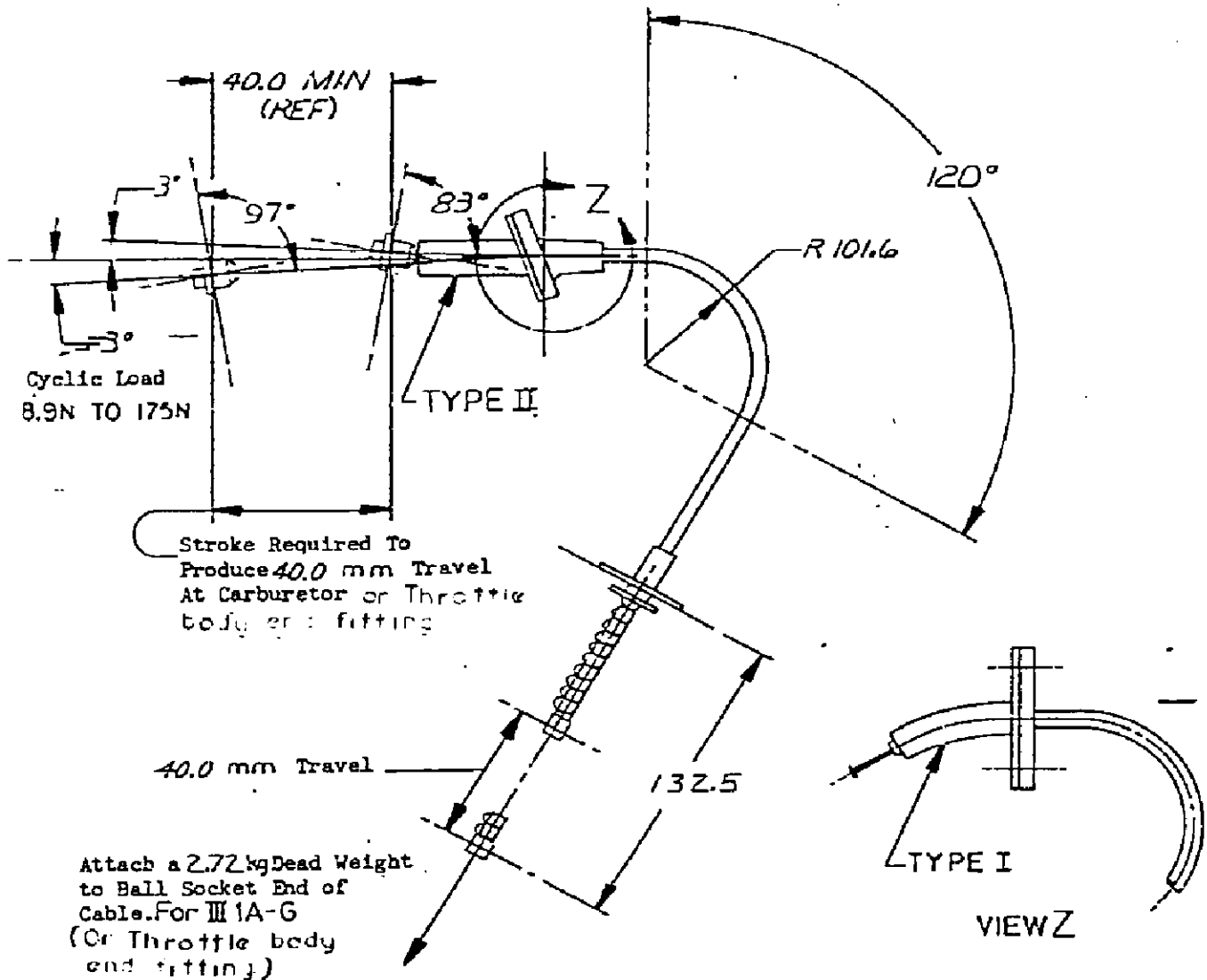
All molded components must be clearly identifiable and traceable to individual cavities.

jac930715  
mcb941205

.....



# Engineering Specification



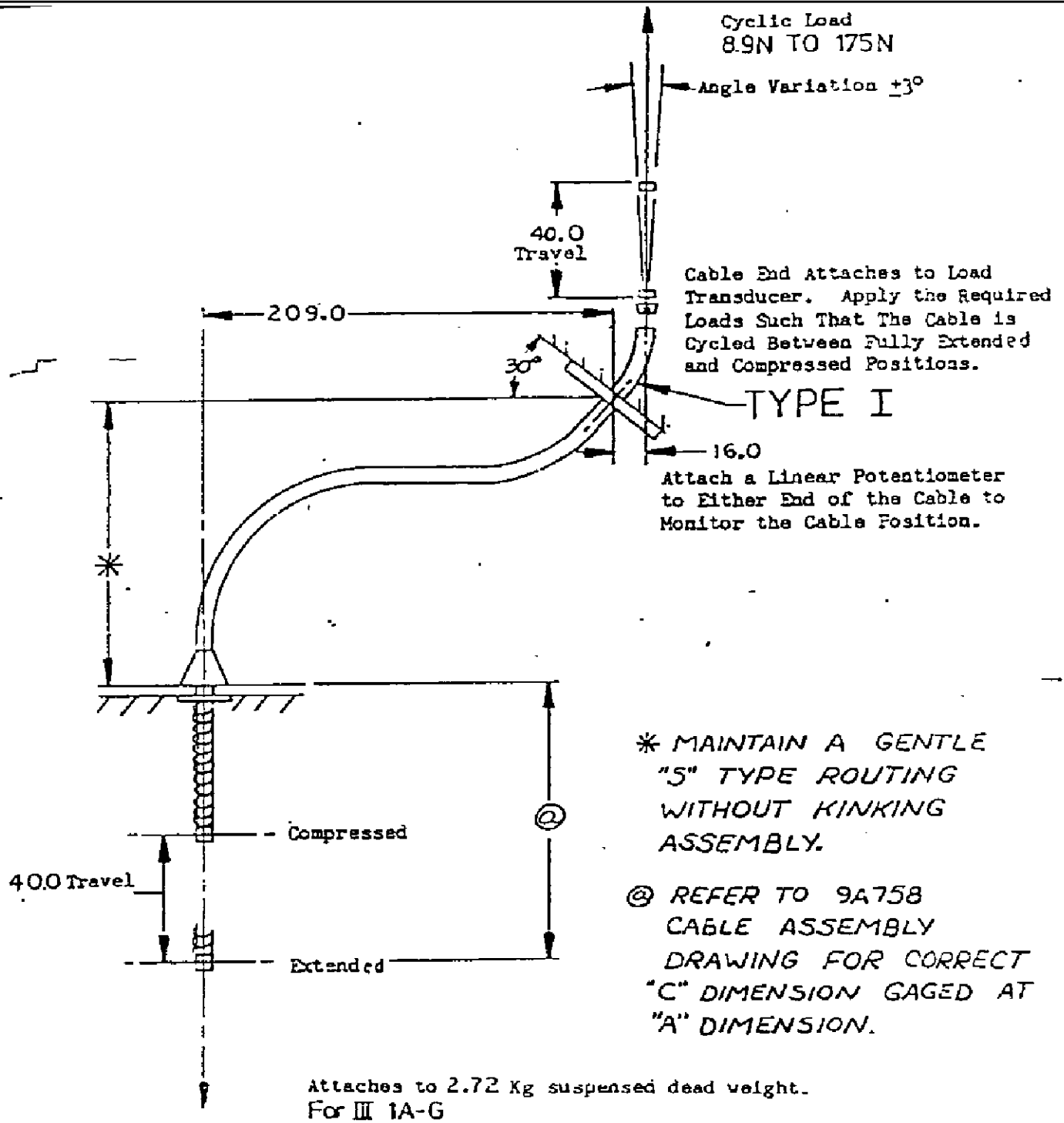
Place Cable Assy. Over 120°, R101.6 Form. Prior to Attaching Carburetor Fitting as Shown Move Conduit Fitting Up Approximately 12.7 so Conduit Does Not Touch Form During Cycling. Attach Both Conduit Fittings as Shown.

## FIGURE 1T

THE ABOVE FIXTURE IS USED FOR TEST III. 11/23/73 FOR 9A758 CABLES WITH DIMENINSION "B" GREATER THAN 400.0



# Engineering Specification



## FIGURE 2T

THIS FIXTURE IS TO BE USED FOR TESTS III. 1A-G, 1B-G, 1C-G, 1D-G, 1E-G, 1F-G, 1G-G, 1H-G, 1I-G, 1J-G, 1K-G, 1L-G, 1M-G, 1N-G, 1O-G, 1P-G, 1Q-G, 1R-G, 1S-G, 1T-G, 1U-G, 1V-G, 1W-G, 1X-G, 1Y-G, 1Z-G FOR 9A758 CABLES WITH DIMENSION "B" LESS THAN 400.0



CABLE CONDUIT CRUSH STRENGTH TEST FIXTURE

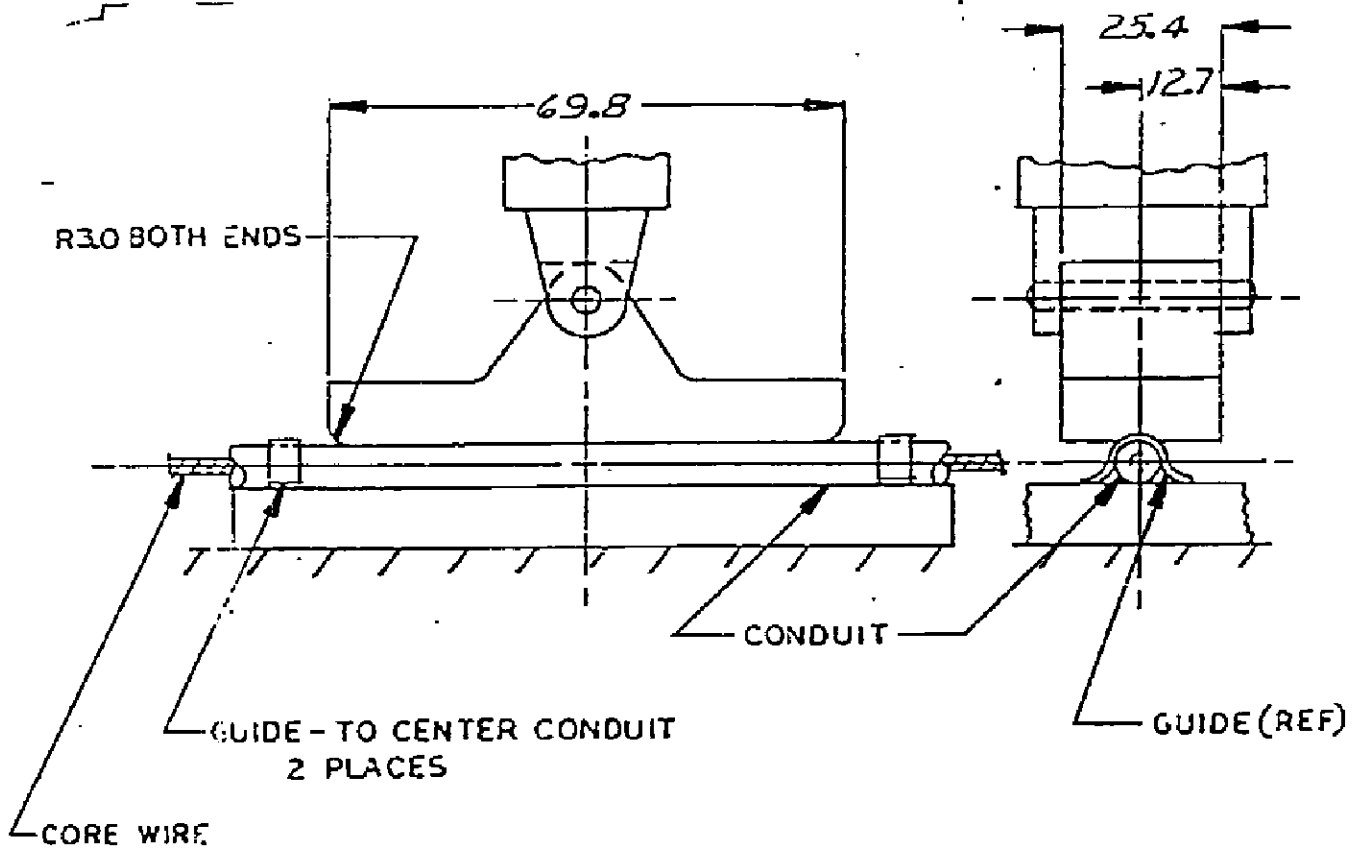
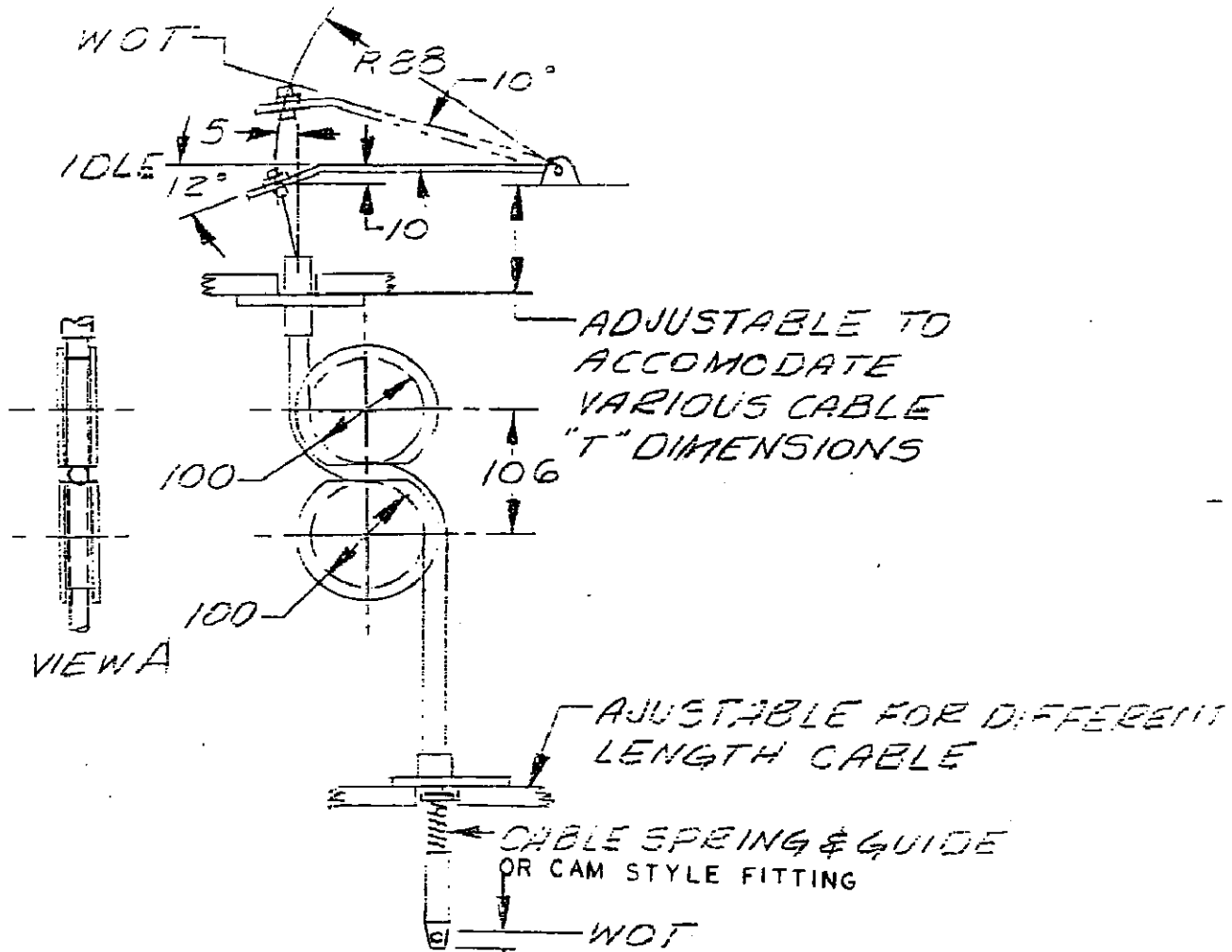


FIGURE 4T  
FOR TEST III. 12





FIGURE I 1 OF 2  
CABLE LIFE TEST FIXTURE & EFFICIENCY  
DETERMINATION  
SECTION III .1



REFER TO FIG VII A  
FOR MIN LOADS TO BE  
APPLIED AT THE BALL  
SOCKET. LOADS  
INCLUDE EFFECT  
FROM CABLE SPRING

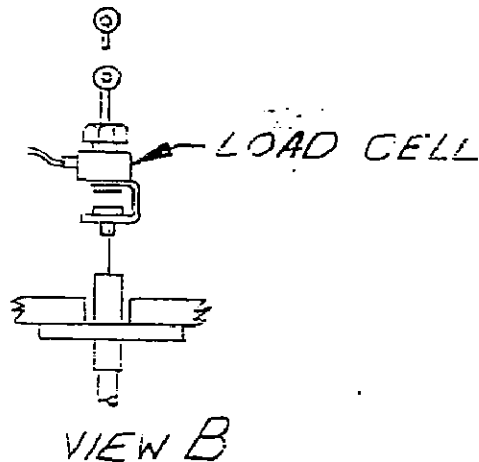
30.6 IDLE TO WOT. THE  
2.3 TRAVEL (REF)  
0.8 OVERLOAD TRAVEL

FRAME 24 OF 40	REVISED	030819	NUMBER ▽ ES-F5TA-9A758-AA
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FIGURE I 20F2  
CABLE LIFE TEST FIXTURE & EFFICIENCY  
DETERMINATION

SECTION III.1



EFFICIENCY DETERMINATION  
SET UP

REPLACE RADIAL WITH LINEAR  
ACTUATION MECHANISM  
\*COMPRESS CABLE SPRING AND  
HOLD SPRING & ITS GUIDE UP  
(IF USED) TO REMOVE THEIR  
EFFECT  
INSTALL LOAD CELL  
REFER TO FIG VIII C TYPE CABLE  
ROUTING FOR EFFICIENCY  
DETERMINATION & EQUIPMENT

\* IF APPLICABLE



FIGURE II  
SECTION III.5  
CONDUIT END FITTING & INTEGRITY

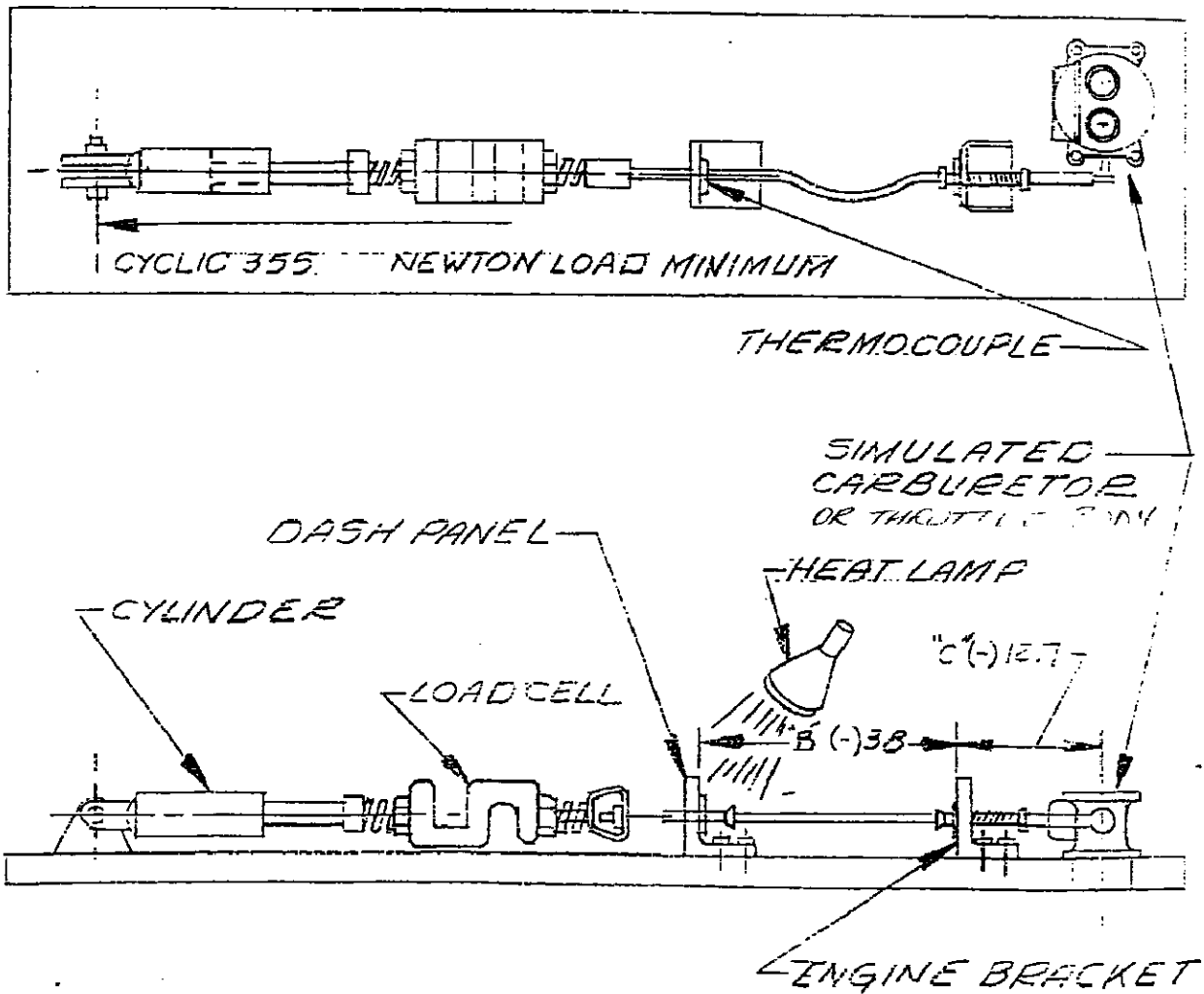
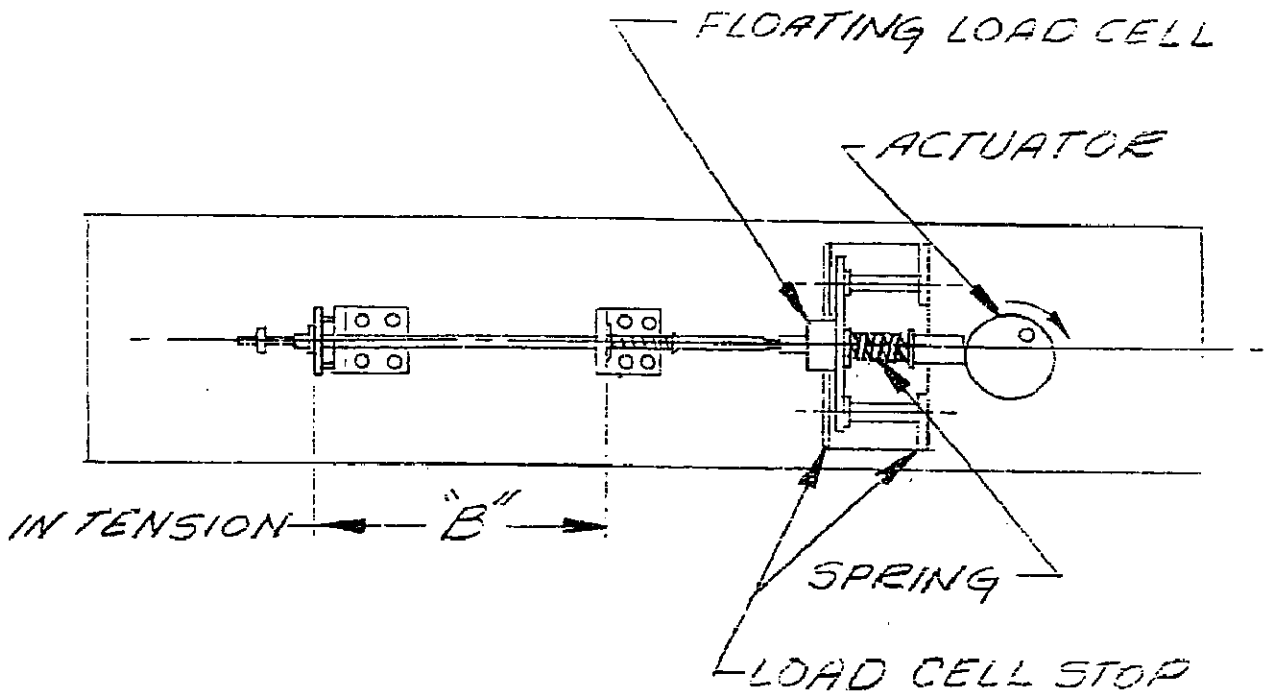




FIGURE III  
SECTION III.2.  
CABLE SPRING W & Z VERIFICATION  
(IF APPLICABLE)



SPRING-LOADED  
MOVEABLE DASH  
MOUNT

STATIONARY ENGINE MOUNT

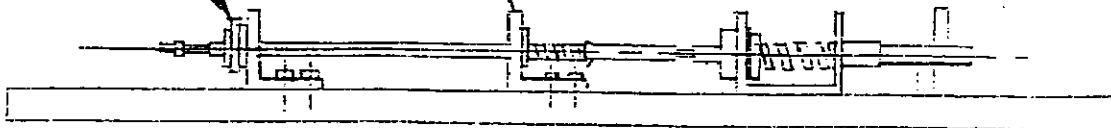
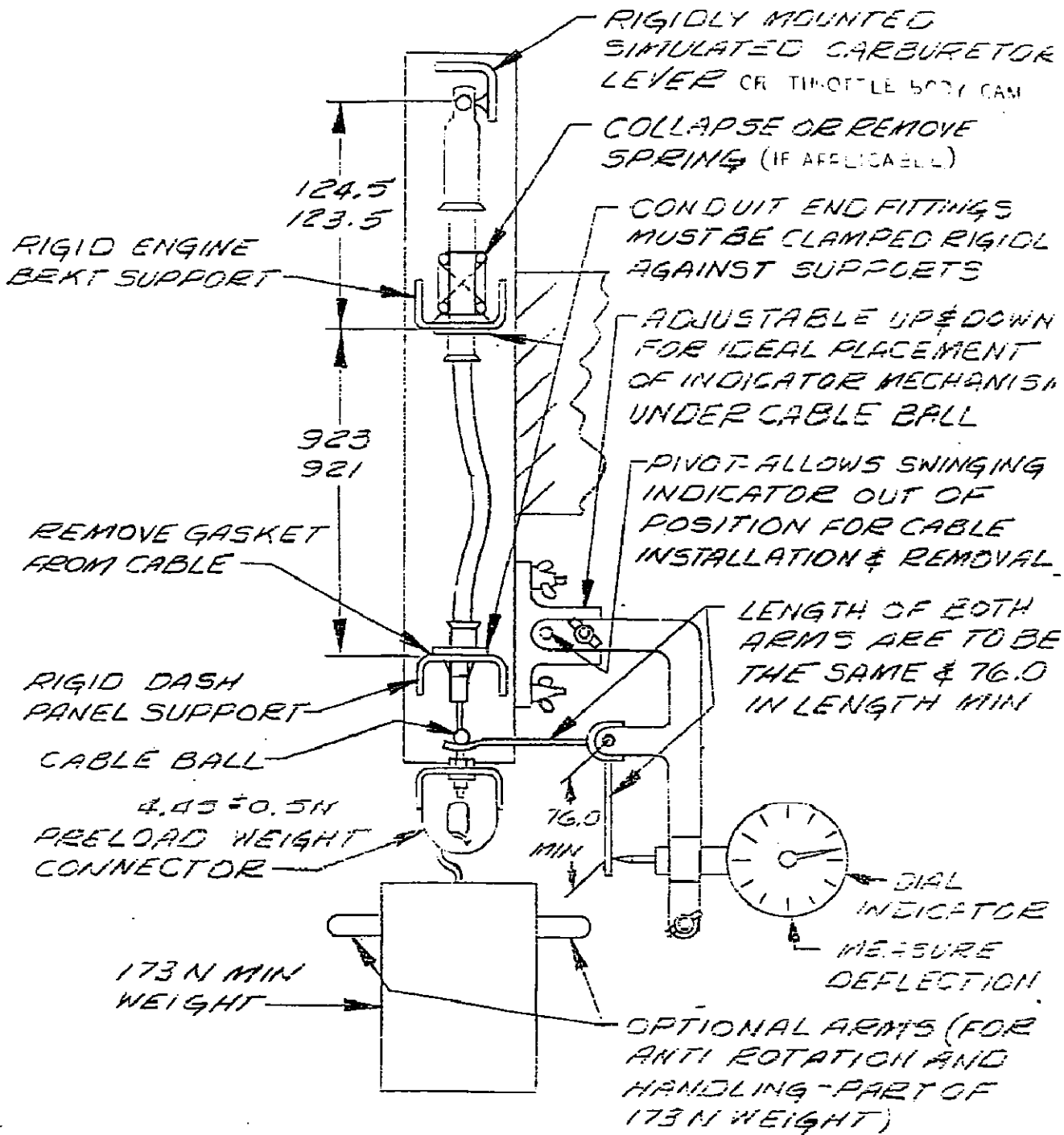




FIGURE IV A  
SECTION III.7.C



FIXTURE IS TO BE MOUNTED VERTICALLY

FIGURE IV B  
SECTION III.7.F

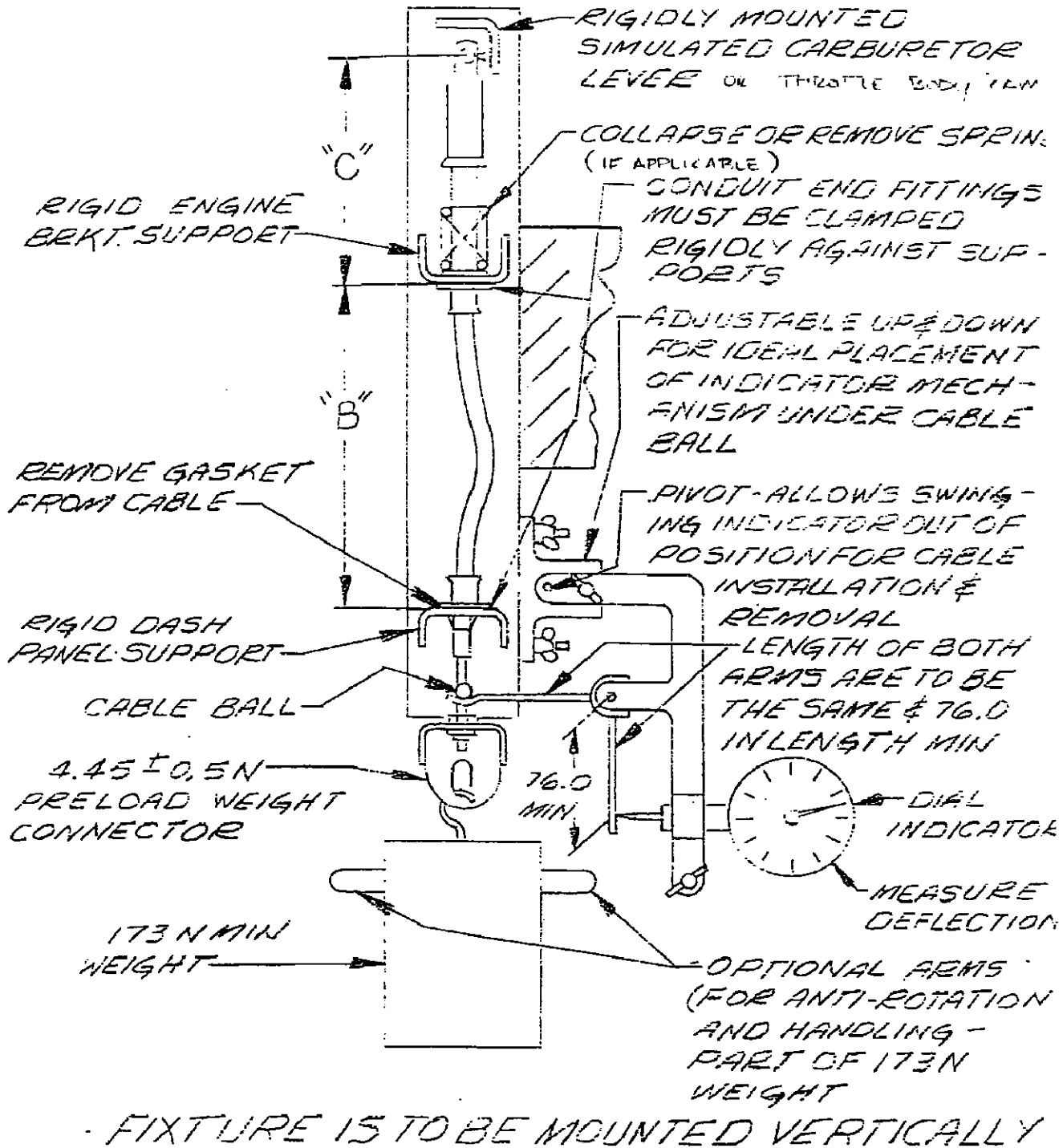




FIGURE  $\nabla$ A  
SECTION III.8.C.

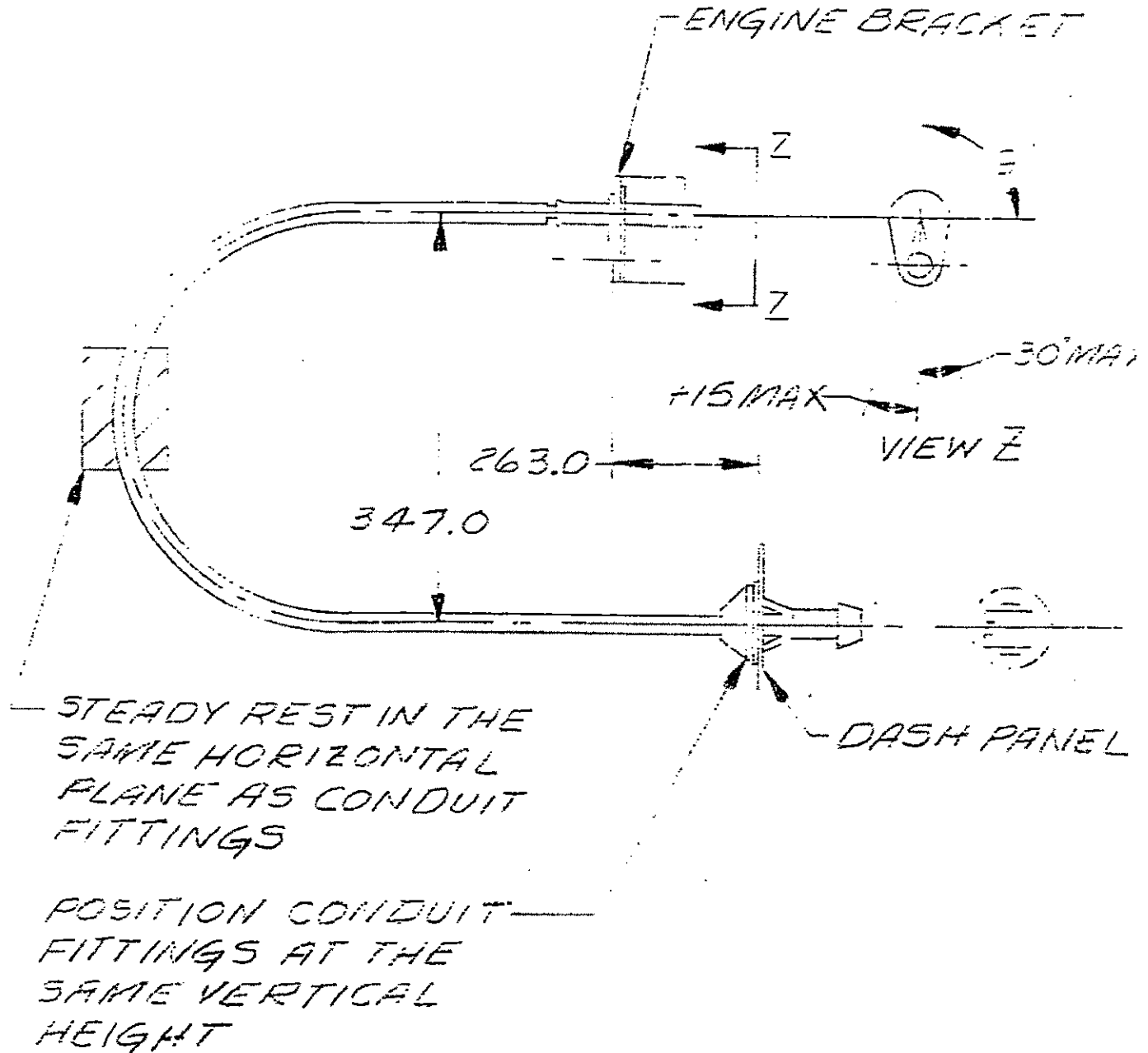




FIGURE V B  
SECTION III. 8.F

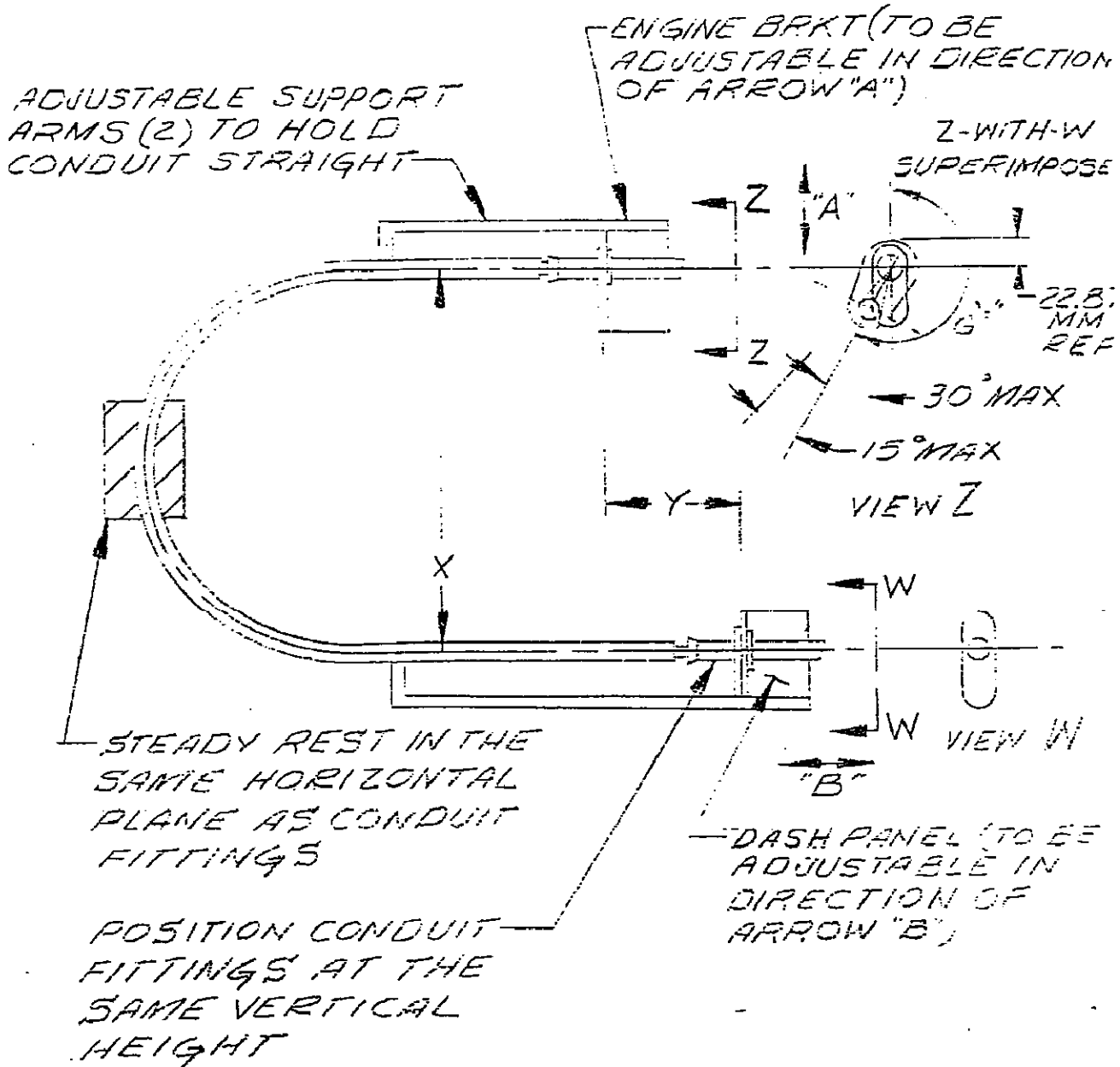






FIGURE VII A, 1 OF 2  
ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE  
LOAD SIMULATION  
CABLE INPUT LOAD AT THROTTLE BODY  
SECTION III.1

