EA02-025

FORD 10/27/03

APPENDIX N

BOOK 31 OF 61

PART 1 OF 4

Exponent
Date of Inspection: 9/22/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0070863490
VIN: 1LNLM82W5NY[redacted] Date: 07/28/92
Vehicle Location – City: DETROIT
Vehicle Location – State: MICHIGAN
Vehicle Model: TOWN CAR
Vehicle Model – Year: 1992

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2052

Base Physical Condition Notes: SIGNIFICANT DEBRIS ON EXTERIOR SURFACE. HEX PORT SURFACE RUSTED, RESIDUE ON TERMINAL CONTACTS.

Overall External Beginning Photo Number: 7501
Overall External Ending Photo Number: 7514

Resistance: Terminal-to-Terminal: .2 Ω
Resistance: Stationary Terminal to Hex Port: 65.1 kΩ
Resistance: Moveable Terminal to Hex Port: .440 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9469

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: Liquid Collected.

Aluminum Crimp Ring Condition Notes: Loose Debris Collection. Minor Corrosion

Interior of Base Condition Notes: Liquid In Base. Residue on Terminals. Spring Arm Partially Melted In Center of Arm.

Hexport-Cup Condition Notes: Cup Exterior Fluid Coverage, Discolored And Residue Present

Al Crimp-Base-Hex Port Start Photo No: 7515

Al Crimp-Base-Hex Port End Photo No: 7523

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks' and Gasket.

Interior Hexport Photo Start No: 7524

Interior Hexport Photo End No: 7527

Cup-Washer-Kapton Condition Notes: White Marks on Surface of Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 7526

Cup-Washer-Kapton Photo End No: 7531

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Darkened Appearance. White Marks on Surface. Torn from 0 to 4 O'clock. Torn At 6 O'clock. Torn From 9 to 12 O'clock.

Kapton Layer 1 Brake Fluid Side Start Photo #: 7512

Kapton Layer 1 Brake Fluid Side end Photo #: 7514

Kapton Layer 1 Switch Side Condition: Bubble Evidence of Delamination. Multiple Tears From 12 to 3 O'clock. Torn From 7 to 9 o'clock.

Kapton Layer 1 Switch Side Start Photo #: 7601

Kapton Layer 1 Switch Side end Photo #: 7604

3713 9490

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bagel Evidence of Delamination Tear At 2 O'clock, Tear At 3 O'clock Multiple Circumferential Tears From 3 to 12 O'clock, Circumferential Black Line From 6 to 11 O'clock

Kapton Layer 2 Brake Fluid Side Start Photo #: 7605

Kapton Layer 2 Brake Fluid Side end Photo #: 7607

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Switch Side Start Photo #: 7608

Kapton Layer 2 Switch Side end Photo #: 7610

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Bagel Evidence of Delamination, Darkened Appearance. Tear At 7 O'clock

Kapton Layer 3 Brake Fluid Side Start Photo #: 7611

Kapton Layer 3 Brake Fluid Side end Photo #: 7613

Kapton Layer 3 Switch Side Condition: Dark Residue on Surface

Kapton Layer 3 Switch Side Start Photo #: 7614

Kapton Layer 3 Switch Side end Photo #: 7616

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Parts Found Cupped. Washer, Bevel And Bottom Surfaces Discolored.

Washer-Cup-Button Photo Start Number: 7617

Washer-Cup-Button Photo End Number: 7626

3713 9491

Exponent
Date of Inspection: 9/22/00

Inspected by: JK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0070376840
VIN: 2MECM74WXN[redacted] Build Date: 05/07/92
Vehicle Location – City: Rio Grande City
Vehicle Location – State: Texas
Vehicle Model: Grand Marquis
Vehicle Model – Year: 1992

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 4138A

Base Physical Condition Notes: Debris on Exterior Surface. Residue on Interior of Base Four Terminal Contacts.

Overall External Beginning Photo Number: 7701
Overall External Ending Photo Number: 7714

Resistance: Terminal-to-Terminal: 284.5 kΩ
Resistance: Stationary Terminal to Hex Port: 18.12 MΩ
Resistance: Moveable Terminal to Hex Port: 19.20 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): YES
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No: 7715
Connector/Seal End Photo No: 7718
Connector Seal Notes:

Connector Engagement Notes: Electrical Path Not Returned. No Resistance Measurements Taken.

3713 9492

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: Clean & Dry

Interior of Base Condition Notes: Residue on Base and Contacts

Hexport-Cup Condition Notes: Residue on External Surface of Cup.

Al Crimp-Base-Hex Port Start Photo No: 7719

Al Crimp-Base-Hex Port End Photo No: 7725

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: —

Interior Hexport Photo Start No: 7726

Interior Hexport Photo End No: 7728

Cup-Washer-Kapton Condition Notes: —

Cup-Washer-Kapton Photo Start No: 7730

Cup-Washer-Kapton Photo End No: 7732

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Brown Evidence of Deformation. Torn from 7 to 8 o'clock. Silver-Colored Debris on Surface

Kapton Layer 1 Switch Side Condition: —

Kapton Layer 1 Brake Fluid Side Start Photo #: 7733

Kapton Layer 1 Brake Fluid Side end Photo #: 7735

Kapton Layer 1 Switch Side Start Photo #: 7801

Kapton Layer 1 Switch Side end Photo #: 7804

3713 9493

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: —

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Brake Fluid Side Start Photo #: 7805

Kapton Layer 2 Brake Fluid Side end Photo #: 7807

Kapton Layer 2 Switch Side Start Photo #: 7808

Kapton Layer 2 Switch Side end Photo #: 7810

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Possible Evidence of Delamination.

Kapton Layer 3 Switch Side Condition: —

Kapton Layer 3 Brake Fluid Side Start Photo #: 7811 thru

Kapton Layer 3 Brake Fluid Side end Photo #: 7813

Kapton Layer 3 Switch Side Start Photo #: 7814

Kapton Layer 3 Switch Side end Photo #: 7816

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Brown Clean And Dry

Washer-Cup-Button Photo Start Number: 7817

Washer-Cup-Button Photo End Number: 7834

Exponent
Date of Inspection: 9/25

Inspected by: DK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0070907663
VIN: 2FACP74W1N[redacted] Build Date: 06/15/92
Vehicle Location – City: GADSDEN
Vehicle Location – State: ALABAMA
Vehicle Model: CROWN VICTORIA
Vehicle Model – Year: 1992

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2D1B

Base Physical Condition Notes: DIAGRAM ON EXTERIOR SURFACE. BASE INTERIOR SURFACE MOIST.

Overall External Beginning Photo Number: 7901
Overall External Ending Photo Number: 7914

Resistance: Terminal-to-Terminal: .1 Ω
Resistance: Stationary Terminal to Hex Port: 7.11 M Ω
Resistance: Moveable Terminal to Hex Port: 7.72 M Ω

CONNECTOR INFORMATION

Connector Present (y/n): NO
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

1/1

3713 9495

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: —

Interior of Base Condition Notes: *Interior Base Moist with Fluid. Terminal Springs And Terminal Covered With Residue.*

Hexport-Cup Condition Notes: —

Al Crimp-Base-Hex Port Start Photo No: 7915

Al Crimp-Base-Hex Port End Photo No: 7921

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: *White Marks or Grease?*

Interior Hexport Photo Start No: 7922

Interior Hexport Photo End No: 7925

Cup-Washer-Kapton Condition Notes: *White Marks on Kapton Layer 1.*

Cup-Washer-Kapton Photo Start No: 7926

Cup-Washer-Kapton Photo End No: 7928

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: *Shows Evidence of Delamination. Torn From 7 to 2 O'clock. Torn From 8 to 1 O'clock. Dark Marks And Residue Present.*

Kapton Layer 1 Brake Fluid Side Start Photo #: 7929

Kapton Layer 1 Brake Fluid Side end Photo #: 7931

Kapton Layer 1 Switch Side Condition: *Shows Evidence of Delamination. Torn From 11 to 4 O'clock. Torn Ends*

Kapton Layer 1 Switch Side Start Photo #: 7932

Kapton Layer 1 Switch Side end Photo #: 7934

3713 9496

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bulged
Evidence of Delamination Term From
7 to 10 o'clock.

Kapton Layer 2 Switch Side Condition: Bulged
Evidence of Delamination, Two
Ears

Kapton Layer 2 Brake Fluid Side Start Photo #: 8001
Kapton Layer 2 Brake Fluid Side end Photo #: 8004

Kapton Layer 2 Switch Side Start Photo #: 8005
Kapton Layer 2 Switch Side end Photo #: 8007

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Bulged
Evidence of Delamination

Kapton Layer 3 Switch Side Condition: Dark
Rings on Surface.

Kapton Layer 3 Brake Fluid Side Start Photo #: 8008
Kapton Layer 3 Brake Fluid Side end Photo #: 8010

Kapton Layer 3 Switch Side Start Photo #: 8011
Kapton Layer 3 Switch Side end Photo #: 8013

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Parts Moist
With Fluid

Washer-Cup-Button Photo Start Number: 8014
Washer-Cup-Button Photo End Number: 8052

Exponent
Date of Inspection: 9/25/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071184661
VIN: 1LNLM81W3PY[redacted] Build Date: 10/02/92
Vehicle Location – City: TUCSON
Vehicle Location – State: ARIZONA
Vehicle Model: TOWN CAR
Vehicle Model – Year: 1993

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2036

Base Physical Condition Notes: DEBRIS ON EXTERIOR SURFACE, INTERIOR OF BASE AND TERMINAL CONTACTS ARE CLEAN AND DRY.

Overall External Beginning Photo Number: 8101
Overall External Ending Photo Number: 8114

Resistance: Terminal-to-Terminal: .1 Ω
Resistance: Stationary Terminal to Hex Port: OPEN
Resistance: Moveable Terminal to Hex Port: OPEN

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9498

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base:

Aluminum Crimp Ring Condition Notes: Clean & Dry.

Interior of Base Condition Notes: Clean & Dry
Tension Pin Loose on Spring Arm After Disassembly.

Hexport-Cup Condition Notes: Clean & Dry

Al Crimp-Base-Hex Port Start Photo No: 8115

Al Crimp-Base-Hex Port End Photo No: 8122

INFO AFTER OPENING CUP

Interior Hexport Condition Notes White Marks on Shaft

Interior Hexport Photo Start No: 8123

Interior Hexport Photo End No: 8126

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1. Kapton Layers 1 & 2 Raised from Cup During Disassembly. Layer 1 & 2 Were Marked and Removed from Cup Prior to Marking Layer 3.

Cup-Washer-Kapton Photo Start No: 8127

Cup-Washer-Kapton Photo End No: 8130

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks on Surface. Bubble Evidence of Delamination. Torn from 4 to 11 O'clock. Multiple Tears In Center, Torn from 8 to 9 O'clock. Black Mark At 6 o'clock.

Kapton Layer 1 Brake Fluid Side Start Photo #: 8131

Kapton Layer 1 Brake Fluid Side end Photo #: 8133

Kapton Layer 1 Switch Side Condition: Bubble Evidence of Delamination. Torn from 7 to 2 O'clock. One Tear.

Kapton Layer 1 Switch Side Start Photo #: 8134

Kapton Layer 1 Switch Side end Photo #: 8136

3713 9499

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bubble Evidence of Delamination. Term At 5 O'clock. Term At 11 O'clock.

Kapton Layer 2 Brake Fluid Side Start Photo #: 8201

Kapton Layer 2 Brake Fluid Side end Photo #: 8204

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Switch Side Start Photo #: 8205

Kapton Layer 2 Switch Side end Photo #: 8207

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: —

Kapton Layer 3 Brake Fluid Side Start Photo #: 8208

Kapton Layer 3 Brake Fluid Side end Photo #: 8210

Kapton Layer 3 Switch Side Condition: Dark Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 8211

Kapton Layer 3 Switch Side end Photo #: 8213

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Brown Deg. Discoloration on Washer Bevel.

Washer-Cup-Button Photo Start Number: 8214

Washer-Cup-Button Photo End Number: 8234

Exponent
Date of Inspection: 9/25/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071389672
VIN: 2MECM74W7NX[redacted] Build Date: 02/26/92
Vehicle Location – City: Harvey
Vehicle Location – State: Louisiana
Vehicle Model: Grand Marquis
Vehicle Model – Year: 1992

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: A8
Date Code: 2015

Base Physical Condition Notes: Debris on External Surface. Interior of Base Moist. Debris Present.

Overall External Beginning Photo Number: 8301
Overall External Ending Photo Number: 8314

Resistance: Terminal-to-Terminal: 71.1 kΩ
Resistance: Stationary Terminal to Hex Port: 128.9 kΩ
Resistance: Moveable Terminal to Hex Port: 4.6 Ω

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9581

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: Liquid + Material Collected From Base.

Aluminum Crimp Ring Condition Notes: Liquid And Material Collected From Crimp Ring.

Interior of Base Condition Notes: Liquid In Base. Spring Arm Detached At Bottom. Transfer Pin Area; Remnant of Spring Arm And Liquid In Base.

Hexport-Cup Condition Notes: Cup Exterior Discolored And Partially Covered

Al Crimp-Base-Hex Port Start Photo No: 8315

Al Crimp-Base-Hex Port End Photo No: 8323

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Material on Gasket.

