RQ03-008

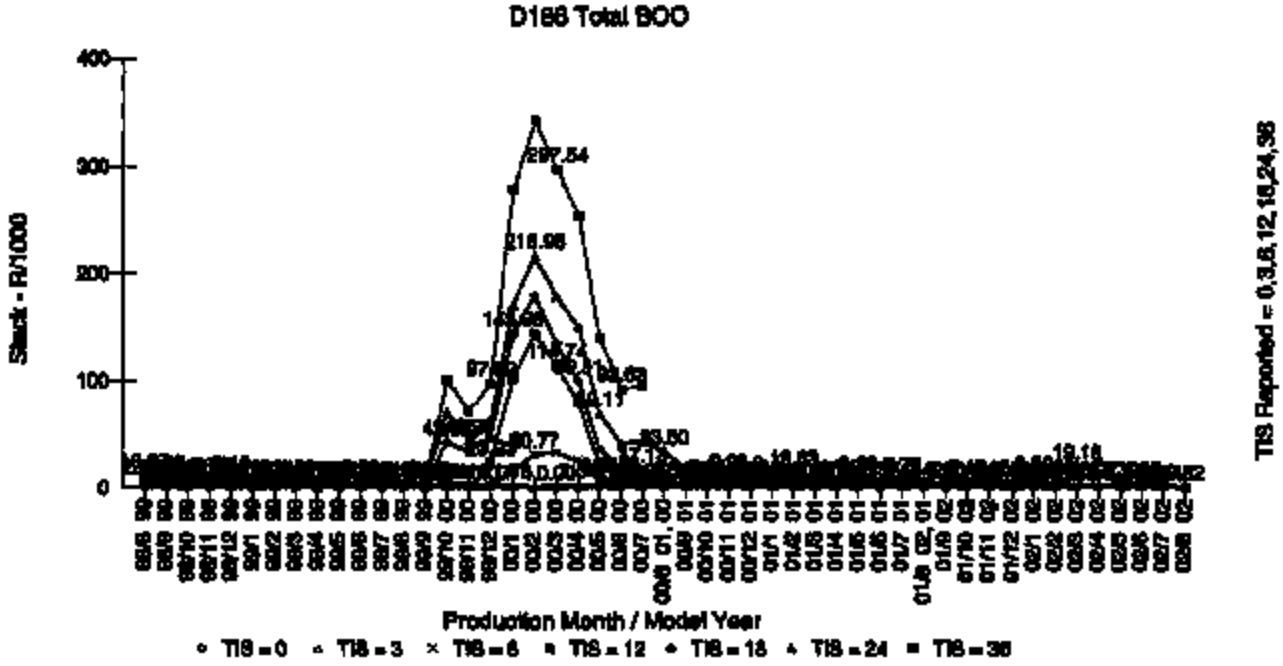
FORD

FORD 12/12/03 LETTER TO ODI 4 BOOKS

ATTACHMENT L

PART 2 OF 3
BOOK 3 OF 4

D186 Overview of Brake Pedal Design



D186 00MY Design Overview:

-**Wiring:** issues due to pkg'g constraints; wiring gets caught in steering wheel shaft; routing & retaining finalized by 01MYJ1

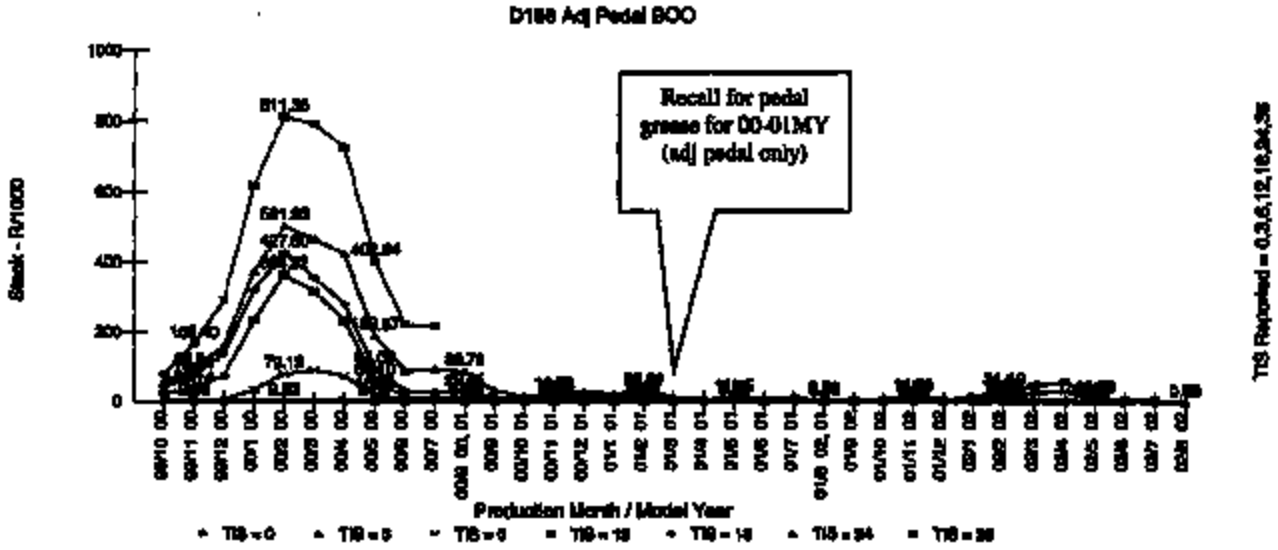
-**Sheetmetal:** (cowl) sporadically in-control potentially impacting the anchoring of brake booster and pedal box- impacting booster rod alignment to pedal box mounting pin.

-**Pedal box:** D186 first platform with adjustable pedal. DV testing identified known lateral lash which worsens over time. Many (38) changes occurred on the design over 2.5yrs.

-**Brake booster:** Wagon & Sedan booster rods are unique due to brake ratios.

-**Pollak switch:** First platform with 2 terminal design.

D186 Adj Pedal Design Summary



D186 00MY Design Evolution:

Pedal box:

-00/1 Teleflex moves mfg from OH to IN. Also mfg change on bracket from laser cutting to hard tooled.

-00/1 thru 00/3 Welding changes on brackets also occurred. Also, Mounting pin process change to welding.

-00/8 Grease used on pedal spring changed to match grease used on fix pedal (RECALL: oil onto switch)

-01/7 Change to anti-lash bushings to address lash.

-01/11 Reduce welding on booster pin- excessive causing boo to stick

-02/5 CMM on mig welding

-02/11 LDM bushing out of spec.

-03/3 Mounting pin length increased based on VSA study which identified offset

Booster:

00/8 Wagon production stopped due to pedal ratio issue.

00/12 Wagon production resumes with new booster rod

Sheetmetal:
-(Cowl&IP) sporadically in-control potentially impacting booster rod alignment to pedal box mounting pin

Pollak switch:

-99/10 CAP&Pollak identified fixed terminal distance not matching go/no go gage resulting in lower actuation (its on)

-00/8 J1 Poke yoke switches (mounting)

-02/2 Plating extended to quieten the switch.

-02/2 Low end shifted from 0.706 to 0.709.

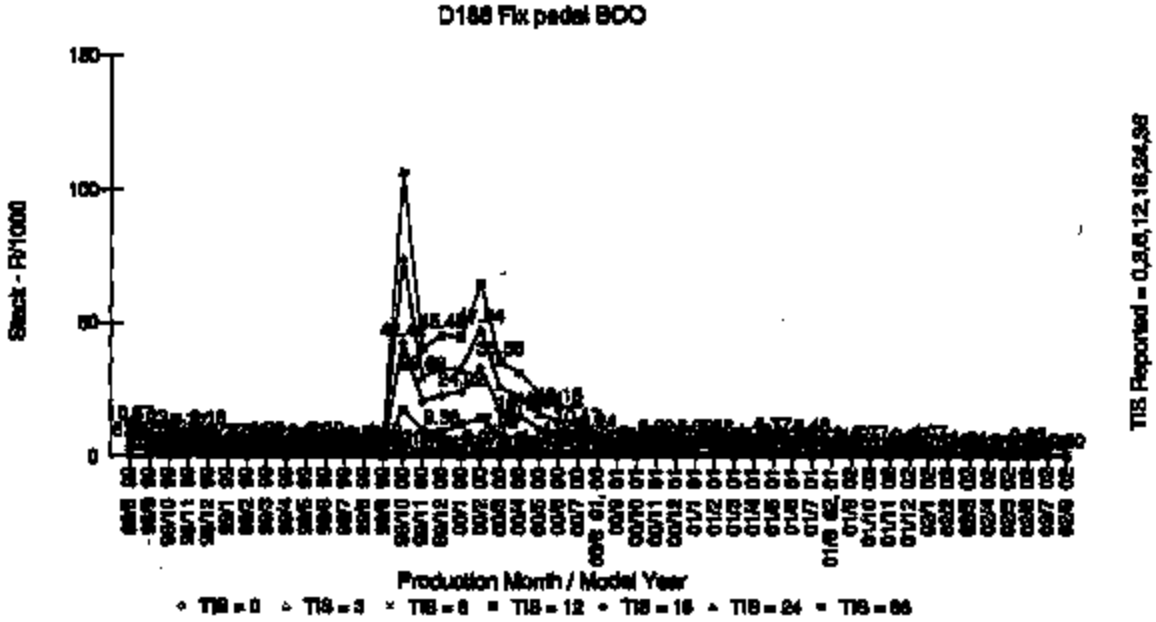
-03/11 Shift in range on all 2 terminal application. Also changed radius on terminal due to stress fractures.

Wiring:

-00/3 Wire length changed

-00/8 Hockeystick added to assist in routing.

D186 Fix Pedal Design Summary



D186 00MY Design Evolutions

Pedal box:

-KSR's design changes:

00/6 (Sedan) reoriented booster pin,

00/5 (Sedan) deact flag reference dimension changed,

99/8 (Sedan) pin orientation.

8/00 (Wagon) pedal ratio changed

02/11 LDM bushing out of spec.

Booster:

00/8 Wagon production stopped due to pedal ratio issue.

00/12 Wagon production resumes with new booster rod

Sheetmetal:

-(Cowl&IP) sporadically in-control potentially impacting booster rod alignment to pedal box mounting pin.

Pollak switch:

-99/10 CAP&Pollak id fixed terminal distance not matching go/no go gage resulting in lower actuation (its on)

-00/8 J1 Poke yoke switches (mounting)

-02/2 Plating extended to quieten the switch. & Low end shifted from 0.706 to 0.709.

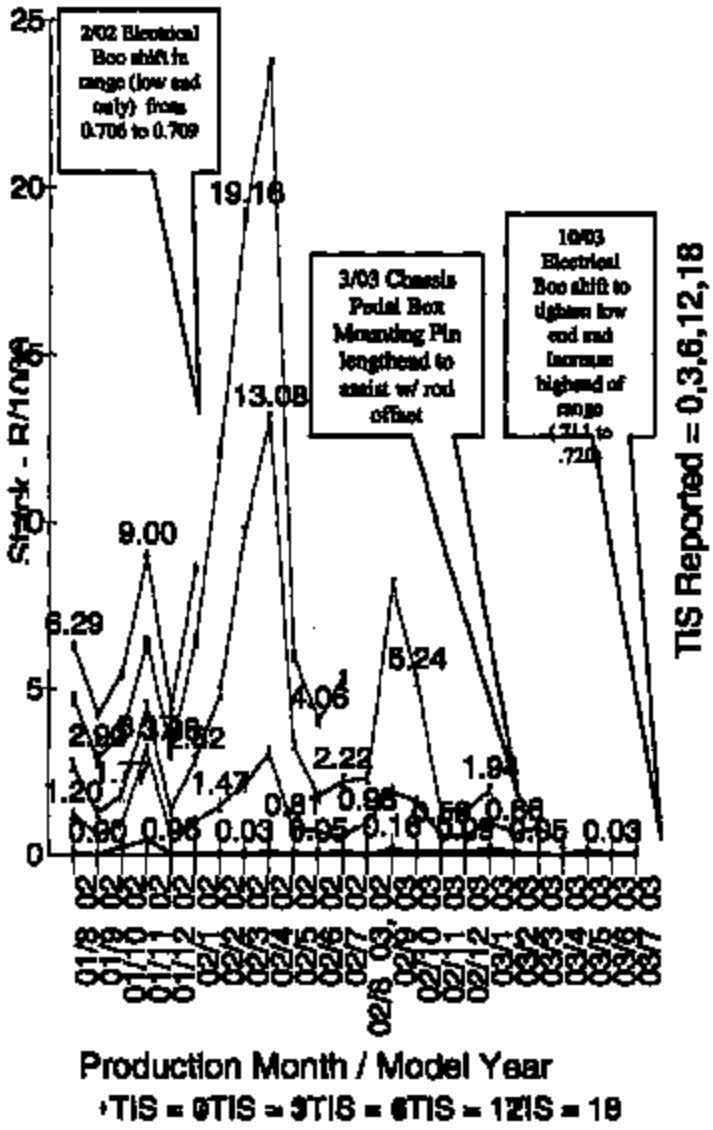
-03/11 Shift in range on all 2 terminal application. Also changed radius on terminal due to stress fractures.

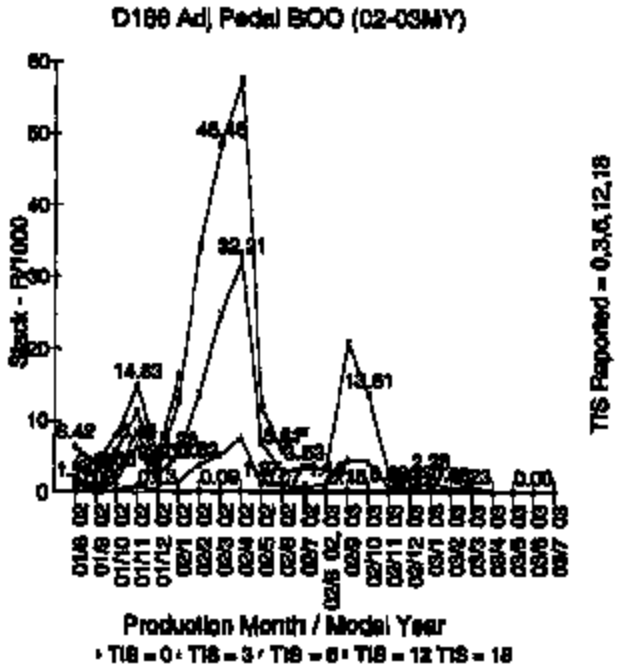
Wiring:

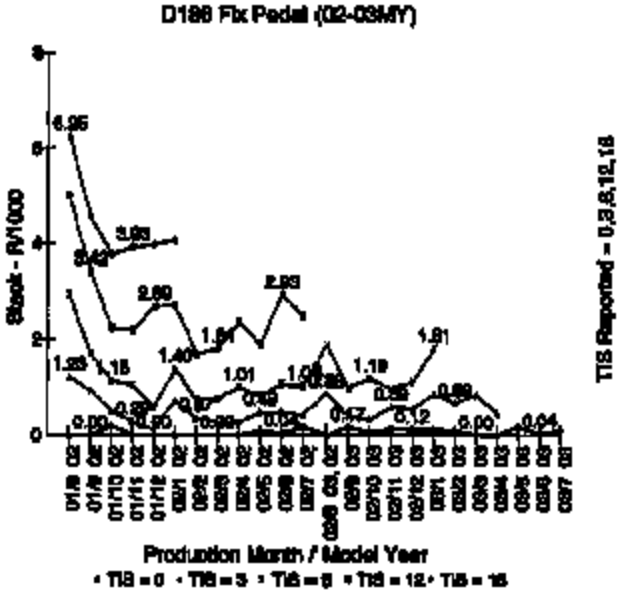
-00/3 Wire length changed

-00/8 Rockeystick and tie strap added to assist in routing.

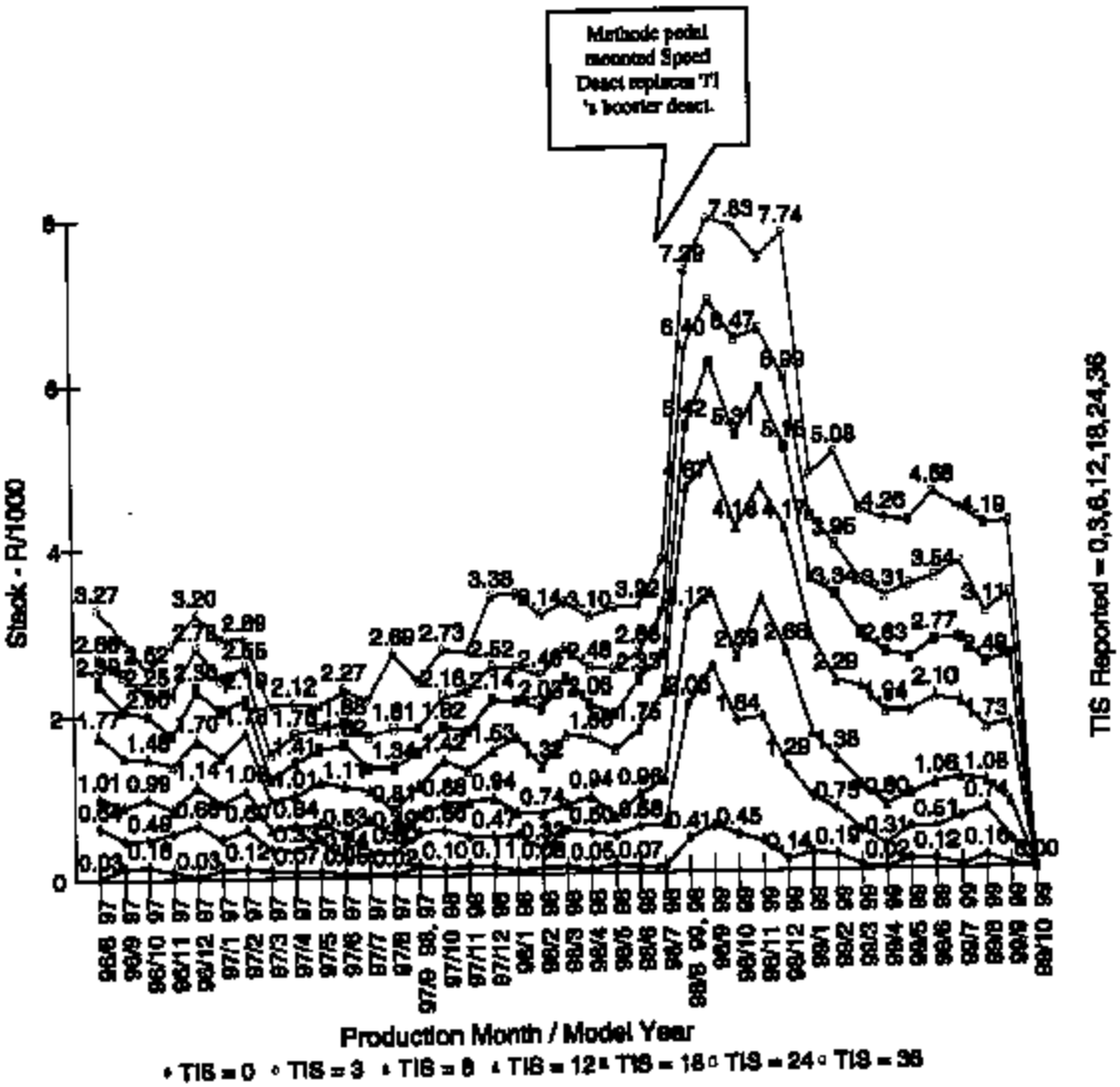
D186 02-03MY BOO (*pedal deact)



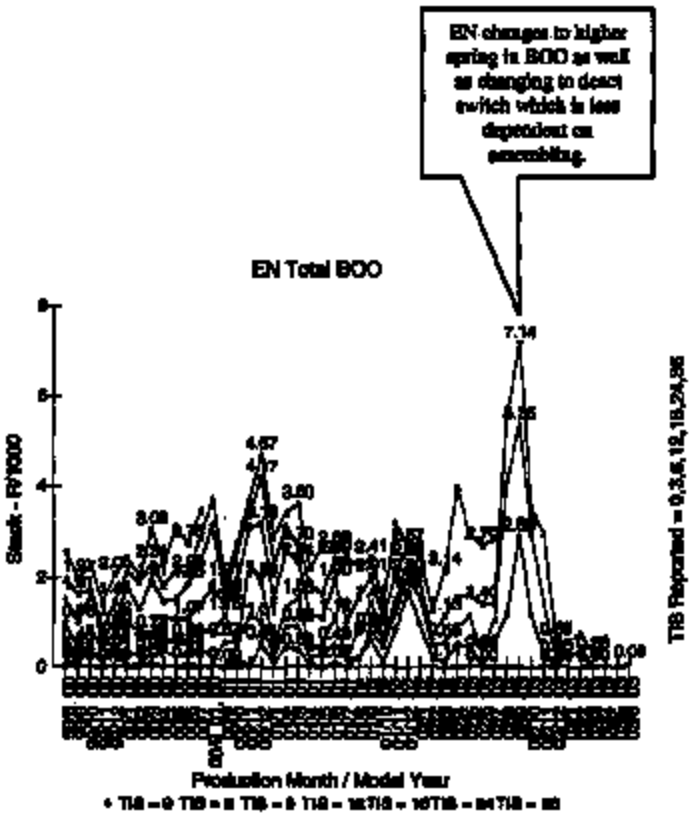


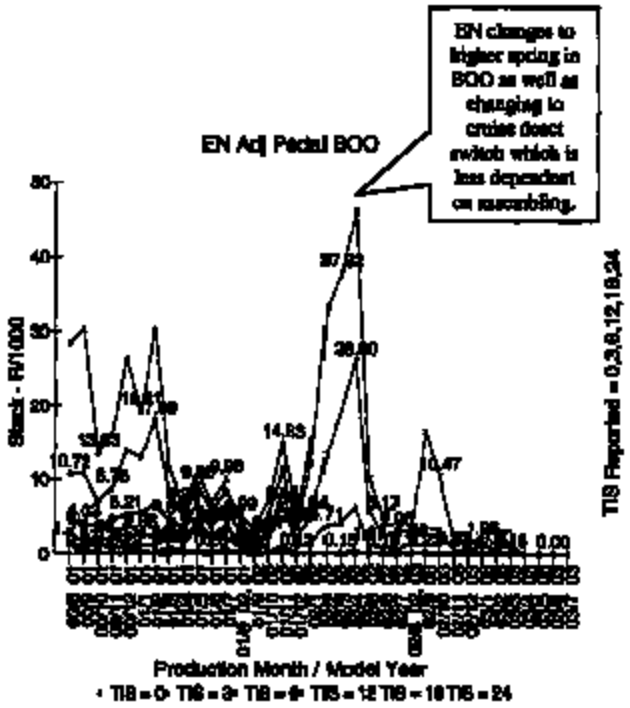


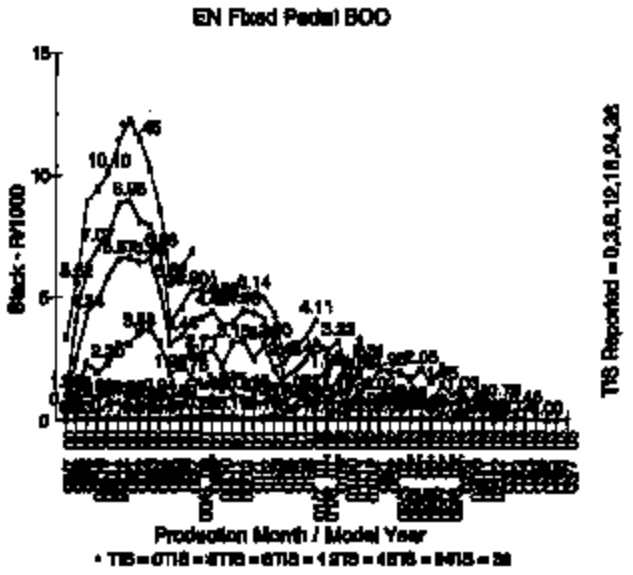
Littelfuse Past Performance on D186 (Fixed Pedal)



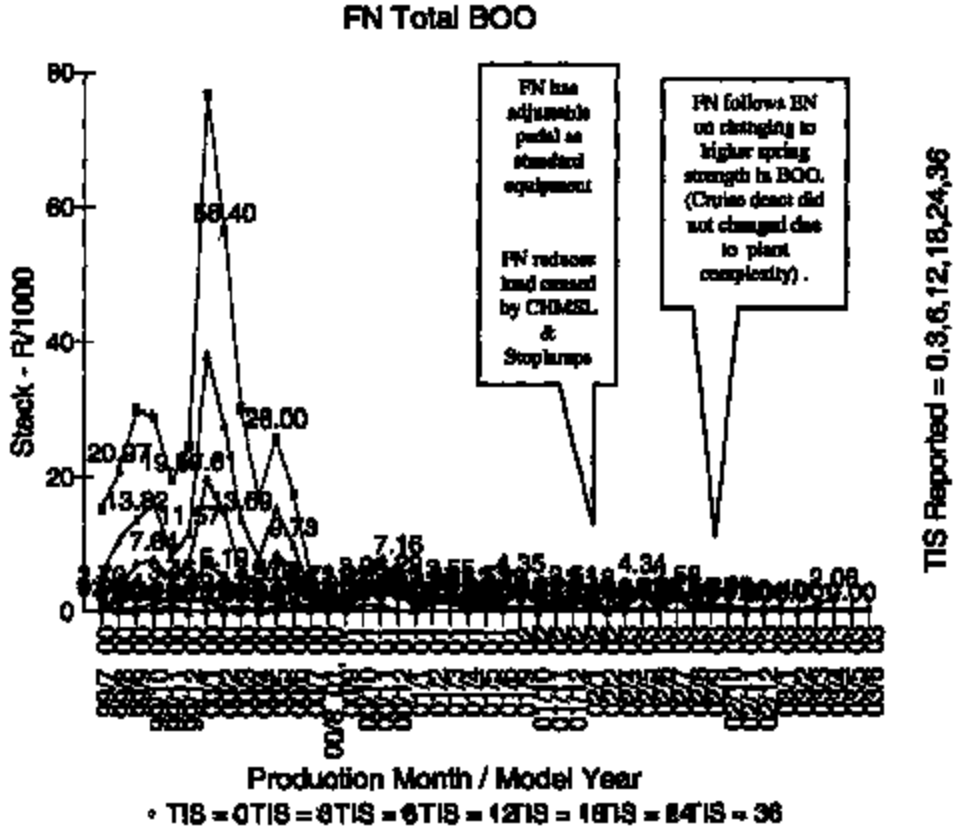
Other platform performance
(Adjustable and Fixed) with Littelfuse







Other Platform Performance
(Adjustable and Fixed) with Littelfuse



Note:
Adjustable pedal and Fix pedal cannot be filtered due to the complexity of the 'option pkg' offered.

D186 Summary Test Results

Component testing (12/02-3/03):

- Box pedal grease

  -Test stand cycle testing of Pollak switch replicated field issue of switch failure when subject to oil from grease.

  -Test stand cycle testing of Littelfuse showed no failures when exposed to the grease.

Subsystem testing (12/02-3/03):

- Testing of both switches when exposed to D186's system noise of wiring and rod offset for 400,000 cycles;

  -The Pollak switch showed operational failures on 1 out of 6 switches. In addition, 3 of the 6 showed signs of switch housing degradation due to heat generation.

  -The Littelfuse switch had no failures.

  -Wiring robustness was also proven; high flex wire should be used on platforms with rod actuated boo switch.

In vehicle/System testing to chassis requirements (2/03-5/03):

- Both switches were tested on 12 (02-03MY) vehicles for suitablity for field and production system designs.

  - Pollak and Littelfuse original spring strength (8.5-12lb) was too weak causing some flicker.

  - Higher spring strength (10-14.5lb) with both switches pass the chassis taillamp flicker test.

  - The field kit released the Littelfuse switch with the higher spring range.

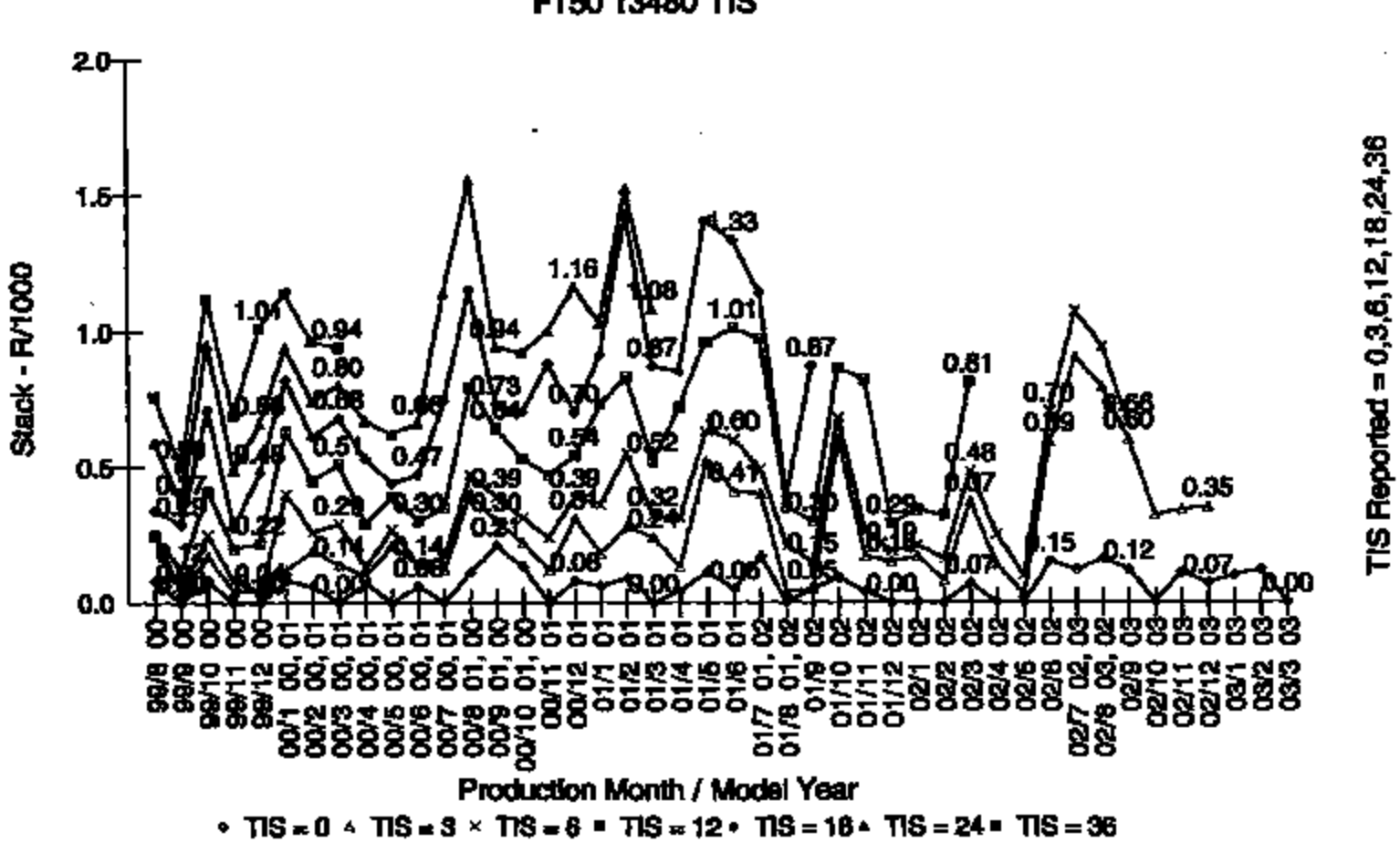
Dimensional Stack-up Analysis of D186 (12/02-2/02):

- Multiple studies done by VSA identifying system issues. These studies use the Ford print tolerances as the basis and also estimate the capability of each supplier based on these dimensions. Some of the chassis and electrical changes this year were based on these studies.

REPEAT VINS based on 13490 AWS

build month	(aka revisit) 00MY singl rpt	(aka 3 visits) 00MY dbl rpt	(aka 4 visits) 00MY> 3 rpts	(aka revisit) 01MY singl rpt	(aka 3+ visits) 01MY dbl rpt	(aka revisit) 02MY singl rpt
Aug-99	3	0	0			
Oct-99	11	3	8			
Nov-99	33	1	9 (1=5x)			
Dec-99	160	6	7			
Jan-00	782	74	6			
Feb-00	1248	66	5			
Mar-00	1196	51	0			
Apl 00	778	66	0			
May-00	310	27	1			
Jun-00	66	6	0			
Jul-00	18	2	0			
Aug-00	44	0	1	8		
Sep-00				16	1	
Oct-00				11		
Nov-00				15		
Dec-00				4		
Jan 01				4		
Feb 01				2		
Mar 01				4		
Apr 01				3		
May 01				2		
Jun 01				4	1 +1 (4x)	
Jul 01				5		
Aug-01						1
Sep-01						1
Oct-01						2
Nov-01						5
Dec-01						0
Jan 02						8
Feb 02						4
Mar 02						3+ 1x3 + 1x4
Apr 02						5
May 02						1
Jun 02						
Jul 02						

NOTES:	9wagons	55wagons	1wagon	1wagon		0wagon


F150 13480 TIS
Stack - R/1000
2.0
1.5
1.0
0.5
0.0
Production Month / Model Year
TIS Reported = 0,3,6,12,18,24,36
◆ TIS = 0 △ TIS = 3 × TIS = 6 ■ TIS = 12 ✱ TIS = 18 ▲ TIS = 24 ■ TIS = 36

R983-988 4822

Advanced Product Quality Planning Status Report

Date: March 26, 2001

Review No.: 2

Diamond Point:

Supplier	Pollak Engineered Products
Location	Canton,Ma
Supplier Code	P545K
Risk Assessment	
New: *Site* *Technology* X *Process*	
Other Risks Late kick off	

Program	U222/U228
Model Year	2002
Part Number	2L1T-13480-A
Part Name	Six Terminal BOO Switch
Notice Level	AE00-E-11053542-009
User Plant(s)	Michigan Truck

Team Members	Company/Title	Phone/e-mail
Michael A. Vidal	Pollak / Principal Product Eng.	781-830-8476 / mike.vidal@pollak.com
Brian Nadeau	Pollak / Sales Engineer	248-624-3880 / brian.nadeau@pollak.com
Drew Benton	Pollak / Manufacturing Engineer	781-830-8574 / drew.benton@pollak.com
Jim O'Rourke	Pollak / Quality Engineer	781-830-8360 / jim.orourke@pollak.com
Bob Malenovsky	Pollak / Sales Manager	248-332-8280 / malenovb@hotst.com
Mike O'Reilly	Pollak / Engineering Manager	781-830-8444 / mike.oreilly@pollak.com
Kathy Olson	Ford / Application Eng. U222	313-317-7958 / kolson5@ford.com
Mark Schneider	Ford / Application Eng. U228	313-206-2710 / machne13@ford.com
Dale Stoltzfoimer	Ford / Core Switch Engineer	313-845-7686 / dstoltst@ford.com
John Rentie	Ford / Supplier Quality Assur.	313-337-9527 / jrentie@ford.com

Build Level (MRD)	Material Required Date	Quantity	Concurred		P.T.S.T. %	P.J.P.O. %
			No. ECs	No. CCs		
AP			N/A			
CP	7/9/00	125				
1PP	2/5/01					
PEQ	4/13/01					
Continuous						
Integrated	4/20/01					
Job1	7/23/01					

APQP Elements	QYR Status	Focus Element Rating	Program Need Date	Supplier Timing Date	Closed Date	Resp. Engineer Initials	Remarks or Assistance Required
1) Sourcing Decision	R		(12-1-99)	6/6/00	6/6/00	Ford PurSt'g	
2) Customer Input Requirements	G			7/19/99	7/19/99	BN	
3) Design FMEA	R			2/21/00	2/21/00	MV	
4) Design Review(s)	R		Ongoing	2/23/00	2/23/00	MV/BN	
5) Design Verification Plan	R			10/22/99	10/22/99	MV	
6) Subcontractor APQP Status						MV	
7) Facilities, Tools and Gages	R			5/10/00	5/10/00	DB	
8) Prototype Build Control Plan	R			5/12/00	5/12/00	JOR	
9) Prototype Builds	G		5/1/00	5/1/00	5/1/00	MV	Build of revised design. Original date:5/12/00
10) Drawings and Specifications	Y		5/5/00	5/5/00		MV/DB	Need ES approval
11) Team Feasibility Commitment	G			11/5/99	11/5/99	BN	
12) Manufacturing Process Flow Chart	G		10/31/99	1/31/00	1/31/00	DB	
13) Process FMEA	G		10/31/99	2/21/00	2/21/00	DB	
14) Measurement Systems Evaluation	G			6/30/00	6/30/00	MV	
15) Pre-Launch Control Plan	G		6/17/00	6/17/00	6/17/00	JOR	
16) Operator Process Instructions	G			10/15/00	10/15/00	DB	
17) Packaging Specifications	G		11/15/00	6/5/00	6/5/00	DB	
18) Production Trial Run	R			1/30/01	3/15/01	MOR	
19) Production Control Plan	G		6/13/00	6/13/00	6/13/00	JOR	
20) Preliminary Process Capability Study	G			2/10/01		JOR	
21) Production Validation Testing	R		2/5/01	3/17/01		MV	Decision req'd for what level parts to ship for 1PP
22) Production Part Approval (PSW)	R		4/5/01	6/13/01		JOR	
23) PSW Part Delivery at MRD	R		4/5/01	6/13/01		MOR	

COMMENTS: Q:\Ped_Prod\98-112\Dist.Doc\APQP

Switches

Electrical / Electronic Systems Design Transmittal

Component Name:	4-Terminal Brake Switch - RIGHT HAND MOUNT
Part Number:	2L17-13480-AB
SubSystem:	Brakes 06.08.04

D&R Engineer (Ford): Megan Savage
Department: RVT Electrical
Phone: (313)322-4249
PROFS ID: msavag10

Supplier Contact:	MIKE VIDAL
Company:	POLLAK
Phone:	(781) 830-5478
PROFS ID / E-Mail:	mike.vidal@pollak.com

Electrical Hardware Requirements Matrix

Connector Number / Pin Number	Signal Name	Functional Class	Operating Voltage: Maximum Rated Voltage (vr)	Nominal Rated Voltage (vn)	Minimum Rated Voltage (vmin)	Operating Current: Maximum Rated Switch Current (I_sl)	Minimum Rated Switch Current (I_min)	Maximum Rated Load Current (I_sc)	Power Dissipation: Max. Rated Instantaneous Power Dissipation (pwr_in)	Max. Rated Constant Power Dissipation (pwr_sat)	Resistance: Typical Closed Contact Resistance (ron)	Tolerance of Closed Contact Resistance (rtol)	Typical Contact Open Resistance (roff)	Type: Break Type (m/b) (make before break, b=break before make)	Timing: Minimum Time to Make (+tmk_min)	Nominal time to Make (+tmk)	Maximum Time to Make (+tmk_max)	Minimum Time to Break (+tbrk_min)	Nominal Time to Break (+tbrk)	Maximum Time to Break (+tbrk_max)	Gap: Gap of Open Contacts (bl_gap)	Contact Bounce	Description
			V	V	V	A	A	A	W	W	Ohms	%	Ohms	m,b	msec	msec	msec	msec	msec	msec	mm		
1	Fuse B+ 60	c	16	13	9	60	3.5	16.5	—	3.7	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	* velocity and timing are operator dependent
2	Stop Lamps	c	16	13	9	60	3.5	16.5	—	3.7	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	
3	Fuse B+ 61	c	16	13	9	40	3.0	12.5	—	2.7	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	
4	CHMSL & Pull Up Mod.	c	16	13	9	40	3.5	12.5	—	3.7	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	
3	Ground	c	16	13	9	0.017		0.017	—	0.004	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	* velocity and timing are operator dependent
4	Pull Down Modules	c	16	13	9	0.017		0.017	—	0.004	0.005	—	1 Meg	*	*	*	*	*	*	*	0.4	5 ms	

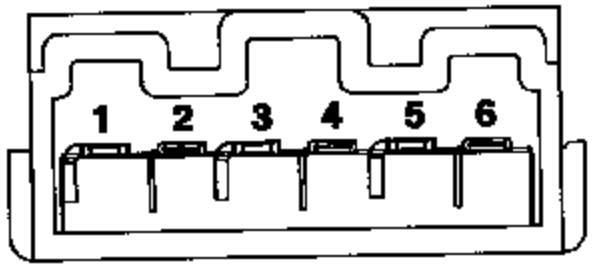
	Min	Nominal	Max
Operating Temperature (Degrees C) *	-40	23	85

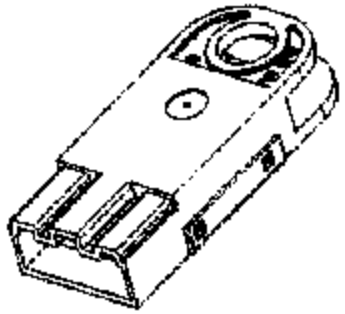
Physical Interface Requirements Matrix

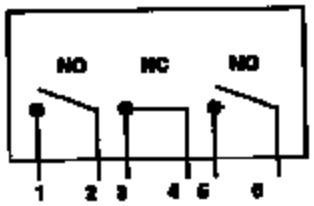
Mating Connector Part Number: XL1T-14A486-AZB

Signal Name		Pin Number	Terminal Part Number
Fuse B+ #2		1	9R83-14474-BCA
Stop Lamps		2	9R83-14474-BCA
Reserved		3	9R83-14474-BAA
Pull Down Modules		4	9R83-14474-BAA
Fuse B+ #1		5	9R83-14474-BBA
CHMSL & Pull Up Mod.		6	9R83-14474-BBA

Connector Pin-Out - View Looking into the Face of Switch Connector







Mating Connector Part Number:

Signal Name		Pin Number	Terminal Part Number

Connector Pin-Out - View Looking into the Face of Switch Connector

Component Name:	
Part Number:	
Sub-System:	

Department:	
Phone:	
PROFS ID:	

Supplier Contact:	
Company:	
Phone:	
PROFS ID / E-Mail:	

...rdware Requirements Matrix

			Operating Voltage			Operating Current			Power Dissipation		Resistance			Type	Timing						Gap				
Connector Number / Pin Number	Signal Name	Functional Class	Maximum Rated Voltage (Vr)	Nominal Rated Voltage (Vn)	Minimum Rated Voltage (Vmin)	Maximum Rated Switch Current (I_sw)	Minimum Rated Switch Current (I_min)	Maximum Rated Load Current (I_ref)	Max. Rated Instantaneous Power Dissipation (pwr_inst)	Max. Rated Constant Power Dissipation (pwr_cnt)	Typical Closed Contact Resistance (rcc)	Tolerance of Closed Contact Resistance (rctol)	Typical Contact Open Resistance (rod)	Break Type (Break before make, make before break)	Minimum Time to Make (t-mk_min)	Nominal time to Make (t-mk)	Maximum Time to Make (t-mk_max)	Minimum Time to Break (t-brk_min)	Nominal Time to Break (t-brk)	Maximum Time to Break (t-brk_max)	Gap of Open Contacts (d_gap)	Closing/Opening Contact Velocity (cont_vel)	Tolerance of cont_vel (cvtol)	Contact Bounce - define tolerance & min / max	Description
			V	V	V	A	A	A	W	W	Ohm	%	Ohm	n/a	msec	msec	msec	msec	msec	msec	mm	m/s	%		

Design Voltage for the switch.
1. Maximum voltage: Switch is tested for. Normally 16v.
2. Nominal voltage: Normally that is 13.5V +/-0.2
3. Minimum voltage: Normally 9v.

1. Typical closed contact resistance: Bulk resistance across closed contacts. Includes entire switch circuit like terminals, PCB, substrate, pigtail, solder joints, etc as applicable.
2. Tolerance: Define min / max in ohms. This includes build tolerances as well as degradation over life.

Maximum, nominal & maximum time to break in self breaking switch designs like snap action, V blade, dome/cam, etc.

Power dissipation based on the maximum instantaneous current and voltage. Take max contact resistance into account also.

Circuit number and function of that circuit like 57 - Ground

Vibration of contact between first make and seat. In case of rotary/ 2 stage switches, may also include bounce during transition. (For max contact bounce switch may be loaded).

Define tolerance in %.

Contact blade velocity during customer actuation of the switch.

Applicable for low current circuits only

Power dissipation based on the maximum run current and voltage. Take max contact resistance into account also.

Air gap between normally open contacts in mm.

1. Maximum rated current: In rush, stall, running, break currents, whichever is highest.
2. Minimum rated current: This is normally in milli-amps.
3. Maximum rated load current: Nominal run current switch was designed & tested for.

1. Minimum time to make: Not contact bounce but minimum time needed to change state during fast customer actuation.
2. Nominal time to make: Based on actuation speeds per durability test fixtures. Define tolerance, if significant.
3. Maximum time to make: This is maximum time if switch is to be tested. Max. contact bounce measurements under these conditions.

Give actual power consumption rating of the lighting circuits

Identify if it is a class a,b or c function. WDR 00.00EA-D03-1
a - Comfort/ Entertainment
b - Enhances operation but is not essential
c - Essential for operation or safety

Open contact resistance measured across the circuits terminal to terminal.

Define actual temperature switch design is validated for. Must be capable to operate under these conditions.

e - Essential for operation or safety

[illegible]	Min.	Nom.	Max.
Operating Temp. (Degrees C)			

Temperature rise in switch terminals (Deg C): [illegible]	

Physical Interface Requirements Matrix

Specify the maximum temperature rise in switch terminals contributed due to ohmic resistance in switch. Needed to confirm service temperature of terminals. All readings at ambient.

Connector Part Number:		
Circuit Name	Pin Number	Terminal Part Number

Connector Pin-Out - View Looking Into the Face of the Connector on Switch / Component

Either looking at the pinouts in the base of the switch (in case of direct connect) or connector at the end of a pigtail (in case of pigtail like a clock spring).

Connector Part Number:		
Circuit Name	Pin Number	Terminal Part Number

Connector Pin-Out - View Looking Into the Face of the Connector on Mating Wire Harness Connector

Pinouts at the mating wire harness. Will be mirror image of the pinouts looking into the switch, shown above.

Note: [illegible]

Circuit Diagram [illegible]

Sketch the internal switch circuit diagram as detailed on the release drawing.

DRAFTONLY - NOT VALID AFTER PRODUCTION RELEASE OF COMPONENT DRAWING. ***Please refer switch release drawing for design intent ICD.***

N03-086 4827

[illegible]

Electrical / Electronic Systems Design Transmittal

[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]

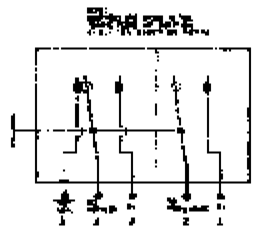
DRAFT ONLY - NOT VALID AFTER PRODUCTION RELEASE OF

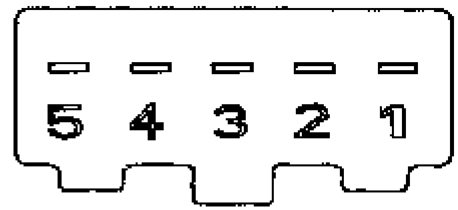
Physical Interface Requirements Matrix

[illegible]

[illegible]				Pin Number	[illegible]
[illegible]				1	
[illegible]				2	
[illegible]				3	
[illegible]				4	
[illegible]				5	

[illegible]

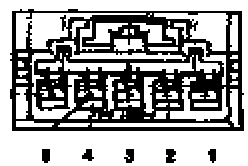




[illegible]

[illegible]				Pin Number	[illegible]
[illegible]				1	
[illegible]				2	
[illegible]				3	
[illegible]				4	
[illegible]				5	

[illegible]



[illegible]

DRAFTONLY - NOT VALID AFTER PRODUCTION RELEASE OF

COMPONENT DRAWING. *Please refer switch release drawing for design intent ICD.*

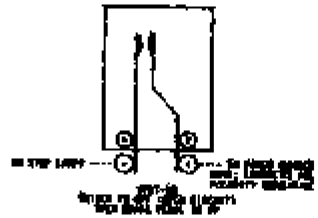
Electrical / Electronic Systems Design Transmittal

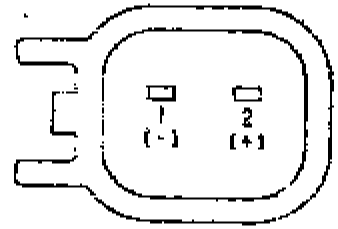
DRAFT ONLY - NOT VALID AFTER PRODUCTION RELEASE OF

Physical Interface Requirements Matrix

[illegible]				Pin Number	[illegible]
[illegible]				1	
[illegible]				2	

Connector Pin-Out - View Looking Into the Face of the Connector on Device / Component





[illegible]				Pin Number	[illegible]
[illegible]				1	[illegible]
[illegible]				2	[illegible]

Connector Pin-Out - View Looking Into the Face of the Connector on Mating Wire Harness Connector

Switches

Electrical / Electronic Systems Design Transmittal

Component Name:	
Part Number:	
[illegible]:	

[illegible] Engineer (Ford):	
Department:	
Phone:	
[illegible]:	

Supplier Contact:	
Company:	
Phone:	
[illegible] / [illegible]:	

Electrical Hardware Requirements Matrix

			Operating Voltage			Operating Current			Power Dissipation		Resistance			Type	Timing						[illegible]				
Connector Number / Pin Number	Signal Name	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Description
			V	V	V	A	A	A	W	W	Ohm	%	Ohm	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	%		

	Minimum		Max
Operating Temperature (Degrees C) *			

[illegible]	

Delphi

Electrical / Electronic Systems Design Transmittal

Component Name:
Part Number:
Description:

D&R Engineer (Ford):
Department:
Phone:
PROFS ID:

Supplier Contact:
Company:
Phone:
PROFS ID / E-Mail:

Physical Interface Requirements Matrix

Connector Part Number:

Signal Name				Pin Number	Terminal Part Number

Connector Pin-Out - View Looking Into the Face of the Connector on Switch / Component

Connector Part Number:

Signal Name				Pin Number	Terminal Part Number

Connector Pin-Out - View Looking Into the Face of the Connector on Mating Wire Harness Connector

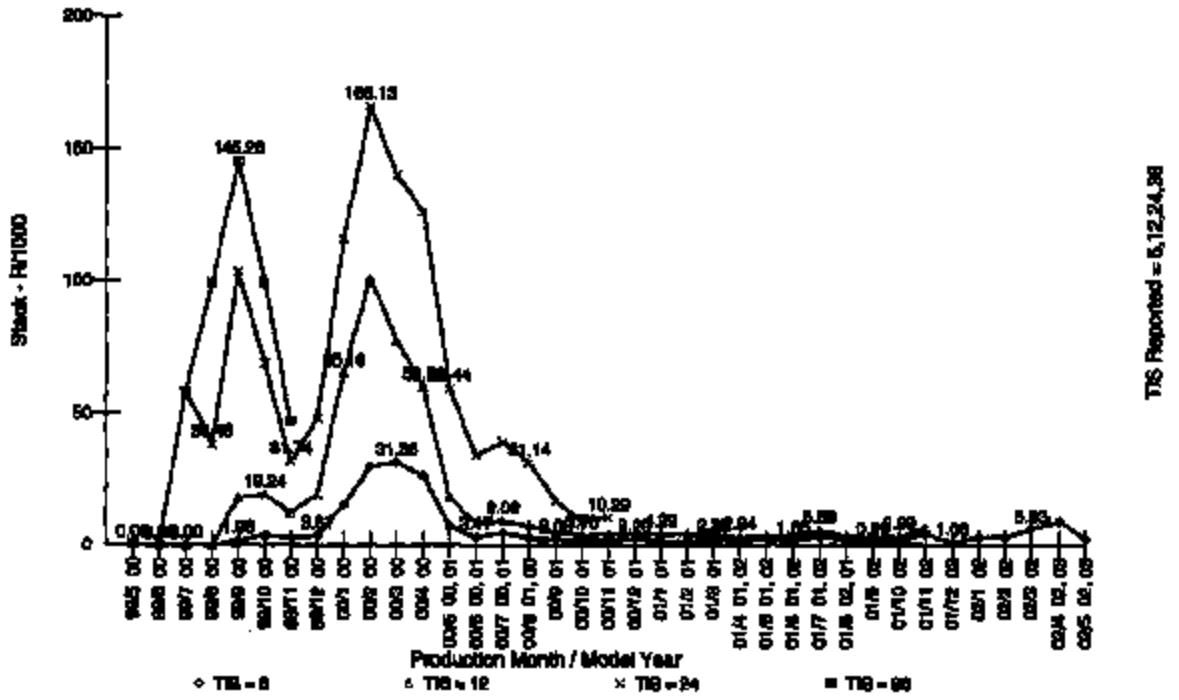
Note: Connector Part Number is the Part Number for the Connector on Your Component Unless Otherwise Noted.

