Wider Distribution (Core Team and Functional Support)

Book: 05-Engineering/Integration Areas
Information: Historical
Topic: 01.0 VAPIR
Sub-Topic: 01.02 All Meeting Minutes
Title: VAPIR 6-14-05

ILM Record Definition: GVI Business Record
ILM Record Series #: PRD035
Business Process: Product Development/Engineering
Record Series: Design and Release - Decision Documentation
Retention Period: Production Run+ 50, With Review,

Program: GMX001
ILM Architecture: Delta

Description:

Keywords:

Attachments/Comments:
6-14 X001 VAPIRx 6-14 Scott GMX001 timeline 6-14 X001 Ignition Cylinder 06091

6-14 X001 Ignition Cylinder 060905 6-14 CR309195 VAPIR Update (14JUN1)

Originator: Chris M Ritter
Created: 14Jun05
Status: Approved
Approval Date: 
Version: Original
Sequence Number:

CROSS REFERENCE AREAS (Select all that apply)
Field 1: SMT/Major Subsystem
Field 2: PMT/Subsystem
Field 3: Integration Areas/PDT'S

08/06/2013 GMX001 Program Notebook - Cover Page
<table>
<thead>
<tr>
<th>TIME</th>
<th>SUBJECT</th>
<th>PRESENTER</th>
<th>ID</th>
<th>When</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00</td>
<td>Program Update 311821 - Revised Catalytic Converter Architecture 08+ 308642-01 - RR End Panel 06+ 310835-01 - CAS Clutch Apply Sensing System 08+</td>
<td>Manson</td>
<td>I</td>
<td>Meet CR approval and EPM B23 - 3060F, system fill this week All CHs ok for solder, 186642-01 straight to CK, PWG was ok’d in CAS</td>
</tr>
<tr>
<td>7:05</td>
<td>07 Integration Build BOM &amp; Status</td>
<td>Konzen</td>
<td>I</td>
<td>12th vehicle through bit check</td>
</tr>
<tr>
<td>7:10</td>
<td>Exhaust Hanger issues</td>
<td>Marlowe Porter</td>
<td>I</td>
<td>Potential epic base with new 15 mm shorter hanger/ball joint - clearance to body may be tight. Will work on it with plant to optimize design</td>
</tr>
<tr>
<td>7:20</td>
<td>06 Exhaust Retrofit</td>
<td>Porter</td>
<td>I</td>
<td>Build bucket 1.2 and 16 more to account for exhaust. Retrofit schedule in place with Marlowe</td>
</tr>
<tr>
<td>7:45</td>
<td>UQ3 - Common Attachment Scheme</td>
<td>Kirsch</td>
<td>D</td>
<td>On with 06 design to up capacity, sandia 092 commination in Q4 due to Q4 changes</td>
</tr>
<tr>
<td>8:00</td>
<td>Leather Status</td>
<td>Craig Dalton Scott Kolhoff</td>
<td>I</td>
<td>Continuing testing on seats &amp; bags</td>
</tr>
<tr>
<td>8:15</td>
<td>Side NCAP</td>
<td>Craig</td>
<td>I</td>
<td>Test Leaf Friday with ahead changes - 3rd. Will move forward with re-test by NHTSA</td>
</tr>
<tr>
<td>8:20</td>
<td>Park Brake Timing Plan</td>
<td>Crockett</td>
<td>I</td>
<td>Need complete business case including banking costs</td>
</tr>
<tr>
<td>8:30</td>
<td>Ignition Cylinder Status</td>
<td>Manson Manzor</td>
<td>D</td>
<td>Will try ring/slot change and continue investigation of 911 cylinder</td>
</tr>
</tbody>
</table>

**Time Permitted**

**PRTS - Chart below**

- **Function**: Name
- **Status**: PDF Date
- **Rootchamp**:

<table>
<thead>
<tr>
<th>Function</th>
<th>Name</th>
<th>Prob#</th>
<th>Title</th>
<th>Status</th>
<th>PDF Date</th>
<th>Rootchamp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Engineering Manager (PEM)*</td>
<td>Manson</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Business Manager (BMI)</td>
<td>Ritter</td>
<td>x</td>
<td></td>
<td></td>
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<tr>
<td>Vehicle Performance Manager (VPM)</td>
<td>Manzor</td>
<td>x</td>
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<tr>
<td>Vehicle Architecture Manager (VAM)</td>
<td>NA</td>
<td></td>
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<tr>
<td>VSE/EGM - Body Structure / Closures</td>
<td>Rodriguez/Adriete Meza</td>
<td></td>
<td></td>
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<tr>
<td>VSE/EGM - Exterior</td>
<td>Sergot/Zawacki</td>
<td></td>
<td></td>
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<tr>
<td>VSE/EGM - Interior</td>
<td>Dolzenski</td>
<td></td>
<td></td>
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<tr>
<td>VSE/EGM - Electrical</td>
<td>Kirkman</td>
<td></td>
<td></td>
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<tr>
<td>VSE/EGM - HVAC/PTC</td>
<td>Pearson</td>
<td></td>
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<tr>
<td>VSE/EGM - Powertrain</td>
<td>Schultz</td>
<td></td>
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<tr>
<td>VSE/EGM - Chassis</td>
<td>Mata/Morales/Guerrero</td>
<td></td>
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<tr>
<td>Manufacturing Program Manager (MPM)</td>
<td>Taylor/Marlowe</td>
<td></td>
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<tr>
<td>Program Quality Manager (PQM)</td>
<td>Taylor/Marlowe</td>
<td></td>
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<tr>
<td>Program Launch Manager (PLM)</td>
<td>Sloan</td>
<td></td>
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</tbody>
</table>

*The VCE or AVCE/PEM must be present for any items that require a decision.*

GMHEC000552112
X001 Ignition Cylinder Effort...
Next Actions

**Short Term:**
- Eliminate 25mm dia key ring (use only 13mm ring)
  - Timing: Immediate, Cost (savings)
- Plug Key Slot w/Hole
  - Timing: 10wks, Cost (tbd)
- Combine?

**Long Term:**
- Increase camshaft load to cylinder module (10% solution to increase effort)
  - Timing: 50wks, Cost ($0.57/veh, $187K & proto parts)
- Revise Ignition Switch aka GMX191 to increase shut off effort from 3lbs to 6lbs
  - Timing: 2008 SOP (GMX191 gets in 2007), Cost ($1.00/veh, Tools TBD)

GMHEC000552113
X001 Ignition Cylinder Effort...Field Info

- Jeff Sabatini (NY Times) article on his wife's experience due 6/19
- GM Communication Response (attach)
- 5/23 Sunbury Article (attach)
- Service Bulletin PI (attach)
X001 Ignition Cylinder Effort...
GM Communications Statement

**GM Statement On** Chevrolet Cobalt Inadvertent Shutoffs

*Attributable to Alan Adler, Manager, Product Safety Communications*

In rare cases when a combination of factors is present, a Chevrolet Cobalt driver can cut power to the engine by inadvertently bumping the ignition key to the accessory or off position while the car is running.

When this happens, the Cobalt is still controllable. The engine can be restarted after shifting to neutral.

GM has analyzed this condition and believes it may occur when a driver overloads a key ring, or when the driver’s leg moves amid factors such as steering column position, seat height and placement. Depending on these factors, a driver can unintentionally turn the vehicle off.

Service advisers are telling customers they can virtually eliminate this possibility by taking several steps, including removing non-essential material from their key rings.

Ignition systems are designed to have “on” and “off” positions, and practically any vehicle can have power to a running engine cut off by inadvertently bumping the ignition from the run to accessory or off position.

GMHEC000552115
X001 Ignition Cylinder Effort…Sunbury Article

May 26, 2005

All-new Cobalt
has good,
bad points
By Gary Heiler
SUNBURY - The all-new Chevrolet Cobalt has many virtues and many faults.