Interior Hexport Photo Start No: 8324

Interior Hexport Photo End No: 8327

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1

Cup-Washer-Kapton Photo Start No: 8328

Cup-Washer-Kapton Photo End No: 8330

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Brake Evidence of Delamination. White Marks on Surface. Torn From 9 to 12 O'clock. Brake Marks At 4 And 7 O'clock.

Kapton Layer 1 Brake Fluid Side Start Photo #: 8331

Kapton Layer 1 Brake Fluid Side end Photo #: 8333

Kapton Layer 1 Switch Side Condition: Brake Evidence of Delamination. Torn At 4 And 10 O'clock. One End.

Kapton Layer 1 Switch Side Start Photo #: 8334

Kapton Layer 1 Switch Side end Photo #: 8336

3713 9582

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Trace Evidence of Delamination. Tear From 4 to 5 O'clock And At 7:00 o'clock. Circumferential Black Mark From 2 to 4 O'clock. Circumferential And Radial Black Mark at 7:00 O'clock.

Kapton Layer 2 Brake Fluid Side Start Photo #: 8401

Kapton Layer 2 Brake Fluid Side end Photo #: 8404

Kapton Layer 2 Switch Side Condition: Trace Surface of Delamination. Tear At 5, 10 And 11 O'clock. Tear From 7 to 8 O'clock Only Edge.

Kapton Layer 2 Switch Side Start Photo #: 8405

Kapton Layer 2 Switch Side end Photo #: 8407

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Trace Evidence of Delamination. Tear At 2 And 8 O'clock. Three Tears From 3 to 5 O'clock.

Kapton Layer 3 Brake Fluid Side Start Photo #: 8408

Kapton Layer 3 Brake Fluid Side end Photo #: 8410

Kapton Layer 3 Switch Side Condition: Trace Evidence of Delamination, Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 8411

Kapton Layer 3 Switch Side end Photo #: 8413

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Phases Fully Covered. Metallic Phase Discolored And Rims Covered.

Washer-Cup-Button Photo Start Number: 8414

Washer-Cup-Button Photo End Number: 8434

3713 9583

Exponent
Date of Inspection: 9/26/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 007112 1973

VIN: 2MELM75WONX[redacted] Build Date: 05/04/92

Vehicle Location – City: HEIDELBERG

Vehicle Location – State: PENNSYLVANIA

Vehicle Model: GRAND MARQUIS

Vehicle Model – Year: 1992

Part Prefix Number: F2VC

Part Base Number: 9F924

Part Suffix Number: AB

Date Code: 2031

Base Physical Condition Notes: DECAL ON EXTERIOR SURFACE. HEX-PORT SURFACE RUSTED. INTERIOR OF BASE MOIST WITH FLUID.

Overall External Beginning Photo Number: 8501

Overall External Ending Photo Number: 8514

Resistance: Terminal-to-Terminal: 92.8 Ω

Resistance: Stationary Terminal to Hex Port: 3.371 MΩ

Resistance: Moveable Terminal to Hex Port: 3.470 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): No

Res: Terminal-to-Terminal w/ Connector:

Res: Stationary Term to Hex Port w/ Connector:

Res: Moveable Term to Hex Port w/ Connector:

Connector/Seal Start Photo No:

Connector/Seal End Photo No:

Connector Seal Notes:

Connector Engagement Notes:

3713 9504

Experiment

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: Loose Material Collected From Crimp Ring. Corrosion Present on Interior Surface.

Interior of Base Condition Notes: Interior of Base Moist And Residue Covered. Spring Arm Damaged At Elbow.

Hexport-Cup Condition Notes: Cup Surface Discolored And Residue Covered

Al Crimp-Base-Hex Port Start Photo No: 8515

Al Crimp-Base-Hex Port End Photo No: 8522

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks on Gasket.

Interior Hexport Photo Start No: 8523

Interior Hexport Photo End No: 8526

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 8527

Cup-Washer-Kapton Photo End No: 8530

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Some Evidence of Delamination. Tear From 11 to 4 O'clock. Two Tears In Center. Tear From 10 to 5 O'clock. Brake Residue And Circumferential Marks At 10 O'clock. White Marks on Surface. One Tear

Kapton Layer 1 Brake Fluid Side Start Photo #: 8531

Kapton Layer 1 Brake Fluid Side end Photo #: 8533

Kapton Layer 1 Switch Side Condition: Some Evidence of Delamination. Tear At 1 O'clock One Tear

Kapton Layer 1 Switch Side Start Photo #: 8534

Kapton Layer 1 Switch Side end Photo #: 8536

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bubble Evidence of Delamination. Tears At 5, 9 And 11 O'clock. One Ear

Kapton Layer 2 Brake Fluid Side Start Photo #: 8601

Kapton Layer 2 Brake Fluid Side end Photo #: 8604

Kapton Layer 2 Switch Side Condition: Bubble Evidence of Delamination. Tear At 7 O'clock. One Ear.

Kapton Layer 2 Switch Side Start Photo #: 8605

Kapton Layer 2 Switch Side end Photo #: 8607

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Bare Evidence of Delamination. Tear At 8 O'clock.

Kapton Layer 3 Brake Fluid Side Start Photo #: 8608

Kapton Layer 3 Brake Fluid Side end Photo #: 8610

Kapton Layer 3 Switch Side Condition: Darkened Appearance. Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 8611

Kapton Layer 3 Switch Side end Photo #: 8613

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Parts Melt With Fluid. Connector, Disc, And Washer Bottom Surfaces Discolored

Washer-Cup-Button Photo Start Number: 8614

Washer-Cup-Button Photo End Number: 8634

Exponent
Date of Inspection: 9/27/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0070725317

VIN: 2MELM75W3P[redacted] Build Date: 10/16/92

Vehicle Location – City: Fort Lauderdale

Vehicle Location – State: Florida

Vehicle Model: Grand Marquis

Vehicle Model – Year: 1993

Part Prefix Number: F2VC

Part Base Number: 9F924

Part Suffix Number: AG

Date Code: 2030

Base Physical Condition Notes: Minor Debris and External Surface. Residue on Interior of Base.

Overall External Beginning Photo Number: 8701

Overall External Ending Photo Number: 8714

Resistance: Terminal-to-Terminal: .1 Ω

Resistance: Stationary Terminal to Hex Port: 8.90 M Ω

Resistance: Moveable Terminal to Hex Port: 9.32 M Ω

CONNECTOR INFORMATION

Connector Present (y/n): No

Res: Terminal-to-Terminal w/ Connector:

Res: Stationary Term to Hex Port w/ Connector:

Res: Moveable Term to Hex Port w/ Connector:

Connector/Seal Start Photo No:

Connector/Seal End Photo No:

Connector Seal Notes:

Connector Engagement Notes:

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: Clean And Dry

Interior of Base Condition Notes: Residue on Base And Terminal Contacts.

Hexport-Cup Condition Notes: Cup Surface Discolored. Residue on Portion.

Al Crimp-Base-Hex Port Start Photo No: 8715

Al Crimp-Base-Hex Port End Photo No: 8721

INFO AFTER OPENING CUP

Interior Hexport Condition Notes —

Interior Hexport Photo Start No: 8722

Interior Hexport Photo End No: 8723

Cup-Washer-Kapton Condition Notes: Gasket Adhered To Kapton Layer. Damage During Disassembly. White Marks on Gasket And Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 8724

Cup-Washer-Kapton Photo End No: 8729

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Brake Evidence of Delamination. White Marks on Surface. Even on Surface. Circumferential Black Marks At 6 And 12 O'clock. One Ear.

Kapton Layer 1 Brake Fluid Side Start Photo #: 8730

Kapton Layer 1 Brake Fluid Side end Photo #: 8732

Kapton Layer 1 Switch Side Condition: Brake Evidence of Delamination. Tear At 12 O'clock. One Ear.

Kapton Layer 1 Switch Side Start Photo #: 8733

Kapton Layer 1 Switch Side end Photo #: 8735

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Possible Evidence of Delamination, Circumferential Black Line At 10 O'clock. One Ear

Kapton Layer 2 Brake Fluid Side Start Photo #: 8801

Kapton Layer 2 Brake Fluid Side end Photo #: 8804

Kapton Layer 2 Switch Side Condition: Possible Evidence of Delamination Term At 1 And 2 O'clock One Ear

Kapton Layer 2 Switch Side Start Photo #: 8805

Kapton Layer 2 Switch Side end Photo #: 8807

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Possible Evidence of Delamination. Term At 10 O'clock. One Ear

Kapton Layer 3 Brake Fluid Side Start Photo #: 8808

Kapton Layer 3 Brake Fluid Side end Photo #: 8810

Kapton Layer 3 Switch Side Condition: Darkened Appearance. Residue on Surface. One Ear

Kapton Layer 3 Switch Side Start Photo #: 8811

Kapton Layer 3 Switch Side end Photo #: 8813

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Brass Moist with Fluid. Discoloration and [illegible] of Washer.

Washer-Cup-Button Photo Start Number: 8814

Washer-Cup-Button Photo End Number: 8834

Exponent
Date of Inspection: 9/27

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071228706
VIN: 2FALP73W1NX[redacted] Build Date: 08/07/92
Vehicle Location – City: HIALEAH
Vehicle Location – State: FLORIDA
Vehicle Model: CROWN VICTORIA
Vehicle Model – Year: 1992

Part Prefix Number: F2AC
Part Base Number: 9F924
Part Suffix Number: AA
Date Code: 2127

Base Physical Condition Notes: Debris on Exterior Surface. Base Internal Clean And Dry.

Overall External Beginning Photo Number: 8901
Overall External Ending Photo Number: 8914

Resistance: Terminal-to-Terminal: 4.40 MΩ
Resistance: Stationary Terminal to Hex Port: open
Resistance: Moveable Terminal to Hex Port: open

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9518

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: Clean & Dry.

Interior of Base Condition Notes: Clean & Dry
Environmental Seal: Adhered to Base on Disassembly. Transfer Pin On Spring Arm At Disassembly Fell Into Base Prior To Photo.

Hexport-Cup Condition Notes: Clean & Dry

Al Crimp-Base-Hex Port Start Photo No: 8915

Al Crimp-Base-Hex Port End Photo No: 8921

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks on Gasket

Interior Hexport Photo Start No: 8922

Interior Hexport Photo End No: 8925

Cup-Washer-Kapton Condition Notes: —

Cup-Washer-Kapton Photo Start No: 8926

Cup-Washer-Kapton Photo End No: 8929

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Bubbles Evidence of Delamination. Two Circumferential Tears from 2 to 5 O'clock. Circumferential Tear From 9 to 12 O'clock. Black Residue on Surface.

Kapton Layer 1 Brake Fluid Side Start Photo #: 8930

Kapton Layer 1 Brake Fluid Side end Photo #: 8932

Kapton Layer 1 Switch Side Condition: —

Kapton Layer 1 Switch Side Start Photo #: 8933

Kapton Layer 1 Switch Side end Photo #: 8935

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: ____________

Kapton Layer 2 Switch Side Condition: ____________

Kapton Layer 2 Brake Fluid Side Start Photo #: 9001
Kapton Layer 2 Brake Fluid Side end Photo #: 9004

Kapton Layer 2 Switch Side Start Photo #: 9005
Kapton Layer 2 Switch Side end Photo #: 9007

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: ____________

Kapton Layer 3 Switch Side Condition: Residue on Surface

Kapton Layer 3 Brake Fluid Side Start Photo #: 9008
Kapton Layer 3 Brake Fluid Side end Photo #: 9010

Kapton Layer 3 Switch Side Start Photo #: 9011
Kapton Layer 3 Switch Side end Photo #: 9013

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: [illegible] [illegible] [illegible] [illegible]

Washer-Cup-Button Photo Start Number: 9014
Washer-Cup-Button Photo End Number: 9034

Expment
Date of Inspection: 9/27/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071566478
VIN: 2MELM75W2N[redacted]d Date: 06/26/92
Vehicle Location – City: Kenner
Vehicle Location – State: Louisiana
Vehicle Model: Grand Marquis
Vehicle Model – Year: 1992

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2114

Base Physical Condition Notes: Debris on Exterior Surface. Intrusion of Base Mount with Fluid.

Overall External Beginning Photo Number: 9101
Overall External Ending Photo Number: 9114

Resistance: Terminal-to-Terminal: .1 Ω
Resistance: Stationary Terminal to Hex Port: 6.30 M Ω
Resistance: Moveable Terminal to Hex Port: 6.48 M Ω

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9513

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: —

Aluminum Crimp Ring Condition Notes: Clean And Dry

Interior of Base Condition Notes: Interior Moist; Residue on Portion of Spring Arm & Terminal Contacts

Hexport-Cup Condition Notes: Portion of Surface Discolored And Residue Present.

Al Crimp-Base-Hex Port Start Photo No: 9115

Al Crimp-Base-Hex Port End Photo No: 9121

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks on Gasket.

Interior Hexport Photo Start No: 9122

Interior Hexport Photo End No: 9128

Cup-Washer-Kapton Condition Notes: White Marks on Surface of Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 9124

Cup-Washer-Kapton Photo End No: 9129

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks on Surface. Basic Evidence of Delamination. Tear At 9 o'clock.

