

## Summary

- Faults for two different deployment control faults "A" & "C"
  - Deployment Control "A" refers to the anchor pretensioner
  - Deployment Control "C" refers to the retractor pretensioner
- Both deployment control types were found in an active state @download in the files provided
  - Most likely caused by setup/testing issue
- Three fault conditions were observed in the fault buffers
  - 7x Open circuit ( $> 10.7 \Omega$ )
  - 1x Low resistance ( $< 1.6 \Omega$ )
  - 5x High Resistance ( $> 4 \Omega$  &&  $< 10.7 \Omega$ )
- For all 3 fault conditions the warning lamp is commanded on and latched for remainder of the key-cycle.

1FMJK1MT [REDACTED]

### Full Fault Buffer

Lifetime Module Timer: 6012285 seconds

DTC807F - Passenger Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance too high**
- Time First Detected: 5970151 seconds
- Time Removed: 5971271 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 62
- This DTC was set 1 time 62 key-cycles ago.

DTC807F - Passenger Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open Circuit Failure**
- Time First Detected: 5971271 seconds
- Time Removed: 6012016 seconds
- Key-cycles code active: 58
- Key-cycles code historic: 4
- This DTC was set 58 times and became historic 4 key-cycles ago.

DTC 8070 - Driver Seatbelt Pretensioner "A" Deployment Control circuit open

- **Open circuit failure**
- **Code is Active**
- Time First Detected: 6012016 seconds
- Time Removed: 1 seconds
- Key-cycles code active: 2
- Key-cycles code historic: 0
- This DTC was set 2 times and was active at download.
  - This fault is most likely the result of the download based on its active status @ download, the limited number of times set and the occurrence timing so close to the Lifetimer of the module.

1FMJU1J [REDACTED]

### Full Fault Buffer

Lifetime Module Timer: 3576745 seconds

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance Too High**
- **Code is Active**
- Time First Detected: 3576686 seconds
- Time Removed: 1 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 0
- This DTC was set 1 time and was active at download.
  - This fault is most likely the result of the download based on its active status @ download, the limited number of times set and the occurrence timing so close to the Lifetimer of the module.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance Too High**
- Time First Detected: 3558991 seconds
- Time Removed: 3576196 seconds
- Key-cycles code active: 37
- Key-cycles code historic: 5
- This DTC was set 37 times and became historic 5 key-cycles ago.

5LMJJ2LT

**Full Fault Buffer**

Lifetime Module Timer: 7628680 seconds

DTC 8070 - Driver Seatbelt Pretensioner "A" Deployment Control circuit open

- **Open circuit failure**
- **Code is Active**
- Time First Detected: 7628651 seconds
- Time Removed: 1 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 0
- This DTC was set 1 time and was active at download.
  - This fault is most likely the result of the download based on its active status @ download, the limited number of times set and the occurrence timing so close to the Lifetimer of the module.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance Too High**
- Time First Detected: 7573966 seconds
- Time Removed: 7578526 seconds
- Key-cycles code active: 5
- Key-cycles code historic: 70
- This DTC was set 5 times and became historic 70 key-cycles ago.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 7578526 seconds
- Time Removed: 7628451 seconds
- Key-cycles code active: 66
- Key-cycles code historic: 3
- This DTC was set 66 times and became historic 3 key-cycles ago.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance Too Low**
- Time First Detected: 7623221 seconds
- Time Removed: 7623296 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 20
- This DTC was set 1 time and became historic 20 key-cycles ago.

5LMJJ2LT

**Full Fault Buffer**

Lifetime Module Timer: 3058610 seconds

DTC807F - Passenger Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance too high**
- Time First Detected: 2934991 seconds
- Time Removed: 2935561 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 189
- This DTC was set 1 time and became historic 189 key-cycles ago.

DTC807F - Passenger Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 2935561 seconds
- Time Removed: 2988716 seconds
- Key-cycles code active: 66
- Key-cycles code historic: 123
- This DTC was set 66 times and became historic 123 key-cycles ago.

DTC8072 - Passenger Seatbelt Pretensioner "A" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 2988536 seconds
- Time Removed: 2988716 seconds
- Key-cycles code active: 1
- Key-cycles code historic: 123
- This DTC was set 1 time and became historic 123 key-cycles ago.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 3038566 seconds
- Time Removed: 3058121 seconds
- Key-cycles code active: 23
- Key-cycles code historic: 5
- This DTC was set 23 times and became historic 5 key-cycles ago.

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Resistance too high**
- Time First Detected: 3047081 seconds
- Time Removed: 3052411 seconds
- Key-cycles code active: 8
- Key-cycles code historic: 21
- This DTC was set 8 times and became historic 21 key-cycles ago.



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**From:**

**Sent:**

**To:**

**CC:**

**Subject:**

**Attachments:** Pretensioner Faults Breakdown\_10282022.docx

Hi, team.

Attached is an updated file with timeline charts for the faults in 6 RCMs (from the list shared by [REDACTED] there would be a total of 9 RCMs).

The file was reviewed by Jay and Paul.