Circuit Diagram

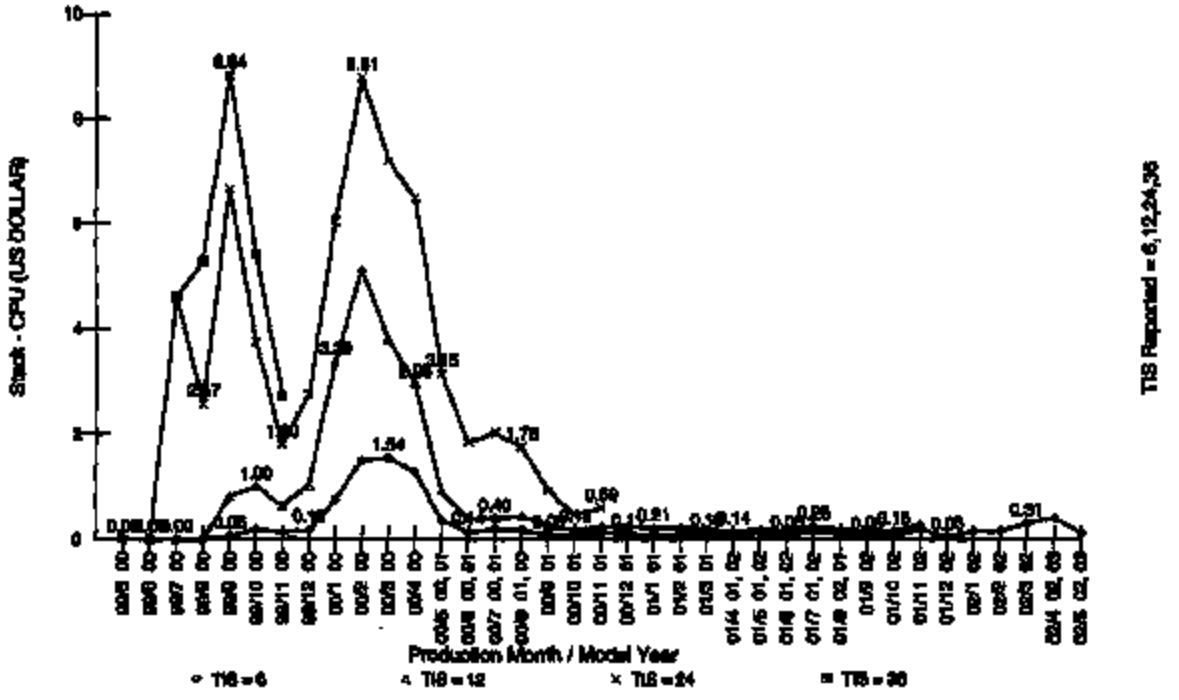
NCHO-080 4932

D186 Total 13480 R's

MODEL YEAR MATRIX



MODEL YEAR MATRIX



SPETERS
1/14/03

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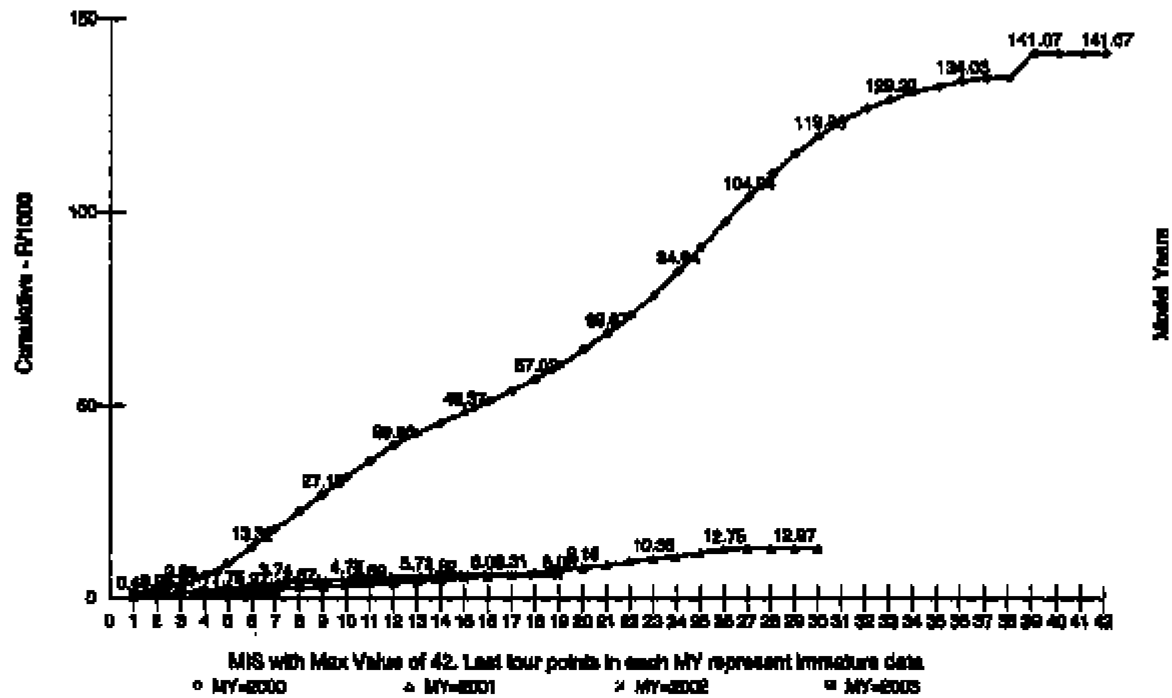
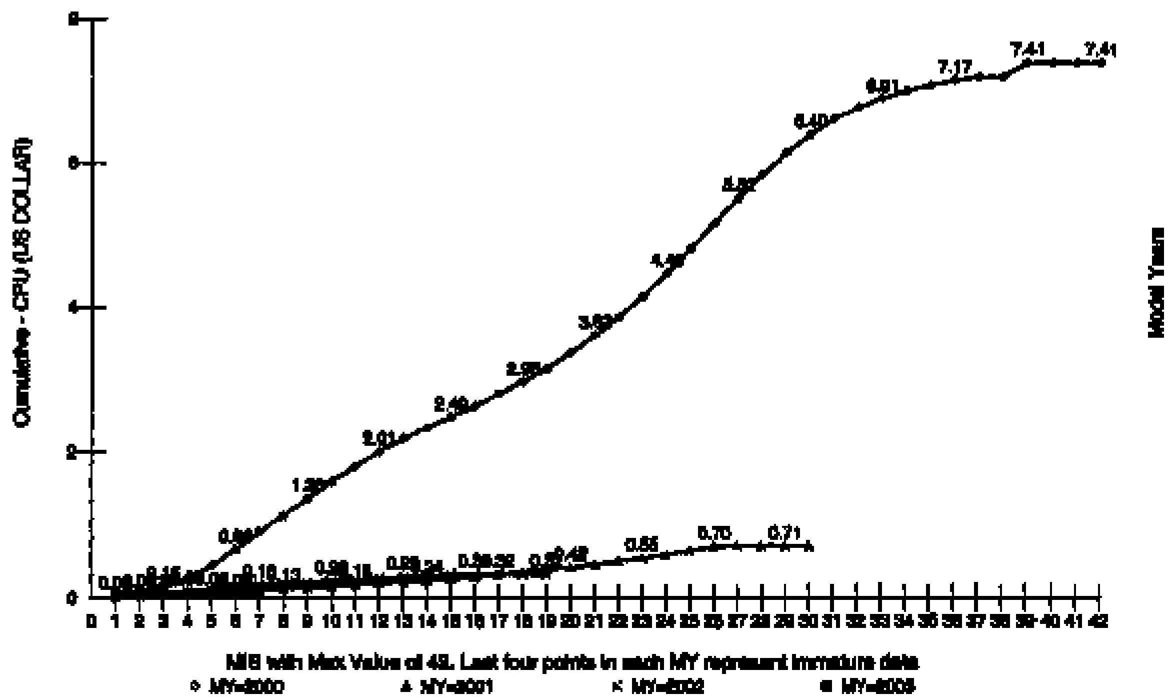
12/4/2003
Msavage_13480_D186_trend charts.xls

D186 Total 13480 R's

MODEL YEAR MATRIX



MODEL YEAR MATRIX



SPETERS
1/14/03

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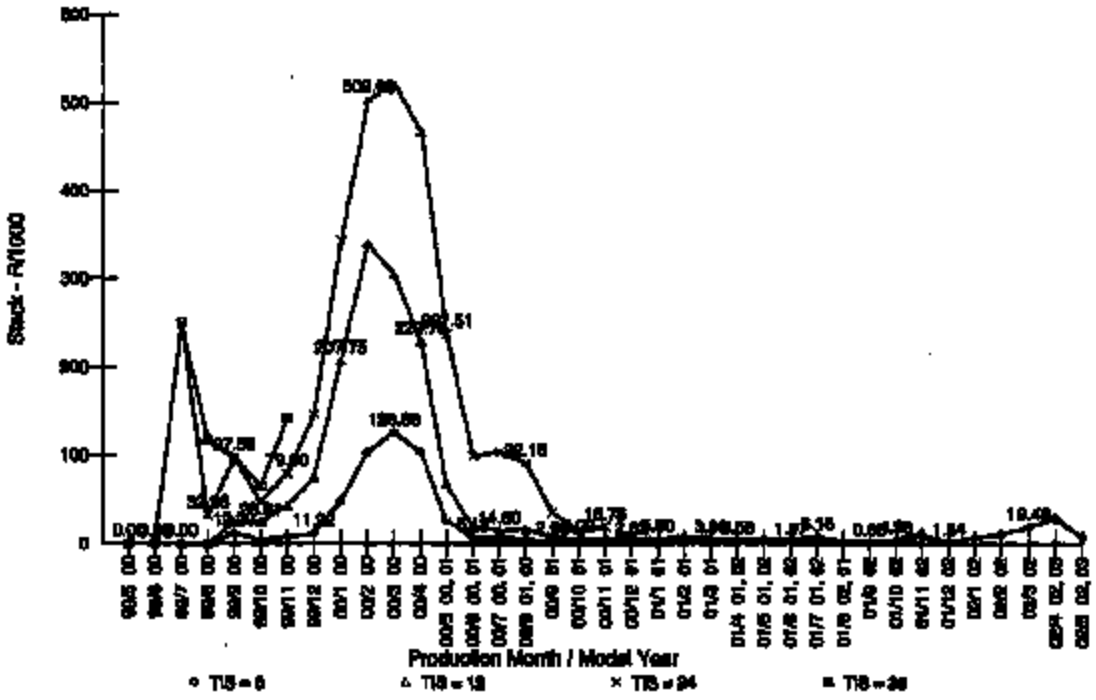
12/4/2003
Msavage_13480_D186_trend charts.xls

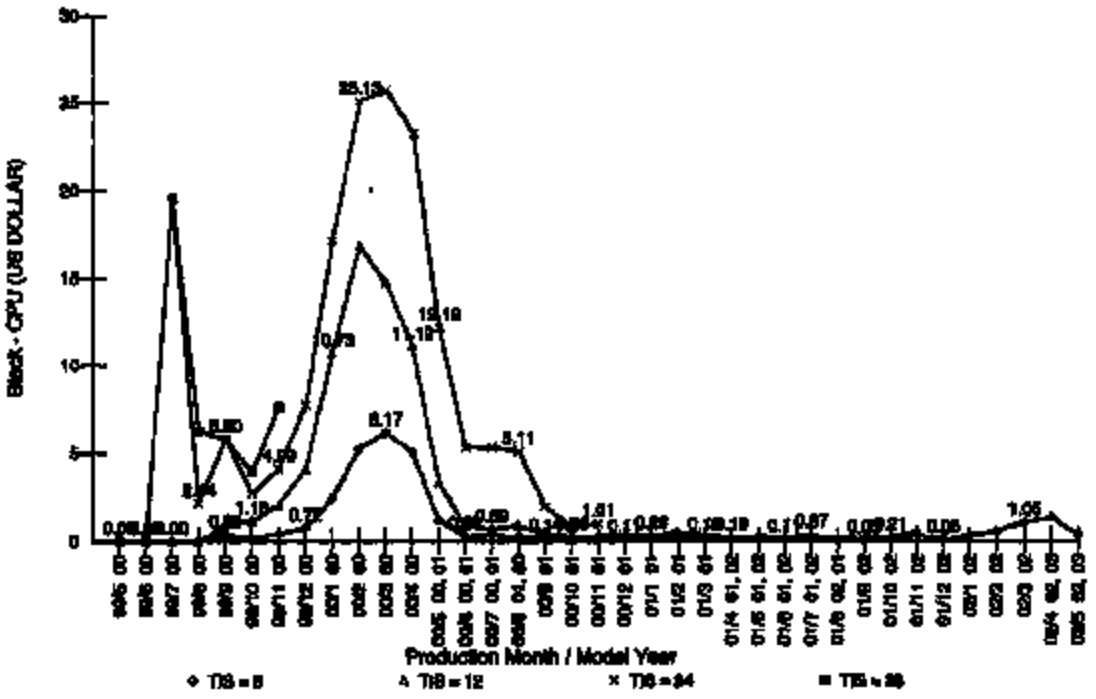
D186 Total Adjustable

MODEL YEAR MATRIX



TIS Reported = 6,12,24,36

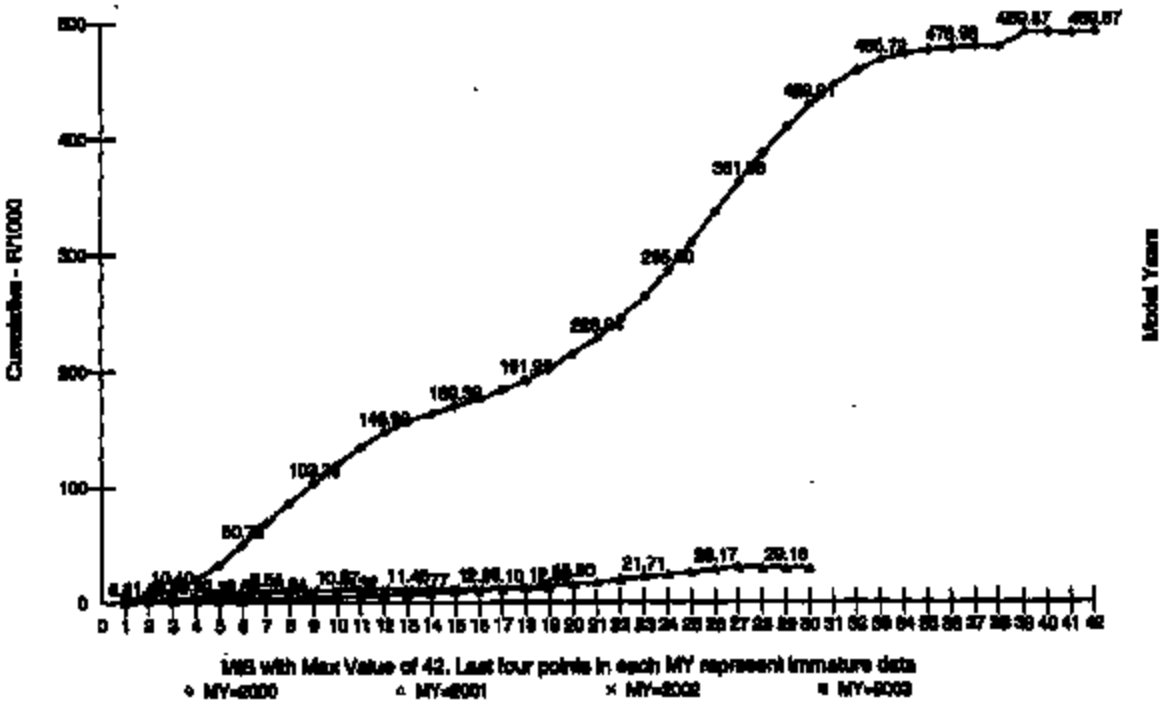
MODEL YEAR MATRIX



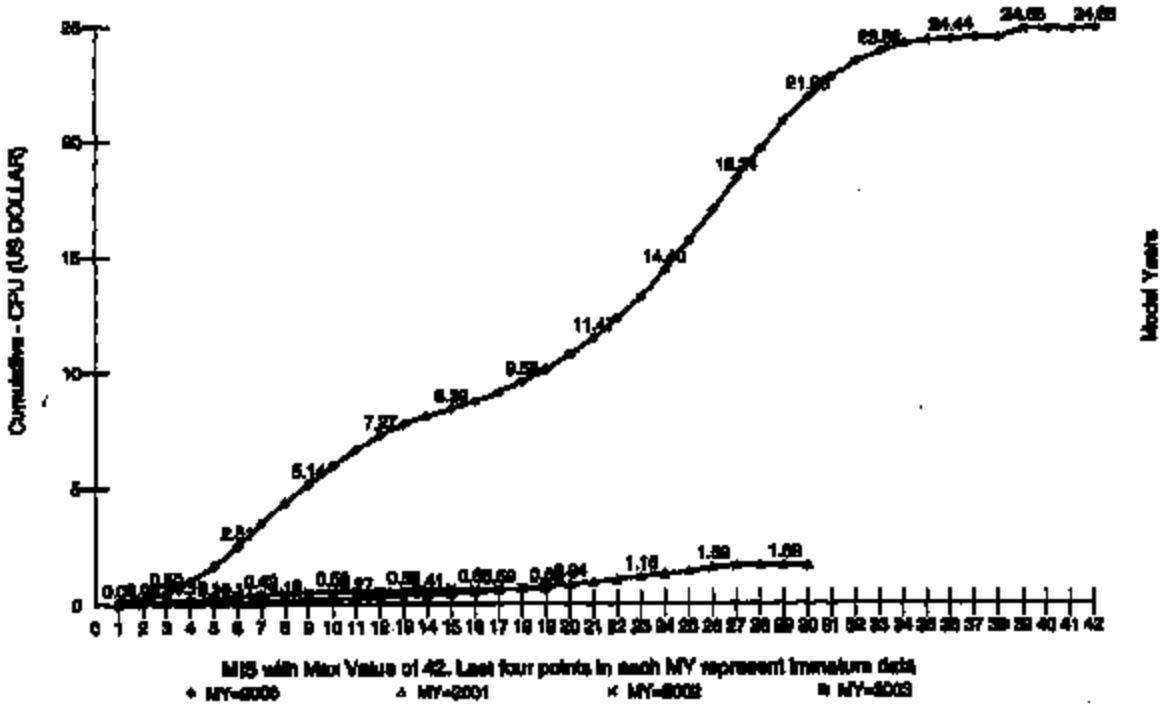
TIS Reported = 6,12,24,36

D166 Total Actuarable

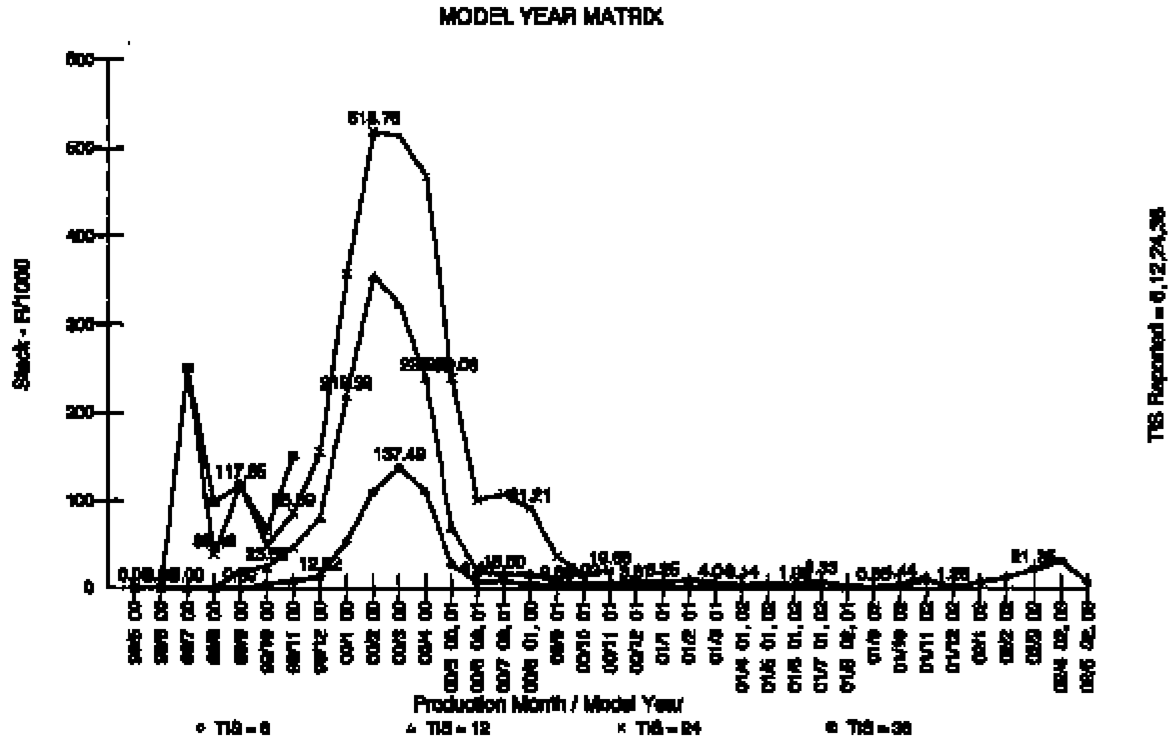
MODEL YEAR MATRIX

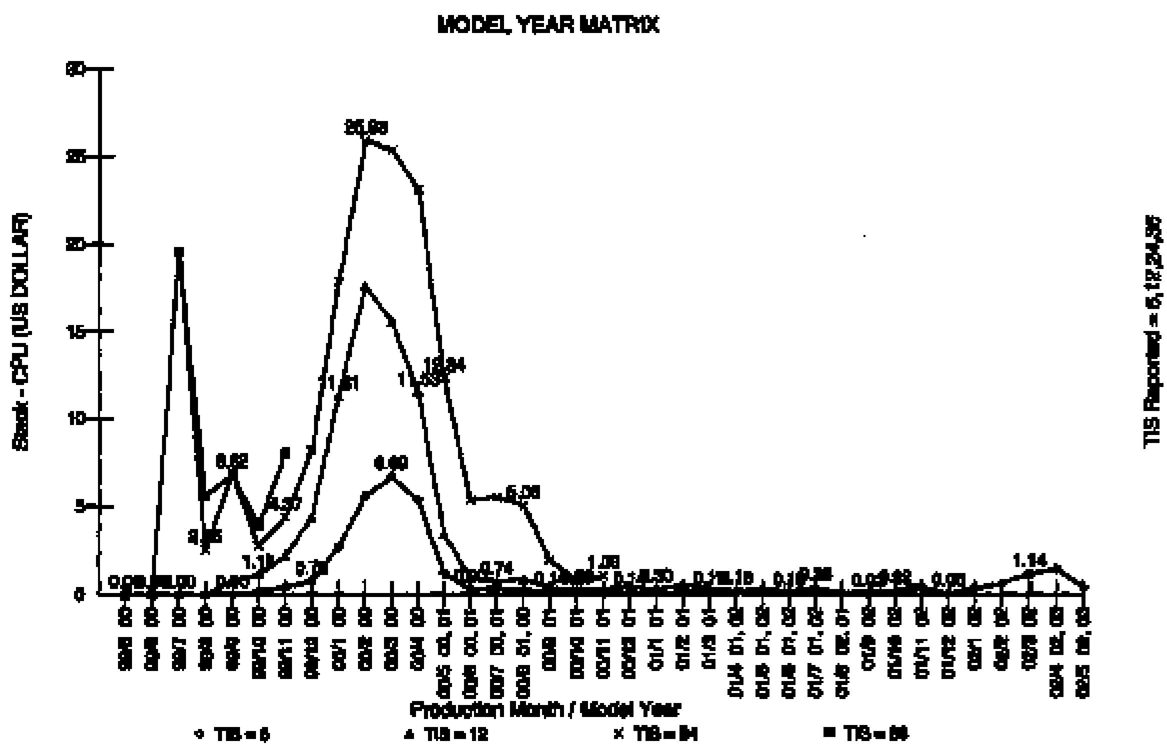


MODEL YEAR MATRIX



D186 Total for Sedan Adjustable





BPETERS
1/14/05

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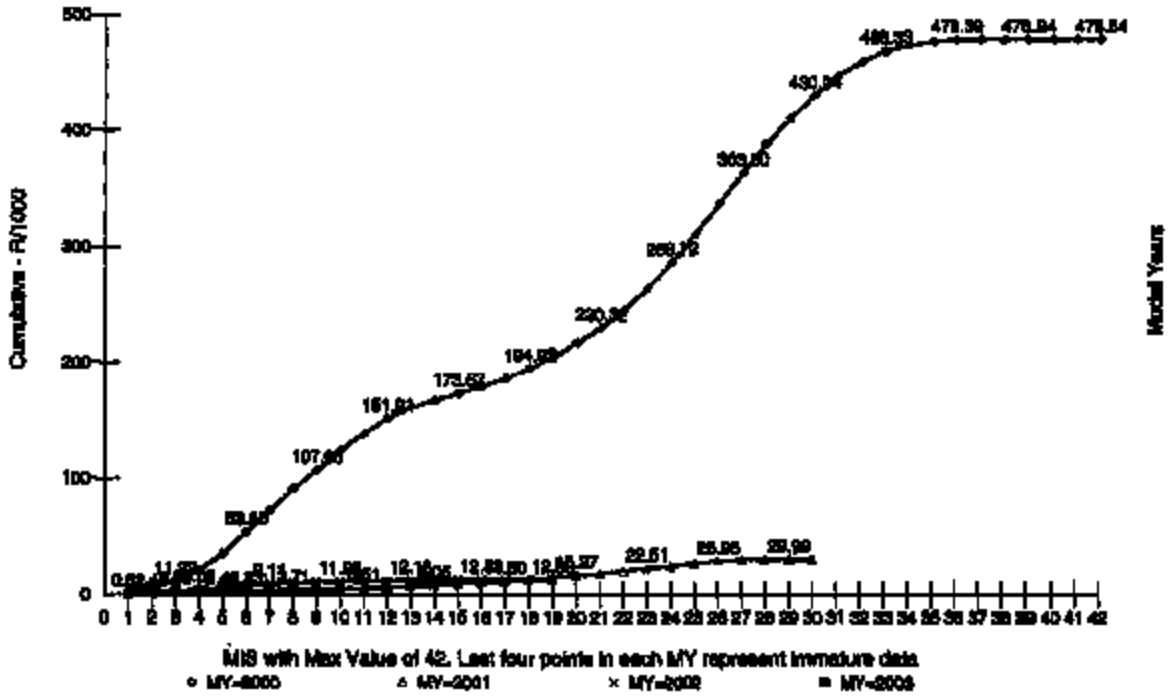
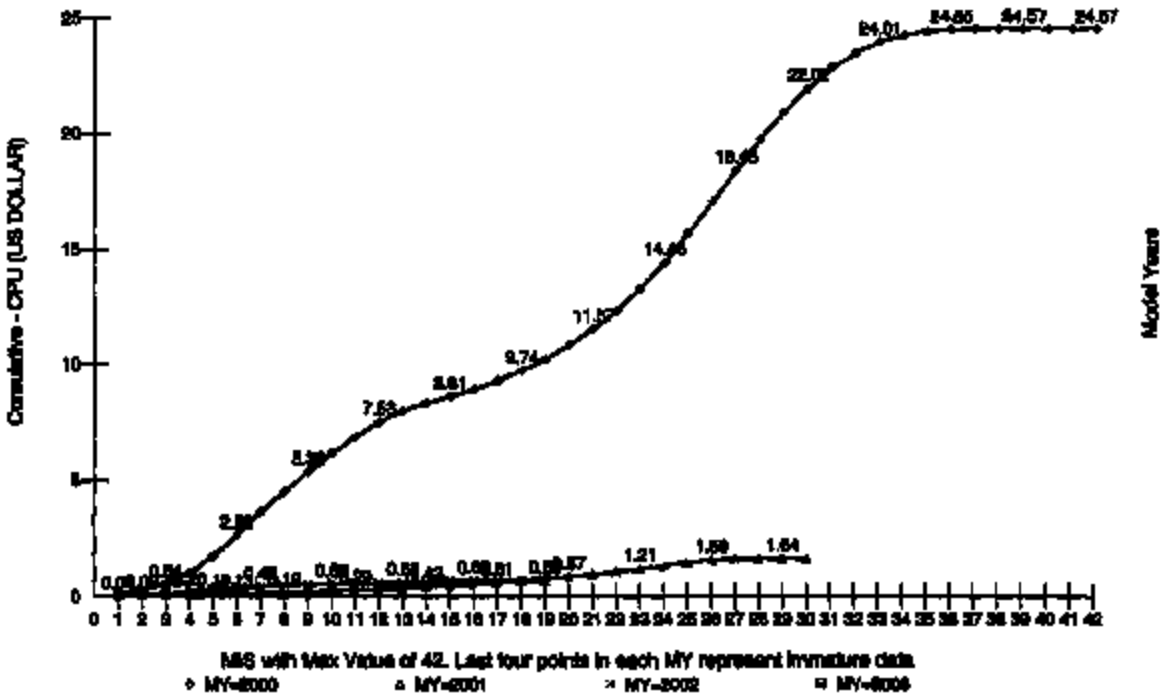
12/4/2003
Msavage_13480_D186_trend charts.xls

D196 Total for Sedan Adjustable

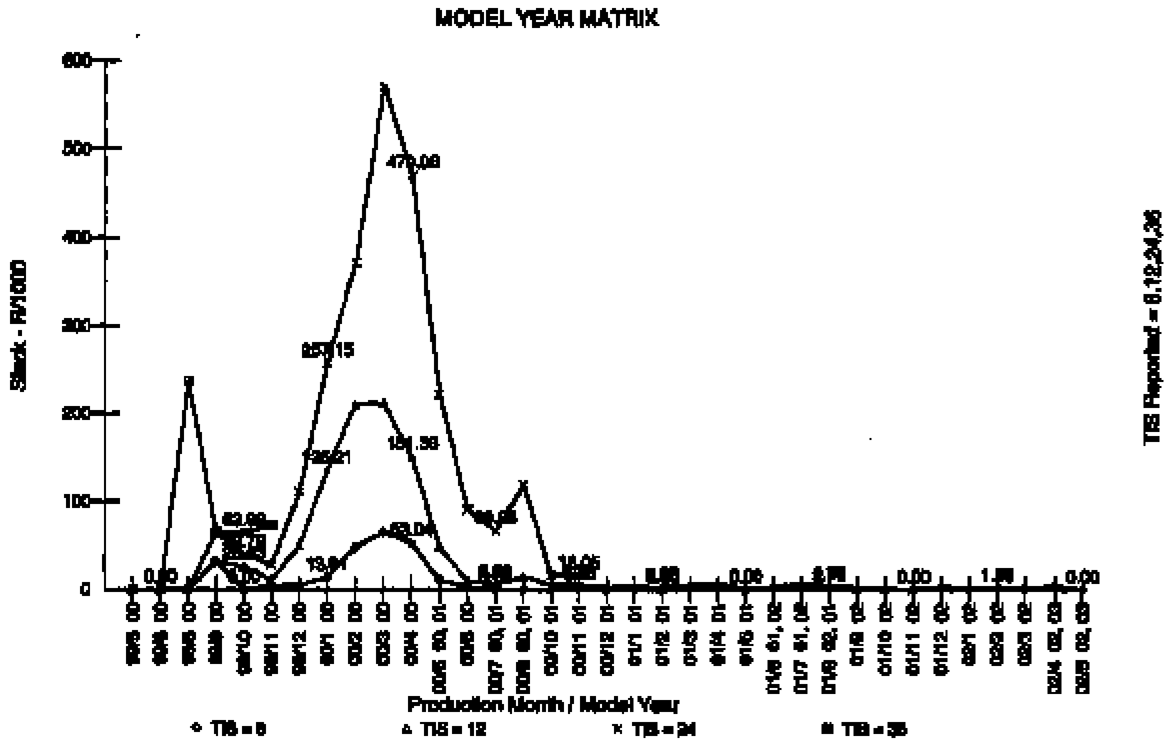
MODEL YEAR MATRIX

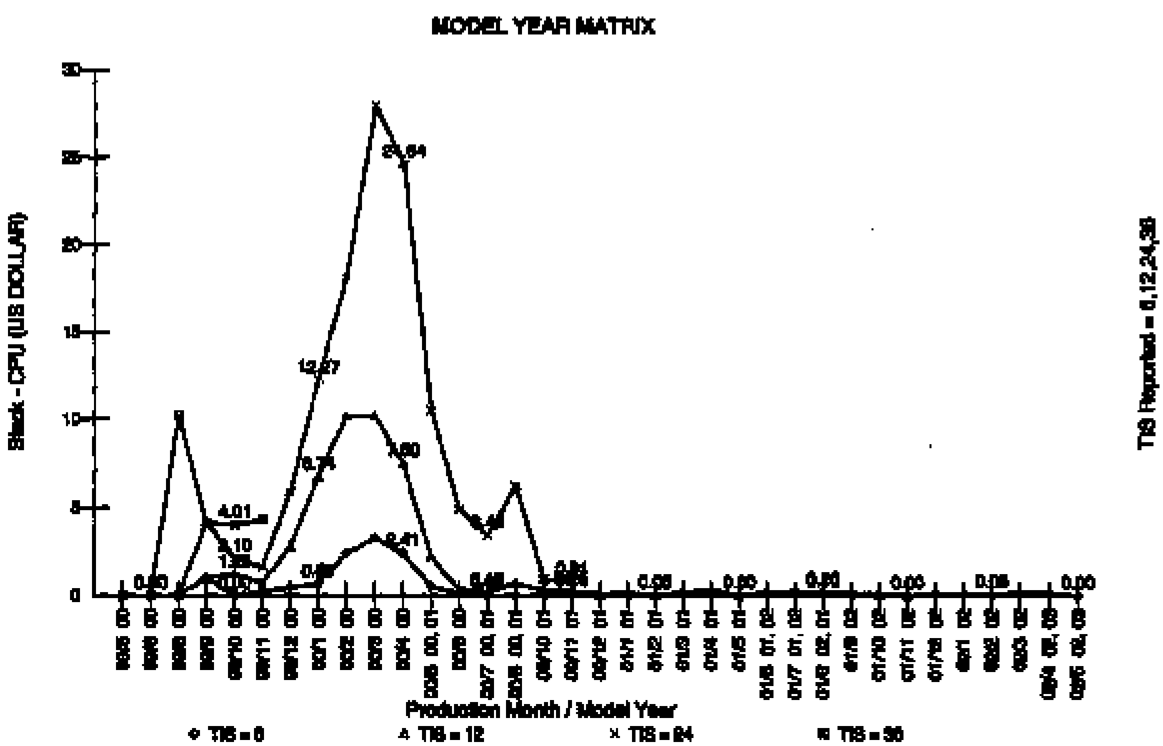


MODEL YEAR MATRIX



D166 Total Wagon Adjustable





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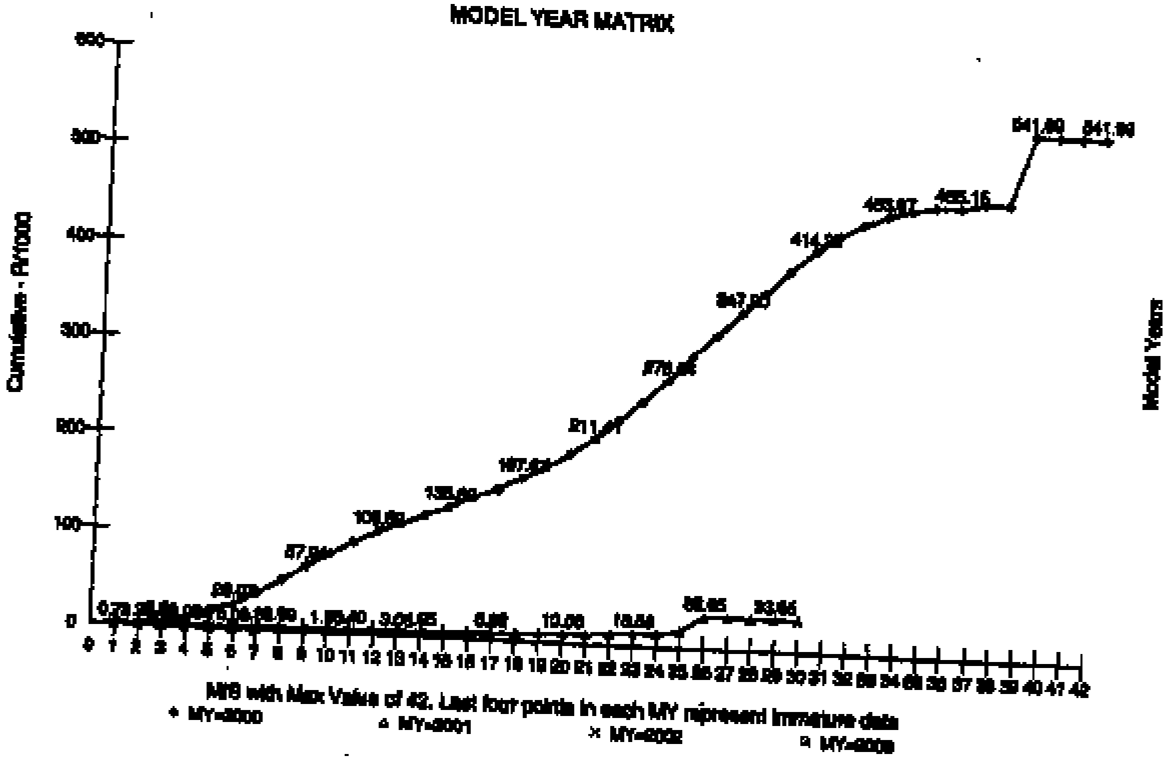
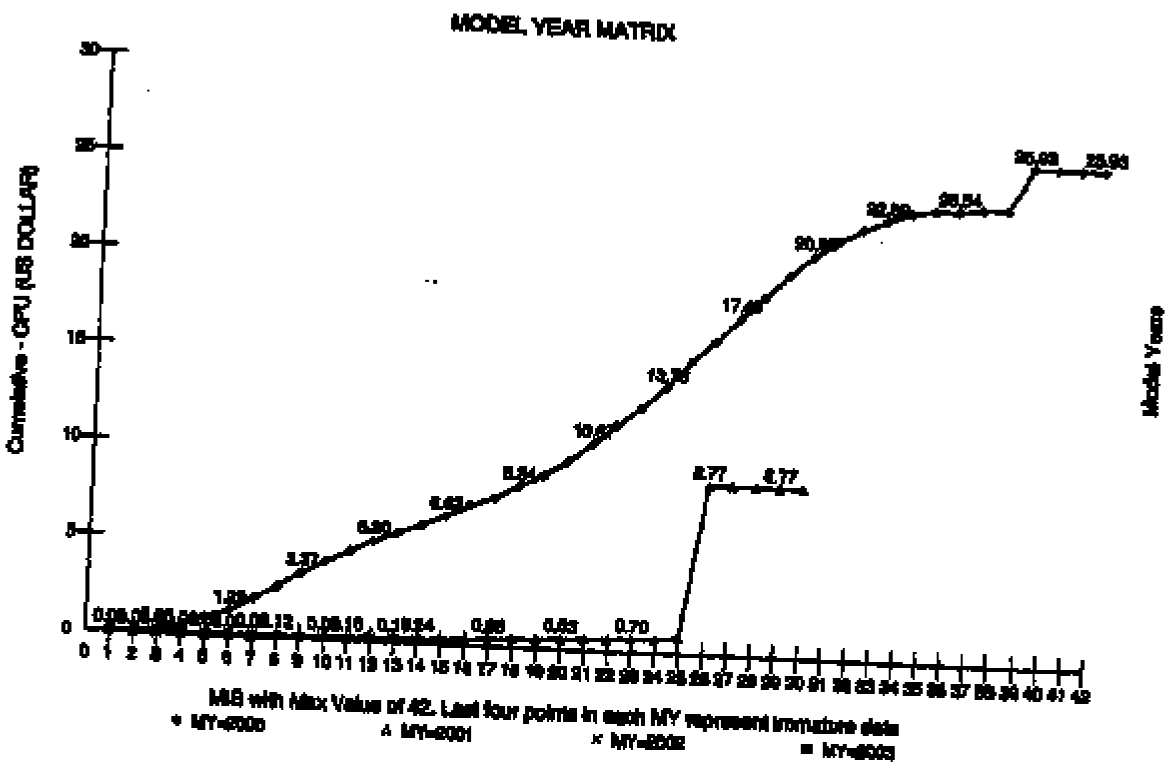
SPETERS
1/14/03

6239 S08-0504

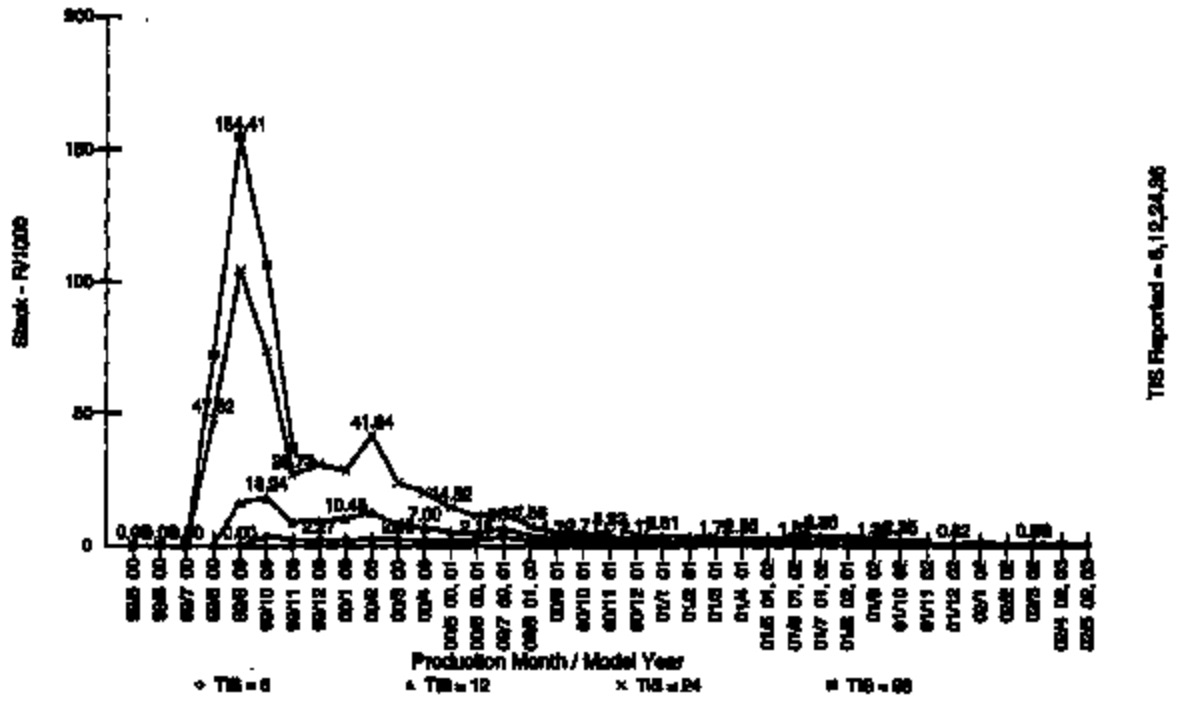
D186 Total Wagon Adjustable





D186 Total Fixed

MODEL YEAR MATRIX



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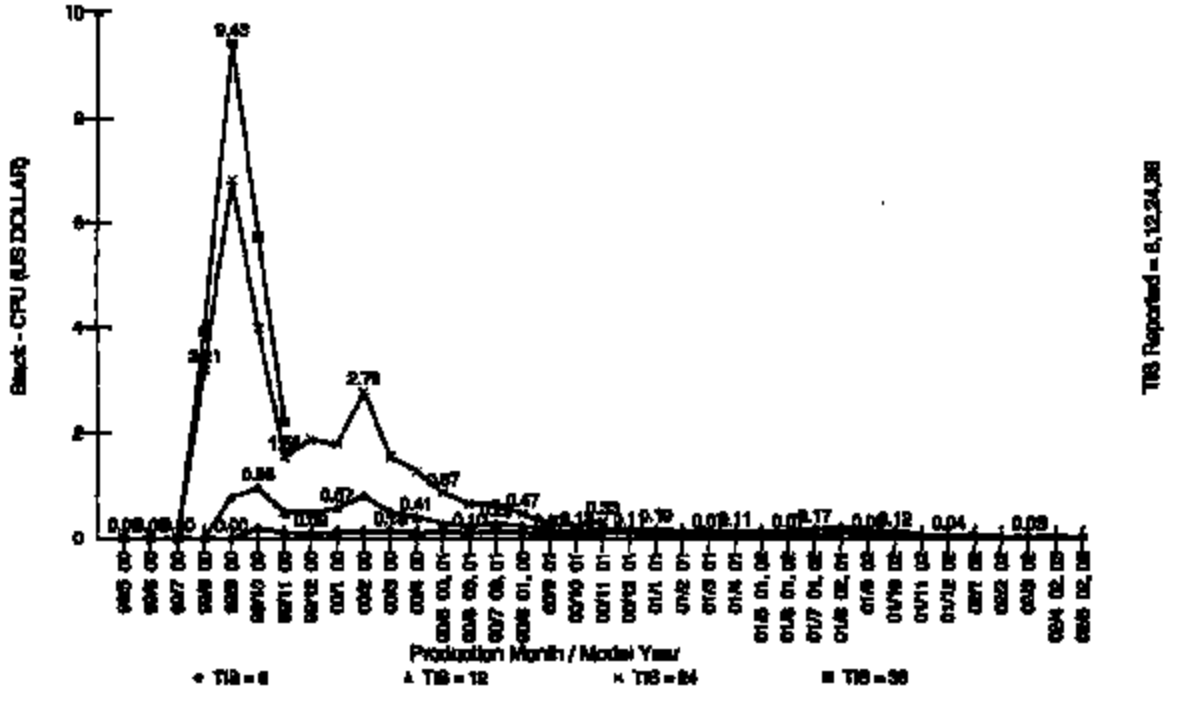

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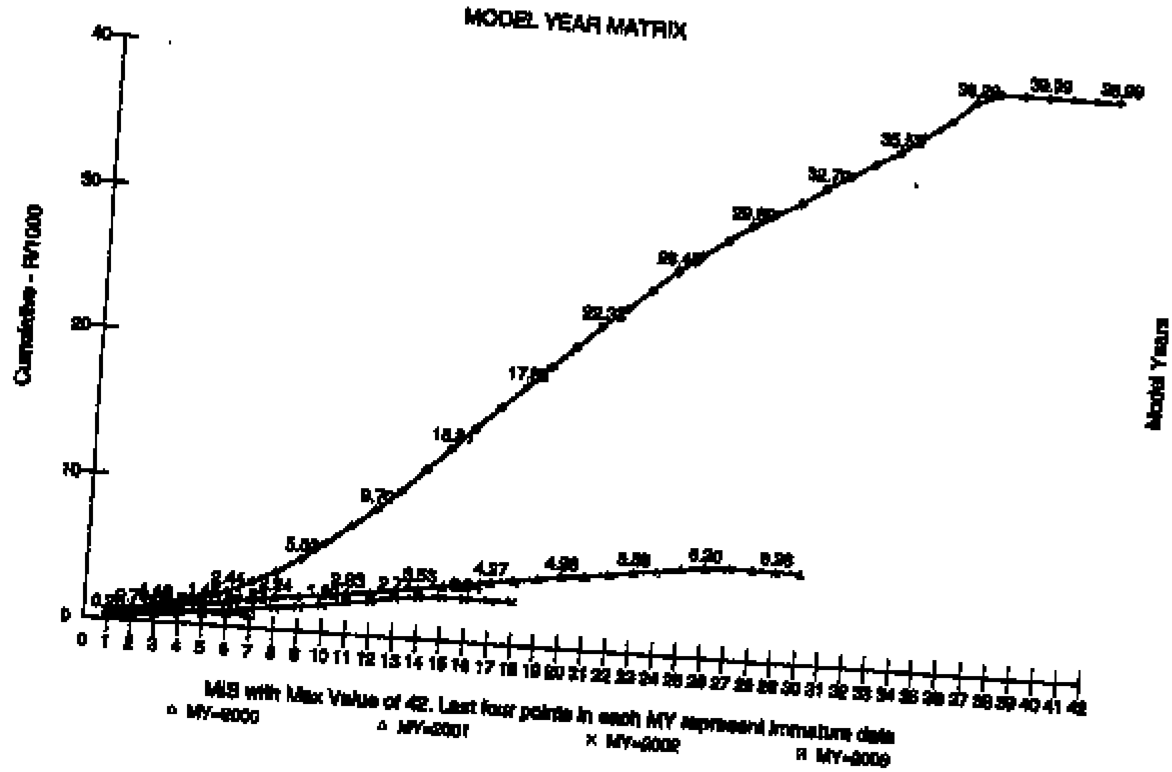

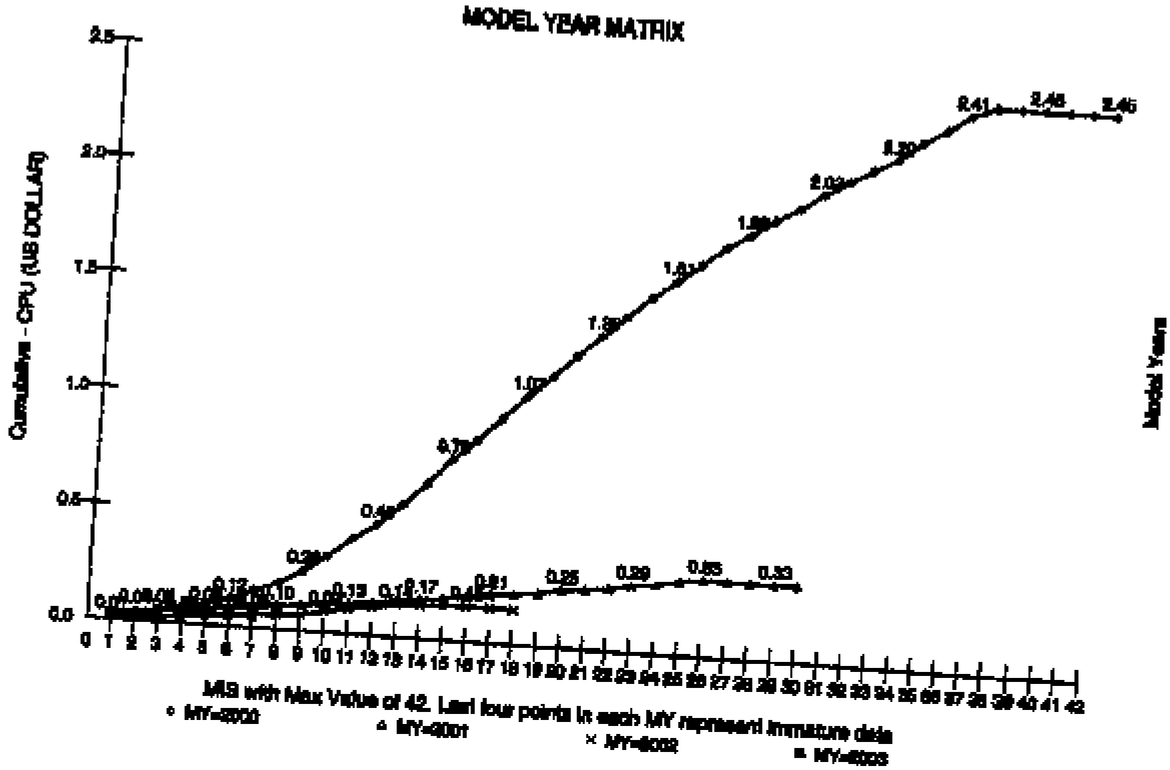

SPETERS
1/14/03

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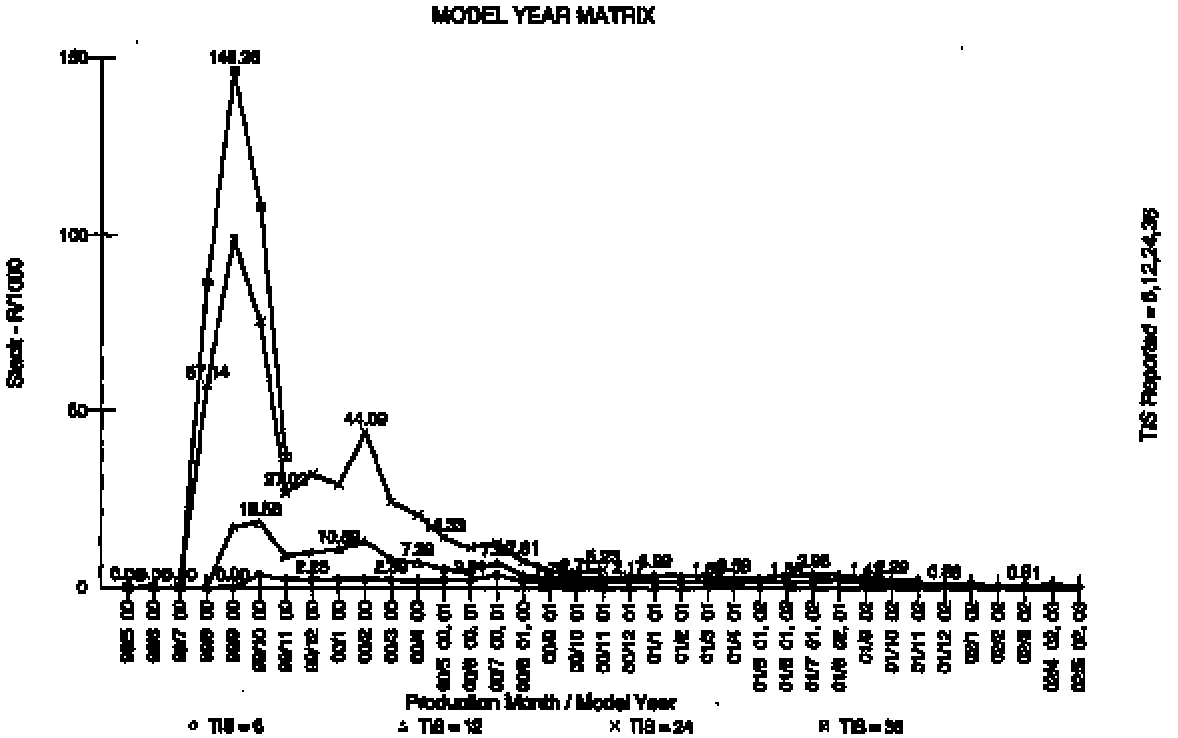
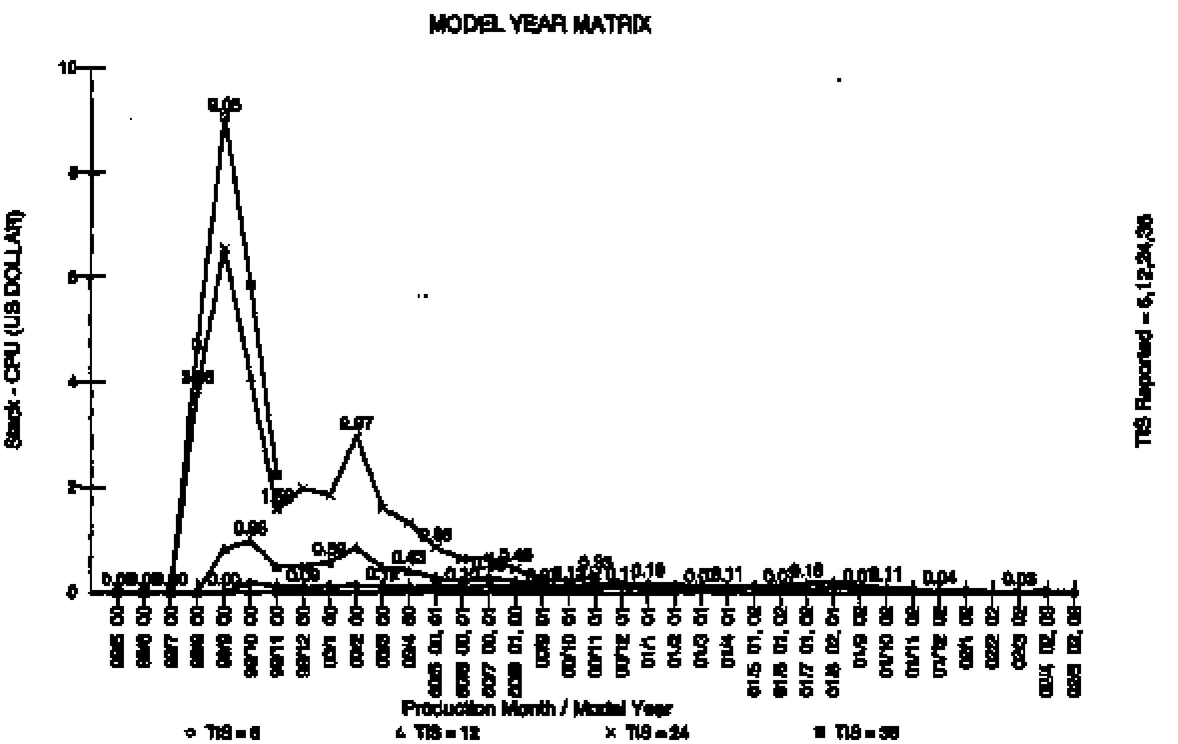
2/6/97 9000-0092