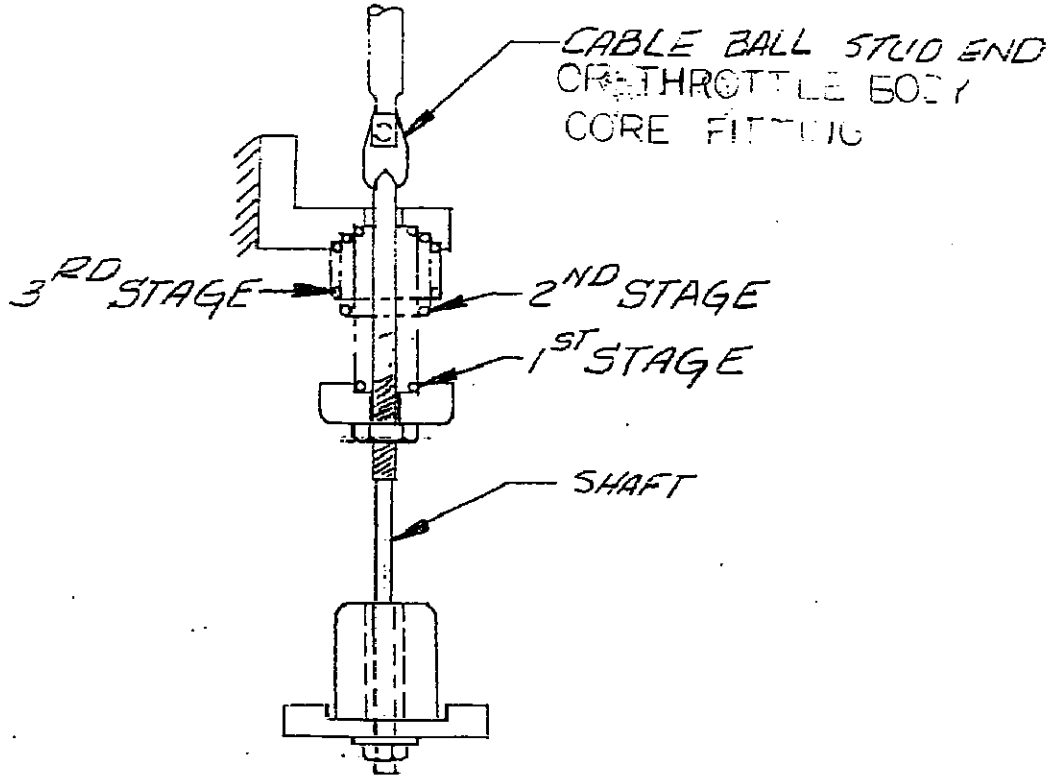
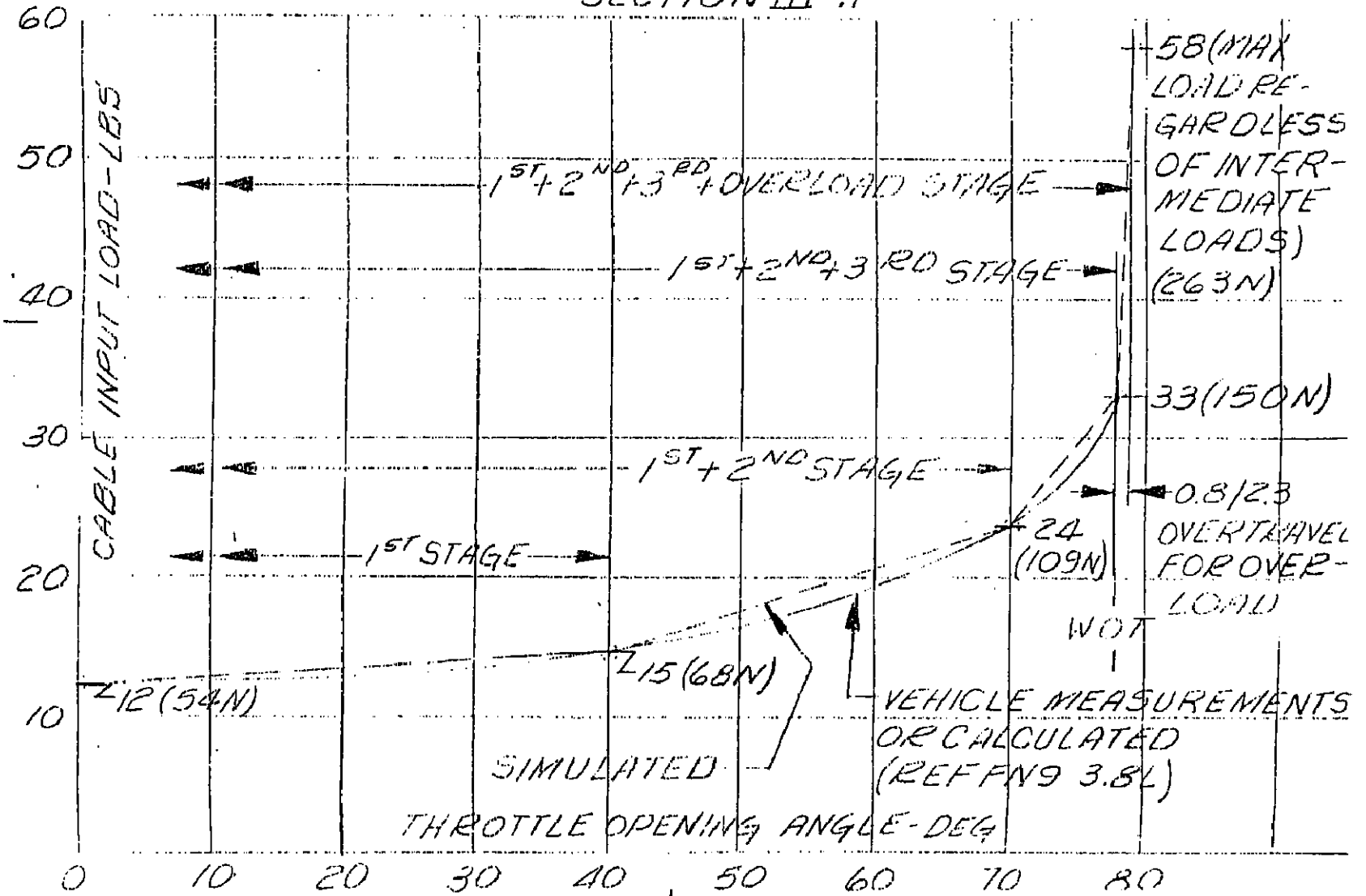




FIGURE VII A 2 OF 2  
ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE LOAD SIMULATION  
CABLE INPUT LOAD AT THROTTLE BODY  
SECTION III .1



FRAME 33 OF 40

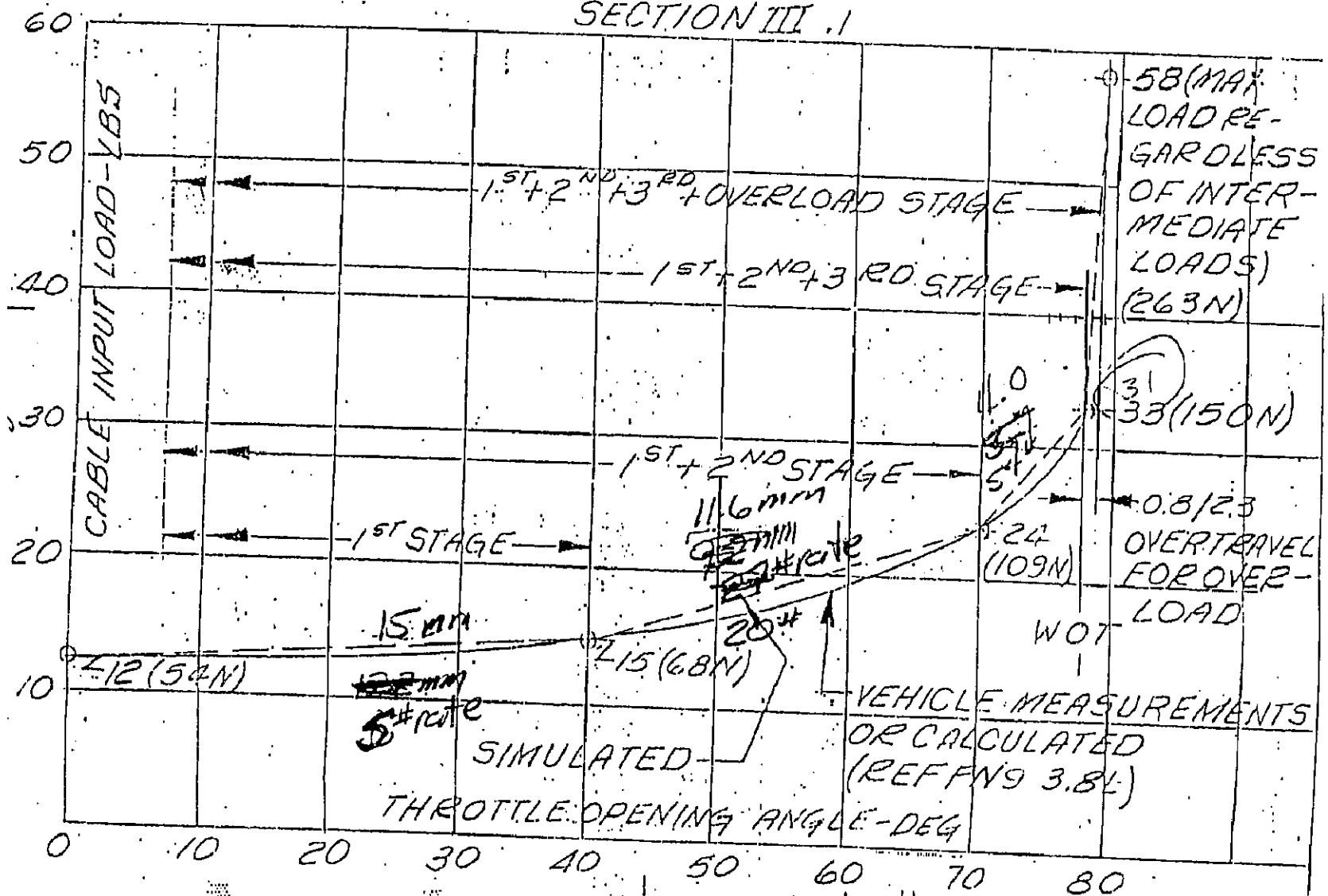
REVISED

030819

NUMBER V ES-F5TA-9A758-AA



FIGURE VII A 2 OF 2  
ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE LOAD SIMULATION  
CABLE INPUT LOAD AT THROTTLE BODY  
SECTION III.1



FRAME 34 OF 40

REVISED

030819

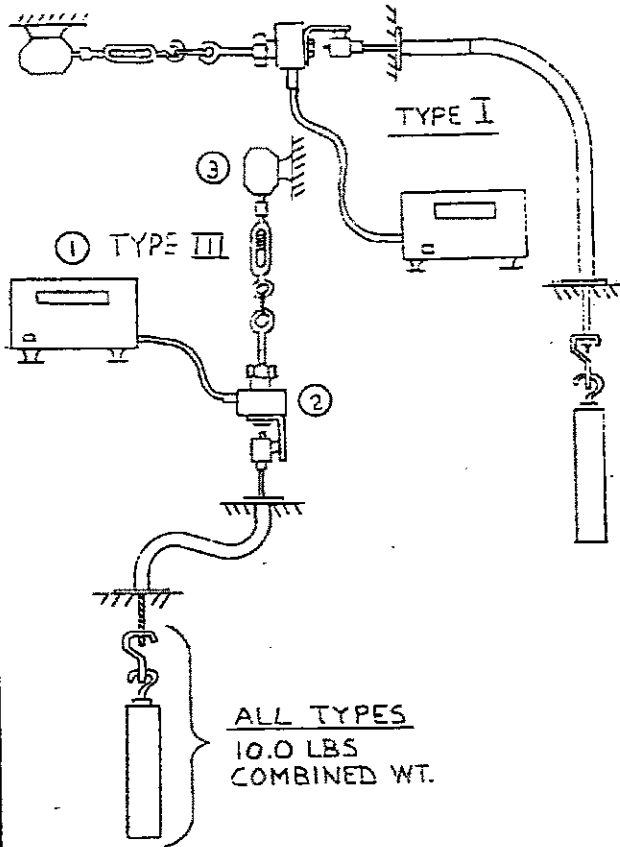
NUMBER V ES-F5TA-9A758-AA

MAY 1988 PD 3947-a2 (Previous editions may NOT be used)



## ACCELERATOR CABLE EFFICIENCY MEASUREMENT PROCEDURE FIGURE VII B. 1 OF 2

### SECTION III.9



#### EQUIPMENT

- ① REVERE T60 DIGITAL WEIGHT INDICATOR
- ② REVERE UMPI-.025A LOAD CELL
- ③ BODINE MOTOR NEM-12R & MINARIK CONTROLLER SL-15

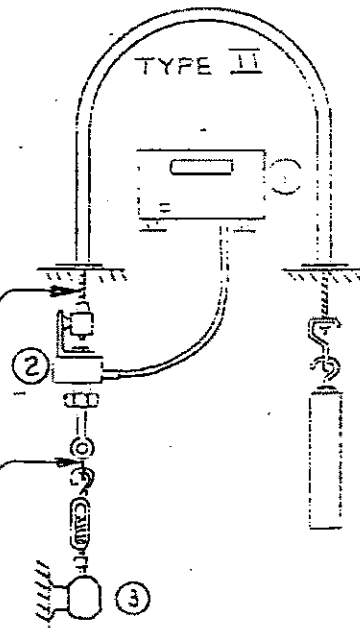
#### PROCEDURE

CYCLE CABLE UP & DOWN SEVERAL TIMES TO INSURE HIGHEST EFFICIENCY BEFORE RECORDING READINGS. TAKE READINGS WITH CONTROLLER (3) SET AT "LO/50" AT MIDSECTION OF CABLE TOTAL TRAVEL AND WITHIN THE SAME 0.25" RANGE FOR BOTH DIRECTIONS THE PRINTER MUST AUTOMATICALLY BE ACTIVATED AND RECORD THE VALUES WITHIN THE .25" RANGE & CYCLE. CABLE PART NO. & DATE CODE IS TO BE ADDED TO THE PRINTED RECORD

ALL TYPES  
10.0 LBS  
COMBINED WT.

ALL TYPES:  
WITH CABLE COMPRESSION  
SPRING - COMPRESS SPRING  
& HOLD SPRING & GUIDE TO  
REMOVE THEIR EFFORTS

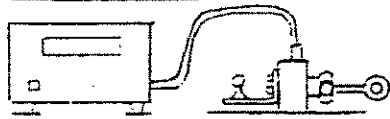
ALL TYPES  
OVERLOAD LINK (GIANT  
PAPER CLIP) 25 LBS MAX.





# Engineering Specification

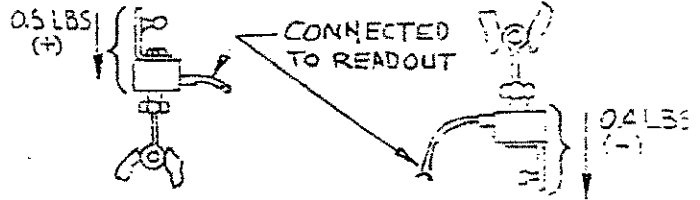
## A. READOUT



ZERO READOUT WITH LOAD CELL RESTING HORIZONTALLY

## B. LOAD CELL

- TYPE I SYSTEM SAME AS FOR READOUT (A)
- TYPE II SYSTEM • TYPE III SYSTEM



SUPPORT LOAD CELL VERTICALLY AT STEM TO DETERMINE ITS WIRE LOAD EFFECT. LOAD READOUT IS ADDED (+) TO READOUT OF 10.0 LB WT. IN SYSTEM

HANG LOAD CELL VERTICALLY AT STEM TO DETERMINE ITS WIRE LOAD EFFECT. LOAD READOUT IS SUBTRACTED (-) FROM READOUT OF 10.0 LB WT. IN SYSTEM

## CABLE EFFICIENCY DETERMINATION

NOTE: VALUES SHOWN AT LOAD CELL MAY MEASURE DIFFERENT & SHOULD BE ESTABLISHED FOR SPECIFIC SET-UPS

### TYPE I SYSTEM

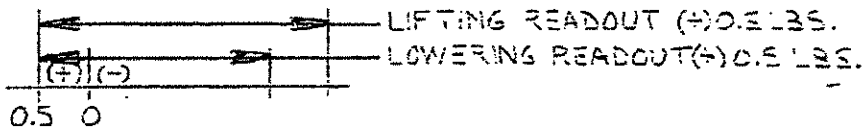
$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT.}}{\text{LIFTING 10.0 LB. WT.}}} \times 100$$



NOTE: (+) SYMBOL INDICATES LOAD CELL IS IN COMPRESSION & ITS EFFECT (0.5 LBS.) IS ADDED. THE (-) SYMBOL INDICATES LOAD CELL IS IN TENSION & ITS EFFECT (0.4 LBS.) IS SUBTRACTED

### TYPE II SYSTEM

$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT. (+) 0.5 LBS.}}{\text{LIFTING 10.0 LB. WT. (+) 0.5 LBS.}}} \times 100$$



### TYPE III SYSTEM

$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT. (-) 0.4 LBS.}}{\text{LIFTING 10.0 LB. WT. (-) 0.4 LBS.}}} \times 100$$

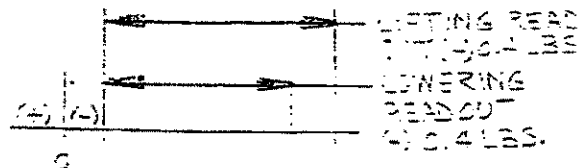
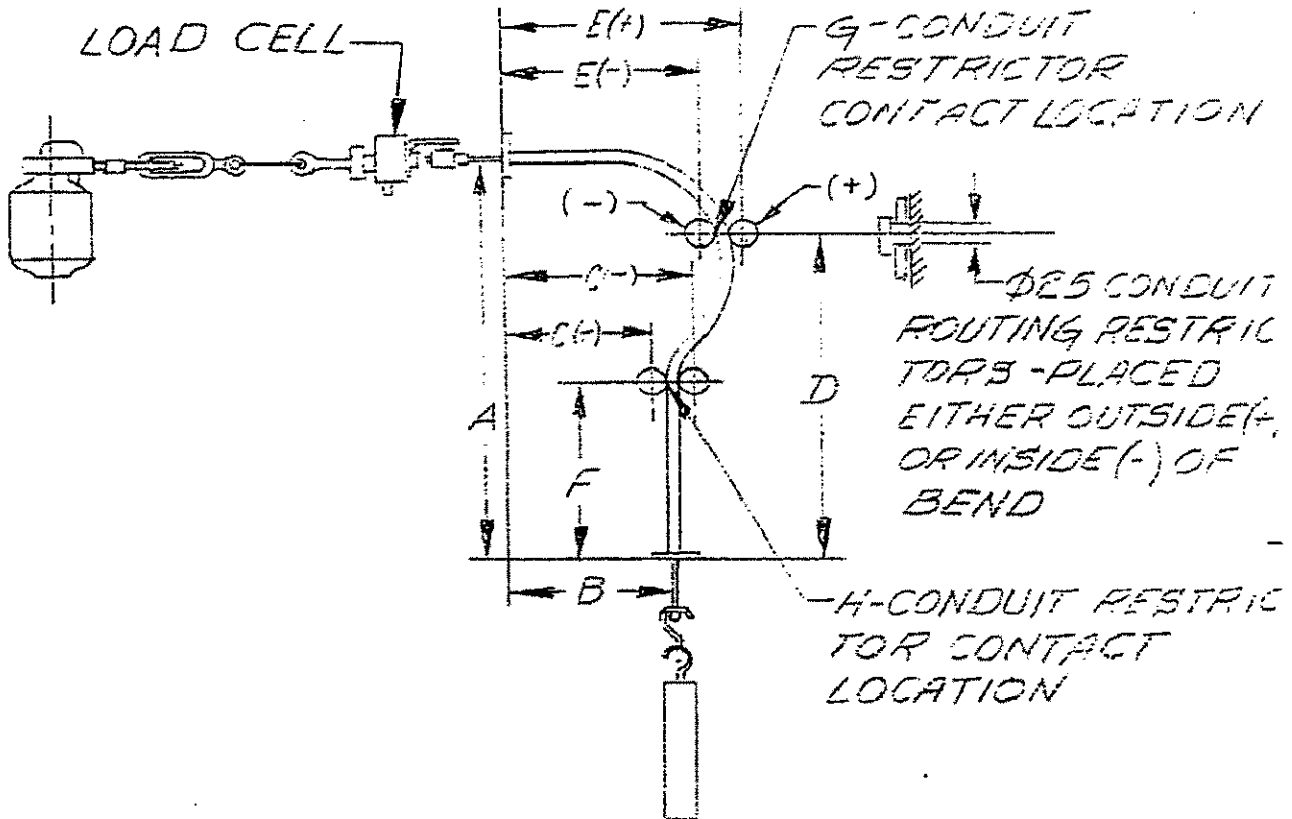


FIGURE VII C  
TYPE I ROUTING  
SECTION III.9



REFER TO FIG. VII B FOR  
EQUIPMENT & USAGE

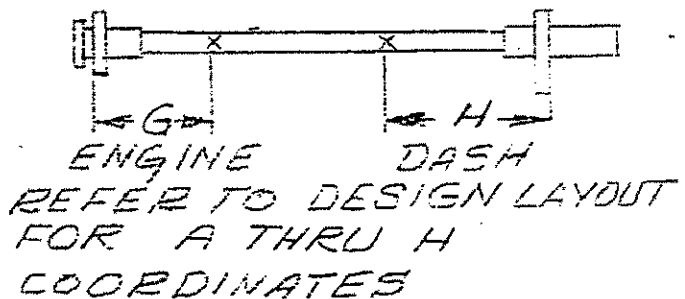
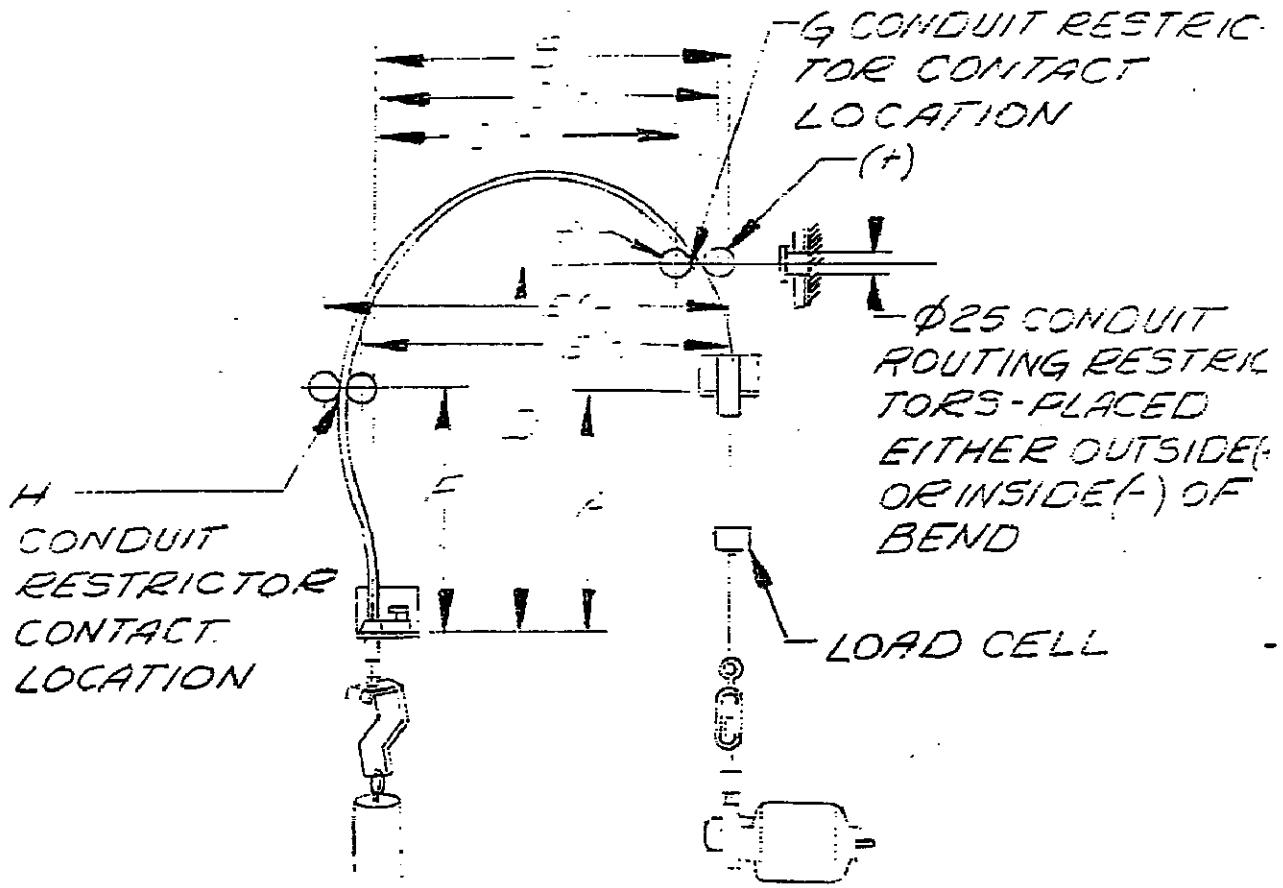
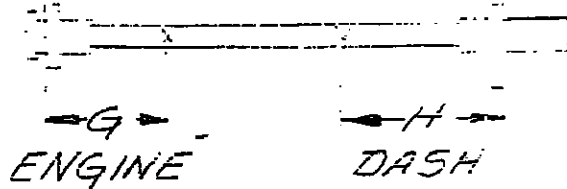




FIGURE VII D  
SECTION III .9  
TYPE II ROUTING



REFER TO FIGURE III B FOR EQUIPMENT & USAGE

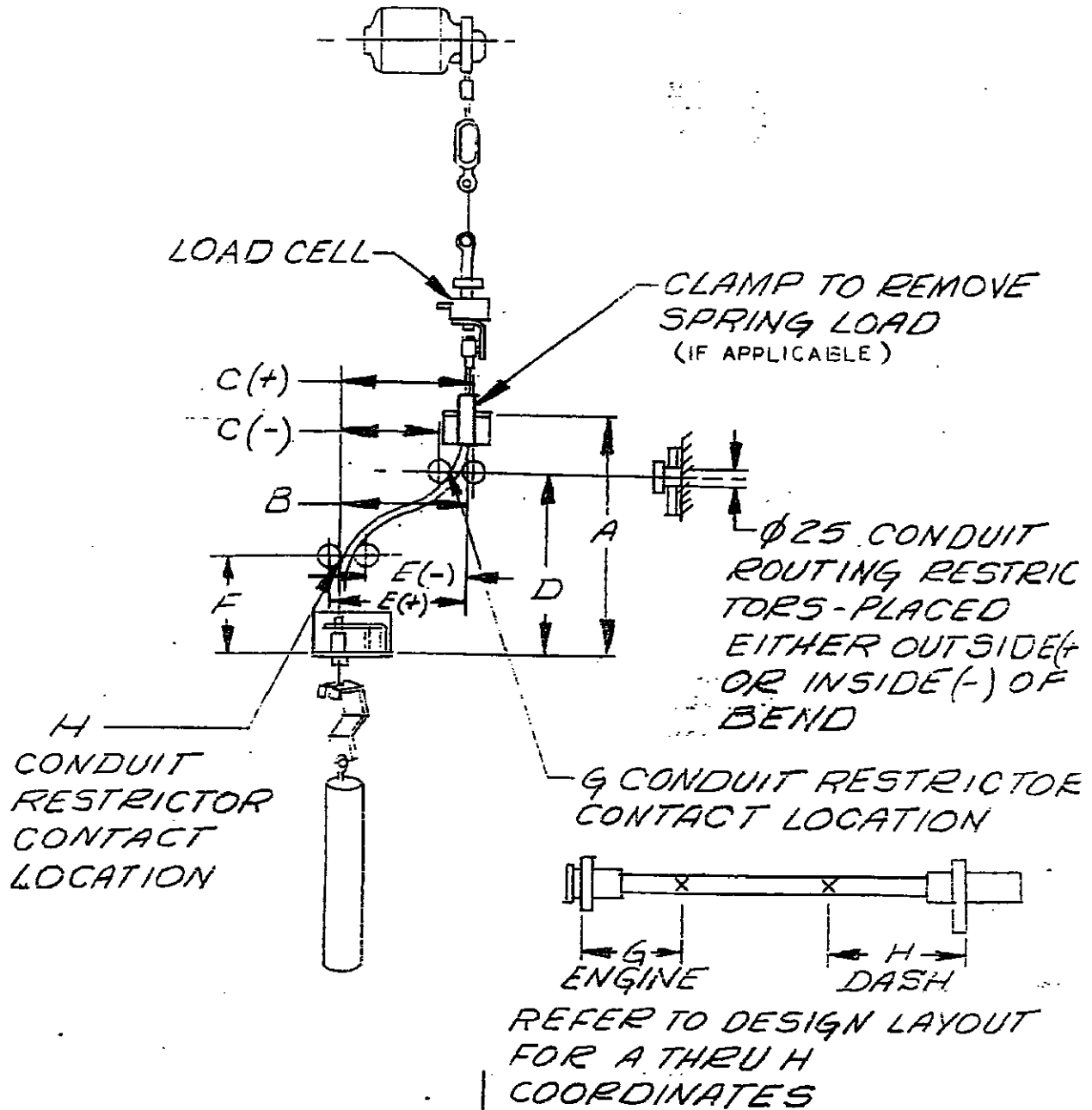


REFER TO DESIGN LAYOUT FOR A THRU H COORDINATES



FIGURE VII E  
SECTION III.9  
TYPE III ROUTING

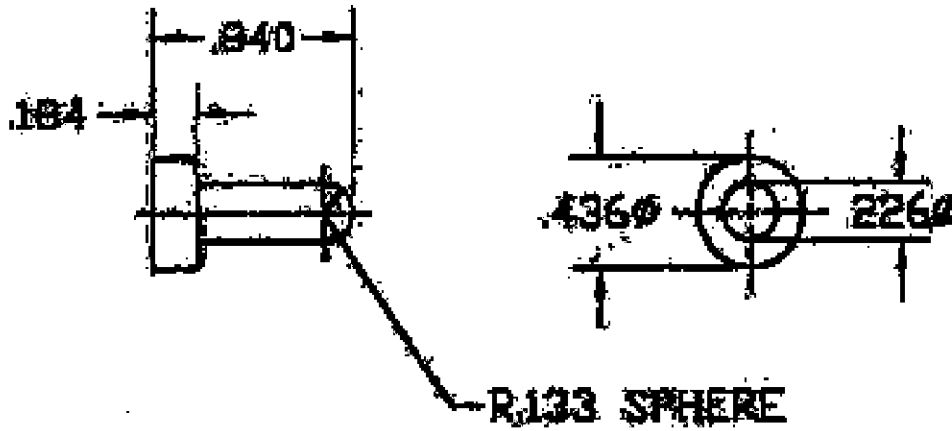
REFER TO FIG. VII B FOR  
EQUIPMENT & USAGE







**Figure VIII**  
**Ball Socket Stud Design for Cable Final Assembly Check**





# ENGINEERING SPECIFICATION

PART NAME												PART NUMBER					
SPEED CONTROL CABLE												ES-F8VF-9A825-AA					
LET	A												A				
FR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LET																	
FR	18	19	20	21	22	23	24	25									
LET																	
FR																	
LET																	
FR																	
LET																	
FR																	
LET																	
FR																	
DATE	LET	FR	REVISIONS									DR	CK	REFERENCE			
971217			DAN RIM (313) 845-4546											PREPARED/APPROVED BY			
			REL DE00-E-10802489-000											DAN RIM			
	A	1	REV COVER SHEET											CHECKED BY			
	A	14	REV FIGURE 1											DETAILED BY			
	A		MIKE KOZYKOSKI (313) 248-3234											<i>CKing</i>			
990804	A		REL DE00-E-10888678-002											CONCURRENCE/APPROVED			
														SIGNATURES			
														DESIGN ENGRG. SUPV.			
														DESIGN ENGRG. MGMT.			
														MANUFACTURING ENGRG.			
														QUALITY CONTROL			
														PURCHASING			
														SUPPLIER QUALITY ASSISTANCE			

FRAME 1 OF 25      REV A

TABLE OF CONTENTS

- 1 GENERAL
- 2 SUMMARY OF PRODUCTION VALIDATION AND IN-PROCESS TESTS
- 3 TEST PROCEDURES AND REQUIREMENTS
  - 3.1 Measurements
    - 3.1.1 Gage Length (Travel Length)
    - 3.1.2 Efficiency
  - 3.2 Cable Integrity Tests
    - 3.2.1 End Slug Proof Load Test
    - 3.2.2 Throttle Connector Assembly Tension Test
  - 3.3 Extended Use Tests
    - 3.3.1 Life Cycle Test
    - 3.3.2 Lost Motion Cycle Test
    - 3.3.3 Salt Mist Atmosphere Test
    - 3.3.4 Chemical Resistance Test
    - 3.3.5 Cable Freeze Test
  - 3.4 Cable Abuse Test
    - 3.4.1 Throttle Connector Bend Test
    - 3.4.2 Conduit Crush Test
    - 3.4.3 Cable Torsion and Tension Test
    - 3.4.4 Engine Attachment Fitting Side Loading Test
  - 3.5 Vehicle Assembly test
    - 3.5.1 Engine Attachment Fitting Assembly Test
    - 3.5.2 Throttle Connector Assembly Test
- 4 REVALIDATION REQUIREMENTS
- 5 INSTRUCTIONS AND NOTES
  - 5.1 Common Test Conditions
  - 5.2 Equipment Approval
  - 5.3 Calibration Requirements
  - 5.4 Test Data Reporting
- 6 COMPILATION OF REFERENCE DOCUMENTS

FIGURES

- Figure 1 Type "S" Routing
- Figure 1a Throttle Attachment Geometry
- Figure 2 Diagram for Throttle Connector Tension Test
- Figure 3 Diagrams for Throttle Connector Bend Test
- Figure 4 Cable Conduit Crush Strength Test Fixture
- Figure 5 Lost Motion Cycle Test Fixture
- Figure 6 Cable End Mold Torsion Test Fixture
- Figure 7 Life Cycle Test Environmental Profile
- Figure 8 Diagram for Cable Conduit Pull Test
- Figure 9 Diagram for Throttle Connector Assembly Effort Test
- Figure 10 Cable Side Loading Test

TABLES

- Table 1 Summary of ES Test and Acceptance Parameters



## 1 GENERAL

This Engineering Specification is a supplement to the released drawing of the referenced part. All requirements herein must be met in addition to all other requirements of the part drawing. Where applicable the released drawing takes precedence over this specification. Minimum measures necessary for demonstrating compliance to these requirements are given in Table 1 and Section 3.

The Engineering Specification is intended to evaluate specific characteristics as a supplement to normal material inspections, dimensional checking, and in process controls. It should in no way adversely influence other inspection operations.

Preparation and submission of an acceptable Control Plan are the responsibility of the Manufacturing source. Control Plan approval by Visteon Automotive Systems (Visteon) or by other activities according to ISO/9000 is a prerequisite for the Production Part Approval Process (PPAP). The manufacturing source will retain the original of the approved Control Plan and any later revisions per ISO/9000 and provide a copy to the design responsible Visteon.

## 2 SUMMARY OF PRODUCTION VALIDATION AND IN-PROCESS TESTS

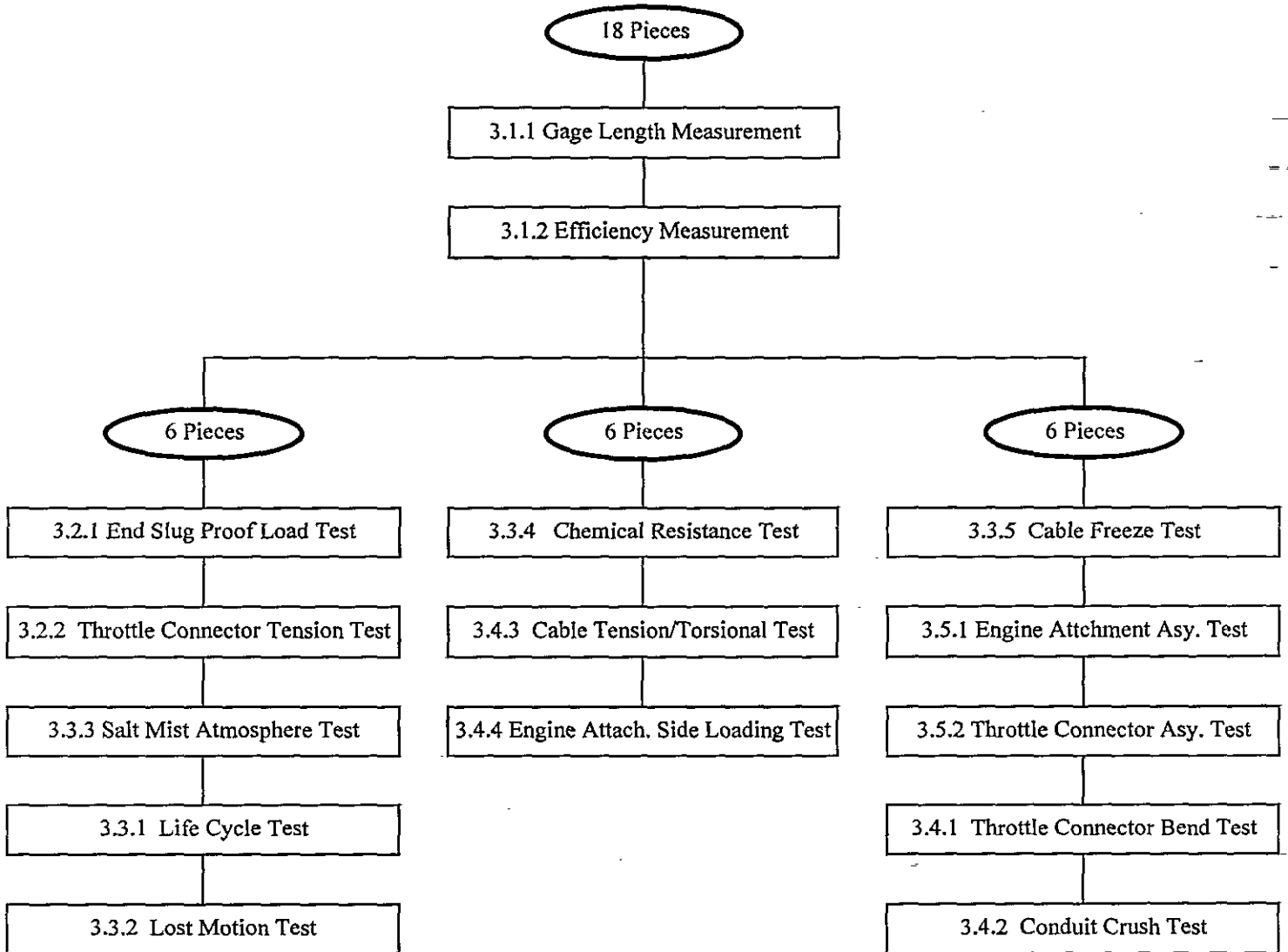
Production validation (PV) tests must be completed satisfactorily with parts from production tooling and processes at production rates before Production Part Approval and authorization for shipment of parts can be issued. The PV testing program includes engineering tests and evaluations conducted to assure that initial production parts from regular production tooling and processes meet the design intent. This program is performed by the supplier on parts having previously passed all dimensional, chemical, metallurgical, physical, etc. requirements. Sampling Plans for PV testing must be included in the DVP&R.

In-Process (IP) tests are used to further understand the relationship between significant design and process characteristics and to establish a basis for continuing improvement. Tests must be completed with production parts on an ongoing basis. Sampling plans for both IP testing and evaluation of the significant process characteristics must be included in the Control Plan. When the process is found to be out of control or the test acceptance criteria are not met, the reaction plan approved in the Control Plan shall be invoked.

Table 1 summarized the various PV and IP tests and the acceptance parameters for each. They form the basis on which to develop a complete control plan for these and their related significant process characteristics. The Control Plan will include frequencies, sample sizes and reaction plans. Parts must be revalidated completely, or per section 4 whenever any change is made which could possibly affect part function or performance.