Thanks,

[REDACTED]  
Product Engineer

Electrical and Electronic Systems Engineering

Ford Motor Company do Brasil Ltda - Camaçari

Phone: [REDACTED]

E-mail: [REDACTED]

[REDACTED]

**Subject:** RE: U55x Pretensioner Eng. Review

Hello Team,

I updated the file on IADs and DTC based on the file I got from [REDACTED]

Thank you,

Best Regards,

[REDACTED]

-----Original Appointment-----

[REDACTED]

**Subject:** U55x Pretensioner Eng. Review

**When:** Thursday, October 27, 2022 2:00 PM-2:30 PM (UTC-05:00) Eastern Time (US & Canada).

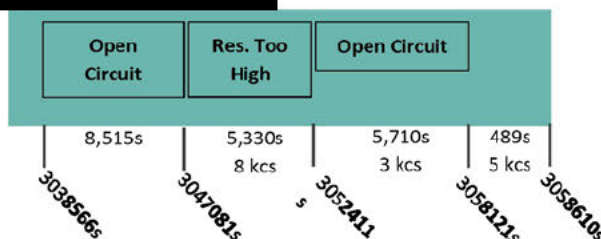
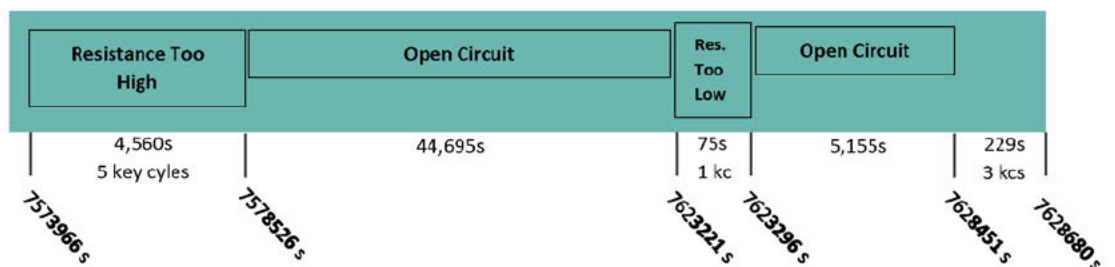
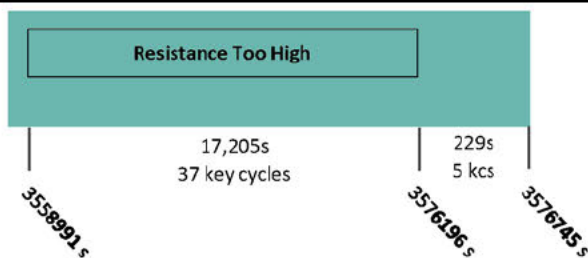
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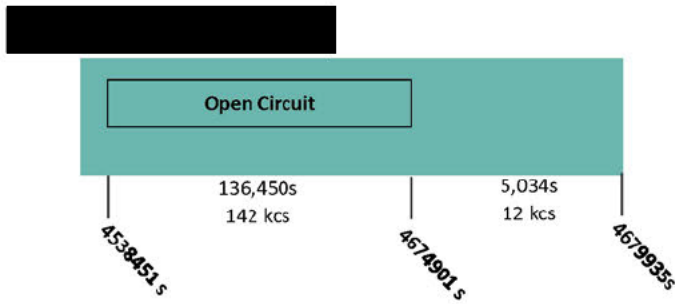
Please invite additional attendees as necessary.



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- For all 3 fault conditions the warning lamp is commanded on and latched for remainder of the key-cycle.
- Most faults seen on Retractor Pretensioners for Open Circuit are preceded by a High Resistance fault.
- Charts and analysis below are focused on Driver side retractor pretensioners.
- Driver "C" (retractor) pretensioner:
  - 3 Resistance Too High faults
  - 2 Open Circuit faults
  - 1 Resistance Too Low fault
- Timeline charts for Driver Seatbelt Retractor Pretensioner faults:





1FMJK1M [REDACTED]

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1FMJU1J [REDACTED]

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- Time First Detected: 3576686 seconds
- Time Removed: 1 seconds



- Key-cycles code historic: 20
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5LMJJ2LT [REDACTED]

**Full Fault Buffer**

Lifetime Module Timer: 3058610 seconds

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- Key-cycles code historic: 21
- This DTC was set 8 times and became historic 21 key-cycles ago.

5LMJJ2LT [REDACTED]

**Full Fault Buffer**

Lifetime Module Timer: 9592035 seconds

DTC807F - Passenger Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 3038566 seconds
- Time Removed: 3058121 seconds
- Key-cycles code active: 23
- Key-cycles code historic: 5
- This DTC was set 23 times and became historic 5 key-cycles ago.

1FMJK1MT



**Full Fault Buffer**

Lifetime Module Timer: 4679935 seconds

DTC 807E - Driver Seatbelt Pretensioner "C" Deployment Control circuit open

- **Open circuit failure**
- Time First Detected: 4538451 seconds
- Time Removed: 4674901 seconds
- Key-cycles code active: 142
- Key-cycles code historic: 12
- This DTC was set 142 times and became historic 12 key-cycles ago.