D186 Sedan Fixed





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SPETERS
1/14/03

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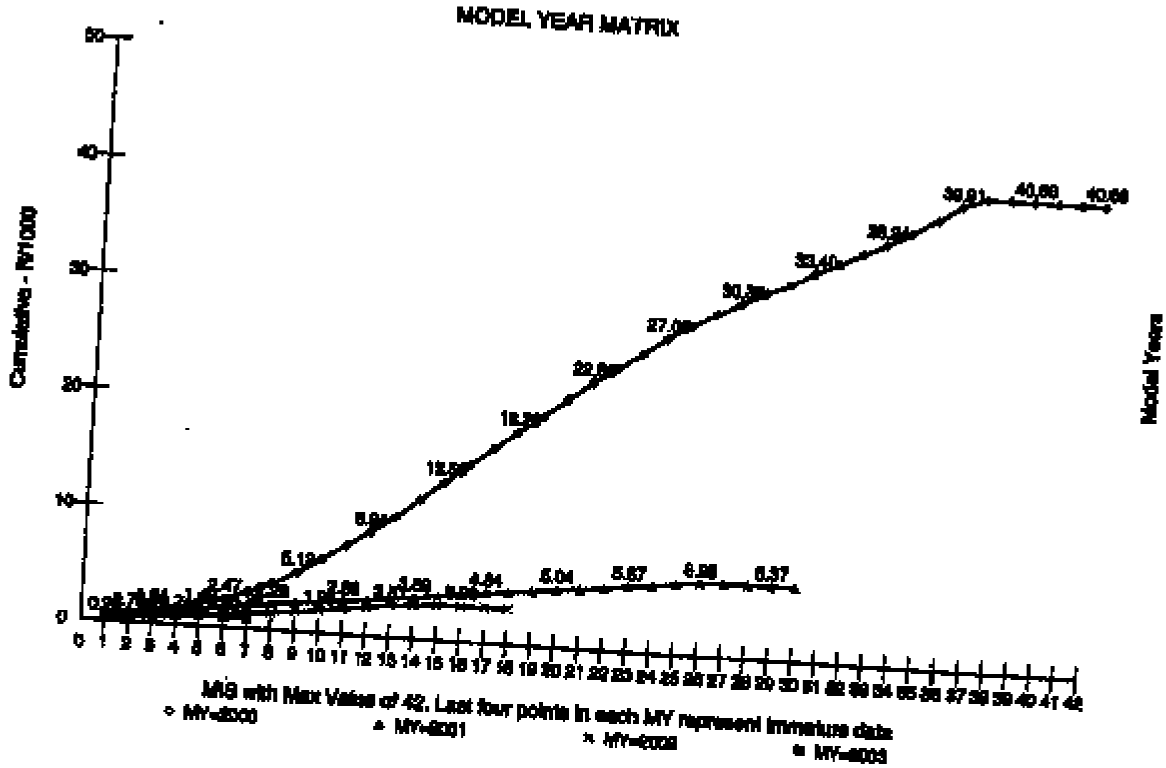
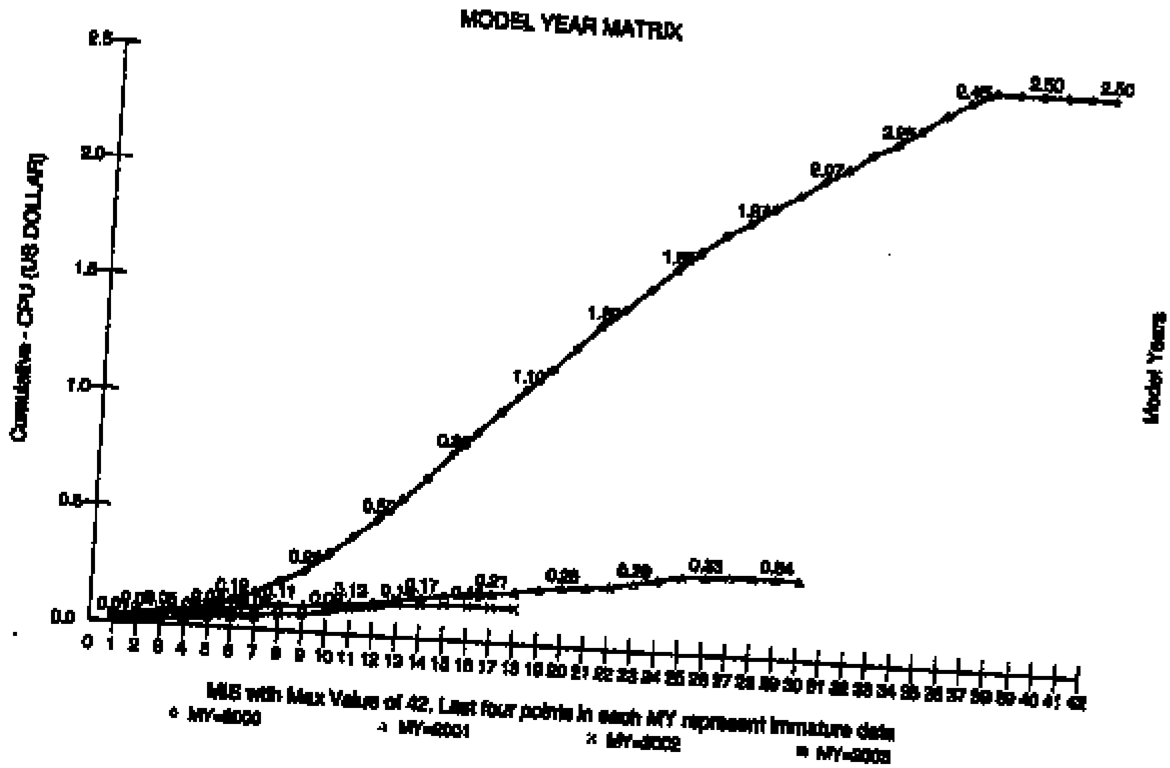
D186 Sedan Fixed





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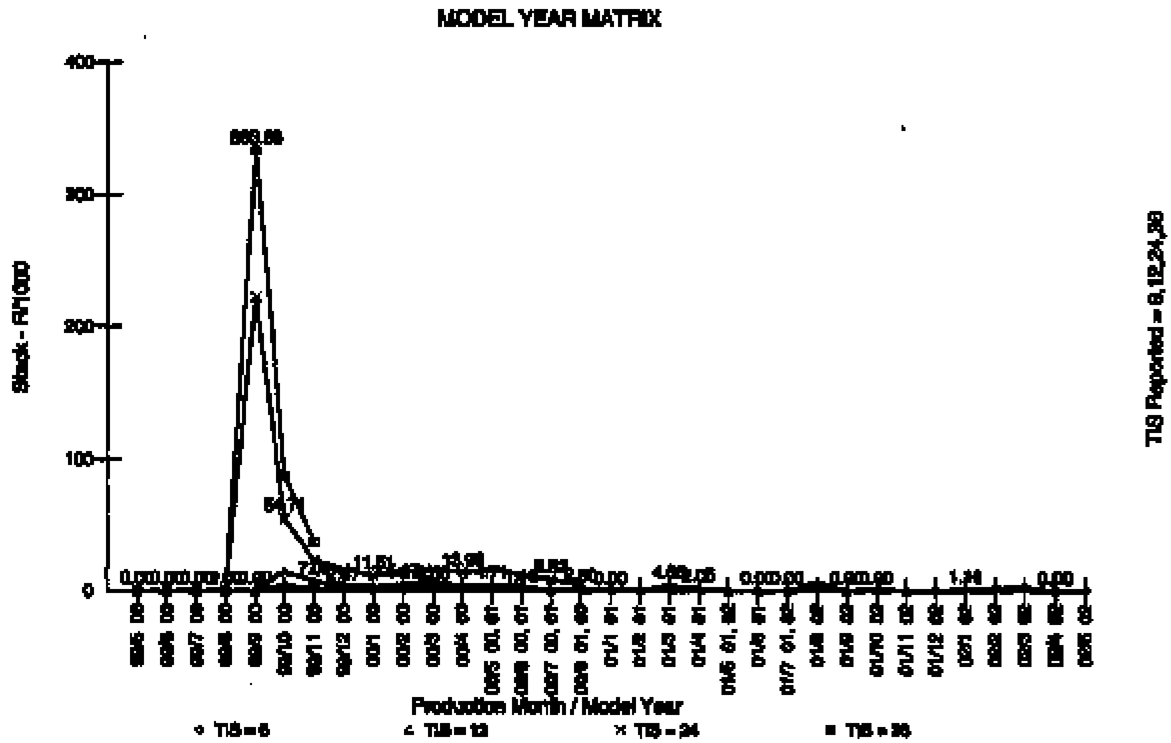
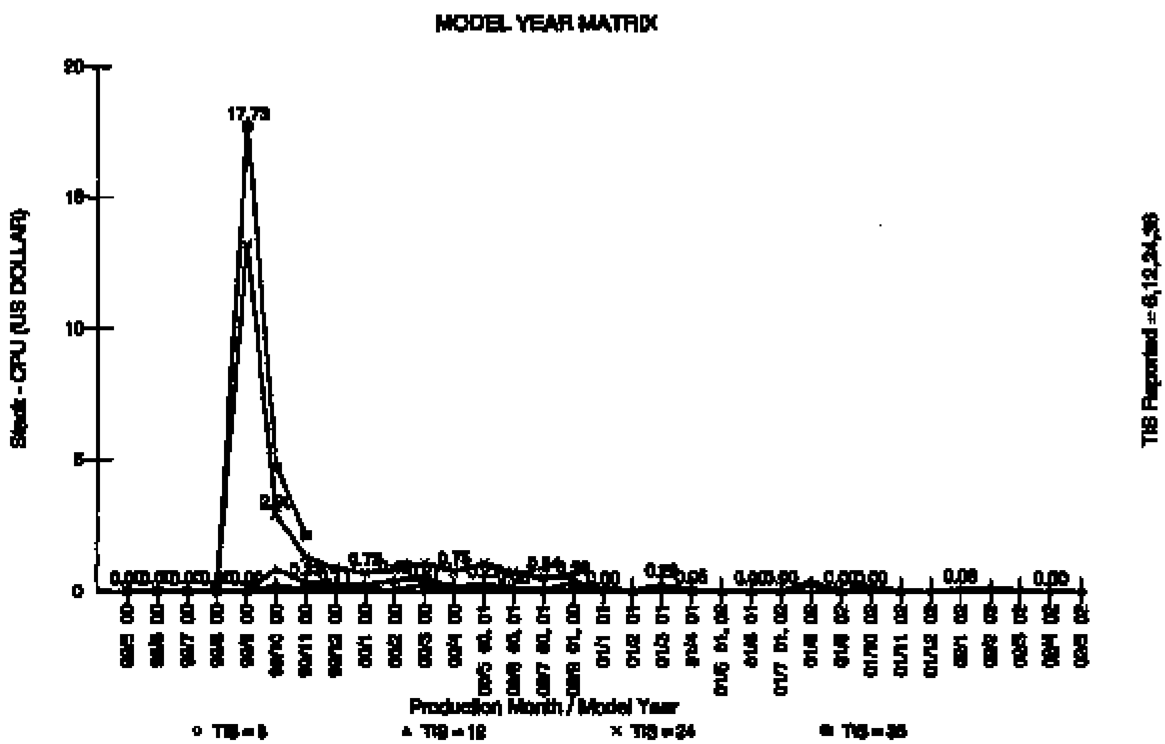
D186 Wagon Fixed





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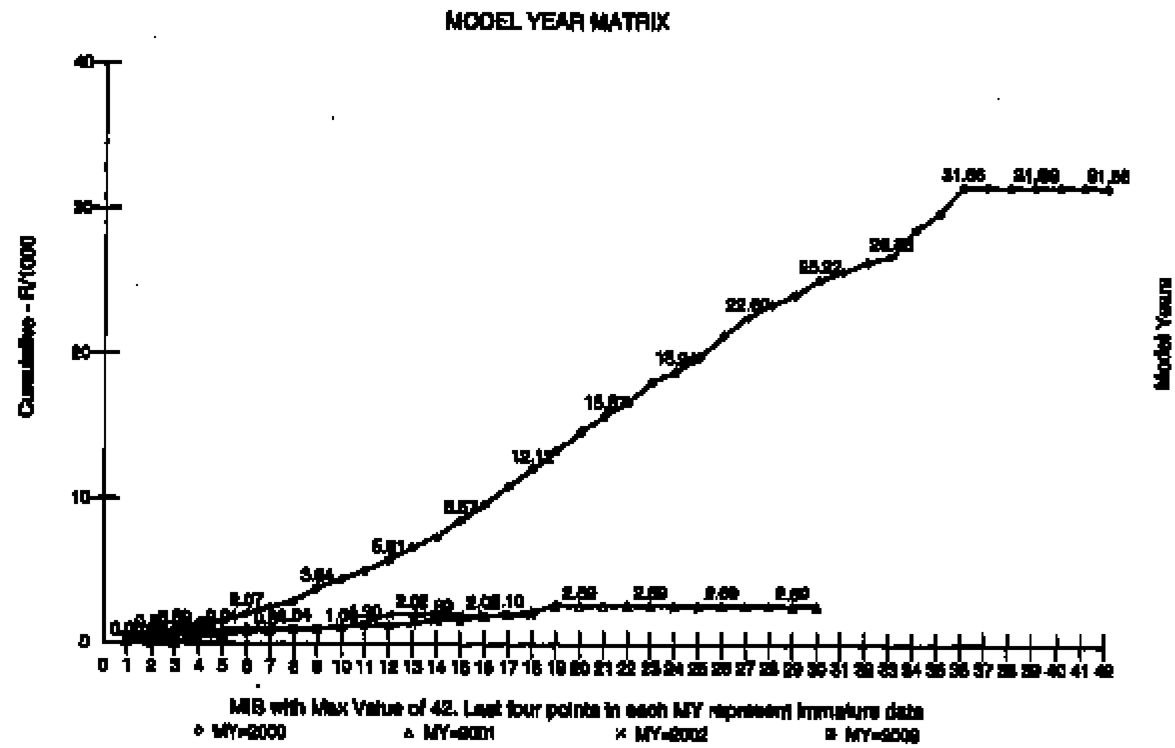
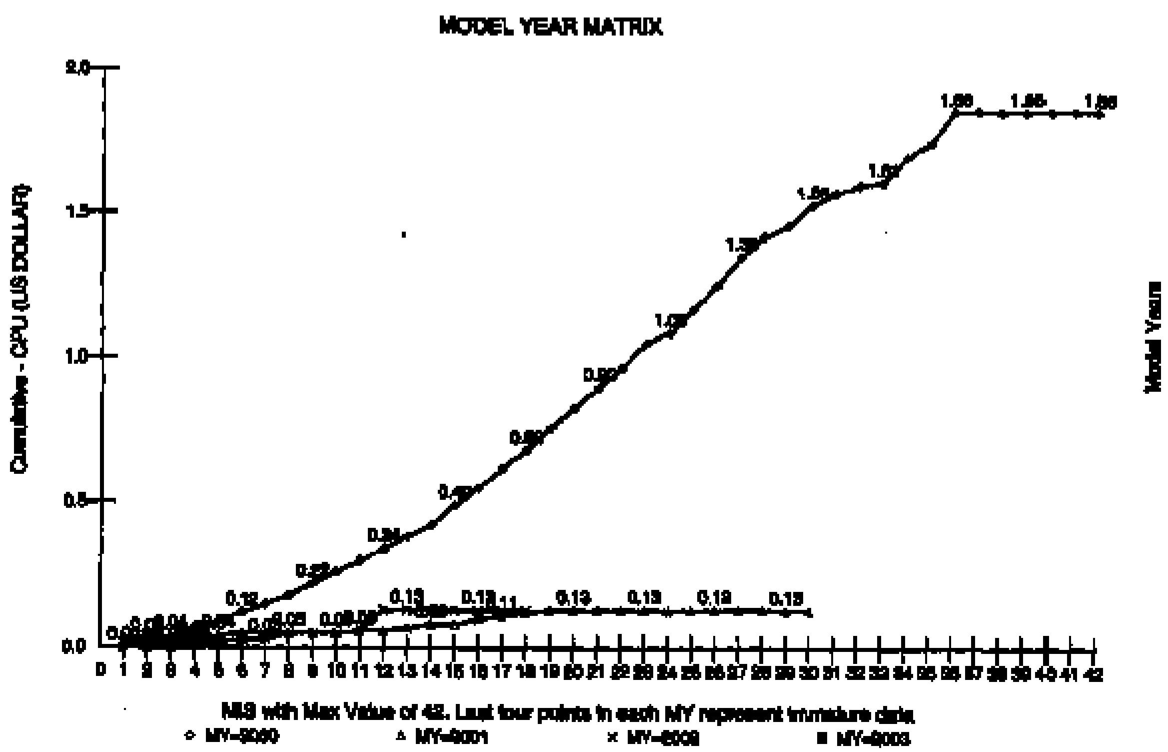
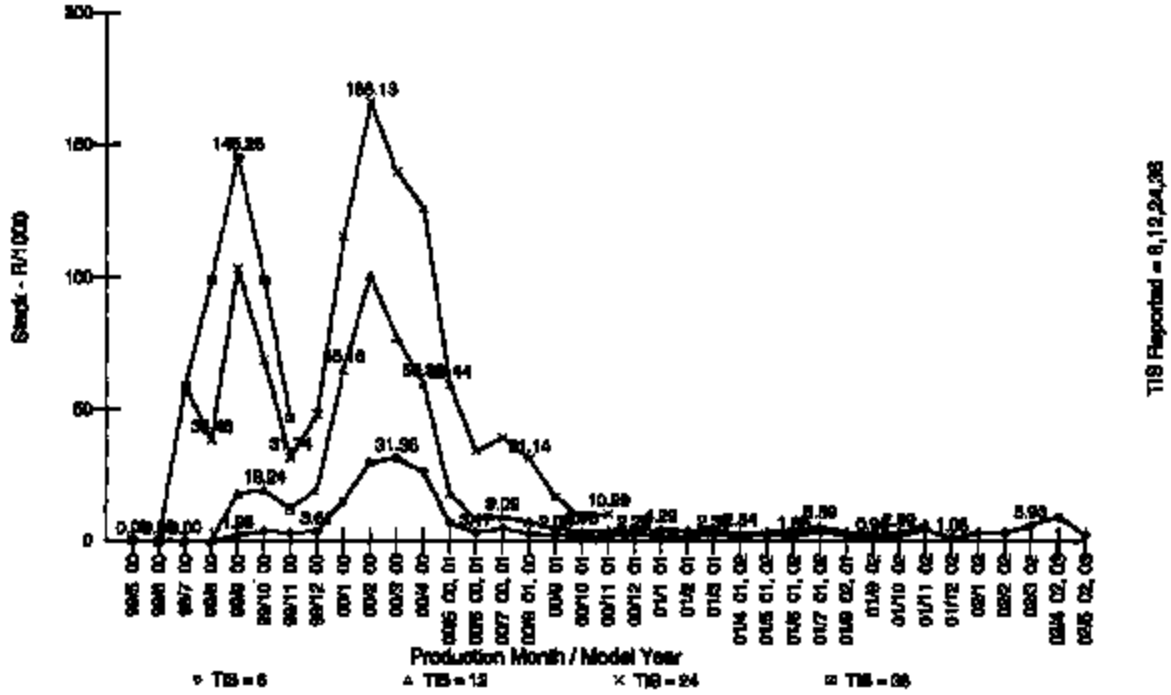
D186 Wagon Fixed





MODEL YEAR MATRIX



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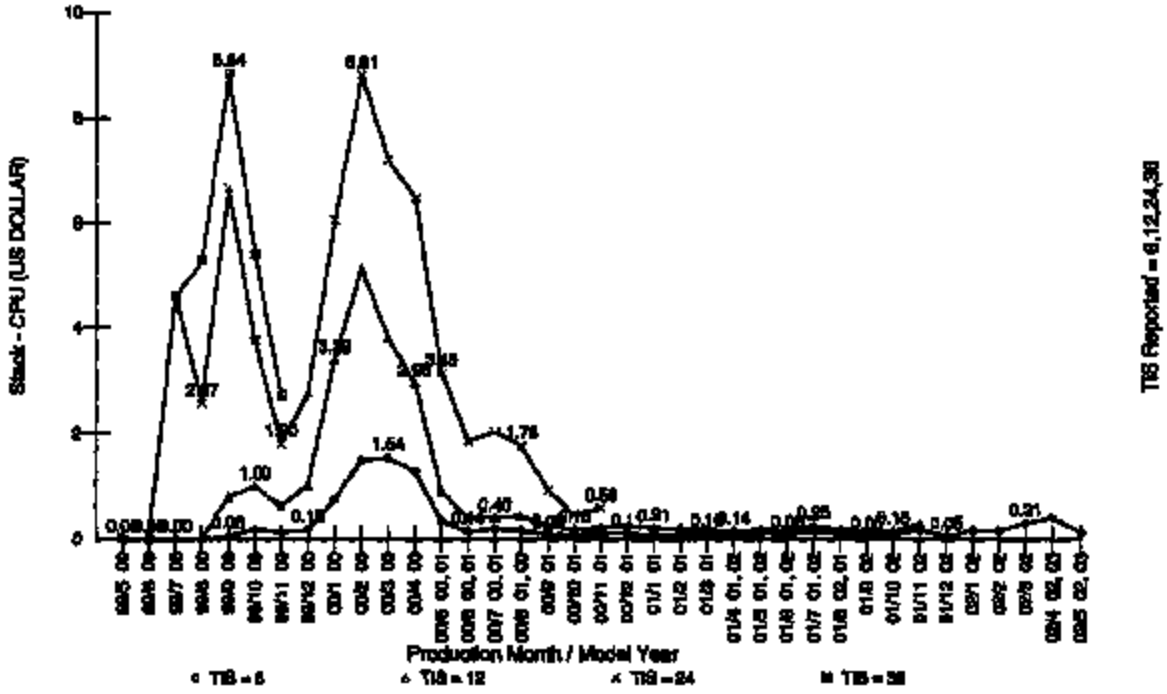

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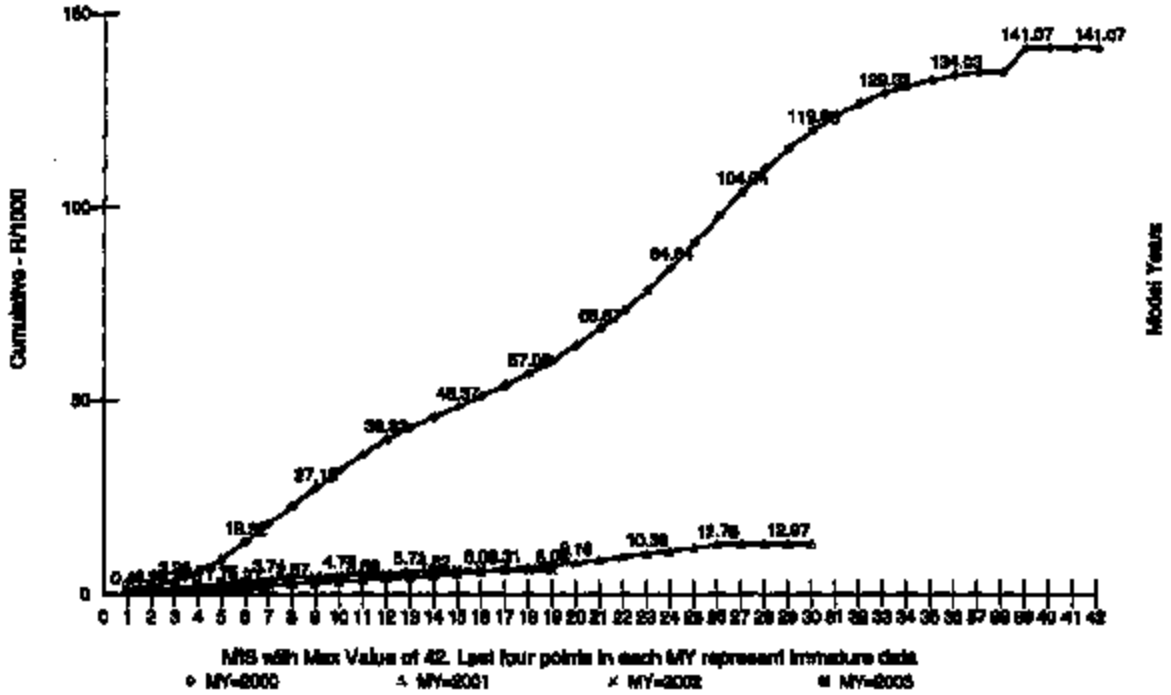

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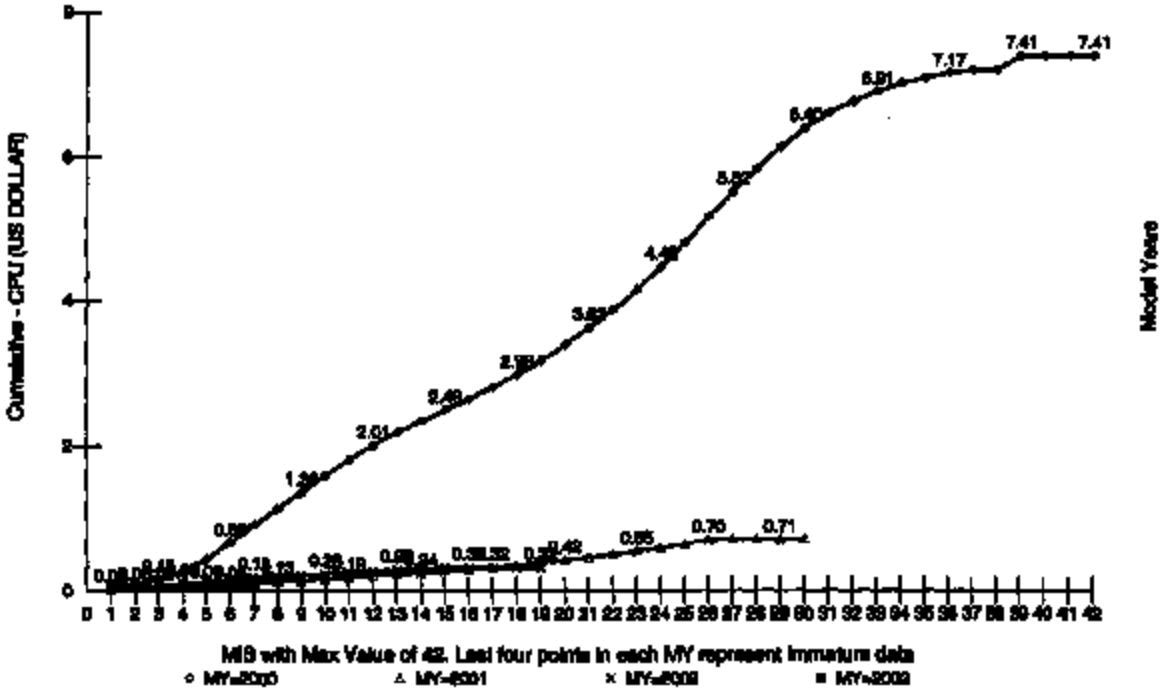

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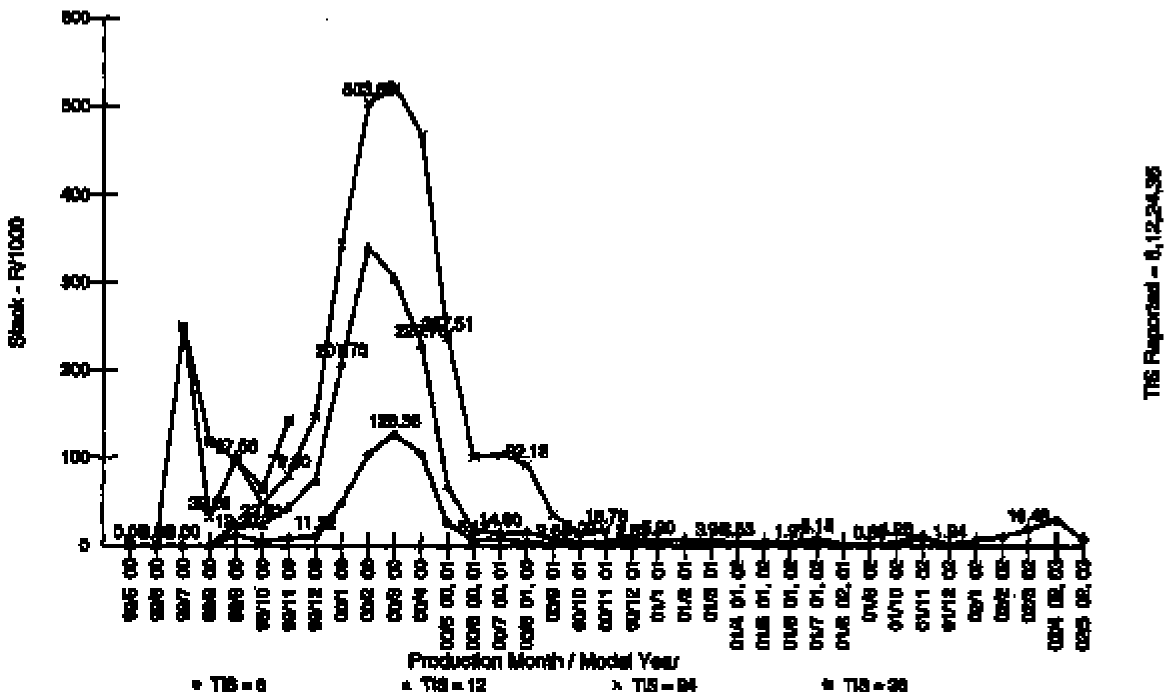

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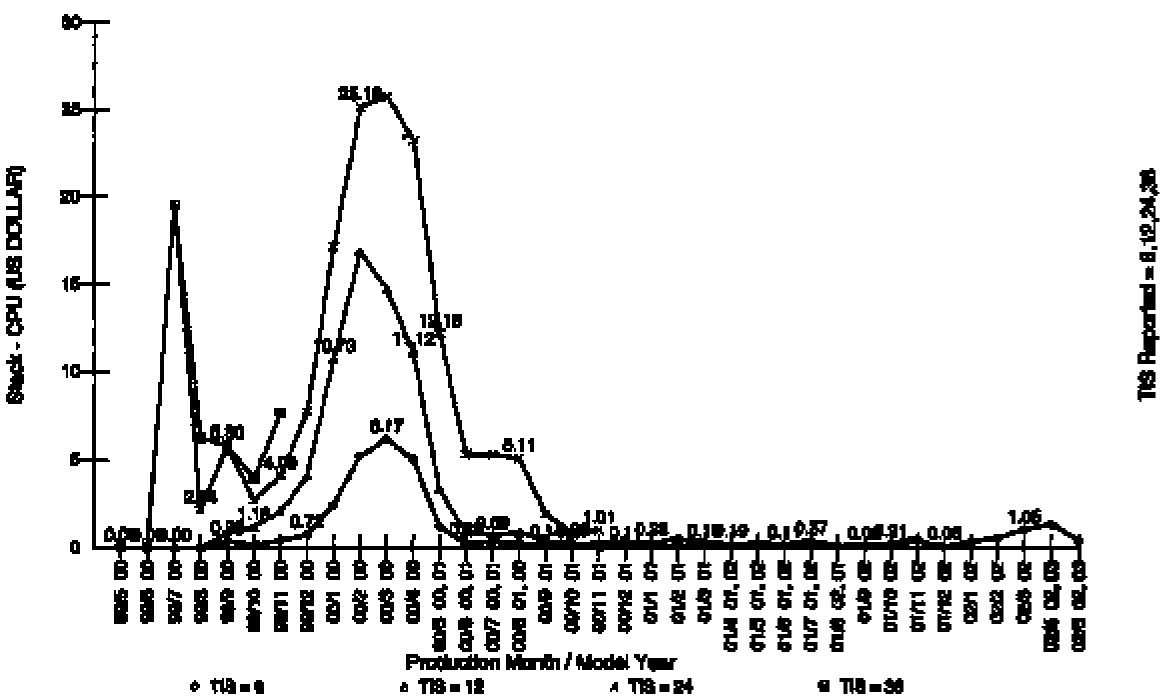
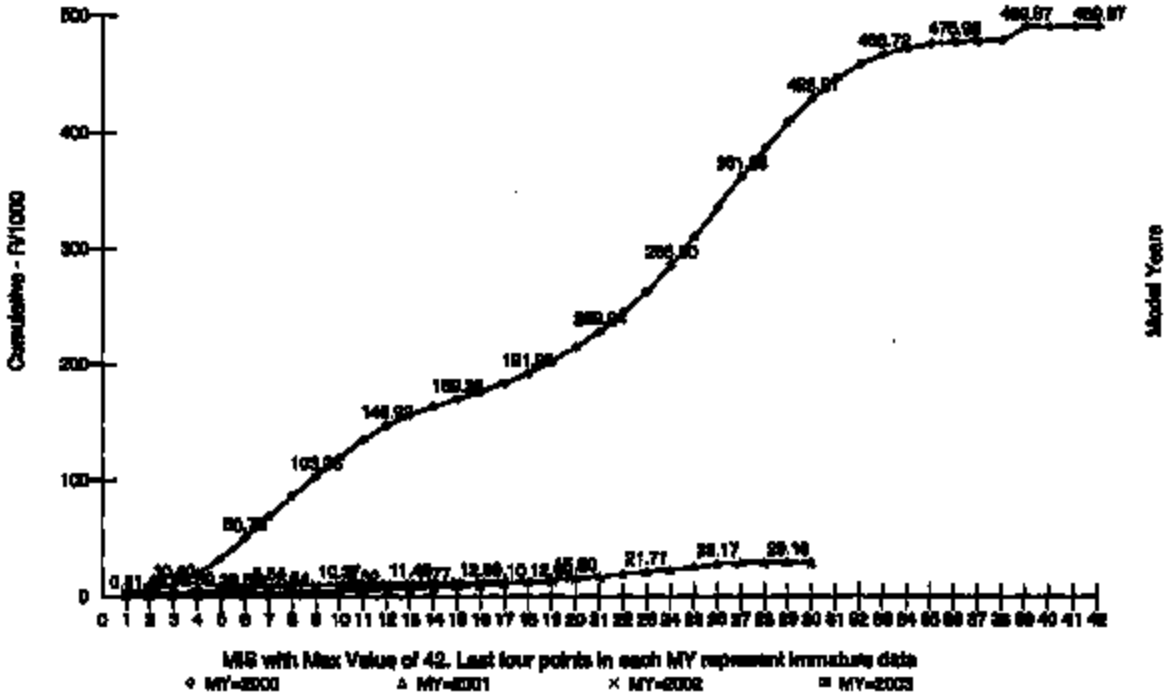
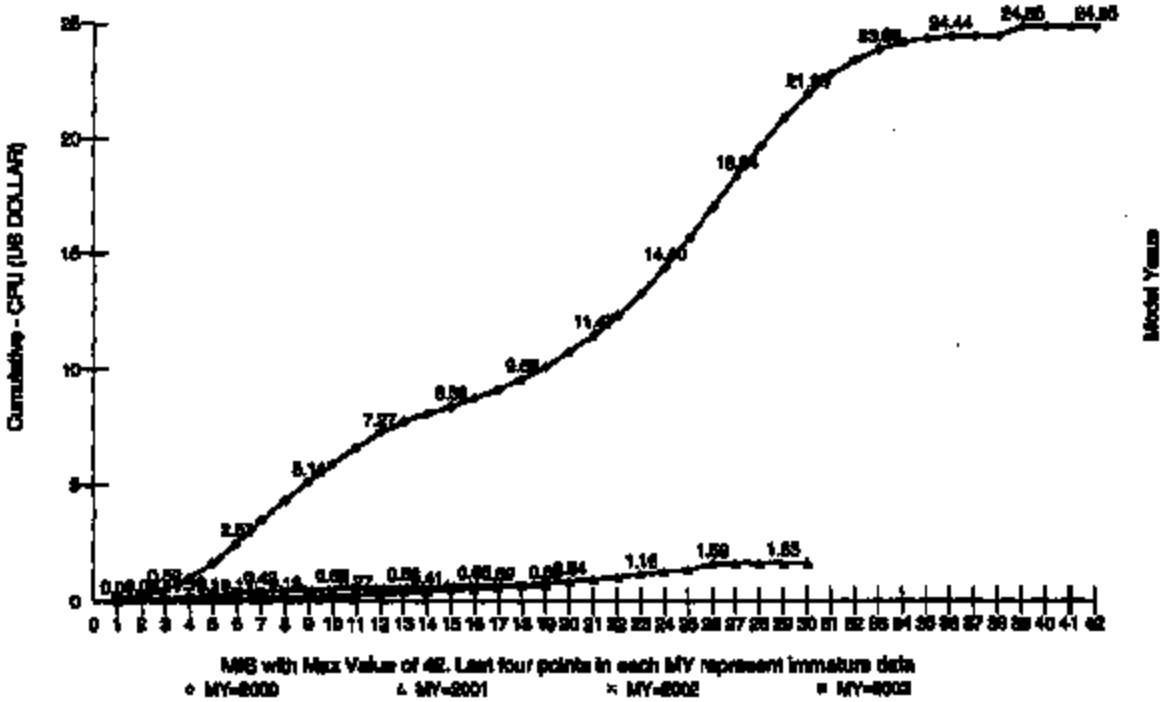


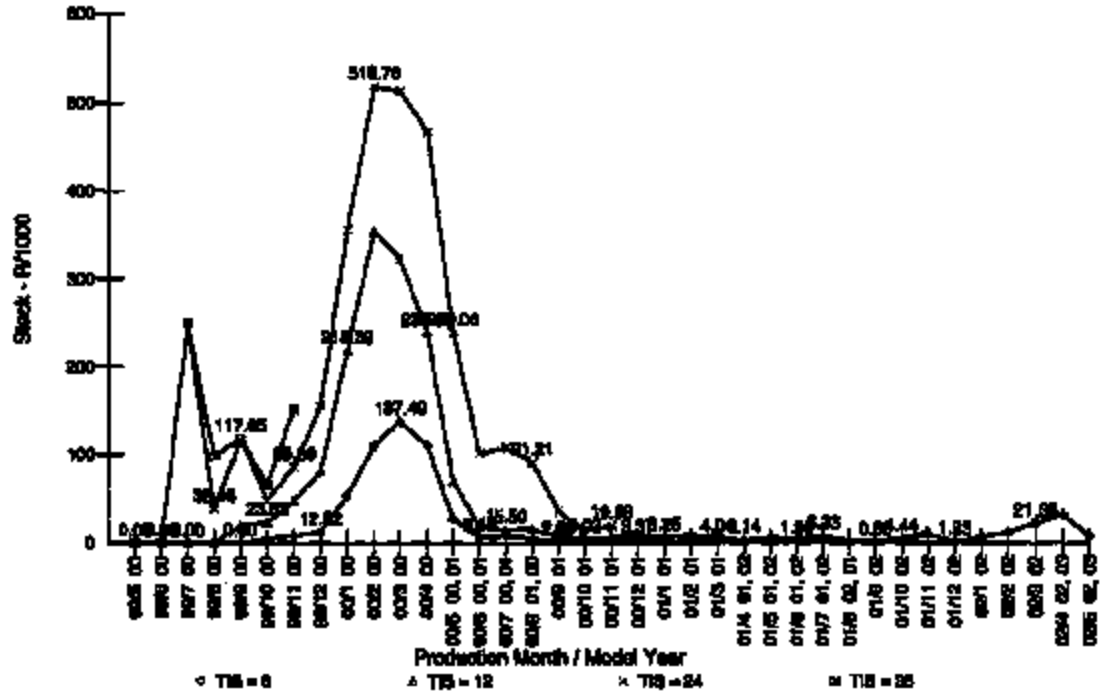
MODEL YEAR MATRIX



MODEL YEAR MATRIX



MODEL YEAR MATRIX



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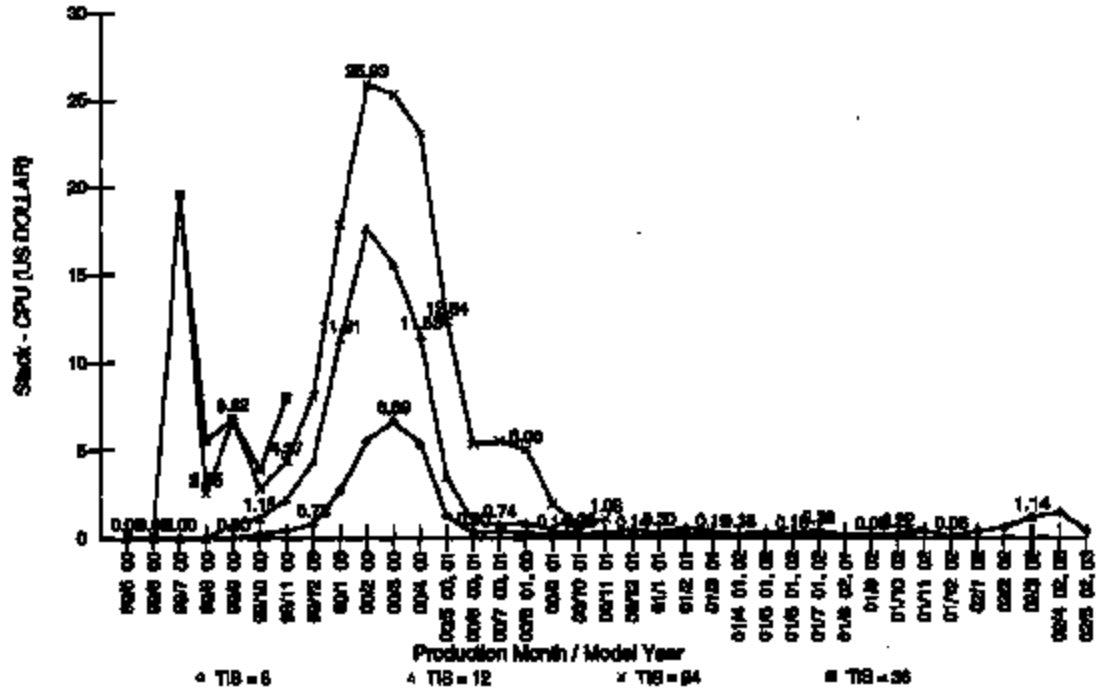

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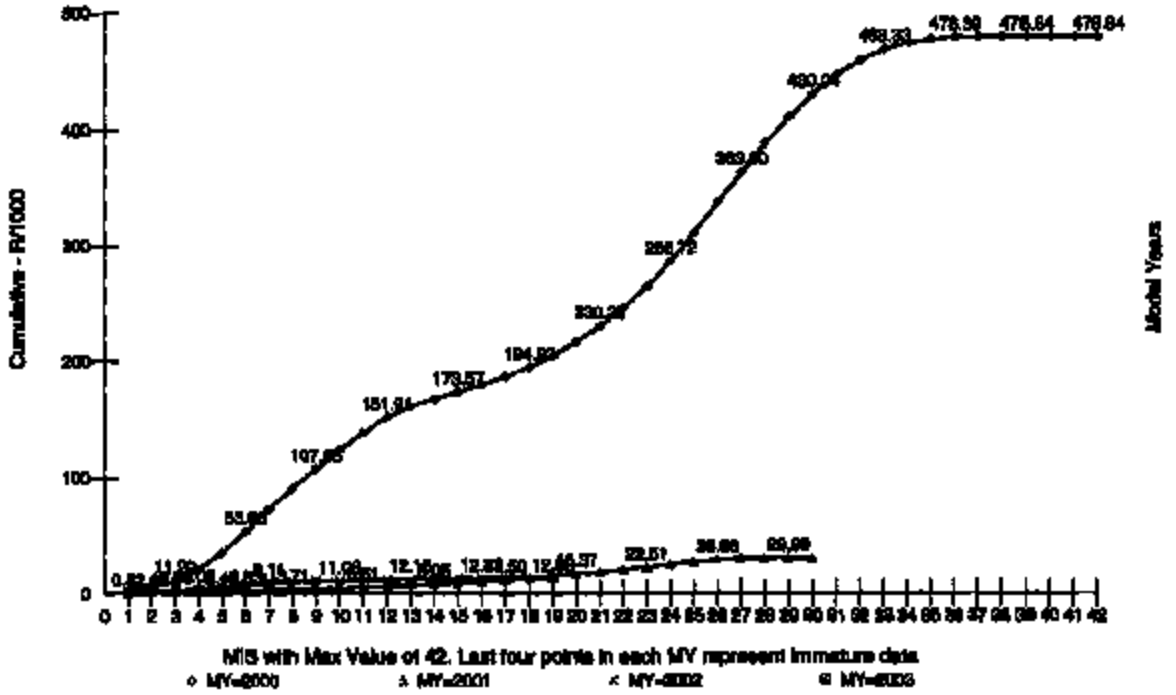

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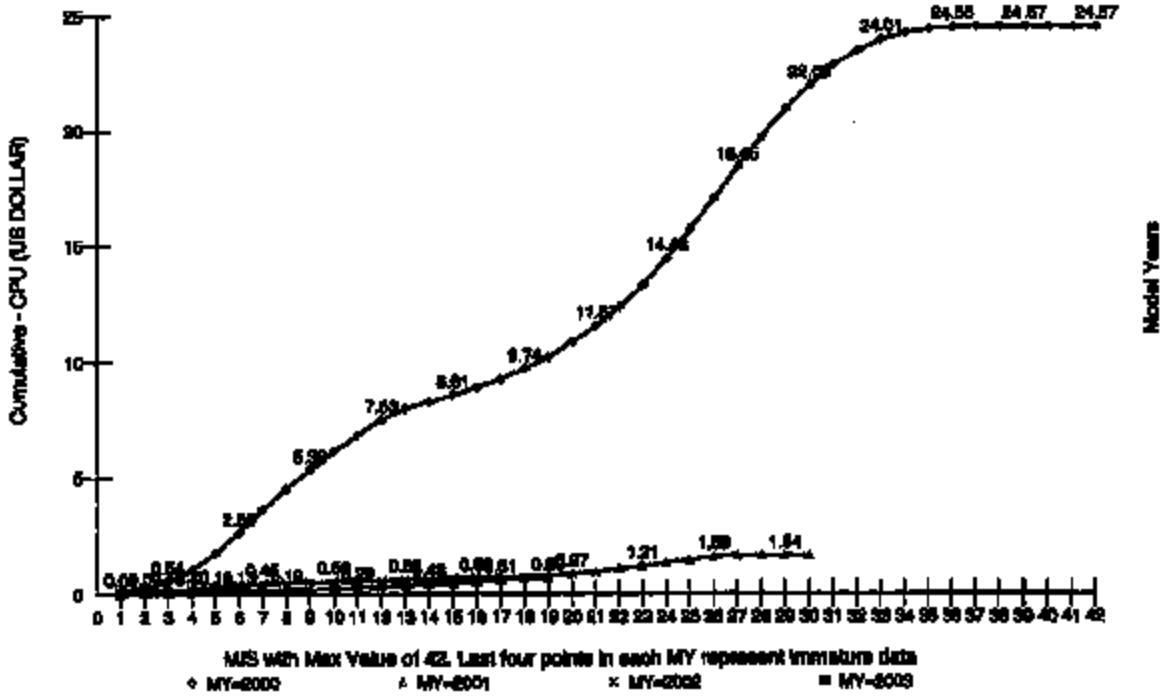

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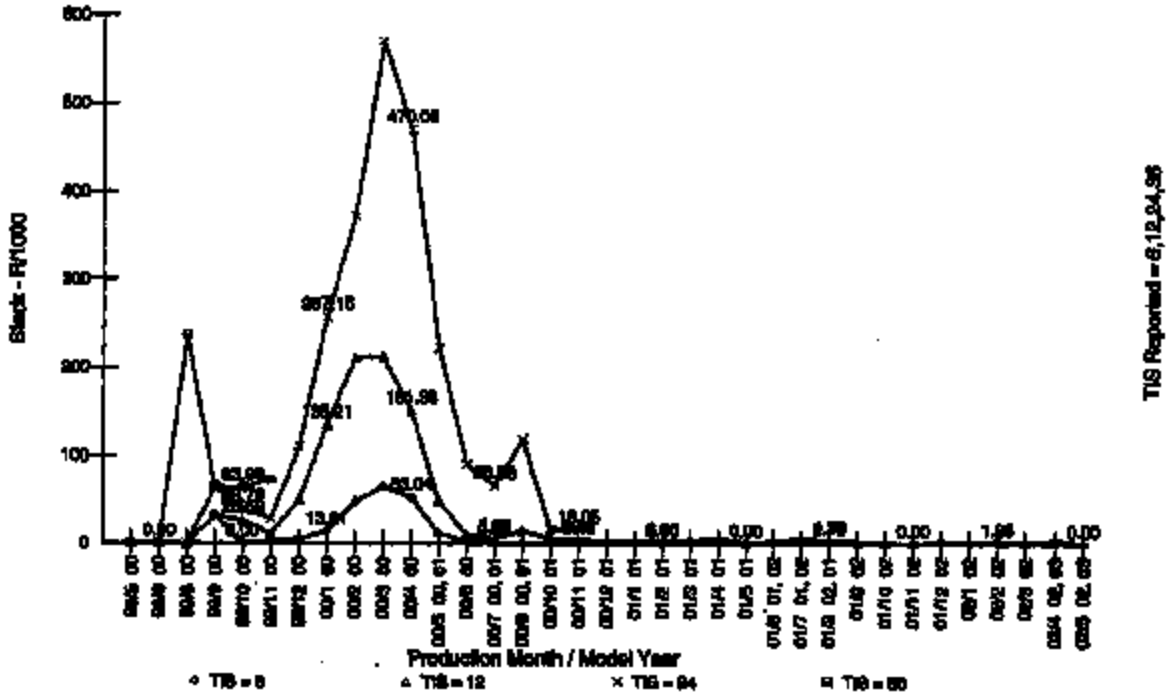
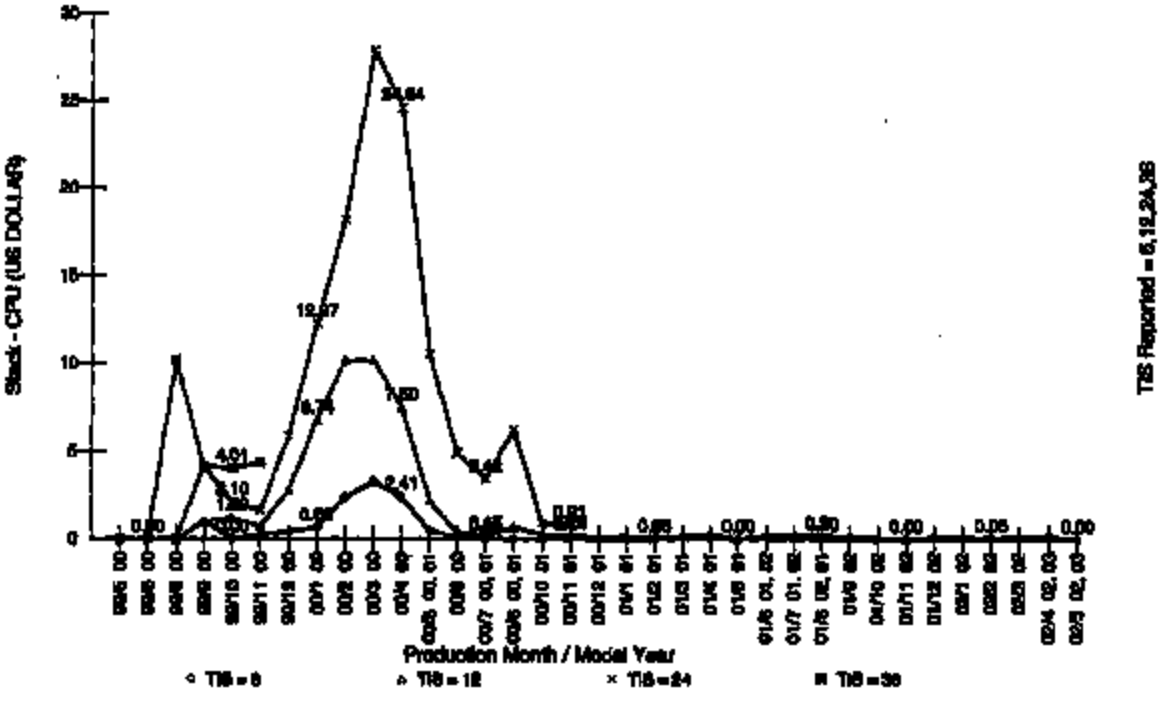
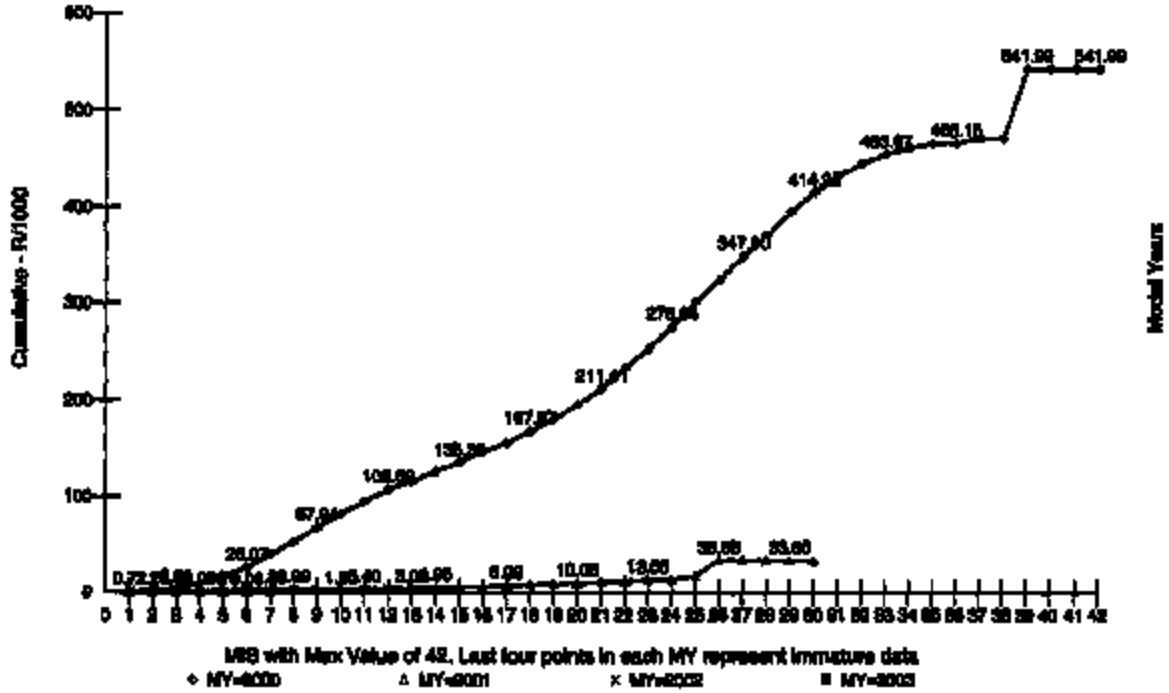


MODEL YEAR MATRIX



MODEL YEAR MATRIX



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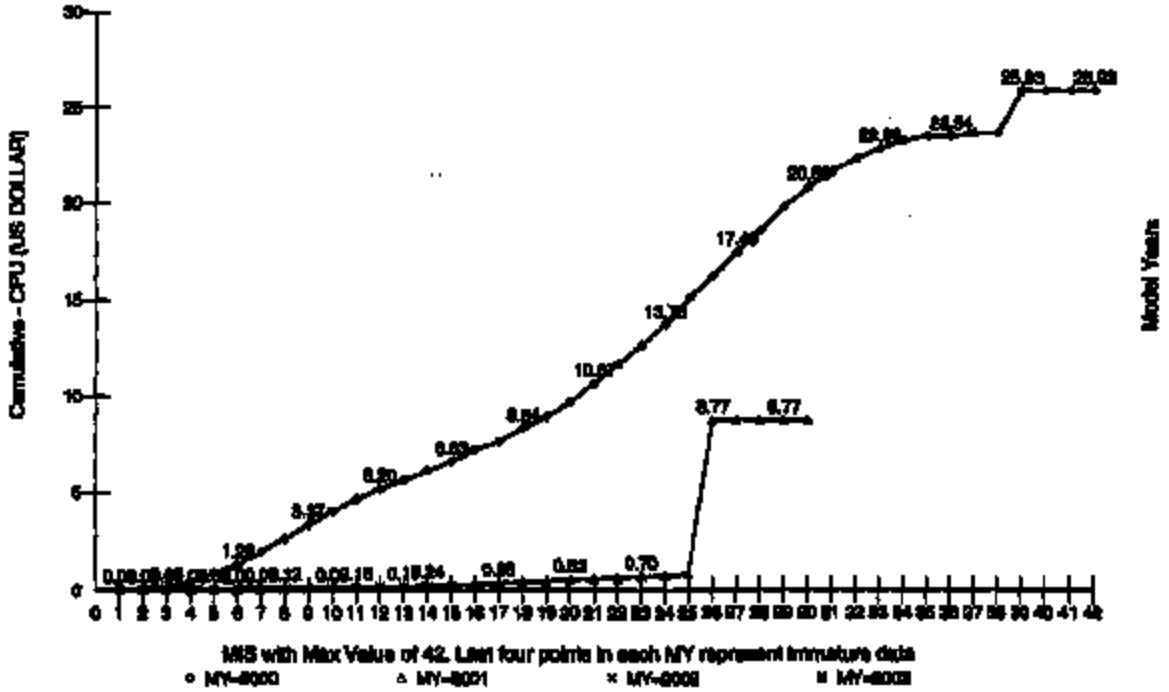