The PV flow chart shows the sequence in which PV tests are to be performed. Test set up and description details are found in Section 3 of this document.

## PV TEST SEQUENCE FLOW





### 3 TEST PROCEDURES AND REQUIREMENTS

#### 3.1 Measurements

##### 3.1.1 Gage Length (Travel length)

- a. Purpose - To verify that the part is to design intent and will not hold the throttle off idle or cause poor system performance.
- b. Mounting - A completed cable assembly shall be mounted with the servo end mold and core wire on a gage block which simulates a production speed control servo pulley, or if dictated by the released detail drawing, the core wire may be located in the shipping slot. The engine bracket attachment shall be placed in an appropriate mating feature. The throttle attachment shall be attached to a nail head (or other appropriate mating feature). In this mounting, the cable shall be in a straight orientation (as opposed to routed).  
Note: Gage length measuring fixture must be approved by Visteon.
- c. Procedure - A 44.0 N tensile force shall be applied to the servo end mold to ensure the conduit is straight and taught and a 22.0 N force shall be applied in the opposite direction to the throttle connector.
- d. Measurement - The gage (or travel) dimension shall be measured per procedure listed above or in accordance with the cable assembly detail drawing.

##### 3.1.2 Efficiency

- a. Purpose - This test verifies that the cable performs within limits which ensure acceptable speed control performance and will not create a drag which impedes throttle return.
- b. Mounting - Mount the cable as specified in Figure 1. Apply a 44.0 N load at the throttle end connector. Attach the servo end of the cable to a radial drive motor with a built in torque sensor or to other Visteon approved efficiency test fixture.
- c. Procedure - Cycle the cable back and forth 40.0 mm 10 times at a rate of 1 cycle per 2 seconds. Then cycle the cable one more time at the same rate, and measure and record the torque required to pull the load and the torque exerted when the load is released.
- d. Calculation T1= Pull Force  
T2 = Release Force  
$$\text{Efficiency} = \text{Square Root } (T2/T1) \times 100\%$$
- e. Measurement - Calculated Efficiency must conform to the values specified in Table 1 at room temperature or at specified temperature.



### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.2 Cable Integrity Tests

##### 3.2.1 End Slug Proof Load Test

- a. Purpose - This test ensures that the core (pull) wire end slugs will remain secure under extreme loads.
- b. Mounting - Test sample shall be positioned in a linear configuration. Access and clamp the cable end slugs.
- c. Procedure - For PV, apply a tensile force at a rate of  $1.0 \pm 0.25$  mm per second until a force of 360.0N is reached or per Table 1, between the slugs, and hold for 60 second period. For IP, apply a tensile force at a rate of min. 1.0 mm per second and hold for 0.1 to 0.75 seconds.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. If the slugs move or detach from the cable, the sample has failed. For PV tests, monitor the force for the test period and record any changes. If the force decreases more than 10.0 N during the test period the test cable has failed this test.

##### 3.2.2 Throttle Connector Assembly Tension Test

- a. Purpose - This test will validate the integrity of the speed control cable throttle attachment under extreme tension.
- b. Mounting - Install the complete cable assembly in a test fixture, such that a load is applied between the servo end slug and the throttle end attachment, generally a nail head (See Figure 2). Mount the servo end to a fixed steel pulley, retaining the end slug there in.
- c. Procedure - Apply a tensile force at a rate of  $1.0 \pm 0.25$  mm/sec until a load of 225 N is reached. Hold this position and monitor the force for 60 seconds, then release it.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. Monitor the force for the 60 second period and record any changes. If the force decreases by more than 22.0 N during the test period, the test cable has failed this test. The cables shall be tested and evaluated per Gage Length Measurements (Section 3.1.1).

#### 3.3 Extended Use Tests

##### 3.3.1 Life Cycle Test

- a. Purpose - To validate that the cable assembly will function within specified limits for the equivalent of 10 yrs, 150,000 miles.



### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.3 Extended Use Test (cont.)

##### 3.3.1 Life Cycle Test (cont.)

- b. Mounting - Mount the cable as specified in the Figure 1. Attach the servo end of the cable to a production plastic speed control servo pulley. Attach the throttle end of the cable to a nailhead (or other appropriate feature) which is on a lever with a 35 mm radius. The starting/rest position shall be 20 degrees past perpendicular (see Figure 1a). The lever shall be connected to load of  $30 \pm 5$  N off idle with  $6.5 \pm 1$  N/cm. The sample's engine and throttle attachment shall be mounted either 10 deg. upward or downward as specified in DVP&R. The test shall be conducted in an environmental chamber.
- c. Procedure - By actuating the cable from the servo end, cycle the cable assembly at a rate of 30 cycles/minute unless otherwise specified. Cycle the cable and vary the environmental conditions per Figure 7 until a total of 100,000 cycles accumulates on each test sample. A cycle is defined as one stroke back and forth over a linear distance of 40 mm. Every 25,000 cycles, introduce  $3.0 \text{ g/m}^3$  of SAE Grade 1 - Arizona Dust into the test cables by directing this dust at the overlap at the throttle end of the cable. Circulate the dust for the next 1,000 cycles. A new pulley shall be used for each life cycle per cable.
- d. Measurement - Inspect the cables for signs of structural damage which would cause part failure. The cables shall be evaluated per Efficiency Test (Section 3.1.2) and measure, in routed position, delta change in core wire length before and after the life cycle test. Additionally, efficiency measurement shall be taken at  $125^\circ\text{C}$  at every 25,000 cycles.

##### 3.3.2 Lost Motion Cycle Tests

- a. Purpose - This test will ensure that the speed control cable will withstand normal foot controlled throttle operations.
- b. Mounting - The cable may be mounted straight or as specified in Figure 1. Attach the Servo end of the cable to a fixed pulley which simulates the production speed control servo pulley. Locate the engine bracket attachment fitting in an appropriate mating feature. Attach the throttle end of the cable to a nail head or other appropriate feature which is on a lever with a 35 mm radius (see Figure 5).
- c. Procedure - Actuate the cable from the throttle end by cycling the lever back and forth at a rate of 60 cycles/minute. Cycle the throttle end and vary the environmental conditions per Figure 7 until a total of 500,000 cycles accumulates on each test sample.
- d. Measurement - At the end of the test, remove the cable from the test fixture. Ensure the core wire is free from the shipping slot. Manually slide the throttle attachment connector back and forth. The throttle attachment connector should slide freely and the core wire should not move.





### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.3 Extended Use Tests

##### 3.3.3 Salt Mist Atmosphere

- a. Purpose - This test will verify that the cable can withstand the effects of operating in conditions of high salt mist.
- b. Mounting - The cables shall be placed in a salt mist chamber. The cables shall be evenly spaced and horizontally oriented.
- c. Procedure - Expose the cables to salt mist atmosphere (5% salt water solution @ 35°C; made up of 5.0% NaCl) for 168 hours.
- d. Measurements - Measure first five Efficiency per Section 3.1.2 without pre-stroking.

##### 3.3.4 Chemical Resistance

- a. Purpose - This test will verify that the cable can withstand the effects of exposure to common under hood chemicals.
- b. Mounting - Position the parts in an environmental chamber so that they do not contact each other and so that there is equal flow of air around each sample. 150 mm diameter mandrills may be used for cable routing if required.
- c. Procedure - Brush the following chemicals onto one cable each (one chemical per sample cable) such that at least 90% of the external surfaces of the cable assembly are coated including all overlap areas.. Then soak the cable for 96 hours at 115°C.

##### List of Chemicals

1. Engine oil (10W-30)
2. Transmission Fluid (Merkon)
3. Brake Fluid (DOT 3)
4. Coolant (50% Ethylene Glycol solution with water)
5. Engine cleaning soap (Gunk Brand - Heavy Duty)
6. CaCl (30% Calcium Chloride solution with water)

- d. Measurements - Evaluate per Efficiency (Section 3.1.2).

##### 3.3.5 Cable Freeze Test

- a. Purpose - This test is to simulate cable exposure in a cold temperature environment.
- b. Mounting - Sample cables shall be mounted either 10 ° upward or downward from engine mounting point. Refer to direction specified in DVP&R.



### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.3 Extended Use Tests (cont.)

##### 3.3.5 Cable Freeze Tests (cont.)

- c. Procedure - Spray generously throttle end of cable 10 times ensuring sufficient coverage with water while cycling the cable 5 times through its maximum travel. Expose the entire cable to -40°C for one hour minimum.
- d. Measurements - Evaluate per Efficiency Tests (Section 3.1.2) at -40°C.

#### 3.4 Abuse Tests

##### 3.4.1 Throttle Connector Assembly Bend Test

- a. Purpose - This test will ensure that the cable is durable against potential abuse which it may receive in the plant prior to and during vehicle installation. This test is not required for speed control cables with an integral return spring.
- b. Mounting - Prepare the test cable so that the servo end of the core wire is bottomed out in the shipping slot. Bend the throttle connector over 180°, and secure it against its conduit with a rubber band as per Figure 3.
- c. Procedure - Hold the position with rubber band for minimum of 60 seconds and remove the rubber band.
- d. Measurement - Inspect the cables for signs of structural damage which would cause part failure. The cables shall be measured per Efficiency Test (Sections 3.1.2).

##### 3.4.2 Conduit Crush Tests

- a. Purpose - This test will ensure that the cable is durable against potential abuse which it may receive in the plant prior to and during vehicle installation.
- b. Mounting - Position the conduit portion of the cable in a test fixture per Figure 4. Remove any curvature in the conduit between the test fixture guides. Position the cable under the crush pad such that it is centered between the servo end mold and the conduit end mold. If the cable has foam on it which does not entirely expose the test area for a length of 70.0 mm, it is permissible to test the parts with all or part of the foam under the applied load.
- c. Procedure - Apply a load of 1,334 N (at minimum rate of 111.2 N per second) distributed over a length of 70.0 mm. The location of this crush should be centered between the servo and conduit end mold. After 60 seconds, remove the load. Measurement shall be completed within 30 minutes from removal of the load.



3 TEST PROCEDURES AND REQUIREMENTS (cont.)

3.4 Abuse Tests (cont.)

3.4.2 Conduit Crush Tests (cont.)

- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. The cables shall be measured and evaluated per Efficiency Test (Section 3.1.2). Record first 5 measurement without pre-stroking.

3.4.3 Cable Conduit Mold Torsion and Tension Test

- a. Purpose - This test will validate the integrity of the cable end molding's attachment to the conduit and verify the conduit's dimensional stability under torsion and tension.
- b. Mounting a) - Install the complete cable assembly in a fixture which clamps the conduit 60 mm from the base of the servo or conduit end mold (see Figure 6).  
Mounting b) - Install the complete cable assembly in a test fixture, such that the load is applied between the servo end mold and the conduit end mold (See Figure 8).
- c. Procedure - Rotate the plate that clamps the end mold in place 90°. Hold this position for 10 seconds. Then rotate the sample cable 180° in the opposite direction (-90° from the starting position). Hold this position for 10 seconds. Repeat this cycle 10 times. Maintain a rate of 90°/sec during all rotations. (See Figure 6 - "rotation rate"). Then apply a tensile force at a rate of 1.0 ± 0.25 mm per second until a force of 225 N is reached. Hold this position for 60 seconds, then release.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. Monitor the force for the 60 second period and record any changes. If the force decreases by more than 22.0 N during the test period the test cable has failed this test. The cables shall be measured and evaluated Gage Length Measurement (Section 3.1.1).

3.4.4 Engine Attachment Fitting Side Loading Test

- a. Purpose - This test is to verify that the engine attachment fitting will not be damaged during normal vehicle installation.
- b. Mounting - Engine Bracket or simulated engine bracket with worst case tolerances (Use max. hole size and min. thickness).
- c. Procedure - Insert the fitting into the mounting plate as described above and apply side load of 45.0 N. The load shall be applied to the conduit end fitting 90° to the centerline as shown on Figure 10.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. The engine fitting shall not disengage fully or partially from the mounting plate.

### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.5 Vehicle Assembly Tests

##### 3.5.1 Engine Attachment Fitting Assembly Test

- a. Purpose - This test is to verify the engine attachment fitting can be installed and retained in the engine bracket within specified tolerances. This test applies to Push-n-Snap and Slide-n-Snap style end fittings.
- b. Mounting - Engine Bracket or simulated engine bracket with worst case tolerances (Use min. hole size and max. thickness with open slot if necessary for insertion and max. hole size and min. thickness for retention test).
- c. Procedure - Installation: At a minimum rate of 2.5 mm per second, snap the engine attachment fitting into the bracket and record the maximum force required to engage.  
  
Procedure - Retention: Apply 200 N force away from the engine bracket by gripping conduit 100 mm rearward of the end fitting at 30° angle. Hold the conduit at each 90° position for 10 seconds.
- d. Measurements - Insertion force shall not exceed 90.0 N. End fitting shall not disengage fully or partially from the bracket when cable is at rest following above retention test.

##### 3.5.2 Throttle Connector Assembly Tests

- a. Purpose - This test will verify that force required to install will be in compliance to the specified limits.
- b. Mounting - Position the Throttle Connector as illustrated in the Figure 9.
- c. Procedure - Installation: At a minimum rate of 2.5 mm per second, snap the connector onto a nailhead (or appropriate feature) and record the max. force required to engage.  
  
Procedure - Removal: At the same rate, remove the connector from the Nailhead and record the force required to disengage.
- d. Measurements: Insertion force required shall not exceed 55.0 N and removal force required shall not be less than 20.0 N.



#### 4 REVALIDATION REQUIREMENTS

The manufacturing source and the Design and Release activity will jointly determine potential changes to the process, materials or material sources which may have significant impact on the product's function, performance, durability or appearance. The supplier will describe these conditions in the Control Plan, along with either

- (1) the revalidation plan that would be followed in each case, or
- (2) a provision to submit an amended Control Plan for approval if any of those process changes are planned.

The Control Plan must include a provision that, for any significant change in processing, Design and Release activity and the supplier shall jointly determine if PV re-testing is required, and, if so, to what degree, i.e., Full or Mini-PV. If it is agreed that less than a full PV is acceptable, it is the supplier's responsibility to obtain DVP&R from Design and Release activity for detail test plan.

No changes to processing may be allowed without prior engineering approval of the process changes via a signed SREA or an equivalent and the attendant Control Plan changes.

For major changes in basic cable construction, it may be necessary to run Life Cycle Test 3.3.1 to failure. If this is necessary, Design and Release Activity will notify the supplier.

Although many test data can be surrogated for repeat test, manufacturing source may be required to perform entire PV testing to re-validate the data on annual basis.

#### 5 INSTRUCTIONS AND NOTES

##### 5.1 Common Test Conditions

Unless otherwise specified, the following conditions shall apply:

Test Room Temp =  $20 \pm 5^{\circ}\text{C}$   
Humidity =  $65 \pm 20\%RH$

##### 5.2 Equipment Approval

All test equipment concepts and final test equipment used to perform the required tests described in Section 3 must be evaluated and approved by Visteon Design and Release Activity. Any changes to the test method or equipment other than minor calibration corrections, must receive approval from Design and Release Activity through Form 1638 - Supplier Request for Engineering Approval or equivalent.



## 5 INSTRUCTIONS AND NOTES (cont.)

### 5.3 Calibration Requirements

An equipment calibration schedule with procedures and intervals must be submitted to and agreed upon by Visteon and STA. Proper records must be maintained for all calibration procedures performed.

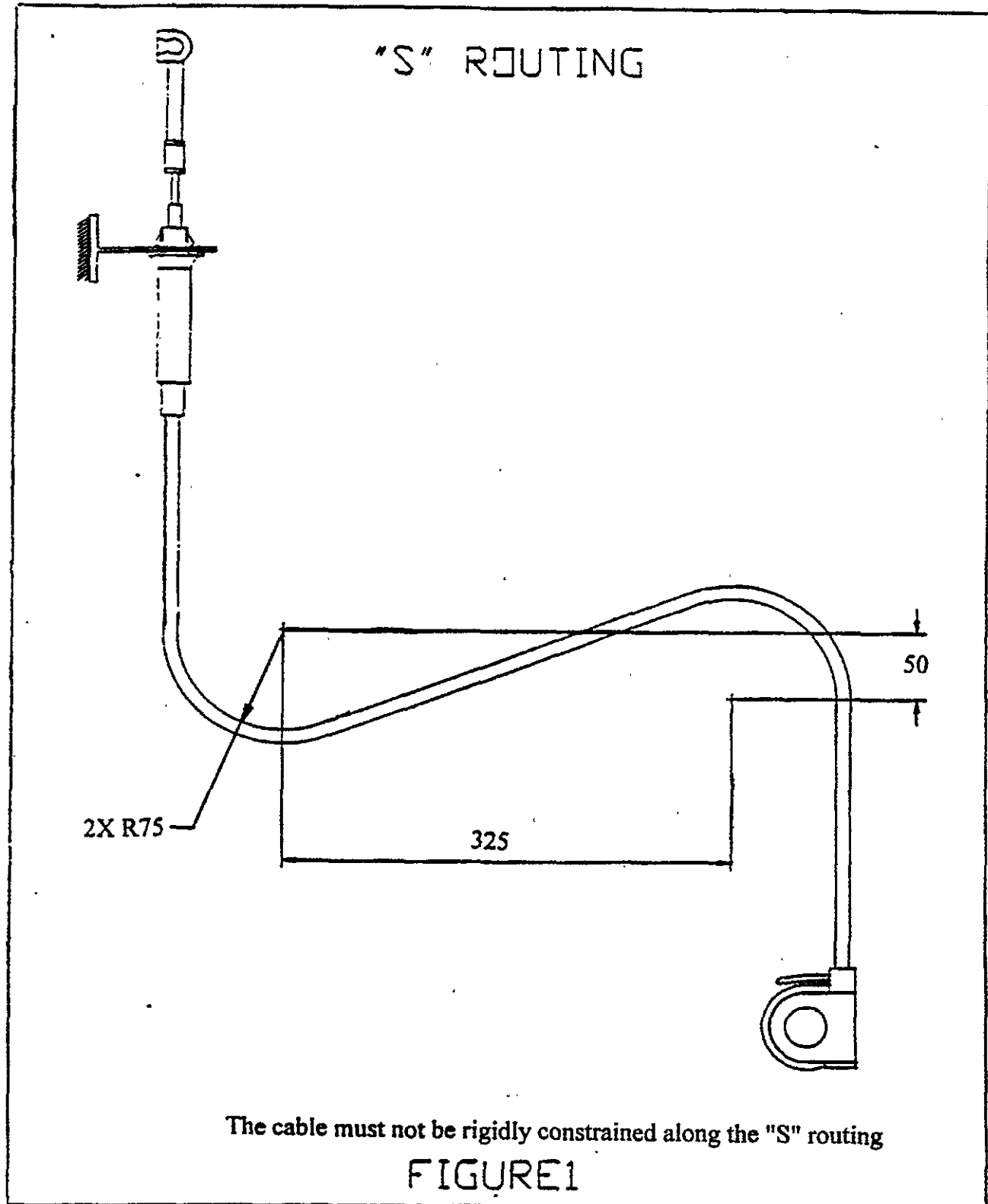
### 5.4 Test Data Reporting

All test results must be recorded on Visteon Design and Release Activity approval summary sheets, detailing the following:

- Test Name/Specification Section Number
- Part Number of sample started
- Sample identification number
- Sample lot number and/or manufacturing date
- Test completion date
- Test equipment identification and last calibration date
- Test acceptance criteria
- Specified test conditions and actual test conditions
- Test results and conclusions
- Technician name/Supervisor initials

## 6 COMPILATION OF REFERENCE DOCUMENTS

ISO/QS-9000, Quality System Requirements  
Production Part Approval Process (PPAP)  
Supplier Request for Engineering Approval (SREA)  
Program Specific NGSC Actuator Cable DVP&R approved by Visteon



## THROTTLE END GEOMETRY

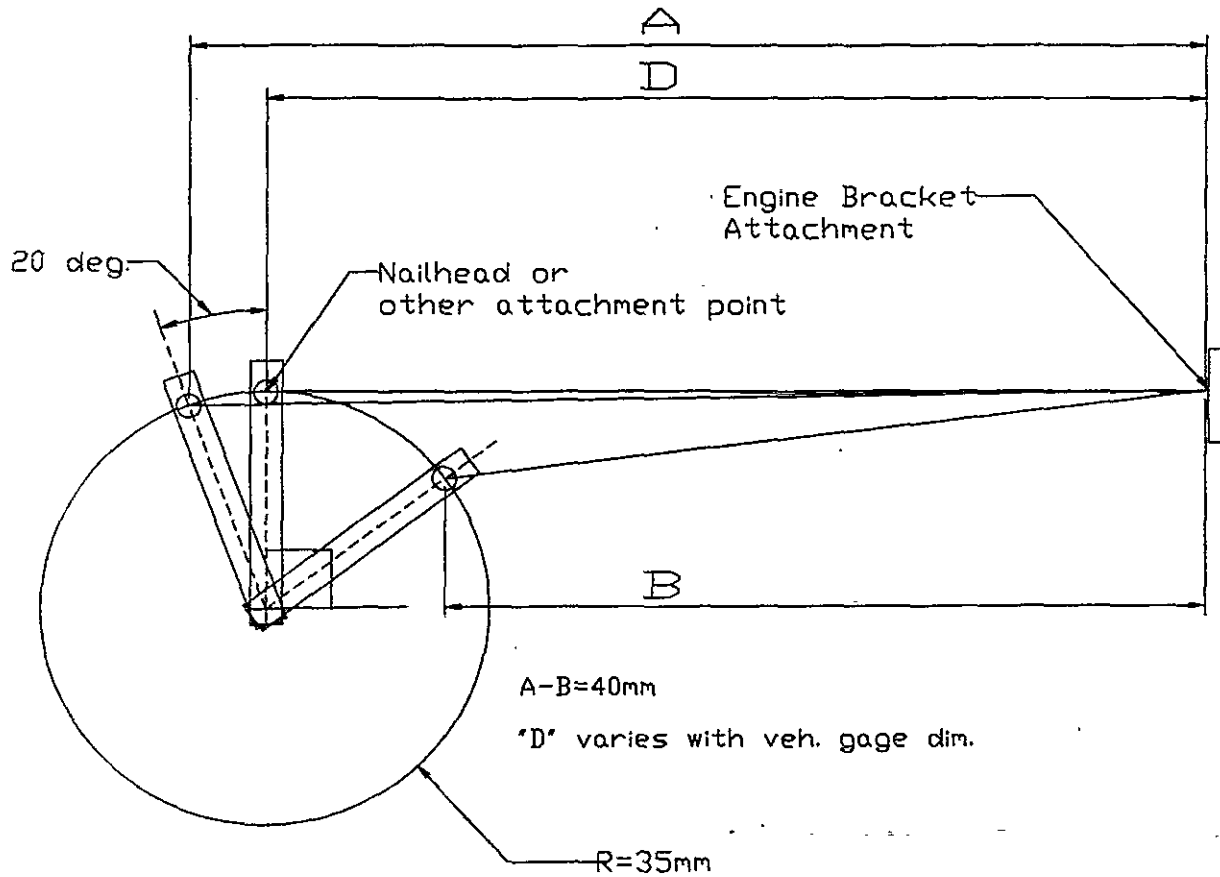


FIGURE 1A



## THROTTLE CONNECTOR ASY. TENSION TEST

Apply tensile load to  
throttle end attachment

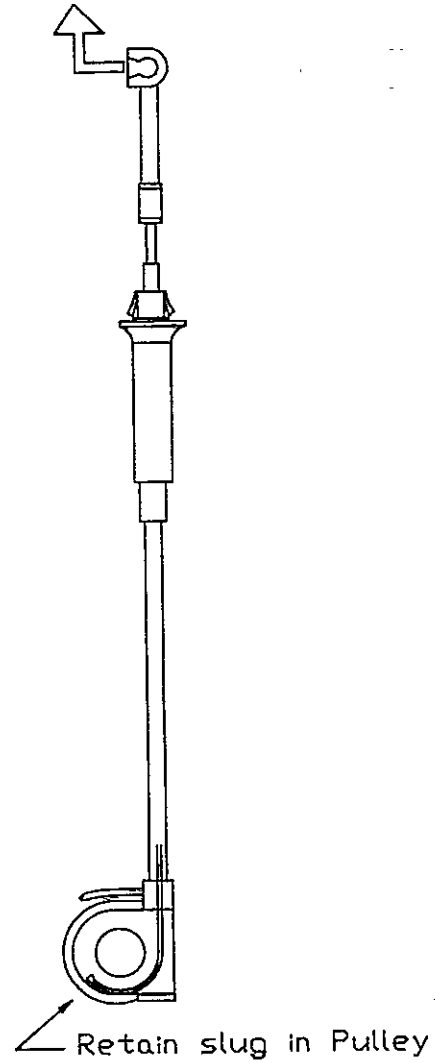


FIGURE 2

THROTTLE CONNECTOR ASY. BEND TEST

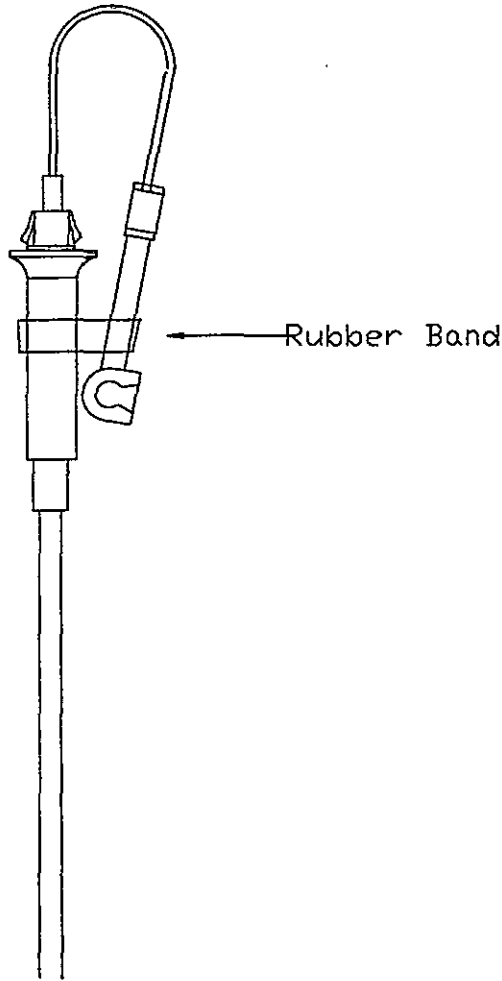
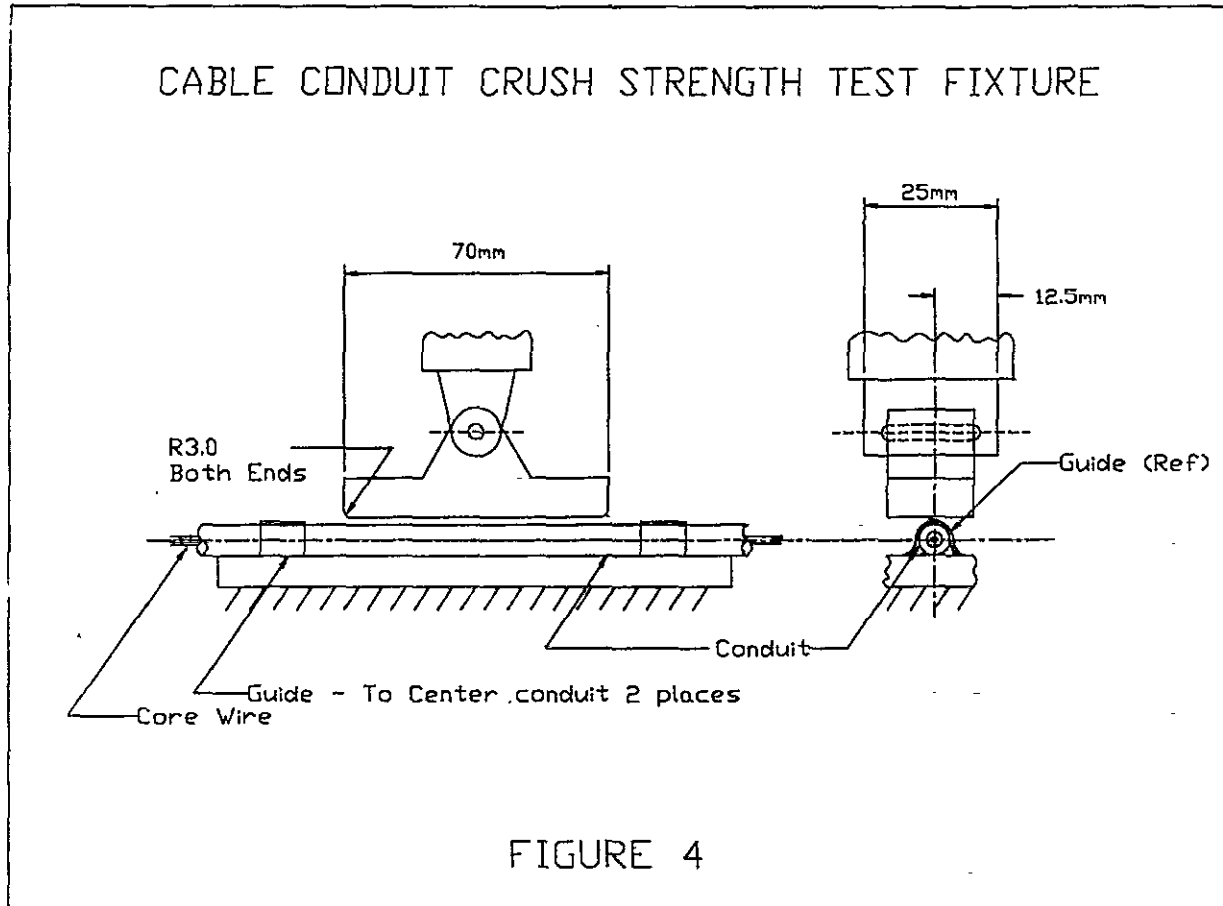
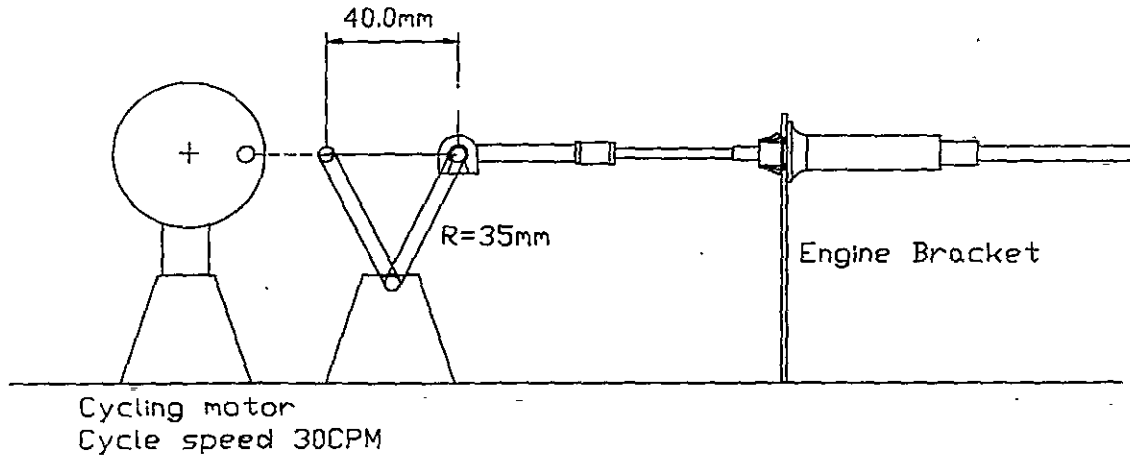


FIGURE 3



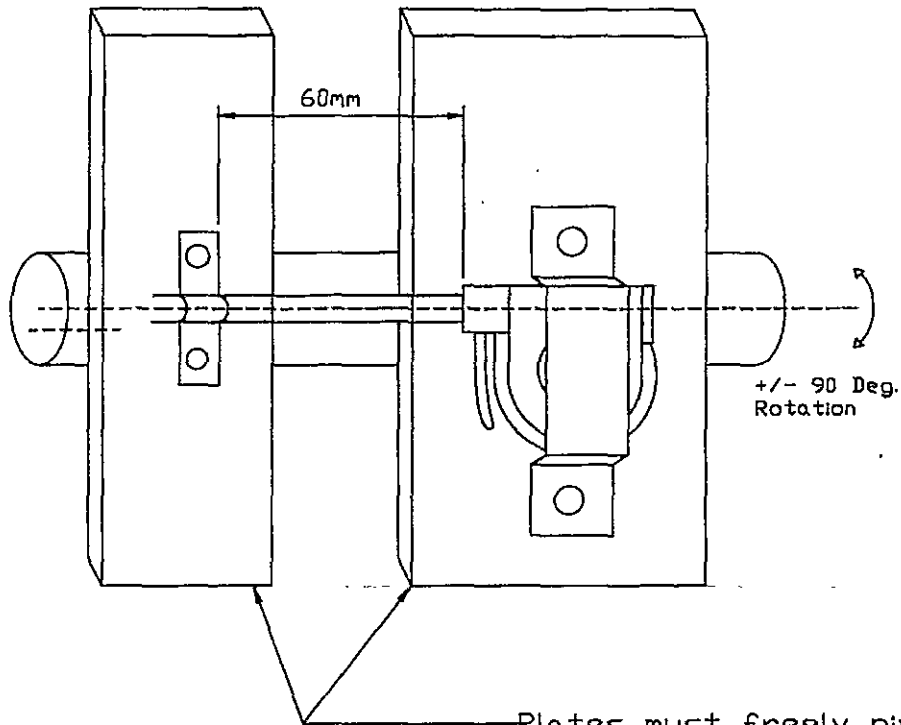
## LOST MOTION COVER LIFE CYCLE FIXTURE



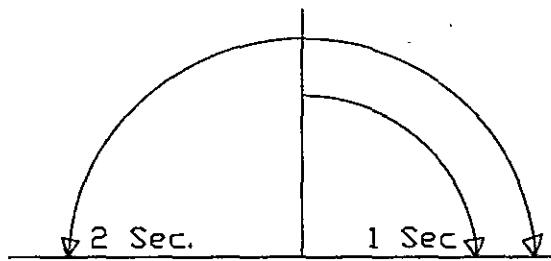
Note: Corewire shall be attached to Servo while running this test

FIGURE 5

# END MOLD TORSION TEST FIXTURE



Plates must freely pivot about center line of conduit



Rotation Rate

FIGURE 6

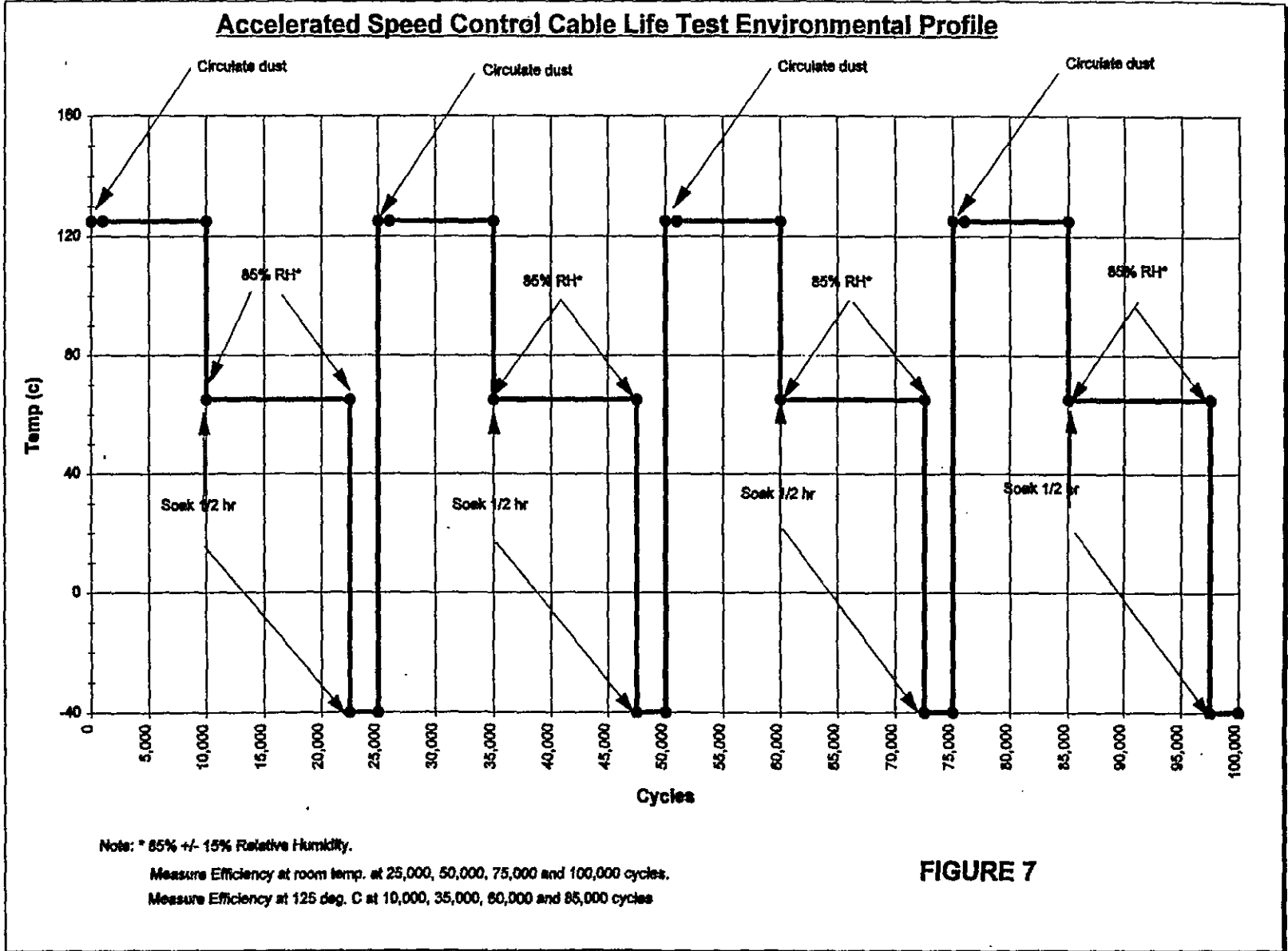


FIGURE 7

# CABLE CONDUIT MOLD TENSION TEST

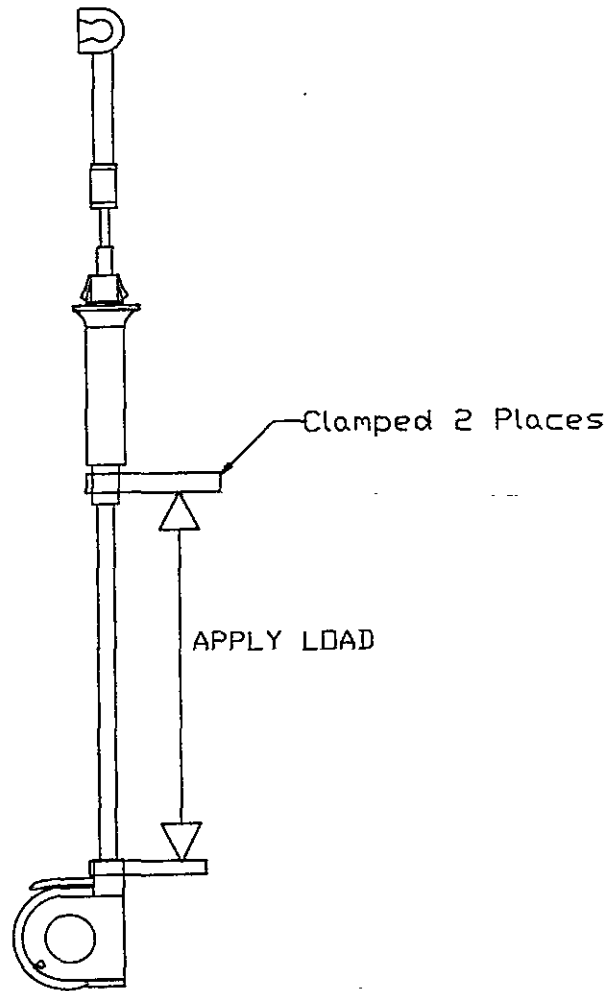

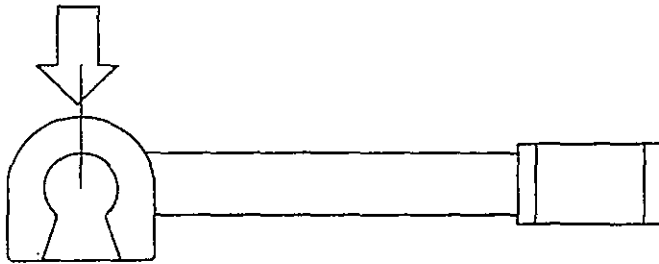


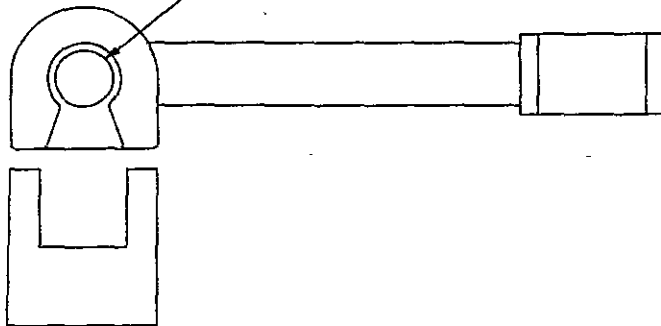
FIGURE 8

## THROTTLE CONNECTOR ASSEMBLY TEST

Apply Load

 Nailhead or Ballstud (Largest Tolerance Dim.)