Kapton Layer 1 Switch Side Condition: Basic Evidence of Delamination. Tear At 4 o'clock. Residue Blister Line At 2 o'clock. One Ear.

Kapton Layer 1 Brake Fluid Side Start Photo #: 9130

Kapton Layer 1 Brake Fluid Side end Photo #: 9132

Kapton Layer 1 Switch Side Start Photo #: 9133

Kapton Layer 1 Switch Side end Photo #: 9135

3713 9514

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bubble Evidence of Delamination. Tear At 9 O'clock

Kapton Layer 2 Switch Side Condition: Tear At 3 O'clock. One Ear.

Kapton Layer 2 Brake Fluid Side Start Photo #: 9201

Kapton Layer 2 Brake Fluid Side end Photo #: 9204

Kapton Layer 2 Switch Side Start Photo #: 9205

Kapton Layer 2 Switch Side end Photo #: 9207

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: ——

Kapton Layer 3 Switch Side Condition: Dark Appearance. Residue on Surface

Kapton Layer 3 Brake Fluid Side Start Photo #: 9208

Kapton Layer 3 Brake Fluid Side end Photo #: 9210

Kapton Layer 3 Switch Side Start Photo #: 9211

Kapton Layer 3 Switch Side end Photo #: 9213

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Damp Moist With Fluid. Rear of Washer Partially Discolored. Surface of Converter Discolored

Washer-Cup-Button Photo Start Number: 9214

Washer-Cup-Button Photo End Number: 9233

Exponent
Date of Inspection: 9/28/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 006962447/
VIN: 2FALP74W3PX[redacted] Build Date: 11/12/92
Vehicle Location – City: BEVERLY
Vehicle Location – State: MASSACHUSETTS.
Vehicle Model: CROWN VICTORIA
Vehicle Model – Year: 1993

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2030

Base Physical Condition Notes: Degradation and Extrusion Surface Present on Hex-Port. Interior of Base Was Moist. Degradation Surface and Terminal Contacts

Overall External Beginning Photo Number: 9301
Overall External Ending Photo Number: 9314

Resistance: Terminal-to-Terminal: .455 kΩ
Resistance: Stationary Terminal to Hex Port: 2.619 MΩ
Resistance: Moveable Terminal to Hex Port: 8.7 Ω

CONNECTOR INFORMATION

Connector Present (y/n): YES
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No: 9315
Connector/Seal End Photo No: 9316
Connector Seal Notes:

Connector Engagement Notes: No Electrical Components Retained With Connector. No Additional Measurements Taken.

3713 9516

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: Liquid Collected from Base

Aluminum Crimp Ring Condition Notes: Material Collected From Crimp Ring. Corrosion Present.

Interior of Base Condition Notes: Liquid In Base. Spring Arm Deposits At Elbow. Remnants In Base. Interior Surface And Terminal Contacts Covered In Residue.

Hexport-Cup Condition Notes: Surface Moist With Fluid. Discolored Residue on Surface.

Al Crimp-Base-Hex Port Start Photo No: 9317

Al Crimp-Base-Hex Port End Photo No: 9324

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks on Gasket.

Interior Hexport Photo Start No: 9325

Interior Hexport Photo End No: 9328

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 9329

Cup-Washer-Kapton Photo End No: 9332

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks on Surface. Brass Evidence of Delamination. Tear From 3 to 5 O'clock. Two Tears In Center. Random Black Marks At 2 And 4 O'clock. Circumferential Black Mark From 12 to 5 O'clock. Residue on Surface. Two Ends

Kapton Layer 1 Brake Fluid Side Start Photo #: 9333

Kapton Layer 1 Brake Fluid Side end Photo #: 9335

Kapton Layer 1 Switch Side Condition: Brass Evidence of Delamination; Tears At 5, 8 And 11 O'clock. Residue on Surface. Two Ends

Kapton Layer 1 Switch Side Start Photo #: 9401

Kapton Layer 1 Switch Side end Photo #: 9405

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: BUBBLE SURFACE OF DELAMINATION. THREE TEARS BETWEEN 1 AND 2 O'CLOCK. TWO TEARS IN CENTER. TEARS AT 7 & 8 O'CLOCK. RESIDUE ON SURFACES. RAISED RING CIRCUMFERENTIAL BUBBLE LINE AT 9 O'CLOCK. TWO ENDS.

Kapton Layer 2 Brake Fluid Side Start Photo #: 9406

Kapton Layer 2 Brake Fluid Side end Photo #: 9408

Kapton Layer 2 Switch Side Condition: BUBBLE SURFACE OF DELAMINATION. TEAR AT 12:00 O'CLOCK TWO ENDS.

Kapton Layer 2 Switch Side Start Photo #: 9409

Kapton Layer 2 Switch Side end Photo #: 9411

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: DARKENED APPEARANCE. BUBBLE SURFACE OF DELAMINATION. TEAR AT 6 O'clock ONE END

Kapton Layer 3 Brake Fluid Side Start Photo #: 9412

Kapton Layer 3 Brake Fluid Side end Photo #: 9414

Kapton Layer 3 Switch Side Condition: DARK RESIDUE ON SURFACE.

Kapton Layer 3 Switch Side Start Photo #: 9415

Kapton Layer 3 Switch Side end Photo #: 9417

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: PIXEL FLAT CONTACT, CONVERGE, DISC BONDED AREA OF WASHER AND REVERSE SIDE DISCOLORED.

Washer-Cup-Button Photo Start Number: 9418

Washer-Cup-Button Photo End Number: 9436

Exponent
Date of Inspection: 9/29/00 Inspected by: DK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071001852
VIN: 2MELM75W9P[redacted] Build Date: 09/11/92
Vehicle Location – City: SALINA
Vehicle Location – State: KS
Vehicle Model: Grand Marquis
Vehicle Model – Year: 1993

Part Prefix Number: F2VC
Part Base Number: 9F924
Part Suffix Number: AB
Date Code: 2014

Base Physical Condition Notes: Debris on Exterior Surface. Dirt and Debris on Interior Surface of Base and Connector.

Overall External Beginning Photo Number: 9501
Overall External Ending Photo Number: 9518

Resistance: Terminal-to-Terminal: 5.8 Ω
Resistance: Stationary Terminal to Hex Port: open
Resistance: Moveable Terminal to Hex Port: open

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9519

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: None.

Aluminum Crimp Ring Condition Notes: Clean & Dry.

Interior of Base Condition Notes: Drain in Base, Terminal Corroded. Spring Arm Damaged Near Elbow.

Hexport-Cup Condition Notes: Surface Corroded And Discolored.

Al Crimp-Base-Hex Port Start Photo No: 9515

Al Crimp-Base-Hex Port End Photo No: 9522

INFO AFTER OPENING CUP

Interior Hexport Condition Notes

Interior Hexport Photo Start No: 9523

Interior Hexport Photo End No: 9524

Cup-Washer-Kapton Condition Notes: Gasket Adhered To Kapton Layer During Disassembly. White Marks on Gasket

Cup-Washer-Kapton Photo Start No: 9525

Cup-Washer-Kapton Photo End No: 9530

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Brass Evidence of Delamination. Multiple Tears Around Circumference. White Marks on Surface. Brass Residue on Surface

Kapton Layer 1 Brake Fluid Side Start Photo #: 9531

Kapton Layer 1 Brake Fluid Side end Photo #: 9533

Kapton Layer 1 Switch Side Condition:

Kapton Layer 1 Switch Side Start Photo #: 9534

Kapton Layer 1 Switch Side end Photo #: 9536

3713 9528

Experiment

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: —

Kapton Layer 2 Brake Fluid Side Start Photo #: 9601
Kapton Layer 2 Brake Fluid Side end Photo #: 9604

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Switch Side Start Photo #: 9605
Kapton Layer 2 Switch Side end Photo #: 9607

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: —

Kapton Layer 3 Brake Fluid Side Start Photo #: 9608
Kapton Layer 3 Brake Fluid Side end Photo #: 9610

Kapton Layer 3 Switch Side Condition: Residue on Surfaces.

Kapton Layer 3 Switch Side Start Photo #: 9611
Kapton Layer 3 Switch Side end Photo #: 9613

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Parts Dry. White Residue From Rust Present on Metallic Parts.

Washer-Cup-Button Photo Start Number: 9614
Washer-Cup-Button Photo End Number: 9634

Exponent
Date of Inspection: 9/29/03

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0069094524

VIN: 1LNLM82W5NY[redacted] Build Date: 03/06/92

Vehicle Location – City: INDEPENDENCE

Vehicle Location – State: OH

Vehicle Model: TOWN CAR

Vehicle Model – Year: 1992

Part Prefix Number: F2AC

Part Base Number: 9F924

Part Suffix Number: AA

Date Code: 3280

Base Physical Condition Notes: DEBRIS ON EXTERIOR SURFACE. DEBRIS ON INTERNAL SURFACES OF BASE. HEX PORT RUSTED.

Overall External Beginning Photo Number: 9701

Overall External Ending Photo Number: 9714

Resistance: Terminal-to-Terminal: 2.2 Ω

Resistance: Stationary Terminal to Hex Port: 28.52 MΩ

Resistance: Moveable Terminal to Hex Port: 29.11 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): YES

Res: Terminal-to-Terminal w/ Connector:

Res: Stationary Term to Hex Port w/ Connector:

Res: Moveable Term to Hex Port w/ Connector:

Connector/Seal Start Photo No: 97.23

Connector/Seal End Photo No: 97.24

Connector Seal Notes:

Connector Engagement Notes: ELECTRICAL CONNECTOR NOT REMOVED. NO RESISTANCE MEASUREMENTS TAKEN.

3713 9522

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: None

Aluminum Crimp Ring Condition Notes: White Material Collected From Crimp Ring. Some Corrosion on Crimp Ring.

Interior of Base Condition Notes: Residue In Base And On Terminal Contacts.

Hexport-Cup Condition Notes: Residue And Discoloration on Portion of Cup Surface. Corrosion on Cup Edge.

Al Crimp-Base-Hex Port Start Photo No: 9715

Al Crimp-Base-Hex Port End Photo No: 9722

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks On Gasket.

Interior Hexport Photo Start No: 9725

Interior Hexport Photo End No: 9728

Cup-Washer-Kapton Condition Notes: Kapton Layers Partially Raised During Disassembly

Cup-Washer-Kapton Photo Start No: 9729

Cup-Washer-Kapton Photo End No: 9732

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: Overall Evidence of Delamination. Multiple Tears In Center And Around Circumference. Dark Residue on Portion of Surface.

Kapton Layer 1 Brake Fluid Side Start Photo #: 9733

Kapton Layer 1 Brake Fluid Side end Photo #: 9735

Kapton Layer 1 Switch Side Condition: —

Kapton Layer 1 Switch Side Start Photo #: 9801

Kapton Layer 1 Switch Side end Photo #: 9804

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: —

Kapton Layer 2 Brake Fluid Side Start Photo #: 9805
Kapton Layer 2 Brake Fluid Side end Photo #: 9807

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Switch Side Start Photo #: 9808
Kapton Layer 2 Switch Side end Photo #: 98 10

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: —

Kapton Layer 3 Brake Fluid Side Start Photo #: 98 11
Kapton Layer 3 Brake Fluid Side end Photo #: 9813

Kapton Layer 3 Switch Side Condition: —

Kapton Layer 3 Switch Side Start Photo #: 9814
Kapton Layer 3 Switch Side end Photo #: 9816

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Clean
And Dry.

Washer-Cup-Button Photo Start Number: 9817
Washer-Cup-Button Photo End Number: 9836

3713 9524

Exponent
Date of Inspection: 10/2/00

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0071057870

VIN: 2MEFM75W3N[redacted] Build Date: 06/11/92

Vehicle Location – City: HARTVILLE

Vehicle Location – State: OH

Vehicle Model: Grand Marquis

Vehicle Model – Year: 1992

Part Prefix Number: F2VC

Part Base Number: 9F924

Part Suffix Number: AB

Date Code: 1364

Base Physical Condition Notes: Debris on Exterior Surface. Interior of Base and Contacts Moist with Fluid and Residue - Corroded

Overall External Beginning Photo Number: 9901

Overall External Ending Photo Number: 9914

Resistance: Terminal-to-Terminal: 540.9 kΩ

Resistance: Stationary Terminal to Hex Port: 3.82 MΩ

Resistance: Moveable Terminal to Hex Port: 1.911 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): No

Res: Terminal-to-Terminal w/ Connector: ____

Res: Stationary Term to Hex Port w/ Connector: ____

Res: Moveable Term to Hex Port w/ Connector: ____

Connector/Seal Start Photo No: ____

Connector/Seal End Photo No: ____

Connector Seal Notes: ____

Connector Engagement Notes: ____

3713 9525

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: None

Aluminum Crimp Ring Condition Notes: Liquid Collected from Crimp Ring.

Interior of Base Condition Notes: Terminal Surface Moist. Spring Arm Deposits In Middle of Arm. Remnants In Base. Contacts Brown Covered.

Hexport-Cup Condition Notes: Surface of Cup Moist, Discoloured And Residue Covered.