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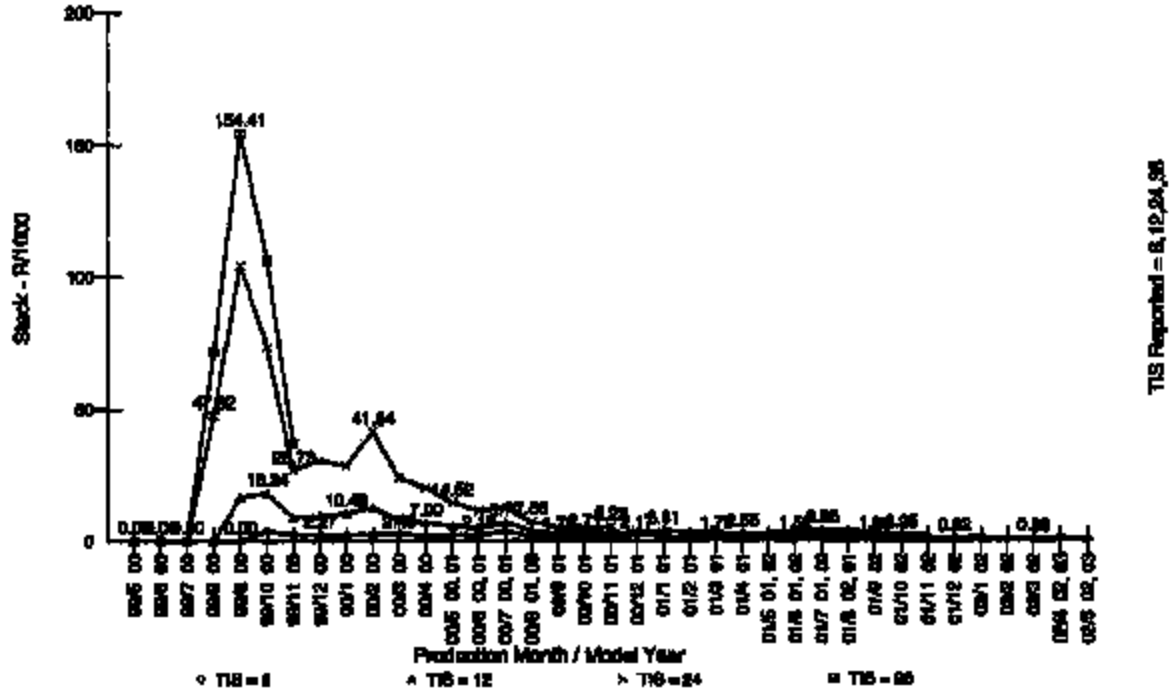
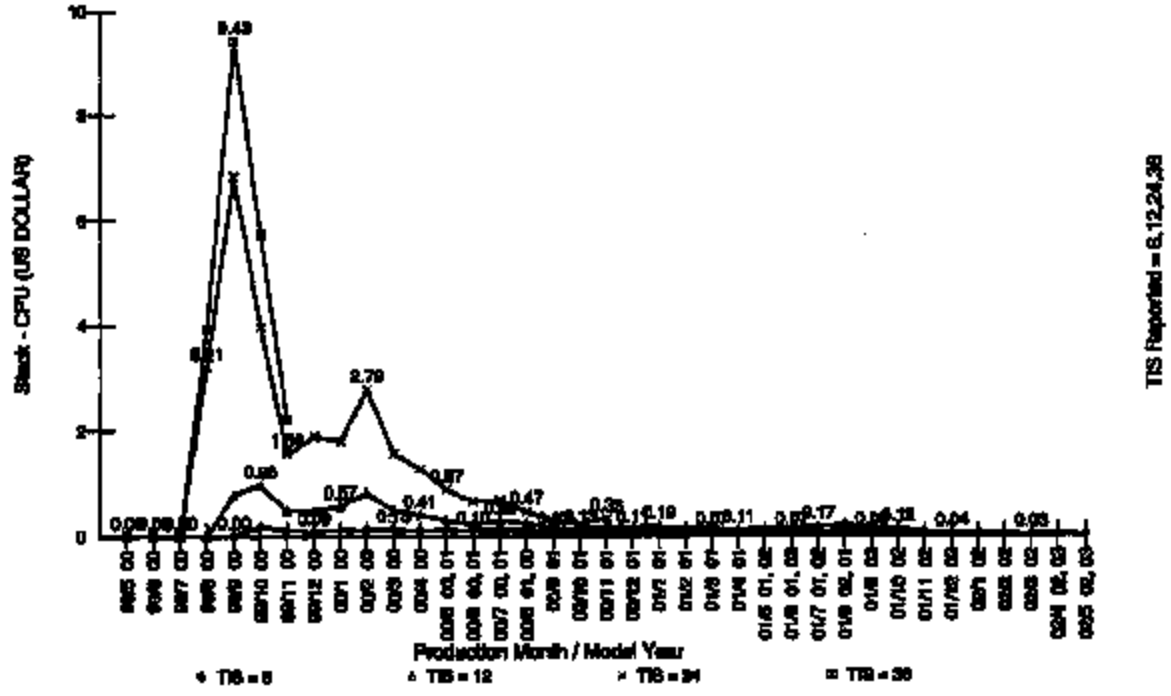


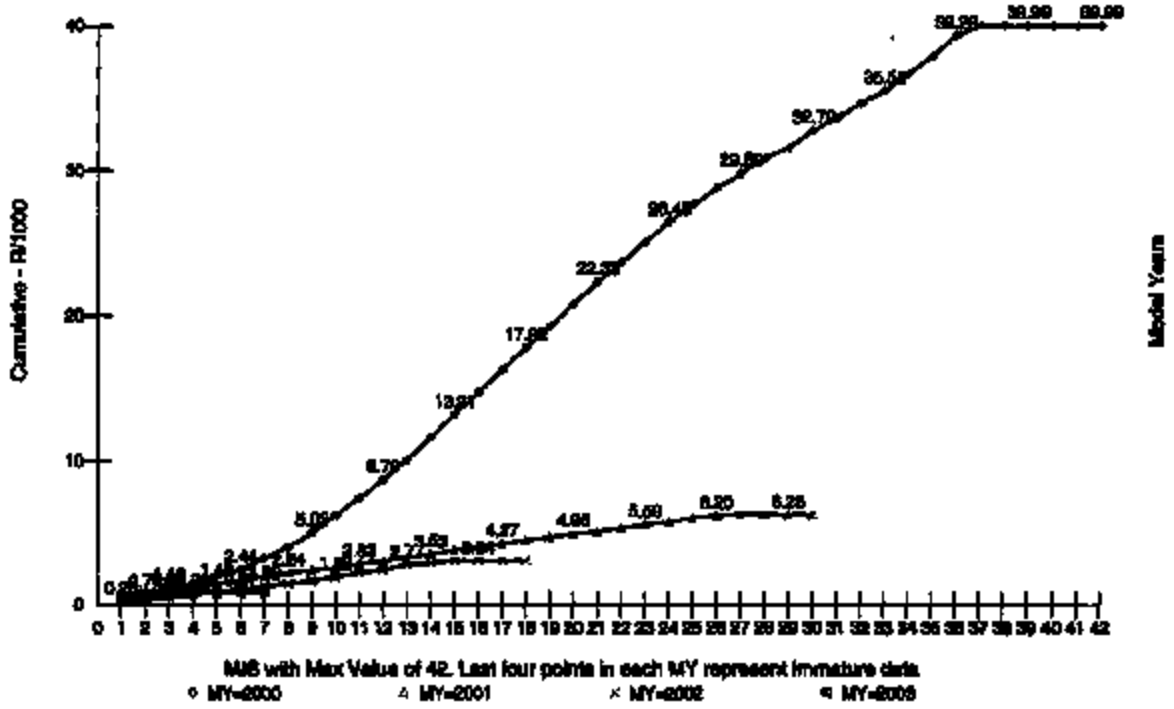
TIS Reported = 8,12,24,36

MODEL YEAR MATRIX



TIS Reported = 8,12,24,36

MODEL YEAR MATRIX



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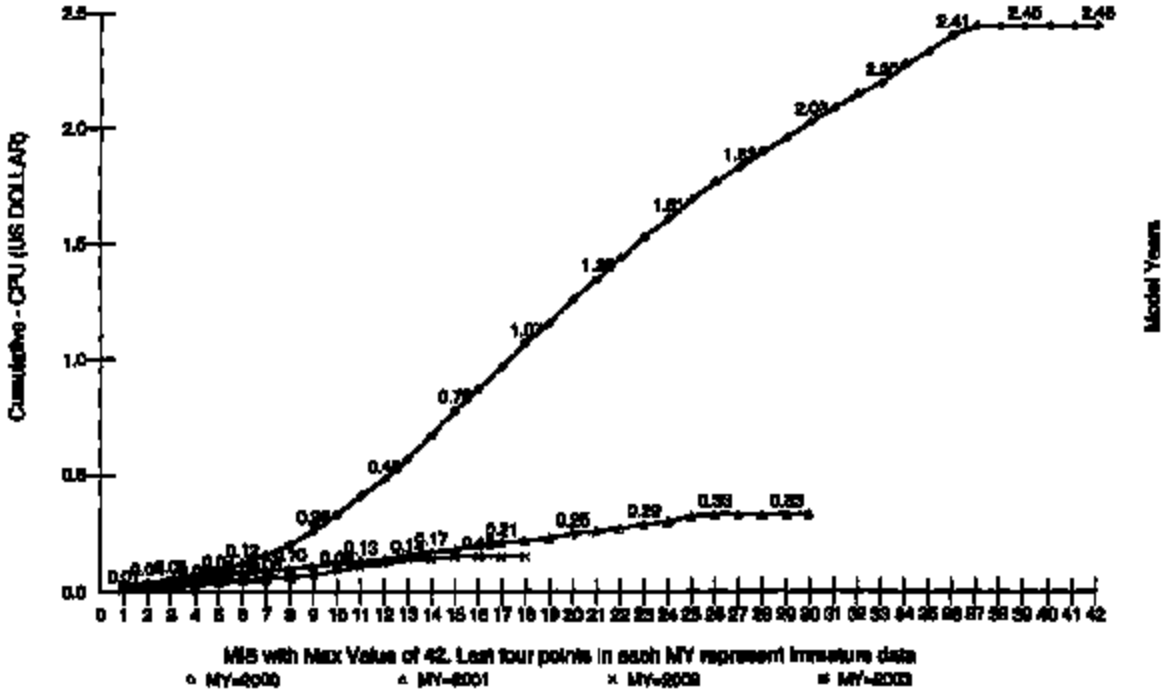

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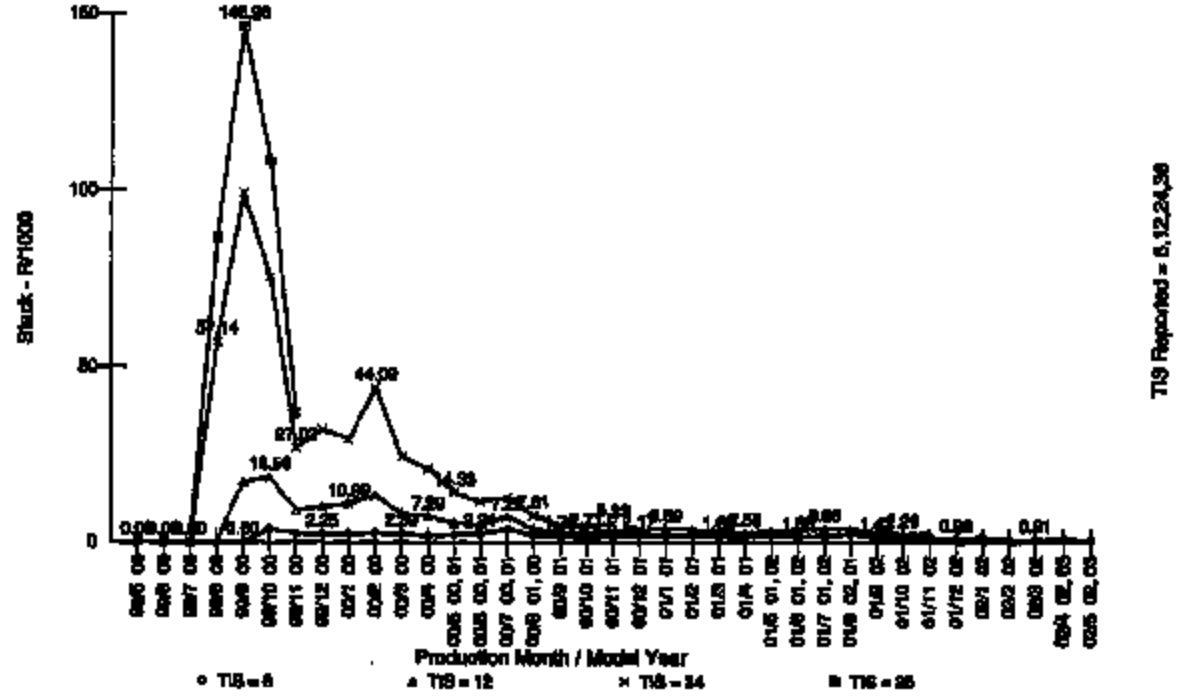

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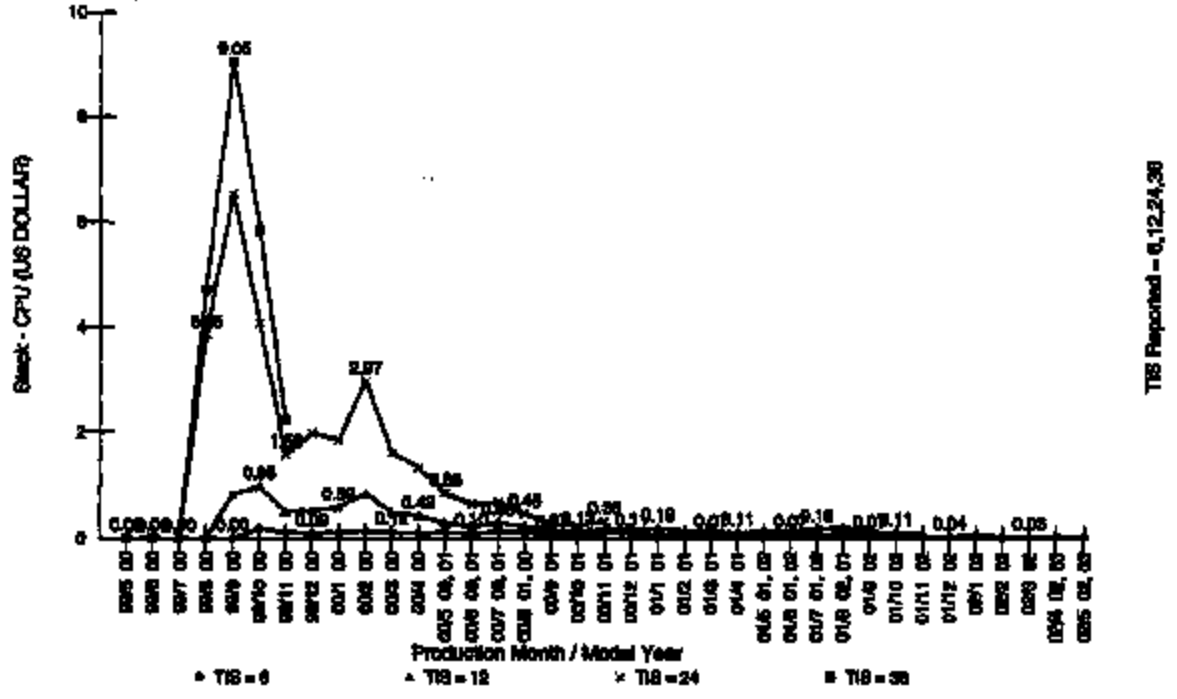
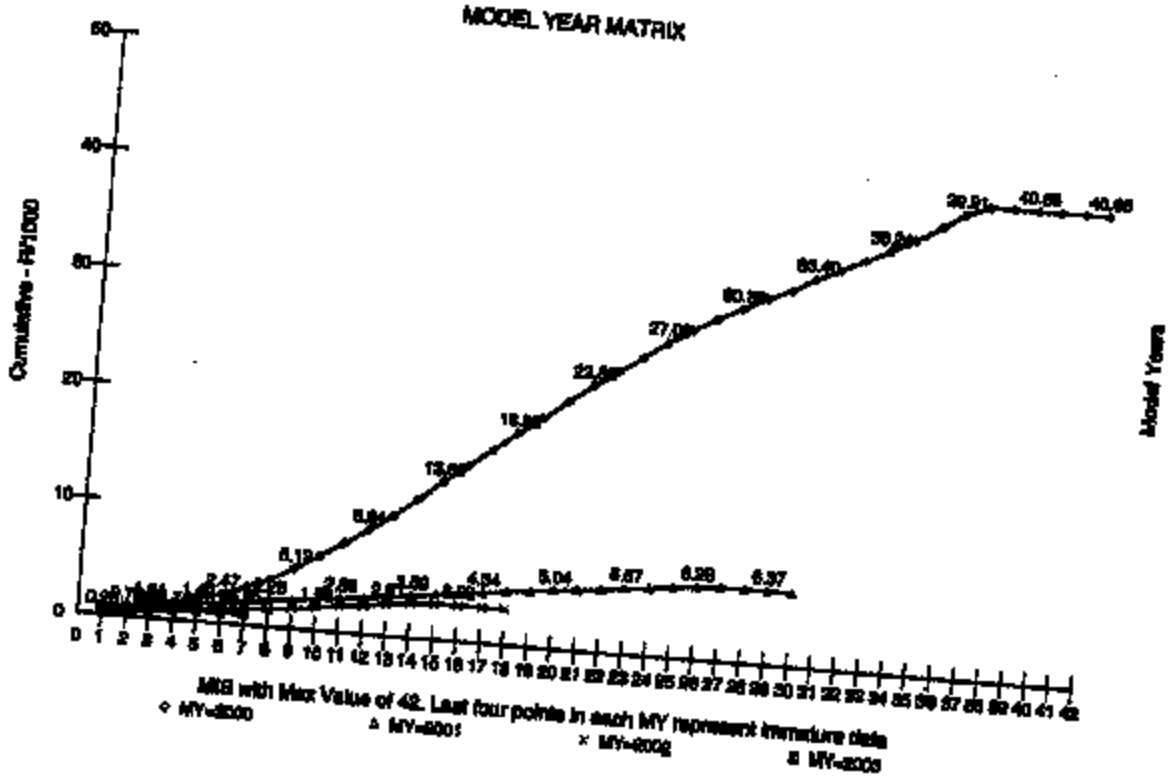
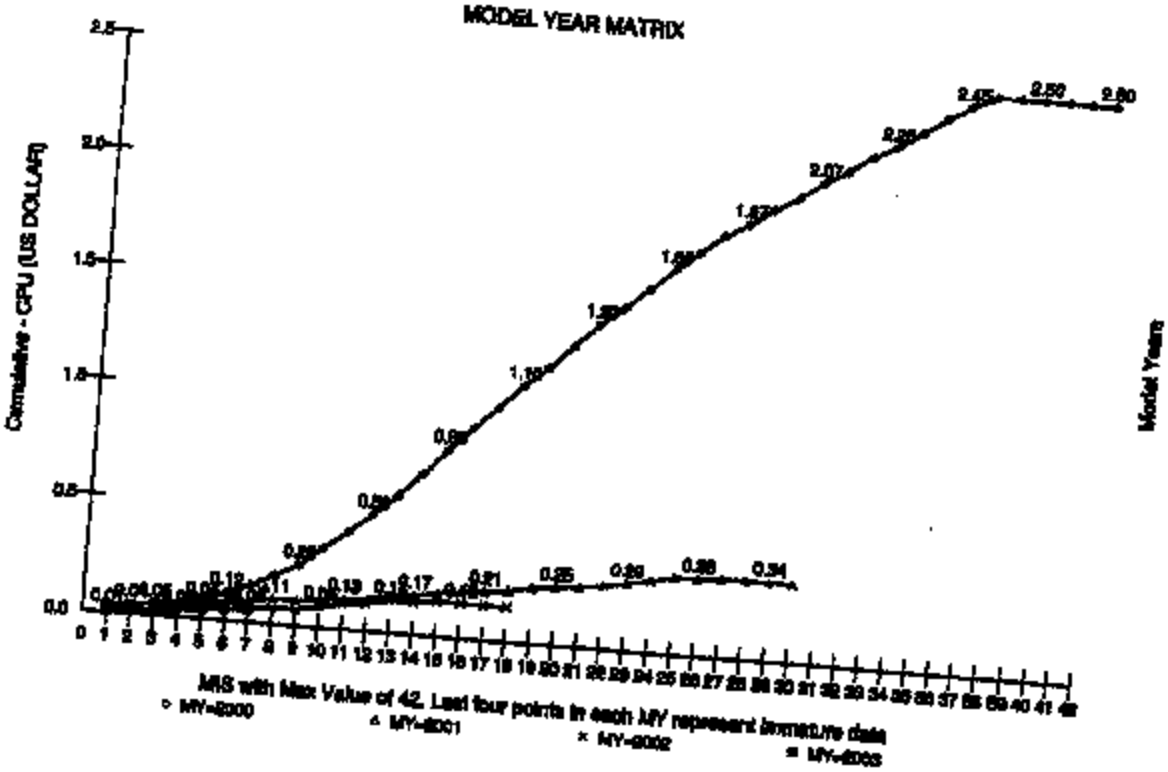
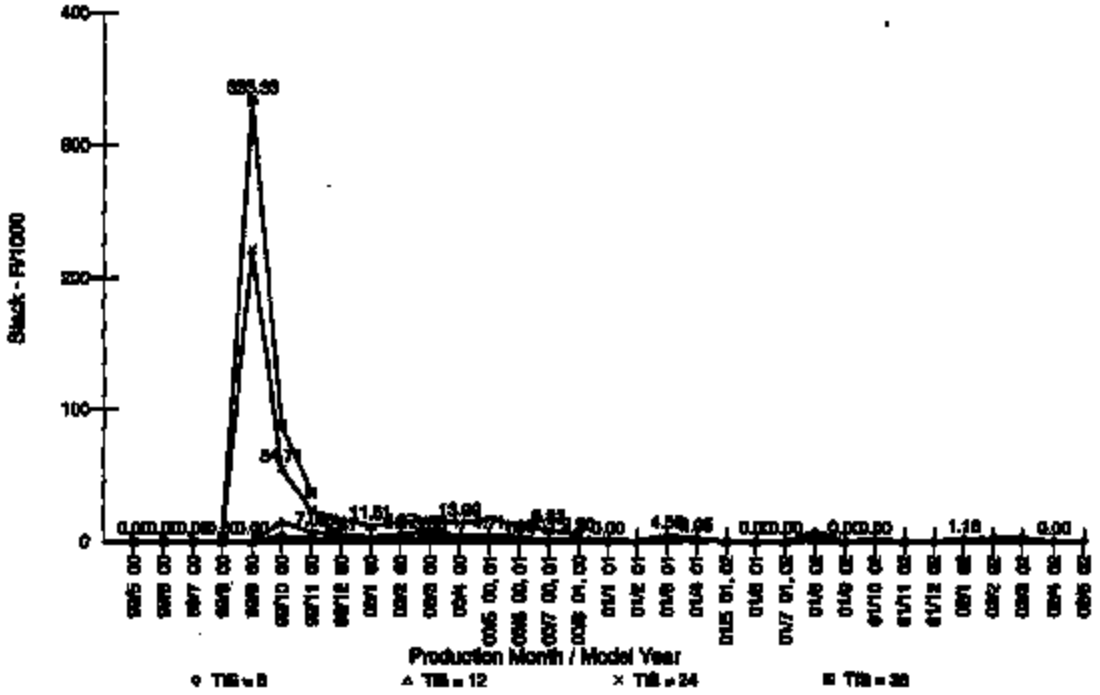


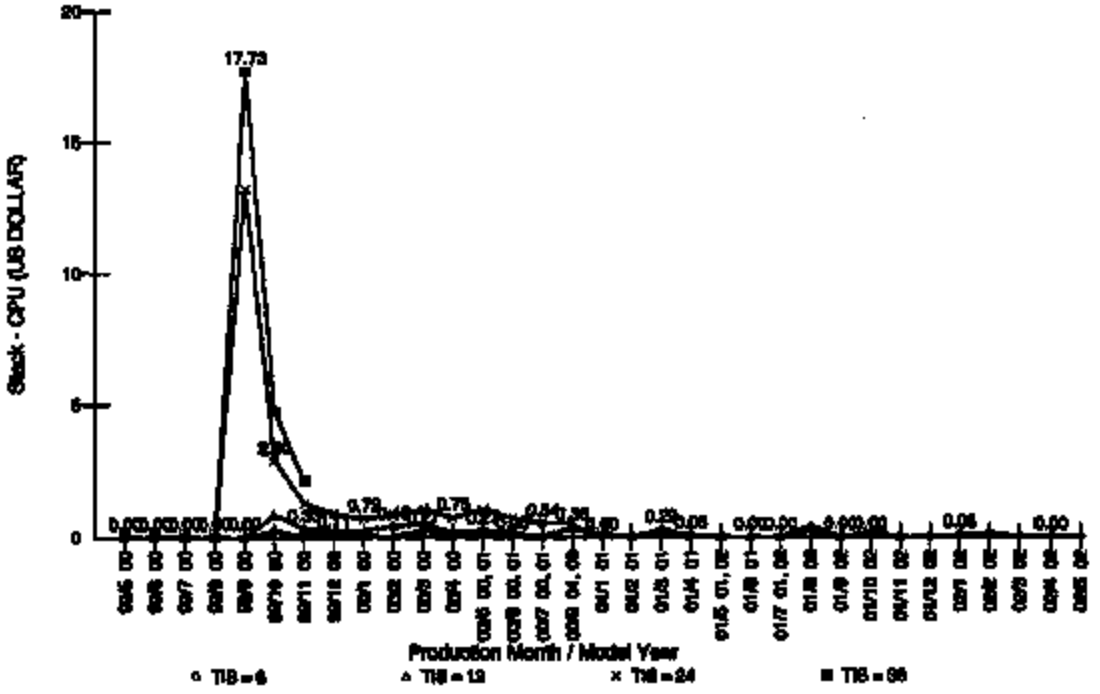

MODEL YEAR MATRIX
Cumulative - RP1000
Model Years
MIS with Max Value of 42. Last four points in each MY represent immature data
◇ MY=2000
△ MY=2001
× MY=2002
= MY=2003


MODEL YEAR MATRIX
Cumulative - CPU (US DOLLAR)
Model Years
MIS with Max Value of 42. Last four points in each MY represent immature data
◇ MY=2000
△ MY=2001
× MY=2002
= MY=2003

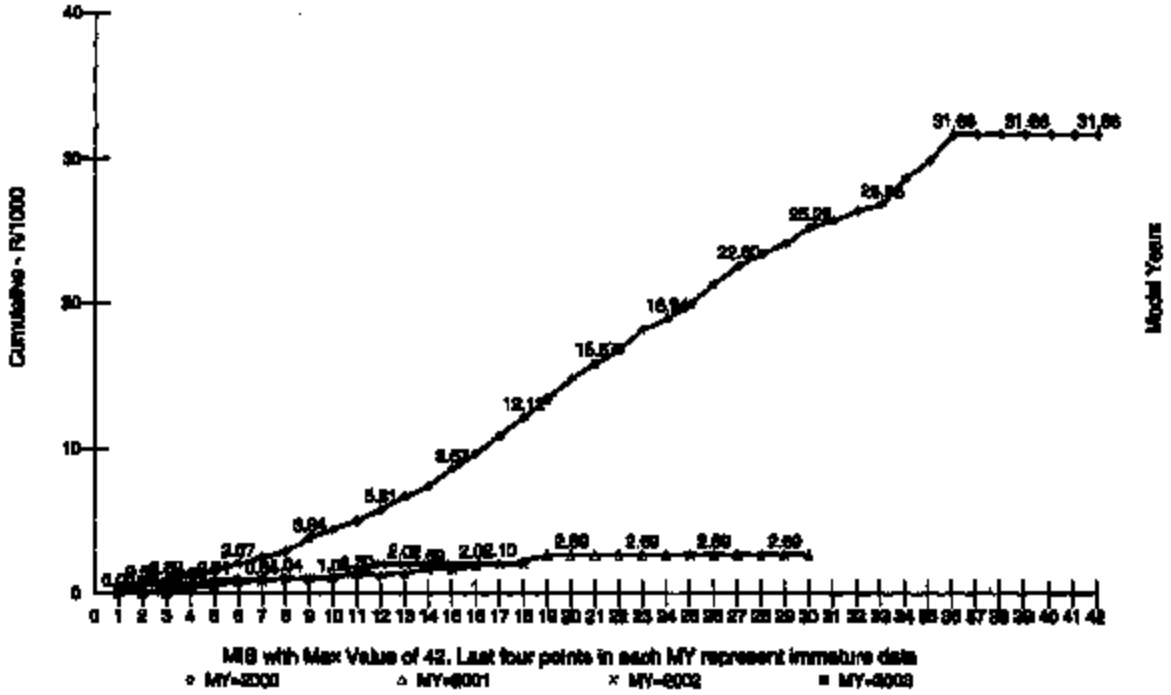
MODEL YEAR MATRIX



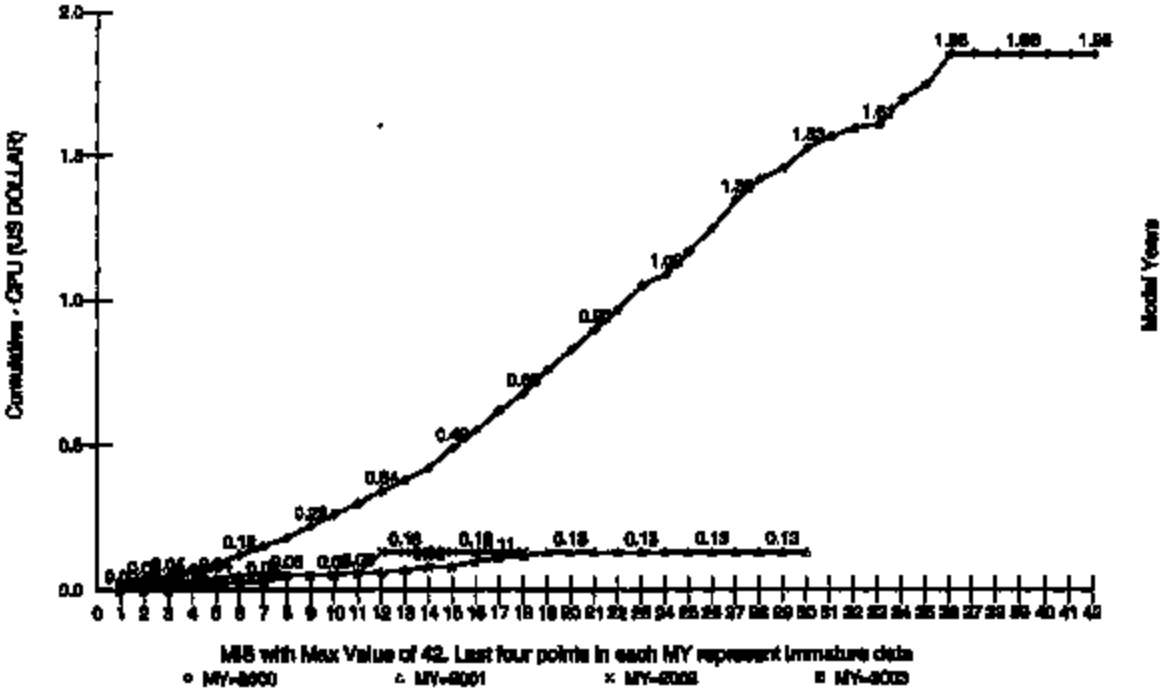
MODEL YEAR MATRIX



MODEL YEAR MATRIX



MODEL YEAR MATRIX



Pollak BOO Review

D186 History

AWS: 00MY vs 01-03MY	Adjustable pedal worse than Fixed pedal (consistent also on wagon and sedan with different pedal ratios); light on and Brake shift interlock issues identified in field.
CCRG:	Separate recalls for pedal seperation and grease contamination. Internal inquiries on wiring (00MY). Internal inquiry on switch and grease reopened (02-03sy) due to trending.
Design changes by Chassis	Change in grease used on adjustable pedal box. Booster rod offset corrected by lengthening mounting pin (Mar03). *Pedal lash not addressed.*
Design changes by Electrical	Wiring routing changes finalized by 01MY Wiring fatiguing due to mechanical strain id'd via testing. Crosslink wire to be incorp in production in Oct03sy. The Littelfuse switch was observed to be more tolerant to pedal grease as well as CHMSL flicker- kit released- FCSD to issue to field. Pollak switch actuation range has been shifted to high side of range to attempt to compensate for too much preload from rod (PSW due Oct 03: C11470565). Under review: Pollak spring force can be increased to reduce lights on field issue...but requires compeneint and field testing. Also Pollak revaluating design to increase contact force...

W126 History

AWS: 00MY vs 01-03MY	Adjustable pedal worse than Fixed pedal. Lights on is predominant problem.
CCRG:	Oct 02 SSM issued for lights on (C11514774)
Design changes by Chassis	Feb-Aug 02 chassis ran runner &reduced booster force which coincides w/ warranty spike in 02MY. TRW IVD with adjustable found to be high on spec. Unknown if actions are being taken for W126. Stack study conducted for V229- system is in tolerance.
Design changes by Electrical	SSM went out for OCT02 with higher make switches to compensate for booster rod offset . Switch actuation range has been increased (due Oct03). Unknown if V229 uses high flex wire. W126 did use high flex. **Recommendations:** Option 1 Pollak spring force can be increased to reduce lights on W126 field issue...but requires componeint & vehicle testing. Testing and Timing: Vehicle Cobblestone testing aand cycle testing to make sure no contact stress due to increased force. Timing by Also Pollak revaluating design to increase contact force... Fleet under review - low mileage failures id.

U152 /251 History

AWS:	U150 had 5 terminal with less than 4r/1000 for 36mis U152 02MY & 03MY are tracking sporadically avg 10R/1000 for 24mis. Worse appears to be fixed pedal- however take rates on U152 were not built as forecasted. Lights on and park shift interlock are id'd as issues. U152 adjustable with IVD was introduced with problem identified on force balance with IVD booster &deact; correction targetted for J104MY. U251 has adjustable and IVD (option). AWS is immature however 3-6 mis is approaching 2r/1000.
CCRG:	None
Design changes by Chassis	Pedal mounted redundant deact (IVD only) force to be changed at 04MY J1 should address 'lights on' for U152. Fleet vehicles evaluated by chassis indicated that wire harness too stiff when cold causing lights on. See electrical 's rqst to change harness). Stack study conducted showing system in tolerance. Additional study underway by greenbelts; CMM all system components underway at PDC

R093-098 5032

Design changes by Electrical	Fleet data under review - low mileage failures id. Pedal mounted redundant deact (IVD only) force to be changed at 04MY J1 should address 'lights on' for U162. Inquiry to platform made to change to high flex wire based on vendor time...resistance from platform. Pollak switch actuation range has been shifted to high side of range as well as correct for cracking of terminal on few field returns (PSW due Oct 03: C11470565). Under review: Pollak spring force can be increased to reduce lights on field issue...but requires component and field testing. Also Pollak revaluating design to increase contact force...

D186 History

AWS: 00MY vs 01-03MY	Adjustable pedal worse than Fixed pedal (consistent also on wagon and sedan with different pedal ratios); 'Lights on' and 'Brake shift interlock' issues identified in field.
CCRQ:	-Separate recalls for pedal seperation and grease contamination. -Internal inquiries on wiring (00MY). -Internal inquiry on switch and grease reopened (02-03oy) due to trending.
Design changes by Chassis	-Change in grease on adjustable pedal box. '-Booster rod offset corrected by lengthening mounting pin (Mar03). -*Pedal lash not addressed.*
Design changes by Electrical	-Wiring routing changes finalized by 01MY -Wiring fatiguing due to mechanical strain id'd via testing. Crosslink wire due in production in Oct03oy. -The Littelfuse switch was observed to be more tolerant to pedal grease as well as CHMSL flicker- kit released- FCSD to issue to field. **Production options:** - Revert to Littelfuse (coordinated change). - Continue with Pollak Changes: a) switch actuation range has been shifted to high side of range to attempt to compensate for too much preload from rod (PSW due Oct 03: C11470685). b) 2 terminal spring force can be increased to reduce lights on W126 field issue...but requires component & vehicle testing. Vehicle Cobblestone testing & switch cycle testing to make sure no contact stress due to increased force. Estimated test timing: 14 weeks c) Pollak revaluating design to increase contact force...via material thickness.

W126 History

AWS: 00MY vs 01-03MY	Adjustable pedal worse than Fixed pedal. Lights on is predominent field problem.
CCRQ:	Oct 02 SSM issued for lights on (C11514774)
Design changes by Chassis	-Feb-Aug 02 chassis ran runner &reduced booster force which coincides w/ warranty spike in 02MY. '-TRW IVD with adjustable found to be high on spec. '-Unknown if actions are being taken for W126. '-Stack study conducted for V229- system is in tolerance. No plant issues during any builds nor during vehicle durability.
Design changes by Electrical	-SSM went out for OCT02 with higher make switches to compensate for booster rod offset . -Switch actuation range has been increased (due Oct03). -W126 did use high flex. Unknown if V229 uses high flex wire. -W126 Fleet under review - low mileage failures id. Field returns are being analyzed by Pollak. **Options for Field:** Continue with Pollak changes: a) switch actuation range has been shifted to high side of range to attempt to compensate for too much preload from rod (PSW due Oct 03: C11470685). b) 2 terminal spring force can be increased to reduce lights on W126 field issue...but requires component & vehicle testing. Vehicle Cobblestone testing & switch cycle testing to make sure no contact stress due to increased force. Estimated test timing: 14 weeks c) Pollak revaluating design to increase contact force...via material thickness. *Alternative option:* Finish Pkg studies for 6 terminal boo (low current) to address field spike.

U152 /231 History

AWS:	-U160 had 5 terminal with less than 4/1000 for 36mls -U152 02MY & 03MY are tracking sporadically avg 10R/1000 for 24mls. Worse appears to be fixed pedal- however take rates on U152 were not built as forecasted. 'Lights on' and 'park shift interlock' are id'd as issues. -U152 adjustable with IVD was introduced with problem identified on force balance with IVD booster &deact; correction targetted for J104MY. -U231 has adjustable and IVD (option). AWS is immature however 3-6 mls is approaching 2r/1000.
CCRQ:	None
Design changes by Chassis	-Spd deact flags to be stiffened.(IVD only) at 04MY J1 should address adjustable pedal 'lights on'. -Stack study conducted showing system in tolerance. -Additional study underway by greenbelts; CMM all system components underway at PDC

Design changes by Electrical	-Pedal mounted redundant deact (IVD only) to change to preset switch at O4MY J1 (eliminating assembly issues for setting switch) .....should address 'lights on' for U152 adj pedal issue. -Inquiry to platform made to change to high flex wire based on vendsalms...resistance from platform. -Pollak switch actuation range has been shifted to high side of range as well as correct for cracking of terminal on few field returns (PBW due Oct 03: C11470585). **Options for Production & Field:** - Revert to Littelfuse. (coordinated change) - Continue with Pollak Changes: a) switch actuation range has been shifted to high side of range to attempt to compensate for too much preload from rod (PBW due Oct 03: C11470585). b) 2 terminal spring force can be increased to reduce lights on W126 field issue...but requires component & vehicle testing. Vehicle Cobblestone testing & switch cycle testing to make sure no contact stress due to increased force. Estimated test timing: 14 weeks c) Pollak revaluating design to increase contact force...via material thickness.

Discrepancies in nos are due not enough info and/or misc claims

	Description	Fix Claims 02MY (12/02CY Pull)	Adj Claims 02MY (12/02CY Pull)	Fix Claims 02MY (3/03CY Pull)	Adj Claims 02MY (3/03CY Pull)	Fix Claims 03MY (3/03CY Pull)	Adj Claims 03MY (Includes WD) (3/03CY Pull)
VEQ							
	MISC						
V19	PWR/BATT	7	0	11	2	1	
V41	CRUISE	29	3	39	3		
V21	BRAKING: PARK	205	16	310	35	4	5
	Verbatim= Lts on & Park						
	Verbatim= Lts on						
	Verbatim= Lts inop						
	Verbatim= Lts inop & Park						
	Verbatim Park		1				
V47	TRANSMISSION: PARK	149	19	203	22	2	1
	Verbatim= Lts on & Park						
	Verbatim= Lts on						
	Verbatim= Lts inop						
	Verbatim= Lts inop & Park		1				
	Verbatim Park		17				
V45	TRANSMISSION: PARK	10	1	15	3		1
	Verbatim= Lts on & Park						
	Verbatim= Lts on						
	Verbatim= Lts inop						
	Verbatim= Lts inop & Park						
	Verbatim Park		1				
V17	LTS ON/PARK	139	11	200	17	1	
	Verbatim= Lts on & Park						
	Verbatim= Lts on		5				
	Verbatim= Lts inop						
	Verbatim= Lts inop & Park						
	Verbatim Park						
V77	TOTAL LIGHTING	811	66	1268	131	3	16
	Verbatim= Lts on & Park						
	Verbatim= Lts on		34				
	Verbatim= Lts inop		1				
	Verbatim= Lts inop & Park						
	Verbatim Park						
TOTAL CLAIMS		1349 / 1449	108 / 118	2031 / 2183	229 / 249	16	30

EDS Related	TBD	TBD	125	25	3	3

REPEAT VIN's		84	6

K0B3-006 5678

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12/4/2003 10:07 AM

Pollak (8 term) EOO Warranty Analysis .xls

TOTAL 00MY D186 AWS (Dec02 AWS)

[illegible]	Description	Fixed Total Claims 00MY	Fixed Total Claims 01MY	Fixed Total Claims 02-03MY	Adj Total Claims 00MY	Adj Total Claims 01MY		Adj Total Claims 02-03MY
VFG								
	V19 PWR/BATT	2	3	1	20	0		0
	V41 CRUISE	2	2	4	20	1		1
	V21 Braking; aka	25	16	2	327	15		1
	V47 Transmission;	204	32	21	1202	32		6
	V48 Transmission;	3	6	0	88	0		0
	V77 Lighting	145	64	33	1457	33		8
	Verbatim= Lts on							
	Verbatim= Lts inop or Park							
	V17 LTS ON/PARK	36	16	6	311	8		1
VFG CUM		416	137	62	3425	89		17
CC								
	30 chafe	2	0	0	12	0		0
	84 pinched	18	2	1	15	1		0
	X1,X2,X4,X7 grnd, eds, etc	36	3	1	103	3		1
	42 does not open	222 (81eds	88	39	2170	53		7
	28 'open' (vague)	95 (50eds	27	13	679	18		5
	48 burned	27 (17eds	6	3	299	7		1
	1 broken (switch	16 (11eds	0	2	68	4		0
	41 stick/binds	8			186	6		0
CC CUM		418	128	59	3532	92		14
TOTAL CLAIMS		434	149	69	3614	101		17

TOTAL 00MY D186 AWS (Dec02 AWS)

[illegible]	Description	Fixed Total Claims 00MY	Fixed Total Claims 01MY	Fixed Total Claims 02-03MY	Adj Total Claims 00MY	Adj Total Claims 01MY		Adj Total Claims 02-03MY
VFG								
	V19 PWR/BATT	55	21	4	186	5		8

V41 CRUISE	128	63	15	250	31	29
V21 Braking; aka	761	124	36	3221	162	131
V47 Transmission;	3569	249	72	7858	580	74
V48 Transmission;	193	17	3	601	49	4
V77 Lighting	3326	462	124	13966	649	619
Verbatim= Lts on						
Verbatim= Lts inop or Park						
V17 LTS ON/PARK	747	119	41	2718	137	71
VFG CUM	6769	1049	295	26760	1607	938
CC						
30 chafe	36	1	0	42	3	1
64 pinched	306	10	1	111	6	3
X1,X2,X4,X7 grnd, eds, etc	690	47	13	862	53	27
42 does not open	4611	636	176	16085	055 (77eds+sw)	587 (38 eds+sw)
28 'open' (vague	1926	189	50	5539	315	134 (16 eds+sw)
46 burned	680	97	19	2465	118	65 (2 eds)
1 broken (switch	380	26	3	389	22	6
41 stick/binds	332			2073	104	125
CC CUM	8963	1008	264	29566	1676	975
TOTAL CLAIMS	9300	1166	332	30270	1734	994

Data Sorted based on 1Mar01-Jan03 (Post Recall/Service Kit) Repair Cutoff dates (used for CCRG paper Feb03):

	Description	Fixed Claims 00MY	Adj Claims 00MYpost 3/1/01
VFG			
	MISC		140
V19	PWR/BATT		7
V41	CRUISE		16
V21	BRAKING; PARK		327
	Verbatim= Lts on & Park		3
	Verbatim= Lts on		260
	Verbatim= Lts inop		6
	Verbatim= Lts inop & Park		8
	Verbatim Park		98
V47	TRANSMISSION: PARK		1067

Discrepancies in nos are due not enough info and/or misc c

	Verbatim= Lts on & Park		9
	Verbatim= Lts on		1
	Verbatim= Lts inop		0
	Verbatim= Lts inop & Park		73
	Verbatim Park		948
V48	TRANS ISSIO		85
	Verbatim= Lts on & Park		0
	Verbatim= Lts on		1
	Verbatim= Lts inop		8
	Verbatim= Lts inop & Park		0
	Verbatim Park		76
V17	LTS ON/PARK		218
	Verbatim= Lts on & Park		2
	Verbatim= Lts on		91
	Verbatim= Lts inop		9
	Verbatim= Lts inop & Park		22
	Verbatim Park		77
V77	TOTAL LIGHTING		1085
	Verbatim= Lts on & Park		15
	Verbatim= Lts on		803
	Verbatim= Lts inop		92
	Verbatim= Lts inop & Park		175
	Verbatim Park		0
TOTAL CLAIMS		9306	2836

Verbatim Summary		2836
Verbatim= Lts on & Park		29
Verbatim= Lts on		1156
Verbatim= Lts inop		114
Verbatim= Lts inop & Park		278
Verbatim= Park		1199

Data Sorted based on 1Mar01-Jan03 (Post Recall/Service Kit) Repair Cutoff dates (used for CCRG paper Feb03):

	Description	Fixed Claims 00MY	Adj Claims 00MY post 3/1/01
VEG			
	MISC		937
V19	PWR/BATT		166
V41	CRUISE		162

V21	BRAKING; PARK	1963
	Verbatim= Lts on & Park	
	Verbatim= Lts on	
	Verbatim= Lts inop	
	Verbatim= Lts inop & Park	
	Verbatim Park	
V47	TRANSMISSION: PARK	8071
	Verbatim= Lts on & Park	
	Verbatim= Lts on	
	Verbatim= Lts inop	
	Verbatim= Lts inop & Park	
	Verbatim Park	
V48	TRANS ISSIO	408
	Verbatim= Lts on & Park	
	Verbatim= Lts on	
	Verbatim= Lts inop	
	Verbatim= Lts inop & Park	
	Verbatim Park	
V17	LTS ON/PARK	1726
	Verbatim= Lts on & Park	
	Verbatim= Lts on	
	Verbatim= Lts inop	
	Verbatim= Lts inop & Park	
	Verbatim Park	
V77	TOTAL LIGHTING	8029
	Verbatim= Lts on & Park	32
	Verbatim= Lts on	3,912
	Verbatim= Lts inop	228
	Verbatim= Lts inop & Park	280
	Verbatim Park	166

Discrepancies in nos are due not enough info and/or misc claims

4,600 claims evaluated !!!

CC		
30	chafe	
B4	pinched	
X1,X2,X4,X7	grnd, ade, etc	
42	does not operate	
26	'open' (vaguely used by tech's)	
46	burned	
1	broken (switch)	
41	stick/binds	

Verbatim Summary			
Verbatim= Lts on & Park			
Verbatim= Lts on			
Verbatim= Lts inop			
Verbatim= Lts inop & Park			
Verbatim= Park			

CC CUM		
TOTAL CLAIMS		
TOTAL CLAIMS		20323

<u>REPEAT VINS based on 13460 AWS</u>

build month	(aka revisit) 00MY singl rpt	(aka 3 visits) 00MY dbl rpt	aka 4 visits 00MY> 3 rpts	(aka revisit) 01MY singl rpt	(aka 3+ visits) 01MY dbl rpt	(aka revisit) 02MY singl rpt
Aug-99	3	0	0			
Oct-99	11	3	8			
Nov-99	33	1	9 (1=5x)			
Dec-99	169	5	7			
Jan-00	762	74	6			
Feb-00	1246	96	3			
Mar-00	1196	91	0			
Apl 00	779	86	0			
May-00	310	27	1			
Jun-00	68	5	0			
Jul-00	16	2	0			
Aug-00	44	0	1	8		
Sep-00				16	1	
Oct-00				11		
Nov-00				15		
Dec-00				4		
Jan 01				4		
Feb 01				2		
Mar 01				4		
Apr 01				3		
May 01				2		
Jun 01				4	1 +1 (4x)	
Jul 01				5		
Aug-01						1
Sep-01						1
Oct-01						2

Nov-01						5
Dec-01						0
Jan 02						6
Feb 02						4
Mar 02						3+ 1x3 + 1x4
Apr 02						5
May 02						1
Jun 02						
Jul 02						
NOTES:	9wagons	55wagons	1wagon	1wagon		0wagon

Pedal Spacing recall?

Wiring claims

	Taurus Sedan	Taurus Wagon
2000 Total Fix	10,798	656
EDS Mentioned	473/1200	194
2000 Total Adj		3,121
EDS Mentioned		232/2347
2001 Total Adj		162
EDS Mentioned		27
2002&3 Total Fix		
EDS Mentioned		

Platform	Adj Total Claims 00-03MY	00MY		01MY	02MY	03MY
D186 Sedan						
#1 CCC						
#2 CCC						
Wire Repairs						
D186 Wagon	3313	3121		163	28	1
#1 CCC		P01(985)		P01(51)	P01(11)	-
Actual per verbatim				63+13	9+1	
#2 CCC		L26 (802)		L26(48)	L26(6)	-
Actual per verbatim				59	5	
Wire Repairs		77/1000		23	3	-

2002&3 Total Ad		29
EDS Mentioned		4

Discrepancies in rise are due not enough info

[illegible]	Description (Dec 02 Pull)	Fixed Claims 00MY	Adj Claims 00MY	Fixed Claims 01MY	Adj Claims 01MY	Fixed Claims 02MY	Adj Claims 02MY	Fixed Claims 03MY	Adj Claims 03MY
VFG									
	MISC								
V19	PWR/BATT	33		10		69			
V41	CRUISE	34		66		22			
V21	BRAKING: PARK	271		230		245		4	
V47	TRANSMISSION: PARK	107		47		40		4	
V48	TRANSMISSION: PARK	10		6		1			
V17	LTS ON/PARK	120		93		171			
V77	TOTAL LIGHTING	567		759		1007		6	
TOTAL CLAIMS		1577	430	1280	TBD	1782	TBD	16	TBD
	Repeats								
	EDS related	85	10	58	TBD	75	TBD	4	TBD

ELECTRICAL QUARTERBACK
KEY ATTRIBUTE/HEALTH CHART
SWITCH SUBSYSTEM

Item	Design Metric	Key Deliverable	[illegible]	OVERALL SWITCH	Risk to Program	D186 Sedan / ...PIT-14B450-AA (2 TERMINAL)	D186 Wgn / ...PIT-14B450-BA (2 TERMINAL)	U152 / ...PIT-14B450-AA (2 TERMINAL)	W126 / ...PIT-14B450-AA (2 TERMINAL)	W126 (Field) / ...PIT-14B450-AA (2TERMINAL)	V228 (Field only) / ...PIT-14B450-AA (2 TERMINAL)	...PIT-14B450-CA (2 TERMINAL)	UP207, PN150, PN131, PN96 / ...PIT-14B450-BA (6 TERMINAL)	...P221 (06- / ...L1T-14B450-AG (6 TERMINAL)	...L1T-14B450-AA (4 TERMINAL)		Comments
						Pollak											
1	[redacted]					[redacted]											
5	[redacted]	X				[redacted]											Deviations for old specs: durability, water ingress, salt,
9	[redacted]	X				[redacted]											ES spec has been developed. Under review.
11	[redacted]	X				[redacted]											
13	[redacted]	X				[redacted]											
14	[redacted]	X				[redacted]											
15	[redacted]	X				[redacted]											
16	[redacted]	X				[redacted]											
18	[redacted]	X				[redacted]											
25	[redacted]					[redacted]											TBD
29	[redacted]	X				[redacted]											
33	[redacted]	X				[redacted]											
34	[redacted]	X				[redacted]											

Pollak BOO Packaging & Forward Application

Projected Volume/Usage for Loss Travel:

2T		5T		6T/4T	
V229-	223k	P150-	300k	U222/228-	171k
D186 thru 067-	480k	P131/96 -	365k		
V127 thru 07/81-	173k	EN/FN-	280k		

Volume= 1.5M @ 07/08MY (without D186)

Present (5/03) price based on present volumes

2T= $0.85 lo (V229)
$1.04 high (D186/U152/U231)
5T= $1.43 (UP207/P150/PN96/P131)
6T= $2.12 (U222/228/P221)
4T= $2.02 (U222/228/P221)

	Pkg'g Dimensions		
	H	L	W
2T	70.6	38.2	35
5T	52.1	37.4	25
6T/4T	78.4	38.2	35

H = dimension from center of mounting pin hole to end of switch as an extension of booster rod.

DV –Durability per specs released

2T: Total cycles= 1M
#cycles @16.5A= 100k at different increments
900k @10A
24 cycles /minute w/ 0.8 sec on time.
Plunger= GF Poly
Contacts = Stat= C194
Move= ?

6T: Total cycles= 1M
#cycles @16.5A= 98k at different increments
remaining cycles @12A
24 cycles /minute w/ 0.8 sec on time.
Plunger= PBT GF
Contacts = Stat= 1927
Move=Olin 7025 alt;Cu beryllium 17410

5T: Total cycles= 500k @16.5A
5 or 10 cycles /minute w/ 1 sec on time, 10 sec off or 5 sec if 2 banks used.
Plunger= GF Poly
Contacts = Stat=192? Or EP110
Move=Cu beryllium 17410

New proposed plunger material for extended durability=

ELECTRICAL	19075	THINK II	MARK STURGILL	SWITCH ASY-STOPLIGHT	2002	THNEIG
ELECTRICAL	19075	THINK II	MARK STURGILL	SWITCH ASY-STOPLIGHT	2002	THNEIG
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250X4

ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPLX2

ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	F550X4

ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1998	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	1999	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250X2

ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPDX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	RANGX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPDX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPDX4

ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	EXPLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F150X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F150X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250L2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250L4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F250X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F350X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F350X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F450X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F450X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F550X2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	F550X4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	FCLX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	FCLX4
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	RANGX2
ELECTRICAL	22843	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	RANGX4
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	TAURUS
ELECTRICAL	22845	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	TAURUS
ELECTRICAL	22862	MEHTODE ELECTRONICS	DAVOR LEDER	SWITCH ASY-STOPLIGHT	2003	ESCAP2
ELECTRICAL	22862	MEHTODE ELECTRONICS	DAVOR LEDER	SWITCH ASY-STOPLIGHT	2003	ESCAP4
ELECTRICAL	22862	MEHTODE ELECTRONICS	DAVOR LEDER	SWITCH ASY-STOPLIGHT	2004	ESCAP2
ELECTRICAL	22862	MEHTODE ELECTRONICS	DAVOR LEDER	SWITCH ASY-STOPLIGHT	2004	ESCAP4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	EXPDX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	EXPDX4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F150X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F150X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F250L2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F250L4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F250X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F250X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F350X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F350X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F450X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F450X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F550X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	F550X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	NAVGX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2002	NAVGX4

ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	EXPDX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	EXPDX4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F150X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F150X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F250L2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F250L4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F250X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F250X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F350X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F350X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F450X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F450X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F550X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	F550X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	NAVGX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2003	NAVGX4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	EXPDX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	EXPDX4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F150X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F150X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F250L2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F250L4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F250X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F250X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F350X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F350X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F450X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F450X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F550X2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	F550X4
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	NAVGX2
ELECTRICAL	23738	POLLAK SWITCHING	MIKE O'REILLY	SWITCH ASY-STOPLIGHT	2004	NAVGX4
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	FRSTAR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	MONTER
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2000	WINSTR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	FRSTAR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	MONTER
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2001	WINSTR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	FRSTAR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	MONTER
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2002	WINSTR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	FRSTAR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	MONTER
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2003	WINSTR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	FRSTAR
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	MONTER
ELECTRICAL	23756	POLLAK SWITCHING	FILIPE MIRANDA	SWITCH ASY-STOPLIGHT	2004	WINSTR

Pollak 2 Terminal Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
D186	Lts On & Park Shift Interlock	- Field returns show no problem found	- Change to stronger spring within switch to counter pedal weight (ETA Post J1 pending testing). -Change the switch actuation range to compensate for system interaction. (C11470565: ETA NOV 03)	-Hi flex wire adopted to prevent wiring breakage. -Chassis &Switches developing System FMEA: cascade SC's to all suppliers
W126/V229	Lts On	- Field returns show no problem found	- Change to stronger spring within switch to counter pedal weight (ETA Post J1 pending testing). -Change the switch actuation range to compensate for system interaction. (C11470565: ETA NOV 03)	- V229 improved robust pedal box - Wiring TBD (New supplier) - Chassis & Switches developing System FMEA: cascade SC's to all suppliers
U152	Lts On & Park Shift Interlock	TBD	- Change to stronger spring within switch to counter pedal weight (ETA Post J1 pending testing). -Change the switch actuation range to compensate for system interaction. (C11470565: ETA NOV 03)	- Redundant Speed deact switch changes @ J1 to address adj IVD vehicle problem with Lts on. - Chassis & Switches developing System FMEA: cascade SC's to all suppliers
U231	Lts Off	TBD	- Change to stronger spring within switch to counter pedal weight (ETA Post J1 pending testing). -Change the switch actuation range to compensate for system interaction. (C11470565: ETA NOV 03)	- Under investigation - Chassis & Switches developing System FMEA: cascade SC's to all suppliers

Pollak 5&6 Terminal Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
U222/228	Lts On & Park Shift Interlock	- Field returns show no problem found	- Added fine silver to low current contacts and delete to sets of contacts for improved closing forces and cost save.	
Fseries	Lts On	- Field returns show no problem found		-Hi flex TBD
UP207	Lts On & Park Shift Interlock	TBD		-Hi flex wire being adopted to prevent breakage.