Nailhead or Ballstud (Smallest Tolerance Dim.)

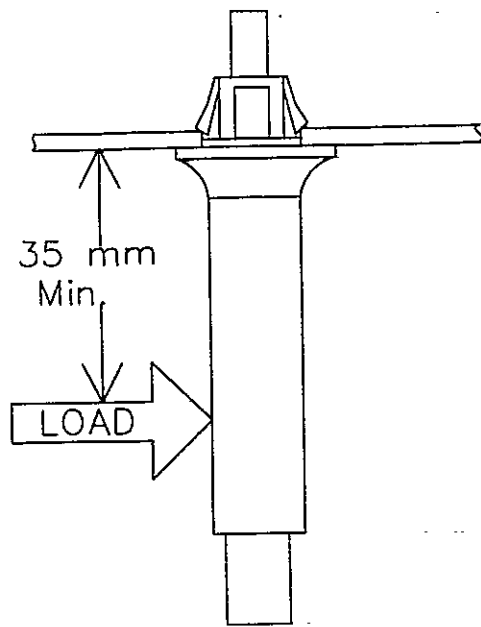


Apply Load

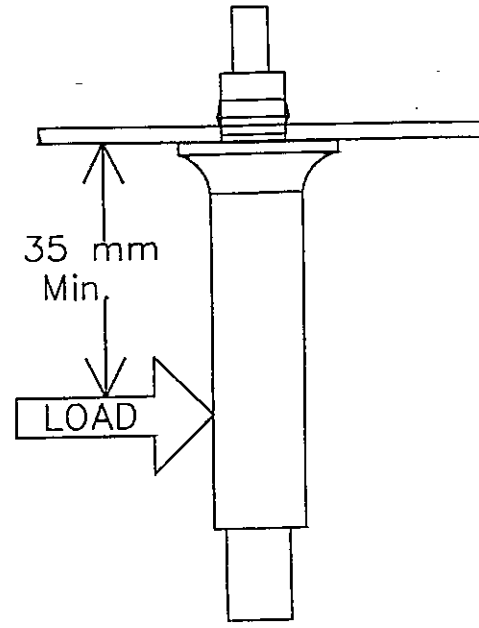
FIGURE 9



## ENGINE ATTACHMENT SIDE LOADING TEST



Load applied parallel  
to 'Tangs'.



Load applied perpendicular  
to 'Tangs'.

FIGURE 10

TABLE 1

## SUMMARY OF ES TEST AND ACCEPTANCE PARAMETERS

Test No.	Test Characteristics	Test Use	PV Sample Size	Test Conditions	Acceptance Criteria	Verification
3.1.1	Gage Length (Travel Length)	PV IP	18 100%*		Per detail drawing Per detail drawing	
3.1.2	Efficiency	PV	18		Min. 72 %	
3.2.1	End Slug Proof Load Test	PV  IP	6  100%*	360 N for 60 sec.  360 N for 0.1 - 0.75 dec.	Less than 10.0 N decrease  Must reach 360 N	
3.2.2	Throttle Connector Tension Test	PV	6	225 N	Less than 22.0 N decrease	Conforms to 3.1.1
3.3.1	Life Cycle Test	PV	6	100,000 Cycles	No structural damage	Conforms to 3.1.2
3.3.2	Lost Motion Cycle Test	PV	6	500,000 Cycles	Must move freely	Conforms to 3.1.1 & 3.1.2
3.3.3	Salt Mist Atmosphere	PV	6	5% NaCl solution @ 35°C 168 hours Soak	Must not impede efficiency	Conforms to 3.1.2
3.3.4	Chemical Resistance	PV	6	96 hours Soak @ 115°C	Must not impede efficiency	Conforms to 3.1.2 & 3.4.3
3.3.5	Cable Freeze Test	PV	6	Spray water and soak 1Hr Min. @-40°C	No binding	Conforms to 3.1.2
3.4.1	Throttle Connector Asy. Bend Test	PV	6	Rubber band, 60 sec.	No structural damage	Conforms to 3.1.2
3.4.2	Conduit Crush Test	PV	6	1,334 N for 60 sec.	Must not impede efficiency	Conforms to 3.1.2
3.4.3	Cable Torsion and Tension Test	PV	6	± 90° 10 Cycles 225 N pull for 60 sec.	No Structural damage, Max. 22.0 N decrease	Conforms to 3.1.1 & 3.1.2
3.4.4	Engine Attach. Side Loading Test	PV	6	45.0N applied 90° to cable centerline.	Must not disengage	
3.5.1	Engine Attach. Fitting Assembly Test	PV	6	Insertion at 2.5 mm / sec. Pull 200 N for 10 sec at 30°.	Max. insertion force 90N. Must not disengage	
3.5.2	Throttle Connector Test	PV	6	Insertion/Removal at 2.5 mm /sec.	Max. Insertion 55N Min. Removal 20N	

Note: \* or per Control Plan

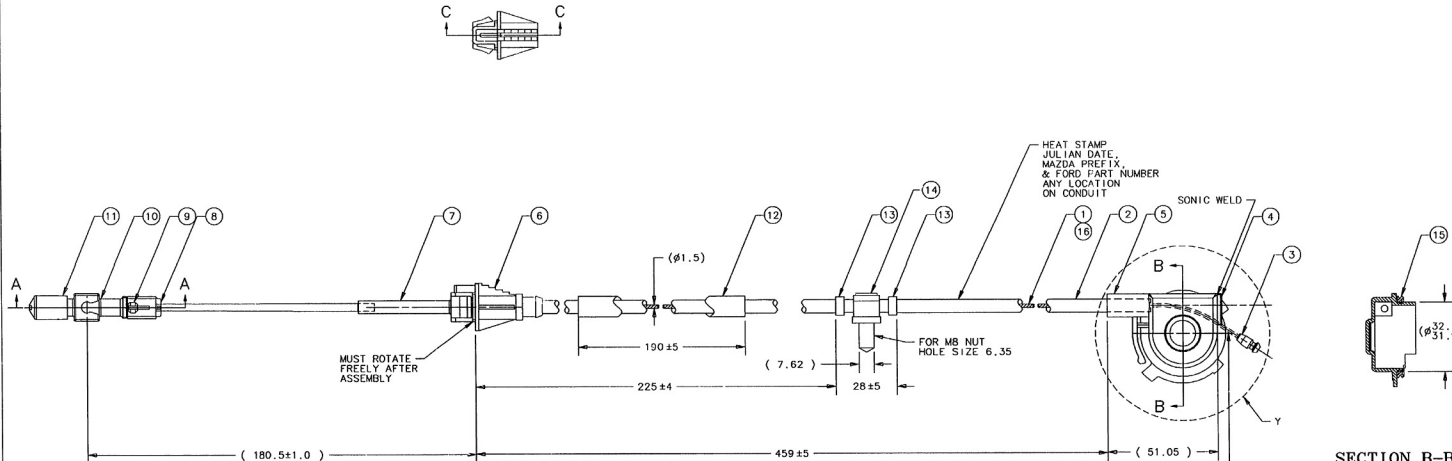
PE12-019

FORD

9-4-2012

APPENDIX L

3L84-9A825-AA Drawing



MEASURE 180.5±1.0 AFTER ITEM ② (NIPPLE END) IS POSITIONED IN SERVO GAUGE WHILE A 44.0 N 14.5 Kg(11 TENSILE FORCE IS APPLIED TO ITEM ② (SERVO HOUSING) TO ENSURE THE CONDUIT IS STRAIGHT AND TAUGHT AND A 22.0 N 12.25 Kg(11 FORCE IS APPLIED IN THE OPPOSITE DIRECTION TO ITEM ① (CONNECTOR).

SECTION B-B

SECTION A-A

SECTION C-C

DETAIL OF ITEM ③ (180° FROM MAIN VIEW)

DETAIL Z

VIEW Y

NOTES:  
 ALL GRAPHIC MEASURED DATA IS BASIC (NO TOLERANCE) AND IS TO BE TAKEN FROM DATA FILE 3L84-9A825-A AT ITS LATEST RELEASE DATE.  
 FOR THE PURPOSES OF GEOMETRIC DIMENSIONING AND TOLERANCING, ALL DIMENSIONAL INFORMATION CONTAINED IN THE CAD MODEL IS BASIC.  
 SURFACES MUST BE FREE OF IMPERFECTIONS THAT AFFECT FUNCTION OR FIT OF A PART.  
 SIGNIFICANT CHARACTERISTICS ARE IDENTIFIED ON THE CONTROL PLAN.  
 MINIMUM PULL OFF STRENGTH OF CORE END FITTINGS: 360.0 N 136.7 Kg(11  
 CORROSION PROTECTION FOR SERVICE PARTS MUST COMPLY WITH FORD CUSTOMER SERVICE DIVISION (FOSD) PACKAGING AND SHIPPING GUIDE.  
 FOR ENGINEERING APPROVED SOURCE, SEE THE WERS ENGINEERING NOTICE.  
 FOR CURRENT RELEASE STATUS SEE THE WERS ENGINEERING NOTICE.  
 CHANGES AFFECTING DESIGN COMPOSITION OR PROCESSING OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION REQUIRE PRIOR APPROVAL FROM FORD PRODUCT ENGINEERING. REFER TO 05-9000.  
 SILICONE OIL LUBRICANT: VISCOSITY 225 cSt FOR APPROVED SILICONE OIL SEE ENGINEERING RELEASE.  
 MATERIAL RECYCLE CODE PER SAE J1344 NOT FEASIBLE DUE TO CONSTRUCTION.  
 PART MUST COMPLY WITH MATERIAL CONTROL, BLACK/GREY BOX PROGRAM. WSS-MR224-B.  
 MUST CONFORM TO ES-F8VF-9A825-AA-1/12/00  
 FOR ADDITIONAL GENERAL NOTES SEE ES-YF12-1294-AA.  
 ARE MAZDA REVISIONS

REVISIONS			
ORIGINATOR	CHECKER	ENGR APP	MATL APP
RELEASED 3L84-9A825-AA			
ML00-E-11393481-000			DATE: 020826
B-UPTAIN	GROBERTS	RCOLLEY	MKWACZYK

**HI-LEX** CONTROLS INC.

3L84-9A825-A  
 ACTUATOR ASY-SPD CONTROL

4/83047

02-0178	02-09-03	A	MATERIAL CHANGE FOR 2003	TAKASHI
REV ECN NO.	DATE	REV ELEM	NOTE	BY
CAD TYPE	CAD LEVEL	CAD MSTR	CAD FILE	
SPEC. DWG	COLOR	QUALITY	TREATMENT	MEM P
02-09-03	SCALE	EST. MASS	THICKNESS	MATERIAL
CHECKED (TEL)	NAME	CABLE - ASC		
DESIGNED	DRAWN	DWG. NO.	EC05 66 311F	
		PART NO.	MULT. DWG	SUBSCRIPT
			FRM	SHT
			1/1	A1
REFERENCE	HP-5L84-031900-S1			
DRAFTED	PART MUST COMPLY WITH MATERIAL SPECIFICATION WSS-M99F9999-A1 TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT			
CAD TYPE	CAD LOC.	CAD FILE	DTH	
1-IDEAS	METAPHASE	DWG 3L84-9A825-A	15 MASTER	
OPER. NO.	UNIT	DRAWING	3L84-9A825-AA	
DESIGN	DETAIL	TITLE		
B-UPTAIN	B-UPTAIN	ACTUATOR ASY-SPD CONTROL		
CHECKED	SAFETY			
SCALE	DATE	DIVISION	V315	
1:1 & NOTED	020819	PLANT		

SYM	QTY	PART NO.	DESCRIPTION	MATERIAL
16	AR	E155 OR EQUIVALENT	LUBRICANT	(SILICONE OIL)
15	1	AK69010	SEAL	F5VF-9A896-AA
14	1	AO99049	CLIP	WSK-M4D578-A
13	1	AO40259	CLAMP	SAE 1008-1010
12	1	AD19347	PROTECTOR	ASTM D 1036-ZAZ
11	1	AK79007	COVER	SAE J11639-PA0121
10	1	AY99004	CONNECTOR	ESF-M4D287-B
9	1	AN49004	NIPPLE END	SAL J403 (1117 OR EQUIVALENT)
8	1	AY99005	GUIDE TUBE	ESA-M4D430-A
7	1	YC49023	CASING CAP	WSK-M4D648-A
6	1	AC-9044	FRONT HOUSING	ESA-M4D379-B
5	1	YC49022	SERVO HOUSING	ESF-M4D287-B
4	1	AK79004	HOUSING PLUG	WSK-M4D287-B
3	1	ZN49003	NIPPLE END	ASTM B96-AC43A
2	1	SO69010-H	CONDUIT	PA6-ESA-M4D430-A
1	1	915240	CORE	SAE J405 30302 OR 30304

*Ford Motor Company*

DWG 3L84-9A825-AA

PE12-019

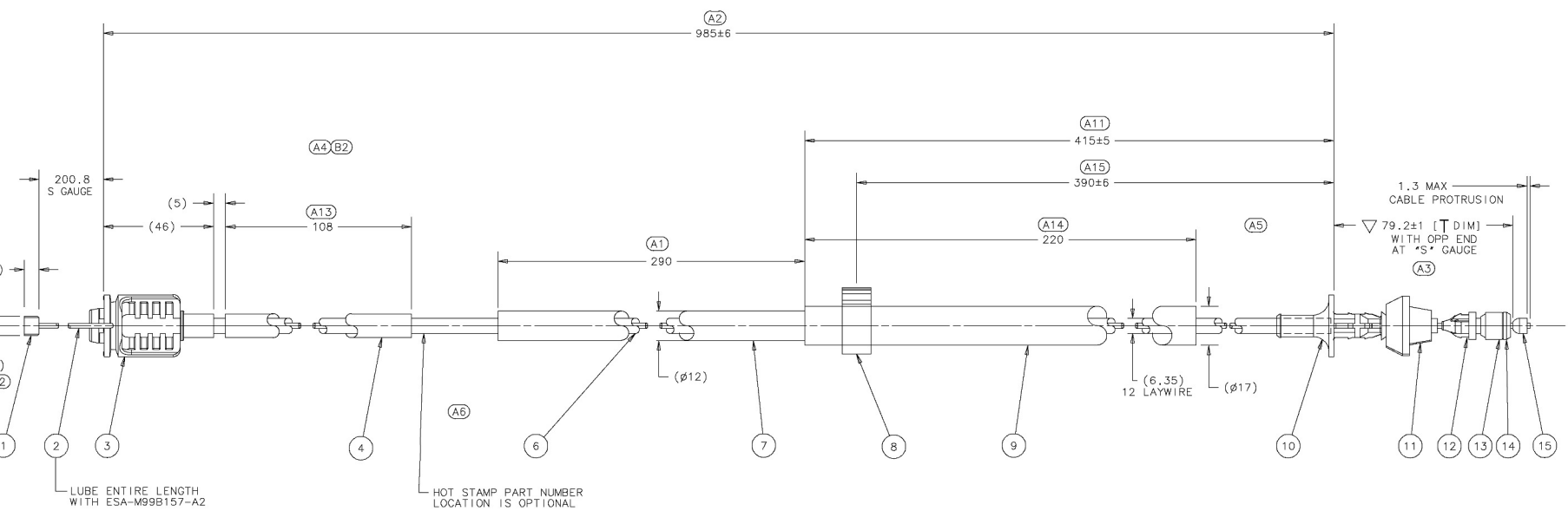
FORD

9-4-2012

APPENDIX L

5L84-9A758-AA Drawing

REVISIONS		
ORIGINATOR	CHECKER	ENGR APP
RELEASED		
ML00-E-11671155-000		20040701
A-LANGRE	MLAFATA	BABBASI
A1	290 WAS 355±10	
A2	985±6 WAS 970±6	
A3	79.2±1 WAS 81.2±1	
A4	290±8 WAS (235)	
A5	REMOVED DIM 175±5	
A6	2X REMOVED P/N 056P-A1406	
A7	ITEM 4 P/N WAS 016P-S1020	
A8	ITEM 7 P/N WAS 946P-A9107	
A9	ITEM 10 P/N WAS 996P-A2025	
A10	ITEM 1 P/N WAS 931F-A9601	
A11	ADDED DIM 415±5	
A12	(8) WAS (12)	
A13	108 WAS 140±10	
A14	220 WAS 200±10	
A15	390±6 WAS 335±6	
A16	ITEM 9 P/N WAS 966P-C9104	
ML00-E-11543180-071		20040930
A-LANGRE	PFOLIAN	BABBASI
B1 REVISED NOTES		
B2	REMOVED DIM 290±8	
ML00-E-11708922-000		20041010
A-LANGRE	PFOLIAN	BABBASI



FOR ENGINEERING APPROVED SOURCE  
SEE THE WERS ENGINEERING NOTICE.

MANUFACTURER TO ESTABLISH PRODUCT  
ENGINEERING APPROVED CONTROL PLAN

FOR CURRENT RELEASE STATUS SEE THE WERS  
ENGINEERING NOTICE

CABLE CORE WIRE MUST BE CLEAN AND FREE OF DIRT  
AND OTHER FOREIGN MATERIAL PRIOR TO APPLICATION  
OF LUBE AND INSERTION INTO CONDUIT

CORROSION PROTECTION FOR SERVICE PARTS MUST COMPLY  
WITH FORD CUSTOMER SERVICE DIVISION (FCSO) PACKAGING  
AND SHIPPING GUIDE

CHANGES AFFECTING DESIGN, COMPOSITION OR PROCESSING  
OF THE PART PREVIOUSLY APPROVED FOR PRODUCTION  
REQUIRE PRIOR APPROVAL FROM FORD PRODUCT ENGINEERING.  
REFER TO QS 9000.

MUST CONFORM TO FORD ENGINEERING SPEC WES-F5TA-9A758-AA

PART MUST COMPLY WITH WSS-M99P23-B MATERIAL CONTROL FOR  
BLACK/ GREY BOX PROGRAMS. MATERIAL SPECIFICATIONS SHALL  
BE REVIEWED BY THE RELEASING ENGINEER & THE AFFECTED  
MATERIALS ENGINEERING ACTIVITY, RETAINED BY THE SUPPLIER  
AND AVAILABLE UPON REQUEST.

MATERIALS DEFINED BY ES/WS-M CALL-OUTS REQUIRE PRIOR  
ENGINEERING APPROVAL. SEE FORD MOTOR COMPANY ENGINEERING  
MATERIAL APPROVED SOURCE LIST.

FERROUS PARTS MUST CONFORM TO WSS-M99A3-A

▽ CONTROL ITEM - THE ▽ ALSO IDENTIFIES  
CRITICAL CHARACTERISTICS DESIGNATED  
BY THE CROSS FUNCTIONAL TEAMS DEVELOPING  
THE PRODUCT. THESE AND ADDITIONAL CRITICAL  
CHARACTERISTICS IDENTIFIED BY THE PROCESS REVIEWS.  
MUST APPEAR ON THE CONTROL PLANS ACCORDING TO  
QS-9000. THESE CONTROL PLANS REQUIRE  
ENGINEERING APPROVAL.

PART NO	DESCRIPTION
56T-A9828	SLUG-PEDAL
76T-A9731	SEAT-PEDAL
76T-A9732	ISOLATOR-PEDAL
76T-A9730	PEDAL RETAINER
81F-A9701	GROMMET
86P-A2027	END FITTING-DASH
86P-C9115	SLEEVE-PROTECTION
86T-C8713	LOCATOR CLIP
86P-C9117	SLEEVE-PROTECTION
83P-A9107	CONDUIT
REMOVED	BRACKET
-6266-22	SLEEVE-PROTECTION
86P-A1428	END FITTING-ENGINE
16155	CABLE
81F-A9604	SLUG
PART NO	DESCRIPTION

- (A9)
- (A15)
- (A8)
- (A7)
- (A10)



REFERENCE		
PART MUST COMPLY WITH MATERIAL SPECIFICATION WSS-M99P9999 TO HELP SAFEGUARD HEALTH, SAFETY AND THE ENVIRONMENT		
DRAFTED IN ACCORDANCE WITH FORD MOTOR COMPANY ENGINEERING CAD AND DRAFTING STANDARDS VERSION 16		
CAD TYPE	CAD LOC.	CAD FILE
I-IDEAS	METAPH	5L84-9A758-A
OPER. NO.	UNIT	DRAWING
----	----	▽ 5L84-9A758-AA
DESIGN	DETAIL	TITLE
AML	AML	CA ASY - ACEL
CHECKED	SAFETY	PDL TO CARB THROT
----	----	
SCALE	DATE	DIVISION
1:1	20040701	Y130
		PLANT



PE12-019

FORD

9-4-2012

APPENDIX L

ES-F5TA-9A758-AA Eng Spec

PART NAME										PART NUMBER									
Specification - Cable Assembly Accel. Pedal to Carb. Throttle										▽ES-F5TA-9A758-AA									
LET																			
FR																			
LET																			
FR																			
ATE	LET	FR	REVISIONS						DR	CK	REFERENCE								
94/05/28			Rewritten to provide a common specification for both Car Product Division – Accelerator Controls and Light Truck Engineering – Accelerator Controls NL00-E-10405993-001								▽ES-E9SC-9A758-AA ▽ES-E1TA-9A758-BA								
											PREPARED/APPROVED BY M. C. Blair / J. A. Conrad / B. White								
											CHECKED BY	DETAILED BY							
940721																			
020808		1-40	Renumbered frames 1 to 40								CONCURRENCE/APPROVAL SIGNATURES								
		7	Revised Frame 7 – added 2.D.								Design Engineering Supervisor S. Vonfoerster								
		20	Revised Frame 20 – 14A. – 14E.								Design Engineering Management P. F. Johnston								
		40	Added Frame 40 – Figure VIII								Manufacturing Engrg.								
020808			WPTS-E-11054441-002								Quality Control								
		3	Added Test III.3.14 to Table								Purchasing								
		5	Added ▽'s to Items 1, 3, 4, and 5 of Table in Section								Supplier Quality Assistance								
		15	Relocated Ball Socket Insertion / Removal Test to Section																
030819			WPTS-E-11069621-021																
<b>FRAME</b>	<b>1</b>	<b>OF</b>	<b>40</b>	<b>REV B</b>															





# Engineering Specification

## I. GENERAL

This specification pertains to the accelerator cable assembly which controls the engine throttle operation.

This engineering specification is a supplement to the released drawing on the above part and all requirements herein must be met in addition to all other requirements of the part drawing. Minimum measures necessary for demonstrating compliance to these requirements are given in each section.

The engineering tests, sample sizes and test frequencies contained within this specification reflect the minimum values established to provide a regular evaluation of conformance to design intent. The engineering test program is intended as a supplement to normal material inspections, dimensional checking and in-process controls. The engineering test program should in no way adversely influence adherence to other more statistically significant inspection operations. Q1 suppliers may implement different test sample sizes and frequencies providing these changes have been included in an alternate Control Plan approved by the design responsible Product Engineering Office and concurred by SQA.

## II. PRODUCTION VALIDATION AND IN-PROCESS TESTS

Compliance with all of the requirements in this section must be demonstrated as follows:

- A. Production Validation (PV) - PV test must be completed satisfactorily with parts from production tooling (and processes where possible) before ISW approval and authorization for shipment of production parts can be effected. Parts must be revalidated completely per Section V whenever and change is made which may affect part function and performance.
- B. In-Process Tests, Phase 1 (IP-1) - IP-1 tests may be implemented only after process capability has been established. Tests must be completed with production parts on a continuing basis. Samples for these tests must be selected on a random basis to represent the entire production population as much as possible. In the event that any portion of these test are not met, Ford Q-101 Section III, E, 3 for "ES Test Performance Requirement" shall be invoked.



# Engineering Specification

## TABLE OF TESTS

**When                      Product Verification    In-Process IP-1**

Test Description	ES Test Number	Accel Cable Style	Product Verific.	In-Process	Minimum Sample Size <u>1/</u>	Stat. <u>2/</u> Acceptance Criteria	Min. <u>1/ 3/</u> Sample Size and Frequency	Stat. <u>2/</u> Acceptance Criteria
Accel. Life Test	III.1	All	Yes	-	6	All must pass		
Cable Assembly Check	III.2	All	Yes	Yes	100%	All must pass	100%	All must pass
Conduit Liner Presence Verification	III.3	All	Yes	Yes	100%	All must pass	100%	All must pass
Pedal Retainer Pull Through	III.4	All	Yes	-	6	All must pass	-	-
Metal End Fitting Integrity	III.5	As required by design	Yes	-	3	All must pass	-	-
Spring Load Verification	III.6	Ball Stud Style	Yes	Yes	6	All must pass	5 pcs 2x/shift/ final assembly machine <u>4/</u>	All must pass
Cable Deflection Test	III.7	All	-	Yes	-	-	3 pcs. at beginning and end of each conduit lot <u>6/</u>	All must pass
Cable End Fitting Orientation	III.8	All	-	Yes	-	-	Same as above	All must pass
Cable Efficiency Test	III.9	All	Yes	Yes	6	All must pass	6 pcs/shift selected at random throughout the shift <u>5/</u>	All must pass
Spring Fatigue Test	III.10	Ball Stud Style	Yes	Yes	50	All must pass	50 spring lot	All must pass
Accel Cable Abuse Test	III.11	Ball Stud Style	Yes	-	10	All must pass	-	-
Conduit Crush Test	III.12	All	Yes	-	6	All must pass	-	-
Cable Thermal Distortion Test	III.13	ALL	Yes	-	6	All must pass	-	-
Ball Socket Insertion / Removal Load	III.3.14	Ball Stud Style	Yes	Yes	10	All must pass	10 pcs/ lot	All must pass

FRAME 3 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

For symbol (x) definitions, see the chart on the following page.  
Tests #12 and #13 are only required for new conduit constructions.

1/ Sample size is to be a minimum requirement and must represent a cross section of new part numbers or a single part number if only a single cable is new. At least one (1) cable for each different part number is to be included.	4/ A final assembly machine is defined as a machine that secures the pedal arm pivot ball or stop.
2/ Data reduction techniques for calculating reliability acceptance values are contained in Section IV.	5/ At least one (1) cable of each different part number produced during the shift is to be included.
3/ Refer to section III.C for permissible grouping of part numbers.	6/ The production from one line for eight (8) hours or 50,000 pieces whichever is less.

### III. TEST PROCEDURES AND REQUIREMENTS

#### 1. Accelerated Life Test - Refer to Figure I.

##### A. Introduction

The purpose of this test is to verify the performance, in terms of component failure, wear and efficiency, of the cable assemblies while cycling at normal and overload conditions. A common cable conduit routing is used for test regardless of the cable part number. Routing requirement is to be in accordance with that shown in View A.

##### B. Acceptance Limits

It is considered a failure when cable efficiency is less than 80% initially or after testing or yielding, breaking, slipping or loosening of any part occurs on the cable assembly. With the exception of efficiency checks (Section F.), the above failure conditions are to be checked daily throughout testing.

##### C. Test Frequency

At least six (6) cables are to be selected at random and tested.

##### D. Test Fixture and Loads - Refer to Figure VII.A.

- 1) A minimum six (6) station fixture is to be used for this test. Each station is to have its own cycle counter and be capable of being adjusted separately for different length cables.
- 2) The cycling mechanism is to be adjustable to compensate for cable core wire stretch. Also, a sensing device is to be included on each station to insure that correct displacement is maintained for the WOT overtravel of 0.8 - 2.3mm.

##### E. Test Conditions



# Engineering Specification

- 1) Cycle speed = 30cpm
- 2) Test Duration = 500,000 cycles

## F. Efficiency Measurement Procedure

Efficiency measurement is to be done as depicted in Figure I, View B. and in accordance with the procedure outlined in Figure VII.B. for Type III routings.

## G. Records

The following information must be kept for each cable tested:

- Part number
- Part numbers in group (see C. above)
- Sample number
- Fixture number
- Date code
- Test cycles completed
- Efficiencies
- Technician's signature

## 2. Cable Final Assembly Check

### A. Introduction

The purpose of this automatic checking fixture is to cycle each completed cable assembly produced to verify function, returnability, various critical dimensions and proof loads. A chart of the checking fixture requirements follows:

Item	Function	Failure	Fixture Reaction				Remarks
			A	B	C	D	
1 ▽	"C" dimension check	Core stop located outside of dimensional tolerance or missing.	Yes	Yes	Yes	Yes	FMVSS 124 requirement - insures against core stop holding throttle of idle.
2 <u>A</u>	Spray silicone fluid on spring guide.	Fluid not spraying	Yes	Yes	Yes	Yes	
3 ▽ <u>A</u>	Cycle cable from free to solid length of the spring or bottom out the spring guide in the dust tube and utilizing the spring for return. Return is to be from .20 to .50 second.	Return is: -quicker than .20 second -slower than .50 second.	Yes	Yes	Yes	Yes	FMVSS 124 requirement - insures against hesitation and masking of hesitation by too quick of a return (sling shotting). Return is to be at a constant rate.
4 ▽	Pull cable core and fitting at 556N (124 lbs.) load minimum.	-Fittings pull off or slip beyond "A" dimension -Fittings are at less than "A" dimension. <u>1</u>	Yes	Yes	Yes	Yes	<u>1</u> /"A" dimension or "T" dimension when applicable, has to be adjusted to compensate for inherent stretch due to load.
5 ▽	Pull conduit end fittings at 222N (50 lbs.) load minimum	-Fittings pull off or slip beyond "B" dimension -Fittings are at less than "B" dimension	Yes	Yes	Yes	Yes	FMVSS 124 requirement - return impeded by fitting pulling off. Subassembly pull off load of 356N for the metal dash fitting is not voided by this check load.
6	Stamp date code on conduit	Any of the 5 checks not completed satisfactorily.	Yes	Yes	Yes	Yes	If cables are rejected and the components are used again, the date control continuity must be maintained.

FRAME 5 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

7	Eject cable automatically from the fixture	Any of the above six functions are not completed satisfactorily.	Yes	Yes	Yes	Yes	Automatic counters are to be part of the checker and must register the total cables checked and the number of rejects for each of the above items. Records must be maintained (at each checking fixture for each fixture and shift) of rejects and actions taken.
---	--	--	-----	-----	-----	-----	---

A/ - For accelerator cables with integral compression springs

- A Shuts down
- B Manual cable removal required
- C Date code omitted
- D Press "Reset" to activate

NOTE: For cable assemblies without integral compression return springs perform only items 1 (when applicable), 4, 5, 6 and 7.

### B. Test Frequency

All cable assemblies produced must be checked on this fixture prior to being shipped.

### C. Cable Packaging Requirements

Cables must be packaged in a telescoping box.

### D. Ball Stud Fixture Design

See Figure VIII for shape and dimensions of ball socket fixture pin.

## 3. Accelerator cable Conduit Inner Liner Presence Verification

Verification of the presence of the conduit Teflon liner is to be done initially at the liner flat wire wrap machine. A minimum of 152mm of liner must protrude beyond the flat wire wrap at both ends of the spool after each production run.

Additional techniques are to be employed at subsequent in-process operations to insure that liner is present throughout the full length of the conduit for all conduit styles. Verification is to be included in the supplier's control plan.

## 4. Pedal Retainer Pull Through Test

Plastic seat is to be installed in a fixture hole that is 9.525/9.652mm diameter and is 1.752/1.9.05mm thick with a 1.778/2.286mm slot to permit entry of the cable core. Plastic seat must withstand a minimum pull load of 1000 N (225 lbs.) without the end fitting pulling through. Rate of pull is to be no greater than 76mm per minute.

NOTE: Complete cable assemblies are not necessary for the above test.

## 5. Metal End Fitting Integrity - Refer to Figure II

### A. Introduction



## Engineering Specification

The purpose of this test is to verify the fatigue characteristics and retention capability of the conduit dash panel end fitting and nylon bushing where applicable.

### B. Acceptance Limits

It is considered a failure when the nylon bushing becomes dislodged or yielding, breaking, slipping or loosening of the end fitting or any component part of the end fitting occurs.

### C. Test Frequency

Samples to be selected at random and tested per quantities outlined in **Section II**.

### D. Test Instrumentation

- 1) Air or hydraulic cylinder capable of applying a cyclic 356 N load minimum.
- 2) Load cell or force gauge to measure cable loads. The load cell/force gauge must be calibrated on a regular scheduled basis using dead weights. Records of the calibration must be maintained.
- 3) Brush recorder to monitor and permanently record cable load.
- 4) Heat lamp with a thermocouple and controller capable of automatically maintaining 82°/94°C at the dash panel end fitting.
- 5) Thermocouple read out.

### E. Test Fixture and Procedure

- 1) A minimum of a one (1) station fixture is to be used for this test. The stations are to have individual cycle counters and be capable of being adjusted separately for different length cables.
- 2) Cables are to be mounted to simulated dash panel and engine brackets that are in line at a linear distance of 38mm less than the test samples print "B" dimension (-9A758-).
- 3) Cable throttle attachment fitting is to be secured to a simulated throttle lever/cam attachment that is mounted to a stationary bracket at a distance determined by the cable drawing "S" dimension (-9A758-).
- 4) Actuating cylinder is to be attached to the core wire at the accelerator pedal end through the load cell and apply an in-line cycle pull load of 356 N minimum.
- 5) Thermocouple is to be attached to and make direct contact with the end fitting at the area of the fitting to conduit crimp.
- 6) End fitting to be stabilized at temperature and allowed to soak for 10 minutes minimum prior to applying cyclic load.

### F. Test Conditions

FRAME 7 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

- 1) Cycle speed - 125 to 150 CPM.
- 2) Core wire load - 310 - 355 N (70 - 80 lbs.)
- 3) End fitting temperature - 82°-94°C.
- 4) Test Duration - 50,000 cycles

## 6. Accelerator Cable Assy. Spring Load Verification (W & Z) - Refer to Fig. III.

### A. Introduction

The purpose of this test is to verify that the return force of the completed accelerator cable assembly meets the design intent. (For accelerator cables with integral compression springs.)

### B. Acceptance Limits

It is considered a failure if the load, when measured according to the following procedure, does not conform to the "W" limits when compressed to within the "Z" dimensions as required by the specified assembly drawing (-9A758-).

Each hour of production must be identifiable to the final assembly machine as well as the hour in which it was produced until the associated five (5) piece sample has passed the spring load verification. Treatment of one (1) hour's production of a final assembly machine in which a sample failure has occurred is to be in accordance with the procedure outlined in Q101 (III, E, 3).

### C. Checking Frequency

Samples are to be selected at random and tested at a rate of five (5) pieces per 4 hrs. per final assembly machine prior to final assembly check.

### D. Test Instrumentation

- 1) Load cell to measure cable loads. The load cell capacity is not to exceed 112 N (25 lbs.) and must be calibrated on a regularly scheduled basis using dead weights. Records of calibration must be maintained.
- 2) Digital read out.

### E. Test Fixture and Procedure

- 1) Fixture - A one (1) station fixture is to be used for this test and conform to the following parameters:
  - a. Accelerator cable is to be mounted in a horizontal position between fixture blocks that will apply a spring load of 22-45 N (5 - 10 lbs.) to the engine bracket and/or dash panel fitting to insure the conduit assumes a straight routing.



## Engineering Specification

- b. Fixture blocks are to be relieved to insure clearance to any end fitting radius or irregularities due to staking or other manufacturing operations.
- c. Engine bracket fixture block is to have a locating pin to accept the cable assembly mounting hole to insure the same installation from cable to cable.
- d. A load cell is to be mounted on the centerline of the cable assembly and ride on a shaft(s) piloted by ball bearing bushings to minimize friction.
- e. Load cell to accelerator cable is to have a point contact to preclude introducing a non-concentric loading.
- f. The load cell is to be actuated through a spring having an approximate 45 N (10 lbs.) load by a cam or toggle type lever to insure a constant repetitive load from cable to cable. The load cell will contact the cable at the core wire end fitting.

### 2) Procedure

- a. Silicone in quantities equal to that dispensed at the 100% checking fixture is to be applied to the spring and spring guide.
- b. The cable is to be cycled by hand to full spring collapse five (5) times prior to test.
- c. Install cable assembly in fixture.
- d. Actuate the cable two (2) times to its "Z" dimension and return it to its "C" dimension.
- e. Actuate the cable to "Z" dimension and determine acceptance or rejection by digital read-out.

## 7. Cable Deflection Test - Refer to Figures IV.A. and B.

### A. Introduction

The purpose of this test is to verify that the deflection of the cable conduit and core wire as an assembly meet design intent.

### B. Acceptance Limits

It is considered a failure when the cable deflection exceeds 7.0mm (Figure IV.A.) or .608% (Figure IV.B.) of the overall length when using the optional test procedure at 173 N (39 lbs.) minimum applied load or yielding, breaking or slipping of any component part of the cable occurs.

### C. Test Frequency - Refer to Figure IV.A.

Samples to be selected and tested at the beginning and end of each spool of conduit per quantities outlined in Section II. The test cables are to be complete assemblies having the following basic dimensions: "A" dimension of  $1149.5 \pm 1.5$ mm; "B" dimension of  $960.0 \pm 2.0$ mm; and "C" dimension of  $136.7 \pm 3.2$ mm. (Refer to -9A758- drawings for definition of A, B, and C dimensions.)





# Engineering Specification

## D. Test Instrumentation

- 1) A 173.5 N (39 lbs.) weight to apply the load.
- 2) A 4.45 N (1 lb.) pre-load connector weight required to zero the dial indicator.
- 3) A dial indicator to measure cable deflection in 0.0254mm or smaller increments.

## E. Test Fixture and Procedure

- 1) A vertically mounted dead weight fixture as shown must be used for this test.
- 2) Cables are to be mounted to simulated dash panel and engine bracket supports that are in line at a linear distance of 922mm. The dash fitting gasket is to be removed and both fittings are to be firmly seated against the dash panel and engine bracket supports. (Supports should be made as rigid as possible since their deflection may add to the deflection measurements.)
- 3) The cable return spring dust cover or cable cam fitting is to be attached to a carburetor ball stud or cam style attachment that is mounted to a stationary bracket at a distance of 124mm. The cable spring (if applicable) is to be collapsed or removed so its load does not act on the dust cover.
- 4) The weights are to be attached to the core wire at the accelerator pedal end (either to the plastic retainer or end slug) to apply an in-line pull load as shown.
- 5) Position the dial indicator as shown, load the cable core wire initially with the 4.45 N pre-load connector weight. Pull down and release the 4.45 N weight by hand several times and then zero the dial indicator once the indicator stabilizes. Attach the 173 N weight to the connector weight. Flex the cable conduit side to side several times by hand until the dial indicator shows no further increase in deflection.

NOTE: Do not allow the 173 N weight to rotate for it may yield a higher, unrealistic deflection measurement. With the cable and weights at rest and the indicator stabilized, read the indicator for cable deflection.

## F. Optional Test Frequency. Fixture and Procedure - Refer to Figure IV.B.

- 1) Samples are to be selected at the beginning and end of each shift's production or part number production in the event that a part number shall run less than a shift. The test cables will be the same dimensions as the part number to be run. The test cables shall be assembled in the same manner as production parts.
- 2) A vertically mounted dead weight fixture as shown. This fixture must be adjustable to produce a "B" dimension equal to 96% of the cable drawing "B" dimension and a "C" dimension equal to 91% of the cable drawing "C" dimension (-9A758-).
- 3) Cables are to be mounted to simulated dash panel and engine bracket supports that are in line at a linear distance "B". The dash fitting gasket is to be removed and both fittings are to be firmly seated against the dash panel and engine bracket supports. (Supports should be made as rigid as possible since their deflection may add to the deflection measurements.)