Al Crimp-Base-Hex Port Start Photo No: 9915

Al Crimp-Base-Hex Port End Photo No: 9922

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Marks on Grain.

Interior Hexport Photo Start No: 9923

Interior Hexport Photo End No: 9926

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 9927

Cup-Washer-Kapton Photo End No: 9930

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks on Surface. Rainbow Surface. Bubble Evidence of Delamination. Tears From 1 to 2 Oclock. One End.

Kapton Layer 1 Brake Fluid Side Start Photo #: 9931

Kapton Layer 1 Brake Fluid Side end Photo #: 9933

Kapton Layer 1 Switch Side Condition: Bubbles Evidence of Delamination. Tears At 1 And 8 O'clock And From 10 to 11 oclock One End.

Kapton Layer 1 Switch Side Start Photo #: 9934

Kapton Layer 1 Switch Side end Photo #: 9935

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bubble Evidence of Delamination. Tears from 1 to 2 O'clock and near center. One Ear.

Kapton Layer 2 Brake Fluid Side Start Photo #: 10001

Kapton Layer 2 Brake Fluid Side end Photo #: 10004

Kapton Layer 2 Switch Side Condition: Bubble Evidence of Delamination. Tears at 1 and 8 O'clock and from 10 to 11 O'clock. One Ear.

Kapton Layer 2 Switch Side Start Photo #: 10005

Kapton Layer 2 Switch Side end Photo #: 10007

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Bubble Evidence of Delamination. Tear from 11 to 1 O'clock. One Ear.

Kapton Layer 3 Brake Fluid Side Start Photo #: 10008

Kapton Layer 3 Brake Fluid Side end Photo #: 10010

Kapton Layer 3 Switch Side Condition: Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 10011

Kapton Layer 3 Switch Side end Photo #: 10013

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Parts Moist with fluid. Washer Bevel Area and Reserve Side, Conductor and Disc Discolored.

Washer-Cup-Button Photo Start Number: 10014

Washer-Cup-Button Photo End Number: 10034

3713 9527

Experiment
Date of Inspection: 10/22/09

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0051139606

VIN: 2FACP74W3PX[redacted] Build Date: 09/08/92

Vehicle Location – City: St Charles

Vehicle Location – State: MO

Vehicle Model: Crown Victoria

Vehicle Model – Year: 1993

Part Prefix Number: F2VC

Part Base Number: 9F924

Part Suffix Number: AB

Date Code: 1347

Base Physical Condition Notes: Debris on Exterior Surface. Debris on Interior of Base and Contacts.

Overall External Beginning Photo Number: 10101

Overall External Ending Photo Number: 10114

Resistance: Terminal-to-Terminal: 1.5 Ω

Resistance: Stationary Terminal to Hex Port: 10.65 MΩ

Resistance: Moveable Terminal to Hex Port: 13.07 MΩ

CONNECTOR INFORMATION

Connector Present (y/n): No

Res: Terminal-to-Terminal w/ Connector:

Res: Stationary Term to Hex Port w/ Connector:

Res: Moveable Term to Hex Port w/ Connector:

Connector/Seal Start Photo No:

Connector/Seal End Photo No:

Connector Seal Notes:

Connector Engagement Notes:

3713 9528

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: None.

Aluminum Crimp Ring Condition Notes: Clean & Dry.

Interior of Base Condition Notes: Clean & Moist.

Hexport-Cup Condition Notes: Clean & Moist.

Al Crimp-Base-Hex Port Start Photo No: 10115

Al Crimp-Base-Hex Port End Photo No: 10122

INFO AFTER OPENING CUP

Interior Hexport Condition Notes

Interior Hexport Photo Start No: 10123

Interior Hexport Photo End No: 10124

Cup-Washer-Kapton Condition Notes: White Marks on Gasket & Kapton Layer 1. Gasket Adhered to Kapton Layer During Disassembly

Cup-Washer-Kapton Photo Start No: 10125

Cup-Washer-Kapton Photo End No: 10130

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks On Surface. Residue on Surface. Tears From 4 to 5 And 10 to 11 O'clock. Bubble Evidence of Delamination

Kapton Layer 1 Brake Fluid Side Start Photo #: 10131

Kapton Layer 1 Brake Fluid Side end Photo #: 10133

Kapton Layer 1 Switch Side Condition: —

Kapton Layer 1 Switch Side Start Photo #: 10134

Kapton Layer 1 Switch Side end Photo #: 10136

Exponent

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: —

Kapton Layer 2 Brake Fluid Side Start Photo #: 10201

Kapton Layer 2 Brake Fluid Side end Photo #: 10204

Kapton Layer 2 Switch Side Condition: —

Kapton Layer 2 Switch Side Start Photo #: 10205

Kapton Layer 2 Switch Side end Photo #: 10207

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: —

Kapton Layer 3 Brake Fluid Side Start Photo #: 10208

Kapton Layer 3 Brake Fluid Side end Photo #: 10210

Kapton Layer 3 Switch Side Condition: Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 10211

Kapton Layer 3 Switch Side end Photo #: 10213

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Pieces Occur Any Deg.

Washer-Cup-Button Photo Start Number: 10214

Washer-Cup-Button Photo End Number: 10234

Exponent
Date of Inspection: 10/02/03

Inspected by: BK

Data Form for Examination and Disassembly of Brake Switch

GENERAL INFORMATION

Long Tag Number: 0070031194
VIN: 1LNLM81W6NY[redacted] Build Date: 02/18/92
Vehicle Location - City: Alcoa
Vehicle Location - State: TN
Vehicle Model: Town Car
Vehicle Model - Year: 1992

Part Prefix Number: 2FVC
Part Base Number: 9F924
Part Suffix Number: A4
Date Code: 2045

Base Physical Condition Notes: Overall Discoloration External Surfaces. Base Insertion Molding.

Overall External Beginning Photo Number: 10301
Overall External Ending Photo Number: 10314

Resistance: Terminal-to-Terminal: .1 Ω
Resistance: Stationary Terminal to Hex Port: 4.78M Ω
Resistance: Moveable Terminal to Hex Port: 4.92M Ω

CONNECTOR INFORMATION

Connector Present (y/n): No
Res: Terminal-to-Terminal w/ Connector:
Res: Stationary Term to Hex Port w/ Connector:
Res: Moveable Term to Hex Port w/ Connector:
Connector/Seal Start Photo No:
Connector/Seal End Photo No:
Connector Seal Notes:

Connector Engagement Notes:

3713 9531

Exponent

INFORMATION AFTER REMOVAL OF ALUMINUM CRIMP RING

Loose Liquid or material Collected from Inside the Base: None.

Aluminum Crimp Ring Condition Notes: Clean & Dry.

Interior of Base Condition Notes: Interior Surface Moist. Portion of Surface And Residue Covered.

Hexport-Cup Condition Notes: Portion of Cup Surface Discolored And Residue-Covered.

Al Crimp-Base-Hex Port Start Photo No: 10315

Al Crimp-Base-Hex Port End Photo No: 10321

INFO AFTER OPENING CUP

Interior Hexport Condition Notes: White Mark on Gasket.

Interior Hexport Photo Start No: 10322

Interior Hexport Photo End No: 10325

Cup-Washer-Kapton Condition Notes: White Marks on Kapton Layer 1.

Cup-Washer-Kapton Photo Start No: 10326

Cup-Washer-Kapton Photo End No: 10329

KAPTON LAYERS

LAYER 1

Kapton Layer 1 Brake Fluid Side Condition: White Marks on Surface. Residue on Surface. Bubble Evidence of Delamination. Tear from 10 to 11 O'clock.

Kapton Layer 1 Brake Fluid Side Start Photo #: 10330

Kapton Layer 1 Brake Fluid Side end Photo #: 10332

Kapton Layer 1 Switch Side Condition: Bubble Evidence of Delamination. Tear At 11 O'clock. Two Tears From 7 to 8 O'clock. One Tear

Kapton Layer 1 Switch Side Start Photo #: 10333

Kapton Layer 1 Switch Side end Photo #: 10335

Expanded

LAYER 2

Kapton Layer 1 Brake Fluid Side Condition: Bubble Evidence of Delamination. Tears At 4, 5 And 7 O'clock.

Kapton Layer 2 Brake Fluid Side Start Photo #: 10401
Kapton Layer 2 Brake Fluid Side end Photo #: 10404

Kapton Layer 2 Switch Side Condition: Bubble Evidence of Delamination. Tear At 10' O'clock. Dot [illegible].

Kapton Layer 2 Switch Side Start Photo #: 10405
Kapton Layer 2 Switch Side end Photo #: 10407

LAYER 3

Kapton Layer 3 Brake Fluid Side Condition: Bubble Evidence of Delamination.

Kapton Layer 3 Brake Fluid Side Start Photo #: 10408
Kapton Layer 3 Brake Fluid Side end Photo #: 10410

Kapton Layer 3 Switch Side Condition: Dark Residue on Surface.

Kapton Layer 3 Switch Side Start Photo #: 10411
Kapton Layer 3 Switch Side end Photo #: 10413

WASHER-CUP-BUTTON ASSEMBLY

Washer-Cup-Button Assembly Condition: Piston Moist With Fluid. Bevel of Washer And Portions of Connector And Disc Are Discolored.

Washer-Cup-Button Photo Start Number: 10414
Washer-Cup-Button Photo End Number: 10434

3713 9533

LOGGING AND BOXING task.

Collect parts (RAC code FED S1) from Ford Warranty Return Parts Center.

Important....DO NOT SEPARATE YELLOW TAG FROM PARTS!!! If yellow tag is missing, then add a tag with VIN, ODOM, and State from worksheet packaged with parts.

For each brake pressure switch record the following in an Excel spreadsheet file- ~~(Part~~. RO #

1. **~~10 digit Yellow Tag number~~ (or enter VIN and Odom miles and State)**
2. **11 digit Part Number stamped on brake pressure switch.**
3. **4 digit Date Code stamped on brake pressure switch following after part number**
4. **YES or NO, Resistance between terminals is less than 1 ohm.** $-<1\ 3$

Box parts in the following Date Code groups:

1. **less than 1200.**
2. **1201 to 1228.**
3. **1229 to 1257.**
4. **1258 to 1285.**
5. **1286 to 1313.**
6. **1314 to 1341.**
7. **1342 to 2000.**
8. **2001 to 2028.**
9. **2029 to 2057.**
10. **2058 to 2085.**
11. **2086 to 2113.**
12. **2114 to 2141.**
13. **2142 to 2169.**
14. **2170 to 2197.**
15. **2198 to 2225.**
16. **2226 to 2253.**
17. **2254 to 2281.**
18. **2282 to 2309.**
19. **2310 to 2337.**
20. **2338 to 3000.**
21. **3001 to 4000.**
22. **4001 to 9000.**
23. **9001 to 9365.**
24. **unreadable.**

SAMPLE SELECTION task

Select a sample group of 432 parts with the following criteria from the above boxed parts:

1. All samples must have part number F2VC-9F924- AB~~-or-BB~~.
2. Vehicle line, odometer mileage, date code, region, and vehicle build date as shown below.

Town Car

High Mileage VINs (> 100K)

parts date coded <2000

6 Southern Coastal states build date < Feb 1 1992

6 Other states build date < Feb 1 1992

parts date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)

Southern Coastal states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

Other states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

parts date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

parts date coded 2305 thru xxxx (Nov 1 1992 - xxxx)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Median Mileage (40K to 100K)

48 same criteria as High Mileage

Low Mileage (< 40K)

48 same criteria as High Mileage

Crown Victoria

144 same criteria as Town Car above

Grand Marquis

144 same criteria as Town Car above

total = 432 parts

ANALYSIS task

For 432 brake pressure switches record the following in an excel spreadsheet file.

External

1. 10 digit Yellow Tag number (if none, then enter VIN)
2. YES or NO, Condition of plastic base shows heat damage or melting.
3. YES or NO, Condition of electrical connector shows leakage.
4. YES or NO or missing, Mating connector shows signs of fluid leakage.
5. Foam or Silicone or missing, Mating connector seal.
6. YES or NO or missing, Mating seal shows compression mark.
7. YES or NO, Kapton shows delamination bubbles.
8. YES or NO, Kapton shows non-symmetric deformation. Ful. Scope
9. Brake pressure switch height inches +/- 0.01
10. Crimp ring o.d. inches +/- 0.01 how many places
11. Crimp ring height inches +/- 0.01
12. Actuation pressure psi +/- 2
13. Reset pressure psi +/- 2 DAQ
14. Leakage rate pass/fail psi / minute (<62 psi / 30 seconds at 3000 psi) DAQ
15. Resistance between terminals ohms +/-0.1 ohm, @ 0 psi.
16. Resistance between terminals ohms +/-0.1 ohm, @ 200 psi.
17. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 0 psi DAQ
18. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 200 psi

Fluoroscopic examination (photograph items logged "Yes")

18. Yes or No, loose metal parts are present in base assembly
19. Yes or No, Spring arm is touching sensor cup
20. Yes or No, Spring arm shows cracks or material loss Pics
21. Yes or No, Moveable terminal shows cracks or material loss
22. Yes or No, Stationary terminal shows cracks or material loss

ANALYSIS task (continued)

Internal

Carefully separate the base from the sensor by removing crimp ring, preserving the part number and date code. Bag each loose part individually and keep with Yellow Tag.