Littelfuse

Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
EN	Park Shift Interlock			-Speed deact changed in Oct 02. Trending warranty.
FN	Lts On			
V127	n/a	Low R's	None required	
SN195	n/a	Low R's	None required	

Methode

Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
C170				
DEW				
M206				
U204				-Speed deact Change (Oct02) -Brake pedal box- process control tightened-improved warranty trended down (Dec02)

Pollak 2 Terminal Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
D186	Lts On & Park Shift Interlock	- Field returns show no problem found - Pedal box lash & wiring issues	- Change to stronger spring within switch to counter pedal weight (ETA Post J1 pending testing). -Change the switch actuation range (upwards) to compensate for system interaction. (C11470565: ETA NOV 03)	-Hi flex wire adopted to prevent wiring breakage. -Chassis &Switches developing System FMEA: cascade SC's to all suppliers
W126/ V229	Lts On	- Field returns show no problem found - W126 rod is major contributor to lts on	See above	- V229 improved robust pedal box & booster rod changed. - Wiring TBD (New supplier) - Chassis & Switches developing System FMEA: cascade SC's to all suppliers
U152	Lts On & Park Shift Interlock	-IVD vehicles predominantly. -Also 03MY not trending like 02MY.	See above	- Wiring sheathing on 03MY and takeout length rqrs revision- Identified . - Redundant Speed deact switch changes @ J1 to address adj IVD vehicle problem with Lts on. - Chassis & Switches developing System FMEA: cascade SC's to all suppliers
U231	Lts On	TBD- Problem reported last week (Jun21)	See above	-Hi flex wire under review (3/10 claims). - Chassis & Switches developing System FMEA: cascade SC's to all suppliers

Pollak 5&6 Terminal Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
U222/228	Lts On & Park Shift Interlock	- Field returns show no problem found	- Added fine silver to low current contacts and deleted a set of contacts for improved closing forces and cost save. (CR 11433160 ETA 04MY J1)	TBD
F series	Lts On	Low R's	-Same as above	- Hi flex under review with systems engineering.
UP207	Lts On & Park Shift Interlock	Low R's	Low R's	- Hi flex wire being considered - Module/system operating below minimum current on select vehicles.
P150	Park Shift Interlock	Low R's	Low R's	- Hi flex wire being considered. - Module/system operating below minimum current on select vehicles.

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Littelfuse Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
EN	Park Shift Interlock	No problem found	None required	-Speed deact changed in Oct 02. Trending warranty. -Booster rod might be changed pending testing.
FN	Lts On	No problem found	None required	-Speed deact changed in Oct 02. Trending warranty. -Booster rod might be changed pending testing.
VN127	n/a	Low R's	None required	None required
SN195	n/a	Low R's	None required	None required

Methode Switch	Customer /Tech	Field Analysis	Switch Design Changes	System Changes
C170	Lts On & Park Shift Interlock	TBD	None at this time	-System released by Europe; changes made unknown.
U204	Lts On & Park Shift Interlock	TBD	None at this time	- Speed deact change (Oct02) - Brake pedal box- process control tightened (Dec02)
DEW	Lts On & Park Shift Interlock	Low R's	None at this time	None at this time
M205	Lts On & Park Shift Interlock	Low R's	None at this time	None at this time

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Switch	mV @ Terminal Block	mV @ Switch
1	210	26
2	294	27
3	205	27
4	283	27
5	202	34
6	298	38
7	345	61
8	212	26
9	299	44
10	213	39
11	282	36
12	210	89

12/3/02: All Switches operating normally

Switch	mV @ Terminal Block	mV @ Switch
1	224	27
2	297	34
3	220	26
4	290	30
5	205	29
6	385	40
7	333	134
8	250	33
9	309	30
10	221	35
11	310	60
12	237	57

12/4/02: Switch 1, 2, 8 sticking ON intermittently

Switch	mV @ Terminal Block	mV @ Switch
1	228	36
2	305	25
3	218	26
4	299	28
5	215	34
6	397	72
7	282	34
8	283	27
9	308	27
10	215	31
11	315	57
12	214	39

12/9/02: Switch 1, 2, 3, 8, 9 sticking ON intermittently

Switch	mV @ Terminal Block	mV @ Switch
1	216	38
2	295	26
3	223	30
4	306	42
5	221	33
6	326	46
7	288	44
8	235	44
9	318	32
10	220	48
11	277	30
12	218	33

Switch 1, 2 intermittently stuck ON
Switch 3 slow to close

Switch	mV @ Terminal Block	mV @ Switch
1	36	219
2		
3	27	239
4	36	323
5	30	244
6	33	411
7	44	333
8	47	238
9	32	420
10	36	227
11	38	287
12	36	225

Replaced #2 Harness, wire was damaged possibly during service of chamber heating unit.

Switch	mV @ Terminal Block	mV @ Switch
1	236	36
2	275	28
3	307	42
4	310	41
5	222	32
6	548	47
7	409	36
8	218	33
9	440	26
10	226	33
11	298	29
12	228	35

Switch 1, 2 stuck ON
Switch 5 slow to close
Log reports switch 6 not lighting at 187336 cycles
12/18/2002 13:48
189450 Cycles

Test restarted at 2:55 PM 12/19/2002 189450 cycles.

Switch 3, 8, 9 show signs of overheating: Beam discoloration, contact carbon, lower beam support deformation.
Switch 1, 2 show signs of contact point carbon buildup.
Switch 7 shows normal wear.

Switch	mV @ Terminal Block	mV @ Switch
1	211	25
2	312	29
3	210	41
4	249	34
5	192	29
6	272	110
7	405	37
8	234	62
9	765	27
10	198	27
11	261	27
12	203	37

#6 Stays ON Intermittently
#8 Is late to light
#9 Strand breakage, Harness Replaced at 260,660 Cycles
#4 Strand breakage, Harness Replaced at 251,073 Cycles

Switch	mV @ Terminal Block	mV @ Switch
1	234	30
2	470	51
3	245	33
4	292	33
5	238	36
6	292	34
7	390	36
8	296	76
9	275	38
10	233	43
11	294	31
12	247	42

1/3/03 9:45AM

Switch # 2 Strand breakage, harness replaced at 300,087 Cycles.

Switch	mV @ Terminal Block	mV @ Switch
1	236	60
2	270	35
3	245	35
4	292	42
5	253	31
6	326	67
7	420	38
8	317	109
9	284	29
10	240	38
11	305	34
12	245	51

1/7/03 10AM
#7 Possible harness strand breakage

Switch	mV @ Terminal Block	mV @ Switch
1	255	59
2	860	41
3	260	35
4	498	41
5	251	31
6	369	86
7	275	26
8	293	49
9	332	46
10	253	37
11	296	34
12	263	39

1/13/03 2PM
#2,#4,#9 connectors are warm

Switch & Rig	Wire Type	Switch ON Point	Natural Gap	Gap on Fixture	Gap w/ 0.005" shim	mV @ Terminal Block	mV @ Switch	
1	Hi-Flex	0.71	0.051	0.026	0.02	211	26	New Pollak 0.710 switches installed at 189450 cycles 2:55 Pm 12/19/2002
2		0.71	0.05	0.031	0.018	272	29	
3	Hi-Flex	0.71	0.05	0.032	0.024	306	26	
4		0.7185	0.062	0.058	0.046	288	27	
5	Hi-Flex	0.7185	0.062	0.054	0.039	197	31	
6		0.716	0.067	0.046	0.022	271	26	
7		0.71	0.062	0.035	0.02	287	27	New Pollak 0.710 switches installed at 189450 cycles 2:55 Pm 12/19/2002
8	Hi-Flex	0.71	0.054	0.035	0.023	210	34	
9		0.71	0.05	0.034	0.022	376	29	
10	Hi-Flex	0.717	0.067	0.049	0.035	194	27	
11		0.717	0.067	0.061	0.044	287	30	
12	Hi-Flex	0.716	0.068	0.058	0.046	189	26	

	ET= [illegible] (mm)	ET= [illegible] (mm)	ET= [illegible] 18.29 to 18.05 (mm)	ET= YP1T & ZF1T = [illegible] (mm)						[illegible] (mm)							ET= [illegible]
Load Travel Analysis: [illegible]	[illegible] fix	[illegible] adj		[illegible] fix	[illegible] adj	[illegible] fix	[illegible] adj	[illegible] adj		[illegible]	[illegible]	[illegible]	[illegible]	P131	[illegible]		[illegible] fix	[illegible] adj
Shoulder pin			[illegible]															
Pedal [illegible] pin																		
[illegible] bushing																		
rod id																		
rod distance from id to flat																		
radius of flat																		
mounting pin od																		
pin length from pedal arm to hub																		
bushing thickness																		
Pedal pressed																		
1) Max rod id to flat & [illegible]																		
2) Min rod id to flat & [illegible]																		
Pedal not pressed																		
1) Max rod id to flat & [illegible]			[illegible]															
2) Min rod id to flat & [illegible]																		

Load Travel Analysis [illegible]	[illegible] fix	[illegible] adj	[illegible] fix	[illegible] adj	[illegible] fix	[illegible] adj	[illegible] adj		[illegible]	[illegible]	[illegible]	[illegible]	P131	P131		[illegible] fix	[illegible] adj
Max angle lateral offset [illegible]							2.8 degrees		1.8 degrees								

[illegible]

[illegible]

[illegible]

		6T= 18.24/.39 to 17.93 (mm) 4T= 4L1T		
	Lost Travel Analysis: - assume concentric bushing - assume sheetmetal is neglible - clamshell not installed	P221 fix	P221 adj	
	Booster p/n			
	Pedal box p/n			
	LDM bushing			
	rod id	16.28-16.23	Same	
	rod distance from id to flat	2.95-2.85	Same	
	radius of flat	25.4 (+/-?)	Same	
	mounting pin od	14.20-14.15	Same	
	pin length from pedal arm to hole	*	*	
	bushing thickness	0.673-0.622	Same	
	Max angle lateral offset to create lights on			
Customer Issue	Extreme 'system is short' based on Tol. w/ Pedal pressed			Acceptable range
Chassis Short = BSI, no lts (no offset)	Chassis System full travel= min rod id to flat+ min rod id-max bushing (assuming no offset and radius on flat = 25.4mm)	18.456	Same	18.4023-18.6055
Chassis Short = BSI, no lts (max offset)	Chassis System full travel= min rod id to flat+ min rod id-max bushing Max Angular offset which minimizes travel (1deg=4mm ; P150)			18.4023-18.6055
Customer Issue	Extreme 'system is long' based on Tol. w/ Pedal pressed			Acceptable range
Chassis Long= lts on, batt drain	Chassis system full travel = max rod id to flat+ max rod id-min bushing (assuming no offset and radius on flat = 25.4mm)	18.608	Same	18.4023-18.6055
Chassis Long= lts on, batt drain (max offset)	Chassis system full travel = max rod id to flat+ max rod id-min bushing Max Angular offset which minimizes travel (1deg=4mm ; P150)			18.4023-18.6055

1003-045 E129

Summary Report from Pollak (Canton) visit of May 13-15, 2003

Day 1: Discussion of ES spec and BOO revision list.

- ES spec : 10mV & 15mA requires equipment capability micro-Volt level for accuracy which is susceptible to noise- equipment not available- particularly for the number of cycles that BOO must endure for continuous monitorring. The 4x4 switch that is produced for Ford is resistor ladder which has different operation currents and voltages and cycles.
- New material on 5 terminal was briefly discussed. Pollak gave assurance that noise would be addressed with new material also should reduce shaving on plunger by the contacts as seen internall to Pollak in testing, etc. Present testing underway to confirm if new material will make switch more robust to last 1.5M cycles (GenII application).
- Forward model system design requires clarification (Meg/Brian):
    - Module milli-amp (15mA per ES Spec- however 05MY UP207 & P150 requesting to operate at less than 5mA!!!!) Also both platforms are not grounding through the lamp bulbs necessitating a ground terminal in switch which will add complexity for next GEN. Contact force on present design 5T will make 1.5M difficult to meet.
    - Tow package requirements. Note: all 3 Ford/Pollak specs identify difft electrical durability parameters; this adds doubt as to what each switch can endure in meeting 1.5M+. Need confirmation from truck that 16A is not excessive.

- Design change#1for 2 terminals: Spring strength on 2 terminal switches. The springs were received, however the spring strength is on the high side. I've requested that Carl produce prototypes for me to run on vehicles (V229, D186(sdn & wgn), U152) to gage if flicker will not occur. Samples are to be representative as follows (or as close as possible):

2 @ 10-12lb w/ make 0.710-0.712	2 @10-12lb w/ make 0.713-0.715	2 @10-12lb w/ make 0.715-0.718
2 @ 12-14.5lb w/ make 0.710-0.712	2 @ 12-14.5lb w/ make 0.713-0.714	2 @10-14.5lb w/ make 0.715-0.718

- This testing should confirm that spring strength change will address field issues with lights on. Incorp as soon as Aug/Sept timeframe (Post J1) pending cycle testing.
- Design change#1for 2 terminals: The radius change and plunger overhaul will proceed pending approval timed for Nov- Dec 03CY ....if not frozen due to J2's (MCR) in Dec on most platforms which would push this out to Jan/Feb04CY. DV to be firmed up asap- defiantly cycle testing with

Day2: Mfg Tour, Lab Tour, other technology & further discussion on GEN II BOO.

- Mfg tour; (see notes)

-**MSD Pads and Plugrs**- Separate cell for build up of plungers for the assembly. No QC check on dimensional of wiper (distance between endpts) after they are staked. Staked parts after passing preliminary assy, are then bulk toted to main assembly line for insertion into body. Assembly line checks for all electrical checks once assembled, but the assembly can (feasibly) pass electrical with a wiper that is 'set' (due to handing from the build-up cell to the main line). This line is not fully automated so the added check could be inserted as PFMEA improvement. Also operators are doing a visual on grease application- room for improvement (automation- pressure sensing or optical).

-**FSOS** – synchronous line with electrical checks throughout, end of line tests 30G rqmt. Note: Bracket assy cell separate from main line. Brackets assembled after all testing. Automated BOL testing - results are 'soft' and retained on network.

-**BOO (2T)**- Asynchronous. Reel feed contacts (new die running recently). Stationary terminal bent on-line w/ gp/no go. Deionizing air. Automated BOL testing - results are 'soft' and retained on network.

-**BOO (5T)**- Asynchronous. Cavities sorted for optimal circuit performance (1-2, 3-4, 4-5). Bowl feed contacts. Force on cct 1-2 tested. Automated BOL testing - results are 'soft'. ? QC responsible for variable data- is equipment in lab calaibrated to mfg equipment?

-**BOO (6T/4T)**- Synchronous for better control. Bowl feed with ionizing blowoff. Other boo's are calibrated on pellet versus probing on non-movable area. Prior to cover assembled mVolt tested (2T and 5T tested with covers on) Note: 'break' info is starting to be monitored on 6T but not yet controlled. Automated BOL testing - results are 'soft'.

-**Door Ajar**- ¾ Lines still running close to rate. No forecast (internally) to bring line down (so far). Asynchrounous line. Setting of switch is based off of roll of metal housing. Make and height monitored. Force is also checked. Note: Grease terminals first then mV checked afterwards.

-Fuel filler door- Magnets inserted into lug and heat staked into housing. Magnets 'Set' end of line via gauss meter. Automated EOL testing- results are 'soft'.

- NOTE: No time to review PFMEA & DFMEA during this visit.

- QC/Test Lab; tour of equipment. Verified 2T hysterisis running (60K cycles) however test data not reviewed. DVPR nor DFMEA test data not reviewed during this visit.

- GEN II discussion: Discussion of potential volume pending 'system design' (i.e. hi/lo current and grounding needs) on platforms that would use the new switch; V229, VN127, EN/FN, P150, P131/96, P221, U222/228. Estimated volume for these platforms is over 2Million. Warranty on 6 & 5 terminal fairly low in comparison to 2 Terminal. I expressed that it would be a difficult sell to all platforms with low warranty to convert to new switch which has (1) no warranty history and a new contact design to Ford, (2) potential pc price cost hit and (3) tooling hit. Cost for the GENII proposed to Ford earlier this year has not been confirmed yet.

  Alternate options to Pollak GENII proposal:

  a) Use new 4 terminal (formerly 6 terminal) as basis for all platforms for 07MY (system architecture need to support (P150)) & tweak plunger and contact to meet 1.5M as well as address other outstanding deviations. Present (5/03) cost of 4 terminal is $2.02 based on P221, U222/228 volume.

  b) Use 5 terminal as basis for platforms and tweak plunger and contact to meet 1.5M as well as address other outstanding deviations. Possibility to remove grid from switch would improve contact force on low terminal in order to meet/exceed 1.5M. Present (5/03) cost of 5 terminal is $1.43 based on P150/P96/P131 volume.

  - Both options would need to be flexible to adapt for strictly high current or low current applications (VN127 & V229). Either set of unused contacts would be 'depopulated' for application and would bring the respective price down for the platforms.

  The 2 terminal plngr change to shift make range is tooling hit and it is increasing pcs price from original price of 0.85 (lo) and 1.04 (hi) to hit 0.10-0.14 more/pc. With added volume on 5 terminal price might be in a respectable ball park?

  Forward model info (as discussed during previous day) needs to be confirmed in order to assure appropriate parameters in ES spec and simplify mfg complexity.

-Gen II FMEA as proposed to Ford earlier this year was not reviewed during this visit however Carl identified that it is outlined/nearly complete. S/W used for creation of FMEA is BYTEWORKS not FMEAplus.

- Briefly reviewed new technology using ball effect on pedal.

END.

Bill Strickland
Core Actuation

Brake Lights Off, Pedal Pressed

4

3

1

2

Booster Push Rod	Diameter	16.256	0.025	0.025
Booster Push Rod	Anvil Thickness	2.600	0.050	0.050
Bushing	Thickness	0.648	0.025	0.025
Pedal	Pin Diameter	14.175	0.025	0.025
Switch	As Shipped Plunger Height (with brakes applied)			

Chassis Component Stack-Up

Interference is the (pin, bushing, anvil) chassis component stack-up minus the as shipped plunger height.

Switch Make Range = (17.93 - 18.24)

Assume bushing to pedal pin gap is collapsed during actuation, and irrelevant when pedal is at rest.

	Minimum	Maximum
Switch Make Distance	17.93	18.24

X

Y

Z

Vehicle Position

Bill Strickland
Core Actuation

12/4/2003
Switch Activation Distance- p221.xls

Stack-Up Study - Switch Make Point - Switch Rotated About Pedal Pin Center

0.000	0.220	0.220

Enter Angle of Rotation (Deg) **3.9**

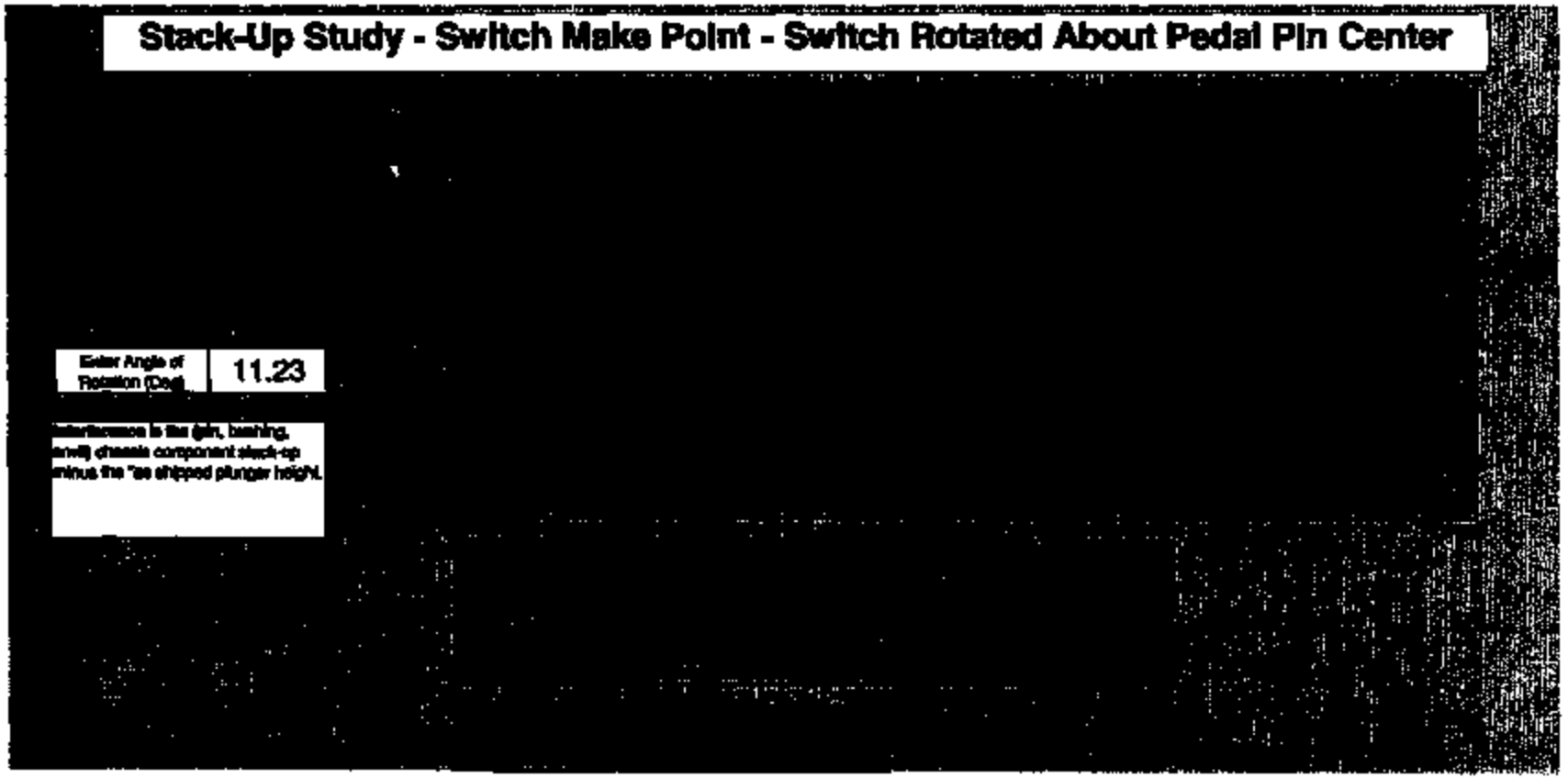
[illegible] in the (pin, bushing, and) chassis component stack-up raises the Tan clipped plunger height.

Switch Rotation:
Switch rotation about the Z-axis of the vehicle is limited by the clearance between the switch mounting holes and the pedal pin. The clearance between these components ranges from (0.02 - 0.220) mm.

0.29	0.04	0.49
0.40	0.21	0.60

Bill Strickland
[illegible]

Stack-Up Study - Switch Make Point - Switch Rotated About Pedal Pin Center



TYPES OF STOP LAMP SWITCHES

Loss Travel type switches:

- This switch & booster rod are mounted on a pin which extends from the brake pedal.
- When the pedal is pressed, the booster rod moves rearward toward the switch to actuate it within a specified range of movement.
- Single contact & multiple contact switches are used on various applications
- Littelfuse and Pollak are the suppliers

Plunger type switches:

- This switch is mounted on a stationary 'flag' on the pedal box and opens the circuit when the target flag moves away from the switch.
- As the brake pedal is pressed, the pedal arm moves toward the engine compartment; the target flag which is mounted on the pedal arm moves away from the switch causing the switch to change state.
- One set of contacts are used with this style of switch.
- Methode is the supplier

Loss Travel/Rod actuated type
Brake On/Off switch:

•Switch's actuation is dependent on pedal box and booster rod and thus tight tolerancing required.

•This switch & booster rod are mounted together on a mounting pin extending from the brake pedal arm.

•When the pedal is pressed, the booster rod moves rearward toward the switch to actuate it within a specified range of movement.

• Single contact & multiple contact switches are used on various applications

• Littelfuse and Pollak are Ford approved suppliers

Report Information for Result ID 72510149:	Status=Finished	Request Name=134 60 Fearless Park problem	Ion=134 60 Fearless Park problem	Run Date And Time=17 Jul 2003 17:28	Completion Date And Time=17 Jul 2003 17:30	Job Size=185	Execution Time=2	Precalc Processing=	Cut Off Date=30 Jun 2003	Load Date=15 Jul 2003	Currency Exchange=v 6	Generated By=MSAVAG10	
Data Selection Criteria:	Model Year = MY_03[2003], MY_02[2002]	Cost Category = All Vehicle Coverages / Contractual [1,%,%]	Region Sold = North America [NA]	Country Sold / Repaired [type4] = [USA,USA]	Vehicle Line Axes = F 650/750[FC], F150/250LD/CR CAB[F5], F250HD/350/450/550[F7]	Part Num Eng Base [type4] = [13480,%]	Customer Concern Code = DIFFICULT TO OPERATE SHIFT LEVER,CHANGE GEARS[P01, V47], DIFFICULT TO OPERATE SHIFT LEVER[P01, V48]						
Report Selection Criteria:	Report Name=Standard Claims List	Model Year=2003, 2002	Destination=DB	Cov Name=CLAIMS149	Order By=VIN	Maximum Claims=Unlimited	Logic=Corporate	Tie Claims=ALL	Claims With Comments=ALL	Requested Currency=USD	Reported Currency=USD	Requested Distance=Kilometers	Reported Distance=Miles	Descriptions=Yes	Default Claims (no Date Filters)=Up to current cutoff date

MDL_YR	VIN_CD	LBR_COST	VEH_LINE_CD	MKT_DERIV_CD	BOD_CAB_STYL	VEH_SERIES_CD	DRIVE_CD	ENG_CD	TRANS_CD	PLANT_CD	PRODN_DT	WRTY_START_DT	WCC_CD	PART_NUM_CAUS_PREF	PART_NUM_CAUS_BASE	PART_NUM_CAUS_SUFF	CUST_CONC_CD	COND_CD	RPR_DT	TIS_WSO	MILGE
2002	1FTRX?HW?2EA00087	82.48	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/DS	A1	16-Jul-01	3-Oct-01	7V01	F07Z		13480	AA	P01	42	25-Jun-02	9	3366
2002	1FTRW31F?2EA16086	44.82	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	16-Jul-01	6-Mar-02	7V01	*		13480	*	P01	X2	4-Oct-01	0	11
2002	1FTRX?1P42EA22128	43.82	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/DS	A1	18-Jul-01	13-Oct-01	7V01	F07Z		13480	AA	P01	48	10-Jan-03	21	25053
2002	1FTRX?1F02EA19178	16.88	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/DS	A1	18-Jul-01	28-Oct-01	7V01	F07Z		13480	AA	P01	28	20-Dec-01	2	3305
2002	1FTRW31F02EA?1887	40.72	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	18-Jul-01	5-Oct-01	7V01	F07Z		13480	AA	P01	28	18-Feb-03	17	20458
2002	1FTRW31P12EA09128	21.8	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	19-Jul-01	14-Dec-01	7V01	F07Z		13480	AA	P01	42	10-Jan-03	14	32806
2002	1FT?F31F02EA16523	48.21	T/F7	T/F	T/BS	T/CD	T/E	T/DS	T/DS	A1	19-Jul-01	10-Oct-01	7V01	F07Z		13480	AA	P01	42	22-Oct-02	13	25457
2002	1FTRW?W72EA0?880	84.1	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	24-Jul-01	14-Sep-01	7V01	*		13480	*	P01	X2	11-Jul-02	11	16825
2002	1FTRX?1F32EA?0178	38.7	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	25-Jul-01	10-Jul-02	7V01	F07Z		13480	AA	P01	42	22-Nov-02	5	11408
2002	1FTRX18L?2A02526	18.82	T/F5	T/F	T/BD	T/AM	T/5	T/VZ	T/DU	AR	30-Jul-01	18-Jan-02	7V01	F07Z		13480	AA	P01	28	4-Mar-02	2	4183
2002	1FTRX?1F02EA20887	17.1	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	31-Jul-01	19-Oct-01	7V01	F07Z		13480	AA	P01	42	4-Feb-03	16	32842
2002	1FTRX21F02EA11832	28.44	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	31-Jul-01	2-Nov-01	7V01	F07Z		13480	AA	P01	14	25-Feb-02	4	13800
2002	1FTRW21F72EA0?808	39.76	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	31-Jul-01	1-Oct-01	7V01	F07Z		13480	AA	P01	42	8-Dec-01	3	4676
2002	1FTRW21W?2EA05772	28.1	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	2-Aug-01	17-Sep-01	7V01	*		13480	*	P01	28	28-Jan-03	17	36587
2002	1FTRF21L?2EA?8887	101.2	T/F7	T/F	T/BS	T/BD	T/E	T/VZ	T/DE	A1	2-Aug-01	28-Nov-01	7S22	2C7Z	14A005	AA	P01	28	18-Jul-02	9	11885
2002	1FT?W?W72EA21881	48.15	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	3-Aug-01	31-Aug-01	7V01	*		13480	*	P01	28	12-Jun-02	10	18428
2002	1FTRX21L02EA08800	18.82	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1	3-Aug-01	3-Oct-01	7V01	F07Z		13480	AA	P01	42	18-Mar-03	18	21253
2002	1FTRW22L?2EA27480	33.28	T/F7	T/F	T/BC	T/BD	T/E	T/VZ	T/DE	A1	6-Aug-01	17-Nov-01	7V01	F07Z		13480	AA	P01	28	8-Jan-02	7	12831
2002	1FTRX21F02EA33089	18.38	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	8-Aug-01	16-Aug-02	7V01	F07Z		13480	AA	P01	1	20-Dec-02	6	18814
2002	1FTRW32F42EA?6851	17.82	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	12-Aug-01	7-Dec-01	7V01	F07Z		13480	AA	P01	42	20-Sep-02	10	28888
2002	1FTRW2?F?2EA13823	18.81	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	14-Aug-01	30-Nov-01	7V01	F07Z		13480	AA	P01	42	28-Dec-01	2	4783
2002	1FTRF21L?2EA?8887	68.1	T/F7	T/F	T/BS	T/BD	T/E	T/VZ	T/DE	A1	17-Aug-01	1-Oct-01	7V01	*		13480	*	P01	28	1-Apr-03	18	23388
2002	1FTRW?2F02EA?1821	17.78	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	28-Aug-01	22-Sep-01	7V01	F07Z		13480	AA	P01	28	13-Jun-02	9	4744
2002	1FTRW31F02EA?5032	167.88	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	28-Aug-01	14-Sep-01	5T06	*		7328	*	P51	41	7-Jan-03	17	24123
2002	1FTRX18L4?NA18184	18.81	T/F5	T/F	T/BD	T/AM	T/5	T/VZ	T/DU	AR	28-Aug-01	23-Oct-01	7V01	F07Z		13480	AA	P01	42	27-Feb-02	5	8930
2002	1FTRP17252NA18617	69.14	T/F6	T/F	T/BS	T/AM	T/5	T/LY	T/DU	AR	30-Aug-01	8-Oct-01	7V01	F07Z		13480	AA	P01	28	7-Jun-02	4	7110
2002	1FTRW08L?2KA11327	144.4	T/F5	T/F	T/BC	T/AM	T/5	T/VZ	T/DU	AJ	31-Aug-01	25-Feb-02	8R03	F2DZ	32718	A	P01	42	17-Jul-02	5	8848
2002	1FTRX21F72EA?7800	86.44	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	31-Aug-01	18-Dec-01	8R03	F2DZ	32718	A	P01	42	3-Sep-02	8	21085
2002	1FTRX21L02EA?8874	80.17	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1	3-Sep-01	14-Feb-02	7S02	*		14401	*	P01	1	6-Jan-03	11	28307
2002	1FTRX18L?2NA?2842	142.34	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	4-Sep-01	18-Sep-01	7V01	F07Z		13480	AA	P01	28	4-Mar-03	18	28864
2002	1FTRW31F02EA?6572	24.21	T/F7	T/F	T/BC	T/CD	T/5	T/DS	T/DS	A1	4-Sep-01	14-Sep-01	7V01	F07Z		13480	AA	P01	42	25-Feb-03	18	28094
2002	1FTRX17W?2NA22488	83.47	T/F6	T/F	T/BD	T/AM	T/5	T/AN	T/DU	AR	6-Sep-01	5-Oct-01	7V01	F07Z		13480	AA	P01	42	21-Apr-03	18	3875
2002	1FTRF21F32EA?3800	18.1	T/F7	T/F	T/BS	T/BD	T/E	T/DS	T/DS	A1	6-Sep-01	25-Oct-01	7V01	*		13480	*	P01	1	31-Mar-03	18	35808
2002	1FTRX18L?2KA?3815	62.84	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AJ	6-Sep-01	8-Apr-02	7V01	*		13480	*	P01	48	9-May-02	2	183
2002	1FTRW08L?2KA21858	27.6	T/F6	T/F	T/BC	T/AM	T/5	T/VZ	T/DU	AJ	10-Sep-01	8-Oct-01	7V01	*		13480	*	P01	33	10-Jan-03	16	28883
2002	1FTRX21L?2EA70178	28.7	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1	20-Sep-01	4-Oct-01	7V01	*		13480	*	P01	42	10-Feb-03	17	18188
2002	1FTRW08L72KA54808	23.29	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	21-Sep-01	8-Oct-01	7V01	F07Z		13480	AA	P01	41	25-Feb-03	17	28110
2002	1FTRW08L?2KA47281	18.82	T/F5	T/F	T/BC	T/AM	T/5	T/VZ	T/DU	AJ	21-Sep-01	3-Oct-01	7V01	F07Z		13480	AA	P01	41	12-Aug-02	11	18322
2002	1FTRW07W?2KA41170	303.12	T/F6	T/F	T/BC	T/AM	T/5	T/AS	T/DU	AJ	21-Sep-01	15-Feb-02	7V01	F07Z		13480	AA	P01	28	13-Aug-02	6	18880
2002	1FTSF31S42EA73841	15.88	T/F7	T/F	T/BS	T/CD	T/E	T/WA	T/DE	A1	24-Sep-01	1-Nov-01	7V01	F07Z		13480	AA	P01	42	28-Jul-02	8	22887
2002	1FTRX18L22NA38048	21.76	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	24-Sep-01	11-Oct-01	7V01	F07Z		13480	AA	P01	42	25-Mar-03	18	18883
2002	1FTRW08L?2KA31730	40.14	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	24-Sep-01	3-Oct-01	7V01	F07Z		13480	AA	P01	48	18-Jun-02	9	13318
2002	1FTRW08L?2KA41880	28.21	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	24-Sep-01	27-Dec-01	7V01	F07Z		13480	AA	P01	42	8-Aug-02	6	8738
2002	1FTRW21F02EA?8008	314.82	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	26-Sep-01	27-Oct-01	7S02	2C7Z	14A005	AA	P01	28	10-Jul-02	8	27218
2002	1FTRP172X2NA?4887	80.88	T/F6	T/F	T/BS	T/AM	T/5	T/LY	T/DU	AR	28-Sep-01	8-Oct-01	7V01	F07Z		13480	AA	P01	28	28-Apr-03	18	28018
2002	3FTRW31P32MA07407	80.38	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A2	27-Sep-01	28-Oct-01	8R03	F2DZ	32718	A	P01	42	30-Jul-02	10	18228
2002	3FTRW?2P?2MA07718	81.8	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A2	28-Sep-01	28-Oct-01	7S22	F2LZ	14505	M	P01	46	21-Jan-02	3	4808
2002	3FTRW?2P12MA07302	80.08	T/F7	T/F	T/BC	T/BD	T/5	T/DS	T/DS	A2	28-Sep-01	28-Oct-01	7V01	F07Z		13480	AA	P01	42	18-Jan-02	8	14239
2002	1FTRW21F?2EA?0208	84.48	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	30-Sep-01	25-Nov-01	7V01	F07Z		13480	AA	P01	42	17-Apr-03	17	35258
2002	1FTRW08L32KA73020	80.88	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	1-Oct-01	18-Oct-01	7V01	*		13480	*	P01	28	3-Nov-01	1	481
2002	1FTRX21S?2EA0?887	38.8	T/F7	T/F	T/BD	T/BD	T/E	T/WA	T/DE	A1	1-Oct-01	28-Nov-01	7V01	F07Z		13480	AA	P01	28	28-Apr-02	6	8102
2002	1FTRW21S02EA78281	87.44	T/F7	T/F	T/BC	T/BD	T/E	T/WA	T/DE	A1	1-Oct-01	18-Oct-01	7V01	F07Z		13480	AA	P01	28	7-Jun-02	8	17118
2002	1FTRW21S02EA74539	88.41	T/F7	T/F	T/BC	T/BD	T/E	T/WA	T/DE	A1	3-Oct-01	28-Oct-01	7V01	F07Z		13480	AA	P01	42	2-Apr-02	6	8480
2002	1FTRW07?82KA?8888	118.8	T/F6	T/F	T/BC	T/AM	T/5	T/AS	T/DU	AJ	3-Oct-01	25-Oct-01	7V01	*		13480	*	P01	28	13-Nov-01	1	1253
2002	1FTRW08L?2KA87357	22.41	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	4-Oct-01	7-Nov-01	7V01	F07Z		13480	AA	P01	42	11-Jan-03	18	31080
2002	1FTRW08L?2KA88818	126.81	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	4-Oct-01	21-Dec-01	8R03	F2DZ	32718	A	P01	42	28-Jan-03	14	20074
2002	1FTRW08L?2KA80045	18.2	T/F5	T/F	T/BC	T/AM	T/5	T/VZ	T/DU	AJ	4-Oct-01	18-Dec-01	7V01	F07Z		13480	AA	P01	42	27-Dec-02	13	17814

2002	1FDAF[illegible]	211.60	T/F7	T/F	T/A0	T/E0	T/B	T/WA	TIDE	A1	4-Oct-01	18-Feb-02	7V01	*		14280	*	P01	1	11-Feb-02	0	5
2002	1FTRX07W0XKA79221	21.44	T/F5	T/F	T/BD	T/AM	T/B	T/WV	TIOU	AJ	8-Oct-01	30-Oct-01	7V01	F87Z		13480	AA	P01	42	3-Oct-02	12	26144
2002	1FTRW08LX3KA[illegible]	19.27	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	5-Oct-01	10-Dec-01	7V01	F87Z		13480	AA	P01	42	10-Jun-03	10	23040
2002	1FTRW08LX[illegible]	20.95	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	5-Oct-01	18-Dec-01	7V01	*		13480	*	P01	XE	21-May-03	18	26145
2002	1FTNX21L[illegible]	35.1	T/F7	T/F	T/BD	T/BD	T/E	T/WZ	TIDE	A1	8-Oct-01	26-Oct-01	7V01	F87Z		13480	AA	P01	28	20-Aug-02	10	14129
2002	1FTSX31F[illegible]	60	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/DB	A1	7-Oct-01	9-Nov-01	7V01	F87Z		13480	AA	P01	42	18-Feb-03	15	29979
2002	1FTRW08L[illegible]	37.2	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	8-Oct-01	29-Oct-01	7V01	F87Z		13480	AA	P01	46	2-Jan-03	16	24780
2002	1FTRW08L72KA74012	14.46	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	10-Oct-01	23-Nov-01	7V01	F87Z		13480	AA	P01	28	10-Apr-02	5	10194
2002	1FTRX17202KA82741	44	T/F5	T/F	T/BD	T/AM	T/B	T/LY	TIOU	AJ	12-Oct-01	28-Feb-02	7V01	*		13480	*	P01	7	1-Oct-02	6	4461
2002	1FTRX17W12KA[illegible]	18.11	T/F5	T/F	T/BD	T/AM	T/B	T/WN	TIOU	AJ	16-Oct-01	2-Jan-02	7V01	F87Z		13480	AA	P01	42	18-Mar-02	3	1322
2002	1FTRX18L12KA79872	21.69	T/F5	T/F	T/BD	T/AM	T/E	T/WZ	TIOU	AJ	18-Oct-01	28-Dec-01	7V01	F87Z		13480	AA	P01	36	5-Nov-01	0	12
2002	3FTSW31F12MA12804	117.30	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DB	A2	19-Oct-01	9-Nov-01	7V01	F87Z		13480	AA	P01	42	1-May-02	8	10140
2002	1FTRW08LX[illegible]	19.80	T/F5	T/F	T/BC	T/AM	T/B	T/WZ	TIOU	AJ	22-Oct-01	7-Nov-01	7V01	F87Z		13480	AA	P01	42	11-Sep-02	11	11580
2002	1FTRW08LX3KA[illegible]	44.71	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	22-Oct-01	18-Dec-01	7V01	F87Z		13480	AA	P01	1	18-Mar-02	3	7825
2002	1FTRW08L[illegible]	40.73	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	22-Oct-01	13-Nov-01	7V01	F87Z		13480	AA	P01	36	7-Mar-03	16	21030
2002	1FTSW31F12E[illegible]	34	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DB	A1	23-Oct-01	19-Nov-01	7V01	F87Z		13480	AA	P01	38	7-Aug-02	8	[illegible]
2002	1FTNW21F[illegible]	118.18	T/F7	T/F	T/BC	T/BD	T/E	T/DB	T/DB	A1	24-Oct-01	4-Dec-01	7V01	F87Z		13480	AA	P01	42	10-Apr-02	6	13134
2002	1FTNX21L82E[illegible]	52.14	T/F7	T/F	T/BD	T/BD	T/E	T/WZ	TIDE	A1	27-Oct-01	19-Nov-01	7V01	F87Z		13480	AA	P01	28	27-Mar-03	17	16008
2002	1FTNW21[illegible]	31.3	T/F7	T/F	T/BC	T/BD	T/E	T/WA	TIDE	A1	27-Oct-01	5-Nov-01	7V01	F87Z		13480	AA	P01	42	11-May-02	7	15340
2002	1FTNW21[illegible]	23.4	T/F7	T/F	T/BC	T/BD	T/E	T/WA	TIDE	A1	31-Oct-01	8-Mar-02	7V01	F87Z		13480	AA	P01	42	24-Jul-02	5	10903
2002	1FTRW08L[illegible]	88.84	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	6-Nov-01	5-Dec-01	7V01	F87Z		13480	AA	P01	1	21-Feb-03	16	17106
2002	1FTSX31F42E[illegible]	105.5	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/DB	A1	7-Nov-01	3-Jan-02	7V01	F87Z		13480	AA	P01	48	18-Dec-02	7	10846
2002	1FTRX18[illegible]	23.84	T/F5	T/F	T/BD	T/AM	T/E	T/WN	TIOU	AR	7-Nov-01	14-May-02	7V01	F87Z		13480	AA	P01	28	22-Oct-02	6	4807
2002	1FTSX31[illegible]	67.5	T/F7	T/F	T/BD	T/BD	T/E	T/WA	TIDE	A1	7-Nov-01	4-Dec-01	7V01	F87Z		13480	AA	P01	42	18-Dec-01	1	516
2002	1FTNF2[illegible]	10.80	T/F7	T/F	T/BB	T/BD	T/E	T/WZ	TIDE	A1	7-Nov-01	22-Nov-01	7C01	*	1F83#		*	P01	1	11-Nov-02	12	28438
2002	2FTRX18L02CA[illegible]	374.60	T/F8	T/F	T/BD	T/AM	T/E	T/VZ	TIOU	A4	8-Nov-01	30-Dec-01	[illegible]	F20Z	32719		A	P01	42	10-Jul-02	7	12630
2002	1FTRW08L42K[illegible]	31.01	T/F8	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	14-Nov-01	6-Dec-01	7V01	*		13480	*	P01	XI	21-Jan-02	2	1008
2002	1FTNF20L[illegible]	67.90	T/F7	T/F	T/BA	T/BD	T/B	T/WZ	TIDE	A1	15-Nov-01	12-Mar-02	7V01	F87Z		13480	AA	P01	42	13-Sep-02	7	10746
2002	1FTNX21F72E[illegible]21811	77.80	T/F7	T/F	T/BD	T/BD	T/E	T/DB	T/DB	A1	18-Nov-01	31-Dec-01	7V01	F87Z		13480	AA	P01	42	10-Jul-02	7	32273
2002	1FTNW21[illegible]	34.50	T/F7	T/F	T/BC	T/BD	T/E	T/WA	TIDE	A1	21-Nov-01	4-Dec-01	7V01	F87Z		13480	AA	P01	42	13-Jan-03	14	13247
2002	1FTRW08L[illegible]	37.5	T/F5	T/F	T/BD	T/AM	T/E	T/WZ	TIOU	AJ	27-Nov-01	12-Dec-01	7V01	F87Z		13480	AA	P01	42	10-Jan-03	13	24719
2002	2FTRX18L02CA09120	11.01	T/F8	T/F	T/BD	T/AM	T/E	T/WZ	TIOU	A4	13-Dec-01	30-Jan-02	7V01	*		13480	*	P01	42	11-Feb-02	1	663
2002	1FTRW08L[illegible]	68.25	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	13-Dec-01	13-May-02	7V01	F87Z		13480	AA	P01	28	28-Mar-02	7	16756
2002	1FTWW33F[illegible]	187.3	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/DB	A1	14-Dec-01	3-Jan-02	[illegible]	F20Z	32719		A	P01	42	18-Dec-02	12	26144
2002	1FTNW31[illegible]72767	283.11	T/F7	T/F	T/BC	T/CD	T/B	T/WA	TIDE	A1	17-Dec-01	31-Dec-01	[illegible]	F20Z	32719		A	P01	42	11-Mar-03	18	19532
2002	1FTSW31S02E[illegible]	36.44	T/F7	T/F	T/BC	T/CD	T/E	T/WA	TIDE	A1	17-Dec-01	28-Dec-01	7V01	F87Z		13480	AA	P01	41	8-May-02	8	4085
2002	1FTSX31F42E[illegible]302	67.24	T/F7	T/F	T/BD	T/BD	T/E	T/DB	T/DB	A1	21-Dec-01	10-Jan-02	7V01	F87Z		13480	AA	P01	28	7-May-03	16	15281
2002	1FTNX21F[illegible]	114.08	T/F7	T/F	T/BD	T/BD	T/E	T/DB	T/DB	A1	31-Dec-01	16-Jan-02	7V01	F87Z		13480	AA	P01	42	29-Jul-02	7	8865
2002	1FTNW31F[illegible]2252	117.8	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DB	A1	4-Jan-02	22-Jan-02	7V01	F87Z		13480	AA	P01	42	14-Aug-02	7	16223
2002	1FTRX18L[illegible]799	189.7	T/F6	T/F	T/BD	T/AM	T/E	T/WZ	TIOU	AR	17-Jan-02	18-Apr-02	[illegible]	F20Z	32719		A	P01	42	8-Jul-02	3	8846
2002	1FTSW31F[illegible]	198.14	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DB	A1	24-Jan-02	1-Mar-02	[illegible]	F20Z	32719		A	P01	1	16-Sep-02	7	16067
2002	1FTNW21F12E[illegible]	83.8	T/F7	T/F	T/BC	T/BD	T/E	T/DB	T/DB	A1	24-Jan-02	18-Mar-02	7V01	F87Z		13480	AA	P01	42	3-Mar-03	12	27878
2002	1FTRX18L[illegible]2872	54.4	T/F5	T/F	T/BD	T/AM	T/E	T/WZ	TIOU	AR	8-Feb-02	22-Feb-02	7V01	F87Z		13480	AA	P01	42	23-Aug-02	7	5974
2002	1FTRW08L[illegible]	87.81	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	26-Feb-02	14-Jun-02	7V01	F87Z		13480	AA	P01	42	29-Oct-02	8	9160
2002	1FTRW08L[illegible]42725	57.81	T/F5	T/F	T/BC	T/AM	T/E	T/WZ	TIOU	AJ	25-Feb-02	14-Jun-02	7V01	F87Z		13480	AA	P01	42	24-Dec-02	7	12059
2002	1FTWW33F12EC[illegible]	89.01	T/F7	T/F	T/BC	T/CD	T/B	T/DB	T/DB	A1	26-Feb-02	18-Mar-02	7V01	F87Z		13480	AA	P01	42	12-Mar-02	0	5
2002	1FTWW33F12EC[illegible]	66.6	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/DB	A1	26-Feb-02	28-Mar-02	7V01	F87Z		13480	AA	P01	42	26-Dec-02	10	16295
2002	1FTRW07L[illegible]	26.44	T/F5	T/F	T/BC	T/AM	T/B	T/WZ	TIOU	AJ	8-Mar-02	18-Apr-02	7V01	F87Z		13480	AA	P01	42	8-Aug-02	4	22094
2002	1FTRW07[illegible]58416	20.63	T/F6	T/F	T/BC	T/AM	T/B	T/WP	T/07	AJ	8-Mar-02	14-Dec-02	7V01	F87Z		13480	AA	P01	42	7-Oct-02	8	21
2002	1FTNW21L[illegible]	37	T/F7	T/F	T/BC	T/BD	T/E	T/WZ	TIDE	A1	11-Mar-02	19-Mar-02	7V01	*		13480	*	P01	28	27-Sep-02	7	10659
2002	1FTNW21L82EC[illegible]	61.69	T/F7	T/F	T/BC	T/BD	T/E	T/WZ	TIDE	A1	11-Mar-02	1-Apr-02	7V01	F87Z		13480	AA	P01	42	16-Jul-02	4	4062
2002	1FTNW21L82EC38279	34.82	T/F7	T/F	T/BC	T/BD	T/E	T/WZ	TIDE	A1	11-Mar-02	20-Mar-02	7V01	F87Z		13480	AA	P01	42	3-Oct-02	7	11488
2002	1FTNW21F[illegible]	47.28	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DB	A1	12-Mar-02	6-May-02	7V01	F87Z		13480	AA	P01	28	2-Jun-03	7	15771
2002	1FTRW07L[illegible]	37.71	T/F5	T/F	T/BC	T/AM	T/B	T/WZ	TIOU	AJ	20-Mar-02	4-May-02	7V01	F87Z		13480	AA	P01	42	6-Mar-03	11	9016
2002	1FTWW33F[illegible]	18.58	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/DB	A1	21-Mar-02	23-Apr-02	7V01	F87Z		13480	AA	P01	28	10-Jun-02	2	4289
2002	1FTWW33F12EC[illegible]	17.24	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/DB	A1	22-Mar-02	28-Mar-02	7V01	F87Z		13480	AA	P01	42	8-Nov-02	8	24792
2002	1FTRW08L[illegible]	14.98	T/F5	T/F	T/BC	T/AM	T/B	T/WZ	TIOU	AJ	22-Mar-02	29-Mar-02	7V01	F87Z		13480	AA	P01	28	19-Nov-02	8	9630
2002	1FTZF07[illegible]	55.1	T/F6	T/F	T/BB	T/AM	T/B	T/WP	T/07	A4	25-Mar-02	1-Jul-02	7V01	F87Z		13480	AA	P01	42	5-Jun-03	12	11058
2002	2FTRX17W[illegible]	19.58	T/F6	T/F	T/BD	T/AM	T/B	T/WN	TIOU	A4	11-Apr-02	10-Jun-02	7V01	F87Z		13480	AA	P01	38	26-Dec-02	7	8741
2002	1FTNX21L[illegible]	22.5	T/F7	T/F	T/BD	T/BD	T/E	T/WZ	TIDE	A1	16-Apr-02	8-Jul-02	7V01	F87Z		13480	AA	P01	41	6-Aug-02	1	1683
2002	1FTRX17W[illegible]	386.5	T/F5	T/F	T/BD	T/AM	T/B	T/WN	TIOU	AR	23-Apr-02	29-Jul-02	7V01	F87Z		13480	AA	P01	42	17-Jan-03	6	11212
2002	1FTSX31L42E[illegible]	52.78	T/F7	T/F	T/BD	T/CD	T/E	T/WZ	TIDE	A1	27-Apr-02	25-Nov-02	7V01	*		13480	*	P01	42	12-Jun-03	7	9498

