<table>
<thead>
<tr>
<th>General Service Bulletin (GSB):</th>
<th>Historical Powertrain Diagnostic Trouble Codes</th>
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</thead>
<tbody>
<tr>
<td>GSB Overview:</td>
<td>This bulletin explains historical DTCs.</td>
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</tbody>
</table>

**NOTE:** This information is not intended to replace or supersede any warranty, parts and service policy, Work Shop Manual (WSM) procedures or technical training or wiring diagram information.

**Historical Powertrain Diagnostic Trouble Codes (DTC)**

**Overview and Summary**
Historical Powertrain DTCs

- What is a historical DTC?
- How should historical DTCs be used?
- Which vehicles are involved?
What is a historical DTC and how does it compare to other DTCs?

• The following slides will construct a diagram which answers this question.

• Imagine every different type of diagnostic trouble code and an empty box where they could be organized.
Historical Powertrain DTCs

All Diagnostic Trouble Codes

Non-OBD module DTCs (Body/Chassis)

OBD module DTCs (Powertrain – PCM only at this time)
Historical Powertrain DTCs

All Diagnostic Trouble Codes

- Non-OBD module DTCs (Body/Chassis)
- OBD module DTCs (Powertrain – PCM only at this time)
- On-Demand DTCs
Historical Powertrain DTCs

All Diagnostic Trouble Codes

Non-OBD module DTCs (Body/Chassis)

OBD module DTCs (Powertrain – PCM only at this time)

On-Demand DTCs

Confirmed Continuous Memory DTCs
What exactly is a confirmed continuous memory DTC?
The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

Historical Powertrain DTCs

Non-OBD module DTCs (Body/Chassis)

Confirmed Continuous Memory DTCs

On-Demand DTCs

OBD module DTCs (Powertrain – PCM only at this time)
The first time a fault is detected it is considered “pending”.

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

OBD module DTCs (Powertrain – PCM only at this time)

The first time a fault is detected it is considered “pending”.

Confirmed Continuous Memory DTCs

On-Demand DTCs
Historical Powertrain DTCs

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

OBD module DTCs (Powertrain – PCM only at this time)

On-Demand DTCs

The first time a fault is detected it is considered “pending”.

Confirmed Continuous Memory DTCs

If fault persists for two key cycles it becomes confirmed.

Pending DTC

Historical Powertrain DTCs
Ver 1.2
Ford Motor Company
Dec 2015
Page 10 of 21
What if the fault doesn’t persist for two key cycles?
Historical Powertrain DTCs

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

On-Demand DTCs

Confirmed Continuous Memory DTCs

OBD module DTCs (Powertrain – PCM only at this time)

The first time a fault is detected it is considered “pending”.

Pending DTC

If a fault is not detected on two consecutive key cycles it ages out.

Module clears DTC
Historical DTCs:
Temporarily retain aged out DTCs for diagnostics
Historical Powertrain DTCs

Historical DTCs are those which used to be pending (or confirmed).

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

On-Demand DTCs

The first time a fault is detected it is considered “pending”.

Confirmed Continuous Memory DTCs

OBD module DTCs (Powertrain – PCM only at this time)

Historical DTCs are those which used to be pending (or confirmed).
Historical Powertrain DTCs

Historical DTCs are those which have aged out of pending status.

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

OBD module DTCs (Powertrain – PCM only at this time)

The first time a fault is detected it is considered “pending”.

On-Demand DTCs

Confirmed Continuous Memory DTCs

Pending DTC

Module clears DTC

Historical DTCs are those which have aged out of pending status.
Historical Powertrain DTCs

Non-OBD module DTCs (Body/Chassis)

The first time a fault is detected by a module’s internal monitor it is considered “confirmed”.

On-Demand DTCs

Confirmed Continuous Memory DTCs

OBD module DTCs (Powertrain – PCM only at this time)

The first time a fault is detected it is considered “pending”.

Pending DTC

Historical DTCs will age out after 80 or more key cycles.

Historical DTC

Module clears DTC
Historical Powertrain DTCs

How can historical DTCs be retrieved?

[Diagram showing a software interface with options for retrieving PCM CMDTCs]
Description of historical DTCs

Historical Powertrain DTCs

Historical CMDTCs log snapshot data of vehicle conditions that resemble, but may not represent a real fault.

Select a code to display the vehicle conditions that occurred at that time. The vehicle conditions did not occur consistently enough to set a CMDTC. On-board diagnostics avoid setting CMDTCs due to unusual driving conditions that may mimic an actual fault. Carefully review the snapshot data to determine if the vehicle conditions match the customer concern.

The REAL_TIME or GLOBTIM PIDs indicate the module’s running time (hr:min:sec) when the snapshot data was recorded. The REALTIME_CURRENT PID indicates the time when self test was run.

The DIST_FIRST_MFF and DIST_LAST_MFF PIDs capture the distance since the first occurrence and distance since last occurrence respectively. The letters "MFF" stand for manufacturer freeze frame.

Use the time and mileage data to determine if the historical DTC is relevant to the customer’s concern.

PCM CMDTCs
Pass - PCM

Historical CMDTCs
U0109:00-20 - PCM
P0108:00-20 - PCM
P025A:00-20 - PCM
Historical Powertrain DTCs

Distance since ______ PIDS

PCM CMDTCs
Pass - PCM

Historical CMDTCs
P0108:00-20-PCM

APP FLT: No Fault
ECT F: No Fault
ETC TRIM LRN: No
IAT F: No Fault
MP LRN: Yes
MAP F: Yes Fault
MISFIRE: No
TP F: No Fault
APP 1: 0.96V
TP 1: 4.41V
TP 2: 0.69V
PROG FLOWTRACE1: 0
PROG FLOWTRACE2: 0
DIST FIRST MFF: 0.621mi
DIST LAST MFF: 0.621mi
TRIPS FIRST MFF: 1
### Historical Powertrain DTCs

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