23. Connector Leak? No Yes
24. Component wear? None Light Medium Heavy
25. Brake Fluid leak? No Yes
26. Environment seal condition? Good Bad
27. If seal bad, describe condition.
28. Sensor Cup Corrosion? Yes No (if YES, provide photo and chemical composition)
29. Sensor cup crimp o.d.
30. Sensor cup crimp height
31. Force (apply at bump) to deflect spring arm to close contacts. — DAQ
32. Transfer Pin stroke from 0 to 200 psi and from 200 to 1400 psi. LVDT
33. Transfer pin height above cup (0, 200, and 1400 psi)
34. Stationary/ Moveable terminal retention Loose Firm
35. Stationary/ Moveable terminal condition OK Discolored
    Corroded (if corroded, provide photo and chemical composition)

Carefully separate the hex-port from the sensor cup by opening the sensor cup crimp. Bag each loose part individually and keep with Yellow Tag.

36. Diaphragm Inspection - indicate presence of listed conditions for each side of each layer of Kapton.

	Nearest Fluid			Middle			Nearest Converter		
	Fluid #1		Converter	Fluid #2		Converter	Fluid #3		Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Condition									
Teflon stretch									
Teflon cracks									
Teflon delamination									
Kapton cracks									
Strain pattern									
Wear particals/discoloration									

37. Gasket Inspection
    Present Yes No
    Nibbles/missing material Yes No

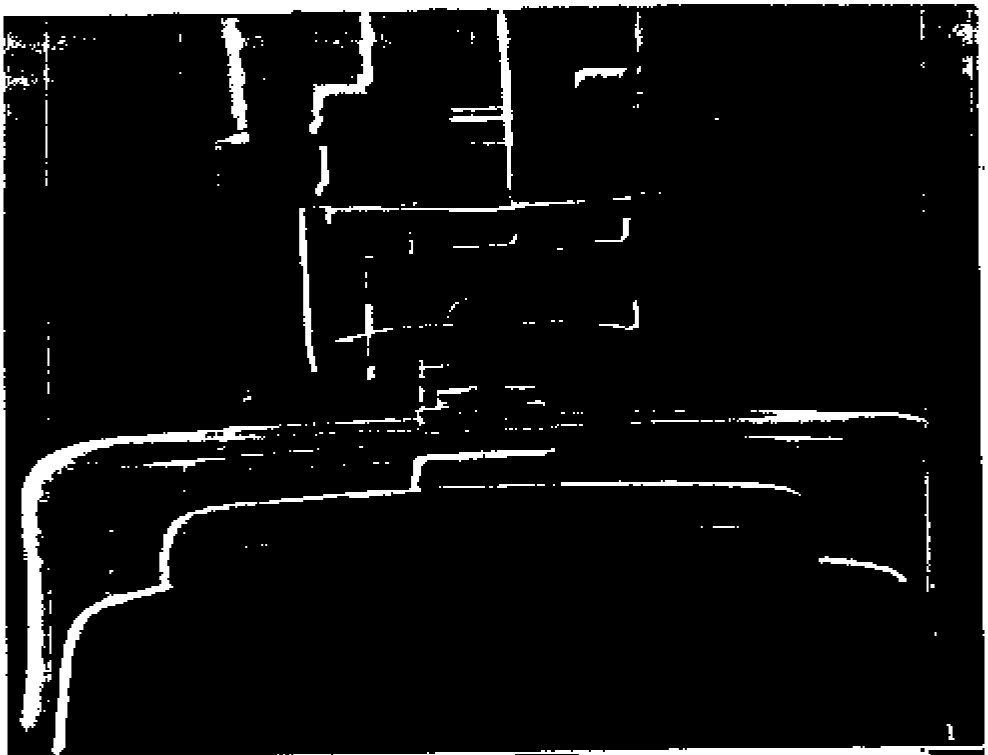
Comparative Analysis task

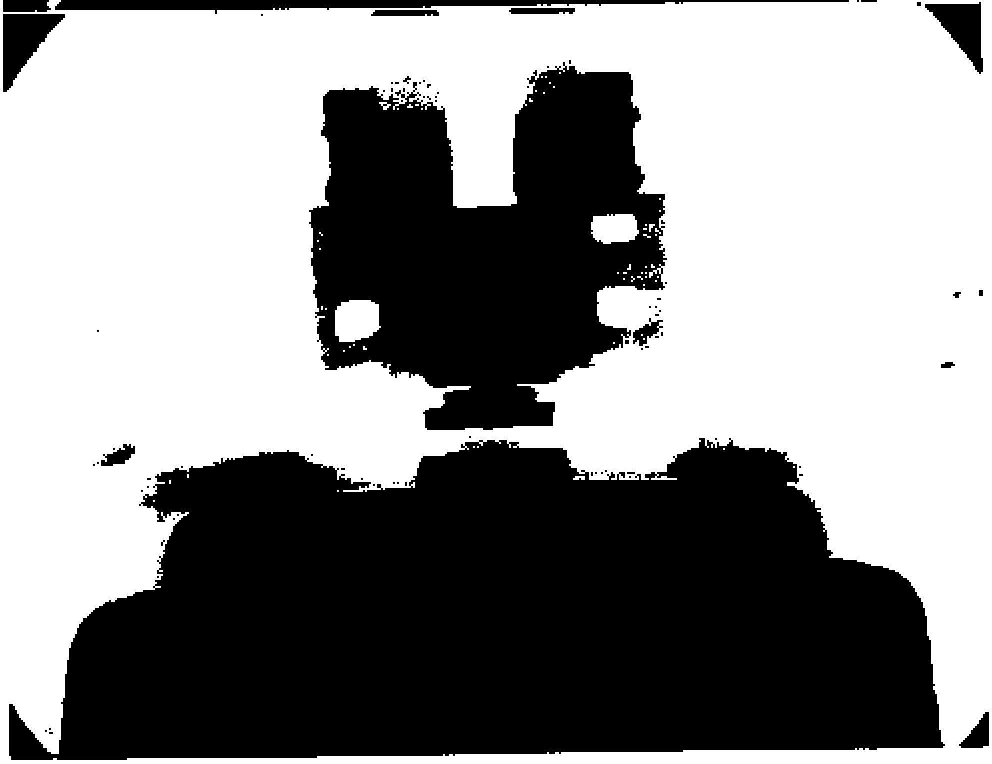
Quantify differences between three groups: 1. 10 Parts from peak of claims reports population; 2 10 Parts from end of recall population; 3. 10 New/ unused current production parts.

- Forces applied (insitu) to
  - stationary terminal at contact
  - moving terminal at spring arm bump (0, 200, and 1400 psi)
  - ceramic pin at snap disk
  - snap disk at converter
  - converter at Kapton
  - terminal retaining forces
- Dimensional Analysis
  - assembly height (0, 200, and 1400 psi)
  - spring arm to cup clearance (0, 200, and 1400 psi)
  - crimp ring o.d and height (0, 200, and 1400 psi)
  - stationary contact to cup clearance (0, 200, and 1400 psi)
  - Transfer pin height above opening (0, 200, and 1400 psi)
  - base height
  - base crimp flange o.d., thickness
  - enviro seal flange o.d., thickness
  - sensor cup crimp o.d. and height (0, 200, and 1400 psi)
  - converter button profile
  - converter button outside diameter
  - converter button clearance from top of washer (0, 200, 1400 psi)
  - washer hole profile
  - washer hole inside diameter (bottom of taper)
  - washer hole taper outside diameter
  - washer thickness
  - washer outside diameter
  - hex-port gasket groove i.d., o.d., depth
  - hex-port i.d. at Kapton interface
  - hex-port o.d., thickness at crimp flange
  - stationary terminal minimum cross-section
  - moving terminal minimum cross-section
  - Kapton profile (0, 200, and 1400 psi)
  - Transfer pin length, o.d.
  - Sensor cup transfer pin opening i.d.

Purpose: Determine Root Cause of Town Underhood Fire Allegations

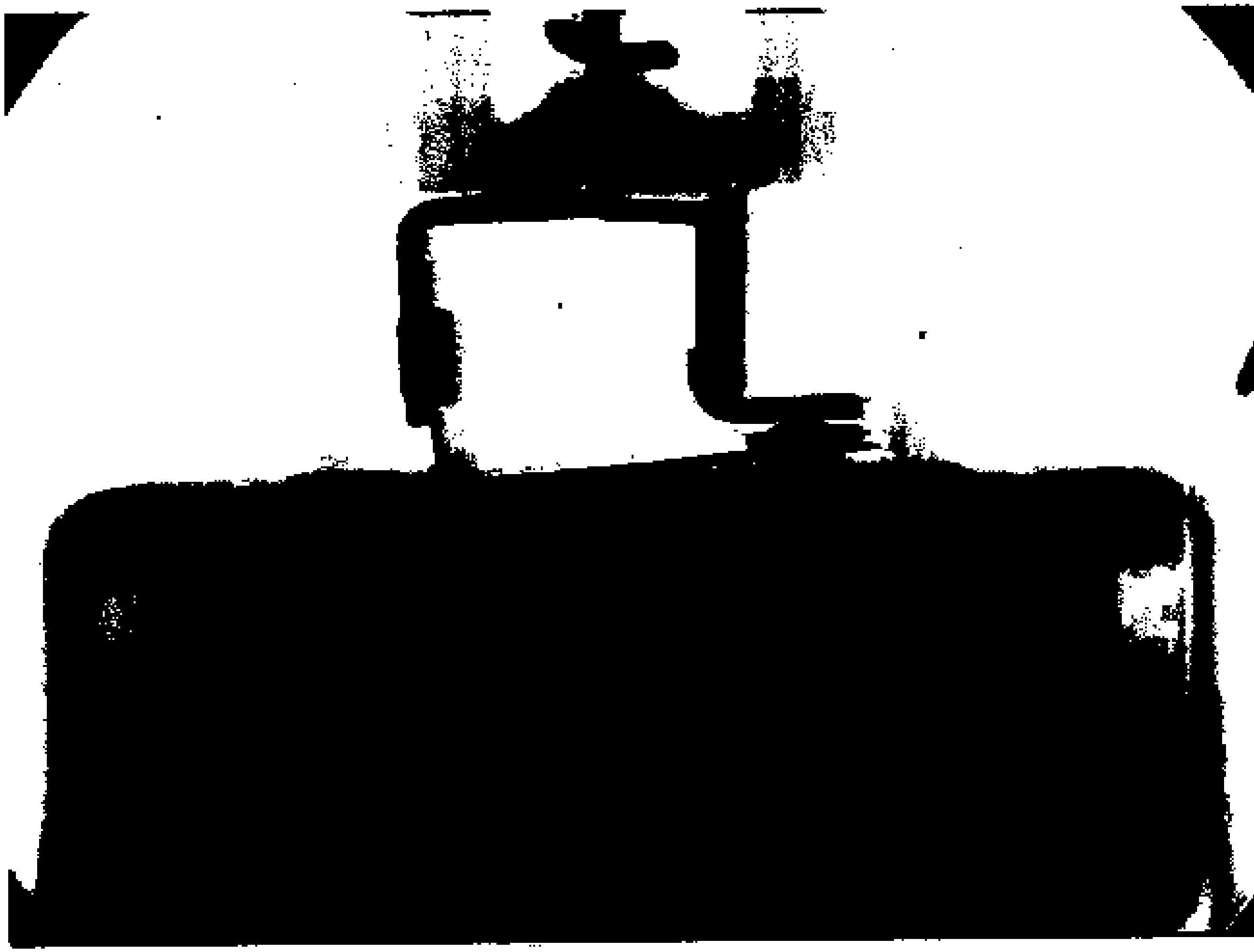
Work plan	Target completion
Receive parts, prelim exam, sort and store.	9/30/99
Draft analysis scope of work .	9/15/99
Distribute draft for adds/deletes.	9/15/99
Review and update draft.	9/17/99
Meet with Central Lab to discuss sow	9/20/99
Finalize analysis scope of work	9/21/99
Select samples for analysis.	10/1/99
Contract with outside agency if necessary	10/1/99
Deliver samples to tester	10/1/99
Monitor test analysis progress	10/25/99
Receive final test report	10/27/99
Review and publish conclusion	10/31/99