2002	1FTSX31L[illegible]	87.94	T/F7	T/F	T/BD	T/CD	T/E	T/VZ	T/D8	A1	27-Apr-02	28-Nov-02	7V01	F87Z		13480	AA	P01		42	23-Jan-03	8	[illegible]
2002	1FTRX17[illegible]	16.46	T/F8	T/F	T/BD	T/AM	T/E	T/LY	T/OU	AR	29-Apr-02	8-Jul-02	7V01	F87Z		13480	AA	P01		46	8-Aug-02	2	3813
2002	1FTNW21F[illegible]D06002	80.11	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	2-May-02	22-May-02	7V01	F87Z		13480	AA	P01	X1		8-Aug-02	3	7304
2002	1FTNW21[illegible]	10.5	T/F7	T/F	T/BC	T/BD	T/E	T/WA	T/D6	A1	4-May-02	13-Jun-02	7V01	F87Z		13480	AA	P01		46	28-Aug-02	3	[illegible]
2002	2FTRX08L[illegible]CA[illegible]73	84.24	T/F8	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	A4	10-May-02	27-Jul-02	7V01	F87Z		13480	AA	P01		20	28-Jul-02	1	137
2002	1FDAF57F[illegible]EC[illegible]4	180.78	T/F7	T/F	T/BD	T/EB	T/E	T/DS	T/D8	A1	15-May-02	3-Oct-02	7V01	F87Z		13480	AA	P01		42	12-Feb-03	5	3725
2002	1FTWW21F[illegible]	86.87	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	22-May-02	30-Jun-02	7V01	F87Z		13480	AA	P01		42	7-Jan-03	12	21430
2002	1FTRW08L[illegible]07	10	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	28-May-02	22-Jul-02	7V01	*		13480	*	P01		42	20-May-03	11	12071
2002	1FTNW21F12ED[illegible]	100.78	T/F7	T/F	T/BC	T/BD	T/E	T/D6	T/D8	A1	28-May-02	3-Sep-02	7V01	F87Z		13480	AA	P01		41	10-Sep-02	1	800
2002	1FTRW08L[illegible]41	53.32	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	29-May-02	11-Sep-02	7V01	F87Z		13480	AA	P01		42	28-Jul-02	0	23
2002	1FDW[illegible]71	21.45	T/F7	T/F	T/BD	T/CD	T/E	T/D8	T/D8	A1	30-May-02	14-Jun-02	7V01	F87Z		13480	AA	P01		28	26-Sep-02	4	7301
2002	1FTNW21F[illegible]	102.24	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	1-Jun-02	8-Jul-02	5R09	F2DZ	32719		A	P01		42	8-Jul-02	1	97
2002	1FTNS[illegible]22	18.82	T/F7	T/F	T/BD	T/CD	T/8	T/DS	T/D8	A1	2-Jun-02	25-Jun-02	7V01	F87Z		13480	AA	P01		42	14-Aug-02	2	4227
2002	1FTSW31F02ED[illegible]	22.30	T/F7	T/F	T/BC	T/CD	T/E	T/D8	T/D8	A1	3-Jun-02	28-Sep-02	7V01	F87Z		13480	AA	P01		42	17-Apr-03	7	[illegible]
2002	1FTSW31F[illegible]	48.20	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1	3-Jun-02	19-Jul-02	7V01	F87Z		13480	AA	P01		20	27-Nov-02	3	[illegible]
2002	1FTSW31F02ED[illegible]	18.15	T/F7	T/F	T/BC	T/CD	T/E	T/D8	T/D8	A1	3-Jun-02	14-Jun-02	7V01	F87Z		13480	AA	P01		42	21-Aug-02	3	4371
2002	1FTSF31[illegible]	68	T/F7	T/F	T/B8	T/CD	T/8	T/WA	T/DL	A1	3-Jun-02	10-Jun-02	7V01	F87Z		13480	AA	P01		42	30-Apr-03	11	4344
2002	2FTRX18W[illegible]CA[illegible]10	138.88	T/F8	T/F	T/BD	T/AM	T/E	T/VN	T/OU	A4	4-Jun-02	27-Jun-02	7V01	F87Z		13480	AA	P01		48	8-Dec-02	4	11050
2002	2FTRX[illegible]CA[illegible]76	22.76	T/F8	T/F	T/BD	T/AM	T/E	T/VM	T/OU	A4	4-Jun-02	20-Sep-02	7V01	F87Z		13480	AA	P01		42	10-Jul-02	0	7
2002	2FTRX18L[illegible]CA[illegible]7	18.30	T/F8	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	A4	4-Jun-02	1-Aug-02	7V01	F87Z		13480	AA	P01		42	19-Jul-02	0	11
2002	1FTSX21[illegible]ED[illegible]21	37.33	T/F7	T/F	T/BD	T/CD	T/8	T/WA	T/DE	A1	4-Jun-02	4-Jun-02	7V01	F87Z		13480	AA	P01	X1		20-Jan-03	6	135
2002	1FTNW21F[illegible]ED[illegible]	88.81	T/F7	T/F	T/BC	T/BD	T/E	T/D6	T/D8	A1	4-Jun-02	6-Sep-02	7V01	F87Z		13480	AA	P01		42	30-Oct-02	2	8072
2002	1FDX[illegible]ED[illegible]777	22.80	T/F7	T/F	T/BD	T/CD	T/E	T/VZ	T/DE	A1	4-Jun-02	8-Aug-02	7V01	*		13480	*	P01		41	27-Nov-02	4	5583
2002	1FTRX18L7[illegible]106	18.43	T/F8	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	AR	5-Jun-02	21-Jun-02	7V01	F87Z		13480	AA	P01		28	9-Sep-02	3	817
2002	1FTRW08L[illegible]35	18.82	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	6-Jun-02	18-Jul-02	7V01	*		13480	*	P01		42	12-Aug-02	1	1430
2002	1FTRX18L[illegible]43	114.81	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	AR	7-Jun-02	3-Sep-02	7V01	*		13480	*	P01		28	28-Jul-02	8	32
2002	1FTRX18W[illegible]011	54.20	T/F8	T/F	T/BD	T/AM	T/8	T/VN	T/OU	AR	8-Jun-02	16-Jul-02	7V01	F87Z		13480	AA	P01		42	22-Jul-02	1	277
2002	1FTRX17W[illegible]024	51.14	T/F5	T/F	T/BD	T/AM	T/8	T/VN	T/OU	AR	8-Jun-02	20-Jun-02	7V01	F87Z		13480	AA	P01		42	20-Jun-02	8	84
2002	1FTNW21F82ED[illegible]27	31.71	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	8-Jun-02	1-Aug-02	7V01	F87Z		13480	AA	P01		42	8-Jun-03	11	20184
2002	1FTSW31F[illegible]ED[illegible]70	90.9	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1	8-Jun-02	10-Aug-02	7V01	F87Z		13480	AA	P01		42	14-Aug-02	1	302
2002	1FTSW31FX2ED[illegible]129	58.21	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1	12-Jun-02	31-Jul-02	7V01	F87Z		13480	AA	P01		28	20-Jul-02	0	84
2002	1FTRX18L72[illegible]	16.6	T/F8	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	AR	12-Jun-02	5-Jul-02	7V01	F87Z		13480	AA	P01		28	18-Feb-03	6	11161
2002	1FTSX[illegible]ED[illegible]145	85.73	T/F7	T/F	T/BD	T/CD	T/E	T/D8	T/D8	A1	12-Jun-02	3-Sep-02	7V01	F87Z		13480	AA	P01		28	20-Jan-03	5	3830
2002	1FTNW21F82ED[illegible]03	87.15	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	13-Jun-02	28-Sep-02	7V01	F87Z		13480	AA	P01		28	2-Oct-02	1	352
2002	1FDW21F[illegible]ED[illegible]60	22.4	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D8	A1	13-Jun-02	21-Aug-02	7V01	F87Z		13480	AA	P01		42	1-Aug-02	0	208
2002	1FTRW08L2[illegible]012	84.08	T/F8	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	14-Jun-02	18-Oct-02	7V01	F87Z		13480	AA	P01		42	6-Aug-02	0	420
2002	1FTRW08L72KE14534	20.21	T/F8	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	17-Jun-02	28-Sep-02	7V01	F87Z		13480	AA	P01		1	18-Sep-02	0	18
2002	1FTRW07[illegible]373	31.8	T/F8	T/F	T/BC	T/AM	T/8	T/VS	T/OU	AJ	18-Jun-02	12-Oct-02	7V01	*		13480	*	P01		38	14-Apr-03	7	6817
2002	1FTNW21F[illegible]ED[illegible]17	74.88	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1	18-Jun-02	31-Aug-02	7V01	F87Z		13480	AA	P01		42	28-Jan-03	10	8788
2002	1FTPP18L[illegible]NC01173	48.35	T/F8	T/F	T/BB	T/AM	T/E	T/VZ	T/DE	AR	18-Jun-02	17-Jul-02	7V01	F87Z		13480	AA	P01		42	29-Aug-02	2	20282
2002	1FTSX21F[illegible]ED[illegible]05	18.8	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D6	A1	20-Jun-02	11-Jul-02	7V01	F87Z		13480	AA	P01		42	8-Jan-03	5	8851
2003	1FTNW21F[illegible]EA[illegible]16	31.68	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1	16-Jul-02	6-Dec-02	7V01	F87Z		13480	AA	P01		42	15-Aug-02	0	180
2002	1FTRX17W[illegible]E37[illegible]	22.33	T/F6	T/F	T/BD	T/AM	T/8	T/VM	T/OU	AJ	17-Jul-02	3-Aug-02	7V01	F87Z		13480	AA	P01		38	28-May-03	10	8834
2002	1FTRW08L[illegible]KE[illegible]	18	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	17-Jul-02	28-Aug-02	7V01	F87Z		13480	AA	P01		38	28-Aug-02	0	21
2003	1FTRW08LX2KE27[illegible]22	22.85	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	18-Jul-02	28-Jul-02	7V01	F87Z		13480	AA	P01		42	12-Mar-03	6	11718
2003	1FTSW31F[illegible]71	83.88	T/F7	T/F	T/BC	T/CD	T/E	T/D8	T/D8	A1	18-Jul-02	18-Oct-02	7V01	*		13480	*	P01		42	21-Nov-02	2	1927
2003	1FTNW21F[illegible]EA02034	28.86	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	18-Jul-02	14-Dec-02	7V01	F87Z		13480	AA	P01		28	3-Sep-02	0	57
2002	1FTRW08L72KE25[illegible]	69.43	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/OU	AJ	19-Jul-02	31-Oct-02	7V01	F87Z		13480	AA	P01		41	21-Oct-02	0	124
2002	1FTRW07[illegible]	47.87	T/F6	T/F	T/BC	T/AM	T/8	T/VS	T/OU	AJ	22-Jul-02	12-Oct-02	7V01	F87Z		13480	AA	P01		28	20-Mar-03	6	8813
2003	1FTWW30F[illegible]EA11570	47.5	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1	22-Jul-02	8-Sep-02	7V01	F87Z		13480	AA	P01		42	8-Sep-02	0	27
2003	1FTSW31F[illegible]EA1[illegible]	41.8	T/F7	T/F	T/BC	T/CD	T/E	T/D8	T/D8	A1	22-Jul-02	11-Oct-02	7V01	F87Z		13480	AA	P01		42	14-Oct-02	1	213
2003	1FTNX21F[illegible]EA10616	68.87	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DE	A1	28-Jul-02	9-Oct-02	7V01	F87Z		13480	AA	P01		42	16-Apr-03	7	8868
2003	1FTNW21F[illegible]EA02772	13.87	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D6	A1	22-Jul-02	30-Sep-02	7V01	F87Z		13480	AA	P01		42	20-Mar-03	6	6113
2003	1FTNW21F[illegible]EA1[illegible]7	68.84	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1	22-Jul-02	8-Sep-02	7V01	F87Z		13480	AA	P01		41	8-Nov-02	2	3007
2002	1FTRX07W[illegible]	28.34	T/F5	T/F	T/BD	T/AM	T/8	T/VN	T/OU	AR	22-Jul-02	9-Oct-02	7V01	F87Z		13480	AA	P01		42	22-May-03	8	20878
2002	1FTRW07L72KE31461	88.8	T/F6	T/F	T/BC	T/AM	T/8	T/VZ	T/OU	AJ	22-Jul-02	27-Aug-02	7V01	*		13480	*	P01		12	31-Jul-02	0	3
2002	1FTRW07[illegible]547	27.85	T/F5	T/F	T/BC	T/AM	T/8	T/VS	T/OU	AJ	22-Jul-02	12-Dec-02	7V01	*		13480	*	P01	X2		22-Aug-02	0	210
2003	1FTSW31F43EA[illegible]377	72.88	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1	22-Jul-02	7-Jan-03	7V01	F87Z		13480	AA	P01		42	22-May-03	8	9836
2003	1FTSF31L[illegible]EA[illegible]7	48.5	T/F7	T/F	T/BB	T/CD	T/E	T/VZ	T/DE	A1	23-Jul-02	28-Sep-02	7V01	F87Z		13480	AA	P01		42	5-Aug-02	0	12
2003	1FTNW21S13EA[illegible]63	23.7	T/F7	T/F	T/BC	T/BD	T/E	T/WA	T/DE	A1	23-Jul-02	12-Dec-02	7V01	F87Z		13480	AA	P01		42	10-Dec-02	0	18
2003	1FTNW21FX3EA07273	41.30	T/F7	T/F	T/BC	T/BD	T/E	T/D8	T/D8	A1	23-Jul-02	10-Dec-02	7V01	F87Z		13480	AA	P01		42	18-Jan-03	2	3118
2002	2FTRX18LX2CA[illegible]32	32.13	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/OU	A4	28-Jul-02	11-Nov-02	7V01	F87Z		13480	AA	P01		48	6-Sep-02	0	38

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2002	2FTRX18L62CA[illegible]	14.[illegible]	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	25-Jul-02	30-Sep-02	TV01	F87Z		13460	AA	P01	42	20-Feb-03	[illegible]	[illegible]
2002	1FTRW[illegible]	19.82	T/F6	T/F	T/BC	T/AM	T/E	T/VS	T/DU	AJ	26-Jul-02	9-Aug-02	TV01	F87Z		13460	AA	P01	28	14-Aug-02	1	179
2002	1FTRW[illegible]	72.[illegible]	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	29-Jul-02	23-Aug-02	TV01	F87Z		13460	AA	P01	28	3-Oct-02	2	3334
2002	2FTR[illegible]CA[illegible]747	57.17	T/F6	T/F	T/BD	T/AM	T/B	T/LY	T/DU	A4	30-Jul-02	14-Sep-02	TV01	F87Z		13460	AA	P01	42	29-Nov-02	3	2612
2003	1FTNX21P[illegible]	[illegible]	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1	30-Jul-02	19-Aug-02	TV01	F87Z		13460	AA	P01	42	8-Nov-02	3	4163
2003	2FTRX18L43CA[illegible]	123.04	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	31-Jul-02	10-Sep-02	TV01	F87Z		13460	AA	P01	42	19-Dec-02	4	[illegible]
2002	2FTR[illegible]CA[illegible]012	107.15	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	1-Aug-02	7-Sep-02	[illegible]	F2DZ	32719		A	P01	42	4-Oct-02	1	2029
2002	1FTRW[illegible]E42812	67.1	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	2-Aug-02	1-Sep-02	TV01	F87Z		13460	AA	P01	28	8-May-03	9	11745
2002	1FTRW07L[illegible]	21	T/F6	T/F	T/BC	T/AM	T/B	T/VZ	T/DU	AJ	6-Aug-02	6-Aug-02	TV01	F87Z		13460	AA	P01	28	5-Sep-02	2	2019
2003	1FTRX18L[illegible]A07492	16.6	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	5-Aug-02	28-Dec-02	TV01	F87Z		13460	AA	P01	42	17-Mar-03	3	2296
2003	1FTNX[illegible]	17.52	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1	5-Aug-02	22-Aug-02	TV01	F87Z		13460	AA	P01	42	22-Nov-02	4	5872
2002	2FTRX17242CB00694	66.15	T/F6	T/F	T/BD	T/AM	T/B	T/LY	T/DU	A4	6-Aug-02	3-Oct-02	TV01	F87Z		13460	AA	P01	28	18-Apr-03	7	[illegible]
2002	1FTRW[illegible]E43248	23.12	T/F5	T/F	T/BC	T/AM	T/B	T/VS	T/DU	AJ	6-Aug-02	10-Sep-02	TV01	F87Z		13460	AA	P01	42	25-Mar-03	7	3610
2002	1FTRW[illegible]30044	45.38	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	7-Aug-02	24-Sep-02	TV01	F87Z		13460	AA	P01	42	12-Nov-02	2	2071
2002	1FTRW[illegible]	23.[illegible]	T/F6	T/F	T/BC	T/AM	T/B	T/VS	T/DU	AJ	7-Aug-02	20-Sep-02	TV01	F87Z		13460	AA	P01	42	15-Aug-02	0	5
2003	1FTWW32F43EA[illegible]	20.81	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	7-Aug-02	15-Aug-02	TV01	F87Z		13460	AA	P01	41	22-Aug-02	1	309
2002	1FTRW[illegible]	22.[illegible]	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	8-Aug-02	22-Nov-02	TV01	F87Z		13460	AA	P01	42	13-Feb-03	3	2760
2002	1FTRW[illegible]	181.79	T/F6	T/F	T/BC	T/AM	T/E	T/VS	T/DU	AJ	8-Aug-02	24-Oct-02	[illegible]	F2DZ	32719		A	P01	42	9-Oct-0?	0	[illegible]
2002	1FTRW07LX2[illegible]	58.9	T/F5	T/F	T/BC	T/AM	T/B	T/VZ	T/DU	AJ	8-Aug-02	6-Sep-02	TV01	F87Z		13460	AA	P01	28	18-Mar-03	7	11[illegible]
2003	1FTRW[illegible]	18.87	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	8-Aug-02	16-Sep-02	TV01	F87Z		13460	AA	P01	42	14-May-03	8	17023
2003	1FTRF18L[illegible]	60.5	T/F6	T/F	T/BB	T/AM	T/E	T/V2	T/DU	AR	8-Aug-02	22-Feb-03	TV01	*		13460	*	P01	42	20-May-03	3	10032
2003	2FTRX08L[illegible]CA[illegible]	54.77	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	12-Aug-02	27-Aug-02	TV01	F87Z		13460	AA	P01	42	7-Apr-03	8	[illegible]
2003	2FTR[illegible]CA[illegible]	54.77	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	12-Aug-02	27-Aug-02	TV01	F87Z		13460	AA	P01	42	19-Jan-03	10	21342
2003	1FTRW08L[illegible]A13365	83.[illegible]	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	13-Aug-02	23-Aug-02	TV01	*		13460	*	P01	35	28-Aug-02	1	327
2003	2FTR[illegible]	124.6	T/F6	T/F	T/BD	T/AM	T/B	T/LY	T/DU	A4	13-Aug-02	6-Oct-02	[illegible]	F2DZ	32719		A	P01	20	25-Apr-03	7	6876
2003	1FTRW08L[illegible]A14168	43.84	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	14-Aug-02	30-Aug-02	TV01	F87Z		13460	AA	P01	42	5-May-03	9	16745
2003	1FTNX[illegible]A08474	43.2	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1	14-Aug-02	1-Oct-02	TV01	F87Z		13460	AA	P01	42	2-Oct-02	1	1417
2003	1FTRX[illegible]A14360	58.79	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AJ	15-Aug-02	27-Nov-02	TV01	*		13460	*	P01	42	26-Feb-03	4	[illegible]
2003	1FTRW08L[illegible]A35047	18.07	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	15-Aug-02	20-Aug-02	TV01	F87Z		13460	AA	P01	42	21-Aug-02	0	6
2003	1FTRX08L[illegible]	22.4	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AJ	15-Aug-02	13-Mar-03	TV01	*		13460	*	P01	38	31-Mar-03	1	612
2003	1FTRW08L[illegible]	16.65	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	16-Aug-02	16-Sep-02	TV01	F87Z		13460	AA	P01	42	1-May-03	5	4720
2003	1FTRW07L[illegible]A14641	13.38	T/F5	T/F	T/BC	T/AM	T/B	T/VZ	T/DU	AJ	16-Aug-02	8-Jul-03	TV01	*		13460	*	P01	33	16-Oct-02	0	25
2003	2FTRX18W[illegible]CA[illegible]	18.26	T/F6	T/F	T/BD	T/AM	T/E	T/VN	T/DU	A4	20-Aug-02	24-Oct-02	TV01	F87Z		13460	AA	P01	42	11-Nov-02	1	1650
2003	1FTRX18W[illegible]	88.3	T/F5	T/F	T/BD	T/AM	T/E	T/VN	T/DU	AR	20-Aug-02	28-Oct-02	TV01	F87Z		13460	AA	P01	28	5-Sep-02	0	13
2003	1FTRX18L[illegible]19452	49.4	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	20-Aug-02	10-Sep-02	TV01	F87Z		13460	AA	P01	42	11-Sep-02	1	94
2003	1FTRX18L[illegible]18677	81.2	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	21-Aug-02	2-Jan-03	TV01	F87Z		13460	AA	P01	28	8-Oct-02	0	16
2003	1FTRX18L[illegible]	48.84	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	21-Aug-02	17-Mar-03	TV01	F87Z		13460	AA	P01	42	28-Oct-02	0	66
2003	1FTRX17W[illegible]	29.55	T/F5	T/F	T/BD	T/AM	T/B	T/VN	T/DU	AR	21-Aug-02	28-Oct-02	TV01	F87Z		13460	AA	P01	33	11-Nov-02	1	430
2003	1FTWW33F[illegible]	16.16	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	22-Aug-02	9-Sep-02	TV01	F87Z		13460	AA	P01	42	17-Apr-03	8	4837
2003	1FTRW07[illegible]	33.49	T/F5	T/F	T/BC	T/AM	T/B	T/VS	T/DU	AJ	22-Aug-02	18-Sep-02	TV01	F87Z		13460	AA	P01	28	18-Apr-03	7	2762
2003	1FTRX18L[illegible]	60.3	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	26-Aug-02	23-Jan-03	TV01	F87Z		13460	AA	P01	42	17-Apr-03	3	3635
2003	1FTRX17W[illegible]	20.83	T/F5	T/F	T/BD	T/AM	T/B	T/VN	T/DU	AR	26-Aug-02	8-Oct-02	TV01	F87Z		13460	AA	P01	42	8-Jan-03	4	5421
2003	2FTRX18W63CA06118	51.35	T/F6	T/F	T/BD	T/AM	T/E	T/VN	T/DU	A4	27-Aug-02	12-Oct-02	TV01	*		13460	*	P01	42	28-Mar-03	8	11944
2003	2FTRX18W[illegible]CA06118	38.9	T/F6	T/F	T/BD	T/AM	T/E	T/VN	T/DU	A4	27-Aug-02	12-Oct-02	TV01	F87Z		13460	AA	P01	42	9-Jun-03	9	17607
2003	2FTRX18L63CA05161	16.65	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	A4	27-Aug-02	6-Jan-03	TV01	F87Z		13460	AA	P01	42	29-Apr-03	4	3367
2003	1FTRX18L[illegible]	96.76	T/F6	T/F	T/BD	T/AM	T/B	T/VZ	T/DU	AJ	27-Aug-02	2-Nov-02	TV01	*		13460	*	P01	X2	3-Feb-03	4	[illegible]
2003	2FTRX17W63CA07[illegible]	66.41	T/F5	T/F	T/BD	T/AM	T/B	T/VN	T/DU	A4	28-Aug-02	17-Sep-02	TV01	F87Z		13460	AA	P01	28	10-Dec-02	3	2512
2003	1FTRX18L[illegible]20743	44.1	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	28-Aug-02	2-Nov-02	TV01	F87Z		13460	AA	P01	42	18-Nov-02	1	734
2003	1FTRW08L[illegible]	123.[illegible]	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	28-Aug-02	23-Jan-03	TV01	F87Z		13460	AA	P01	28	30-Jan-03	6	8718
2003	1FTRW08L[illegible]A08437	142	T/F6	T/F	T/BC	T/AM	T/E	T/VS	T/DU	AJ	29-Aug-02	14-Jan-03	TV01	F87Z		13460	AA	P01	1	11-Feb-03	1	[illegible]
2003	1FTSW31F[illegible]EA[illegible]	18.8	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1	29-Aug-02	22-Nov-02	TV01	*		13460	*	P01	X2	3-Mar-03	4	10073
2003	1FTRW08L[illegible]A35865	175.68	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	30-Aug-02	17-Sep-02	[illegible]	F2DZ	32719		A	P01	42	10-Sep-02	0	[illegible]
2003	1FTNW21P[illegible]EA[illegible]	32.61	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	1-Sep-02	27-Feb-03	TV01	F87Z		13460	AA	P01	28	6-Oct-02	0	298
2003	2FTRX18W[illegible]CA[illegible]	40	T/F6	T/F	T/BD	T/AM	T/E	T/VN	T/DU	A4	3-Sep-02	18-Oct-02	TV01	F87Z		13460	AA	P01	42	18-Apr-03	7	13812
2003	1FTRW08L[illegible]A37[illegible]	68.14	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	3-Sep-02	11-Oct-02	TV01	F87Z		13460	AA	P01	42	27-Dec-02	3	4067
2003	1FTRW08L[illegible]A44443	26.73	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	4-Sep-02	13-Sep-02	TV01	F87Z		13460	AA	P01	28	1-Oct-02	1	652
2003	1FTRX18L[illegible]A27[illegible]	12.38	T/F5	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	5-Sep-02	8-Nov-02	TV01	*		13460	*	P01	X2	18-Nov-02	1	484
2003	1FTWW31FX3EA[illegible]	68.32	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1	5-Sep-02	12-Oct-02	TV01	F87Z		13460	AA	P01	42	13-May-03	8	3486
2003	1FTRW08[illegible]	44.06	T/F6	T/F	T/BC	T/AM	T/E	T/VS	T/DU	AJ	7-Sep-02	1-Oct-02	TV01	F87Z		13460	AA	P01	X1	21-Feb-03	5	6430
2003	1FTRX18L[illegible]A31107	64.65	T/F6	T/F	T/BD	T/AM	T/E	T/VZ	T/DU	AR	10-Sep-02	18-Oct-02	TV01	F87Z		13460	AA	P01	42	28-Dec-02	3	1130
2003	1FTRW08L[illegible]A47870	38.08	T/F5	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	10-Sep-02	18-Nov-02	TV01	F87Z		13460	AA	P01	42	29-Nov-02	1	377
2003	1FTRW08L[illegible]A[illegible]44	67.21	T/F6	T/F	T/BC	T/AM	T/E	T/VZ	T/DU	AJ	10-Sep-02	11-Nov-02	TV01	F87Z		13460	AA	P01	42	10-Dec-02	1	4009

R063-[illegible] 4610

2003	1FTRW08L[illegible]KA[illegible]92	33	T/F0	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	10-Sep-02	28-Oct-02	TV01	F87Z		13480	AA	P01	42	10-Jan-03	8	3407
2003	1FTRW07[illegible]KA37[illegible]	278.[illegible]	T/F5	T/F	T/SC	T/AM	T/8	T/V8	T/DU	AJ	10-Sep-02	17-Dec-02	5R01	*		3534	*	P01	[illegible]	3-Feb-03	2	13[illegible]
2003	1FTRX18L0[illegible]NA31473	51.82	T/F8	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	AR	12-Sep-02	3-Jan-03	TV01	F87Z		13480	AA	P01	28	4-Jan-03	1	486
2003	1FTRW08L[illegible]KA47[illegible]	33.[illegible]	T/F5	T/F	T/SC	T/AM	T/8	T/VZ	T/DU	AJ	12-Sep-02	2-Dec-02	TV01	F87Z		13480	AA	P01	28	21-Mar-03	4	3321
2003	1FTRW08[illegible]KA[illegible]4	23.[illegible]	T/F0	T/F	T/SC	T/AM	T/E	T/V8	T/DU	AJ	16-Sep-02	16-Apr-03	TV01	*		13480	*	P01	28	23-Sep-02	0	4
2003	1FTRW08L[illegible]KA67912	32.[illegible]	T/F5	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	17-Sep-02	5-Dec-02	TV01	F87Z		13480	AA	P01	[illegible]	18-Mar-03	4	[illegible]
2003	1FTRF172[illegible]KA37[illegible]	23.78	T/F6	T/F	T/SB	T/AM	T/E	T/LY	T/DU	AR	17-Sep-02	10-Mar-03	TV01	F87Z		13480	AA	P01	42	14-Apr-03	2	788
2003	1FTRW07L4[illegible]KA[illegible]	18.75	T/F8	T/F	T/SC	T/AM	T/8	T/VZ	T/DU	AJ	18-Sep-02	20-Dec-02	TV01	F87Z		13480	AA	P01	42	13-Mar-03	5	2[illegible]
2003	1FTRX18L4[illegible]KA44825	24	T/F8	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	AR	18-Sep-02	6-Dec-02	TV01	F87Z		13480	AA	P01	42	22-Jan-03	2	2077
2003	1FTRW08L[illegible]KA[illegible]40	[illegible].85	T/F5	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	18-Sep-02	31-Jan-03	TV01	F87Z		13480	AA	P01	28	6-Mar-03	2	3006
2003	1FTRW08L[illegible]KA[illegible]80	108.74	T/F8	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	18-Sep-02	4-Dec-02	TV01	*		13480	*	P01	38	11-Dec-02	1	12
2003	1FTRW08L43KA[illegible]70	58.25	T/F8	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	18-Sep-02	18-Dec-02	TV01	F87Z		13480	AA	P01	42	2-Jan-03	1	1204
2003	1FTRW07L1[illegible]KA[illegible]2	40.14	T/F8	T/F	T/SC	T/AM	T/8	T/VZ	T/DU	AJ	19-Sep-02	1-Feb-03	TV01	F87Z		13480	AA	P01	42	12-Apr-03	3	[illegible]
2003	1FTRW07L[illegible]KA[illegible]128	48.8	T/F8	T/F	T/SC	T/AM	T/8	T/VZ	T/DU	AJ	20-Sep-02	28-Oct-02	[illegible]	F2DZ	32719		A	P01	[illegible]	3-Dec-02	2	1849
2003	1FTRF1[illegible]KA[illegible]52	17.4	T/F5	T/F	T/SB	T/AM	T/E	T/LY	T/DU	AR	20-Sep-02	15-Nov-02	TV01	F87Z		13480	AA	P01	42	24-Apr-03	8	4895
2003	1FTRW08L[illegible]KA74[illegible]1	22.58	T/F5	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	21-Sep-02	20-Jan-03	TV01	*		13480	*	P01	X2	6-Feb-03	1	5580
2003	1FTRX18[illegible]NA47[illegible]2	28.[illegible]	T/F3	T/F	T/SD	T/AM	T/E	T/VN	T/DU	AR	23-Sep-02	23-Dec-02	TV01	F87Z		13480	AA	P01	42	28-Oct-02	5	14
2003	1FTRW08L[illegible]KA[illegible]46	18.04	T/F8	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	24-Sep-02	4-Dec-02	TV01	*		13480	*	P01	7	2-Jan-03	1	350
2003	1FTRW07[illegible]KA73[illegible]7	18.82	T/F5	T/F	T/SC	T/AM	T/8	T/V8	T/DU	AJ	26-Sep-02	12-Feb-03	TV01	F87Z		13480	AA	P01	42	7-Nov-02	0	21
2003	1FTNX2[illegible]F43EA[illegible]784	182.[illegible]	T/F7	T/F	T/SD	T/SD	T/E	T/D8	T/D8	A1	26-Sep-02	30-Oct-02	[illegible]	F2DZ	32719		A	P01	42	20-Dec-02	2	2518
2003	1FTNW21F[illegible]EA[illegible]0	[illegible].88	T/F7	T/F	T/SC	T/SD	T/E	T/D8	T/D8	A1	30-Sep-02	16-Oct-02	TV01	*		13480	*	P01	42	12-Dec-02	2	10[illegible]
2003	1FTNX28S[illegible]EA[illegible]84	287.24	T/F7	T/F	T/SD	T/SD	T/E	T/WA	T/DE	A1	4-Oct-02	18-May-03	T822	2C7Z	14A058		AA	P01	42	22-May-03	1	351
2003	1FTRW08L1[illegible]KA[illegible]217	87.[illegible]	T/F8	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	7-Oct-02	14-Dec-02	TV01	*		13480	*	P01	28	18-Dec-02	1	[illegible]
2003	2FTRX18W[illegible]CA1[illegible]	13.2	T/F0	T/F	T/SD	T/AM	T/E	T/VN	T/DU	A4	8-Oct-02	20-Dec-02	TV01	*		13480	*	P01	42	12-Feb-03	2	764
2003	1FTRX18LX[illegible]NA51147	15.[illegible]	T/F5	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	AR	11-Oct-02	28-Dec-02	TV01	F87Z		13480	AA	P01	42	10-Feb-03	2	[illegible]
2003	1FTRW07[illegible]NB[illegible]673	74.4	T/F5	T/F	T/SC	T/AM	T/8	T/V8	T/DU	AJ	16-Oct-02	13-Nov-02	TV01	F87Z		13480	AA	P01	42	9-Dec-02	1	4436
2003	1FTRW08L[illegible]NB[illegible]249	23.12	T/F8	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	17-Oct-02	2-Jan-03	TV01	F87Z		13480	AA	P01	42	25-Jan-03	1	1180
2003	1FTRW07[illegible]NB[illegible]18	17.44	T/F8	T/F	T/SC	T/AM	T/8	T/V8	T/DU	AJ	23-Oct-02	16-Nov-02	TV01	F87Z		13480	AA	P01	42	17-Dec-02	2	2757
2003	1FTRX08L1[illegible]NB[illegible]782	20.32	T/F5	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	AJ	7-Nov-02	9-Jan-03	TV01	F87Z		13480	AA	P01	28	24-Jan-03	1	476
2003	1FTNX21L[illegible]EB[illegible]80	22.83	T/F7	T/F	T/SD	T/SD	T/E	T/VZ	T/DE	A1	7-Nov-02	18-Jan-03	TV01	F87Z		13480	AA	P01	42	23-Jun-03	1	383
2003	2FTRX17L[illegible]CA33[illegible]7	185.84	T/F5	T/F	T/SD	T/AM	T/8	T/VZ	T/DU	A4	11-Nov-02	14-Dec-02	TV01	F87Z		13480	AA	P01	42	14-Dec-02	0	41
2003	1FTRF172[illegible]NA79333	43.84	T/F3	T/F	T/SB	T/AM	T/8	T/LY	T/DU	AR	12-Nov-02	8-Jan-03	TV01	F87Z		13480	AA	P01	42	11-Feb-03	2	2840
2003	1FTRW07L[illegible]NB[illegible]87	88.2	T/F8	T/F	T/SC	T/AM	T/8	T/VZ	T/DU	AJ	20-Nov-02	7-Feb-03	[illegible]	F2DZ	32719		A	P01	42	21-Feb-03	1	837
2003	2FTRX18L23CA48082	20.22	T/F5	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	A4	13-Dec-02	8-Mar-03	TV01	F87Z		13480	AA	P01	28	18-Mar-03	1	454
2003	1FTSW21P1[illegible]EB[illegible]03	181.82	T/F7	T/F	T/SC	T/CD	T/E	T/V8	T/8E	A1	13-Dec-02	14-Jan-03	TV01	F87Z		13480	AA	P01	42	14-Jan-03	0	170
2003	2FTRX18L[illegible]CA48081	33.[illegible]	T/F8	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	A4	17-Dec-02	1-Jan-03	TV01	*		13480	*	P01	42	3-Feb-03	2	9315
2003	1FDXF4[illegible]P1[illegible]EB[illegible]43	82.85	T/F7	T/F	T/SB	T/D8	T/8	T/V8	T/8E	A1	18-Dec-02		TV01	F87Z		13480	AA	P01	42	15-Jan-03	-1	8
2003	1FTNW21P[illegible]EB[illegible]79	20.79	T/F7	T/F	T/SC	T/SD	T/E	T/V8	T/8E	A1	7-Jan-03	21-May-03	TV01	F87Z		13480	AA	P01	42	20-Jun-03	2	1352
2003	1FTRX17W[illegible]NB[illegible]06	18.8	T/F5	T/F	T/SD	T/AM	T/8	T/VN	T/DU	AR	15-Jan-03	30-Jan-03	TV01	F87Z		13480	AA	P01	41	27-Mar-03	2	3316
2003	1FTRX17L13NB[illegible]88	12.36	T/F8	T/F	T/SD	T/AM	T/8	T/VZ	T/DU	AR	7-Feb-03	8-Apr-03	TV01	*		13480	*	P01	42	30-Apr-03	1	980
2003	1FTRX18L[illegible]NB[illegible]294	57.8	T/F5	T/F	T/SD	T/AM	T/E	T/VZ	T/DU	AR	20-Feb-03	30-Mar-03	TV01	F87Z		13480	AA	P01	42	21-Mar-03	1	87
2003	2FTRF07[illegible]CA61[illegible]	8.79	T/F6	T/F	T/SB	T/AM	T/8	T/WP	T/DT	A4	24-Feb-03		TV01	*		13480	*	P01	33	28-May-03	-1	12
2003	1FTRW08L43KC72[illegible]8	60.8	T/F5	T/F	T/SC	T/AM	T/E	T/VZ	T/DU	AJ	6-Mar-03		TV01	F87Z		13480	AA	P01	42	2-May-03	-1	126

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MTRL_ COST	TOT_COST _GROSS	LBR_H RS	REGION_C D	ST_PROV_ CD	CPSC_C D_5
7.86	160.33	1.1	NA	NJ	60604
0	44.62	0.7	NA	MN	60604
6.86	80.4	0.8	NA	MN	60604
6.86	26.14	0.3	NA	PA	60604
6.86	47.3	0.6	NA	MA	60604
6.86	26.36	0.3	NA	UT	60604
6.86	46.79	0.6	NA	NY	60604
0	84.1	1	NA	LA	60604
6.86	45.36	0.5	NA	WA	60604
6.86	28.1	0.5	NA	GA	60604
6.86	23.86	0.3	NA	WA	60604
6.86	46.82	0.6	NA	NC	60604
6.86	46.34	0.6	NA	CA	60604
6.86	26.86	0.3	NA	TX	60604
223.86	364.79	3.1	NA	IA	190100
0	46.86	0.7	NA	AZ	60604
6.86	25.6	0.3	NA	MI	60604
6.86	39.86	0.6	NA	AL	60604
6.86	21.86	0.3	NA	WI	60604
6.86	23.6	0.3	NA	NC	60604
6.86	25.36	0.3	NA	MD	60604
2.86	80.86	1.2	NA	NY	60604
6.86	26.36	0.3	NA	TX	60604
6.86	174.83	2.1	NA	CA	070XXX
6.86	83.36	0.6	NA	NY	60604
6.86	60.74	0.8	NA	TX	60604
42.76	192.76	2	NA	CA	110401
42.76	138.22	2	NA	FL	110401
10.61	70.86	0.7	NA	NJ	190102
6.86	146.82	1.9	NA	CO	60604
6.86	26.76	0.3	NA	CA	60604
37.03	90.46	0.8	NA	MI	60604
6.86	24.86	0.3	NA	TX	60604
0.5	62.54	1	NA	WI	60604
0	27.8	0.6	NA	LA	60604
0	28.7	0.6	NA	CT	60604
6.86	26.87	0.3	NA	VA	60604
6.86	25.8	0.3	NA	OH	60604
19.41	411.83	5	NA	OR	60604
6.86	22.87	0.3	NA	PA	60604
6.86	26.36	0.3	NA	MI	60604
6.86	46.72	0.6	NA	FL	60604
7.06	30.36	0.3	NA	IL	60604
201.74	376.36	4.7	NA	TX	190100
6.86	85.46	0.8	NA	TX	60604
42.76	141.34	1.7	NA	TX	110401
8.01	36.51	0.8	NA	LA	190100
6.86	82.86	0.8	NA	FL	60604
6.36	81.86	0.8	NA	FL	60604
6.96	86.8	1.8	NA	NC	60604
6.86	86.36	1	NA	NY	60604
6.86	84.82	1.4	NA	MA	60604
6.86	83.86	0.8	NA	CA	60604
0	118.8	1.7	NA	TX	60604
6.86	26.86	0.3	NA	CA	60604
44.06	170.07	1.8	NA	CA	110401
8.58	25.76	0.3	NA	OK	60604

[illegible]	216.24	2.4	NA	NJ	110401
[illegible]	[illegible]	0.5	NA	TX	60604
[illegible]	21.[illegible]	4.3	NA	TX	60604
0	20.36	0.4	NA	TX	60604
[illegible]	42.[illegible]	4.5	NA	NY	60604
0.56	71.56	1	NA	MD	60604
44.05	61.29	[illegible]	NA	MA	60604
0.55	21.67	0.3	NA	GA	60604
0	44	0.7	NA	OH	60604
0.66	24.[illegible]	0.3	NA	TX	60604
[illegible]	[illegible]	0.3	NA	IN	60604
0.66	124.24	1.7	NA	TX	60604
[illegible]	[illegible]	0.3	NA	PA	60604
6.66	61.29	0.7	NA	FL	60604
[illegible]	[illegible]	0.9	NA	FL	60604
0.6[illegible]	40.[illegible]	0.4	NA	NC	60604
[illegible]	124.73	2.3	NA	AR	60604
0.55	68.72	[illegible]	NA	VT	60604
[illegible]	67.[illegible]	[illegible]	NA	FL	60604
7.05	50.45	0.3	NA	IL	60604
[illegible]	72.42	0.5	NA	CO	60604
6.55	113.65	1.5	NA	PA	60604
7.02	81.[illegible]	0.3	NA	NJ	60604
[illegible]	[illegible]	0.5	NA	TX	60604
0.59	28.60	0.3	NA	OR	[illegible]
[illegible]	417.[illegible]	6.5	NA	MI	110401
0	31.91	0.4	NA	CT	60604
10.17	73.75	0.7	NA	VA	60604
6.01	[illegible]	1.1	NA	VA	60604
0.56	41.27	0.7	NA	SD	60604
[illegible]	34.[illegible]	0.5	NA	CA	60604
0	11.81	0.2	NA	WV	60604
[illegible]	71.[illegible]	0.9	NA	TX	60604
42.70	140.90	2	NA	AR	110401
[illegible]	340.67	3.6	NA	NJ	110401
6.60	42.02	0.7	NA	MN	60604
[illegible]	[illegible]	1.3	NA	WA	60604
[illegible]	120.[illegible]	1.7	NA	WA	60604
0.46	[illegible]	1.8	NA	TX	60604
42.70	182.[illegible]	1.5	NA	MN	110401
40.73	221.67	2.6	NA	CO	110401
[illegible]	70.45	[illegible]	NA	UT	60604
6.60	60.96	0.6	NA	UT	60604
[illegible]	[illegible]	0.9	NA	TX	60604
[illegible]	[illegible]	[illegible]	NA	TX	60604
0.66	[illegible]	0.9	NA	MO	60604
[illegible]	[illegible]	0.6	NA	NJ	60604
0.56	[illegible]	0.6	NA	AL	60604
[illegible]	37.21	0.3	NA	TX	60604
7.70	44.75	[illegible]	NA	WI	60604
[illegible]	[illegible]	1.1	NA	CA	60604
[illegible]	41.4	[illegible]	NA	MD	60604
0.56	[illegible]	0.9	NA	LA	60604
6.66	72.29	0.5	NA	CA	60604
[illegible]	26.67	0.2	NA	SC	60604
[illegible]	23.62	0.2	NA	MO	60604
0.56	21.66	0.3	NA	SD	60604
[illegible]	75.[illegible]	0.6	NA	AL	60604
6.65	26.44	0.3	NA	OH	60604
7.05	26.56	0.5	NA	IN	60604
0.75	384.[illegible]	5	NA	GA	60604
0	52.75	0.5	NA	NJ	60604

7.[illegible]	[illegible]	1	NA	NJ	60604
4.55	25.00	0.3	NA	FL	60604
[illegible]	[illegible]	0.7	NA	LA	60604
4.55	23.05	0.5	NA	MO	60604
[illegible]	[illegible]	[illegible]	NA	FL	60604
4.55	100.34	2.1	NA	CA	60604
[illegible]	72.35	0.8	NA	TX	60604
4.55	24.55	0.5	NA	PA	60604
[illegible]	115.34	1.8	NA	NV	60604
4.55	64.9	0.8	NA	TX	60604
5.[illegible]	25.03	0.3	NA	GA	60604
43.70	145.02	1.5	NA	MO	110401
7.03	25.87	0.3	NA	IN	60604
[illegible]	23.97	0.3	NA	CA	60604
[illegible]	64.08	0.8	NA	NM	60604
[illegible]	24.70	0.3	NA	NE	60604
6.[illegible]	64.55	0.8	NA	OH	60604
4.55	148.14	2.1	NA	MA	60604
[illegible]	[illegible]	0.3	NA	CA	60604
7.[illegible]	23.44	0.3	NA	IL	60604
10.[illegible]	48.15	0.5	NA	AZ	60604
[illegible]	63.46	0.9	NA	FL	60604
[illegible]	39.27	0.3	NA	MN	60604
[illegible]	22.07	0.3	NA	KY	60604
0.44	[illegible]	0.3	NA	IN	60604
11.87	128.45	1.6	NA	MO	60604
42.75	97.07	1	NA	TN	60604
42.45	96.87	0.7	NA	MI	60604
[illegible]	38.23	0.5	NA	FL	60604
[illegible]	48.85	0.6	NA	FL	60604
[illegible]	62.79	0.8	NA	ID	60604
6.04	22.44	0.3	NA	TX	60604
[illegible]	68.31	0.8	NA	CA	60604
[illegible]	63.75	0.9	NA	AL	60604
[illegible]	[illegible]	0.3	NA	AZ	60604
[illegible]	100.63	1.5	NA	AL	60604
[illegible]	28.79	0.3	NA	MI	60604
0.57	32.37	0.5	NA	AL	60604
48.25	124.11	0.8	NA	CA	60604
[illegible]	45.81	0.6	NA	MT	60604
4.55	25.45	0.3	NA	TX	60604
[illegible]	38.45	0.5	NA	AL	60604
4.55	23.91	0.3	NA	CA	60604
[illegible]	[illegible]	1.6	NA	FL	60604
4.55	28.63	0.3	NA	GA	60604
[illegible]	70.46	0.8	NA	AZ	60604
4.55	[illegible]	0.3	NA	FL	60604
[illegible]	70.01	0.8	NA	AZ	60604
[illegible]	68.55	0.6	NA	FL	60604
4.55	64.10	0.8	NA	TX	60604
[illegible]	48.18	0.8	NA	NC	60604
[illegible]	63.85	0.8	NA	SC	60604
[illegible]	28.55	0.3	NA	KS	60604
4.55	97.12	0.8	NA	CO	60604
[illegible]	27.32	0.3	NA	FL	60604
2.21	58.01	0.8	NA	GA	60604
0	27.55	0.4	NA	TX	60604
4.55	78.94	1	NA	OR	60604
[illegible]	77.70	0.8	NA	NJ	60604
4.55	30.29	0.3	NA	CA	60604
[illegible]	47.87	0.8	NA	SD	60604
4.55	39.71	0.8	NA	NE	60604

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6.58	21.45	0.3 MA	WI	60604
6.58	38.4	0.3 MA	NY	60604
6.58	79.89	1 MA	PA	60604
6.58	89.76	0.9 MA	TX	60604
6.58	20.55	0.3 MA	VA	60604
7.08	191.82	1.8 MA	CA	60604
42.78	149.53	1.7 MA	MA	110401
6.58	79.89	0.9 MA	AZ	60604
6.58	27.89	0.9 MA	KS	60604
7.08	22.85	0.3 MA	IL	60604
6.58	24.1	0.3 MA	PA	60604
6.58	83.79	0.9 MA	FL	60604
6.58	28.7	0.3 MA	MO	60604
6.58	64.87	0.7 MA	WA	60604
6.1	57.36	0.6 MA	AL	60604
6.58	27.39	0.3 MA	PA	60604
7.58	29.84	0.3 MA	IL	60604
42.78	184.81	2.4 MA	PA	110401
6.58	84.48	0.9 MA	AL	60604
6.58	28.98	0.3 MA	GA	60604
0	88.5	1.1 MA	GA	60604
6.58	41.36	0.5 MA	CO	60604
6.58	71.35	0.8 MA	CO	60604
0	69.89	1 MA	MO	60604
44.08	188.36	1.8 MA	FL	110401
6.58	60.12	0.6 MA	AZ	60604
7.58	83.26	0.6 MA	IL	60604
0	68.78	0.7 MA	NJ	60604
7.08	28.12	0.3 MA	IN	60604
0.5	22.9	0.3 MA	CO	60604
6.58	28.14	0.3 MA	MI	60604
0.5	13.89	0.2 MA	TX	60604
6.58	21.86	0.3 MA	PA	60604
6.58	66.66	0.7 MA	MO	60604
6.58	88.88	0.9 MA	MN	60604
6.58	67.78	0.6 MA	TN	60604
6.58	83.48	0.9 MA	NC	60604
6.58	27.13	0.3 MA	OK	60604
6.58	24.78	0.3 MA	NE	60604
6.58	90.97	0.9 MA	MA	60604
6.58	75.86	0.8 MA	MN	60604
6.58	65.21	0.3 MA	TX	60604
0	31.33	0.5 MA	MA	60604
6.58	48.48	0.8 MA	MA	60604
6.58	25.14	0.3 MA	MN	60604
0	88.73	1.4 MA	CA	60604
6.58	62.59	0.9 MA	TX	60604
6.58	83.88	0.9 MA	IA	60604
6.58	128.8	1.9 MA	NC	60604
7.37	148.87	2 MA	MA	60604
0	18.8	0.3 MA	MO	60604
42.78	218.84	2.3 MA	MA	110401
6.58	38.58	0.3 MA	NM	60604
6.58	48.98	0.8 MA	MA	60604
6.58	71.72	0.8 MA	NV	60604
6.58	27.31	0.3 MA	MI	60604
0	12.38	0.2 MA	WI	60604
6.58	68.8	0.8 MA	CA	60604
6.58	50.82	0.8 MA	NY	60604
6.58	101.44	1.8 MA	OR	60604
6.58	46.26	0.6 MA	GA	60604
6.58	78.79	1.2 MA	VA	60604

[illegible]	38.58	0.8	NA	MI	60604
44.86	322.92	3.6	NA	MD	110401
6.[illegible]	58.1	0.8	NA	MI	60604
6.55	42.26	0.8	NA	NY	60604
0	28.[illegible]	0.5	NA	IL	60604
6.60	39.44	0.8	NA	TX	60604
6.56	27.37	0.3	NA	DE	60604
6.55	26.73	0.3	NA	FL	60604
6.56	30.58	0.2	NA	MA	60604
6.56	65.53	0.5	NA	FL	60604
0	100.74	1.4	NA	CA	60604
6.55	66.63	0.5	NA	CO	60604
6.56	40.72	0.6	NA	FL	60604
42.79	92.38	0.8	NA	AL	110401
6.56	28.60	0.3	NA	WV	60604
0	22.[illegible]	0.4	NA	MI	60604
6.56	26.56	0.5	NA	MO	60604
0	16.54	0.3	NA	PA	60604
7.05	28.87	0.3	NA	IN	60604
42.78	226.48	2.6	NA	ID	110401
0	60.66	0.9	NA	MD	60604
263.[illegible]	460.[illegible]	3.3	NA	CA	160109
0	67.40	1.3	NA	MD	60604
6.55	18.78	0.3	NA	ME	60604
6.56	22.27	0.3	NA	PA	60604
[illegible]	83.39	1.2	NA	TX	60604
6.58	26.7	0.5	NA	MO	60604
[illegible]	34.83	0.3	NA	OK	60604
6.58	26.8	0.3	NA	PA	60604
6.58	28.81	0.3	NA	MI	60604
6.57	102.12	2.3	NA	CA	60604
7.76	61.4	0.7	NA	NC	60604
47.21	116.41	1.1	NA	IL	110401
6.52	26.8	0.3	NA	IA	60604
8.56	168.1	2.7	NA	TX	60604
7.56	40.80	0.5	NA	AZ	60604
6.[illegible]	62.43	0.8	NA	NY	60604
6.56	27.37	0.3	NA	TX	60604
6.56	23.[illegible]	0.3	NA	TN	60604
0	12.96	0.2	NA	IN	60604
6.56	64.16	0.8	NA	TN	60604
0	8.76	0.1	NA	WI	60604
6.[illegible]	57.48	0.5	NA	WI	60604

TECH_TXT1
VERIFIED CONCERN TESTED FUSES IN CIRCUIT OK TESTED POWER TO BRAKE PRESSSURE SWITCH OK TESTED FOR POWER AT SHIFT LOCK SOLENOID OK TESTED GROUND OK DIAGNOSE AND REPLACED FAULTY BRAKE PRESSURE SWITCH F

BPP9 BRAKE PEDEL POSITION SWITCH SENSOR OPEN CC 46,CCC P01 VERIFY CONCERN,MODI EEC SYS DIAG NO DTC'S PRESENT,TEST & RE PLACE BPP9 & RETEST. 0626 483
TECH 127 VERIFIED CONDITION,PERFORMED DIAGNOSIS AND FOUND OPEN IN BRAKE LAMP SWITCH,REPLACED BRAKE LAMP SWITCH AND RETESTED,CONDITION NO LONGER PRESENT AT THIS TIME
30499 28 TEST DROVE VERY INT. BRAKE LIGHTS DO NOT COME ON WILL NOT SHIFT DIA PINPOINT TESTING OF HARNESS OK TEST BRAKE LIGHT SWITCH FAILED REMOVED AND REPLACED BRAKE LIGHT SWITCH RETESTED OK XXXXXXXXX
1732 DIAG COULD NOT DUPLICATE,REPLACED BOO SWITCH AS PER DENN SIMPKINS
TEST AND REPLACE BRAKE LITE SWITCH
28 OPEN CIRCUIT BRAKE SWITCH PLUS 14401 13480 X2 VERIFY CONCERN. REINSTALL BRAKE SWITCH PLUG TO OPERATE TRANS. LOCK AND BRAKE LIGHTS. OK. REPAIR OK.
11488 CD42 BOO SWITCH WARRANTY ROADTEST WITH CUSTOMER TO VERIFY CONCERN. PERFORMED BODY CHASSIS ELECTRICAL TEST AND ACCESS INSTRUMENT PANEL TO REROUT HARNESS TO BOO SWITCH. REPLACED BOO SWITCH AS
CHK FUSES CHK BRAKE SWITCH SWITCH BAD REPLACED SWITCH.
CK OPP FOUND SWITCH BAD NESS REPLACE STOP LIGHT SWITCH
PERFORMED BRAKE SWITCH ELECTRICAL PINPOINT TEST REPLACED SWITCH ASSEMBLY
BRAKE SWITCH WORKS INTERMITANTLY SWITCH STOP LAMP REPLACE
CHECK OUT VEH WILL NOT SHIFT INTO PARK AT TIMES, REPLACE BRAKE LIGHT SWITCH (OPEN CIRCUIT)
TESTED CIRCUITS,FOUND THE BRAKE FUSE WAS BLOWN FOR THE SHIFT INTERLOCK SWITCH BAD OPEN CIRCUIT.ALSO FOUND THE FUSE PANEL BAD,REPLACED THE BRAKE SWITCH AND THE FUSE PANEL.TEST DROVE FOUND STILL INTERMI
INSPECTED BRAKE LIGHTS, INOP. CHECKED FUSE, OK. PERFORMED PINPOINT TEST. OPEN IN BRAKE LIGHT SWITCH HARNESS. REPAIRED OPEN. RE TESTED. OK.
ROAD TESTED AND TESTED OPPERATION OF THE SHIFTER, IT COMES OUT OF PARK EVERY TIME,ADVISED AND ROAD TESTED HOME STILL
9909 PERF B C E DIAG FOLLOWED PINPOINT TEST REPLACED BRAKE PEDAL POSITION SWITCH RETEST O.K. CC 42
BRAKE LIGHTS DO NOT WORK FOUND BROKEN BRAKE SWITCH REPLACED AND RETES
REPLACE BRAKE SWITCH
REPLACE BRAKE LIGHT SWITCH
CK REPLACED FUSE CK FOR SHORT REPAIRE SHORTED WIRES IN COLUMN FOR BRAKE LITE SWITCH
VERIFY CUSTOMER CONCERN TEST AND REPLACE OPEN BREAK LIGHT SWITCH RETEST OK
24129 2514A 1.8 13480A .3 CK GEAR SHIFT OPER, FOUND BINDING GEAR SHIFTER, NO TO R&I STEERING COLUMN TO CK OPERATION. FOUND INTERMITTENT LOSS OF POWER AT SHIFTER SOLINOID, CAUSED BY FAULTY BK SWITCH
CHECKED CIRCUITS, BRAKE LIGHT SWITCH HAS OPEN CIRCUIT R R BRAKE LIGHT SWITCH
OPEN CIRCUIT BODY CHASSIS ELECTRICAL (BCE) TEST
THE SHIFT LEVER STICKS IN PARK AT TIMES. TEST3 INDICATE A FAULT IN THE SHIFT INTERLOCK SOLENOID. REPLACED THE SHIFT INTERLOCK SOLENOID AND RECHECKED OPERATION OK.
CK SHIFT INTERLOCK REPL SHIFT INTER LOCK SOLD AND BK SW AMF FUSE OK FOR SERVICE
REPAIR WIRES AT BRAKE LIGHT SWITCH AND REPLACE SWITCH
OPEN CIR ELECT TRANS DIAG PINPOINT REPLACE BOO SWITCH REROAD TEST
SWITCH DIAGNOSE CONCERN IN BRAKE LIGHT SWITCH, R R SWITCH RETEST ALL ACCE
HAD TO R&R REAR BRAKE LINE, CHECKED CONCERN FOR NOT COMING OUT OF PARK, FOUND BRAKE SWITCH ACTING UP.
BRAKE LIGHT SWITCH CK VEHICLE NOT COMING OUT OF PARK, FOUND BRAKE LIGHT SWITCH SHORTED, REMOVED AND REPLACED BRAKE LIGHT SWITCH, RETEST, OK
FOUND PIN FOR BRAKE SWITCH MISSING REPLACED
VERIFIED CONCERN FOUND NO BRAKE LIGHTS FUSES CKED OK CKED VOLTAGE AT GREEN WIRE ON BRAKE LIGHT SWITCH NO VOLTS WITH PEDAL DEPRESSED WIRE TERMINAL REPAIRED TERMINAL CKED OK
VERIFY CONCERN,TROUBLE SHOOT INTERLOCK SYSTEM,CONNECTOR C278 WONT LOCK ONTO BRAKE ON OFF SWITCH,BOO SWITCH PIN 3 CKT 22 BENT,STRAIGHTEN PIN,LOCK CONNECTOR,OK
26119 W VERIFIED CUSTOMERS CONCERN SHIFTER WOULD NOT COM E OUT OF PARK REPLACE BRAKE LIGHT SWITCH ASSY.
BRAKE SWITCH INOP. TESTED CKT O.K. REPLACED SWITCH. SHIFT INTERLOCK NOW WORKS.
VERIFIED CONCERN,PERFORMED DASH SWITCH DIAG AN PINPOINT TEST TEST POWER AN GROUNDS,NECESSARY T O ACCESS DASH TO ACCESS HARNESS TEST GR YE WIRE WITH OHM METER, WIRE TEST BAD WIGGLE TEST HARNE SS REPA
CHECKED AND REPLACED BRAKE SWITCH
P01 SWITCH STOP LAMP REPLACE
CONFIRMED CUSTOMER COMPLAINT PERFORMED INSPECTION OF BRAKE LIGHTS OPERATION AND FOUND BRAKE LIGHTS TO BE INOP PERFORMED PIN POINT TEST FOUNDBRAKE SWITCH TO HAVE AN INTERNAL OPEN IN CIRCUIT REPLACED B
1 VERIFIED CONCERN ,PINPOINT TO CIRCUIT 619 REPLACE DEFECTIVE STOP LIGHT SWITCH
SOP FUSE BLOCK UNDER DASH CKED OUT AND VERIFY CONCERN,SHIFT INTERLOCK INOP CKED FUSES OK CKED POWER AND GROUNDS NO POWER TO CURCUIT 150 RED/LG WIRE WITH BRAKE APPLYED NO POW
CK CIRCUITS REPLACE STOPLIGHT SWITCH
19258 CODE 42 WARRANTY DUPLICATED COMPLAINT FOUND BRAKE SWITCH CONNECTOR TERMINAL HAD BACKED OUT AND WAS ARCKING SHORTED BRAKE SHIFT LOCK SOLENOID AND BRAKE SWITCH ITSELF ALSO NOT WORKING CORRECT
4636 FOUND SHIFT LOCK FUSE BURNT REPLACED SHORTED ELECTRONIC BRAKE SWITCH INSTALLED AMP METER AND FOUND NO EXCESSIVE DRAW. REPLACED FUSE AND OPERATION IS NORMAL
14344 #13488 CONO CODE 42 100 SHIFTER FOR TRANSMISSION HARD TO GET OUT OF PARK.TEST ALL LINKAGE,OK. TEST FOR BRAKE LIGHTS ON, THEY DO WORK. CHECK FOR POWER TO SOLENOID FOR RELEASE. NO POWER TO SOLE
DEFECTIVE SWITCH SWITCH STOP LAMP REPLACE
PERFORM CIRCUIT TEST PINPOINT TEST REPAIR SHORTED BRAKE PEDAL SWITCH WIRING ON STEERING SHAFT REPAIR WIRING AND REPLACE FUSE
INTERNALY SHORTED CHECK OUT PIDS PID MONITOR,REPLACE BRAKE SWITCH
CHECK CIRCUIT 1000 POWER AT SHIFT LOCK SOLENOID WITH BRAKE DEPRESSED
REPLACE SWITCH ASY
PERFORM PIDS TEST, PINPOINT TEST. NO BOO SIGNAL, REPLACE 6 AM P FUSE. REMOVE STEERING COLUMN, TRACE SHORT AND REPAIR SHORT ED CIRCUIT 619
BRAKE SWITCH BAD, REPLACED BRAKE LIGHT SWITCH
MT NO SLO LOWER STEERING COLUMN TO REPLACE SHIFT SOLENOID.
BRAKE PEDAL SWITCH P/N# 13480 VERIFIED CONCERN USED THE PIDS AND CHECKED THE PIDS FOUND THE BRAKE LAMP SWITCH TO NOT BE SENDING THE SIGNAL TO