## Engineering Specification

- 4) The cable throttle attachment fitting is to be secured to a simulated throttle lever/cam that is mounted to a stationary bracket at a distance "C". On a cable assembly with an integral compression spring, the spring is to be collapsed or removed so its load does not act on the dust cover.
- 5) The weights are to be attached to the core wire at the accelerator pedal end (either to the plastic retainer or end slug) to apply an in-line pull load as shown.
- 6) Position the dial indicator as shown; load the cable core wire initially with the 4.45 N pre-load connector weight. Pull down and release the 4.45 N weight by hand several times and then zero the dial indicator once the indicator stabilizes. Attach the 173 N minimum weight to the connector weight. Flex the cable conduit side to side several times by hand until the dial indicator shows no further increase in deflection. NOTE: Do not allow the 173 N weight to rotate for it may yield a higher, unrealistic deflection measurement. With the cable and weights at rest and the indicator stabilized, read the indicator for cable deflection.

### 8. Cable End Fitting Orientation Test - Refer to Figures V.A. and B.

#### A. Introduction

The purpose of this test is to verify that the cable and fitting orientation will remain in the design intended orientation when installed in a vehicle. The orientation is to be based on the cable dimensions specified in 8.C. regardless of other cable lengths in production.

#### B. Acceptance Limits

It is considered a failure when the fitting alignment angle  $G^\circ$  is greater than  $G^\circ + 30^\circ/-30^\circ$  when routed as defined below.

#### C. Test Frequency - Refer to Figure V.A.

Samples are to be selected at the beginning and end of each spool of conduit per quantities outlined in Section II. The test cables are to have the following basic dimensions: "B" dimension of  $960 \pm 2.0$ mm and angle  $G^\circ$  equal to  $90^\circ \pm 10^\circ$  (-9A758-). The test cables can be partial assemblies or just the conduit with end fittings secured to the ends of the conduit.

#### D. Test Instrumentation

None required.

#### E. Test Fixture and Procedure

- 1) A minimum of one (1) station fixture is to be used for this test.
- 2) The rear conduit fitting is to be secured to a simulated dash panel then routed to a simulated bracket as shown. The front conduit fitting is to be permitted to rotate unrestricted and then placed in the engine bracket in its natural position for measurement of angle "G".

#### F. Optional Test Frequency, Fixture and Procedure - Refer to Figure V.B.



# Engineering Specification

- 1) Samples are to be selected at the beginning and end of each shift's production or part number production in the event that production of a given part number shall run less than a shift. The test cables will have the same "B" dimension and "G" angle as the part number being run at the time of testing. The test cables shall have the end fittings secured in the same manner as production parts.
- 2) A minimum of one (1) station fixture is to be used for this test. The fixture is to be adjustable to obtain the following:

"X" dimension = 36.1% of the "B" dimension

"Y" dimension = 27.4% of the "B" dimension

## 9. Accelerator Cable Efficiency Check - Refer to Figures VII.B, C, D, and E.

### A. Introduction

This test measures the cable efficiency under constant load and constant cable speed conditions as shown in Figure VII.B. It is used to verify that the accelerator cable maintains the required efficiency when routed in its "in-vehicle" position. This test is to be conducted on cables routed as shown in Figures VII.C, D and/or E per coordinates shown on part drawing (-9A758-).

### B. Acceptance Limits

The accelerator cable when routed per coordinates must show an efficiency of not less than that specified on the part drawing (-9A758-) or 80%, whichever is greater.

### C. Test Frequency

A minimum of six (6) samples are to be selected randomly from each shift. At least one (1) cable for each different part number produced during the shift is to be included.

### D. Equipment and Procedure - Refer to Figure VII.B.

## 10. Cable Return Spring Fatigue Test

### A. Object

To determine if the "as received" cable return springs comply with the design intent which requires the spring to cycle from the spring height at the "C gage" dimension, through a 39mm compressive travel. (For accelerator cables with integral compression springs.)

### B. Equipment

1. An automatic device capable of cycling the spring for one million cycles with a 39mm stroke.



# Engineering Specification

- At least a 10 station spring fixture. Springs are to be supported during cycling by rods or by using the accelerator cable end tube and guide tube.

## C. Procedure

- Select at random, springs from each log shipment of cable return springs per Q-101 guidelines.
- Check the following dimensions - inside diameter, wire diameter, number of coils, spring load at the "C gage" and "C gage" + 39mm heights, spring rate, and free length.
- Install the springs in a cycle fixture capable of compressing the cable spring from the spring heights defined above.
- Cycle speed = 2 - 6 cycles/second at room temperature.
- Test Duration = 1,000,000 cycles
- Failure is determined if any spring breaks prior to one million cycles. Treatment of a lot in which a sample failure occurs is to be in accordance with the procedure outlined in Q-101. Parts on test must be checked daily for the above failure conditions.

## 11. Accelerator Cable Abuse Test (For accelerator cables with integral compression springs.)

### A. Object

To determine if the cable function can be adversely affected by the following conditions:

- Misaligned cable socket - 15mm lateral offset at the ball stud in the idle position. Offset is to be obtained by twisting the cable flange mounting surface.
- Cable disconnected at the ball stud and bent 90° to the engine bracket attachment.

### B. Requirements

- The cable function must not be adversely affected with 15mm of misalignment after a 10 hour soak at 275°F (135.1°C) followed by a 30 minute soak at room temperature (50° to 110°F / 10° to 43.4°C). The cable must not be cycled during or between the soak periods.

After the soak, the cable shall be checked for cable efforts and returnability per III2.A.3. Cycle the cables per III 1 A-G. Upon completion, evaluate per III 2.A.3.

- The cable function must not be adversely affected (no distortion of the spring guide) and failure must not occur to any component when the cable spring end is bent 90° (min.) after a minimum soak of 30 minutes at temperatures of -40°F (-40°C) and room temperature (50° to 110°F / 10° to 43.4°C).

After each soak, manually displace the ball socket of the cable a minimum of 90° relative to the engine bracket conduit fitting and return it to the straight position. Repeat the cycle 3 times at each temperature. Check the cables for efforts and returnability. Cycle the cable as described in III 1 A-G. Upon completion, evaluate per III 2.A.3.

FRAME 13 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



## C. Equipment

1. Temperature controlled chamber -35° to -45°F (-37.2° to -42.8°C).
2. A heat source to maintain a temperature range of 265° - 285°F (129.4° - 140.6°C).
3. Test fixture - See figures 1T/2T.

## 12. Cable Conduit Crush Strength

### A. Object

To determine the force required to crush the cable conduit such that the return of the core wire is prevented without external aid.

### B. Requirements

The conduit must withstand a force of 1334N (300 lbs.)min. distributed over a length of 69.8mm before any perceptible restriction of the core wire axial movement occurs.

### C. Equipment

1. A test machine capable of accurately applying and recording load. The minimum rate of load application is to be 111.2 N (25 lbs.) per second.
2. A fixture for retaining the conduit and applying force. See Figure 4T.

### D. Conditions

1. Position the conduit under guides to insure that the conduit is centered under the ram throughout the entire load application. Remove any curvature in the conduit between the guides. Record the effort required to move the core wire 25.4mm (1 in.).
2. Constantly move the core wire while applying the load to determine when restriction first occurs. Record the load when restriction is first recorded. All subsequent loadings should be at the same section of the cable.
3. Remove the load to determine if the core wire returns to its original position. The cable return force shall be provided solely by the cable's own compression spring. If the cable does not have a compression spring, a spring with characteristics similar to previous designs shall be used. Record the findings.
4. Once the minimum restriction load is determined via the above steps, increase the load in increments of at least 10% of the minimum load. After each incremental increase, check the effort to move the cable 25.4mm (1 in.) and note the amount that the cable return. Remove all of the load and measure the efforts and returnability. Run the test until the core wire fails to return when the total load is removed. Record the findings at each load.
5. Crush a new cable to 80% of the failure load and then cycle per III 1.A-G.



# Engineering Specification

## 13. Cable Thermal Distortion Test

### A. Object

To determine the compressive strength of a conduit design as a function of load and temperature.

### B. Equipment

1. Load cell(s) capable of monitoring cable core loads up to 356N (80 lbs.)
2. A chart recorder to determine the cable core load.
3. An automatic device able to apply the required cable load.
4. An environmental chamber capable of sustaining a temperature range of -40°F to 400°F (-40°C to 204.6°C).

### C. Conditions

1. Maximum temperature = 275°F (135°C)
2. Minimum temperature = -40°F (-40°C)
3. Constant core wire load of 356N (80 lbs.)
4. Soak time incremental temperature - 15 minutes
5. There shall be no distortion of the conduit or breakthrough of the lay wires at temperatures of 275°F (135°C) or below.

### D. Procedure

1. A six station fixture as shown in figures 1T/2T consisting of: a hydraulic cylinder to apply the required cable load of 356N (80 lbs.), a calibrated load transducer and strip chart recorder to determine and maintain the required load, and fixture couplings between the accelerator cables / load applicator/ and reaction stand. An environment chamber able to enclose the entire cable conduit and sustain a temperature range of -40°F to 400°F (-40°C to 204.6°C). The curved guide tube may extend outside the chamber.
2. Each accelerator cable is to be mounted to simulated dash panel and engine bracket. The ball stud or cam attachment is to be fastened to a rigid bracket so as to allow maximum cable core loading to be transferred to the conduit.
3. After the cables are installed in the test fixture and the temperature is stabilized at -40°F (C), the cable is to be loaded to 356N (80 lbs.). The cable is then soaked at temperature for 15 minutes. After the soak period, the cables are to be inspected for excessive conduit distortion or breakthrough of the lay wires. If there are no failures, the temperature is at 25°F (-3.8°C) increments and the above procedure repeated at each new temperature up to 275°F. If failure occurs below the maximum temperature, a new sample will be cycled at 25°F (3.8°C) below the failure temperature in the manner described

FRAME 15 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

below. Cycle per III 1.A-G except from 9.0N to 111N (2 - 25 lbs.) until failure or 100,000 cycles is achieved. Check efficiencies before and after cycling. Failure is when the cable fails to return or degrades per III 2.A.3.

## E. Items to be Tested

1. Six accelerator cables per conduit design.
2. When more than one vendor supplies a component, six samples from each vendor must be tested.

## F. Completed Samples

After each sample has completed testing, it is to be labeled with the following information:

- Test completion date
- Maximum Temperature
- Test order number
- Vendor or other identification
- Sample number

## 14. Ball Socket Insertion / Removal Load Procedures

### A. Introduction

The purpose of this procedure is to apply consistency to the method for measuring ball socket insertion and removal loads from the ball stud.

### B. Acceptance Limits

The insertion loads shall be less than or equal to 111 Newtons upon the first insertion to the ball stud. The removal loads shall be greater than or equal to 67 Newtons upon the third removal cycle.

### C. Test Frequency

Test minimum of 10 samples from a random sample of 100 or per production lot.

### D. Test Instrumentation and Equipment

1. Chantillon DFM 100 force meter or equivalent whose calibration has been certified according to local ISO 9000 procedures. Gauge must have peak load measurement capability.
2. Calipers whose calibration has been certified according to local ISO 9000 procedures.
3. Ford service tool recommended for removing ball socket from ball stud.
4. Appropriate fixture for mounting ball stud.

### E. Test Fixture and Procedure

1. One station fixture will be sufficient for this test.
2. Verify correct dimension of ball stud per Ford design guidelines with calibrated calipers.

FRAME 16 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

3. Attach appropriate fixture to force meter.
4. Zero out gauge.
5. Set measuring device to record peak load.
6. Grease ball socket with chassis grease (SAE # tbd).
7. Insert ball socket on to ball stud.
8. Record peak insertion load. Load must be less than or equal to 111 Newtons.
9. Remove ball socket with Ford recommended service tool.
10. Insert ball socket onto stud.
11. Remove ball socket with Ford recommended service tool.
12. Insert ball socket onto stud.
13. Remove ball socket with Ford recommended service tool and record peak removal load which must be less than or equal to 67 Newtons.
14. Repeat steps 1 – 13 as required per Section C above.

## IV. RELIABILITY ANALYSIS METHODS

Following are the methods for reducing the test data to compute the reliability values.

- A. Test the number of samples specified in Section II per the requirements of Section III.
- B. If any requirement is not met invoke Q-101, Section III, E, 3 for "ES Test Performance Requirements."

## V. REVALIDATION REQUIREMENTS

For any change in processing or sourcing, the entire PV program must be successfully completed.

Any changes in materials or supplies must be revalidated in accordance with Ford Q-101.

Changes in design, composition or processing from part previously approved for production requires prior engineering approval.

### Running Change Re-Validation

#### Process Change   Material Change   New Supplier

III.1 *	See Q-101	See Q-101
III.2	See Q-101	See Q-101
III.4	See Q-101	See Q-101





# Engineering Specification

## Subsequent Year Re-Validation

## Carryover Design

III.1

III.2

III.4

- \* Revalidation is not required for cable length changes or for use of existing currently approved parts or processing.

## **VI. LOT DEFINITION**

A lot is defined as a day's production of cable assemblies with the same part number or 5000 assemblies of the same part number, whichever quantity is less.

## **VII. RECORD RETENTION**

Recording and record retention shall conform to Ford Q-101 "Records". Copies of Product Validation (Section II) are to be forwarded to the appropriate design engineer.

## **VIII. INSTRUCTIONS AND NOTES**

### **A. Operating Temperature Range**

The cable assembly is to operate smoothly without seizure or sticking from -40°C to 135°C when routed as in "Accelerated Overload Life Test". (This testing is currently conducted by Ford Design Engineering per Test Procedure CEO-10.02-LT-2 and 2/3 or DVT LT-10.02-1.1).

### **B. Conduit Liner Cleanliness**

Inside diameter of the plastic liner must be free of any foreign material except for the specified internal lubricant. A minimum sample of six (6) completed cable assemblies are to be selected at random from each week's production for analysis. The cables are to be disassembled without damaging the total length of liner in each. Each liner is then split and observed under 30x magnification for contaminants. Actions are to be taken immediately to eliminate the sources(s) of contamination. Actions taken are to be recorded along with the cable assemblies part number and date code. The liner samples are to be kept for review for one (1) year.

### **C. Core Wire Cleanliness**

Core wire strand (7x7, 7x19) must be free of any foreign material except for the specified internal lubricant. To aid in cleanliness the core wire strand must be cleaned for a minimum of 15 minutes in a continuous flow of 1, 1, 1trichloroethane or in an ultrasonic cleaner with Chem Crest Ultrasonic Detergent (LN005291). Stacking of core wires in a bath must be such to prevent blocking by each other that may prevent cleaning. Core wires not used immediately after cleaning are to be stored in closed containers.

A minimum of twelve (12) core wire samples are to be selected at random from each week's production and a quantitative analysis made to determine if foreign material is present. Foreign material includes particles

FRAME 18 OF 40

REVISED

030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification

of the core wire material that may have separated during swaging of the OD of the core wire. Actions are to be taken immediately to eliminate the source(s) of contamination. Actions taken are to be recorded along with the part number of cable assemblies that would have used the core wire. The core wire samples are to be kept for review for one (1) year.

## D. Verification of Heat Treatment Specification

Verification of the heat treat specification will conform to procedures established by Q-101 except as follows: A 3-sigma capability study will be performed on a minimum of 25 samples of tube and clip assemblies and spring guides, as required by paragraph 2.3 of Q-101. The process will be considered unacceptable if more than 5% of the values, established by the 3-sigma capability projections, are above or below the print tolerance limits.

Additionally, no individual sample shall be above or below the print tolerance by more than 2 points on the Rockwell 15N scale. Records must be maintained for a period of one (1) year.

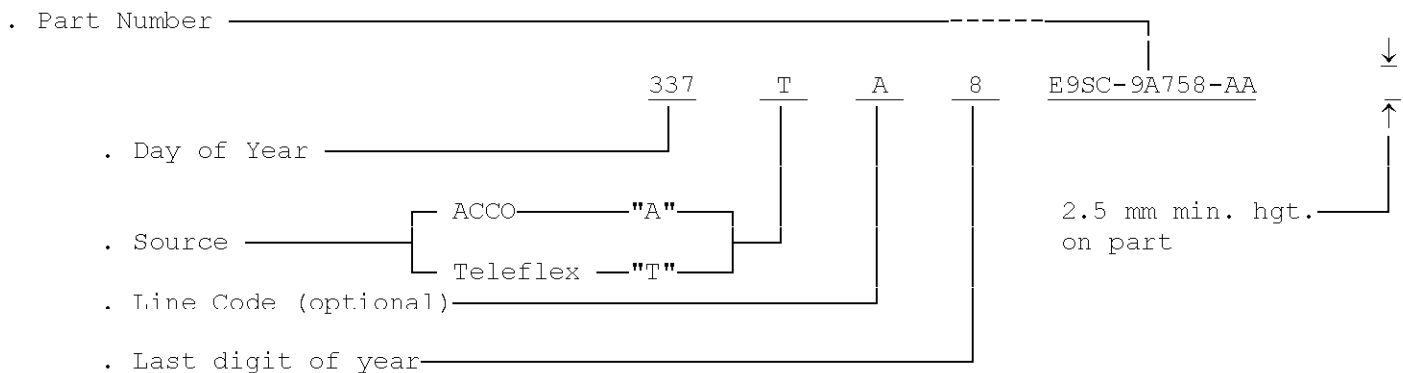
Refer to Section II for treatment of failures.

## E. Spring Guide Nylon Coating Adhesion

Adhesion of the spring guide nylon coating must meet the requirements as stated on -9F654- drawing and/or ▽ ES-E6AC-9A758-AA, Frame 2.

## F. Date Control Number

All accelerator cable assemblies shall be marked with a date code in the area shown on the drawing. The identification shall be legible, permanently imbedded in white in the cable plastic jacket and must contain the information shown below:



Records are to be maintained by the supplier for cross-referencing the date code with respect to the following:

- A. Date
- B. Cable assembly and all of its components by part number.
- C. Design and process changes.
- D. Number of assemblies produced by part number.
- E. Shipping dates and Ford Motor Company assembly plants to which cables were shipped.



# Engineering Specification

## G. Supplier Requirements

The supplier is required to provide the Accelerator Controls Group, Ford Motor Company, a complete set of detail drawings and documentation of compliance to Q101, Section III. and IV. prior to starting of production. All subsequent changes and changes made between prototype and production stages must comply with Q101, Sections III. and IV. and must have written Ford Engineering approval prior to incorporation (Refer to Section V.). Changes include process, material, resourcing, specifications and designs. As any of these are changed, documents/drawings must be forwarded to Ford Engineering as soon as they are completed and before the changes are implemented. Supplier drawings must include the Designer, Checker and Engineer signatures and dated.

Omissions or changes made by the Supplier not specifically agreed upon by Ford Engineering in writing do not void past or present applicable drawing and specification requirements.

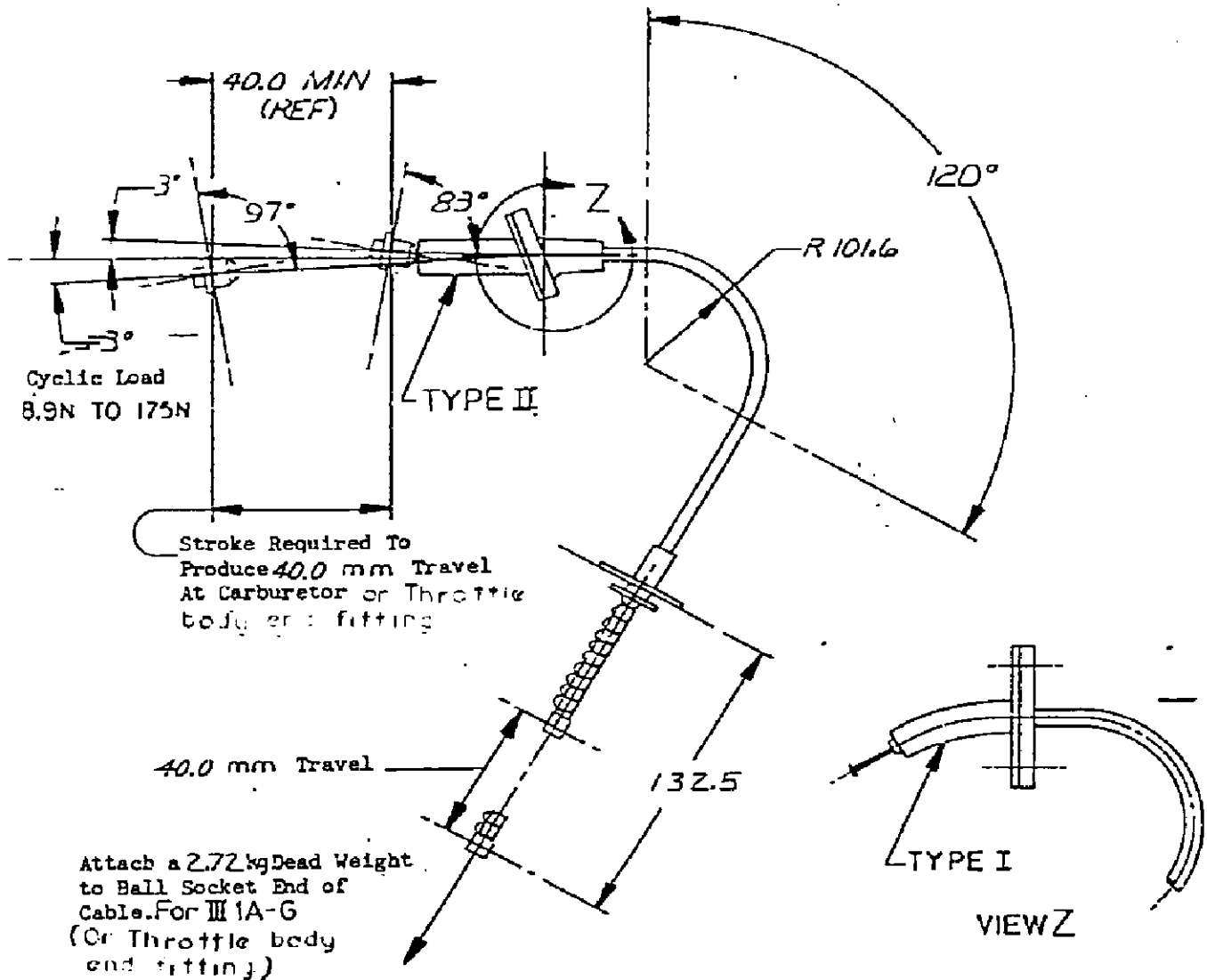
All molded components must be clearly identifiable and traceable to individual cavities.

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# Engineering Specification



Place Cable Assy. Over 120°, R101.6 Form. Prior to Attaching Carburetor Fitting as Shown Move Conduit Fitting Up Approximately 12.7 so Conduit Does Not Touch Form During Cycling. Attach Both Conduit Fittings as Shown.

## FIGURE 1T

THE ABOVE FIXTURE IS USED FOR TEST III. 11/23/72 FOR 9A758 CABLES WITH DIMENINSION "B" GREATER THAN 400.0

FRAME 21 OF 40

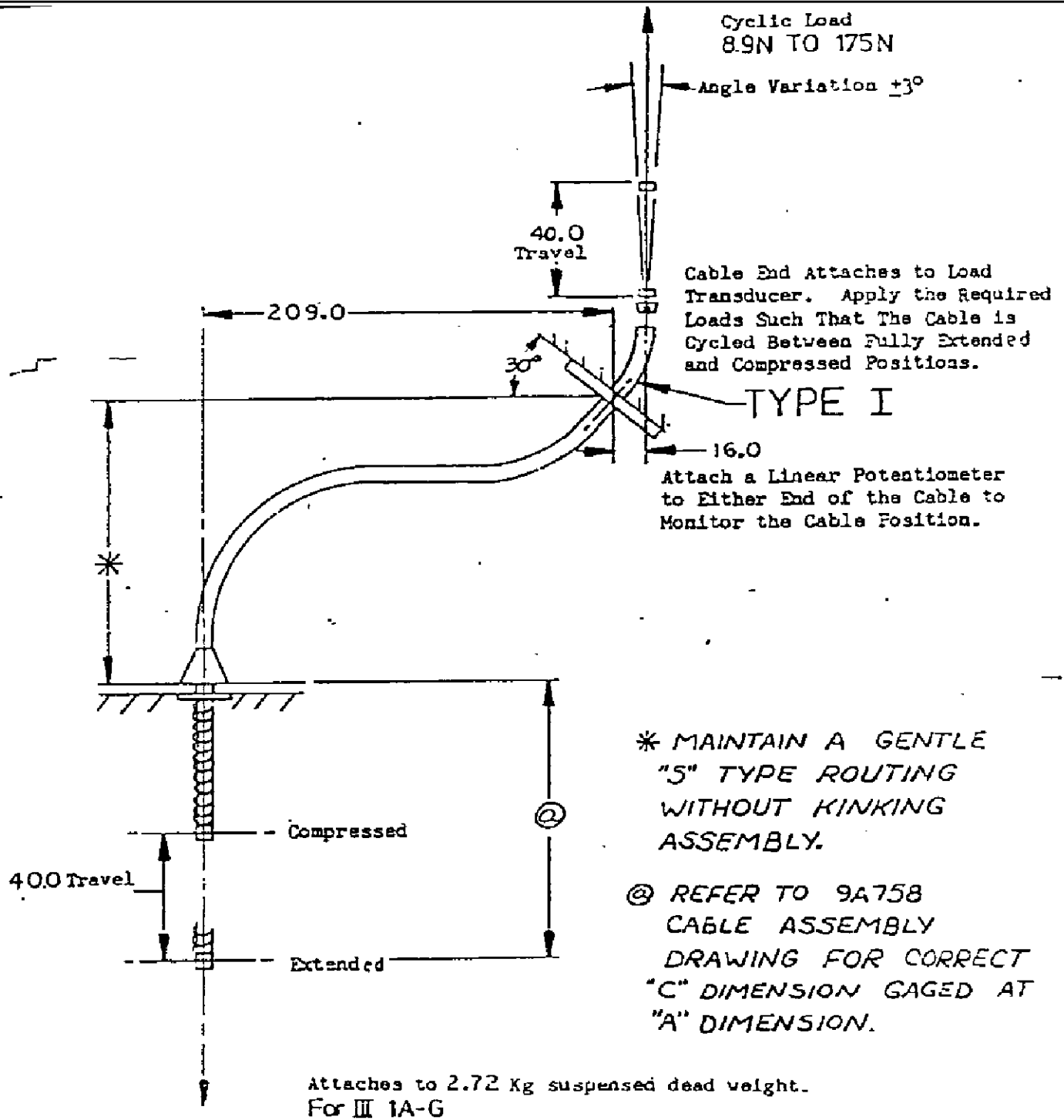
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030819

NUMBER ▽ ES-F5TA-9A758-AA



# Engineering Specification



## FIGURE 2T

THIS FIXTURE IS TO BE USED FOR TESTS III. 1A-G, 1B-G, 1C-G, 1D-G, 1E-G, 1F-G, 1G-G, 1H-G, 1I-G, 1J-G, 1K-G, 1L-G, 1M-G, 1N-G, 1O-G, 1P-G, 1Q-G, 1R-G, 1S-G, 1T-G, 1U-G, 1V-G, 1W-G, 1X-G, 1Y-G, 1Z-G FOR 9A758 CABLES WITH DIMENSION "B" LESS THAN 400.0



CABLE CONDUIT CRUSH STRENGTH TEST FIXTURE

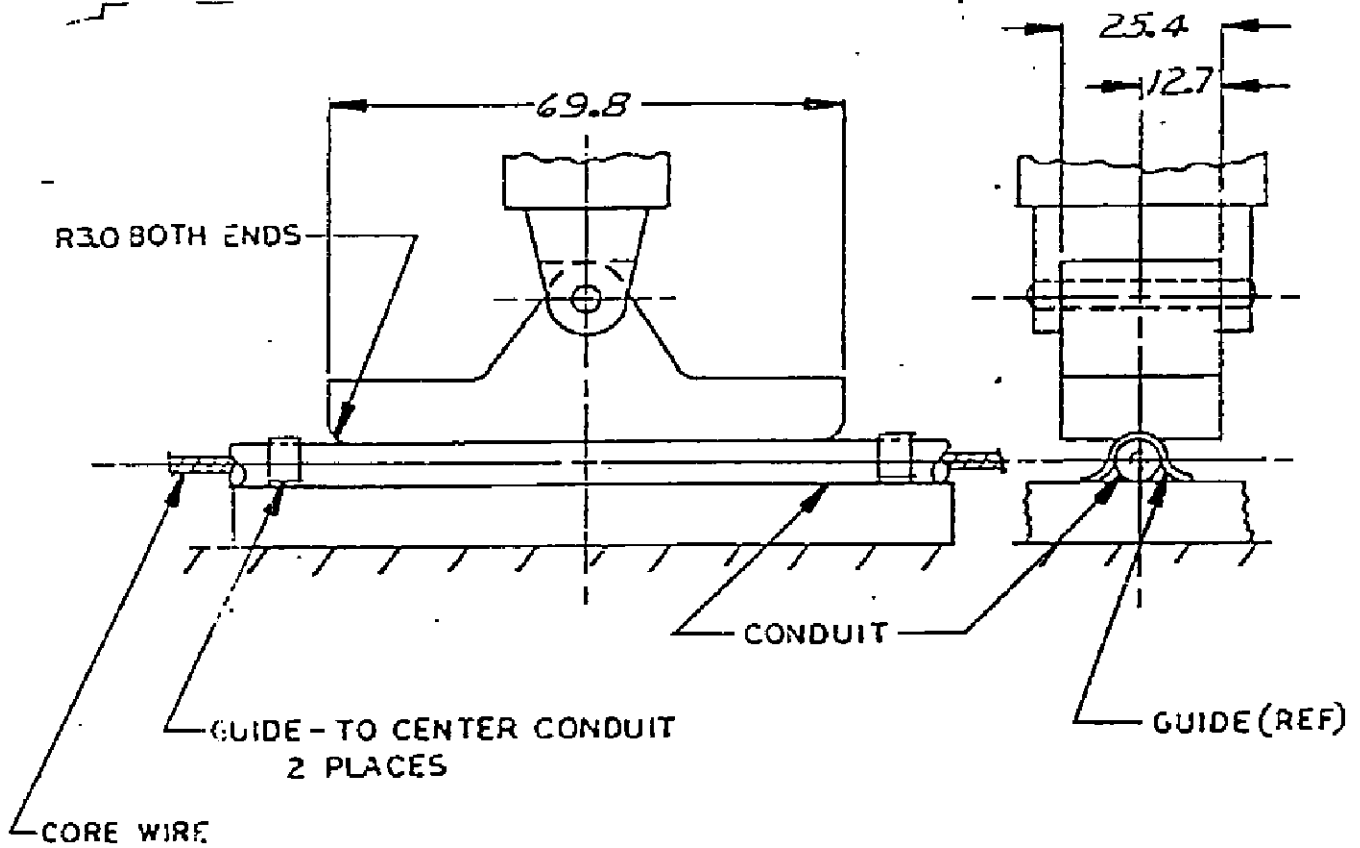
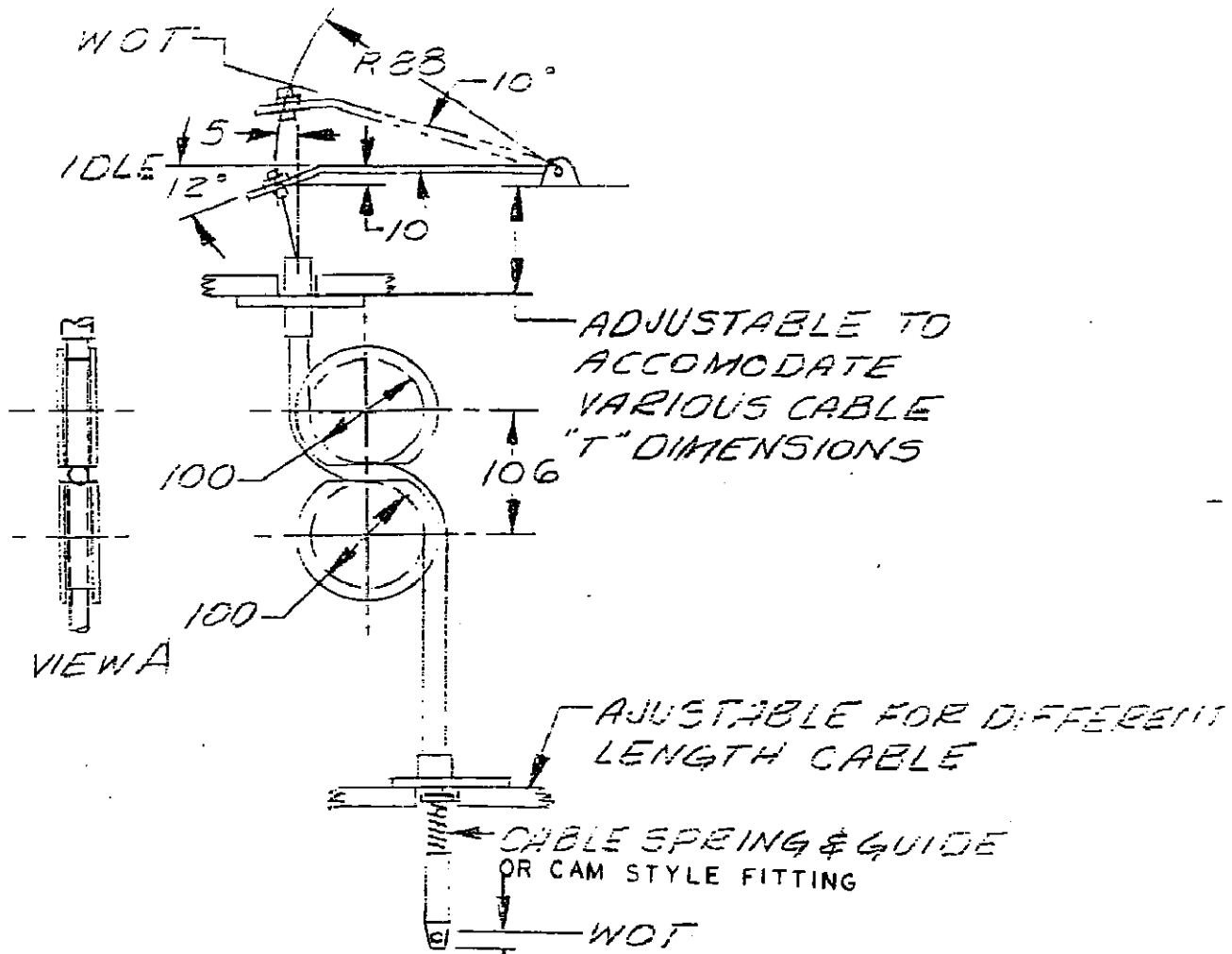


FIGURE 4T  
FOR TEST III. 12



FIGURE I 1 OF 2  
CABLE LIFE TEST FIXTURE & EFFICIENCY  
DETERMINATION  
SECTION III .1



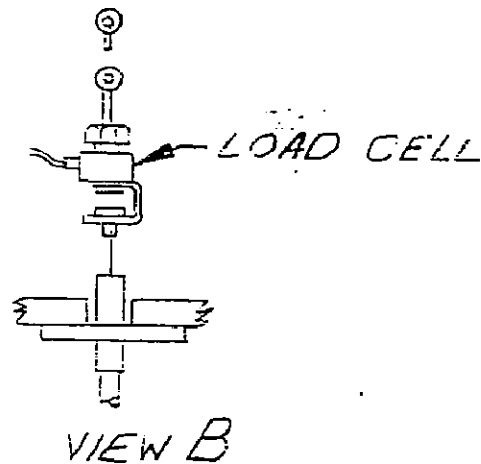
REFER TO FIG VII A FOR MIN LOADS TO BE APPLIED AT THE BALL SOCKET. LOADS INCLUDE EFFECT FROM CABLE SPRING

30.6 IDLE TO WOT. THEC  
2.3 TRAVEL (REF)  
0.8 OVERLOAD TRAVEL



FIGURE I 20F2  
CABLE LIFE TEST FIXTURE & EFFICIENCY  
DETERMINATION

SECTION III.1



EFFICIENCY DETERMINATION

SET UP

REPLACE RADIAL WITH LINEAR  
ACTUATION MECHANISM

\*COMPRESS CABLE SPRING AND  
HOLD SPRING & ITS GUIDE UP  
(IF USED) TO REMOVE THEIR  
EFFECT

INSTALL LOAD CELL

REFER TO FIG VIII C TYPE CABLE  
ROUTING FOR EFFICIENCY  
DETERMINATION & EQUIPMENT

\* IF APPLICABLE





FIGURE II  
SECTION III.5  
CONDUIT END FITTING & INTEGRITY

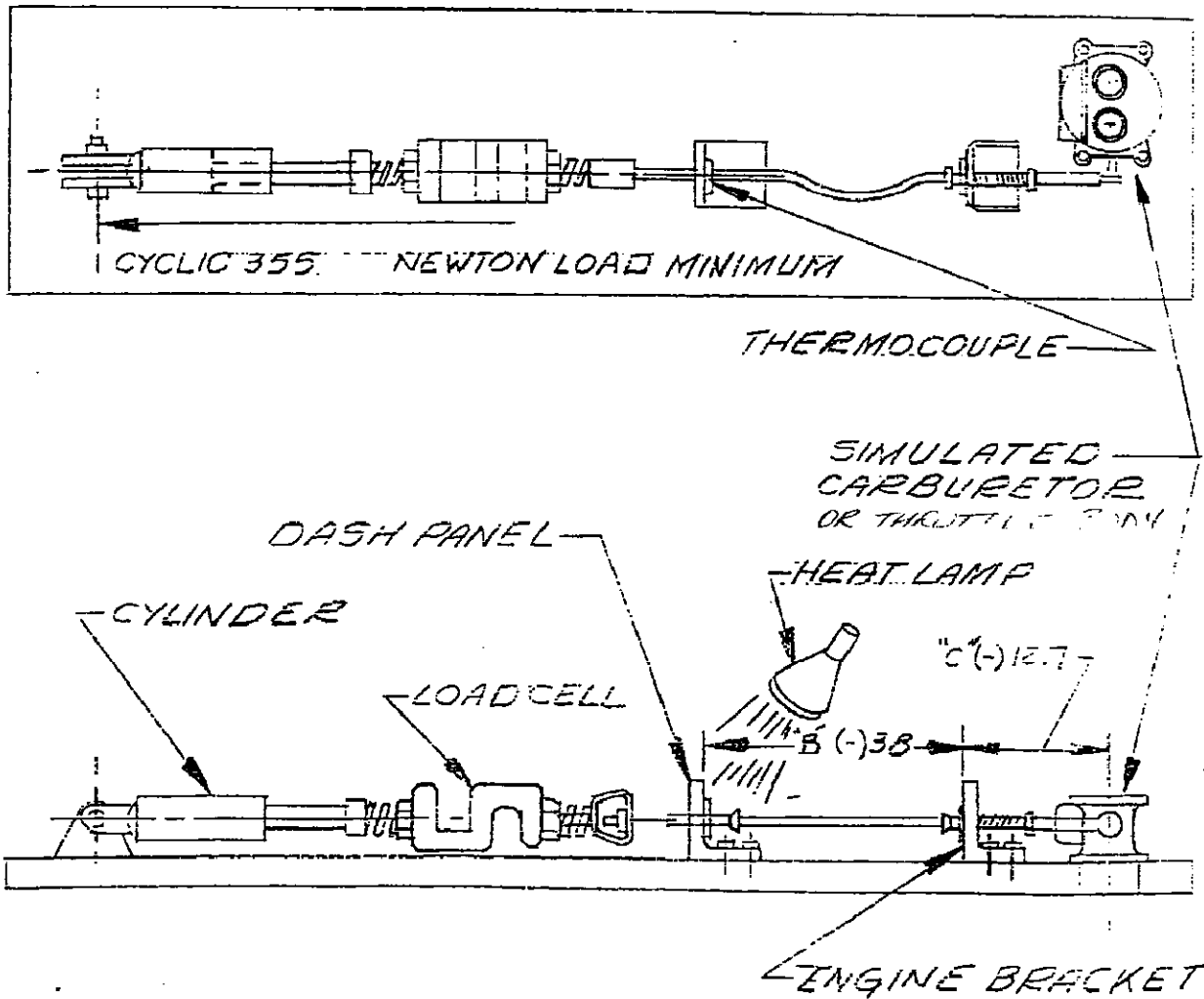




FIGURE III  
SECTION III.2.  
CABLE SPRING W & Z VERIFICATION  
(IF APPLICABLE)