3713 9591

AB

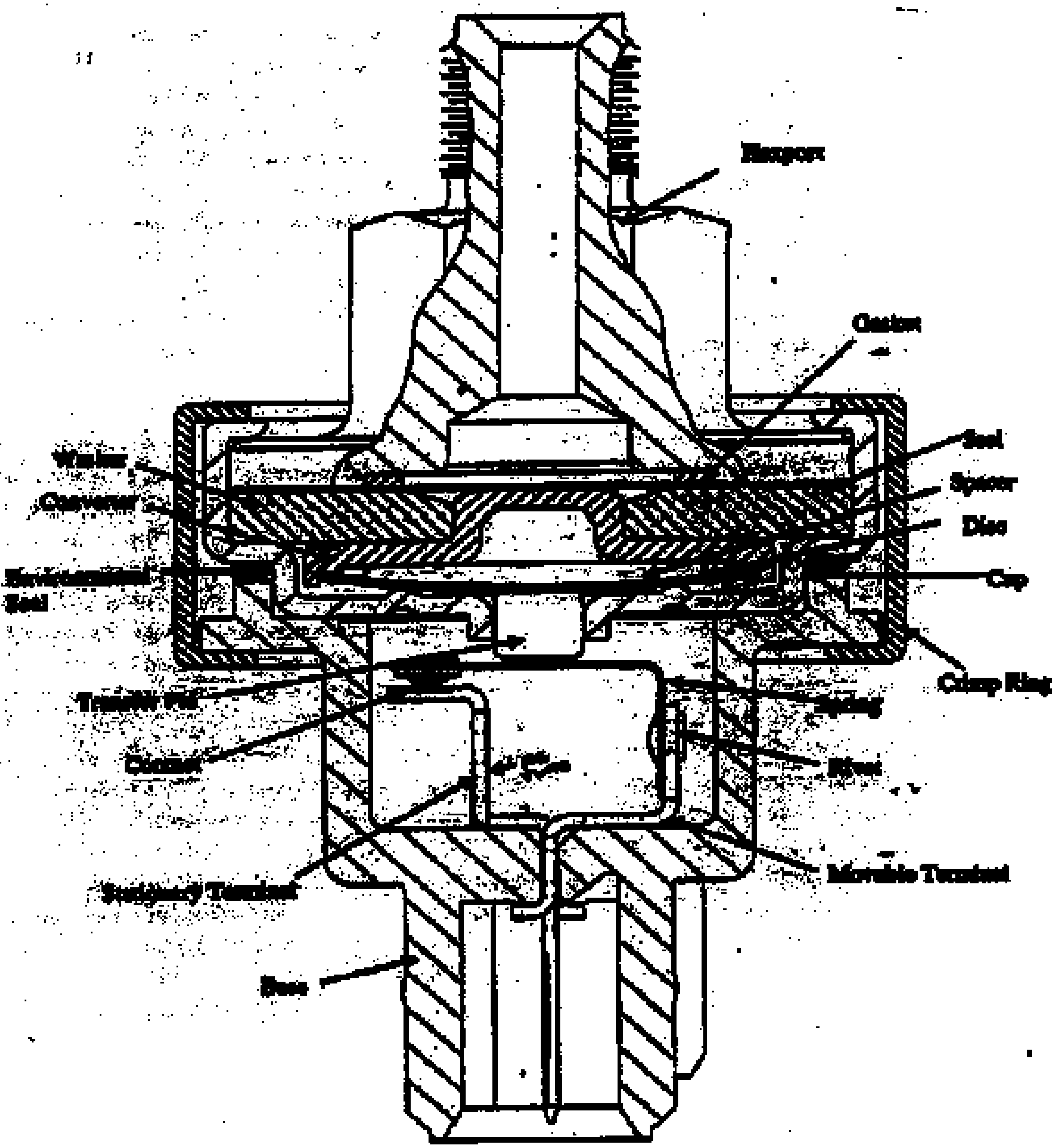


AB

3713 9592

ATTACHMENT 6

Hydraulic Pressure Switch Cross Section



3713 9593

To: Jay Logel ~~talk to~~ Quote

From: Steve Reimers

Re: Recall 99S15 Returned Parts Analysis

I have spoken with Central lab and they are not equipped to perform the analysis shown below. I need your help to get an outside agency going on these tasks. There are three main tasks. Logging and boxing parts, selecting part sample group, analysis of sample group, and comparative analysis. The details of the tasks are shown in the following pages. Preferably these tasks would all be done by the same agency to avoid delivery delays, but could be split up if necessary.

I am available to discuss these tasks with whomever you recommend.

I have also included the work plan for this effort.

Steve Reimers,
sreimers, 39-03286

SREIMERS@Ford.com

313-390-3286

Bldg 5

Rotunda & Oakwood

3713 9594

MRI

LOGGING AND BOXING task.

Collect parts (RAC code FED S1) from Ford Warranty Return Parts Center.

Important....DO NOT SEPARATE YELLOW TAG FROM PARTS!!! If yellow tag is missing, then add a tag with VIN, ODOM, and State from worksheet packaged with parts.

For each brake pressure switch record the following in an Excel spreadsheet file (Part_.

1. **10 digit Yellow Tag number (or enter VIN and Odom miles and State)**
2. **11 digit Part Number stamped on brake pressure switch.**
3. **4 digit Date Code stamped on brake pressure switch following after part number**
4. **YES or NO, Resistance between terminals is less than 1 ohm.**

Box parts in the following Date Code groups:

1. **less than 1200.**
2. **1201 to 1228.**
3. **1229 to 1257.**
4. **1258 to 1285.**
5. **1286 to 1313.**
6. **1314 to 1341.**
7. **1342 to 2000.**
8. **2001 to 2028.**
9. **2029 to 2057.**
10. **2058 to 2085.**
11. **2086 to 2113.**
12. **2114 to 2141.**
13. **2142 to 2169.**
14. **2170 to 2197.**
15. **2198 to 2225.**
16. **2226 to 2253.**
17. **2254 to 2281.**
18. **2282 to 2309.**
19. **2310 to 2337.**
20. **2338 to 3000.**
21. **3001 to 4000.**
22. **4001 to 9000.**
23. **9001 to 9365.**
24. **unreadable.**

3000 - 7000

Can be all catalogued later.

3713 9595

ANALYSIS task 199[illegible]? every [illegible] 1400 in vehicle [illegible]

600-700

For 432 brake pressure switches record the following in an excel spreadsheet file.

External

1. 10 digit Yellow Tag number (if none, then enter VIN)
2. YES or NO, Condition of plastic base shows heat damage or melting.
3. YES or NO, Condition of electrical connector shows leakage.
4. YES or NO or missing, Mating connector shows signs of fluid leakage.
5. Foam or Silicone or missing, Mating connector seal.
6. YES or NO or missing, Mating seal shows compression mark.
7. YES or NO, Kapton shows delamination bubbles.
8. YES or NO, Kapton shows non-symmetric deformation.
9. Brake pressure switch height inches +/- 0.01 Air Pressure OK
10. Crimp ring o.d. inches +/- 0.01
11. Crimp ring height inches +/- 0.01 at $\varnothing$ closed
12. Actuation pressure psi +/- 2
13. Reset pressure psi +/- 2 spec req. Air
14. Leakage rate psi / minute (<62 psi / 30 seconds at 3000 psi) Y/N
15. Resistance between terminals ohms +/-0.1 ohm, @ 0 psi.
16. Resistance between terminals ohms +/-0.1 ohm, @ 200 psi.
17. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 0 psi
18. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 200 psi

body not grounding

Fluoroscopic examination (photograph items logged "Yes")

18. Yes or No, loose metal parts are present in base assembly
19. Yes or No, Spring arm is touching sensor cup
20. Yes or No, Spring arm shows cracks or material loss
21. Yes or No, Moveable terminal shows cracks or material loss
22. Yes or No, Stationary terminal shows cracks or material loss

2.5 in 1 in OD

– Rear brake after DPCV

3713 9596

ANALYSIS task (continued)

Internal

Carefully separate the base from the sensor by removing crimp ring, preserving the part number and date code. Bag each loose part individually and keep with Yellow Tag.

23. Connector Leak? No Yes
24. Component wear? None Light Medium Heavy
25. Brake Fluid leak? No Yes
26. Environment seal condition? Good Bad
27. If seal bad, describe condition.
28. Sensor Cup Corrosion? Yes No (if YES, provide photo and chemical composition)
29. Sensor cup crimp o.d.
30. Sensor cup crimp height
31. Force (apply at bump) to deflect spring arm to close contacts.
32. Transfer Pin stroke from 0 to 200 psi and from 200 to 1400 psi.
33. Transfer pin height above cup (0, 200, and 1400 psi)
34. Stationary/ Moveable terminal retention Loose Firm
35. Stationary/ Moveable terminal condition OK Discolored Corroded (if corroded, provide photo and chemical composition)

Carefully separate the hex-port from the sensor cup by opening the sensor cup crimp. Bag each loose part individually and keep with Yellow Tag.

36. Diaphragm Inspection - indicate presence of listed conditions for each side of each layer of Kapton.

	Nearest Fluid			Middle			Nearest Converter		
	Fluid #1		Converter	Fluid #2		Converter	Fluid #3		Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Condition									
Teflon stretch									
Teflon cracks									
Teflon delamination									
Kapton cracks									
Strain pattern									
Wear particals/discoloration									

37. Gasket Inspection

Present Yes No

Nibbles/missing material Yes No

SAMPLE SELECTION task

Select a sample group of 432 parts with the following criteria from the above boxed parts:

1. All samples must have part number F2VC-9F924- AB or BB.
2. Vehicle line, odometer mileage, date code, region, and vehicle build date as shown below.

Town Car

High Mileage VINs (> 100K)
parts date coded < 2000
6 Southern Coastal states build date < Feb 1 1992
6 Other states build date < Feb 1 1992
parts date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)
Southern Coastal states
2 build date < Feb 1 1992
2 Feb 1 1992 < build date < Nov 30 1992
2 build date > Nov 30 1992
Other states
2 build date < Feb 1 1992
2 Feb 1 1992 < build date < Nov 30 1992
2 build date > Nov 30 1992
parts date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992)
Southern Coastal states
3 Feb 1 1992 < build date < Nov 30 1992
3 build date > Nov 30 1992
Other states
3 Feb 1 1992 < build date < Nov 30 1992
3 build date > Nov 30 1992
parts date coded 2305 thru xxxx (Nov 1 1992 - xxxx)
Southern Coastal states
3 Feb 1 1992 < build date < Nov 30 1992
3 build date > Nov 30 1992
Other states
3 Feb 1 1992 < build date < Nov 30 1992
3 build date > Nov 30 1992

Medium Mileage (40K to 100K)
48 same criteria as High Mileage

Low Mileage (< 40K)
48 same criteria as High Mileage

Crown Victoria
144 same criteria as Town Car above

Grand Marquis
144 same criteria as Town Car above
total = 432 parts

Comparative Analysis task

Quantify differences between three groups: 1. 10 Parts from peak of claims reports population; 2 10 Parts from end of recall population; 3. 10 New/ unused current production parts.

- Forces applied (insitu) to
  - stationary terminal at contact
  - moving terminal at spring arm bump (0, 200, and 1400 psi)
  - ceramic pin at snap disk
  - snap disk at converter
  - converter at Kapton
  - terminal retaining forces
- Dimensional Analysis
  - assembly height (0, 200, and 1400 psi)
  - spring arm to cup clearance (0, 200, and 1400 psi)
  - crimp ring o.d and height (0, 200, and 1400 psi)
  - stationary contact to cup clearance (0, 200, and 1400 psi)
  - Transfer pin height above opening (0, 200, and 1400 psi)
  - base height
  - base crimp flange o.d., thickness
  - enviro seal flange o.d., thickness
  - sensor cup crimp o.d. and height (0, 200, and 1400 psi)
  - converter button profile
  - converter button outside diameter
  - converter button clearance from top of washer (0, 200, 1400 psi)
  - washer hole profile
  - washer hole inside diameter (bottom of taper)
  - washer hole taper outside diameter
  - washer thickness
  - washer outside diameter
  - hex-port gasket groove i.d., o.d., depth
  - hex-port i.d. at Kapton interface
  - hex-port o.d., thickness at crimp flange
  - stationary terminal minimum cross-section
  - moving terminal minimum cross-section
  - Kapton profile (0, 200, and 1400 psi)
  - Transfer pin length, o.d.
  - Sensor cup transfer pin opening i.d.

TI

3713 9599

Purpose: Determine Root Cause of Town Underhood Fire Allegations

Work plan	Target completion
Receive parts, prelim exam, sort and store.	9/30/99
Draft analysis scope of work.	9/15/99
Distribute draft for adds/deletes.	9/15/99
Review and update draft.	9/17/99
Meet with Central Lab to discuss sow	9/20/99
Finalize analysis scope of work	9/21/99
Select samples for analysis.	10/1/99
Contract with outside agency if necessary	10/1/99
Deliver samples to tester	10/1/99
Monitor test analysis progress	10/25/99
Receive final test report	10/27/99
Review and publish conclusion	10/31/99

SAMPLE SELECTION task

Select a sample group of 432 parts with the following criteria from the above boxed parts:

1. All samples must have part number F2VC-9F924- AB~~-or-BB~~.
2. Vehicle line, odometer mileage, date code, region, and vehicle build date as shown below.

Town Car

High Mileage VINs (> 100K)

parts date coded < 2000

6 Southern Coastal states build date < Feb 1 1992

6 Other states build date < Feb 1 1992

parts date coded 2001 thru 2184 (Jan 1 1992 - June 30 1992)

Southern Coastal states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

Other states

2 build date < Feb 1 1992

2 Feb 1 1992 < build date < Nov 30 1992

2 build date > Nov 30 1992

parts date coded 2185 thru 2304 (July 1 1992 - Oct 31 1992)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

parts date coded 2305 thru xxxx (Nov 1 1992 - xxxx)

Southern Coastal states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Other states

3 Feb 1 1992 < build date < Nov 30 1992

3 build date > Nov 30 1992

Median Mileage (40K to 100K)

48 same criteria as High Mileage

Low Mileage (< 40K)

48 same criteria as High Mileage

Crown Victoria

144 same criteria as Town Car above

Grand Marquis

144 same criteria as Town Car above

total = 432 parts

ANALYSIS task

For 432 brake pressure switches record the following in an excel spreadsheet file.