WIRE CUT ON DASH FRAME AND BRAKE SWITCH TAB BROKEN VEHICLE WILL NOT COME OUT OF PARK. BRAKE LAMP SWITCH BROKEN TAP. REPLACE BRAKE PEDAL SWITCH. STILL NOT BRAKE
TEST AND REPLACE BOO SWITCH. RETEST
INTERMINTE OPEN IN STOP LIGHT SWICH REPLACE STOP LIGHT SWITCH
WIRE TERMINAL PULLED LOOSE FROM CONNECTOR AT BRAKE LIGHT SWITCH REINST
OPEN CIRCUIT IN BRAKE SWITCH SWITCH STOP LAMP REPLACE
R AND R BRAKE SWITCH
TESTED SYSTEM AND REPLACED BRAKE SWITCH AND SHI FT LOCK AT SOLENOID
TRANS HARD TO GET OUT OF PARK. CHECK SYSTEM AND FOUND THAT THE BOO SWITCH WAS BAD. REPLACED SWITCH TO REPAIR.
4461 CUST. STATES WONT COME OUT OF PARK VERIFIED CUST. CONCERN,RAN OASIS,NO TSBS OR SSMS,REMOVED LINKAGE,FOUND NO PROBLEMS IN LINKAGE,REMOVED BRAKE SWITCH,TESTED FOR PWR, BRAKE SWITCH IS FUNCTIONI
1 TESTED TRANS SHIFTER ASSY AND FOUND BRAKE SWITCH WAS NOT WORKING REPLACED SWITCH AND RETESTED ALL OK NOW 42
CHECK INTERLOCK CIRCUITS, REPLACE BRAKE LIGHT SWITCH, RECHECK, OK. CLOSED BY WPI
1 COMPLETED STEERING COLUMN DIAG. AXCESS STEERING COL TO GAIN AXCESS TO TEST WIRES TO BRAKE SWITCH WIRES TESTED

7820 CK SHIFTER REPLACE BRAKE LITE SWITCH (OPEN) RETEST
21649 CHECK OUT BRAKE LIGHT SWITCH BAD. REPLACE BRAKE LAMP SWITCH. RECHECK
20 VERIFY COMPLAINT CHECK FUSES OK CHECK FOR POWER AND GROUND AND SHIFT LOCK SOLENOID, 8 VOLTS SEC DIAG VERIFY US RO
FUSE BLOWING. TEST DROVE. R&R BRAKE SWITCH
VERIFY CONCERN CHECKED ELECTRICAL SYSTEM FOUND BRAKE LIGHTSWITCH NOT OPERATING PROPERLY REPLACED BRAKE LIGHT SWITCH VERIFY REPAIR
SWITCH INOP SWITCH STOP LAMP REPLACE
TEST CIRCUITS & REPLACED BRAKE LIGHT SWITCH
CONFERM CUST CONCERN TEST VEH. WITH NGS MONITORED PIDS FOUND BRAKE ON OFF SWITCH OPEN INTERMITTLY PERFORMED PIN REPLACED BRAKE ON OFF SWITCH RETEST PASS ALL WORKING AS INTENDED AT THIS TIME
SHORT BCE DIAGNOSIS, PINPOINT TEST. REPLACE FUSE. REPLACE STOP LIGHT SWITCH. STOP LAMP SWITCH WIRE RUBBED THROUGH.
SHORTED BRAKE SWITCH DIAG AND LOCATE CONCERN REPLACE BRAKE SWITCH
BCE TEST PINPOINT TEST REPLACED STOP LIGHT SWIT OH
TEST VEHICLE OPERATION AND VERIFY CONCERN INSPECT STEERING COLUMN AND FOUND BRAKE SWITCH BROKEN. REPLACE BRAKE SWITCH AND RESTEST FUNCTION AS DESIGNED.
INSPECT VEHICLE, RAN OASIS AND TSB FOR THE CONCERN. RAN TEST FOUND BRAKE LIGHT SWITCH DEFECTIVE. REPLACE SWITCH FOUND INTER. POWER ON RED BLACK WIRE FROM SWITCH AND ACTUATOR. TRACE WIRING. DASH ACCESS
WIRING ASSEMBLY REPAIR
CHECKED REPLACED BRAKE LIGHT SWITCH REPAIRED SHIFT CABLE WARR
BODY CHASSIS ELECTRIAL (BCE) TEST
CHECKED FUSES OK WORKS AT TIMES TAP ON BRAKE SWITCH ACTS UP REPLACED BRAKE SWITCH
PARK INTERLOCK WORKING WELL IN BAY INSPECTED INTERLOCK AND BRAKE LIGHT SYSTEM DIAG AND REPLACED SUSPECT BRAKE LIGHT SWITCH
TESTED ALL FUSES WITH FLUKE METER AND GOOD WIRING AT STOP LAMP SWITCH FOUND 13480 CONNECTOR NOT ATTACHED SEATED CONNECTOR RETESTED OK
BCE TEST, PIN POINT TEST. FOUND BRAKE LIGHT SWITCH OPEN CIRC UIT. REPLACE SWITCH AND RETEST
20149 CHECKED AND FOUND SHIFT INTERLOCK INOP AT TIMES REPLACED SHIFT INTERLOCK SOLINOID ALSO REPLACED BRAKE LIGHT SWITCH TO FIX TEST DROVE TO VERIFY
STOP LIGHT SWITCH INOP AND FAILED SHIFT INTERLOCK ACTUATOR. PERFORMED BCE DIAG. REPLACED STOPLIGHT SWITCH. RETEST. PINPOINT TEST. CHECKED CONNECTORS AND FUSES. ACCESS STEERING
VERIFY CONCERN TEST FOR TO STOP LITE SWITCH OK DIAG BAD SWITCH REMOVE AND REPLACE SWITCH TOO CORRECT THE CONCERN

VERIFED CUSTOMERS CONCERN HAPENED BRAKE LIGHTS DIDNT FUNCTION INTERMITENTLY PROBLEM WITH BRAKE LIGHT SWITCH REPLACED BRAKE LIGHT SWITCH VEHICLE STILL INTERMITENTLY DIDNT COME OUT OF PARK HAD TO REMOV
RAN TRANS DIAG TESTS AND REPLACE STOP LIGHT SW
SOLINOID INOP STEERING COLUMN ASSEMBLY REMOVE AND INSTALL
10087 DIAG SHIFT PROBLEM WARR CHECK OUT FUSES, AHS BLOWN FUSE, REPALCE FUSE. FUSE POPED. CHECK WIRING HARNESS FOR ANY SHORTS OR LOOSE GROUNDS. DID NOT FIND ANY. CEHCK BRAKE SWITCH, WHEREIT HOOKS T
VERIRIFED THE CONCERN AND REPLACED THE BRAKE SWITCH AND VERIFIED THE REPAIR.
12B510 .2 12B51D2 .5 13480A .3 CC 42 CCC RH VERIFIED CONCERN HOOKED UP WDS AND CHECKED OPERATION OF BRAKE SWITCH FOUND IT WORKING ABOUT HALF THE TIME REPLACED
VERIFY CONCERN CHECK GEAR SELECTOR FOR SHORT TO GROUND PIN POINT TEST FOUND STOP LAMP SWITCH SHORTING REPLACED STOP LAMP SWITCH AND RECHECKED OK
GEAR SHIFTER WILL NOT GO INTO GEAR CHECKED BRAKE LAMP SWICTHSHORTED OUT R N R BRAKE LAMP SWITCH ROAD TESTED OK AT THIS TIME
BRAKE SWITCH NOT OPERATING PROPERSWITCH STOP LAMP REPLACE
CK CODES REPLC SW
REPLACED BRAKE STOP LIGHT SWITCH RAN PIN POINT DIAG
CC 42 CP 13480 BRAKE LIGHT SWITCH INOP,REPLACED SWITCH,RETEST
BRAKE LIGHT SWITCH INOP REPLACED BRAKE SWITCH.CLOSED BY WPI
CHECKED AND VERIFIED CONCERN PERFORMED PIN POINT TEST AND FOUND FUSE 34 AND 10 AMP BLOWN PERFORMED CIRCUIT TEST AND
DEFECTIVE STOP LAMP SWITCH BODY CHASSIS ELECTRICAL PIN POINT TEST DIAGNOSIS
VARIFIED CONCERN NO BRAKE LIGHTS PINPOINT TEST REPLACED BRAKE LIGHT SW
TEST AND REPLACE INOP STOP LAMP SWITCH.
DIAGNOSIS REPLACE BRAKE LIGHT SWITCH DUE TO OPE N,AND RETEST.
SWITCH STICKING
DIAG REPLACED BRAKE LIGHT SWITCH
RAN ELECTRICAL TEST AND RAN PINPOINT TEST AND FOUND INOP BRAKE LIGHT SWITCH AND TESTED
8788 WONT COME OUT OF PARK AT TIMES WARR REPLACE ERRATIC STOP LAMP SWITCH
STICKING. VERIFIED PROBLEM AND REPLACED THE BRAKE LIGHT SWITCH.
R&R FUSE. BLEW AGAIN. TEST SYSTEM, DISCONNECT PCM, SECURITY MODULE, ABS MODULE, BRAKE POSITION SWITCH, & GEM MODULE. RETEST EACH; STILL BLEW FUSES. HOOKED RESETABLE FUSE IN LINE TO RD GN WIRE AT BR
CHECK WONT COME OUT OF PARK PERFORM NGS TEST PINPOINT TEST FINAL QUICK TEST CHECK AND CHECK WIRING REPLACE BURNED OUT FUSE CHECK OK

CHECK WONT COME OUT OF PARK PERFORM NGS TEST PINPOINT TEST CHECK AND REPLACE BRAKE SWITCH AS PER TECH HOTLINE REPLACE FUSE CHECK OK
SHORTED RAN PINPOINT TEST FOUND BREAK LIGHT SWITCH NOT WORKING PROPERLY R&R BREAK LIGHT SWITCH
BKSP VEHICLE WOULD NOT DISENGAGE SHIFT INTERLOCK WHEN BRAKE WAS PUSHEDCHECKED FUSE 27 15A T 34 15A CHECKED FOR POWER ON CIRCUIT 810RC/LG NO POWER REPLACED BRAKE PEDAL SWITCH AND RETESTED
WILL NOT COME OUT OF PARK.CHECKED SYSTEMBRAKE LIGHT SWITCH IS BAD.R&R SWITCH AND RECHECKED OK 1
1 VERIFIED CONCERN CHECK STOP LAMP AND INTERLOCK SWITCH REPLACE STOP LAMP SWITCH AND RETEST VERIFIED REPAIR
1 REPLACED BRAKE SWITCH,RETEST OK.
VERIFY. ELECT DIAG..PINPOINT. FOUND BRAKE LIGHT SWITH BKDP AT TIMES. REPLACE SWITCH, RETEST ALL OK
NOT WORKING PROPERLY SWITCH STOP LAMP REPLACE
699 WILL NOT COME OUT OF PARK 41 WILL NOT COME OUT OF PARK. I PERFORMED AUTO TRANS SYSTEM DIAG. I TESTED THE SHIFT LOCK SOLMOID AND FOUND OK. I THEN TESTED ALL CIRS AND FOUND OK. I THEN TESTED TH
23 RAN PINPOINT TEST ON BRAKE LIGHT,R&R BRAKE LIGHT SWITCH TO REPLACE WITH NEW ONE TEST DROVE 4.6 C/P 13480 C/P 42
7301 W TEST & DO PINPOINT TEST REPLACE BRAKE LIGHT SWITCH RETEST OK
TEST DROVE VEH. WILL NOT COME OUT OF PARK ALL THE TIME, CKD FOR BRAKE LIGHTS OK, WENT TO PIN POINT TESTS A IN MANUAL, INSTALLED NEW SHIFT LOCK ACTUATOR, CKD OPERATION STILL HAS CONCERN, TRIED NEW BRAK
SWITCH BAD SWITCH STOP LAMP REPLACE
1 1999 BAD BRAKE SWITCH 13480A 0.3 T 0.3HRS R R SWITCH AND TESTED NORMAL JOB COMPLETE
6389 PINPOINT TESTED. FOUND BRAKE LIGHT WORK OK BUT NO SIGNAL SENT TO THE SHIFT LOCK SOLENOID. REPLACED BRAKE SWITCH AND REASSEMBLED. VEHICLE SHIFTS OUT OF PARK OK.
TEST DROVE AND FOUND BRAKE SWITCH NOT FUNTIONING PROPERLY R&R SWITCH
TEST OPERATION FOUND BAD BRAKE SWITCH REPLACED SWITCH
BRAKE LIGHT SWITCH BURNT OUT
7 BKDP 6.4 DIAGNOSE FOR AND REPLACE BRAKE LIGHT SWITCH RETEST OK
REPLACED BRAKE LIGHT SWITCH ERRATIC OPERATION
126 13480 FOUND OUT THAT F234 WAS OPENED DUE TO INTERNAL SHORT. REPLACED FUSE 10 AMP FUSE AND TRACED CIRCUIT AND FOUND OUT THERE WAS A SHORT IN THE BRAKE SWITCH. REPLACED BRAKE SWITCH. TEST AFTER
13480 BKDP CC 42 REPLACED BRAKE DK OFF SWITCH. RETEST
COULD NOT VERIFY IN LOT RAN DASH NOTHING FOUND DRV VEHICLE TO A HILL ENGAGED PARK AND DISENGAGED, BOTH UPHILL AND DOWNHILL HARDER WHEN PRKD DWNHILL NEED TO ENGAE PRKG BRK B/FRE RELEAS ING BRK PEDAL AFTR
BRAKE LIGHT SWITCH FAILED TEST PARK LOCK OUT AND REPLACE DEFECTIVE BRAKE LIGHT SWITCH.
INT; TIME TO REPLACE CLIP ON SWITCH WITCH
12 462 FOUND FUSE BLOWN REPLACEDC FUSE BLEW AGAIN TRACE WIRES WIRE WAS PINCHED ON COLUMN REPAIRE WIRING INSTALL FUSE STILL WONT MOVE REPLACED BR AKE LIGHT SWITCH OK 462
VERIFIED CUSTOMER CONCERN RAN PINPOINT TEST FOUND SHIFT INTERLOCK SOLENOID AND BRAKE LIGHT SWITCH BAD. REMOVED AND REPLACED BRAKE LIGHT SWITCH AND SHIFT SOLENOID
84 CK OUT REPL BRAKE SWITCH AND SHIFT SOLENOID 13480 42 12719 42
REPLACED THE BRAKE PEDAL SWITCH ASSY. RECHECKED OK
DIAG,REPLACED BRAKE LIGHT SWITCH,RETEST OK
INTERMITTENT OPEN BODY CHASSIS ELECTRICAL (BCE) TEST, BODY CHASSIS ELECTRICAL PINPOINT TEST REPLACE STOP LAMP SWITCH
R&R BRAKE SWITCH

HARD SHIFTING OUT OF PARK. TESTED AND REPLACED STOPLAMP SW ASSY TO CORRECT SHIFTER TO ENGAGE
209 BAD BRAKE SWITCH 28 VERIFIED VEHICLE WONT COME OUT OF PARK. CHECKED SYSTEM FUSES, ALL OK. CHECK BRAKE LIGHTS. OK. CHECKED FOR POWER TO SHIFT LOCK ACTUATOR. FOUND NO POWER FROM BRAKE LIGHT SWIT
VERIFIED KOER SHIFTER WILL NOT COME OUT OF PARK KOEO SHIFTER WILL COME OUT OF PARK PINPOINT TEST AFTER ALL PINPOINT TESTS R&R BRAKE LAMP SWITCH FOR BAD INTERNAL CONTACT RETEST OK M TIME REQUESTED FOR
REPLACE BRAKE LAMP SWITCH
PIN MISSING CK AND FOUND BRAKE LIGHT SWITCH LOOSE PIN WAS MISSING INSTALLED PIN.
VERIFY SHIFTER NOT COMMING OUT OF PARK. ELETRICAL SYSTEM DIAG AND FOUND OPEN STOP LAMP SWITCH. REPLACE STOP LAMP SWITCH AND RECHECK SHIFTER COMES OUT OF PARK OK.
BRAKE SWITCH RAN THROUGH DIAG REPLACED BRAKE SWITCH

VERIFIED CONCERN RAN PP TEST CHECKED ELECTRICAL CONNECTIONS ON BRAKE LIGHT SWITCH FOUND OUT OF ADJUSTMENT ADJUSTED SWITCH TESTED COULD NOT ADJUST ENOUGH R & R SWITCH RECHECKED OK

OPEN CIRCUIT 28 TEST TRACE AND CHECK WIRING REMOVE AND REPLACE SWITCH TEST OK
CC42813480 WARR REPLACED BRAKE LAMP SWITCH
TEST SYSTEM PINPOINT FOUND BRAKE SWITCH HAS INTERMITANT OPEN REPLACED SWITCH AND RETEST OK
OPEN SWITCH STOP LAMP REPLACE
TESTED AND REPLACED BRAKE LIGHT SWITCH.
SPW ON BRAKE LAMP ON AND OFF SWITCH VERIFIED CONCERN,DIAG DIAGNOSIS,PINPOINT TESTED, BRAKE LAMP SWITCH SHORTED INTERNALLY,KEPT BLOWING
INTERNAL DEFECT IN BRAKE SWITCH SWITCH STOP LAMP REPLACE
DIAG RR PARK BRAKE SWITCH IGN
2999 VERIFIED CUST CON CKED HCS QUICK TEST NO CODES PRES PERFROMED PINPOINT TEST FOUND BRAKE SW BAD REMOVED AND REPLACED CKED OPER OK ATT
STOP LAMP SWITCH IS DEFECTIVE, REPLACE WITCH.
VERIFIED CONCERN, INTERMITTENTLY SELECTOR WOULD NOT GO INTO REVERSE WDS TEST, NO CODES. CARRIED OUT PINPOINT TEST FOUND SWITCH SLOW TO RESPOND IF AT ALL WHILE MONITORING PIDS. R&R SWITCH TEST OK
BOO SITCH SHORTED DID PPR,REPLACE BOO SITCH PER PPT,TECH 696
STEERING COLUMN DASH DIAGNOSIS,INSTALLED CLIP AND SPACER ON BRAKE SWITCH(PARTS MISSING).
BRAKE SWITCH LEFT HANGING. REINSTALLED BRAKE SWITCH AND BUSHING. REPLACED R PIN.
BKDP WIRING ASSEMBLY REPAIR
VERIFIED CONCERN NGS DIAG MONITOR PIDS FOR BOO AND REPLACE BRAKE LAMP SW RECHECK OPERATION AND RETEST SYSTEM OK
STOP LAMP SWITCH BKDP SWITCH STOP LAMP REPLACE
REMOVE STEERING COLUMN TO INSPECT SHIFT LEVER, USE DVOM TO CHECK VOLTAGE AT SHIFT INTERLOCK, 8V AS PUSH DOWN ON PEDAL < 12V AND THE NEXT TIMEPUSH ON BRAKE PEDAL 12V INITIALLY. R&R BOO SWITCH
28 WARR CHECK OUT TEST CIRCUIT REPLACE BRAKE LITE SWITCH

FAULTY BRAKE PEDAL POSITION SWITCH REPLACE WITH NEW
180 VERIFY OPERATION WONT COME OUT PARK CHECK CIRCUIT 9 10 LG OG OG LB NO BRAKE LIGHTS CHECK CIRCUIT AT BRAKE LIGHT SWITCH FOR POWER CIRCUIT 1001 WH YE OK CHECK CIRCUIT RD LG NO POWER AT TIMES FOU
PERFORM BCE DIAGNOSIS, PERFORM PINPOINT, N39 DCL, FOUND OPEN CIRCUIT IN BRAKE LAMP SWITCH, REPLACE SWITCH, RECHECK, OKAY.
PERFORM ELEC PINPOINT TEST, AND REPLACE BOO SWITCH. RETEST
R&R BRAKE LIGHT SWITCH
CK VERIFIED WONT COME OUT OF PARK,TRACED TO FAU LTY BRAKE LIGHT SWITCH REPLACED SWITCH
VERIFIED CONCERN, HARD TO DUPLICATE. R AND R STOP LAMP SWITCH LOWER STEERING COLUMN REPLACE SHIFT INERLOCK
STEERING COLUMN DASH SWITCH DIAG TO TEST THE SHIFT LOCK SYSTEM FOUND STOP LAMP SWITCH TO HAVE OPEN REPLACED SWITCH AND RETESTED OK ROAD TESTED OK
2918 WONT ALWAYS COME OUT OF PARK WARR. INSPECT BK/LIGHT SW. . OPERATION INTERMITTANT R&R BRK. LIGHT SW. RE TEST NUMEROUS TIMES , OK
CHECKED AND WILL NOT COME OUT OF PARK,ORDERED BRAKE LIGHT SWITCH REMOVED AND REPLACED BRAKE LIGHT SWITCH AND OPERATING NORMAL
TEST AND REPLACE BRAKE LIGHT SWITCH
13488 28 MD 8606 VERIFY INTERMITTANT CONCERN. BCE DIAG. PINPOINT TEST. FOUND INTERMITTANT OPEN IN BRAKE SWITCH. R&I NEW SWITCH,
DEFECTIVE BRAKE LAMP SWITCH, CHECKED AND REPLACED BRAKE LAMP SWITCH.
FAULTY BRAKE LITE SWITCH M TIME TO DIAGNOSE AND PINPOINT INTERMITTANT SWITCH OPERATION, INSTALL AND RETEST OK.
INSPECTED AND FOUND STOP LIGHT SWITCH AND CLIP BAD. REMOVED AND REPLACED, ALL OK
208 TEST SWITCH AT BRAKE PEDAL REMOVE AND REPLACE SWITCH AND RECK.OK
42 13488 P01 CK OUT AND REPLACE STOP LIGHT SWITCH
TECH 127 VERIFIED CONCERN. RAN OASIS, NO CONCERNS FOUND. PINPOINT TEST A1, CK POWER, GROUND AND CONTINUITY, ALL OK. REPLACE SHIFT LOCK ACTUATOR AS PER PINPOINT TEST. REMOVED STEERING COLUMN AND REPLAC
9812 PERFORMED STR COLUMN AND DASH ASSY SWITCHES DIAG, P P TEST, REPLACED BRAKE LAMP SWITCH RETEST CK OK CC28
TEST & REPLACE BRAKE LIGHT SWITCH
CHECKED STOP LAMP SWITCH CHECKED WIRES AND CONNECTORS NO PROBLEM FOUND
14888 TEST BRAKE LIGHT SWITCH AND SYSTEM FOUND BAD SWITCH REPLACE SWITCH AND RETEST OK
21242 RUN HIGH CODE B1342 BOO SWITCH FAILURE RUN PINPOINT TESTS AND REPLACE BOO SWITCH RETEST AND CLEAR CODES OK
SECURE STOP LIGHT SWITCH BRACKET
VERIFY CONCERN FOUND REAR BRAKE LIGHT INOP AT TIME & SHIFTER WILL NOT GET OF GEAR CHECK ALL FUSE & CHECK LINKAGE FOUND BOO SWITCH NOT RESPONDING AT TIME CHECK HARNESS PASS,R,REPLACE BOO SWITCH RE TEST
CCC P01 VERIFIED CONCERN. MONITORED PIDS AND FOUND BOO SWITCH OPERATING. PUSHED DOWN A LITTLE HARDER ON PEDAL AND IT WOULD COME OUT OF PARK. REPLACED BRAKE ON OFF SWITCH AND VERIFIED REPAIR
RAN PIN POINT FOUND BRAKE ON OFF SWITCH BAD R R SWITCH RETESTED AOK
INSPECTED AND FOUND A LOOSE WIRE TO THE BRAKE LIGHT SWITCH REPAIRED WIRE AND RETESTED
CHECK PROBLEM OUT/REPLACE PARK BRAKE SWITCH ASSY
CLIP WAS MISSING
REPLACE THE STOP LAMP SWITCH
25 WILL NOT SHIFT FROM PARK INSPECTED AND FOUND BRAKE LIGHT SWITCH RETAINING CLIP MISSING AND SWITCH CAME OFF BRAKE PEDAL REINSTALLED SWITCH AND INSTALLED NEW RETAINING CLIP RETESTED OK.
FOUND VEHICLE WONT COME OUT OF PARK. FOUND STOP LAMP SWITCH BAD. REPLACE SWITCH, RECHECK OPERATION, OK.

CC 28 BASE PART# 13480 VARIFIED CONCERN, ALSO NOTICED THAT THE BRAKE LIGHTS DID NOT WORK. PIN POINT TESTED BRAKE SWITCH AND FOUND THAT IT HAD
17 INT OPEN IN BRAKE LT SWITCH DIAG SHIFT LOCK NOT RELEASING, NO SIG FROM BRAKE SW REPLACE BRAKE SW & RETEST OK OPERATION OK.
BASIC ELECTRICAL TEST REPLACE BRAKE SWITCH
BRAKE LIGHT SWITCH DEFICTIVE,OPEN CIRCUIT. REPLACE DEFICTIVE BRAKE LIGHT SWITCH,BRAKE LIGHTS WERE INOP AND GEAR SHIFTER WOULD NOT COME OUT OF PARK.
INSPECT THE SHIFT LOCK CONCERN CKED THE FUSE, GROUND AND SWITCH AND R&R SWITCH
TEST OUT REPLACE SWITCH
INSPECT SHIFT LOCK OPERATION,WORKING OK AT THIS TIME,INSPECT BRAKE LIGHT OPERATION,INSPECT FUSE F2.16,INSPECT C270 AND
N39 TEST,NO CODES,SELECT SYSTEM DIAG,PINPOINT TESTED,NECESSARY TO REPLACE BRAKE LIGHT SWITCH INOP RETESTED
SHIFTER WILL NOT COME OUT OF PARK UNLESS BRAKE PEDAL IS DEPRESSED DOOR LOCKS WILL NOT CYCLE TO LOCK UNLESS GEM MODULE SEES BRAKE PEDAL RELEASED RAN VIN OVER OASIS NO MESSAGES PINPOINT TESTED TESTED HA
FOUND VEHICLE HAS NO BRAKE LIGHT OPERATION CHECKED FOR POWER AT BRAKE SWITCH POWER CHECKED OK TEST BRAKE SWITCH AND FOUND OPEN IN SWITCH REPLACED SWITCH AND ROADTEST OK
CCC P01 CC 42 CAUSAL 13488 VERIFY CONCERN. FOUND BRAKE PEDAL POSITION SENSOR SWITCH IS INTERMITTENTLY INOP. REPLACED SWITCH AND VERIFIED NORMAL SHIFTER OPERATION.
BAD CONNECTION AT BRAKE LIGHT SWITCH REPAIRED CONNECTION.
BRAKE LIGHT SWITCH INOP AT TIMES TEST CIRCUITS FOUND BRAKE SWITCH TO BE INTERMITTANT REPLACED SWITCH AND RETESTED;OK
TESTING FOUND FAULTY STOPLIGHT SWITCH
ELECTRONIC TRANSMISSION DIAGNOSIS DIAGNOSIS
VERIFIED CONCERN. FOUND LOOSE CONNECTOR TO SHIFT INTERLOCK CONTROL. REPAIRED WIRING PROBLEM. R & CHECKED, ALL O.K. AT THIS TIME.
CK OUT WIRE UNHOOK BY BRAKE SWITCH
VERIFIED CONCERN, FOUND FAULTY SHIFT LOCK ACTUATOR REPLACED ACTUATOR
STOP LITE SWITCH INOP AT TIMES REPLACED SWITCH FOR TRANS CONCERN.TEST AFTER SHIFTER WORKS NORM NOW
DIAGNOSIS TIME TESTED AND REPLACED BRAKE LIGHT SWITCH RETEST 6784
BRAKE LIGHT SWITCH STEERING COLUMN DASH SWITCH ASSEMBLIES DIAGNOSIS
DIAG CONCERN NO COMING OUT OF PARK PIN POINT TEST REPLACE BRAKE SWITCH
25 TRYED SHIFT HANDLE WOULD NOT MOVE CHECK BRAKE LIGHT SWITCH FOUND CONNECTOR LOOSE REFASTEN CONNECTOR AND TRY SHIFT HANDLE WORKS OK
VERIFY CONCERN FOUND BRAKE SWITCH AT FAULT. REPLACE AND RECHK OAKY.
TEST AND REPLACE SHORTED BRAKE SWITCH
GEM MODULE CHECK PASS SEC CHECK PASS CHECK PIDS ORDERED BRAKE SWITCH DCL REPLACED BRAKE SWITCH RE CHECK PASS
CONFIRM TEST BRAKE RATCHET NOT WORKING PROPERLY REC TO REPLACE SWITCH, RNEC TO REPLACE SWITCH RETEST
4008 DIAG SHIFT LOCK RUN/PINPOINT ON HARNESS REPLACE STOP LITE SWITCH HAVE TO PUSH TOO HARD TO RELEASE SHIFT LOCK

SWITCH INOP NOT SHIFTING OUT PARKSWITCH STOP LAMP REPLACE
FOUND BRAKE LIGHT SWITCH MALFUNCTIONING; AND SOLENOID REPLACED SWITCH AND SOLENOID; RETESTED BY SERVICE DIRECTOR; R&R STEERING COLUMN TO LUBE SHIFT SHAFT INSIDE COLUMN
465 BRAKE SWITCH INTERNAL OPEN CIRCUIT INSPECT AT TEST BRAKE SWITCH AND CIRCUITS. PERFORMED PINPOINT TEST.REPLACED BRAKE SWITCH AND RETEST.OK.
VERIFIED CONCERN AND PERFORMED PIN POINT TESTS. REPLACED BRALE LAMP SWITCH. MT TIME TO PERFORMED PIN POINT TEST IN SHOP MANUAL.
VERIFIED VEHICLE WONT SHIFT OUT OF PARK. CHECK BRAKE LIGHTS TO VERIFY PROPER OPERATION. CHECKED ALL FUSES. CHECKED FOR SIGNAL AT SHIFT INTERLOCK SOLENOID. DETERMINED NO SIGNAL. CHECKED WIRING. FOUND S
13480A 12080 VERIFY CONCERN . TRANS SHIFTER HARD TO REMOVE FROM PARK AT TIMES . PERFORM ELECTRICAL DIAG . MONITOR BRAKE SWITCH
REPLACE STOP LAMP SWITCH ASY
VERIFY CONCERN, REPLACE BRAKE LIGHT SWITCH
DIAG AND REPLACE BRAKE SWITCH,RETEST 8280
VERIFIED CUSTOMERS CONCERN REPLACED BRAKE LIGHT SWITCH
12 OPEN CIRCUIT 12880 D2 3614A 12200A 1.8 R AND I STEERING COLUMN TEST SHIFT LOCK ACTUATOR FOUND NO VOLTAGE AT ACTUATOR PINPOINT TESTS TO BRAKE LAMP SWITCH CONNECTOR NOT MATED TO BRAKE LAMP SWITC

CK. FOR CONCERN. FOUND THAT TRUCK NOT WANTING TO COME OUT OF GEAR AT TIMES. DID PIN POINT TEST AND FOUND CONCERN TO BE IN BRAKE LIGHT SWITCH , REMOVE BRAKE LIGHT SWITCH AND INSTALL NEW SWITCH, ALL O.K
CHECK AND REPLACE BRAKE LIGHT SWITCH AND SHIFT LOCK ACTUATOR
BRAKE LAMP SWITCH INTERMITTANT OPEN INTERNALLY REPLACED BRAKE ON AND OFF SWITCH RETEST
WEAK CONNECTION REPAIRED WEAK CONNECTORS AT BRAKE SHIFT INTER LOCK
FAULTY BRAKE LAMP SWITCH SWITCH STOP LAMP REPLACE
CHECK FOR HARD TO GET OUT OF GEAR, ADJUSTED BRAKE SWITCH, RE TEST, OK.
WONT COME OUT OF PARK SWITCH STOP LAMP REPLACE
BRAKE SWITCH AND OPEN WIRE EEC (QUICK TEST) DIAGNOSIS, RECORDER MONITOR ROAD TEST, REPLACE STOP LAMP SWITCH REPAIR OPEN IN WIRE. R&R STEERING COLUMN FOR ACCESS AND REPLACE SHIFT MOTOR
RUN DASH SWITCH DIAG. REPAIR LOOSE CONNECTOR AT BRAKE LIGHT SWITCH.
REPL BRK SWITCH AND RECK CIRCUITS; STILL HAS PROB.NEEDS FUSE BOX. AS PER STORE OWNER OK TO INST F USE BOX FROM STK UNIT TO GET CUST ON THE ROAD. XREF RO 172467
289 CHEKC SHIFTER LOCK OUT CIRCUIT TRACE CIRCUIT 810 ACCESS DASH AND REPAIR WIRE CONNECTOR AT BRAKE PEDAL POSITION SWITCH CONNECTOR 278 CIRCUIT 810 RD LG CONNECTOR NOT FULLY SEATED
BRAKE LIGHT SWITCH STICKING REPLACED SWITCH O.K. NOW.
FAULTY BRAKE LAMP SWITCH SWITCH STOP LAMP REPLACE
4465 INOP. SHORTED SWITCH BLOWN FUSES. NGS TESTING OF BCE CIRCUITS. CODE B1372 PRESENT PINPOINT TESTING. R R STEERING COLUMN SHROUD, FOR ACCESS. REPLACE SHORTED STOPLAMP SWITCH. REPLACE TWO BLOWN F
1 REPLACED BRAKE SWITCH
INTERNAL SWITCH STOP LAMP REPLACE
CHECKED AND REPLACED BRAKE LAMP SWITCH
CHECKED AND PERF. WDS DIAG. NO CODES FOUND IN SYS.PERF. PIN POINT TEST AND REPLACED FAULTY BRAKE LAMP SHIFT INTERLOCK SWITCH
WIRING PULLED LOOSE AT STOP LIGHT SWITCH AND FUSE BLOCK. REINSTALL STOP LIGHT WIRING AT FUSE BLOCK. INSPECTED, FOUND NO POWER OUT TO STOP SHIFT INTERLOCK SOL. FROM BRAKE LIGHT SWITCH. FOUND BRAKE SWIT
VERIFIED CONCERN REPLACED BRAKE LIGHT SWITCH AND FUSE
TESTED VEHICLE FOR OPERATION. PERFORMED DIAGNOSTIC TESTS ON SHIFT INTERLOCK. ACCESSED AND REPLACED SHIFT INTERLOCK SOLENOID. INSTALLED NEW BRAKE LAMP SWITCH. RETESTED FOR OPERATION OK.
1 CHECKED AND REPLACED BRAKE LIGHT SWITCH & WASHED VEHICLE
170 BCE DIAG PIN PT R AND I COLUMN FOR ACESS TO TRACE FOUND NO PWR GOING TO SHIFT LOCK ACTUATOR PIN PT FOUND FAULT BRAKE PEDAL SWITCH REPLACE AND RETSET ALL OK AT THIS TIME BRAKE LIGHTS WORK ALL OK
CK FUSES FOUND FUSE #44 SAP BLOWN CK FOR SHORT TO GROUND FOUND STOP LT SWITCH INTERNAL SHORT TO GROUND REPLACE STOP LT SWITCH REPLACE FUSE CK OPERATION OK
8 VERIFIED CONCERN,WILL NOT SHIFT OUT OF PARK PERFORMED SELFTEST NO CODES.REMOVED UPPER AND LOWER STEERING COLUMN TRIM PANELS.CHECKED FOR POWER AND GROUNDS AT SHIFT INTERLOCK,FOUND POWER CIRCU
1362 CHECK SYSTEM FOUND OPEN IN BRAKE LIGHT SWITCH . R & I AND REPLACE SWITCH. RETEST SYSTEM. OK. 42 13480 .
FOUND BRAKE LIGHT SWITCH STICKING SOMETIMES
SWITCH LOOSE ADDITIONAL MISC. REPAIRS
87 ELEC DIAG MONITRED PIDS PERFORMED PIN POINT TESTS INSPECTED WIRING CONNECTOR R R BRAKE SWITCH AN REPLACED WITH NEW ONE RETESTED OK
BOO SWITCH WAS OFF THE PEDAL. REINSTALLED BOO SWITCH.RETESTED ALL GOOD
VERIFY. CK SHIFT INTERLOCK OPERATION AND BRAKE LIGHT CIRCUIT. SWITCH WILL NOT ALWAYS ENERGIZE SHIFTINTERLOCK. BRAKE LIGHTS OPERATE NORMALLY. CK OASIS AND CALL TECH HOTLINE FOR INFO (#EECY01) SUBST

TECH_TXT2
EDITED OK MT TO DIAGNOSE

XXXXXXXXXXXXXXXXXXXXXX

R CONSULT WITH JP. RETEST FOUND CONCERN NO LONGER HAPPENS AT THIS TIME. THANKS JEFF RUSH 4##

TTANTLY WORKING.CALLED TECH HOTLINE 2GOHP021.TOLD TO CHECK SPLICES IN CIRCUIT 810.INSTRUMENT PANEL WIRING HAS A OPEN CIRCUIT.RAN A NEW WIRE AROUND SPLICE AND RETEST OPERATION OK.M TIME FOR NO LABOR OP

, REPLACED, RETEST, OK

RED BROKEN WIRE RETEST SHIFT ACUATOR WO RKING NORMAL,NECESSARY TO REPLACE BRAKE SWITCH AR CRUZ CUT OFF SWITCH DU TO SHORTED WIRE,VEHIC LE WORKING PROPERLY

AKE SWITCHRETESTED ALL OK OPERATING TO SPECS

ER TO PIN 3 CIRCUIT 22 LBK WIRE RETEST PUSH 4 GAIN ACCESS TO LOWER DASH AND KICK PANEL RER FUSE BLOCK DISCONNECT CONNECTOR 270A OHM CIRCUIT

REPAIRED TERMINAL IN BRAKE SWITCH CONNECTOR AND REMOVED AND REPLACED BRAKE SWITCH AND SHIFT LOCK SOLENOID. NO OTHER PROBLE FOUND AFTER REPAIR COMPLETED. PROBLEM WAS IN CIRCUIT

NDID. CHECK POWER AT BRAKE LIGHT SWITCH TO RELEASE,NONE,REPLACE SWITCH AND RETEST. WORKS NOW.

R003-086 4631

NG,RE ASSEMBLED AND ADJUSTED BRAKE SWITCH,NOW SHIFTING THROUGH ALL GEARS NORMALLY

TO REPAIR. SPLICE 100 ALONG THE FIRE WALL. PARTIAL CONNECTION. REPAIRED. ACTUATOR ALSO DEFECTIVE. REPLACE ACTUATOR.

E LOWER KICK PANEL BELOW

O THE PEDAL WAS CRACKED. REPALCE SWITCH. AFTER REPLACEING CRACKED SWITCH TRACKED DOWN LOCK ACTUATOR FOR SHORT. WOULD NOT DISENGAUE SHIFT LEVER. R AND R STEERING COLUMN AND REPLACE

AKE LIGHT SWITCH, DISCONNECT C212; STILL BLEW FUSE. DISCONNECT C140, SHORT OUT. BACK PROBE WIRE. R&I DIST BOX; CHAFFED WIRES FROM DIST BOX AT DIST BRACKET. REPAIR, RETEST, OK. REINSTALL ALL MODUL

E BRAKE ON OFF SWITCH AND FOUND IT TO BE SHORTED INTERNALLY. I THEN REPLACED THE BRAKE ON OFF SWITCH AND RETESTED ALL IS WELL.

E LIGHT SWITCH FROM NEW TRUCK, FIXED CONCERN. REPL BRAKE LIGHT SWITCH, M TIME IN FOR REPL SHIFT LOCK ACTUATOR AND PIN TESTS

REPAIR OK. REINSTALLED SHIFT INDICATOR PRNDLE DUE TO IT NOT BEING IN PLACE.

ENGAGING TRANS IN P THIS IS NORM OP AND

CH TO LOCK ACTUATOR. PERFORMED WIRING PINPOINT TEST AND FOUND A BAD BRAKE SWITCH. REPLACED THE BRAKE SWITCH. RETESTED OK.
INACCURATE PINPOINT TEST IN MANUAL

NO CODES

4693 688-0002

ND SHORTED BRAKE LIGHT SWITCH REPLACE BRAKE LIGHT SWITCH REVERIFY COMES OUT PARK

ED SWITCH, PROBLEM STILL THERE. INSTALL BRAKE ON OFF SWITCH, RETEST. OK AT THIS TIME.

SYST PARKFOUND AFTER SEVERAL ATTEMPT OF SHIFTING FOUND LEVER ACTUATOR NOT REPONDING R.R STERING COVER TO BE ABLE TO REMOVE STERING COVER TO BE ABLE TO R.REPLACE STERING LOCK ACTUATOR CHECK SYST TO VI

RNESS AND SWITCH DIAG NEED TO ORDER BRAK

RAKE SWITCH CONNECTOR DAMAGED. REPAIRED TERMINALS AND RECHECKED. VERIFIED VEHICLE SHIFTING OUT OF PARK.

H REMICLINE CONNECTOR RETEST SHIFT LOCK ACTUATOR TEST OK BRAKE LAMPS OK QC CHECKED BY TECH

. CC 42

USES. CLEAR CODE. RETEST BCE CIRCUITS. TO

CK INTERNAL SHORTED. REPLACED SWITCH, SYSTEM OK AT THIS TIME.

NTERM OPEN.PERFORMED PINPOINT TESTS.FOUND BRAKE LAMP SWITCH INTERM OPEN ON CIRCUIT.REPLACED BRAKE LAMP SWITCH.VERIFIED REPAIR,OK

TUTE KNOWN GOOD SWITCH PER HOTLINE, OK. REPLACED BRAKE LIGHT SWITCH AND RECHECK OPERATION OK. APPROXIMAL DIAG REPAIR TIME FOR INTERMITTENT CONCERN

CUST_TXT	AREA_CD	CNTRY_SOLD	VRG_CD	AWS_VL_CD	VRT_CD	TSL_FLAG
CUSTOMER STATES GEAR SELECTOR LOCKS IN PARK MODE AT TIMES HAVE TO PLAY WITH TO DISENGAGE HEARS CLICK SEE NOTE REPORT	201	USA	V47	F7	511	
	763	USA	V47	F7	511	
CUSTOMER REPORTS TRANS VERY HARD OR WONT COME OUT OF PARK AT	807	USA	V47	F7	511	B
STILL NOT COMING OUT OF PARK PROPERLY SHOP FOREMAN VERIFIED COMPLAINT	724	USA	V47	F7	511	
CUST STATES HAS TO STRUGGLE TO GET SHIFTER OUT OF PARK,BLAMS BRAKE,OR JIGGLES MODULE UNDER DASH TO GET FREE	608	USA	V47	F7	511	
WILL NOT COME OUT OF PARK	801	USA	V47	F7	511	
SHIFTER SOMTIMES WILL NOT GO INTO GEAR	385	USA	V47	F7	511	
CHK SHIFTER WONT COME OUT OF PARK NO BRAKE LIGHTS ABS	316	USA	V47	F7	511	
C S STILL WILL NOT SHIFT OUT OF PARK AT TIMES. HAS TO SMASH BRAKE PEDAL TO FLOOR IN ORDER TO SHIFT OUT OF PART. HISTORY	360	USA	V47	F7	511	
STATES SHIFTER WONT COME OUT OF PARK, ADVISE.	708	USA	V47	F6	511	
CHECK CAUSE OF NOT BEING ABLE TO GET OUT OF PARK AT TIMES	509	USA	V47	F7	511	
WILL NOT COME OUT OF PARK	302	USA	V47	F7	511	
WHEN TRYING TO PUT INTO DRIVE FROM PARK SHIFT LEVER WILL HANG UP AT TIMES IT TAKES # 10 TIMES TO GET IN INTO DRIVE CHECK AND REPORT	580	USA	V47	F7	511	
C# VEHICLE WILL NOT SHIFT INTO PARK	469	USA	V47	F7	511	
CUSTOMER STATES THE TRUCK WILL NOT COME OUT OF PARK.	712	USA	V47	F7	511	
C # CAR NOT PUT INTO GEAR FROM PARK. BRAKE LIGHTS DO NOT WORK.	530	USA	V47	F7	511	
P01 SHIFT HISTORY (CHV) CONTINUES TO HAVE INTERMITANT CONCERN FOR NOT BEING ABLE TO SHIFT OUT OF PARK, OWNER HAS	616	USA	V47	F7	511	
REPAIR WONT COME OUT OF PARK,HAVE TO PUT IN NETURAL TO CRANK	285	USA	V47	F7	511	
CUSTOMER STATES THAT VEHICLE WILL NOT SHIFT OUT OF PARK	715	USA	V47	F7	511	
CHECK BRAKE PEDAL HAS TO BE PUSHED HARD	810	USA	V47	F7	511	
WONT COME OUT OF PARK	410	USA	V47	F7	511	
STUCK IN PARK,THEY BROKE IT,W SHIFT WITHOUT STEPPING ON BRAKE	316	USA	V47	F7	511	
P01 C S VEHICLE HARD TO GET OUT OF PARK AT TIMES	251	USA	V47	F7	511	
CUST STATES SHIFTER STICKS IN PARK TECH 044	310	USA	V48	F7	511	
CUSTOMER STATES: CANT GET SHIFT GEAR OUT OF PARK	716	USA	V47	F5	511	
CK CUSTOMER CANNOT GET TRUCK OUT OF PARK, TOW IN PARKED ON SERVICE DRIVE. CUSTOMER IS IN LOANER CAR.	331	USA	V47	F8	511	
CUSTOMER STATES THE SHIFT LEVER STICKS IN PARK AT TIMES. INSPECT AND ADVISE.	580	USA	V47	F5	511	
CK SHIFTER WONT COME ALL THE WAY BACK	450	USA	V47	F7	511	
CK SHIFTER HARD TO GET OF GEAR AT TIMES	973	USA	V47	F7	511	
WILL NOT COME OUT OF PARK GETS STUCK IN GEAR	308	USA	V47	F6	331	
WILL NOT RELEASE OUT OF PARK INTERMITTANT PLAYED WITH BRAKE SWITCH THEN RELEASED	580	USA	V47	F7	511	
C S HE COULD NOT GET VEHICLE OUT OF PARK...AND THEN SUDDENLY DRIVER SIDE REAR BRAKE LINE BLEW	794	USA	V47	F8	511	
CUSTOMER STATES THAT TRANS WILL *NOT* COME OUT OF PARK AT TIME	234	USA	V47	F7	511	
VEH WILL NOT SHIFT OUT OF PARK WHEN RUNNING	715	USA	V47	F5	511	
SHIFTER WILL NOT COME OUT OF PARK	318	USA	V47	F5	511	
TRANS WONT COME OUT OF PARK DELAYS INTO GEAR	580	USA	V47	F7	511	
INTERM WONT COME OUT OF PARK NO PATTERN TO IT	757	USA	V47	F5	511	
HARD TO GET OUT OF PARK NEED TO PUSH PEDAL HARD TO FLOOR	419	USA	V47	F5	511	
CUSTOMER STATES VEH WILL NOT COME OUT OF PARK.	341	USA	V47	F8	511	
CUSTOMER STATES HAVE TO PUSH HARD ON BRAKE PEDAL TO GET OUT OF PARK	814	USA	V47	F7	511	
S W CK ADN ADV TOW IN VEH WILL NOT SHIFT OUT OF PARK	348	USA	V47	F5	511	
CHECK ADVISE HARD TO GET OUT OF PARK	984	USA	V47	F5	511	
AT TIMES UNABLE TO REMOVE FROM PARK	847	USA	V47	F5	511	
TRUCK WILL NOT COME OUT OF PARK	617	USA	V47	F7	511	
CUSTOMER STATES VEHICLE WILL NOT COME OUT OF PARK INTERM.	291	USA	V47	F5	511	
(P01)THE VEHICLE IS HARD TO SHIFT OUT OF PARK	381	USA	V47	F7	511	
DIAG HARD TO GET OUT OF PARK	985	USA	V47	F7	511	
P01 CUST STATES HARD TO GET OUT OF PARK INTERMITANTLY	382	USA	V47	F7	511	
CUSOMER STATE BRAKE PEDAL HAS TO BE PLAYED WITH TO GET VEHICLE OUT OF PARK	356	USA	V47	F7	511	
CHECK VEHICLE WILL NOT COME OUT OF PARK	704	USA	V47	F5	511	
HARD TO SHIFT OUT OF PARK	588	USA	V47	F7	511	
CUST STATES SHIFT LEVER HARD TO GET INTO GEAR	413	USA	V47	F7	511	
	518	USA	V47	F7	511	
CUST STATES VEHICLE WON T COME OUT OF PARK	972	USA	V47	F5	511	
CUST STATES SHIFTER STICKS IN PARK	588	USA	V47	F5	511	
SHIFTER BINDS UP COMING OUT OF GEAR.	930	USA	V47	F5	511	
CUSTOMER STATES THAT HE CAN NOT SHIFT FROM PARK,INTERMITTENT LY	918	USA	V47	F5	511	

CUST STATES KEY STUCK IN IGNITION	201	USA	V47	F7	511
L16 CK,GEAR SHIFTER WILL NOT WORK PROPERLY.	214	USA	V47	F6	511
CHECK GEAR SHIFT LEVER WONT COME OUT OF PARK	936	USA	V47	F6	511
CHECK HARD TO MOVE SHIFTER OUT OF PARK	938	USA	V47	F5	511
ALSO STATES SHIFTER WONT COME OUT OF PARK AT TIMES	315	USA	V47	F7	511
CUSTOMER STATES THE VEHICLE WONT COME OUT OF PARK	416	USA	V47	F7	511
VEHICLE WONT SHIFT OUT OF PARK	936	USA	V47	F6	511
OWNER CLAIMS THAT TRANS HAR TO GET OUT OF PARK.	736	USA	V47	F8	511
CUST STATES THAT THE TRUCK WILL NOT COME OUT OF PARK	915	USA	V47	F8	511
CUST STTES VEH WILL NOT COME OUT OF PARK	354	USA	V47	F5	511
	249	USA	V47	F5	511
STICKS IN PARK AT TIMES	872	USA	V47	F7	511
	910	USA	V47	F6	511
CUSTOMER SAID TRUCK IS HARD TO SHIFT OUT OF PARK	407	USA	V47	F5	511
CUST STATES AT TIMES VEH WILL NOT COME OUT OF PARK	869	USA	V47	F6	511
CUSTOMER STATES SHIFTER WILL NOT COME OUT OF PARK OC P01	706	USA	V47	F7	511
CUST STATES INTERMITT FUSE WILL BLOW AND IS UNABLE TO GET TRANS SHIFT LEVER OUT OF PARK OR ENGAGE 4X4 UNLESS REPLACE FUSE	970	USA	V47	F7	511
CUSTOMER STATES THAT THE VEHICLE WILL NOT SHIFT OUT OF PARK CHECKAND ADVISE	902	USA	V47	F7	511
CUSTOMER STATES VEH WONT SHIF OUT OF PARK	407	USA	V47	F7	511
CHECK SHIFTER,DOSENT COME OUT OF GEAR ADVISE	647	USA	V47	F7	511
CUST STATES INTERMITT THE VEH DOES NOT WANT TO COME OUT OF PARK,HAVE TO WIGGLE THE KEY AND SHIFTER TO GET IT TO POP	710	USA	V47	F6	511
CUSTOMER STATES CANNOT SHIFT FROM PARK	610	USA	V47	F7	511
TOW IN, VEHICLE WILL NOT GO INTO GEAR	973	USA	V47	F6	511
VEHICLE WILL NOT COME OUT OF GEAR	281	USA	V47	F7	511
CUSTOMER STATES VEHICLE WONT SHIFT FROM PARKING UNLESS IS IN NEUTRAL WHEN START.	603	USA	V47	F7	511
THE SHIFTER WILL NOT COME OUT OF PARK INTERMITTEMTLY.	917	USA	V47	F6	511
CUST STATES THAT TRUCK WILL NOT COME OUT OF PARK	203	USA	V47	F6	511
CHECK FOR REASON THE TRANS WILL NOT SHIFT OUT OF PARK	703	USA	V47	F7	511
LOCKS IN PARK	797	USA	V47	F7	511
CAN NOT PULL SHIFT LEVER OUT OF PARK	606	USA	V47	F7	511
VEHICLE WILL NOT COME OUT OF PARK.	913	USA	V47	F5	511
CUSTOMER STATES THAT VEHICLE WILL NOT COME OUT OF PARK	304	USA	V47	F6	511
GEAR SELECTOR WILL NOT REMOVE FROM PARK TSB	973	USA	V47	F5	511
C S WONT COME OUT OF PARK AT TIMES	479	USA	V47	F7	511
CUST STATES GEAR SHIFTER DOES NOT COME OUT OF PARK	732	USA	V47	F7	511
VEHICLE WILL NOT GO FROM PARK INTO GEAR	607	USA	V47	F7	511
	689	USA	V47	F7	511
CUSTOMER CONCERN OF TRUCK NOT COMING OUT OF PARK INTERMINTALY	649	USA	V47	F7	511
CORRECT HARD TO GET OUT OF PARK.	193	USA	V47	F7	511
VEH WONT SHIFT OUT OF PARK AT TIMES	330	USA	V47	F5	511
CHECK SHIFT INNER LOCK ON SHIFTER IKOP WILL NOT COME OUT OF GEAR	383	USA	V47	F7	511
CST STATES THE VEHICLE WILL NOT COME OUT OF PARK.	435	USA	V47	F7	511
OFFICER COULD NOT GET VEHICLE TO SHIFT FROM PARK. CALLED ROADSIDE GOT TO SHIFT. NOW NO POWER WINDOWS	435	USA	V47	F8	511
CUST STATES SHIFTER WONT COME OUT OF PARK CK AND ADV	986	USA	V47	F6	511
CUST STATES SHIFTER IS GETTING STUCK CK AND ADV	858	USA	V47	F5	511
CHECK FOR NOT COMING OUT OF PARK	417	USA	V47	F7	511
CK CUST SAYS WILL NOT COME OUT OF PARK	859	USA	V47	F7	511
VEHICLE WILL NOT GO INTO DRIVE	206	USA	V47	F6	511
ABS CUSTOMER STATES:CANNOT SHIFT OUT OF PARK WITH ENGINE RUNNING	291	USA	V47	F5	511
	839	USA	V47	F7	511
CUSTOME STATES THE SHIFTER WILL NOT COME OUT OF PARK	805	USA	V47	F7	511
HARD TO GET OUT OF PARK	801	USA	V47	F7	511
CUSTOMER STATES HARD TO COME OUT OF PARK	316	USA	V47	F7	511
	780	USA	V47	F6	511
CUST STATES VEH WILL NOT SHIFT OUT OF PARK INTERMITTENT	864	USA	V47	F7	511
C S TRANSMISSION IS HARD TO GET OUT OF PARK INTERMITTENTLY	417	USA	V47	F7	511
CUST STATES VEHICLE WILL NOT RELEASE BRAKE PEDAL	805	USA	V47	F6	511
CONCERN: VEH WONT COME OUT OF PARK	205	USA	V47	F6	511
CUST STATES THE TRUCK WONT COME OUT OF PARK AT TIMES	515	USA	V47	F5	511
CHECK TRUCK WONT COME OUT OF PARK.	219	USA	V47	F7	511
CUSTOMER STATES THAT TRANSMISSION WILL NOT COME OUT OF PARK.	770	USA	V47	F5	511
CUST TOWED IN TRUCK WILL NOT COME OUT OF PARK	873	USA	V47	F7	511