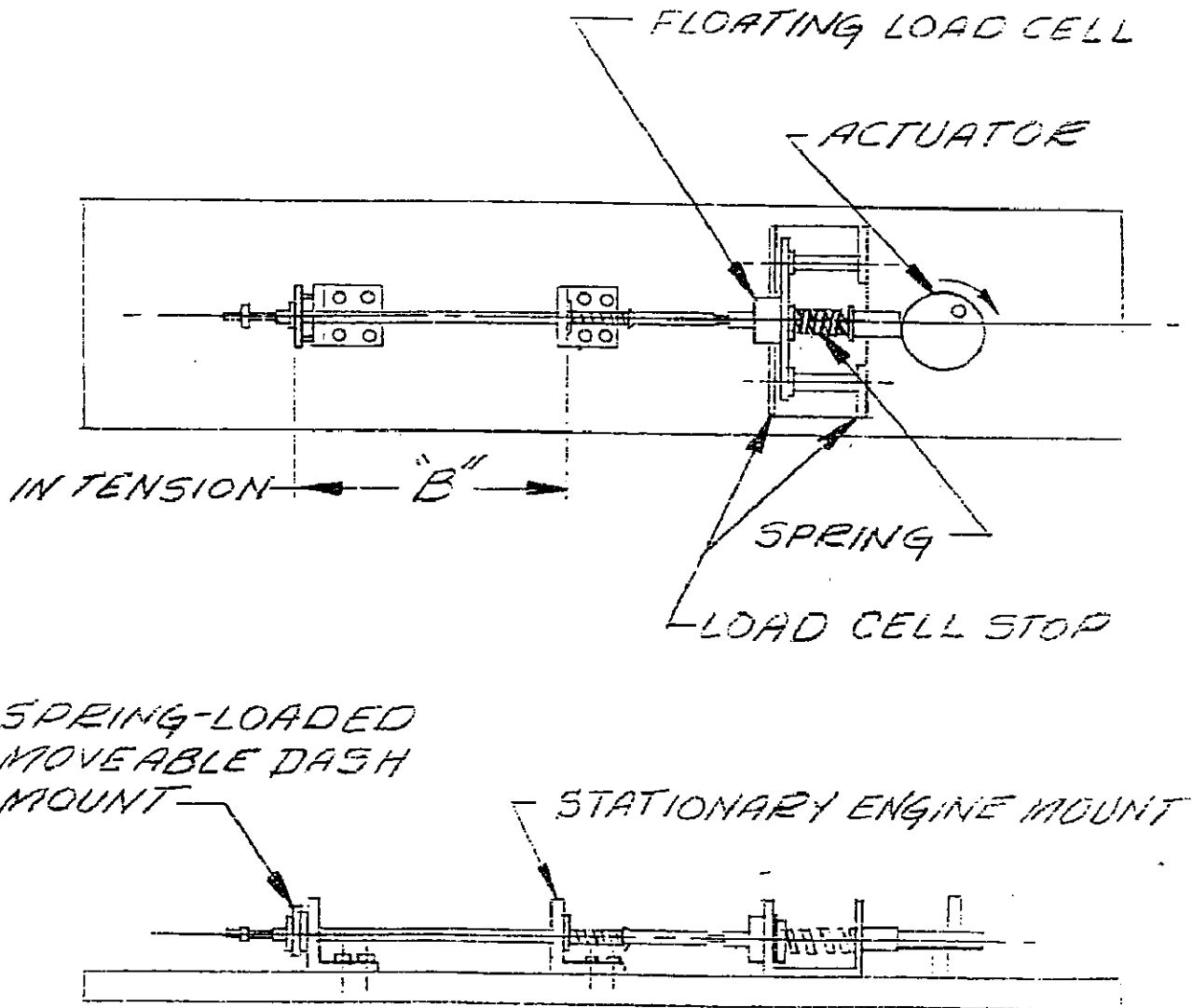
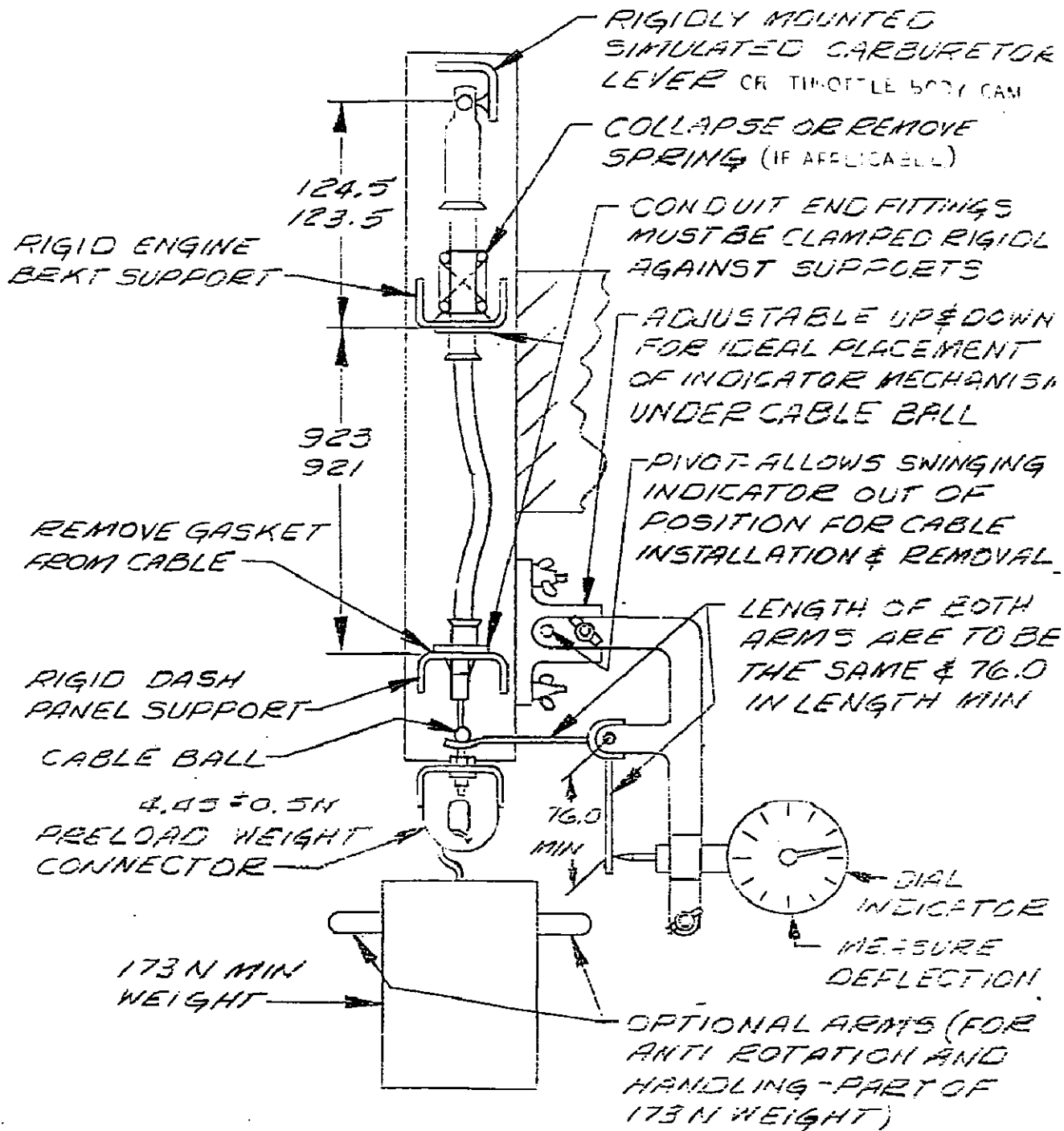




FIGURE IV A  
SECTION III.7.C



FIXTURE IS TO BE MOUNTED VERTICALLY



FIGURE IV B  
SECTION III.7.F

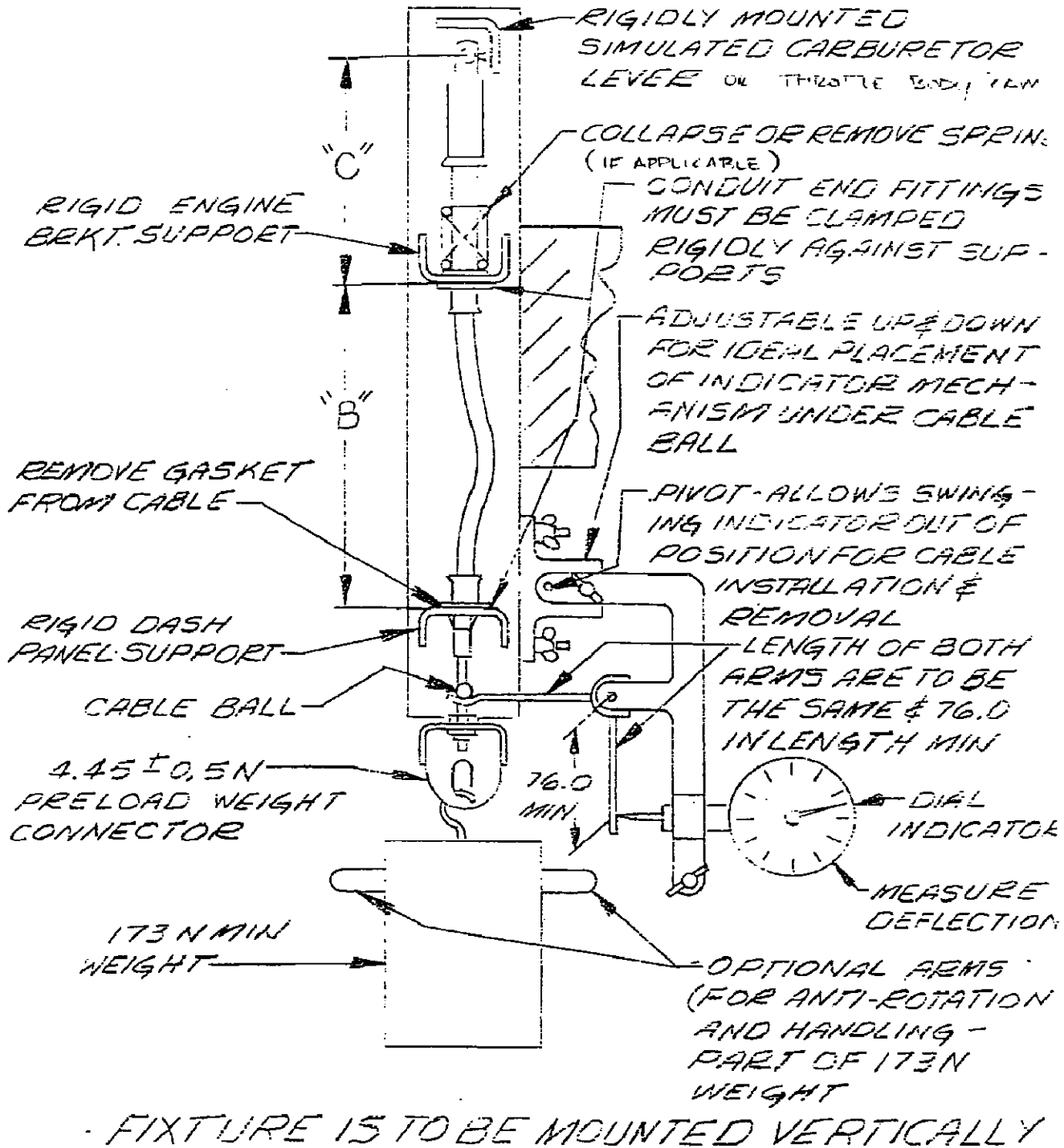




FIGURE  $\nabla$ A  
SECTION III.8.C.

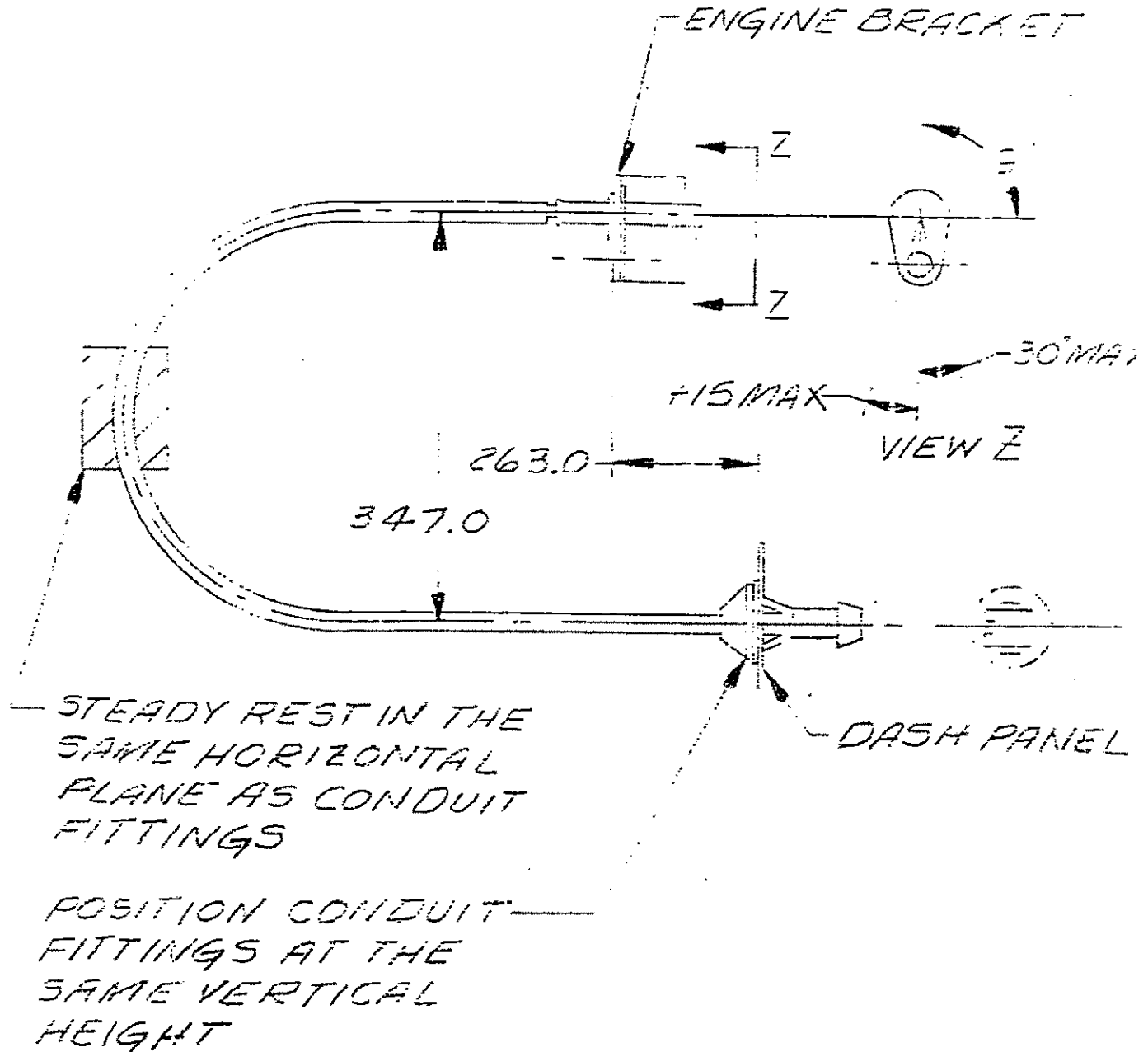




FIGURE V B  
SECTION III. 8.F

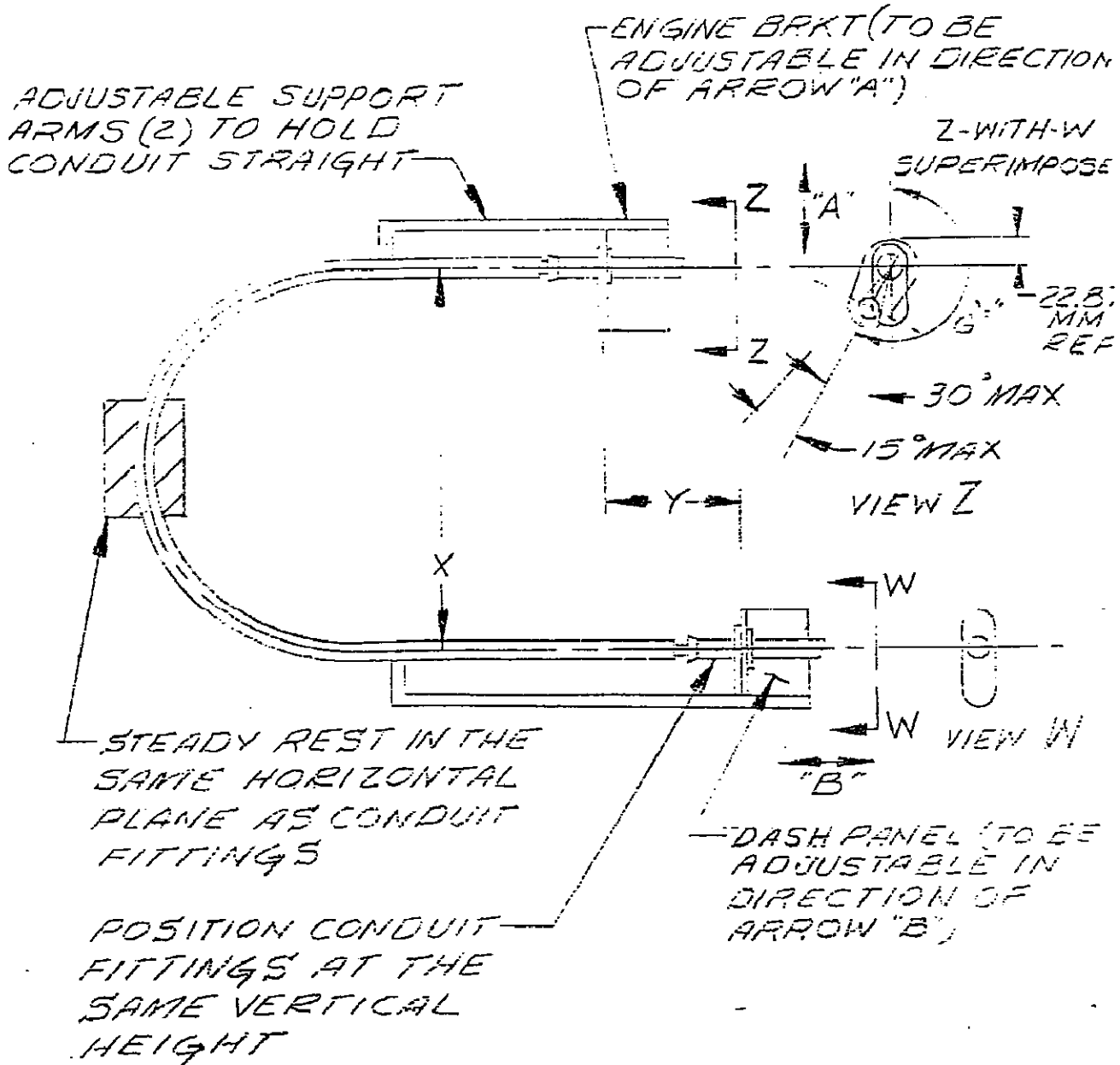




FIGURE VII A, 1 OF 2  
ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE  
LOAD SIMULATION  
CABLE INPUT LOAD AT THROTTLE BODY  
SECTION III.1

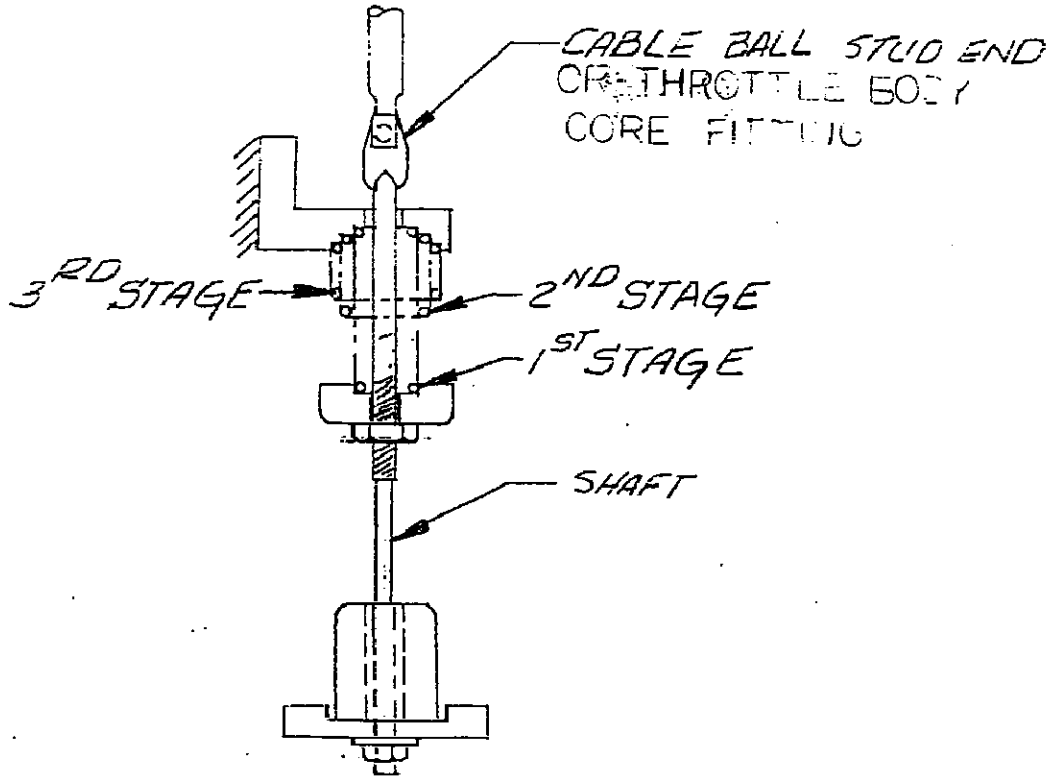
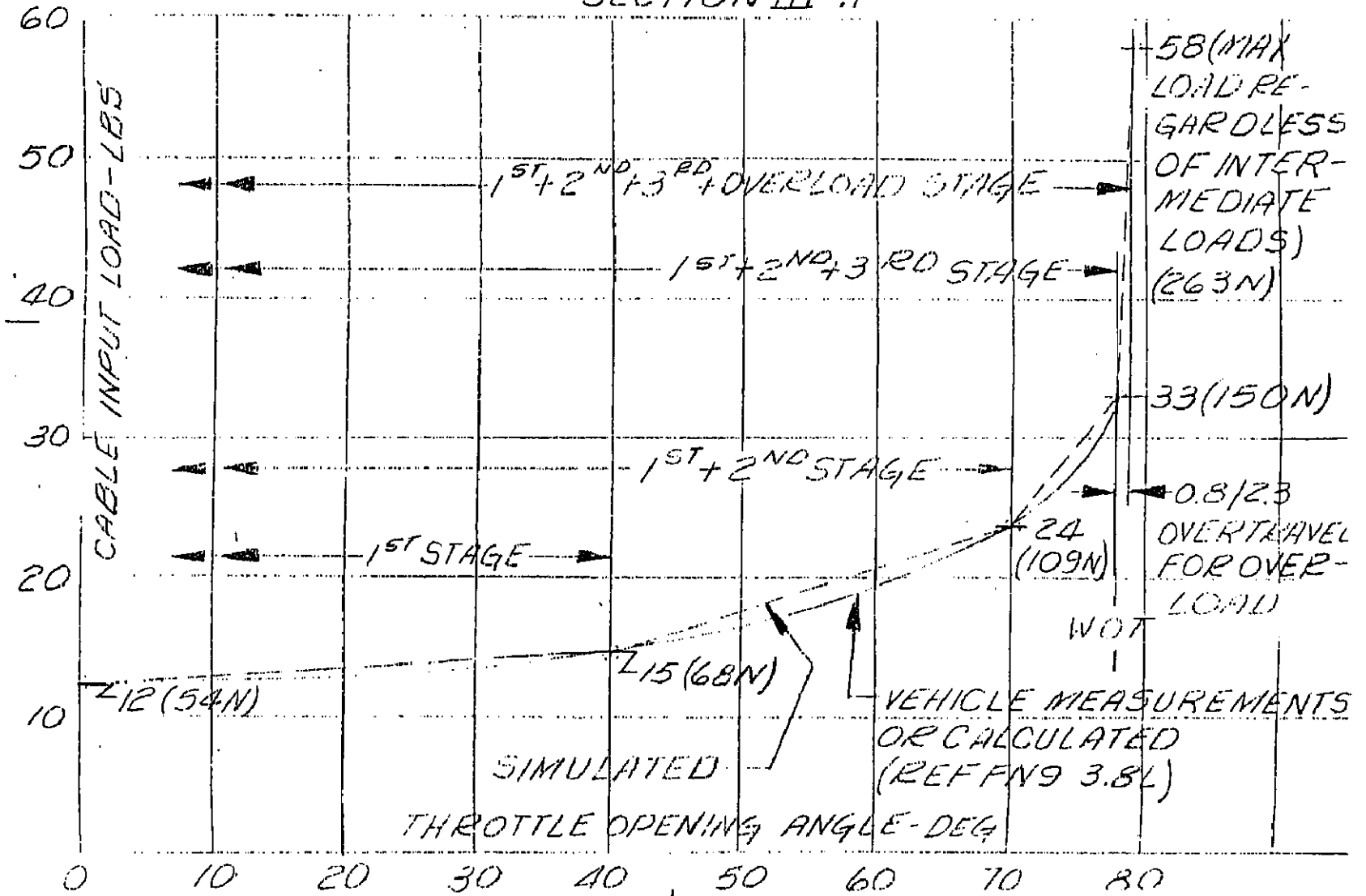




FIGURE VII A 2 OF 2  
ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE LOAD SIMULATION  
CABLE INPUT LOAD AT THROTTLE BODY  
SECTION III .1



FRAME 33 OF 40

REVISED

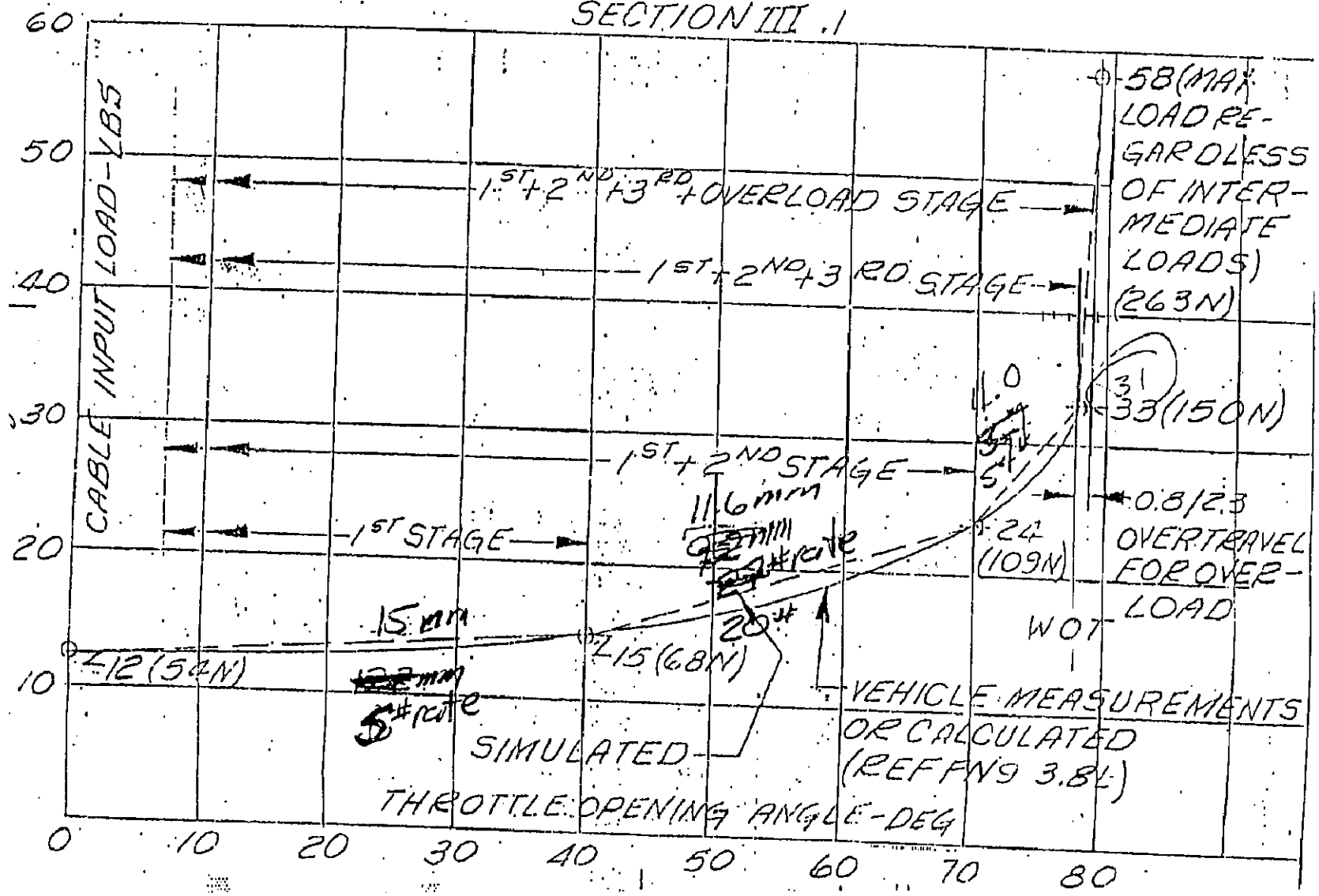
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NUMBER ▽ ES-F5TA-9A758-AA





FIGURE VII A 2 OF 2  
 ACCELERATOR CABLE LIFE TEST FIXTURE VEHICLE LOAD SIMULATION  
 CABLE INPUT LOAD AT THROTTLE BODY  
 SECTION III .1



FRAME 34 OF 40

REVISED

030819

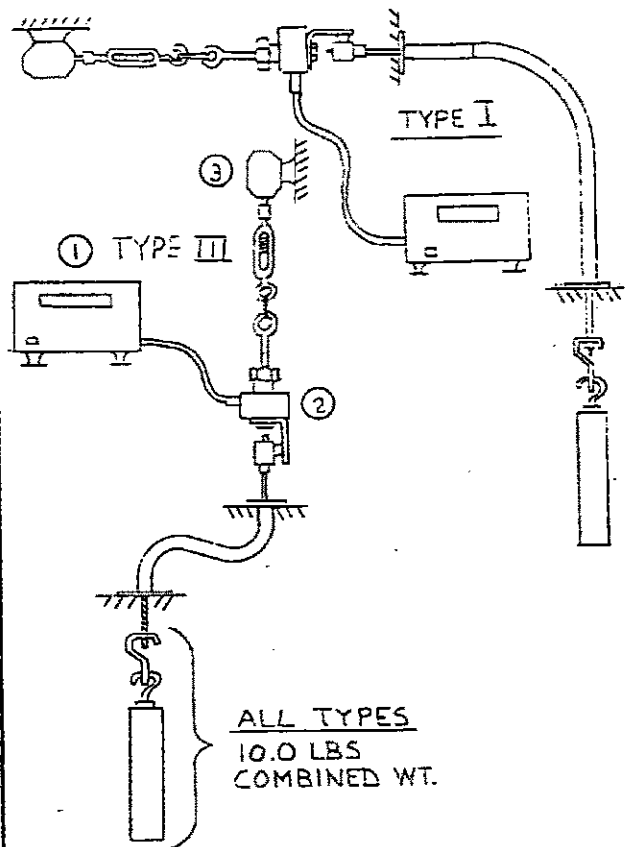
NUMBER ▽ ES-F5TA-9A758-AA



## ACCELERATOR CABLE EFFICIENCY MEASUREMENT

PROCEDURE FIGURE VII B. 1 OF 2

### SECTION III.9



#### EQUIPMENT

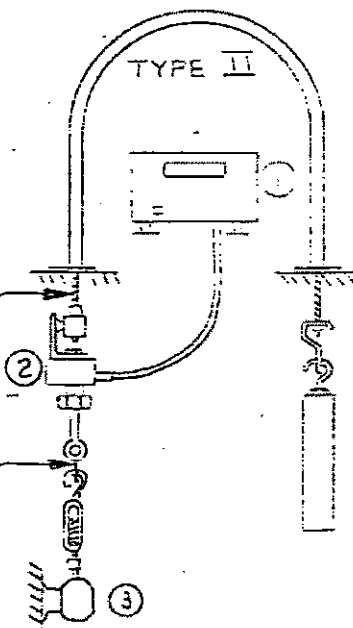
- ① REVERE T60 DIGITAL WEIGHT INDICATOR
- ② REVERE UMPI-.025A. LOAD CELL
- ③ BODINE MOTOR NSH-12R & MINARIK CONTROLLER SL-15

#### PROCEDURE

CYCLE CABLE UP & DOWN SEVERAL TIMES TO INSURE HIGHEST EFFICIENCY BEFORE RECORDING READINGS. TAKE READINGS WITH CONTROLLER (3) SET AT "LO/50" AT MIDSECTION OF CABLE TOTAL TRAVEL AND WITHIN THE SAME 0.25" RANGE FOR BOTH DIRECTIONS THE PRINTER MUST AUTOMATICALLY BE ACTIVATED AND RECORD THE VALUES WITHIN THE .25" RANGE & CYCLE. CABLE PART NO. & DATE CODE IS TO BE ADDED TO THE PRINTED RECORD

ALL TYPES:  
WITH CABLE COMPRESSION  
SPRING - COMPRESS SPRING  
& HOLD SPRING & GUIDE TO  
REMOVE THEIR EFFORTS

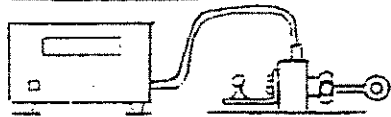
ALL TYPES  
OVERLOAD LINK (GIANT  
PAPER CLIP) 25 LBS MAX.





# Engineering Specification

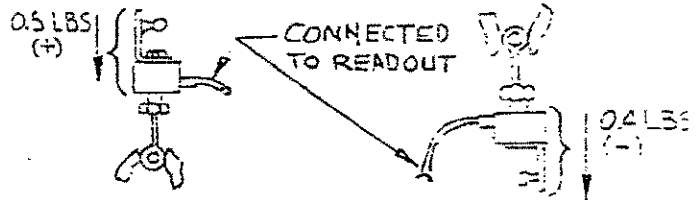
## 7. READOUT



ZERO READOUT WITH LOAD CELL RESTING HORIZONTALLY

## 8. LOAD CELL

- TYPE I SYSTEM SAME AS FOR READOUT (A)
- TYPE II SYSTEM • TYPE III SYSTEM



SUPPORT LOAD CELL VERTICALLY AT STEM TO DETERMINE ITS WIRE LOAD EFFECT. LOAD READOUT IS ADDED (+) TO READOUT OF 10.0 LB WT. IN SYSTEM

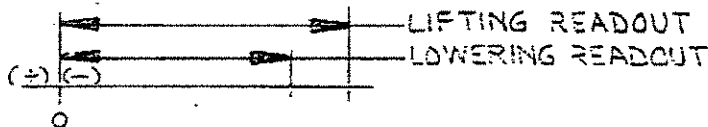
HANG LOAD CELL VERTICALLY AT STEM TO DETERMINE ITS WIRE LOAD EFFECT. LOAD READOUT IS SUBTRACTED (-) FROM READOUT OF 10.0 LB WT. IN SYSTEM

## CABLE EFFICIENCY DETERMINATION

NOTE: VALUES SHOWN AT LOAD CELL MAY MEASURE DIFFERENT & SHOULD BE ESTABLISHED FOR SPECIFIC SET-UPS

### TYPE I SYSTEM

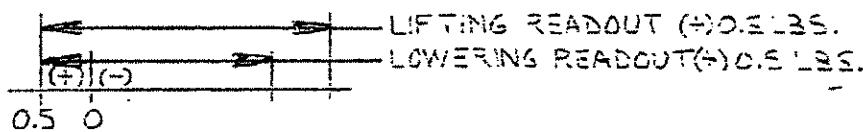
$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT.}}{\text{LIFTING 10.0 LB. WT.}}} \times 100$$



NOTE: (+) SYMBOL INDICATES LOAD CELL IS IN COMPRESSION & ITS EFFECT (0.5 LBS.) IS ADDED. THE (-) SYMBOL INDICATES LOAD CELL IS IN TENSION & ITS EFFECT (0.4 LBS.) IS SUBTRACTED

### TYPE II SYSTEM

$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT. (+) 0.5 LBS.}}{\text{LIFTING 10.0 LB. WT. (+) 0.5 LBS.}}} \times 100$$



### TYPE III SYSTEM

$$\% \text{EFFI} = \sqrt{\frac{\text{LOWERING 10.0 LB. WT. (-) 0.4 LBS.}}{\text{LIFTING 10.0 LB. WT. (-) 0.4 LBS.}}} \times 100$$

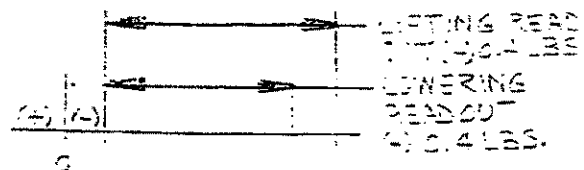
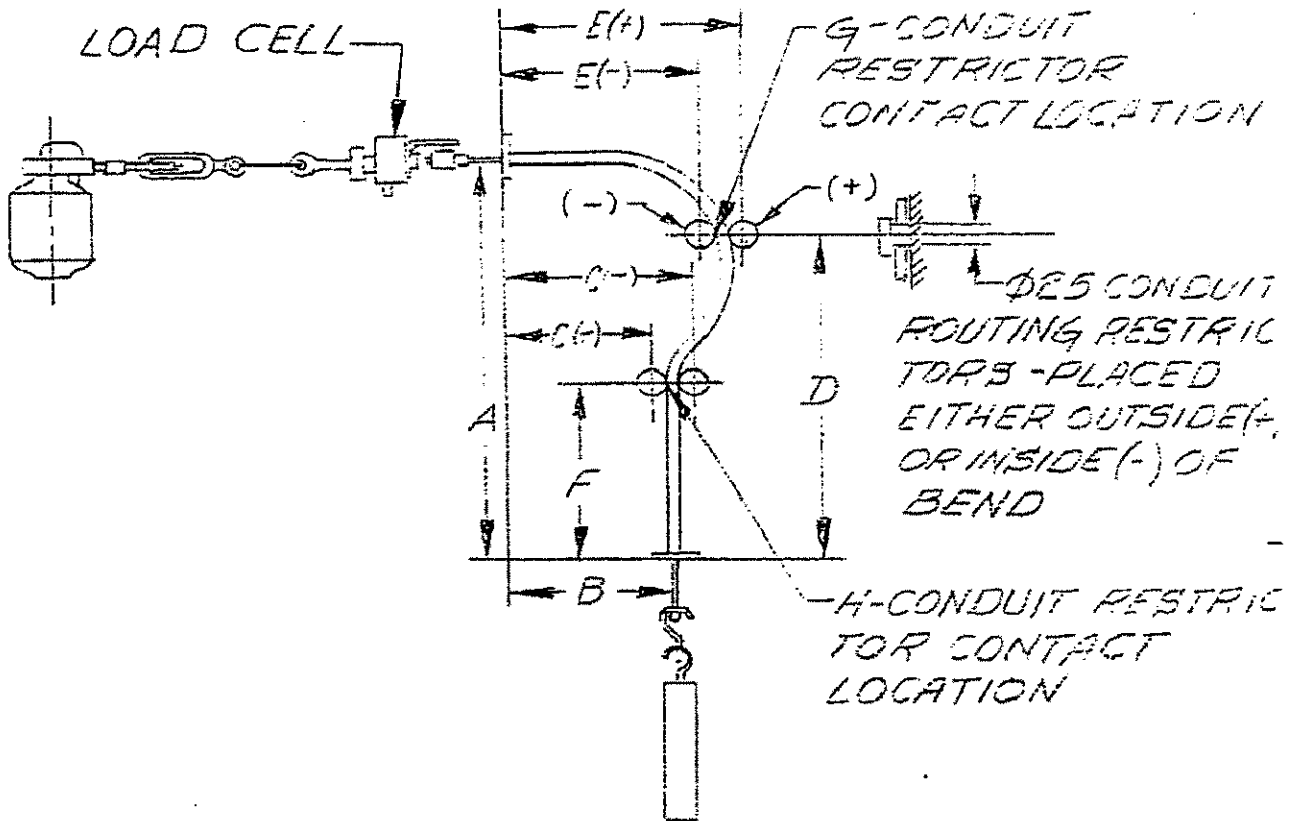