External

1. 10 digit Yellow Tag number (if none, then enter VIN)
2. YES or NO, Condition of plastic base shows heat damage or melting. — Need Def.
3. YES or NO, Condition of electrical connector shows leakage. — Need Def.
4. YES or NO or missing, Mating connector shows signs of fluid leakage. — Mating Con. Supplied?
5. Foam or Silicone or missing, Mating connector seal. — Seal Between Conn.
6. YES or NO or missing, Mating seal shows compression mark. — Need Def.
7. YES or NO, Kapton shows delamination bubbles.
8. YES or NO, Kapton shows non-symmetric deformation.

   Kapton is GE material - which part

   Need if diaphram Borescope?
9. Brake pressure switch height inches +/- 0.01 - whole switch — Height Relative to what?
10. Crimp ring o.d. inches +/- 0.01
11. Crimp ring height inches +/- 0.01 - How many places
12. Actuation pressure psi +/- 2
13. Reset pressure psi +/- 2
14. Leakage rate pass/fail psi / minute (<62 psi / 30 seconds at 3000 psi)
15. Resistance between terminals ohms +/-0.1 ohm, @ 0 psi.
16. Resistance between terminals ohms +/-0.1 ohm, @ 200 psi.
17. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 0 psi
18. YES or NO, Resistance from terminals to hex-port less than 10,000 ohm @ 200 psi

Fluoroscopic examination (photograph items logged "Yes")

18. Yes or No, loose metal parts are present in base assembly
19. Yes or No, Spring arm is touching sensor cup
20. Yes or No, Spring arm shows cracks or material loss
21. Yes or No, Moveable terminal shows cracks or material loss
22. Yes or No, Stationary terminal shows cracks or material loss

Look at after opening?

#

ANALYSIS task (continued)

Internal

Carefully separate the base from the sensor by removing crimp ring, preserving the part number and date code. Bag each loose part individually and keep with Yellow Tag.

23. Connector Leak?	No	Yes		
24. Component wear?	None	Light	Medium	Heavy
25. Brake Fluid leak?	No	Yes		
26. Environment seal condition?		Good	Bad	

27. If seal bad, describe condition.
28. Sensor Cup Corrosion? Yes No (if YES, provide photo and chemical composition)
29. Sensor cup crimp o.d.
30. Sensor cup crimp height
31. Force (apply at bump) to deflect spring arm to close contacts. hand held ? -> DAG
32. Transfer Pin stroke from 0 to 200 psi and from 200 to 1400 psi.
33. Transfer pin height above cup (0, 200, and 1400 psi)
34. Stationary/ Moveable terminal retention Loose Firm
35. Stationary/ Moveable terminal condition OK Discolored Corroded (if corroded, provide photo and chemical composition)

Need to use LVDT/ Dial indicator

Carefully separate the hex-port from the sensor cup by opening the sensor cup crimp. Bag each loose part individually and keep with Yellow Tag.

36. Diaphragm Inspection - indicate presence of listed conditions for each side of each layer of Kapton.

	Nearest Fluid			Middle			Nearest Converter		
	Fluid #1		Converter	Fluid #2		Converter	Fluid #3		Converter
	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon	Teflon	Kapton	Teflon
Condition									
Teflon stretch									
Teflon cracks									
Teflon delamination									
Kapton cracks									
Strain pattern									
Wear particals/discoloration									

examples

37. Gasket Inspection

Present Yes No

Nibbles/missing material Yes No

LOGGING AND BOXING task.

Collect parts (RAC code FED S1) from Ford Warranty Return Parts Center.

Important....DO NOT SEPARATE YELLOW TAG FROM PARTS!!! If yellow tag is missing, then add a tag with VIN, ODOM, and State from worksheet packaged with parts.

For each brake pressure switch record the following in an Excel spreadsheet file- ~~(Part~~ .

1. 10 digit Yellow Tag number (or enter VIN and Odom miles and State)
2. 11 digit Part Number stamped on brake pressure switch.
3. 4 digit Date Code stamped on brake pressure switch following after part number
4. YES or NO, Resistance between terminals is less than 1 ohm.

Box parts in the following Date Code groups:

1. less than 1200.
2. 1201 to 1228.
3. 1229 to 1257.
4. 1258 to 1285.
5. 1286 to 1313.
6. 1314 to 1341.
7. 1342 to 2000.
8. 2001 to 2028.
9. 2029 to 2057.
10. 2058 to 2085.
11. 2086 to 2113.
12. 2114 to 2141.
13. 2142 to 2169.
14. 2170 to 2197.
15. 2198 to 2225.
16. 2226 to 2253.
17. 2254 to 2281.
18. 2282 to 2309.
19. 2310 to 2337.
20. 2338 to 3000.
21. 3001 to 4000.
22. 4001 to 9000.
23. 9001 to 9365.
24. unreadable.

3-7K

Comparative Analysis task

Quantify differences between three groups: 1. 10 Parts from peak of claims reports population; 2 10 Parts from end of recall population; 3. 10 New/ unused current production parts.

allowing for displacement?

Forces applied (insitu) to

- stationary terminal at contact
- moving terminal at spring arm bump (0, 200, and 1400 psi)
- ceramic pin at snap disk
- snap disk at converter
- converter at Kapton
- terminal retaining forces

?

Dimensional Analysis

- assembly height (0, 200, and 1400 psi)
- spring arm to cup clearance (0, 200, and 1400 psi) — how many places
- crimp ring o.d and height (0, 200, and 1400 psi)
- stationary contact to cup clearance (0, 200, and 1400 psi)
- Transfer pin height above opening (0, 200, and 1400 psi)
- base height
- base crimp flange o.d., thickness
- enviro seal flange o.d., thickness
- sensor cup crimp o.d. and height (0, 200, and 1400 psi)
- converter button profile
- converter button outside diameter
- converter button clearance from top of washer (0, 200, 1400 psi)
- washer hole profile
- washer hole inside diameter (bottom of taper)
- washer hole taper outside diameter
- washer thickness
- washer outside diameter
- hex-port gasket groove i.d., o.d., depth
- hex-port i.d. at Kapton interface
- hex-port o.d., thickness at crimp flange
- stationary terminal minimum cross-section
- moving terminal minimum cross-section
- Kapton profile (0, 200, and 1400 psi)
- Transfer pin length, o.d.
- Sensor cup transfer pin opening i.d.

Purpose: Determine Root Cause of Town Underhood Fire Allegations

Work plan	Target completion
Receive parts, prelim exam, sort and store.	9/30/99
Draft analysis scope of work .	9/15/99
Distribute draft for adds/deletes.	9/15/99
Review and update draft.	9/17/99
Meet with Central Lab to discuss sow	9/20/99
Finalize analysis scope of work	9/21/99
Select samples for analysis.	10/1/99
Contract with outside agency if necessary	10/1/99
Deliver samples to tester	10/1/99
Monitor test analysis progress	10/25/99
Receive final test report	10/27/99
Review and publish conclusion	10/31/99

Ford Pressure Switch Study | "To Do List"

- Logging & Boxing Task
  - Create Dbase Access 3 - 7k parts
  - Obtain Box's

- Analysis
  External
  - Need Def.
    - plastic base heat damage
    - connector leakage
    - mating connector leakage
    -
  - Measurements
    #9, 10, 11 } How many places & how
  - Kapton
    - which component?
  - Actuation Pressure / Leakage Rat
    - Get DAQ System
    - Write DAQ Prog.
    - Write Analysis Prog
  - Set up to Measure Term Resistance under pressure
    <need some enclosure>
    15 - 18a
  - Find Flouroscope with photographic capability

3713 9607

Internal

► Need LVDT 32 & 33 Set up & Pressure & Fixture

Ford

Service Recall Bulletin

May, 1999

TO: All Ford and Lincoln Mercury Dealers

SUBJECT: Safety Recall 99S15: Certain 1992 and 1993 Crown Victoria, Grand Marquis, and Lincoln Town Cars with Speed Control - Speed Control Deactivation Switch

AFFECTED VEHICLES

Certain 1992 and 1993 Crown Victoria and Grand Marquis with Speed Control built at the St. Thomas assembly plant from February 5, 1992 through November 30, 1992. Also, certain 1992 and 1993 Town Cars built at the Wixom Assembly plant from November 4, 1991 through November 30, 1992.

REASON FOR RECALL

Some Speed Control Deactivation Switches on the affected vehicles may develop a resistive short in the electrical circuit that may potentially result in an underhood fire. A fire is possible both when the vehicle is running and when the vehicle engine is off. Also, the short may disable the speed control system or cause a fuse to open.

SERVICE ACTION

Repair parts will not be available until mid-June, 1999. Until parts are available, the interim repair described in Attachment III should be used. When parts are available the permanent repair must be completed to close this recall.

Interim Repair: This repair should be performed immediately to eliminate the possibility of a fire. This interim repair involves disconnecting the electrical connector from the Speed Control Deactivation Switch, taping the connector end to protect it from contamination and securing the connector with a tie-strap. The speed control system will be inoperative until the permanent repair is performed.

Permanent Repair: The parts for this repair are expected to become available the middle of June, 1999. This repair will involve the replacement of the Speed Control Deactivation Switch with a new switch. In addition, the switch hard-shell connector will be replaced to eliminate the possibility of undetected heat damage to the connector.

Safety Recall 99S15

Certain 1992 and 1993 Crown Victoria, Grand Marquis, and Lincoln Town Cars with Speed Control - Speed Control Deactivation Switch

OASIS

You must use OASIS to determine if a vehicle is eligible for this recall.

Please note that the Interim Repair will not remove the VIN from OASIS.

PLEASE NOTE

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

PROMPTLY CORRECT

Promptly correct affected vehicles on the enclosed list and other eligible vehicles which are brought to your dealership.

DEALER-OWNER CONTACT

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

REGIONAL CONTACT

Advise regional office if an owner:

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

CLAIMS PREPARATION AND SUBMISSION

- Enter claims using DWE.
- Refer to ACESII Manual for claims preparation and submission information.
- After performing the Permanent Repair, the replaced parts must be returned to the Warranty Parts Return Center for inspection (See Attachment II page 2). FCS 700 tags will be sent as soon as the claim for the Permanent Repair is submitted.

OWNER REFUNDS

Ford Motor will only refund for owner-paid repairs made before the date of the Owner Letter (or after the date of the Owner Letter if an emergency repair was made away from the servicing dealer.) Refer to ACESII Manual for Refund Information.

Safety Recall 99S15
Certain 1992 and 1993 Crown Victoria, Grand Marquis, and Lincoln Town Cars with Speed Control - Speed Control Deactivation Switch

LABOR ALLOWANCES

Interim Repair

Description	Labor Operation	Labor Time
Remove, Tape and Secure the Speed Control Deactivation Switch *	99S15E*	0.3 Hour
Administrative Allowance	Misc. Expense Code "ADMIN"	0.1 Hour

* Labor Operation 99S15E will NOT close the Recall.

Permanent Repair

Description	Labor Operation	Labor Time
Replace Speed Control Deactivation Switch and Hard-shell Connector	99S15B	0.5 Hour
Administrative Allowance	Misc. Expense Code "ADMIN"	0.1 Hour

PARTS REQUIREMENTS

Parts Ordering Information

Parts will not be direct shipped for this recall. Order your parts requirement through normal order processing channels as noted below:

Stock Orders	Effective immediately	Normal order process -
Interim Orders	Effective immediately	Normal order process
Emergency Orders	after July 1, 1999	Normal order process
Emergency Orders	before July 1, 1999	Call 1-800-325-5621

Part Number	Description	Quantity
XW7Z-9G652-AA	Speed Control Deactivation Switch Kit	1

Safety Recall 99S15
Certain 1992 and 1993 Crown Victoria, Grand Marquis, and Lincoln Town Cars with Speed Control - Speed Control Deactivation Switch

DEALER PRICE

For latest prices, check or call your:

- Order Processing Center
- DOES II
- Updated Price Book

EXCESS STOCK RETURN

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

DISPOSITION OF REMOVED PARTS

Parts Return Requested (after completion of Permanent Repair):

We are requesting that the removed parts be returned to Ford Motor Company:

- Speed Control Deactivation Switch
- Switch Hardshell Connector

Packaging and Shipping:

- Speed Control Deactivation Switch
  - Do not drain the brake fluid from inside the Speed Control Deactivation Switch.
  - Use the plastic cap from the new switch to trap and seal as much oil inside the switch as possible.
- Switch Hardshell Connector
  - Connect the hardshell connector to the Speed Control Deactivation Switch.
  - Attach the FCS 700 tag to the part
  - Place the part in a plastic bag and secure with twist-tie.
- Shipping Instructions
  - Follow direction on FCS 700 tag
  - See Section 3 of the ACES II manual for more details