CUST STATES TOWED IN WOULD NOT COME OUT OF PARK	873	USA	V47	F7	511
CUSTOMER STATES: VEHICLE WILL NOT SHIFT INTO DRIVE INTERMITTENLY	352	USA	V47	F5	511
HAVE TO BEAR DOWN HARD ON BRAKE PEDAL TO GET OUT OF PARK	337	USA	V47	F7	511
CUSTOMER STATES HARD TO GET OUT OF PARK	873	USA	V47	F7	511
CUST STATES THE TRUCK NOT COME OUT OF PARK WHEN STARTED UNLESS IT IS STARTED IN NEUTRAL ADVISE	343	USA	V47	F5	511
C.S. TRUCK GETS STUCK IN PARK.	318	USA	V47	F7	511
CUSTOMER STATED SHIFTER HARD TO GET OUT OF PARK.	214	USA	V47	F7	511
CK REALLY HARD TO GET OUT OF PARK	717	USA	V47	F5	511
CUST STATES THAT INTERMITTENLY THE VEH IS HARD TO GET OUT OF PARK	778	USA	V47	F7	511
P01 CHECK WILL NOT COME OUT OF PARK AT TIMES	310	USA	V47	F5	511
HARD TO GET OUT OF PARK WITH FOOT ON BRAKE	770	USA	V47	F7	511
WILL NOT COME OUT OF PARK	518	USA	V47	F7	511
CHECK VEHICLE WILL NOT COME OUT OF PARK	317	USA	V47	F7	511
CUST STATES THAT AT TIMES VEH WILL NOT COME OUT OF PARK	308	USA	V47	F7	511
CUSTOMER STATES THAT VEHICLE WONT COME OUT OF PARK	308	USA	V47	F7	511
VEH WILL NOT COME OUT OF PARK WHEN RUNNING	403	USA	V47	F7	511
WILL NOT COME OUT OF PARK-HAVE TO TURN KEY TO ON POSITION THEN DROP IN NUETRAL AT TIMES THAT WORKS	448	USA	V47	F7	511
CUST. STATES CHECK VEHICLE WILL NOT COME OUT OF PARK	878	USA	V47	F5	511
CHECK VEHICLE WONT COME OUT OF PARK ADVISE	308	USA	V47	F5	511
TRANS. WILL NOT SHIFT OUT OF PARK AT TIMES	308	USA	V47	F5	511
WONT COME OUT OF PARK SHIFTER IS DISCONNECTED SEE JIM FITCH	408	USA	V47	F7	511
GEAR SHIFT LEVER HARD TO GET OUT OF PARK	858	USA	V47	F7	511
CUSTOMER STATES VEHICLE IS HARD TO GET OUT OF PARK BEEN HAPP ENING FOR THE LAST TWO WEEKS DOES NOT MATTER WARM OR COLD	807	USA	V47	F7	511
CK GEAR SHIFTER DIFFICULT TO GET OUT OF PARK	370	USA	V47	F5	511
CHECK VEHICLE WILL NOT COME OUT OF PARK	317	USA	V47	F5	511
CANNOT SHIFT OUT OF PARK	518	USA	V47	F5	511
CUSTOMER STATES WAS PARKED ON AN INCLINE WITH THE EMERGENCY BRAKE APPLIED. WHEN GOT BACK IN THE TRUCK AND RELEASE	433	USA	V47	F5	511
CANT GET VEH OUT OF PARK AFTER STARTING	318	USA	V47	F5	511
P01...TRANS SHIFTER WILL NOT COME OUT OF PARK AT TIMES.	853	USA	V47	F7	511
CUSTOMER STATES VEHICLE WONT SHIFT OUT OF PARK.	238	USA	V47	F7	511
CHECK THE VEHICLE INTER. HARD TO GET OUT OF PARK	308	USA	V47	F7	511
WONT SHIFT OUT OF PARK		USA	V47	F5	511
	700	USA	V47	F7	511
CUST SAYS HARD TO GET OUT OF PARK AT TIMES	308	USA	V47	F7	511
VEHICLE WILL NOT COME OUT OF PARK	480	USA	V47	F7	511
CK VEH WILL NOT COME OUT OF PARK	308	USA	V47	F5	511
VECHILE WILL NOT COME OUT OF PARK	874	USA	V47	F5	511
CUSTOMER STATES CK WON'T COME OUT OF PARK AT TIMES	394	USA	V47	F5	511
C.S. TRUCK WONT COME OUT OF PARK AT TIMES ADV	938	USA	V47	F7	511
HAVE TO PRESS REAL HARD ON BRAKE TO GET OUT OF GEAR AND CRUISE WILL NOT DISENGAGE WITH BRAKE	408	USA	V47	F5	511
	940	USA	V47	F7	511
CHECK HAVE TO PUSH BRAKE TOO FAR TO SHIFT FROM PARK	334	USA	V47	F7	511
	330	USA	V47	F5	511
CUSTOMER STATES THAT VEHICLE WOMOT COME OUT OF PARK NEED BY 10:00AM	880	USA	V47	F5	511
CUST STATES SHIFTER DOES NOT COME OUT OF PARK WHEN ON STEEP GRADES	478	USA	V47	F5	511
CUSTOMER HILCANT VEHICLE OUT OF PARK INT	823	USA	V47	F7	511
OWNER REPORTS CANNOT CHANGE GEARS WITH GEAR SELCTOR	487	USA	V47	F7	511
VEH WILL NOT COME OUT OF PARK INTERMITT	882	USA	V47	F5	511
CUSTOMER STATES THE GEAR SELECTOR WILL NOT COME OUT OF PARK	885	USA	V47	F5	511
CHECK FOR VEHICLE NOT COMING OUT OF PARK	334	USA	V47	F7	511
CHECK HARD TO GET OUT PARK	764	USA	V47	F7	511
SHIFTER IS HARD TO GET OUT OF PARK	884	USA	V47	F7	511
TRANSMISSION WONT SHIFT OUT OF PARK AT ALL TIMES.	788	USA	V47	F7	511
WONT COME OUT OF PARK LEVER WONT MOVE BACKWARDS SEE KRETZ	333	USA	V47	F7	511
CUSTOMER STATES WILL NOT COME OUT OF PARK AT TIMES	884	USA	V47	F5	511
CUSTOMER STATES TRANS WILL NOT SHIFT OUT OF PARK	788	USA	V47	F5	511
P01 TRANSMISSION WILL NOT SHIFT OUT OF PARK MOST OF THE TIME.	812	USA	V47	F5	511
SHIFTER WONT COME OUT OF PARK AT TIMES	888	USA	V47	F7	511
SALES STATES CHECK TRUCK IS HARD TO SHIFT OUT OF PARK	873	USA	V47	F7	511
CUSTOMER STATES VEHICLE DOES NOT SHIFT OUT OF PARK	714	USA	V47	F7	511
SHIFT INTERLOCK IS IN OPERATIVE. WORKS INTERMITTENTALLY	808	USA	V47	F7	511
WONT COME OUT OF PARK	402	USA	V47	F5	511

TRUCK WILL NOT COME OUT OF PARK	715	USA	V47	F5	511
CUSTOMER STATES SHIFT INTERLOCK WILL NOT WORK MUST MESS WITH BRAKES	716	USA	V47	F8	511
CUSTOMER STATES WILL NOT SHIFT OUT OF PARK	810	USA	V47	F5	511
P01 CK TRANS,WILL NOT SHIFT OUT OF PARK W RUNNING.	214	USA	V47	F8	511
CUSTOMER STATES VEHICLE HARD TO GET OUT OF PARK	436	USA	V47	F7	511
CK WONT SHIFT FROM PARK	209	USA	V47	F8	511
TRUCK WONT COME OUT OF PARK	808	USA	V47	F5	511
CUST STATES AT TIMES NOW A COUPLE TIMES SHIFTER WOULD NOT COME OUT OF PARK	460	USA	V47	F8	511
SAYS HAS BEEN HAVING TROUBLE GETTING OUT OF PARK	316	USA	V47	F8	511
CUSTOMER REQUESTS TRANS DIAGNOSIS WILL NOT COME OUT OF PARK	618	USA	V47	F5	511
CHECK SHIFTER WONT MOVE OUT OF PARK	570	USA	V47	F7	511
CUSTOMER STATES GEAR SHIFTER SOMETIMES WON;T SHIFT OUT OF PARK	230	USA	V47	F5	511
VEHICLE WILL NOT COME OUT OF PARK	636	USA	V47	F5	511
5 TIMES SINCE TAKING DELIVERY CUST HAS NOT BEEN ABLE TO TO GET SHIFT LEVER OUT OF PARK.	369	USA	V47	F5	511
VEHICLE GEAR SHIFT WILL NOT COME OUT OF PARK.	334	USA	V47	F5	511
CUST STATES TRUCK WONT COME OUT OF PARK CUST REACHED UNDER DASH AND PUSHED ON SAFTY SWITCH TO GET OUT OF PARK	218	USA	V47	F7	511
CK OUT WONT COME OUT OF PARK AT TIMES	618	USA	V47	F5	511
CK FOR WILL NOT COME OUT OF PARK	724	USA	V47	F5	511
VEHICLE WILL NOT COME OUT OF PARK. BRAKE LIGHTS DO WORK. THE TRANMISSION SHIFT LINKAGE HAS BEEN DISCONNECTED BY	205	USA	V47	F5	511
VEHICLE WONT COME OUT OF PARK	776	USA	V47	F8	511
WONT COME OUT OF PARK	228	USA	V47	F5	511
CK VEHICLE WILL NOT COME OUT OF GEAR	303	USA	V47	F5	511
CK VEHICLE WILL NOT COME OUT OF PARK	333	USA	V47	F5	511
CUSTOMER STATES VEHICLE KEEPS GETTING STUCK IN PARK, AND WILL NOT COME OUT	314	USA	V47	F7	511
C S SHIFTER WILL NOT COME OUT OF PARK AT TIMES , NEEDS TO APPLY EXCESSIVE FORCE TO RELEASE	654	USA	V47	F5	511
C S THE VEICHLE WONT COME OUT OF PARK WHEN VECHILE IS STARTE D, WILL ONLY COME GO INTO DRIVE IF STARTED FROM NEUTRAL	468	USA	V47	F5	511
CUST STATES THAT VEH HARD TO GET OUT OF PARK	618	USA	V47	F7	511
CUSTOMER STATES SHIFTER WOULD NOT COME OUT OF PARK	231	USA	V47	F5	511
WILL NOT COME OUT OF PARK AT TIMES	209	USA	V47	F5	511
CUST STATES HAS TO PUT IN NUETRAL TO START WILL NOT COME OUT OF PARK	678	USA	V47	F5	511
VEHICLE WILL NOT GO FROM PARK TO DRIVE	888	USA	V47	F5	511
VEHICLE WILL NOT COME OUT OF PARK	331	USA	V47	F5	511
VEHICLE WONT COME OUT OF PARK.	614	USA	V47	F5	511
??	314	USA	V47	F5	511
GUEST STATES THE VEH WILL NOT SHIFT OUT OF PARK UNLESS YOU PRESS VERY HARD ON THE BRAKE.	952	USA	V47	F5	511
THE GEAR SHIFT SELECTOR WILL GET HUNG UP INTERMITTEN ADVISE	403	USA	V47	F5	511
WILL NOT COME OUT OF PARK	628	USA	V47	F5	511
,, CUST STATES GEAR SHIFTER WONT COME OUT OF PARK	405	USA	V47	F5	511
THE VEH IS HARD TO COME OUT OF PARK	402	USA	V47	F7	511
WONT SHIFT OUT OF PARK AT TIMES	787	USA	V47	F5	511
CUSTOMER STATES THE SHIFTER WILL NOT COME OUT OF PARK,P01	651	USA	V47	F5	511
WONT SHIFT OUT OF PARK	281	USA	V47	F5	511
CK PARK WOULD NOT COME OUT ONE TIME DOOR	609	USA	V47	F5	511
CUST NOTES VEHICLE WILL NOT COME OUT OF PARK WHEN STEPPING ON BRAKE WITH ENGINE RUNNING HAS TO TURN KEY FORWARD ONE CLICK PUT VEHICLE INTO NEUTRAL THEN START	609	USA	V47	F5	511
OWNER STATES SHIFTER WILL NOT COME OUT OF PARK AT TIMES CHECK AND ADVISE	662	USA	V47	F8	511
CUSTOMER STATES SHIFTER GETS STUCK IN PARK	609	USA	V47	F5	511
CAN NOT SHIFT OUT OF PARK	903	USA	V47	F5	511
WONT GO OUT OF PARK	318	USA	V47	F5	511
CUST REPORTS THAT VEH WOULD START BUT WOULD NOT COME OUT OF GEAR	704	USA	V47	F5	511
CUST STATES CHECK SHIFT OPERATION, STICKS COMING OUT OF PARK.	781	USA	V47	F5	511
UNIT WILL NOT START OUT OF PARK	701	USA	V47	F7	511
CHECK HARD TO SHIFT OUT OF PARK	781	USA	V47	F5	511
TRANS WILL NOT COME OUT OF PARK	805	USA	V47	F7	511
C S VEHICLE GETS STUCK IN PARK.	817	USA	V47	F5	511
SHIFTER WONT COME OUT OF PARK AT TIMES	703	USA	V47	F5	511
START VEHICLE WONT COME OUT OF PARK HAS HAPPENED TWICE	248	USA	V47	F5	511
CHECK AND ADVISE ON SHIFT LEVEL WILL NOT COME OUT OF PARK	252	USA	V47	F8	511
CUST STATES DIFFICULT TO GET VEHICLE OUT OF PARK INTERMITTENT, CHK ADVS	650	USA	V47	F7	511
ADD VEHICLE WILL NOT COME OUT OF PARK	816	USA	V47	F8	511
CUSTOMER REPORTS WILL NOT COME OUT OF PARK AT TIMES	561	USA	V47	F8	511
WILL NOT COME OUT OF PARK CC P01	770	USA	V47	F5	511
GEAR SHIFT WONT MOVE ALL WEEK END HAD TO LEAVE VEHICLE	767	USA	V47	F8	511

WILL NOT SHIFT OUT OF PARK AT TIMES	806	USA	V47	F8	S11	
WILL NOT ALWAYS COME OUT OF GEAR; MUST OVER RIDE TO GET OUT OF GEAR;	301	USA	V47	F5	S11	
CUSTOMER STATES THAT VEHICLE WILL NOT COME OUT OF PARK WHEN STARTED	300	USA	V47	F8	S11	
CUST STATES WILL NOT COME OUT OF PARK	716	USA	V47	F6	S11	
CUSTOMER STATES VEHICLE WONT SHIFT OUT OF PARK.	217	USA	V47	F8	S11	
CUSTOMER STATES AT TIMES HARD TO SHIFT OUT OF GEAR,AT TIMES WHEN IN UPHILL,REALLY HAS TO PULL TRANS LEVER DOWN	856	USA	V47	F5	S11	
CUSTOMER STATES THAT VEHICLE WILL NOT COME OUT OF PARK	302	USA	V47	F8	S11	
CUSTOMER STATES AT TIMES WONT COME OUT OF GEAR	308	USA	V47	F5	S11	
C S HAS TO PUSH BRAKE ALMOST TO FLOOR TO SHIFT FROM PARK TO DRIVE.THIS IS AN INTERMITTENT PROBLEM. THE OTHER DAY IN DRIVE BUT WOULDNT MOVE,INTERMIT	817	USA	V47	F6	S11	
CUSTOMER STATED THAT HAD HARD TIME GETTING TRUCK OUT OF PARK HAD TO UNLOCK STEERING THEN START TO GET IN GEAR.	230	USA	V47	F5	S11	
AFTER STARTING WONT SHIFT OUT OF PARK	808	USA	V47	F8	S11	
	303	USA	V47	F6	S11	
CUST STATES GEAR SHIFTER HARD TO GET OUT OF PARK INTERMITTANTLY	804	USA	V47	F8	S11	
CHECK WOULD NOT COME OUT OF PARK	205	USA	V47	F6	S11	
C S VEHICLE WONT COME OUT OF PARK WHEN PUT FOOT ON BRAKE. HAS HAPPENED TWICE LATELY.	304	USA	V47	F5	S11	
CHECK AT TIMES WONT COME OUT OF PARK	231	USA	V47	F6	S11	
VEHICLE WILL NOT COME OUT OF PARK	417	USA	V47	F8	S11	
CK FOR HARD TO GET OUT OF PARK AT TIMES	724	USA	V47	F6	S11	
CK VEHICLE HAVING TROUBLE COMING OUT OF PARK	317	USA	V47	F5	S11	
CHECK INTER. WILL NOT SHIFT OUT OF PARK . WORSE AFTER DRIVING	208	USA	V47	F7	S11	
VEHICLE WONT COME OUT OF PARK	802	USA	V47	F7	S11	
CUSTOMER STATES SHIFTER WILL NOT COME OUT OF PARK CK&ADVISE	601	USA	V47	F7	S11	
CHECK TRANSMISSION SHIFTER WONT COME OUT OF GEAR AT TIMES	416	USA	V47	F8	S11	
????	207	USA	V47	F6	S11	
SHIFTER STICKS IN PARK AT TIMES	814	USA	V47	F5	S11	
TRUCK WILL NOT COME OUT OF PARK	803	USA	V47	F8	S11	
1 WILL NOT COME OUT OF PARK AT TIMES	836	USA	V47	F3	S11	
HARD TO COME OUT OF GEAR	860	USA	V47	F8	S11	
TOW IN CUSTOMER STATES WONT COME OUT OF PARK	412	USA	V47	F8	S11	●
CUSTOMER SAYS THE TRANSMISSION WILL NOT SHIFT UNLESS YOU PRESS THE GAS.	248	USA	V47	F7	S11	●
CUSTOMER STATES THE TRUCK WILL NOT SHIFT OUT OF GEAR.	520	USA	V47	F5	S11	
CUSTOMER STATES SHIFTER WONT COME OUT OF PARK AFTER STARTING ENGINE.	704	USA	V47	F8	S11	
CUSTOMER STATES SHE COULDNT GET VEHICLE OUT OF PARK.	217	USA	V47	F6	S11	
CUSTOMER STATES THAT THE TRUCK WILL NOT COME OUT OF PARK	515	USA	V47	F8	S11	
VEH WONT GO INTO GEAR UNLESS MESSING WITH KEY SEE	713	USA	V47	F7	S11	
C S VEHICLE WILL NOT SHIFT OUT OF PARK	826	USA	V47	F8	S11	
TRUCK WILL NOT COME OUT OF PARK	716	USA	V47	F7	S11	●
P/U CANNOT SHIFT OUT OF PARK	712	USA	V47	F7	S11	●
VEHICLE WILL NOT COME OUT OF GEAR SOMETIMES	751	USA	V47	F6	S11	
CK STUCK IN PARK AND HAD TO ROCK THE TRUCK TO GET IT OUT OF PARK, HAPPENED ONLY ONE TIME	812	USA	V47	F8	S11	
VEH WOULD NOT PULL OUT OF PARK ADJUSTED THE BRAKE PETAL AND THEN IT WENT OUT	428	USA	V47	F5	S11	
SHIFTER WILL NOT MOVE OUT OF PARK	614	USA	V47	F6	S11	●
C S TRUCK WILL NOT SHIFT OUT OF PARK		USA	V47	F8	S11	●

Report Information for Result ID 98400125:	Status=Finished	Request Name=PN131 13480	Description=2002-2003 MY 13480 PN131	Run Date And Time=23 Apr 2003 13.09	Completion Date And Time=23 Apr 2003 13.10	Job Size=55	Execution Time=0	Precalc Processing=	Cut Off Date=31 Mar 2003	Load Date=21 Apr 2003
Data Selection Criteria:	Model Year = MY_03[2003], MY_02[2002]	Cost Category = All Vehicle Coverages / Contractual[1,%,%]	Region Sold = North America[NA]	Country Sold / Repaired [typed] = [USA,USA]	Vehicle Line Awe = F250HD/350/450/550[F7]	Part Num Base (causal) [typed] = [13480,%,%]	Voc / Eoc [typed] = [82#=]M,%]			
Report Selection Criteria:	Report Name=Standard Claims List	Model Year=2003, 2002	Destination=DB	Csv Name=CLMLS125	Order By=Customer Concern Code	Maximum Claims=1000	Logic=Corporate	Tie Claims=ALL	Claims With Comments=ALL	Requested Currency=USD

MDL_YR	VIN_CD	LBR_COST	VEH_LINE_CD	MKT_DERIVED	BOD_CAB_STL	VER_SERIES_CD	DRIVE_CD	ENG_CD	TRANS_CD	PLANT_CD
2002	1FTNW21F82EA06288	46.81	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTSW31FX2ED55854	20.09	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1
2002	1FTSW31FX2ED55854	20.08	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1
2002	1FTNX21F72ED35817	19.65	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D6	A1
2002	3FTSW31F02MA00124	185.9	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A2
2002	1FTSX31F22EA15621	22.79	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/D6	A1
2002	1FTSX31F32EA19613	66.37	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/D6	A1
2002	1FTNW21FX2EA71718	66.78	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNX21FX2EA69054	58.1	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D6	A1
2002	1FTSW31F82EA72820	62.07	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1
2002	1FTWW33F02EC41883	18.97	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D6	A1
2002	1FTWW33F32ED09055	201.68	T/F7	T/F.	T/BC	T/CD	T/B	T/DS	T/D6	A1
2002	1FTNW21F12EB94689	63.9	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21F12ED38780	109.76	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21F52ED68980	22.4	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21F82ED66683	57.15	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21F72EA03809	39.79	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21F82ED45886	56.91	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNW21S32EB43255	34.69	T/F7	T/F	T/BC	T/BD	T/E	T/WA	T/DE	A1
2002	1FTNX21F42EB65362	114.08	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNX21F82EA06178	38.7	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D6	A1
2002	1FTNX21L52EA09000	18.92	T/F7	T/F	T/BD	T/BD	T/E	T/VZ	T/DE	A1
2002	1FTSW31F12EB06202	34	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1
2002	1FTSW31F22EA56572	24.21	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D6	A1

2002	1FTSW31F72EA21851	45.15	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSW31F82EA01827	40.72	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSW31FX2ED48292	46.38	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSW31FX2ED59129	58.21	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSX31F42EB13044	108.5	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSX31F82EA86870	65	T/F7	T/F	T/BD	T/CD	T/E	T/DS	T/D8	A1
2002	1FTWW33F12EC35779	50.01	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTWW33F12EC37953	53.6	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTWW33F12EC89658	17.24	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTWW33F42EA85851	17.02	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTWW33F82EC85316	16.99	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTSW31F82EB45322	16.5	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	3FTSW31F22MA07219	19.77	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A2
2002	1FTSW31F82EB31482	215.28	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTNW20F22EA23766	18.7	T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/D8	A1
2002	1FTNW21F12EB38400	16	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	1FTNW21F82EB84468	16.64	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	3FTNW21F52MA23115	56.12	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A2
2002	1FDWF36F82EB25530	19.13	T/F7	T/F	T/BB	T/CD	T/B	T/DS	T/D8	A1
2002	1FTNW20FX2EA13361	33.14	T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/D8	A1
2002	1FTNW21F02EB88455	19.26	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	1FTNW21F12ED18349	85.86	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	1FTNW21F42ED59784	41.14	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	1FTNW21F72EA95553	16.5	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A1
2002	1FTNX20L92EB13491	24.67	T/F7	T/F	T/BD	T/BD	T/B	T/VZ	T/DE	A1
2002	1FTNX20S12EC78233	14.4	T/F7	T/F	T/BD	T/BD	T/B	T/WA	T/DE	A1
2002	1FTNX21F12ED54465	24.7	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D8	A1
2002	1FTSW30F02ED57598	21.76	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	1FTSW31F02EA97430	158.43	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSW31FX2EB94368	16.62	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSX31LX2EA36605	303.24	T/F7	T/F	T/BD	T/CD	T/E	T/VZ	T/DE	A1
2002	1FTWW33F72EA79185	90.25	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	3FTNW21F22MA18294	68.24	T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/D8	A2
2002	1FTSW31F42EB31773	186.09	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTSW31F82EC75021	22.65	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1
2002	1FTWW32F22EA08598	16.5	T/F7	T/F	T/BC	T/CD	T/B	T/DS	T/D8	A1
2002	3FTNX21F22MA01828	69.93	T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/D8	A2
2002	1FTNW20F32EA04070	46.44	T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/D8	A1
2002	3FTNW20F22MA07438	16.5	T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/D8	A2
2002	1FTNW20F22EA27341	19.5	T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/D8	A1
2002	1FDWF36F62EB25530	19.13	T/F7	T/F	T/BB	T/CD	T/B	T/DS	T/D8	A1
2002	1FTSW31F72EA10165	44.36	T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/D8	A1

2002	1FTSW31F42EC73475	51.2 T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1
2002	1FTNW21F82ED61848	58.08 T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1
2002	1FTSW31F72ED05027	20.08 T/F7	T/F	T/BC	T/CD	T/E	T/DS	T/DS	A1
2002	1FTNW21F82EC82527	55.47 T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1
2002	1FTNW21F82EB81547	51.07 T/F7	T/F	T/BC	T/BD	T/E	T/DS	T/DS	A1
2002	1FTNX21F62ED55146	72.6 T/F7	T/F	T/BD	T/BD	T/E	T/DS	T/DS	A1
2002	1FTNW20FX2EB62197	135.4 T/F7	T/F	T/BC	T/BD	T/B	T/DS	T/DS	A1

Currency Exchange=v6 Generated By=AKARIZAT

Reported Currency=USD Requested Distance=Kilometers Reported Distance=Miles Descriptions=Yes Default Claims (no Date Filters)=Up to current cutoff date

PRODN_DT	WRTY_START_DT	NAME	DOC_NUM	PH_NUM	WCC_CD	PART_NUM_CAUS_PREF	PART_NUM_CAUS_BASE	PART_NUM_CAUS_SUFF	CUST_CONC_CD	COND_CD
7-Aug-01	29-Aug-01	HAYWARD FORD	36785001	6811200	7V01	*	13480	*	T90	33
13-Jun-02	31-Aug-02	MAC HAIK FORD	162857B	9325000	7V01	F87Z	13480	AA	T90	1
13-Jun-02	31-Aug-02	MAC HAIK FORD	162857D	9325000	7V01	F87Z	13480	AA	T90	1
24-May-02	13-Jun-02	CHAMPION FORD LINCOLN-MERCURY	4558551	6841441	7V01	F87Z	13480	AA	P63	41
2-Aug-01	5-Oct-01	BOB TOMES FORD, INC.	16905902	6981010	7V01	F87Z	13480	AA	P63	45
19-Jul-01	13-Nov-01	BEACH FORD, INC.	452411A	4682717	7V01	F87Z	13480	AA	P24	42
19-Jul-01	26-Sep-01	BEACH FORD, INC.	437161A	4682717	7V01	F87Z	13480	AA	P24	25
20-Sep-01	13-Dec-01	WORLD FORD-PENSACOLA	6819951	4769050	7V01	F87Z	13480	AA	P09	42
1-Oct-01	26-Oct-01	WALNUT CREEK FORD	369912D	6322900	7V01	F87Z	13480	AA	P09	42
20-Sep-01	22-Oct-01	PIONEER FORD SALES	25432301	2571933	7V01	F87Z	13480	AA	P08	41
5-Mar-02	22-Mar-02	HAMILTON BIG COUNTRY FORD, INC	50268901	7624427	7V01	F87Z	13480	AA	P06	42
3-May-02	23-May-02	TOWN & COUNTRY FORD	265217A	4813873	7V01	F87Z	13480	AA	P09	42
24-Jan-02	19-Mar-02	CRANDALL FORD-MERCURY	0655658	6473573	7V01	F87Z	13480	AA	P01	42
28-May-02	3-Sep-02	CAPITAL FORD-MERCURY	127631A	5525353	7V01	F87Z	13480	AA	P01	41
13-Jun-02	21-Aug-02	EARNHARDT FORD SALES COMPANY	455782A	5366000	7V01	F87Z	13480	AA	P01	42
13-Jun-02	26-Sep-02	JIM SKINNER FORD	0636066	8542222	7V01	F87Z	13480	AA	P01	28
31-Jul-01	1-Oct-01	HOBLIT MOTORS	8068453	4562151	7V01	F87Z	13480	AA	P01	42
4-Jun-02	6-Sep-02	TALLAHASSEE FORD	7464402	8771171	7V01	F87Z	13480	AA	P01	42
21-Nov-01	4-Dec-01	PIONEER FORD, INC.	562901	3972311	7V01	F87Z	13480	AA	P01	42
21-Dec-01	19-Jan-02	DISCOVERY FORD LINCOLN MERCURY	8892704	7854551	7V01	F87Z	13480	AA	P01	42
25-Jul-01	13-Jul-02	VANCOUVER FORD INC	410340A	6948501	7V01	F87Z	13480	AA	P01	42
8-Aug-01	2-Oct-01	DUTHLER FORD SALES, INC.	10609201	6566511	7V01	F87Z	13480	AA	P01	42
23-Oct-01	16-Nov-01	TOWN & COUNTRY FORD , INC.	29039401	6358600	7V01	F87Z	13480	AA	P01	28
5-Sep-01	14-Sep-01	PERSON FORD	1117051	5937411	7V01	F87Z	13480	AA	P01	42

3-Aug-01	31-Aug-01	HUDGEONS' FORD-MERCURY INC	4006901	7225470	7V01	*	13480	*	P01		28
19-Jul-01	5-Oct-01	FORD OF HYANNIS, INC.	140616C	7765912	7V01	F87Z	13480	AA	P01		28
3-Jun-02	18-Jul-02	ANDERSON FORD LINCOLN MERCURY	067589G	3641700	7V01	F87Z	13480	AA	P01		28
12-Jun-02	31-Jul-02	DAN WIEBOLD FORD	8706951	4664615	7V01	F87Z	13480	AA	P01		28
7-Nov-01	3-Jun-02	NORRISTOWN AUTOMOBILE COMPANY,	15844801	5395400	7V01	F87Z	13480	AA	P01		46
7-Oct-01	9-Nov-01	RAMSEY FORD LINCOLN MERCURY	081955A	6584801	7V01	F87Z	13480	AA	P01		42
28-Feb-02	15-Mar-02	DON VANCE FORD, INC.	2447481	8892800	7V01	F87Z	13480	AA	P01		42
28-Feb-02	26-Mar-02	COUNTRY FORD-MERCURY	087480A	3388111	7V01	F87Z	13480	AA	P01		42
22-Mar-02	29-Mar-02	CARTHAGE FORD-MERCURY	045582A	3584037	7V01	F87Z	13480	AA	P01		42
12-Aug-01	7-Dec-01	FORD OF LILLINGTON	103330C	8142243	7V01	F87Z	13480	AA	P01		42
21-Mar-02	23-Apr-02	FAIRWAY FORD OF ANDERSON	136622A	2254151	7V01	F87Z	13480	AA	P01		28
8-Dec-01	18-Feb-02	SULLIVAN MOTOR CO INC	1276803	5442134	7V01	*	13480	*	N59		42
25-Sep-01	12-Oct-01	TOWN EAST FORD	7996898	2706441	7V01	F87Z	13480	AA	L63	D1	
8-Nov-01	12-Aug-02	ELVIN HAYES FORD	5486751	3280585	7V01	F87Z	13480	AA	L30		42
8-Aug-01	13-Nov-01	DALE JARRETT FORD	16027801	2838521	7V01	F87Z	13480	AA	L29		42
29-Nov-01	26-Sep-02	JACK KISSEE FORD, INC.	8163801	3410101	7V01	F87Z	13480	AA	L28		42
11-Jan-02	2-Feb-02	JIM PEACH MOTORS, INC.	0380878	8676212	7V01	F87Z	13480	AA	L29		42
11-Dec-01	27-Feb-02	JIM PEACH MOTORS, INC.	D38258A	8676212	7V01	F87Z	13480	AA	L29		42
7-Nov-01	18-Dec-01	APPEL FORD-MERCURY, INC.	5360001	8363669	7V01	F87Z	13480	AA	L26		42
7-Aug-01	23-Oct-01	WEST TEXAS FORD, INC.	3223801	8233211	7V01	F87Z	13480	AA	L26		42
20-Dec-01	2-Jan-02	COURTESY FORD	7990803	3286000	7V01	*	13480	*	L26		7
6-May-02	22-May-02	RODRIGUEZ FORD-MERCURY, INC.	3742801	6882452	7V01	*	13480	*	L26		28
14-Jun-02	20-Jul-02	AL PACKER FORD WEST	0917808	7901100	7V01	F87Z	13480	AA	L26		28
13-Oct-01	31-Dec-01	DUNN FORD COMPANY	6064051	9874321	7V01	F87Z	13480	AA	L26		42
12-Nov-01	14-Jan-02	FUTURE FORD	452203A	7883673	7V01	*	13480	*	L26		33
8-Apr-02	16-Apr-02	GATEWAY FORD INC	3610801	3887790	7V01	F87Z	13480	AA	L26		42
15-Jun-02	29-Aug-02	KOONS FORD INC.	638151	2417200	7V01	F87Z	13480	AA	L26		42
28-Jun-02	28-Jul-02	DREW FORD	9747851	4847777	7V01	F87Z	13480	AA	L26		42
16-Oct-01	31-Oct-01	APPLE VALLEY FORD	25750801	4318900	7V01	F87Z	13480	AA	L26		42
24-Jan-02	1-Mar-02	STAYTON MOTORS INC	5735201	7896888	7V01	*	13480	*	L26		48
7-Sep-01	27-Sep-02	THOMAS FORD SALES INC	094294A	9220059	7V01	*	13480	*	L26		42
11-Oct-01	30-Oct-01	FREEDOM FORD, INC.	288747A	5832871	7V01	F87Z	13480	AA	L26		28
21-Nov-01	18-Dec-01	KEYSTONE FORD	1020152	8880825	7V01	F87Z	13480	AA	L26		46
15-Nov-01	28-Nov-01	MIDWAY FORD TRUCK CENTER, INC.	202180E	4553000	7V01	*	13480	*	L07		42
26-Mar-02	13-Jul-02	FRAMINGHAM FORD	14065402	8791320	7V01	F87Z	13480	AA	H20		42
30-Jul-01	14-Aug-01	HARVEST FORD LINCOLN MERCURY	053076A	6870801	7V01	F87Z	13480	AA	H20		42
13-Aug-01	24-Sep-01	M & M FORD LINC-MERC, INC.	20194701	2635324	7V01	*	13480	*	H20		33
29-Jul-01	28-Sep-01	GILBERT & BAKER FORD	1781802	8913000	7V01	F87Z	13480	AA	H19		42
28-Sep-01	23-Jan-02	SHEEHY FORD MERCURY	10189101	7984791	7V01	*	13480	*	H19		28
17-Aug-01	19-Nov-01	HENSON FORD, INC.	12772802	3489610	7V01	F87Z	13480	AA	H02		42
7-Nov-01	18-Dec-01	APPEL FORD-MERCURY, INC.	5367001	8363659	7V01	F87Z	13480	AA	G29		42
18-Jul-01	28-Nov-01	DOHERTY FORD	5524301	3573114	7V01	*	13480	*	G29		33

20-Mar-02	17-Sep-02	WILSON MOTORS	5543151	7524201	7V01	F87Z	13480	AA	D50		42
17-Jun-02	30-Jul-02	BAYTOWN FORD	15906601	8393300	7V01	F87Z	13480	AA	A65		42
1-May-02	2-Sep-02	MAC HAIK FORD	164053A	9325000	7V01	F87Z	13480	AA	A66		42
15-Mar-02	25-May-02	ROCKWALL FORD-MERCURY	9046001	2902208	7V01	*	13480	*	A26	X2	
5-Dec-01	14-Dec-01	DELAND FORD	062957B	7781000	7V01	F87Z	13480	AA	A25		42
14-Jun-02	27-Aug-02	FORD OF KIRKLAND, INC.	33983201	8216611	7V01	*	13480	*	A25	X2	
3-Jan-02	4-Mar-02	ERNIE HAIRE FORD, INC.	1173654	9306571	7V01	F87Z	13480	AA	A07		42

RPR_DT	TIS_WSD	CLM_KEY	MILGE	MTRL_COST	TOT_COST_GROSS	LBR_HRS	DLR_CD	DLR_SUB_CD	REGION_CD	ST_PROV_CD	CPSC_CD_6
21-Nov-01	3	347874	5027	0	84.26	0.5	7729	*	NA	CA	60604
30-Dec-02	5	4026461	5261	6.58	26.67	0.3	4511	*	NA	TX	60604
30-Dec-02	5	4026463	5261	6.58	26.67	0.3	4511	*	NA	TX	60604
28-Aug-02	3	2496641	6344	6.56	28.23	0.3	5700	*	NA	KY	60604
28-Oct-02	13	3241121	26403	6.58	192.48	2.8	2531	*	NA	TX	60604
19-Mar-02	5	1217278	10124	6.58	29.37	0.3	6727	*	NA	VA	60604
17-Dec-01	3	433849	3559	6.58	74.95	0.9	6727	*	NA	VA	60604
18-Nov-02	12	3514865	31194	6.58	73.36	1.1	4962	*	NA	FL	60604
28-Aug-02	11	2460773	20429	6.56	65.68	0.6	7620	*	NA	CA	60604
1-Mar-02	5	763693	6334	6.59	68.65	0.9	20400	*	NA	AZ	60604
24-Feb-03	12	4703428	36960	6.58	28.55	0.3	20422	*	NA	NM	60604
27-Feb-03	10	4770045	24505	6.58	208.24	3.1	3365	*	NA	AL	60604
3-Mar-03	12	4843396	27976	6.58	70.46	0.8	8328	*	NA	UT	60604
18-Sep-02	1	2748877	669	6.58	116.34	1.6	7892	*	NA	NV	60604
1-Aug-02	0	2138452	208	6.58	28.98	0.3	20313	*	NA	AZ	60604
2-Oct-02	1	2857515	282	6.56	63.73	0.9	224	*	NA	AL	60604
8-Dec-01	3	428032	4676	6.58	48.34	0.6	7735	*	NA	CA	60604
30-Oct-02	2	3244178	6672	6.58	53.49	0.9	4044	*	NA	FL	60604
13-Jan-03	14	4198294	13247	6.58	41.27	0.7	9852	*	NA	SD	60604
29-Jul-02	7	2794406	8665	6.58	120.66	1.7	1170	*	NA	WA	60604
22-Nov-02	5	3617898	11468	6.58	45.28	0.5	8547	*	NA	WA	60604
19-Mar-03	18	5094833	21255	6.58	26.5	0.3	9870	*	NA	MI	60604
7-Aug-02	9	2255127	6856	6.58	40.58	0.5	1057	*	NA	NC	60604
28-Feb-03	18	4769309	25094	6.58	30.79	0.3	5858	*	NA	CA	60604

12-Jun-02	10	1501677	15426	0	45.15	0.7	20878 *	NA	AZ	60604
19-Feb-03	17	4960625	20456	6.56	47.3	0.8	1627 *	NA	MA	60604
27-Nov-02	5	3978650	8979	6.56	54.96	0.8	7116 *	NA	NE	60604
29-Jul-02	0	2106913	54	6.56	62.79	0.9	8325 *	NA	ID	60604
10-Dec-02	7	3924866	15849	6.56	118.08	1.5	1350 *	NA	PA	60604
19-Feb-03	16	4927127	29878	6.56	71.88	1	4073 *	NA	MD	60604
12-Mar-02	0	850106	5	6.56	56.59	0.9	5098 *	NA	MO	60604
28-Dec-02	10	3948602	16205	9.48	63.06	0.8	1223 *	NA	NJ	60604
6-Nov-02	6	3345819	24792	6.56	23.82	0.3	2838 *	NA	MO	60604
20-Sep-02	10	3244274	29589	6.56	23.6	0.3	4119 *	NA	NC	60604
13-Jun-02	2	1806241	4289	6.56	25.57	0.3	2347 *	NA	SC	60604
7-Feb-02	0	855284	977	0	16.5	0.3	4560 *	NA	TX	60604
11-Jun-02	9	1586236	19871	6.56	26.35	0.3	5192 *	NA	TX	60604
12-Nov-02	4	3456192	5083	12.29	227.57	3.5	4449 *	NA	TX	60604
20-Jul-02	6	1972563	24539	6.56	25.28	0.3	1014 *	NA	NC	60604
9-Dec-02	3	3770427	4500	6.56	24.58	0.3	8858 *	NA	OK	60604
30-May-02	4	1872905	15854	6.56	23.42	0.3	1124 *	NA	AL	60604
13-Sep-02	7	2883452	15258	6.54	64.66	1	1124 *	NA	AL	60604
15-Jul-02	7	1931669	9263	6.56	25.71	0.3	4500 *	NA	TX	60604
20-Dec-01	2	467677	3404	6.56	39.72	0.6	1118 *	NA	TX	60604
8-Mar-02	3	1034686	5851	0	19.26	0.3	1625 *	NA	FL	60604
25-Oct-02	6	3163206	16813	0.64	86.52	1.5	4450 *	NA	TX	60604
26-Feb-03	5	4962522	7431	6.56	47.72	0.6	2856 *	NA	FL	60604
27-Jan-03	14	4366551	31573	6.56	23.09	0.3	6862 *	NA	OK	60604
5-Feb-02	1	656615	51	0	24.57	0.3	7749 *	NA	CA	60604
4-Sep-02	5	2497179	17499	6.56	20.99	0.3	6475 *	NA	LA	60604
28-Oct-02	3	3565245	1954	6.56	31.28	0.3	38 *	NA	VA	60604
9-Jan-03	8	4100011	17053	6.56	26.34	0.3	5486 *	NA	CA	60604
17-Aug-02	10	2349728	3691	13.97	170.4	1.9	9217 *	NA	MN	60604
12-Sep-02	7	2727066	13956	6.56	25.2	0.3	8507 *	NA	OR	60604
11-Oct-02	1	3024389	365	0	303.24	4.3	8822 *	NA	MA	60604
27-Dec-01	2	480067	4821	6.56	96.63	1.4	139 *	NA	VA	60604
21-Oct-02	11	3532570	28535	6.56	72.62	0.9	5504 *	NA	CA	60604
8-May-02	6	1328791	16563	41.91	237.4	2.8	5009 *	NA	MO	60604
19-Jul-02	1	2031336	125	6.56	29.23	0.3	8926 *	NA	MA	60604
24-Aug-01	1	179994	752	6.56	23.06	0.3	6403 *	NA	LA	60604
1-Jun-02	9	1684099	16571	0	69.93	0.5	20006 *	NA	IA	60604
13-Nov-01	2	319826	4779	6.56	53.02	1	5896 *	NA	AL	60604
2-Nov-01	0	874164	25	6.56	26.06	0.3	4224 *	NA	VA	60604
16-Nov-01	0	327980	20	6.56	26.06	0.3	3013 *	NA	TX	60604
17-Jul-02	8	1946900	9368	6.56	25.71	0.3	4500 *	NA	TX	60604
9-Jul-02	8	2015061	16627	0	44.36	0.6	8563 *	NA	OR	60604

15-Jan-03	5	4107461	6489	6.58	57.78	0.8	8539 *	NA	OR	60604
8-Sep-02	2	2538202	2969	6.58	64.86	0.9	654 *	NA	TX	60604
20-Jan-03	5	4230765	18158	6.58	28.67	0.3	4511 *	NA	TX	60604
21-May-02	0	1398082	38	1.43	86.0	0.9	3587 *	NA	TX	60604
7-Aug-02	8	2192534	24860	6.58	57.65	0.8	3896 *	NA	FL	60604
16-Dec-02	4	3967958	4378	0	72.6	1	847 *	NA	WA	60604
25-Feb-03	12	4715158	28394	18.17	183.57	2	4869 *	NA	FL	60604

TECH_TXT1
WIRE CLIP FELL OFF REPLACED WIRE CLIP
5261 C.C 13480 13480A .3 REPLACE BRAKE LAMP SWITCH FOR BAKE LAMPS BEIN G INOP
5261 13480 13480A .3 SPR FROM LINE 8
SWITCH REPLACED BRAKE SWITCH ASY
ELECTRIC TRANS DIAGNOSIS, REPAIRED TRACED OUT REPAIRED BRAKE LIGHT SWITCH CIRCUIT
10124 W CVP PER GARLAND REPLACED BRAKE SWITCH,RETEST TO MAKE SURE WORKING PROPERLY
3550 SHIFT INTERLOCK BRAKE LIGHT SWITCH WARR. TEST OPERATION OF THE SHIFTER VERIFIED WOULD NOT COME OUT OF PARK. PERFORMED PINPOIN TEST AND FO
SWITCH STOP LAMP REPLACE
28429 CHECKED FOR NOT COMING OUT OF PARK. TRIED MOVING SHIFT OUT OF PARK AND WORKS OK AT THIS TIME. SPOKE W WRITER,THIS IS INTERMITT PROB. PERFOR
DIAG.AND REPLACED STOPLIGHT SWITCH.
1 & 2 SAME TEST BRAKE LIGHT FUSE IS OK..CHECK BRAKE SWITCH CIRCUIT IS NO GOOD..REPLACE BRAKE SWITCH
PERFORMED STEERING COLUMN DASH SWITCHES TESTS, REMOVED STEERING COLUMN FOR ACCESS TO REPAIR OPEN CIRCUIT & REPLACE BRAKELAMP SWITCH
VERIRIFED THE CONCERN AND REPLACED THE BRAKE SWITCH AND VERIFIED THE REPAIR.
869 WILL NOT COME OUT OF PARK 41 WILL NOT COME OUT OF PARK. I PERFORMED AUTO TRANS SYSTEM DIAG. I TESTED THE SHIFT LOCK SOLINOID AND FOUND OK. I TH
205 BAD BRAKE SWITCH 28 VERIFIED VEHICLE WONT COME OUT OF PARK. CHECKED SYSTEM FUSES, ALL OK. CHECK BRAKE LIGHTS. OK. CHECKED FOR POWER TO SHIF
HARD SHIFTING OUT OF PARK. TESTED AND REPLACED STOPLAMP SW ASSY TO CORRECT SHIFTER TO ENGAGE
BRAKE SWITCH WORKS INTERMITANTLY SWITCH STOP LAMP REPLACE
13480 INOP CC 42 REPLACED BRAKE ON OFF SWITCH. RETEST
CHECKED FUSES OK WORKS AT TIMES TAP ON BRAKE SWITCH ACTS UP REPLACED BRAKE SWITCH
VERIFIED CUSTOMERS CONCERN HAPENED BRAKE LIGHTS DIDNT FUNCTION INTERMITENTLY PROBLEM WITH BRAKE LIGHT SWITCH REPLACED BRAKE LIGHT SWITCH VEH
11488 CC42 BOO SWITCH WARRANTY ROADTEST WITH CUSTOMER TO VERIFY CONCERN. PERFORMED BODY CHASIS ELECTRICAL TEST AND ACCESS INSTRUMENT PANEL
ROAD TESTED AND TESTED OPPERATION OF THE SHIFTER, IT COMES OUT OF PARK EVERY TIME.ADVISED AND ROAD TESTED HOME STILL
28 VERIFY COMPLAINT CHECK FUSES OK CHECK FOR POWER AND GROUND AND SHIFT LOCK SOLENOID, 0 VOLTS SEC DIAG VERIFY LG RD
SWITCH DIAGNOIS CONCERN IN BRAKE LIGHT SWITCH, R R SWITCH RETEST ALL ACCE

INSPECTED BRAKE LIGHTS, INOP. CHECKED FUSE, OK. PERFORMED PINPOINT TEST. OPEN IN BRAKE LIGHT SWITCH HARNESS. REPAIRED OPEN. RE TESTED. OK.
20460 26 TEST DROVE VERY INT. BRAKE LIGHTS DO NOT COME ON WILL NOT SHIFT DIA PINPOINT TESTING OF HARNESS OK TEST BRAKE LIGHT SWITCH FAILED REMOVED
8360 PINPOINT TESTED. FOUND BRAKE LIGHT WORK OK BUT NO SIGNAL SENT TO THE SHIFT LOCK SOLENOID. REPLACED BRAKE SWITCH AND REASSEMBLED. VEHICLE S
INTERMITTENT OPEN BODY CHASSIS ELECTRIAL (BCE) TEST, BODY CHASSIS ELECTRICAL PINPOINT TEST REPLACE STOP LAMP SWITCH
SHORT BCE DIAGNOSIS, PINPOINT TEST. REPLACE FUSE. REPLACE STOP LIGHT SWITCH. STOP LAMP SWITCH WIRE RUBBED THROUGH.
R AND R BRAKE SWITCH
BRAKE SWITCH NOT OPERATING PROPERSWITCH STOP LAMP REPLACE
CK CODES REPLC SW
SWITCH STICKING
REPLACE BRAKE SWITCH
DIAGNOSIS REPLACE BRAKE LIGHT SWITCH DUE TO OPE N,AND RETEST.
VERIFY BRAKE LAMP SWITCH CLICKING NORMAL OPERATION
19671 VERIFIED CUST CONCERN.PERFORMED INSPECTION. FOUND SOURCE OF FLUID TO BE BOO SWITCH REPLACED SWITCH AND RETESTED PROBLEM CORRECTED
BLOWS 20 AMP FUSE #F2.16 REPLACED AND CK BLOWS FUSES AS SOON AS USED RIGHT TURN REMOVED RIGHT REAR TAIL LAMP ASSY AND RIGHT HEAD LAMP ASSY REM
FOUND SWITCH SHORTED STAYING CONNECTED. REPLACED SWITCH WORKS WELL. TESTED ALL OK.
CP 13480 CC 42. REPLACED FAILED BRAKE LIGHT SWITCH. OK NOW.
REPLACED BRAKE LIGHT SWITCH
TEST REPALCED BRAKE SWITCH AND FUSE
REPLACED BRAKE LAMP SWITCH. RETEST O.K.
PERFORMED EEC TEST ON LAMPS ALL PASS STOP LIGHT STAYING ON AT TIMES REPL STOPLIGHT SWITCH.CK WIRING FOR DAMAGE.
ADJUST BACKUP LITE SWITCH
VERIFY STOPLIGHTS NOT WORKING. FOUND BURNED FUSE. FOUND BROKEN WIRE CIRCUIT 511. REPAIR WIRING REPLACE FUSE. OPER OK
7923 BRAKE LIGHTS INOP. DIAG, PIN POINT TEST, REPLACE BRAKE SWITCH, ROAD TEST OK
TURN SIGNAL SWITCH NOT WORKING SWITCH STOP LAMP REPLACE
FOUND BRAKE LIGHT SWITCH CAME LOOSE AT RETAINER RESET BRAKE LIGHT SWITCH
TEST SYSTEM AND REPLACE BRAKE LIGHT SWITCH
00 SWITCH STOP LAMP REPLACE
VERIFY NO BRAKE TEST AND REPLACE BRAKE LAMP SWITCH
CC42 REPLACED FUSE AND BLEW FUSE RIGHT AWAY. CHECKED WIRES FOR BRAKES. FOUND SHORTED WIRE TO MULTI FUNCTION SWITCH.

CHECK VEHICLE NO BRAKE LIGHT CHECK STOP LIGHT CIRCUIT FUSES CONNECTOR WIRES AND BULBS CHECK POWER AT BRAKE PEDAL SWITCH CHECKS OK CHECK POW
4822 BRAKE LIGHT SWITCH BAD, CK BRAKE LIGHTS INOP INTERMITTENT,PINPOINT TEST ,REPL BRAKE LIGHT SWITCH,RETEST
FAULTY LIGHT SWITCH STEERING COLUMN DASH SWITCH ASSEMBLIES DIAGNOSIS
18563 473 WDS TEST NO CODES CK OUT AUTO LOCKS AND PERFORM PINPOINT TEST FOR INTERMINT OPERATION AND REMOVE AND REPLACE BRAKE SWITCH AND RECK
CC 42 BASIC 13480 INSTALL NEW BRAKE LIGHT SWITCH, CHECK BRAKE LIGHTS.
REPLACE STOP LAMP SWITCH
INSPECTED AND FOUND CLIP ON BRAKE SWITCH COME OFF AND WAS MISSING INSTALLED NEW CLIP AND TEST DROVE OK
REPLACED SWITCH
REPLACED BRAKE LIGHT SWITCH

REPLACE BRAKE LIGHT SWITCH
TEST SYSTEM,LOCATE LOOSE WIRE AT BRAKE LIGHT SWITCH LUBE ALL DOOR SWITCHES, ROAD TEST

INOP EEC (QUICK TEST) DIAGNOSIS

PIN POINT TESTED INSPECTED AND FOUND A OPEN IN THE BRAKE SWITCH. REPLACED THE BRAKE SWITCH RETESTED AL OK

13158 13480 VERIFIED CONCERN VEH WOULD NOT SHIFT OUT OF PARK AT TIMES. DID ELECTRICAL DIAG ON BRAKE LIGHT SYSTEM. BRAKE SWITCH NOT MAKING CONTAC

PREFORM TEST DRIVE FOR CRUISE NOT WORKING PREFORM DIAG AND PINPOINT TEST AND REPLACE BLOWN FUSE AND REPAIR

CRUISE DAIGNOIS AND BRAKE LIGHT SWITCH IS SHORTED TO POWER. REPLACE SWITCH AND RETEST

VERIFIED CONCERN PERFORM DIAGNOSIS,FOUND WIRE CONNECTOR AT DEACTIVATION SWITCH WAS INCORRECTLY PLUGGED IN 1

OPEN RPL WITH NEW STILL RADIO WENT ON AND OFF THEN FOUND GC100 AND G300 BAD HAD TO R R BATTERY TO CLEAN G400 AND HAD TO REMOVE SPARE TIRE TOCLEA

TECH_TXT2

WITCH. PERFORMED RNR BRAKE LIGHT SWITCH THEN RETESTED TO VERIFY REPAIRS OK.

WITCH TO MAIN CONNECTOR UNDER DASH. BRAKE LIGHTS ARE WORKING AT THIS TIME. R&R BOO SWITCH FOR INTERMITT PROB. 13480 42.

E BRAKE ON OFF SWITCH AND FOUND IT TO BE SHORTED INTERNALLY. I THEN REPLACED THE BRAKE ON OFF SWITCH AND RETESTED ALL IS WELL.
CH TO LOCK ACTUATOR. PERFORMED WIRING PINPOINT TEST AND FOUND A BAD BRAKE SWITCH. REPLACED THE BRAKE SWITCH. RETESTED OK.

E LOWER KICK PANEL BELOW
R CONSULT WITH JP. RETEST FOUND CONCERN NO LONGER HAPPENS AT THIS TIME. THANKS JEFF RUSH 485

XXXXXXXXXXXXXXXXXXXXXXXX
:HIFTS OUT OF PARK OK.

UNPLUGED TAIL LAMP AND FRT TURN STILL BLOWS SHORT BETWEEN CENTRAL JUNCTION BOX AND TURN SIGN SWITCH

TIFUNTION SWITCH ACCESS DAS H STERRING COULUMN OPEN HARNESS AND CHECK WIRING CIRCUIT 511 REPAIRED PULLED PIN CONNECTO AT C202A MULTIFUNTION SW

CKED FOR 5 MIN. COULD REACTAVATE. CALL HOT LINE ON CONCERN START START M TIME 473 CONTINUE M TIME

R063-094 4867

T AT TIMES. REPLACED SWITCH RETESTED. O.K

N WIRE EN D THEN TEST OK

R083-008 4834