PERMANENT DIAGNOSTIC TROUBLE CODES (PDTC) IMPLEMENTATION UPDATE

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OCTOBER 17, 2019
PDTC UPDATE

• **Implemented:** July 1, 2019

• **Standard:** 15 warm-up cycles and 200 miles since code clear
  - Allows time for codes to clear/reset
  - Continuing to evaluate if this standard is working

• **Program Note:** Half of the vehicles had 4 or fewer warm-ups and traveled less than 40 miles since codes last cleared
  - Evaluating how to reduce reliance on readiness monitors when no PDTCs are present
  - When no PDTCs are present, could readiness monitors be considered complete?
  - Ongoing analysis to identify manufacturer PDTC implementation issues
STATUS OF PDTC FAILURES

• 2010 and newer Model Year inspections: 225,712
  o Fails (without PDTCs): 9,530 4.2%
  o PDTC-only Fails: 3,124 1.4%
  o Combined Fails: 12,654 5.6%

• Approximately 100 PDTC failures per day

• Increased failure rate for 2010 and newer vehicles by 1/3
PDTC FAILING VEHICLE OUTCOMES

July 1 – August 31, 2019

- Pass PDTC Cleared: 63.2%
- Pass PDTC Bypassed: 13.2%
- Fail Again: 7.2%
- No Retest: 16.5%
PDTC TOP 5 FAILURE REASONS

• 425 – EVAP very small leak detected (P0456)
• 265 – EVAP small leak detected (P0442)
• 157 – Mass Air Flow Sensor Circuit (P0101)
• 128 – Thermostat (P0128)
• 118 – Mass Air Flow Censor Circuit (P0102)

Note: 42% of the PDTC failures are related to EVAP
EXAMPLE OF MODIFIED VEHICLE IDENTIFIED BECAUSE OF PDTCS

<table>
<thead>
<tr>
<th>YEAR TESTED</th>
<th>MODEL YEAR</th>
<th>MAKE</th>
<th>MODEL</th>
<th>RESULT</th>
<th>PDTC</th>
<th>MIL STATUS</th>
<th>WARMUPS</th>
<th>DISTANCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>2011</td>
<td>CHEVROLET</td>
<td>CORVETTE GRAND SPORT</td>
<td>PASS</td>
<td>MIL_OFF</td>
<td>2</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2011</td>
<td>CHEVROLET</td>
<td>CORVETTE GRAND SPORT</td>
<td>PASS</td>
<td>P0420,P0430</td>
<td>MIL_OFF</td>
<td>1</td>
<td>25</td>
</tr>
<tr>
<td>2019</td>
<td>2011</td>
<td>CHEVROLET</td>
<td>CORVETTE GRAND SPORT</td>
<td>FAIL</td>
<td>P0420,P0430</td>
<td>MIL_OFF</td>
<td>1</td>
<td>57</td>
</tr>
</tbody>
</table>

- This vehicle has bad or no catalytic converters (P0420/P0430)
- The MIL will illuminate soon after the monitors run
- For past 3 inspection cycles, a code clear has been performed just prior to the test
- Vehicle passed in 2017 with PDTCs present
- In July 2019, presence of PDTCs caused vehicle to fail
QUESTIONS AND COMMENTS

Submit questions and/or comments to:

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