FIGURE VII C  
TYPE I ROUTING  
SECTION III.9



REFER TO FIG. VII B FOR  
EQUIPMENT & USAGE

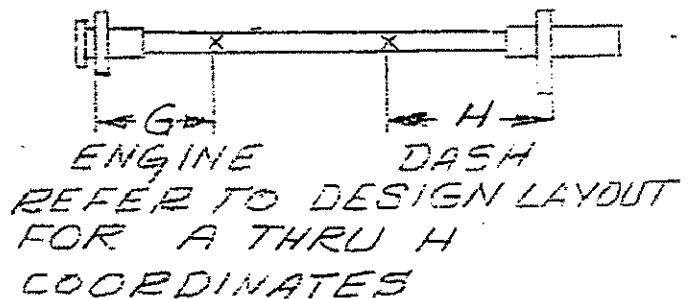
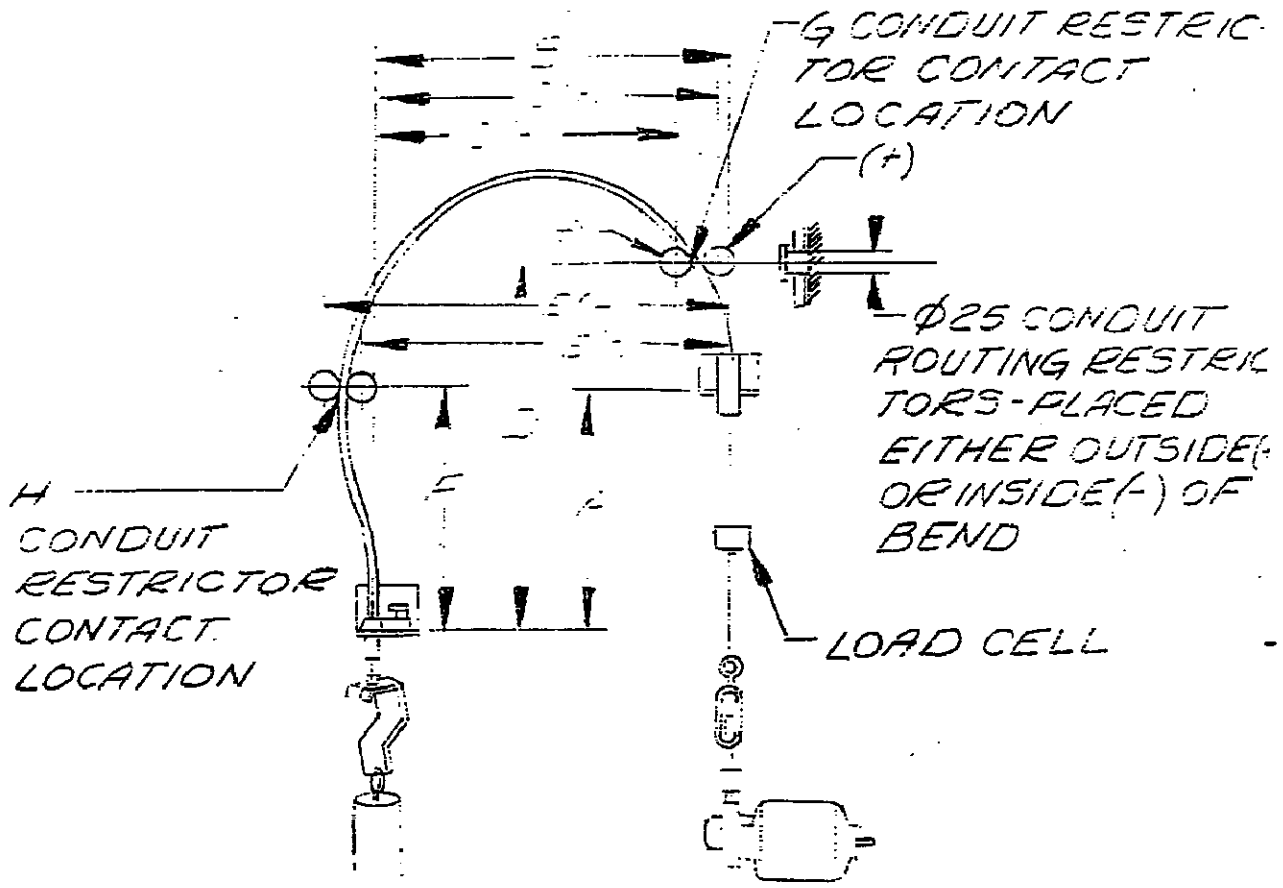
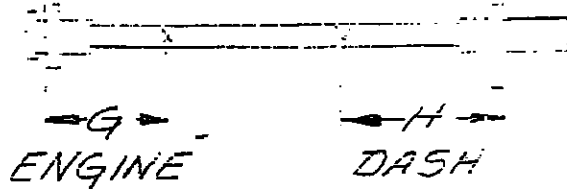




FIGURE VII D  
SECTION III .9  
TYPE II ROUTING



REFER TO FIGURE III B FOR EQUIPMENT & USAGE

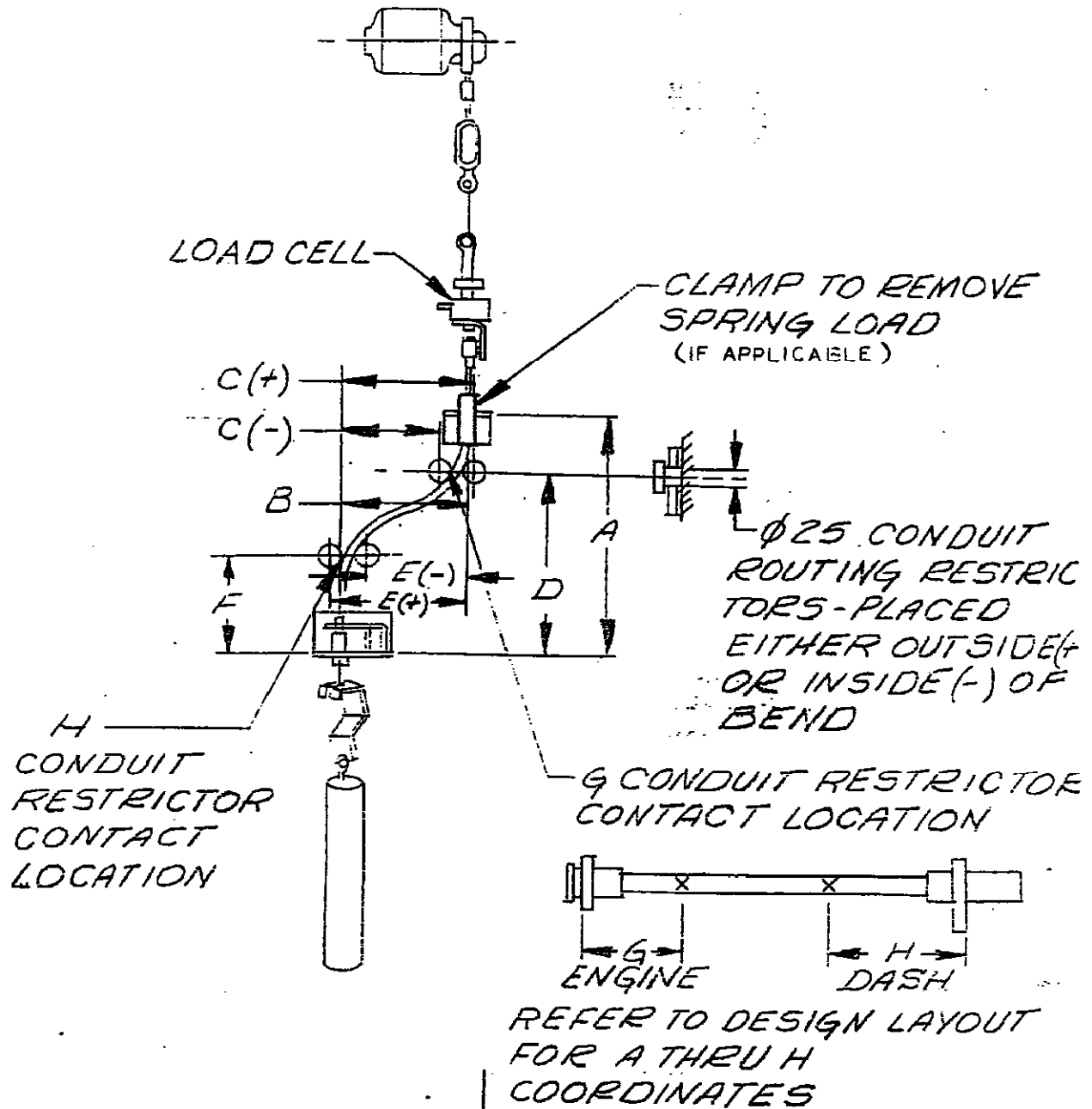


REFER TO DESIGN LAYOUT FOR A THRU H COORDINATES



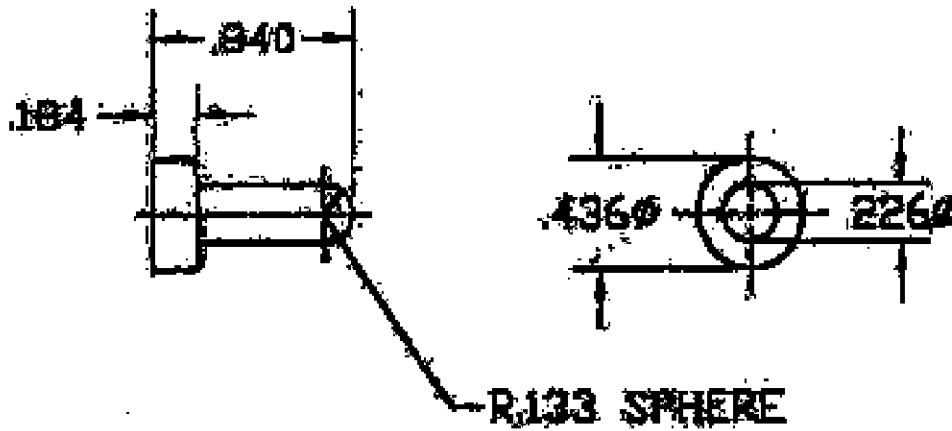
FIGURE VII E  
SECTION III.9  
TYPE III ROUTING

REFER TO FIG. VII B FOR  
EQUIPMENT & USAGE





**Figure VIII**  
**Ball Socket Stud Design for Cable Final Assembly Check**



PE12-019

FORD

9-4-2012

APPENDIX L

ES-F8VF-9A825-AA Eng Spec





# ENGINEERING SPECIFICATION

PART NAME											PART NUMBER						
SPEED CONTROL CABLE											ES-F8VF-9A825-AA						
LET	A																
FR	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
LET																	
FR	18	19	20	21	22	23	24	25									
LET																	
FR																	
LET																	
FR																	
LET																	
FR																	
LET																	
FR																	
DATE	LET	FR	REVISIONS								DR	CK	REFERENCE				
			DAN RIM (313) 845-4546														
971217			REL DE00-E-10802489-000										PREPARED/APPROVED BY				
	A	1	REV COVER SHEET										DAN RIM				
	A	14	REV FIGURE 1										CHECKED BY/DETAILED BY				
	A		MIKE KOZYKOSKI (313) 248-3234										<i>CKozys</i>				
990804	A		REL DE00-E-10888678-002										CONCURRENCE/APPROVED				
													SIGNATURES				
													DESIGN ENGRG. SUPV.				
													DESIGN ENGRG. MGMT.				
													MANUFACTURING ENGRG.				
													QUALITY CONTROL				
													PURCHASING				
													SUPPLIER QUALITY ASSISTANCE				

FRAME 1 OF 25      REV A

TABLE OF CONTENTS

- 1 GENERAL
- 2 SUMMARY OF PRODUCTION VALIDATION AND IN-PROCESS TESTS
- 3 TEST PROCEDURES AND REQUIREMENTS
  - 3.1 Measurements
    - 3.1.1 Gage Length (Travel Length)
    - 3.1.2 Efficiency
  - 3.2 Cable Integrity Tests
    - 3.2.1 End Slug Proof Load Test
    - 3.2.2 Throttle Connector Assembly Tension Test
  - 3.3 Extended Use Tests
    - 3.3.1 Life Cycle Test
    - 3.3.2 Lost Motion Cycle Test
    - 3.3.3 Salt Mist Atmosphere Test
    - 3.3.4 Chemical Resistance Test
    - 3.3.5 Cable Freeze Test
  - 3.4 Cable Abuse Test
    - 3.4.1 Throttle Connector Bend Test
    - 3.4.2 Conduit Crush Test
    - 3.4.3 Cable Torsion and Tension Test
    - 3.4.4 Engine Attachment Fitting Side Loading Test
  - 3.5 Vehicle Assembly test
    - 3.5.1 Engine Attachment Fitting Assembly Test
    - 3.5.2 Throttle Connector Assembly Test
- 4 REVALIDATION REQUIREMENTS
- 5 INSTRUCTIONS AND NOTES
  - 5.1 Common Test Conditions
  - 5.2 Equipment Approval
  - 5.3 Calibration Requirements
  - 5.4 Test Data Reporting
- 6 COMPILATION OF REFERENCE DOCUMENTS

FIGURES

- |           |   |
|-----------|---|
| Figure 1  | Type "S" Routing                                    |
| Figure 1a | Throttle Attachment Geometry                        |
| Figure 2  | Diagram for Throttle Connector Tension Test         |
| Figure 3  | Diagrams for Throttle Connector Bend Test           |
| Figure 4  | Cable Conduit Crush Strength Test Fixture           |
| Figure 5  | Lost Motion Cycle Test Fixture                      |
| Figure 6  | Cable End Mold Torsion Test Fixture                 |
| Figure 7  | Life Cycle Test Environmental Profile               |
| Figure 8  | Diagram for Cable Conduit Pull Test                 |
| Figure 9  | Diagram for Throttle Connector Assembly Effort Test |
| Figure 10 | Cable Side Loading Test                             |

TABLES

- |         |  |
|---------|--|
| Table 1 | Summary of ES Test and Acceptance Parameters |
|---------|--|



## 1 GENERAL

This Engineering Specification is a supplement to the released drawing of the referenced part. All requirements herein must be met in addition to all other requirements of the part drawing. Where applicable the released drawing takes precedence over this specification. Minimum measures necessary for demonstrating compliance to these requirements are given in Table 1 and Section 3.

The Engineering Specification is intended to evaluate specific characteristics as a supplement to normal material inspections, dimensional checking, and in process controls. It should in no way adversely influence other inspection operations.

Preparation and submission of an acceptable Control Plan are the responsibility of the Manufacturing source. Control Plan approval by Visteon Automotive Systems (Visteon) or by other activities according to ISO/QS9000 is a prerequisite for the Production Part Approval Process (PPAP). The manufacturing source will retain the original of the approved Control Plan and any later revisions per ISO/QS9000 and provide a copy to the design responsible Visteon.

## 2 SUMMARY OF PRODUCTION VALIDATION AND IN-PROCESS TESTS

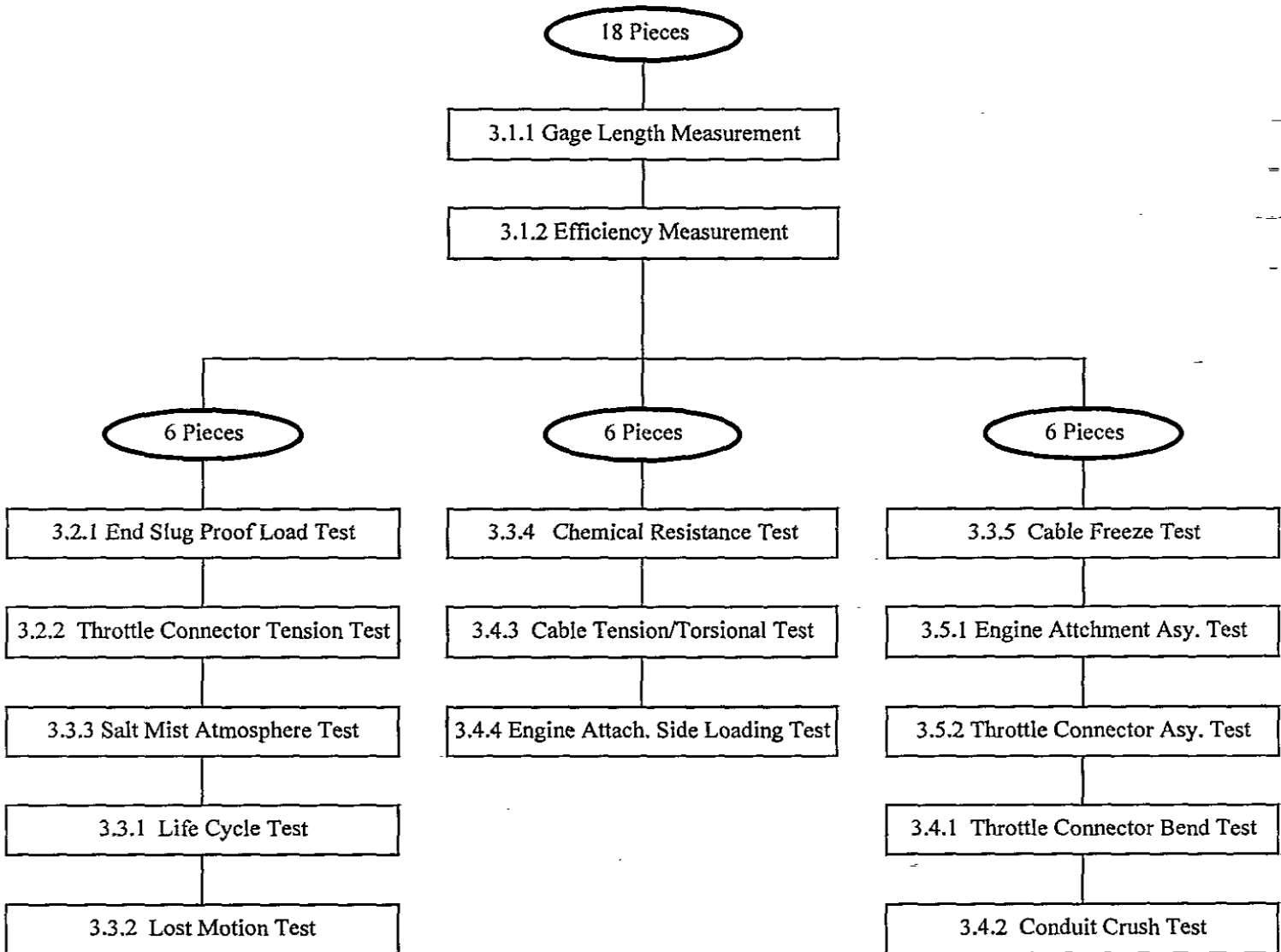
Production validation (PV) tests must be completed satisfactorily with parts from production tooling and processes at production rates before Production Part Approval and authorization for shipment of parts can be issued. The PV testing program includes engineering tests and evaluations conducted to assure that initial production parts from regular production tooling and processes meet the design intent. This program is performed by the supplier on parts having previously passed all dimensional, chemical, metallurgical, physical, etc. requirements. Sampling Plans for PV testing must be included in the DVP&R.

In-Process (IP) tests are used to further understand the relationship between significant design and process characteristics and to establish a basis for continuing improvement. Tests must be completed with production parts on an ongoing basis. Sampling plans for both IP testing and evaluation of the significant process characteristics must be included in the Control Plan. When the process is found to be out of control or the test acceptance criteria are not met, the reaction plan approved in the Control Plan shall be invoked.

Table 1 summarized the various PV and IP tests and the acceptance parameters for each. They form the basis on which to develop a complete control plan for these and their related significant process characteristics. The Control Plan will include frequencies, sample sizes and reaction plans. Parts must be revalidated completely, or per section 4 whenever any change is made which could possibly affect part function or performance.

The PV flow chart shows the sequence in which PV tests are to be performed. Test set up and description details are found in Section 3 of this document.

## PV TEST SEQUENCE FLOW





### 3 TEST PROCEDURES AND REQUIREMENTS

#### 3.1 Measurements

##### 3.1.1 Gage Length (Travel length)

- a. Purpose - To verify that the part is to design intent and will not hold the throttle off idle or cause poor system performance.
- b. Mounting - A completed cable assembly shall be mounted with the servo end mold and core wire on a gage block which simulates a production speed control servo pulley, or if dictated by the released detail drawing, the core wire may be located in the shipping slot. The engine bracket attachment shall be placed in an appropriate mating feature. The throttle attachment shall be attached to a nail head (or other appropriate mating feature). In this mounting, the cable shall be in a straight orientation (as opposed to routed).  
Note: Gage length measuring fixture must be approved by Visteon.
- c. Procedure - A 44.0 N tensile force shall be applied to the servo end mold to ensure the conduit is straight and taught and a 22.0 N force shall be applied in the opposite direction to the throttle connector.
- d. Measurement - The gage (or travel) dimension shall be measured per procedure listed above or in accordance with the cable assembly detail drawing.

##### 3.1.2 Efficiency

- a. Purpose - This test verifies that the cable performs within limits which ensure acceptable speed control performance and will not create a drag which impedes throttle return.
- b. Mounting - Mount the cable as specified in Figure 1. Apply a 44.0 N load at the throttle end connector. Attach the servo end of the cable to a radial drive motor with a built in torque sensor or to other Visteon approved efficiency test fixture.
- c. Procedure - Cycle the cable back and forth 40.0 mm 10 times at a rate of 1 cycle per 2 seconds. Then cycle the cable one more time at the same rate, and measure and record the torque required to pull the load and the torque exerted when the load is released.
- d. Calculation T1= Pull Force  
T2 = Release Force  
$$\text{Efficiency} = \text{Square Root } (T2/T1) \times 100\%$$
- e. Measurement - Calculated Efficiency must conform to the values specified in Table 1 at room temperature or at specified temperature.



### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.2 Cable Integrity Tests

##### 3.2.1 End Slug Proof Load Test

- a. Purpose - This test ensures that the core (pull) wire end slugs will remain secure under extreme loads.
- b. Mounting - Test sample shall be positioned in a linear configuration. Access and clamp the cable end slugs.
- c. Procedure - For PV, apply a tensile force at a rate of  $1.0 \pm 0.25$  mm per second until a force of 360.0N is reached or per Table 1, between the slugs, and hold for 60 second period. For IP, apply a tensile force at a rate of min. 1.0 mm per second and hold for 0.1 to 0.75 seconds.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. If the slugs move or detach from the cable, the sample has failed. For PV tests, monitor the force for the test period and record any changes. If the force decreases more than 10.0 N during the test period the test cable has failed this test.

##### 3.2.2 Throttle Connector Assembly Tension Test

- a. Purpose - This test will validate the integrity of the speed control cable throttle attachment under extreme tension.
- b. Mounting - Install the complete cable assembly in a test fixture, such that a load is applied between the servo end slug and the throttle end attachment, generally a nail head (See Figure 2). Mount the servo end to a fixed steel pulley, retaining the end slug there in.
- c. Procedure - Apply a tensile force at a rate of  $1.0 \pm 0.25$  mm/sec until a load of 225 N is reached. Hold this position and monitor the force for 60 seconds, then release it.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. Monitor the force for the 60 second period and record any changes. If the force decreases by more than 22.0 N during the test period, the test cable has failed this test. The cables shall be tested and evaluated per Gage Length Measurements (Section 3.1.1).

#### 3.3 Extended Use Tests

##### 3.3.1 Life Cycle Test

- a. Purpose - To validate that the cable assembly will function within specified limits for the equivalent of 10 yrs, 150,000 miles.

3 TEST PROCEDURES AND REQUIREMENTS (cont.)3.3 Extended Use Test (cont.)3.3.1 Life Cycle Test (cont.)

- b. Mounting - Mount the cable as specified in the Figure 1. Attach the servo end of the cable to a production plastic speed control servo pulley. Attach the throttle end of the cable to a nailhead (or other appropriate feature) which is on a lever with a 35 mm radius. The starting/rest position shall be 20 degrees past perpendicular (see Figure 1a). The lever shall be connected to load of  $30 \pm 5$  N off idle with  $6.5 \pm 1$  N/cm. The sample's engine and throttle attachment shall be mounted either 10 deg. upward or downward as specified in DVP&R. The test shall be conducted in an environmental chamber.
- c. Procedure - By actuating the cable from the servo end, cycle the cable assembly at a rate of 30 cycles/minute unless otherwise specified. Cycle the cable and vary the environmental conditions per Figure 7 until a total of 100,000 cycles accumulates on each test sample. A cycle is defined as one stroke back and forth over a linear distance of 40 mm. Every 25,000 cycles, introduce  $3.0 \text{ g/m}^3$  of SAE Grade 1 - Arizona Dust into the test cables by directing this dust at the overlap at the throttle end of the cable. Circulate the dust for the next 1,000 cycles. A new pulley shall be used for each life cycle per cable.
- d. Measurement - Inspect the cables for signs of structural damage which would cause part failure. The cables shall be evaluated per Efficiency Test (Section 3.1.2) and measure, in routed position, delta change in core wire length before and after the life cycle test. Additionally, efficiency measurement shall be taken at  $125^\circ\text{C}$  at every 25,000 cycles.

3.3.2 Lost Motion Cycle Tests

- a. Purpose - This test will ensure that the speed control cable will withstand normal foot controlled throttle operations.
- b. Mounting - The cable may be mounted straight or as specified in Figure 1. Attach the Servo end of the cable to a fixed pulley which simulates the production speed control servo pulley. Locate the engine bracket attachment fitting in an appropriate mating feature. Attach the throttle end of the cable to a nail head or other appropriate feature which is on a lever with a 35 mm radius (see Figure 5).
- c. Procedure - Actuate the cable from the throttle end by cycling the lever back and forth at a rate of 60 cycles/minute. Cycle the throttle end and vary the environmental conditions per Figure 7 until a total of 500,000 cycles accumulates on each test sample.
- d. Measurement - At the end of the test, remove the cable from the test fixture. Ensure the core wire is free from the shipping slot. Manually slide the throttle attachment connector back and forth. The throttle attachment connector should slide freely and the core wire should not move.



### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.3 Extended Use Tests

##### 3.3.3 Salt Mist Atmosphere

- a. Purpose - This test will verify that the cable can withstand the effects of operating in conditions of high salt mist.
- b. Mounting - The cables shall be placed in a salt mist chamber. The cables shall be evenly spaced and horizontally oriented.
- c. Procedure - Expose the cables to salt mist atmosphere (5% salt water solution @ 35°C; made up of 5.0% NaCl) for 168 hours.
- d. Measurements - Measure first five Efficiency per Section 3.1.2 without pre-stroking.

##### 3.3.4 Chemical Resistance

- a. Purpose - This test will verify that the cable can withstand the effects of exposure to common under hood chemicals.
- b. Mounting - Position the parts in an environmental chamber so that they do not contact each other and so that there is equal flow of air around each sample. 150 mm diameter mandrills may be used for cable routing if required.
- c. Procedure - Brush the following chemicals onto one cable each (one chemical per sample cable) such that at least 90% of the external surfaces of the cable assembly are coated including all overlap areas.. Then soak the cable for 96 hours at 115°C.

##### List of Chemicals

1. Engine oil (10W-30)
2. Transmission Fluid (Merkon)
3. Brake Fluid (DOT 3)
4. Coolant (50% Ethylene Glycol solution with water)
5. Engine cleaning soap (Gunk Brand - Heavy Duty)
6. CaCl (30% Calcium Chloride solution with water)

- d. Measurements - Evaluate per Efficiency (Section 3.1.2).

##### 3.3.5 Cable Freeze Test

- a. Purpose - This test is to simulate cable exposure in a cold temperature environment.
- b. Mounting - Sample cables shall be mounted either 10 ° upward or downward from engine mounting point. Refer to direction specified in DVP&R.





### 3 TEST PROCEDURES AND REQUIREMENTS (cont.)

#### 3.3 Extended Use Tests (cont.)

##### 3.3.5 Cable Freeze Tests (cont.)

- c. Procedure - Spray generously throttle end of cable 10 times ensuring sufficient coverage with water while cycling the cable 5 times through its maximum travel. Expose the entire cable to  $-40^{\circ}\text{C}$  for one hour minimum.
- d. Measurements - Evaluate per Efficiency Tests (Section 3.1.2) at  $-40^{\circ}\text{C}$ .

#### 3.4 Abuse Tests

##### 3.4.1 Throttle Connector Assembly Bend Test

- a. Purpose - This test will ensure that the cable is durable against potential abuse which it may receive in the plant prior to and during vehicle installation. This test is not required for speed control cables with an integral return spring.
- b. Mounting - Prepare the test cable so that the servo end of the core wire is bottomed out in the shipping slot. Bend the throttle connector over  $180^{\circ}$ , and secure it against its conduit with a rubber band as per Figure 3.
- c. Procedure - Hold the position with rubber band for minimum of 60 seconds and remove the rubber band.
- d. Measurement - Inspect the cables for signs of structural damage which would cause part failure. The cables shall be measured per Efficiency Test (Sections 3.1.2).

##### 3.4.2 Conduit Crush Tests

- a. Purpose - This test will ensure that the cable is durable against potential abuse which it may receive in the plant prior to and during vehicle installation.
- b. Mounting - Position the conduit portion of the cable in a test fixture per Figure 4. Remove any curvature in the conduit between the test fixture guides. Position the cable under the crush pad such that it is centered between the servo end mold and the conduit end mold. If the cable has foam on it which does not entirely expose the test area for a length of 70.0 mm, it is permissible to test the parts with all or part of the foam under the applied load.
- c. Procedure - Apply a load of 1,334 N (at minimum rate of 111.2 N per second) distributed over a length of 70.0 mm. The location of this crush should be centered between the servo and conduit end mold. After 60 seconds, remove the load. Measurement shall be completed within 30 minutes from removal of the load.



3 TEST PROCEDURES AND REQUIREMENTS (cont.)

3.4 Abuse Tests (cont.)

3.4.2 Conduit Crush Tests (cont.)

- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. The cables shall be measured and evaluated per Efficiency Test (Section 3.1.2). Record first 5 measurement without pre-stroking.

3.4.3 Cable Conduit Mold Torsion and Tension Test

- a. Purpose - This test will validate the integrity of the cable end molding's attachment to the conduit and verify the conduit's dimensional stability under torsion and tension.
- b. Mounting a) - Install the complete cable assembly in a fixture which clamps the conduit 60 mm from the base of the servo or conduit end mold (see Figure 6).  
Mounting b) - Install the complete cable assembly in a test fixture, such that the load is applied between the servo end mold and the conduit end mold (See Figure 8).
- c. Procedure - Rotate the plate that clamps the end mold in place 90°. Hold this position for 10 seconds. Then rotate the sample cable 180° in the opposite direction (-90° from the starting position). Hold this position for 10 seconds. Repeat this cycle 10 times. Maintain a rate of 90°/sec during all rotations. (See Figure 6 - "rotation rate"). Then apply a tensile force at a rate of  $1.0 \pm 0.25$  mm per second until a force of 225 N is reached. Hold this position for 60 seconds, then release.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. Monitor the force for the 60 second period and record any changes. If the force decreases by more than 22.0 N during the test period the test cable has failed this test. The cables shall be measured and evaluated Gage Length Measurement (Section 3.1.1).

3.4.4 Engine Attachment Fitting Side Loading Test

- a. Purpose - This test is to verify that the engine attachment fitting will not be damaged during normal vehicle installation.
- b. Mounting - Engine Bracket or simulated engine bracket with worst case tolerances (Use max. hole size and min. thickness).
- c. Procedure - Insert the fitting into the mounting plate as described above and apply side load of 45.0 N. The load shall be applied to the conduit end fitting 90° to the centerline as shown on Figure 10.
- d. Measurement - Inspect the cable for signs of structural damage which would cause part failure. The engine fitting shall not disengage fully or partially from the mounting plate.



3 TEST PROCEDURES AND REQUIREMENTS (cont.)

3.5 Vehicle Assembly Tests

3.5.1 Engine Attachment Fitting Assembly Test

- a. Purpose - This test is to verify the engine attachment fitting can be installed and retained in the engine bracket within specified tolerances. This test applies to Push-n-Snap and Slide-n-Snap style end fittings.
- b. Mounting - Engine Bracket or simulated engine bracket with worst case tolerances (Use min. hole size and max. thickness with open slot if necessary for insertion and max. hole size and min. thickness for retention test).
- c. Procedure - Installation: At a minimum rate of 2.5 mm per second, snap the engine attachment fitting into the bracket and record the maximum force required to engage.  
  
Procedure - Retention: Apply 200 N force away from the engine bracket by gripping conduit 100 mm rearward of the end fitting at 30° angle. Hold the conduit at each 90° position for 10 seconds.
- d. Measurements - Insertion force shall not exceed 90.0 N. End fitting shall not disengage fully or partially from the bracket when cable is at rest following above retention test.

3.5.2 Throttle Connector Assembly Tests

- a. Purpose - This test will verify that force required to install will be in compliance to the specified limits.
- b. Mounting - Position the Throttle Connector as illustrated in the Figure 9.
- c. Procedure - Installation: At a minimum rate of 2.5 mm per second, snap the connector onto a nailhead (or appropriate feature) and record the max. force required to engage.  
  
Procedure - Removal: At the same rate, remove the connector from the Nailhead and record the force required to disengage.
- d. Measurements: Insertion force required shall not exceed 55.0 N and removal force required shall not be less than 20.0 N.



#### 4 REVALIDATION REQUIREMENTS

The manufacturing source and the Design and Release activity will jointly determine potential changes to the process, materials or material sources which may have significant impact on the product's function, performance, durability or appearance. The supplier will describe these conditions in the Control Plan, along with either

- (1) the revalidation plan that would be followed in each case, or
- (2) a provision to submit an amended Control Plan for approval if any of those process changes are planned.

The Control Plan must include a provision that, for any significant change in processing, Design and Release activity and the supplier shall jointly determine if PV re-testing is required, and, if so, to what degree, i.e., Full or Mini-PV. If it is agreed that less than a full PV is acceptable, it is the supplier's responsibility to obtain DVP&R from Design and Release activity for detail test plan.

No changes to processing may be allowed without prior engineering approval of the process changes via a signed SREA or an equivalent and the attendant Control Plan changes.

For major changes in basic cable construction, it may be necessary to run Life Cycle Test 3.3.1 to failure. If this is necessary, Design and Release Activity will notify the supplier.

Although many test data can be surrogated for repeat test, manufacturing source may be required to perform entire PV testing to re-validate the data on annual basis.

#### 5 INSTRUCTIONS AND NOTES

##### 5.1 Common Test Conditions

Unless otherwise specified, the following conditions shall apply:

Test Room Temp =  $20 \pm 5^{\circ}\text{C}$   
Humidity =  $65 \pm 20\%RH$

##### 5.2 Equipment Approval

All test equipment concepts and final test equipment used to perform the required tests described in Section 3 must be evaluated and approved by Visteon Design and Release Activity. Any changes to the test method or equipment other than minor calibration corrections, must receive approval from Design and Release Activity through Form 1638 - Supplier Request for Engineering Approval or equivalent.

5 INSTRUCTIONS AND NOTES (cont.)5.3 Calibration Requirements

An equipment calibration schedule with procedures and intervals must be submitted to and agreed upon by Visteon and STA. Proper records must be maintained for all calibration procedures performed.