The virtues include good gas mileage, loads of trunk space and better-than-average power for a car in this class.

The faults include a stiff ride, a cheap-feeling steering wheel, lack of rear seat legroom and one that I hope is unique - the engine is easy to turn off while the car is in motion.

Unplanned engine shutdowns happened four times during a hard-driving test week.

In each of those instances, I bumped the ignition key fob with my knee. The bump was enough to knock the key into the accessory position, which turned off the engine but allowed other systems to keep operating.

That happened twice on Interstate 80 at 65 mph before I figured what was going on. I confirmed my theory while parked at a rest stop.

Nevertheless, even knowing about the problem didn't stop me from bumping the key fob and accidentally turning off the engine twice more.

I never encountered anything like this in 37 years of driving. I hope I never do again.

Anyway, the test model was an LS sedan with a list price of $15,920. The only options were a four-speed automatic transmission ($850) and rear deck-lid spoiler ($275).

The transmission worked well with the 2.2-liter engine, rated at 145 horsepower, but the engine was a shade noisy when pushed.

And I will have to acknowledge that I pushed it.

I took the Cobalt to Indiana, Pa., to bring my youngest son, Andrew, home from college.

Even with careful packing, the car was so full that Andrew had to ride home with a 40-pound duffle bag on his lap.

Nevertheless, the Cobalt had no trouble handling the mountains on I-80 between the Lewisburg and Clearfield exits - at least when the engine didn't shut down.
Gas mileage was certainly respectable, given the load. I didn't clock it precisely, but it was fairly close to the EPA rating of 32 miles per gallon on highways.

Speed-sensitive electric power steering was among the Cobalt's standard equipment, but I didn't find the handling exceptional. The ride was a bit stiff, but got softer with a load.

Standard equipment on the test model included driver and passenger dual-stage air bags, power windows, locks and exterior mirrors and four-wheel anti-lock brakes.

The Cobalt comes in several styles. A super sport model is available with a 205-horsepower supercharged engine. A 5-speed Getrag manual transmission is standard.

The Cobalt is replacing the Cavalier in the Chevrolet lineup and competes directly with the Ford Focus, Honda Civic, Mazda3 and Toyota Corolla. The standard goodies make it a tempting pick, but I'd look hard at the distance between your knee and the ignition switch before making a final decision.

The stats
2005 Chevrolet Cobalt LS sedan
Engine: 2.2-liter 4-cylinder
Gas mileage: 24 city, 32 highway
Base price: $15,920
As tested: $17,610

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X001 ignition Cylinder Effort...Service Bulletin PI

Engine Stalls, Loss of Electrical Systems, and No DTCs - keywords driver engine intermittent int ignition IPC key loss LSJ phantom #PIC3421 - (Feb 28, 2005)
Engine Stalls, Loss of Electrical Systems, and No DTC

The following diagnosis might be helpful if the vehicle exhibits the symptom(s) described in the PI.

Condition/Concern:
The engine may stall while driving intermittently, and some customers may notice the loss of electrical systems.

Note: No DTCs are stored.

Recommendation/Instructions:
There is potential for the driver to inadvertently turn off the ignition due to low key ignition cylinder torque/effort. The concern is more likely to occur if the driver is short and has a large heavy key chain.

In the cases this condition was documented, the driver's knee would contact the key chain while the vehicle was turning. The steering column was adjusted all the way down. This is more likely to happen to a person that is short as they will have the seat positioned closer to the steering column.

In cases that fit this profile, question the customer thoroughly to determine if this may the cause. The customer should be advised of this potential and to take steps, such as removing unessential items from their key chain, to prevent it.

Please follow this diagnosis process thoroughly and complete each step. If the condition exhibited is resolved without completing every step, the remaining steps do not need to be performed.

Models:
(2005 Pontiac Pursuit) and (2005 Chevrolet Cobalt)
X001 Ignition Cylinder Effort...

Next Actions

Short Term:
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