INTERIM REPAIR

DISABLE SPEED CONTROL DEACTIVATION SWITCH

SERVICE PROCEDURE

1. Disconnect the electrical connector from the speed control deactivation switch. See Figure 1.

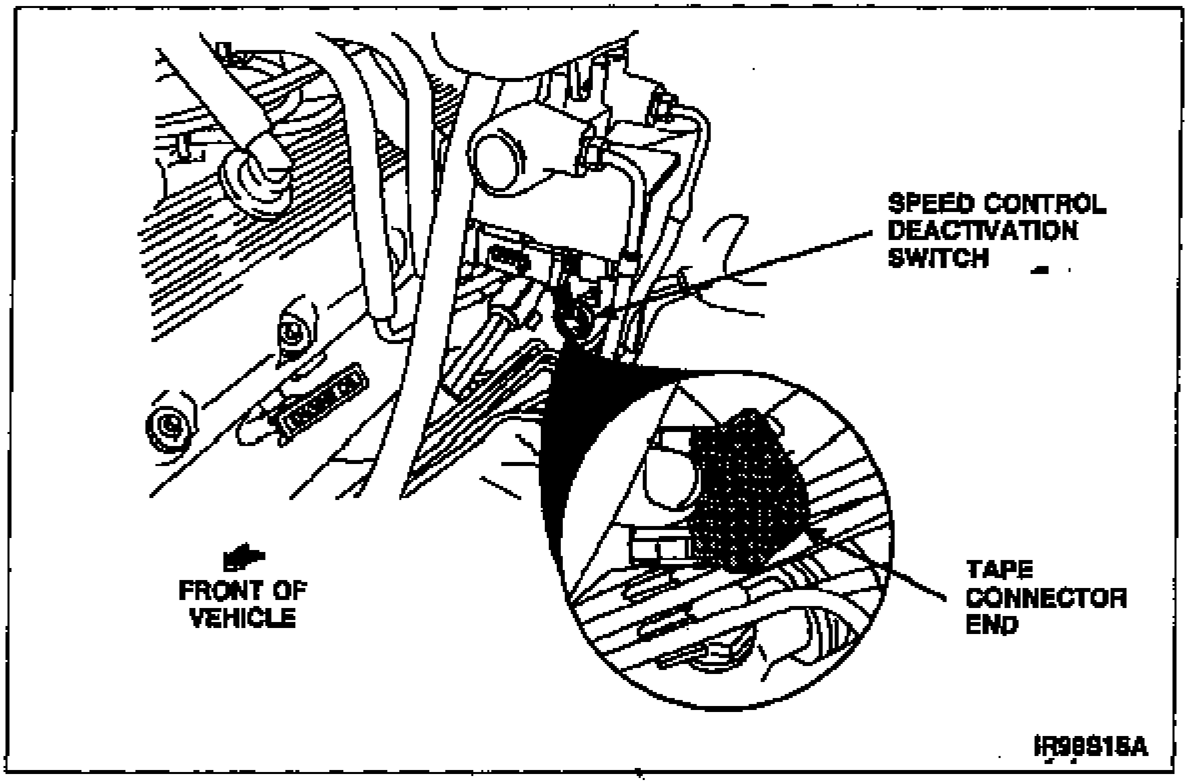


FIGURE 1

2. Tape the end of the connector to prevent contamination from entering the end of the connector.
3. Tie strap the connector to the wiring harness located on the left splash shield.

PERMANENT REPAIR

SPEED CONTROL DEACTIVATION SWITCH AND CONNECTOR REPLACEMENT

AFFECTED VEHICLES: CERTAIN 1992 AND 1993 CROWN VICTORIA, GRAND MARQUIS AND TOWN CAR WITH SPEED CONTROL

OVERVIEW

This repair involves replacement of the speed control deactivation switch and the hard shell of the switch electrical connector. The connector terminals will be removed from the old connector hard shell and inserted into the *new* connector hard shell.

PROCEDURE

1. Install a memory saver and disconnect the negative battery terminal.
2. Disconnect the electrical connector from the speed control deactivation switch. See Figure 2.

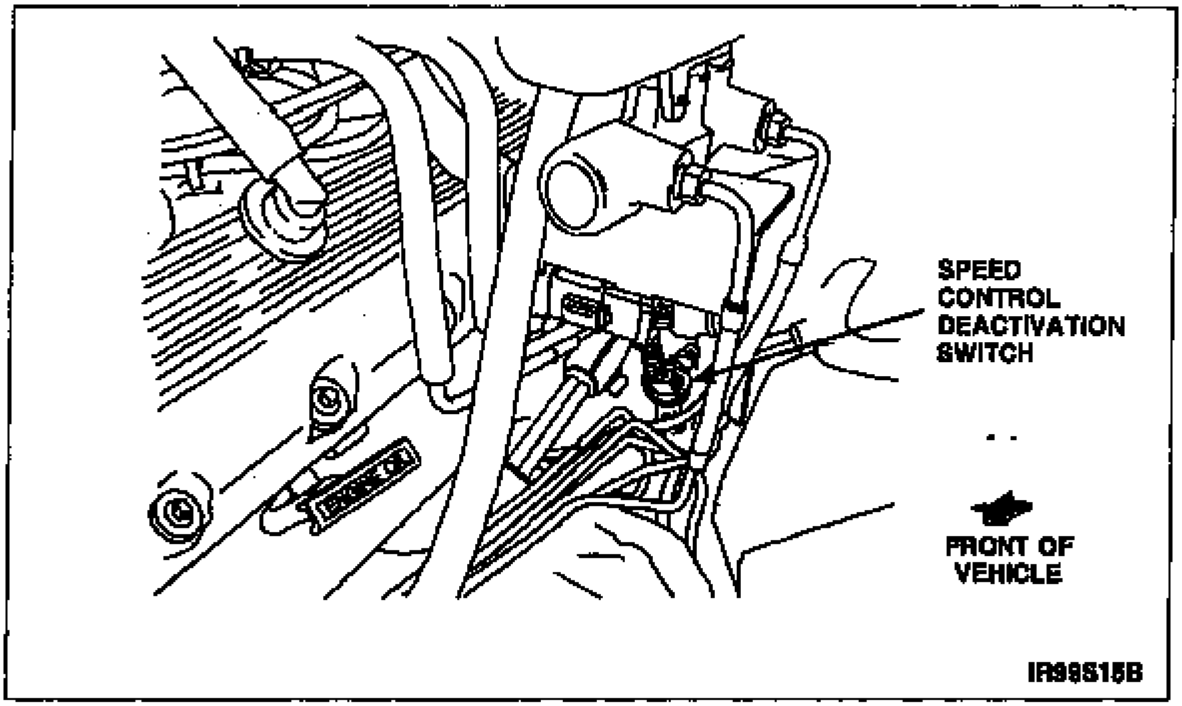


FIGURE 2

3. Remove the locking wedge from the end of the connector. Then, disengage the locking tabs and remove the wire terminals from the connector. See Figure 3.

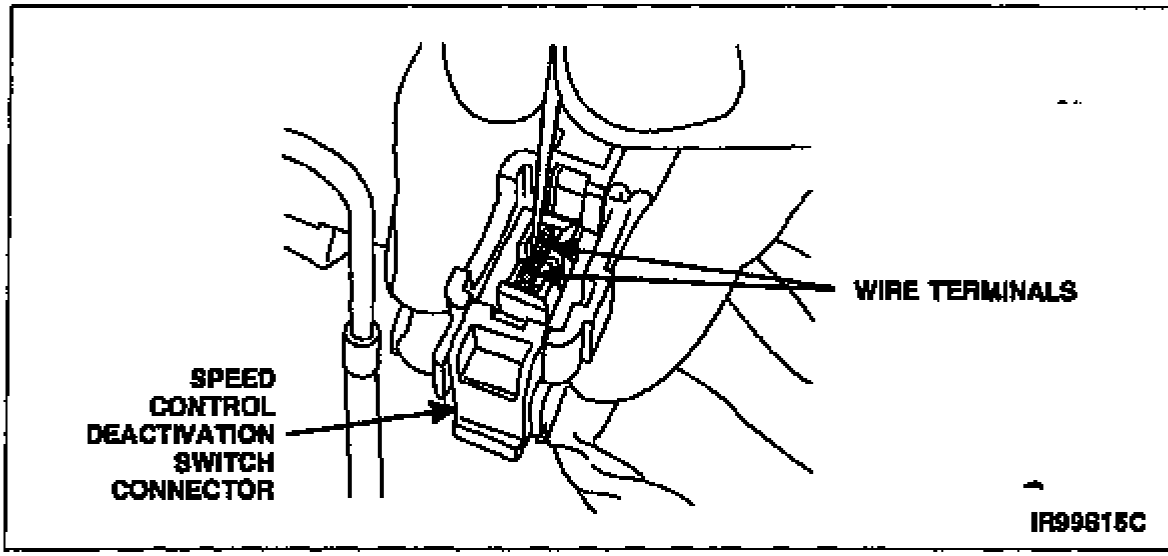


FIGURE 3

4. Obtain the *new* connector from the kit. Insert both wire terminal ends through the connector seal and into the connector hard shell. (The wire terminal ends may be installed into either of the connector cavities).
5. Check the connector to make sure the locking tabs have engaged both terminal ends. Also, make sure the seal is fully seated in the back of the connector. Then, install the red locking wedge to secure the terminals in the connector.
6. Obtain the speed control deactivation switch from the parts kit.
7. Remove the old speed control deactivation switch.
8. Fill the *new* speed control deactivation switch with High Performance DOT 3 Brake Fluid and install the speed control deactivation switch. Tighten the switch to 18 Nm (13 lb-ft).
9. Attach the electrical connector to the speed control deactivation switch.
10. Connect the battery negative cable and remove the memory saver.
11. Raise the vehicle on a hoist.
12. Connect a clear drain tube to the RH rear bleeder screw and the other end in a container partially filled with the recommended brake fluid.
13. Have an assistant pump the brake pedal and then hold firm pressure on the brake pedal.
14. Loosen the RH rear bleeder screw until a stream of brake fluid comes out. While the assistant maintains pressure on the brake pedal, tighten the bleeder screw.
    - Repeat until clear, bubble-free fluid comes out.
    - Refill the brake master cylinder reservoir as necessary.
15. Repeat Steps 12-14 for the LH rear bleeder screw.
16. Lower the vehicle.

A. R. O'Neill
Director
Vehicle Service and Programs
Ford Customer Service Division

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

May, 1999

Safety Recall 99S15

Mr. John Sample
123 Main Street
Anywhere, USA 12345

Your Vehicle Identification Number: 12345678901234567

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

Ford Motor Company has decided that a defect which relates to motor vehicle safety exists in certain 1992 and 1993 Crown Victoria, Grand Marquis, and Lincoln Town Cars with Speed Control.

SAFETY DEFECT

Some Speed Control Deactivation Switches on the affected vehicles may develop a resistive short in the electrical circuit that may potentially result in an underhood fire. A fire is possible both when the vehicle is running and when the vehicle engine is off. Also, the short may disable the speed control system or cause the brake light fuse to open.

REPAIRS

Repair parts may not be available until mid-June, 1999. If your dealer is not able to obtain the parts needed for this recall, an Interim Repair can be performed at no charge to you. However a second visit to your dealer will be required at a later date to have the permanent repair performed. We regret this inconvenience, but your safety is our primary concern.

Interim Repair: If parts are not available, the Interim Repair should be performed immediately. This repair involves disconnecting the electrical connector from the Speed Control Deactivation Switch and protecting the connector end from contamination. The Speed Control System will be inoperative until the Permanent Repair is performed; normal vehicle operation without Speed Control is not affected.

Permanent Repair: Parts for this repair are expected to become available the middle of June, 1999. This repair will involve the replacement of the Speed Control Deactivation Switch with a new switch. In addition, the switch hard-shell connector will be replaced to eliminate the possibility of undetected heat damage to the connector.

HOW LONG WILL IT TAKE?

The time needed for either of the repairs is less than one-half day. However, due to service scheduling issues, your dealer may need your vehicle for a longer period of time. Please call your dealer for a service date.

Call your dealer without delay. Ask for a service date and whether parts are in stock for Safety Recall 99S15.

If your dealer does not have the parts in stock, they can be ordered before scheduling your service date. If available, parts would be expected to arrive within a week after ordering. If parts are not available, your dealer can perform the Interim Repair free of charge. When parts are available, your dealer will perform the Permanent Repair free of charge.

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

REFUNDS

If you paid to have this service done before the date of this letter, Ford is offering a full refund. For the refund, please give your paid original receipt to your Ford or Lincoln Mercury dealer. To avoid delays, do not send receipts to Ford Motor Company.

CHANGED ADDRESS OR SOLD THE VEHICLE?

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

If the dealer doesn't make the repair promptly and without charge, you may contact the Ford Customer Assistance Center, P. O. Box 6248, Dearborn, Michigan 48121. You also may send a complaint to the Administrator, National Highway Traffic Safety Administration, 400 Seventh Street, S. W., Washington, D. C. 20590 or call the toll free Auto Safety Hotline 1-800-424-9393 (Washington, D. C. area residents may call 366-0123).

We regret the inconvenience this service may cause you, but we want you to have the work done for your safety and satisfaction with your Ford or Lincoln-built vehicle.

Sincerely,

A. R. O'Neill
Director
Vehicle Service and Programs

3713 9617