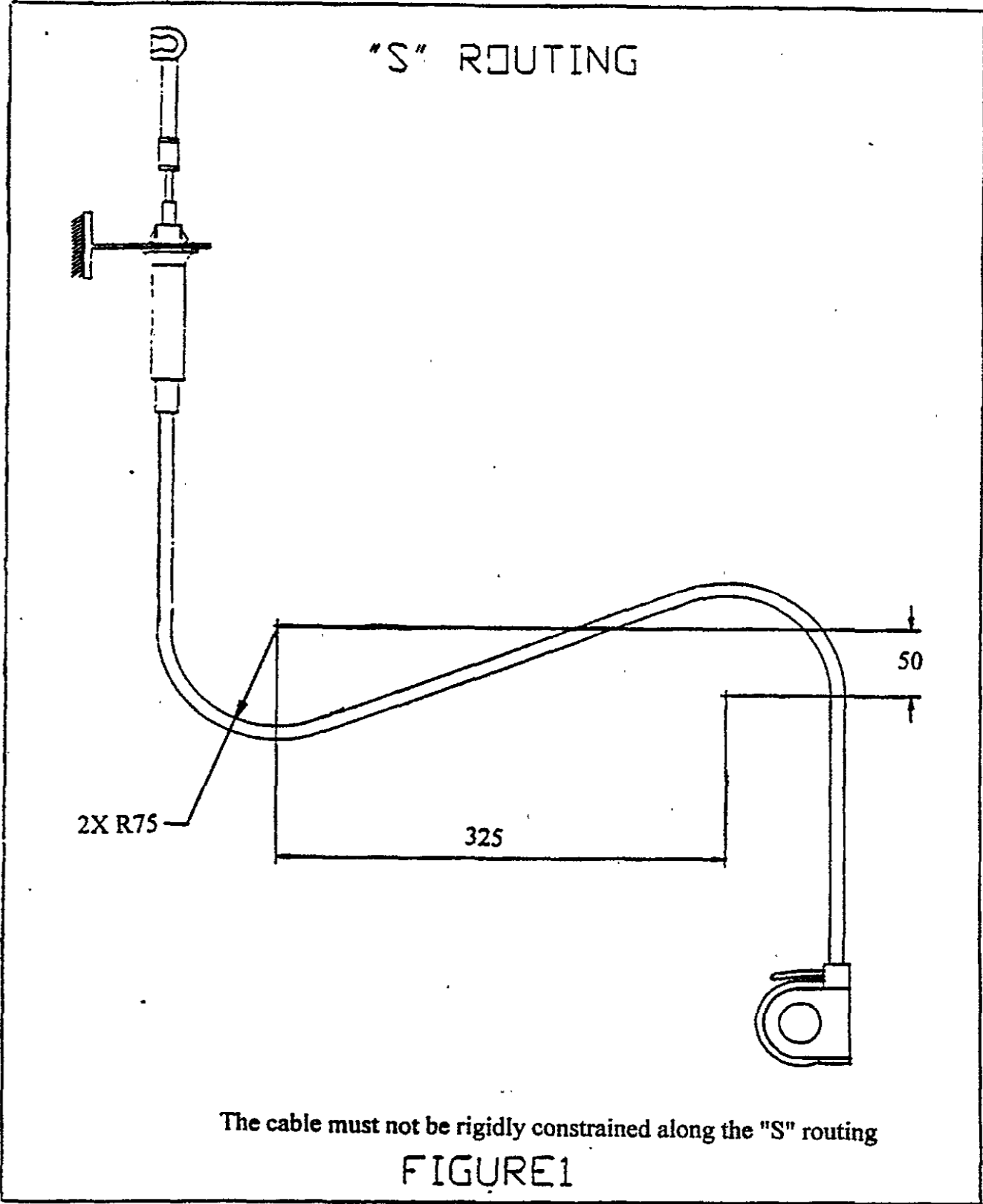
5.4 Test Data Reporting

All test results must be recorded on Visteon Design and Release Activity approval summary sheets, detailing the following:

- Test Name/Specification Section Number
- Part Number of sample started
- Sample identification number
- Sample lot number and/or manufacturing date
- Test completion date
- Test equipment identification and last calibration date
- Test acceptance criteria
- Specified test conditions and actual test conditions
- Test results and conclusions
- Technician name/Supervisor initials

6 COMPILATION OF REFERENCE DOCUMENTS

ISO/QS-9000, Quality System Requirements  
Production Part Approval Process (PPAP)  
Supplier Request for Engineering Approval (SREA)  
Program Specific NGSC Actuator Cable DVP&R approved by Visteon



## THROTTLE END GEOMETRY.

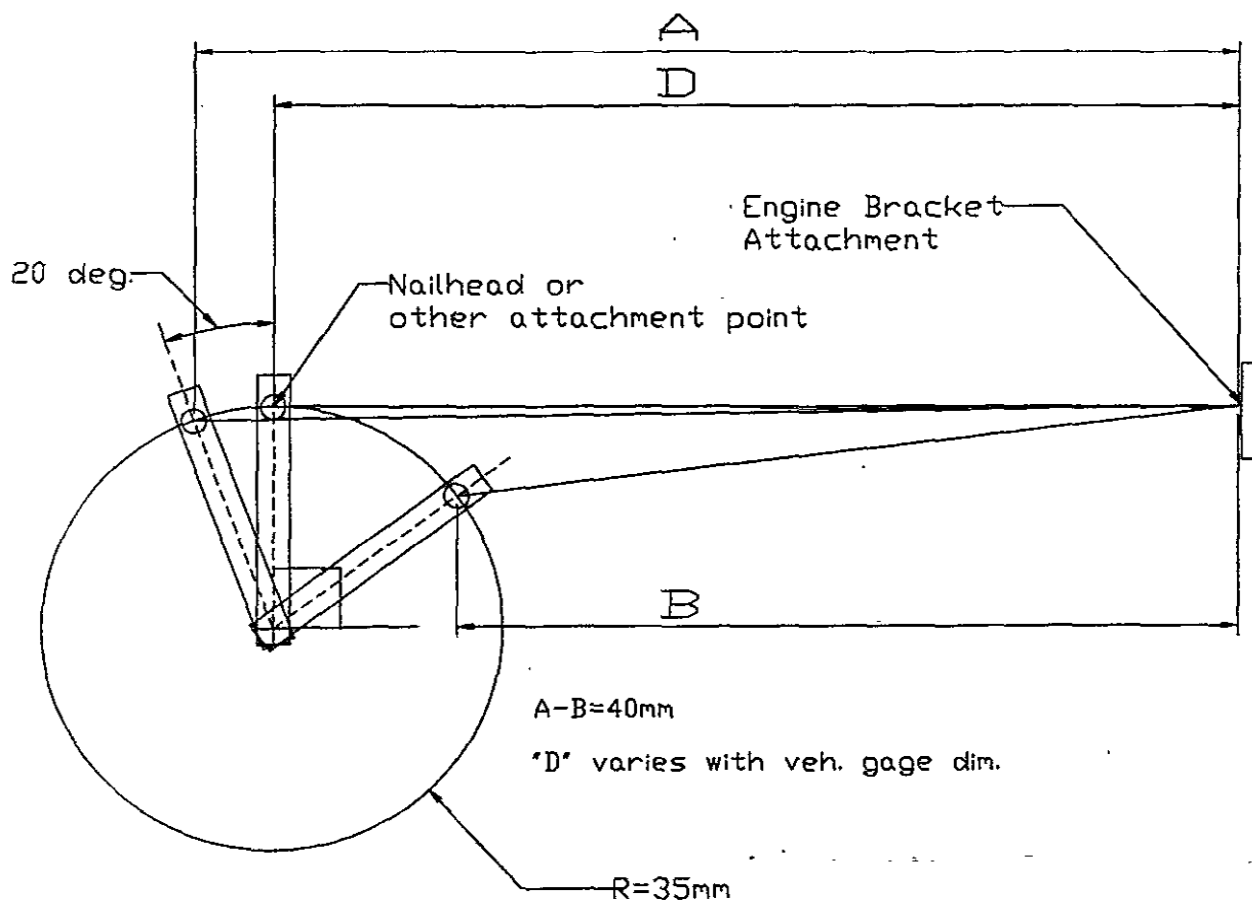


FIGURE 1A

# THROTTLE CONNECTOR ASY. TENSION TEST

Apply tensile load to  
throttle end attachment

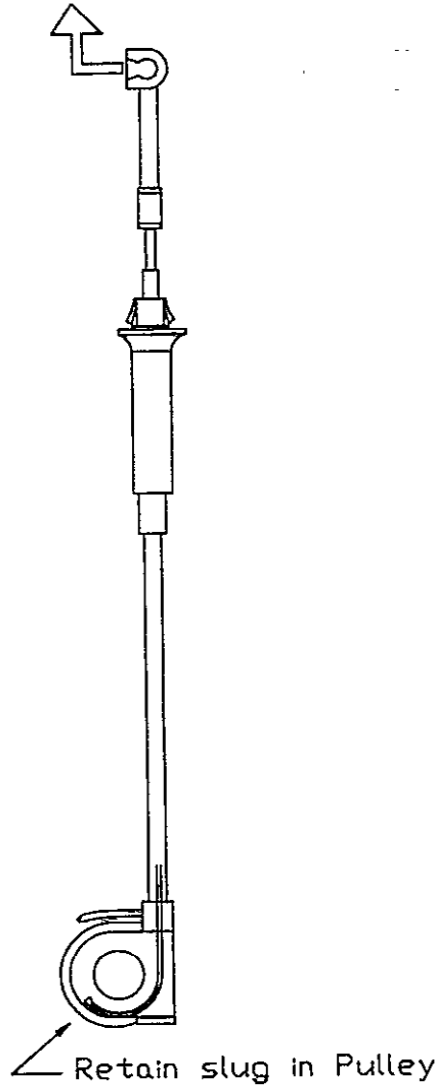


FIGURE 2



## THROTTLE CONNECTOR ASY. BEND TEST

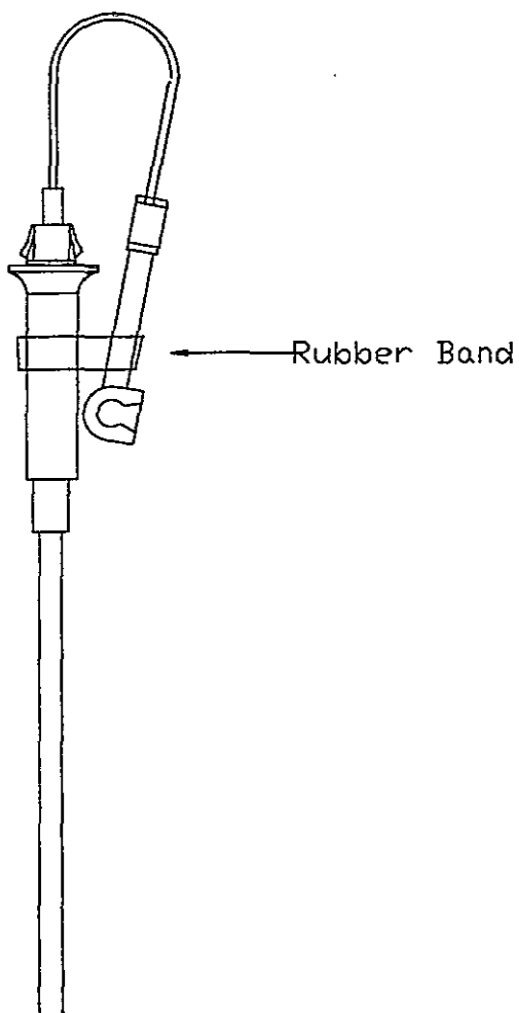
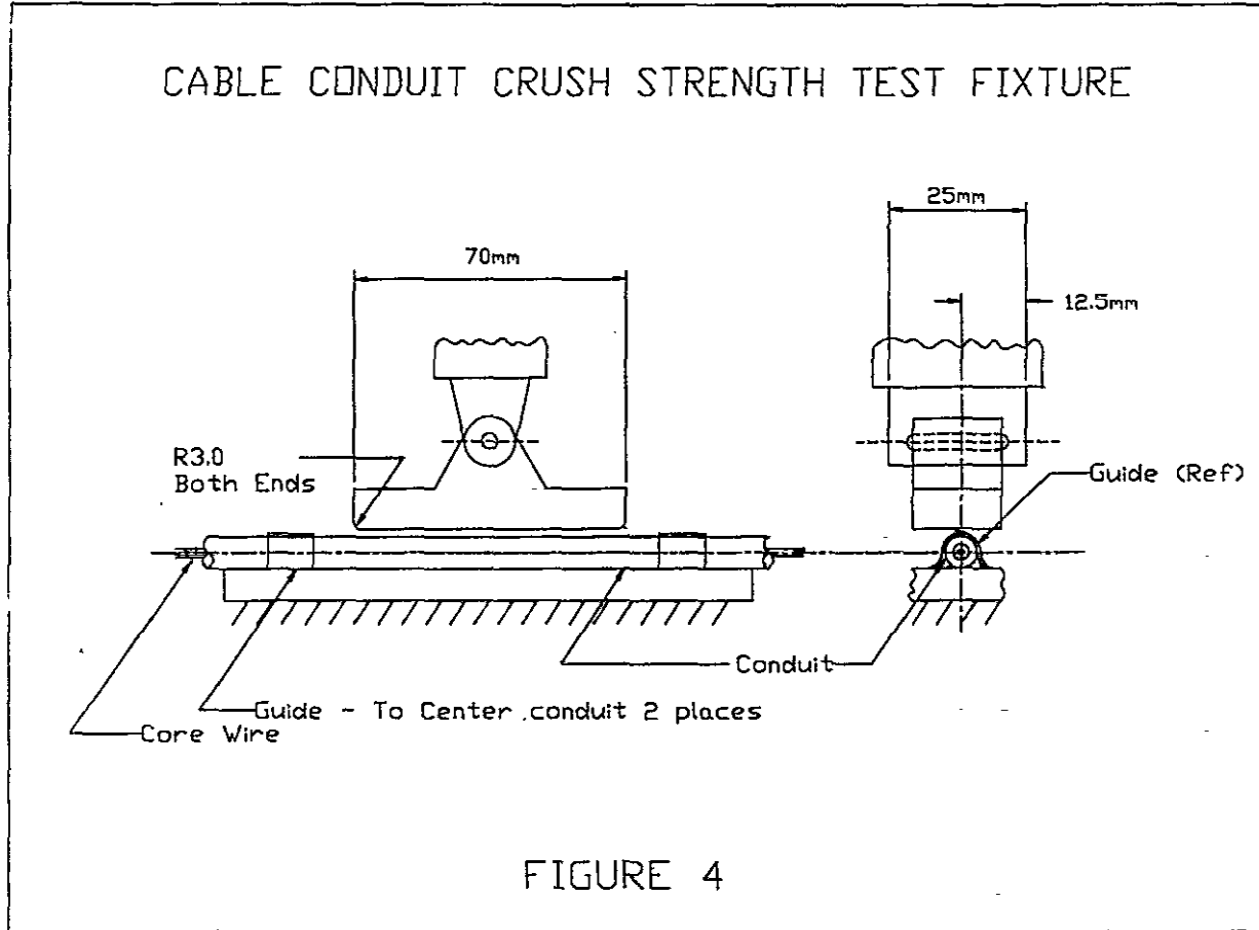
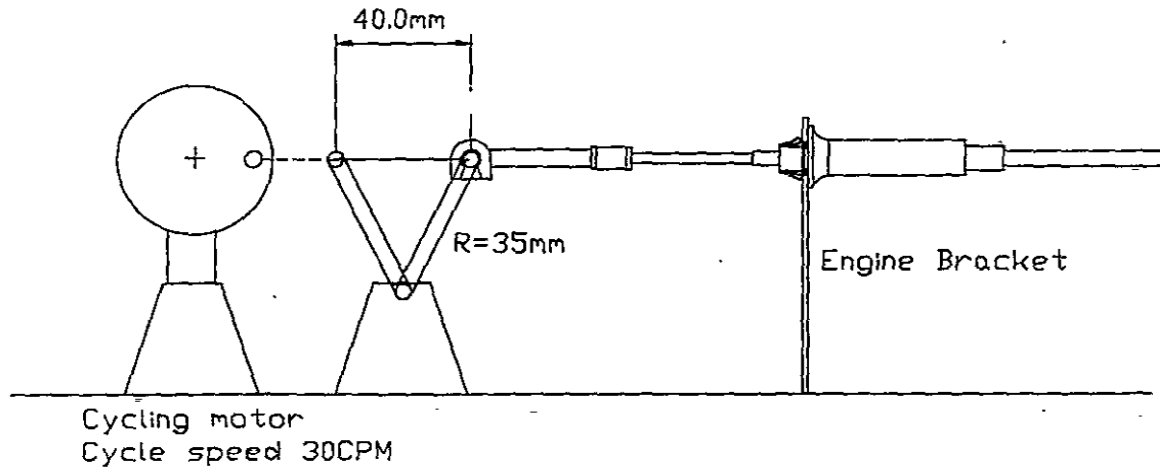


FIGURE 3



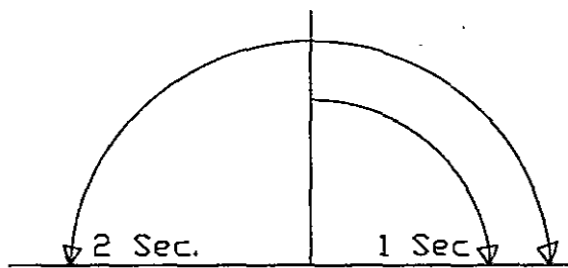
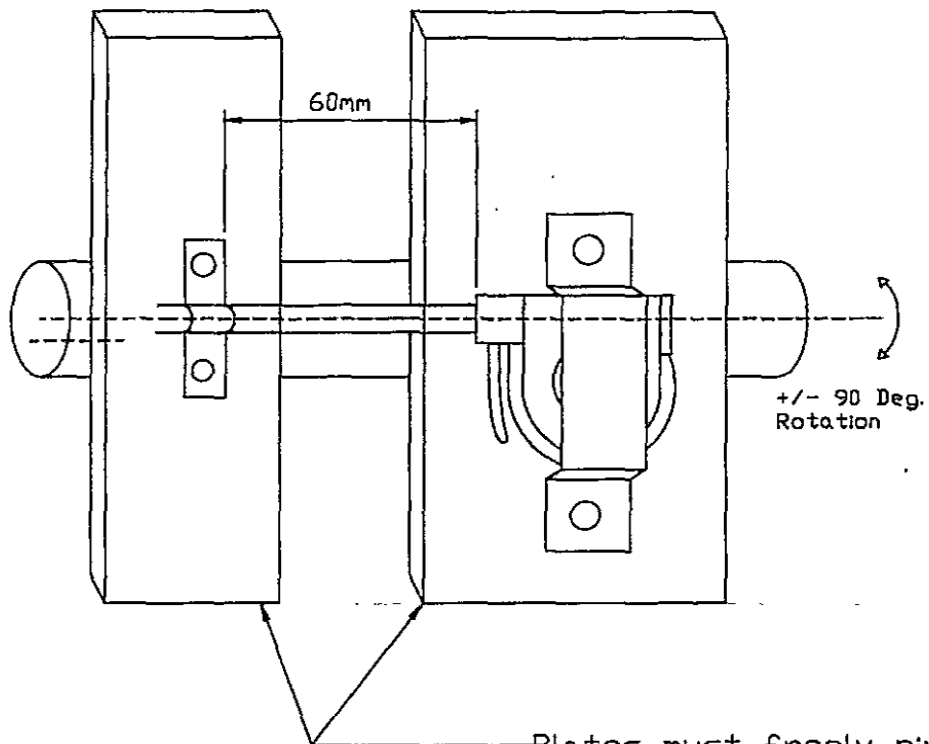
## LOST MOTION COVER LIFE CYCLE FIXTURE



Note: Corewire shall be attached to Servo while running this test

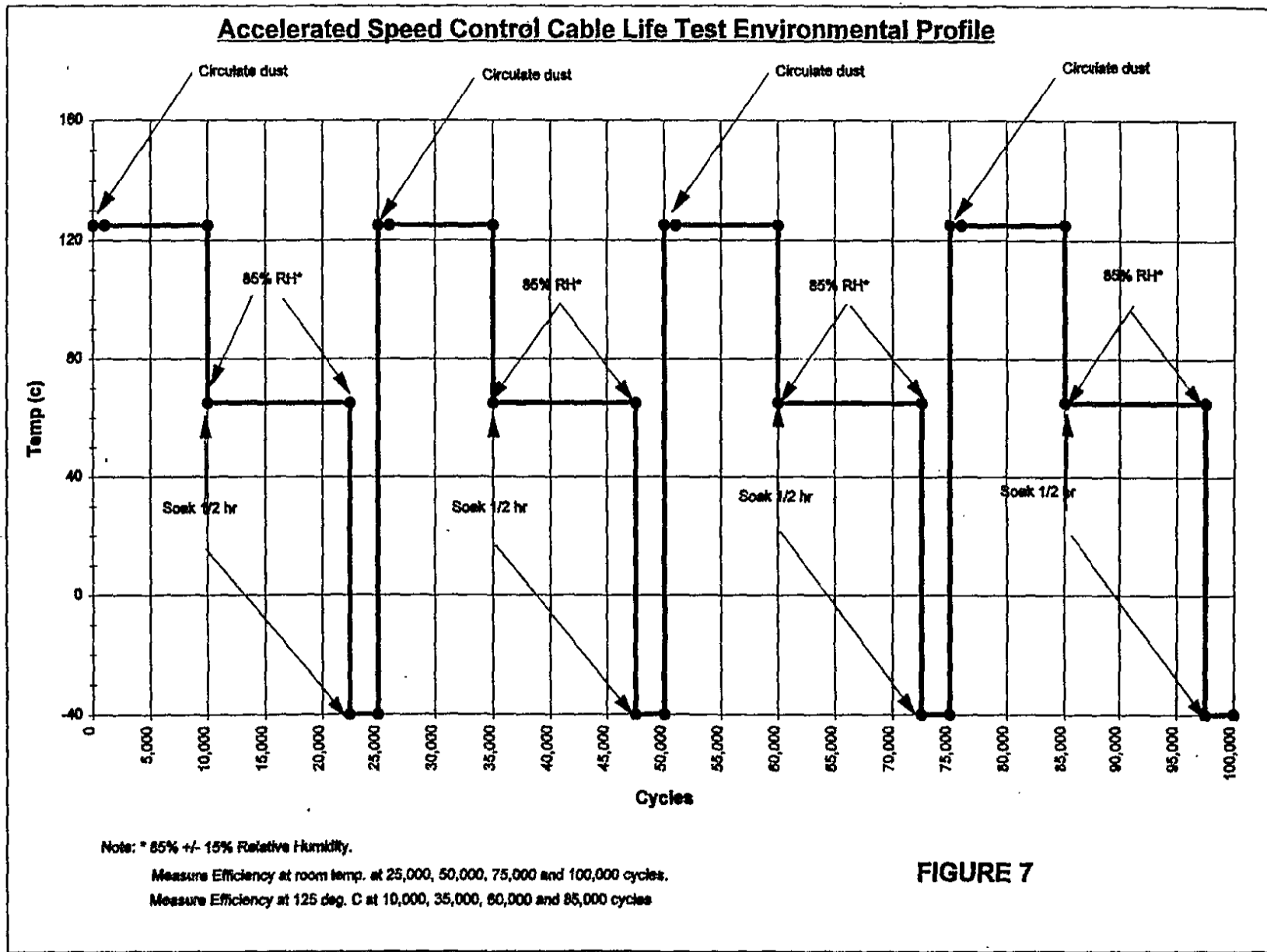
FIGURE 5

## END MOLD TORSION TEST FIXTURE



Rotation Rate

FIGURE 6



# CABLE CONDUIT MOLD TENSION TEST

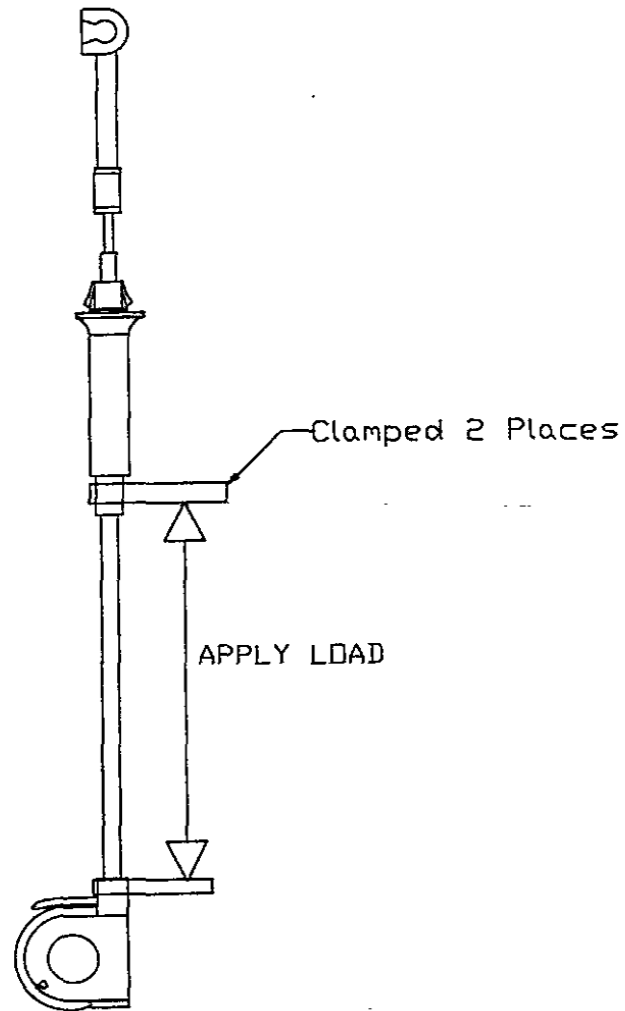

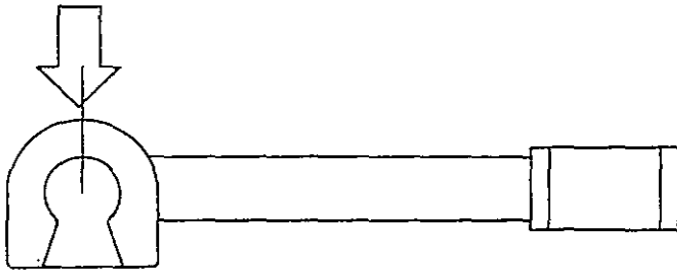

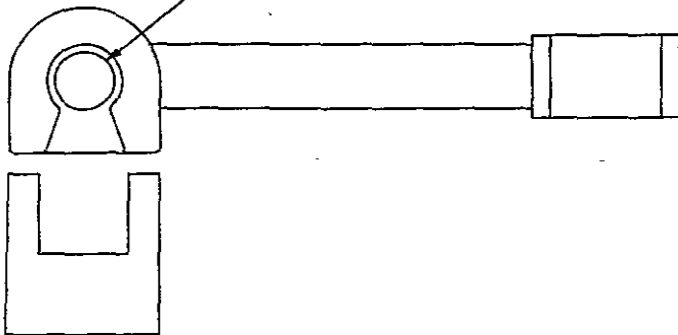


FIGURE 8

## THROTTLE CONNECTOR ASSEMBLY TEST

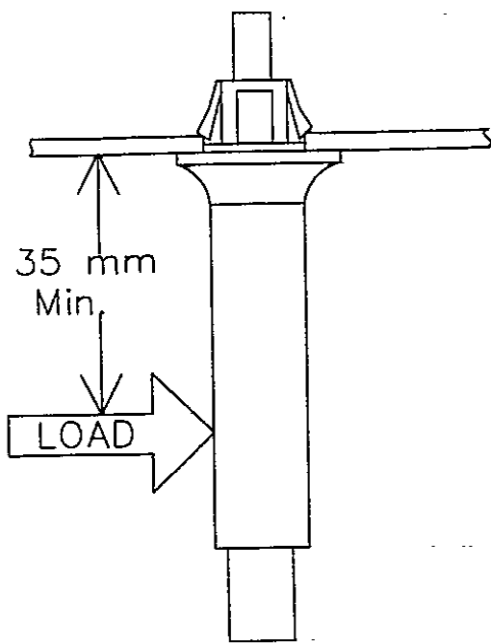
Apply Load

 Nailhead or Ballstud (Largest Tolerance Dim.) Nailhead or Ballstud (Smallest Tolerance Dim.)

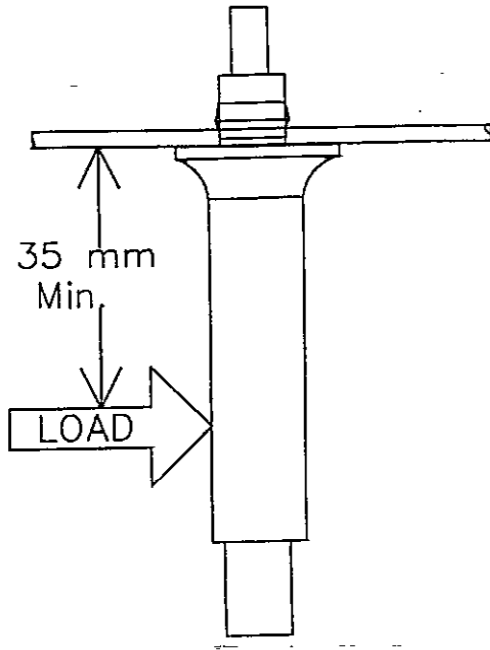
Apply Load

FIGURE 9

## ENGINE ATTACHMENT SIDE LOADING TEST



Load applied parallel  
to 'Tangs'.



Load applied perpendicular  
to 'Tangs'.

FIGURE 10



**TABLE 1**
**SUMMARY OF ES TEST AND ACCEPTANCE PARAMETERS**

Test No.	Test Characteristics	Test Use	PV Sample Size	Test Conditions	Acceptance Criteria	Verification
3.1.1	Gage Length (Travel Length)	PV IP	18 100%*		Per detail drawing Per detail drawing	
3.1.2	Efficiency	PV	18		Min. 72 %	
3.2.1	End Slug Proof Load Test	PV IP	6 100%*	360 N for 60 sec. 360 N for 0.1 - 0.75 dec.	Less than 10.0 N decrease Must reach 360 N	
3.2.2	Throttle Connector Tension Test	PV	6	225 N	Less than 22.0 N decrease	Conforms to 3.1.1
3.3.1	Life Cycle Test	PV	6	100,000 Cycles	No structural damage	Conforms to 3.1.2
3.3.2	Lost Motion Cycle Test	PV	6	500,000 Cycles	Must move freely	Conforms to 3.1.1 & 3.1.2
3.3.3	Salt Mist Atmosphere	PV	6	5% NaCl solution @ 35°C 168 hours Soak	Must not impede efficiency	Conforms to 3.1.2
3.3.4	Chemical Resistance	PV	6	96 hours Soak @ 115°C	Must not impede efficiency	Conforms to 3.1.2 & 3.4.3
3.3.5	Cable Freeze Test	PV	6	Spray water and soak 1Hr Min. @-40°C	No binding	Conforms to 3.1.2
3.4.1	Throttle Connector Asy. Bend Test	PV	6	Rubber band, 60 sec.	No structural damage	Conforms to 3.1.2
3.4.2	Conduit Crush Test	PV	6	1,334 N for 60 sec.	Must not impede efficiency	Conforms to 3.1.2
3.4.3	Cable Torsion and Tension Test	PV	6	± 90° 10 Cycles 225 N pull for 60 sec.	No Structural damage, Max. 22.0 N decrease	Conforms to 3.1.1 & 3.1.2
3.4.4	Engine Attach. Side Loading Test	PV	6	45.0N applied 90° to cable centerline.	Must not disengage	
3.5.1	Engine Attach. Fitting Assembly Test	PV	6	Insertion at 2.5 mm / sec. Pull 200 N for 10 sec at 30°.	Max. insertion force 90N. Must not disengage	
3.5.2	Throttle Connector Test	PV	6	Insertion/Removal at 2.5 mm /sec.	Max. Insertion 55N Min. Removal 20N	

Note: \* or per Control Plan

PE12-019

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9-4-2012

APPENDIX M

Photos







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APPENDIX N

Supplier Contacts

Hi-Lex for speed control cable:

Tim Wolff | Hi-Lex Product Engineer

248 267-3992 | [tim\\_wolff@hi-lex.com](mailto:tim_wolff@hi-lex.com)

Ficosa for original accelerator cable:

Ficosa North America Corp. - R&D Center / Commercial Office

Address: 30870 Stephenson Highway, 48071 Madison Heights, Michigan, USA

Telephone: (+1) 248 307-2230 fax: (+1) 248 307-2244

Kongsberg (was Teleflex) for latest accelerator cable:

Ed Koontz

Engineering Manager | Driveline

Office: +1 248-468-1264 | Mobile: +1 248-622-7014 | [ed.koontz@ka-group.com](mailto:ed.koontz@ka-group.com)

Kongsberg Automotive | 27275 Haggerty Road Suite 610 | Novi | 48377 | US

Tel: +1-248-468-1300 | [www.kongsbergautomotive.com](http://www.kongsbergautomotive.com)

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APPENDIX P

Labor Op Procedures

<b>Labor Op Codes</b>	<b>Procedure Description</b>
00S18A	Speed Control Servo Recall
04S25A	Accelerator Cable Recall
12405A	Spark Plugs - Replace
12650D35	Injector Assy (Fuel) - Remove and Install or Replace
12650D47	Relative Compression/Power Balance Test
12650D64	Ignition Coil Assembly - Coil On Plug - Remove and Install or Replace
6007A	Engine Assembly - Removal and Install
6020A	Gasket or Cylinder Front Cover - Remove and Install or Replace
6051A	Gasket - Cylinder Head - In Vehicle - Replace
6149A	Piston Rings - Replace
6250A	Camshaft - Remove and Install or Replace
6266A	Tensioner Assy - Timing Chain - Replace
6500A	Tappets or Hydraulic Lifters - Replace
6584A	Gasket - Rocker Arm Cover - Remove and Install or Replace
6781A01	Oil Pump Replace
9424A	Intake Manifold Gaskets - Replace
9758A	Accelerator Cable - Replace
9926A	Throttle Body Air Intake Replace



PE12-019

Labor Operations Procedures and Counts

APPENDIX P

MDL\_YR\_CD        2001

Sum of REPAIRS

Row Labels	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Grand Total
00S18A	566	42	4		1	1	1							615
04S25B						2								2
12405A		104	3											107
12650D35		55	95	72	43	20	22	8	5	2	2	1	1	326
12650D47		214	567	413	359	426	338	156	67	35	34	29	10	2648
12650D64		2		2										4
6007A			251	179	109	71	33	13	6	2	2	2		668
6020A		2	118	133	88	71	43	22	11	1	6	5	2	502
6266A			3	4	2	1								10
6584A		1												1
9424A		5	1	1										7
9758A				85	75	83	30	14	1					288
9926A		484	2914	3049	1193	206	95	47	1	5			1	7995
Grand Total	566	909	3956	3938	1870	881	562	260	91	45	44	37	14	13173

**PE12-019**

**Labor Operations Procedures and Counts**

**APPENDIX P**

MDL\_YR\_CD

2002

Sum of REPAIRS

Row Labels	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Grand Total
04S25B				9444	113586	11165	5259	2202	856	542	293	373	143720
12405A	1	1	1										3
12650D35	6	43	46	35	23	19	9	7		1	1		190
12650D47	47	263	363	475	471	367	270	164	71	34	32	8	2565
6007A	2	544	547	379	217	142	86	28	15	6	6	4	1976
6020A		169	290	183	78	62	50	24	9	9	7	6	887
6266A		1	5	3	4	3	1		2				19
9758A			293	404	62	15	12	5	1				792
9926A	41	3077	5684	3422	472	166	93	26	4	3	1		12989
MT04S25					3		1						4
Grand Total	97	4098	7229	14345	114916	11939	5781	2456	958	595	340	391	163145

**PE12-019**

**Labor Operations Procedures and Counts**

**APPENDIX P**

MDL\_YR\_CD

2003

Sum of REPAIRS

Row Labels	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Grand Total
04S25B			9640	111784	10813	5027	2215	871	549	295	172	141366
12405A		1										1
12650D35	2	34	35	23	11	11	5	1	2		1	125
12650D47	29	142	342	492	277	209	203	80	49	38	13	1874
6007A	21	169	173	108	81	45	35	7	8	6	1	654
6020A	3	45	81	88	64	55	60	31	18	25	12	482
6266A		2	3	2	2		1					10
9424A		1										1
9758A		333	888	115	52	18	3	3				1412
9926A	188	3255	4021	1220	458	185	83	16	4			9430
MT04S25				1		1						2
MT04S25B				1								1
Grand Total	243	3982	15183	113834	11758	5551	2605	1009	630	364	199	155358

**PE12-019****Labor Operations Procedures and Counts****APPENDIX P**

MDL\_YR\_CD

2004

Sum of REPAIRS

Row Labels	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Grand Total
04S25A		2	5								7
04S25B		7327	82233	6472	2896	1224	487	310	182	88	101219
12650D35	4	14	26	17	2	6	1	1	1		72
12650D47	19	232	373	297	156	132	112	54	47	24	1446
6007A	36	96	64	54	27	14	13	10	1	1	316
6020A	6	35	29	53	60	54	50	33	21	17	358
6266A		5	1	1	2	1		2			12
9758A	20	427	190	152	67	29	11	5	4		905
9926A	23	663	837	818	341	117	51	16	6		2872
MT04S25			1								1
MT04S25B			9								9
Grand Total	108	8801	83768	7864	3551	1577	725	431	262	130	107217

PE12-019

FORD

9-4-2012

APPENDIX Q

Service Part Sales

	○ Upper Intake Manifold In vehicle Repair				
1	YL8Z	9424	CA	Upper Intake Manifold	2001-2006
2	YL8Z	9H486	AA	Gasket	2001-2006
	○ Lower Intake Manifold In vehicle Repair				
3	YF1Z	9424	BA	Lower Intake Manifold	2001-2003
4	YF1Z	9424	BB	Lower Intake Manifold	2003-2004
5	YF1Z	9439	AC	Gasket	2001-2004
	○ Engine Front Cover In vehicle Repair				
6	1S7Z	6019	BA	Cover - Cylinder Front	2001-2004
7	F5RZ	6020	B	Gasket	2001-2004
	○ Valve Cover RH In vehicle Repair				
8	YL8Z	6582	CA	Cylinder Head Cover	2001-2004
9	YL8Z	6582	BA	Cylinder Head Cover	2001-2004
10	YL8Z	6584	AA	Gasket	2001-2004
	○ Cylinder Head LH In vehicle Repair				
11	2S7Z	6049	AA	Cylinder Head	2001-2006
12	XF1Z	6051	BA	Gasket	2001-2006
13	3M4Z	6051	BAA	Gasket	2001-2006
	○ Cylinder Head RH In vehicle Repair				
	○ Oil Pump In vehicle Repair				
14	XW4Z	6600	DA	Pump Asy - Oil	2001-2006
15	F5RZ	6626	B	Gasket	2001-2004
	○ Engine Removal				
16	1L8Z	6006	AARM	Service Engine	2001
17	1L8Z	6006	ABRM	Service Engine	2002-2004
	○ Engine Assembly				
18	1L8Z	6007	CA	Engine Assy Fully Dressed	2001-2004
	○ Throttle Body Removal and Installation				
19	2L8Z	9E926	AB	Throttle Plate Housing Assy	2001-2004
20	YF1Z	9E936	AA	Gasket	2001-2006
	○ Fuel Injector Removal and Installation				
21	4L8Z	9F593	AA	Injector Assy	2004-2006
22	YL8Z	9F593	CC	Injector Assy	2001-2004
	○ Fuel Injector Supply Manifold Removal and Installation				
23	YL8Z	9F792	GA	Manifold Assy - Fuel Supply	2001-2004
24	4L8Z	9F792	BE	Manifold Assy - Fuel Supply	2004-2006
	○ Ignition Coil-On-Plug- RH Removal and Installation				
25	25 1L8Z	12029	AB	Coil Assy	2001-2006
	○ Spark Plug removal and Installation				
26	26 AGSF	32W	M	Spark Plug	2001-2004
	○ Accelerator Cable Bracket-3.0L (4V) Removal and Installation				
	YL8Z	9A758	AD	Accelerator Cable	2001-2004
	5L8Z	9A758	AA	Accelerator Cable	2001-2004
	○ Speed Control Cable Removal and Installation				
	YL8Z	9A825	AA	Speed Control Cable Assy	2001-2006
	○ Speed Control Actuator Removal and Installation				
27	YL8Z	9C735	EA	Servo Assy - Speed Control	2001-2006

PE12-019

Service Part Sales

APPENDIX Q

YL8Z-9424-CA		2 YL8Z-9H486-AA		3 YF1Z-9424-BA		4 YF1Z-9424-BB		5 YF1Z-9439-AC		6 1S7Z-6019-BA		7 F5RZ-6020-B		8 YL8Z-6582-CA		9 YL8Z-6582-BA		10 YL8Z-6582-AA	
YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity
2012	379	2012	8825	2004	1	2012	364	2003	3873	2012	40	2012	1345	2012	401	2012	70	2012	6335
2011	629	2011	17457	2003	123	2011	659	2002	4569	2011	52	2011	3280	2011	769	2011	122	2011	7258
2010	708	2010	17779	2002	176	2010	746	2001	14784	2010	68	2010	2840	2010	915	2010	149	2010	8031
2009	610	2009	19825	2001	507	2009	713			2009	37	2009	2795	2009	922	2009	134	2009	6378
2008	659	2008	46070	2000	341	2008	803			2008	81	2008	3767	2008	1135	2008	181	2008	5664
2007	556	2007	53776	1999	2	2007	631			2007	59	2007	4402	2007	1434	2007	251	2007	5083
2006	501	2006	50156			2006	410			2006	35	2006	3961	2006	1545	2006	245	2006	4486
2005	405	2005	15760			2005	185			2005	126	2005	4869	2005	1804	2005	288	2005	4303
2004	397	2004	7758			2004	86			2004	274	2004	7335	2004	2023	2004	360	2004	7440
2003	253	2003	4239			2003	53			2003	1008	2003	7735	2003	1724	2003	331	2003	6025
2002	131	2002	2834			2002	4			2002	114	2002	7860	2002	1077	2002	247	2002	2377
2001	322	2001	3372							2001	43	2001	5918	2001	575	2001	120	2001	604
2000	113	2000	400							2000	17	2000	3770	2000	131	2000	68	2000	1901
												1999	2075			1999	2		
												1998	1051						
												1997	942						
												1996	313						
												1995	192						
												1994	43						

11 2S7Z-6049-AA		12 XF1Z-6051-BA		13 3M4Z-6051-BAA		14 XW4Z-6600-DA		15 F5RZ-6626-B		16 1L8Z-6006-AARM		17 1L8Z-6006-ABRM		18 1L8Z-6007-CA		19 2L8Z-9E926-AB		20 YL1Z-9E936-AA	
YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity
2012	31	2012	259	2007	114	2012	398	2012	140	2012	0	2012	47	2006	9	2012	144	2012	898
2011	43	2011	452	2006	1077	2011	815	2011	225	2011	0	2011	90	2005	4	2011	267	2011	1438
2010	84	2010	634	2005	280	2010	620	2010	226	2010	0	2010	81	2004	0	2010	452	2010	1365
2009	111	2009	639	2004	74	2009	328	2009	178	2009	0	2009	67	2003	1	2009	576	2009	1441
2008	305	2008	889	2003	3	2008	451	2008	215	2008	0	2008	122	2002	2	2008	825	2008	3349
2007	260	2007	1008	2002	137	2007	429	2007	290	2007	0	2007	302			2007	1598	2007	3251
2006	328	2006	1224			2006	411	2006	744	2006	392	2006	459			2006	3319	2006	3717
2005	335	2005	1749			2005	469	2005	207	2005	625	2005	625			2005	4972	2005	7479
2004	343	2004	2740			2004	738	2004	169	2004	1121	2004	1121			2004	17394	2004	8936
2003	321	2003	2324			2003	1050	2003	278	2003	1323	2003	1323			2003	20767	2003	5087
2002	118	2002	1684			2002	1143	2002	163	2002	331	2002	331			2002	12467	2002	3952
2001	35	2001	661			2001	1890	2001	223	2001	27	2001	27			2001	1277	2001	937
2000	18	2000	535			2000	1811	2000	254	2000	5	2000	5			2000	144	2000	131
1999	1	1999	264					1999	165									1999	9
		1998	49					1998	95										
								1997	50										
								1996	40										
								1995	12										
								1994	13										

21 4L8Z-9F593-AA		22 YL8Z-9F593-CC		23 YL8Z-9F792-GA		24 4L8Z-9F792-BE		25 1L8Z-12029-AB		26 AGSF-32W-M		27 YL8Z-9C735-EA	
YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity	YEAR	Quantity
2012	2	2012	1142	2012	9	2012	3	2012	59762	2012	560923	2012	39
2011	24	2011	3983	2011	13	2011	15	2011	135723	2011	911730	2011	66
2010	3	2010	4541	2010	23	2010	24	2010	112007	2010	732684	2010	119
2009	2777	2009	1624	2009	16	2009	4	2009	106896	2009	669112	2009	174
2008	3282	2008	2924	2008	33	2008	19	2008	112364	2008	548648	2008	231
2007	2883	2007	2211	2007	20	2007	21	2007	83964	2007	380532	2007	448
2006	2087	2006	2354	2006	29	2006	13	2006	61055	2006	258781	2006	432
2005	1440	2005	2312	2005	26	2005	27	2005	55982	2005	192	2005	526
2004	859	2004	1545	2004	42	2004	12	2004	34040	2004	0	2004	578
2003	84	2003	395	2003	17			2003	20999	2003	0	2003	596
		2002	12	2002	26			2002	2522	2002	11768	2002	363
				2001	73					2001	1270	2001	249
				2000	146					2000		2000	1357