

Diagnosics & Re-Flashing with J2534

and why you need to know about it

September 14th, 2011

Why Learn about J2534?

- Some manufacturers offer many capabilities beyond re-flashing
- Many issues can only be fixed with a re-flash
- Getting started – Things you should know

Capabilities Beyond Re-flashing

Future of OEM Scan Tools

- Many manufacturers are planning on using J2534 as the interface for their next generation OEM tools.
- Legislation in Europe makes OEM's provide re-flashing for ALL ECU's on their vehicles. This is trickling over into the U.S.
- Handful of OEM's already providing DEALER LEVEL software for use with a J2534 interface.

Diagnostics With J2534

- Who offers Dealer level tooling?
 - Toyota – Techstream
 - Volvo – VIDA
 - Jaguar/Land Rover – IDS SDD
- The above three also allow access to security modules and key functions with a NASTF SDRM
- Who offers near dealer level tooling?
 - BMW – ISTA

What does this mean for Me?

- Gain access to OEM tooling that may have been un-accessible or too expensive previously.
- Save time and money by keeping the job in house.
- As profits grow, so does access to more OEM software subscriptions.
- More subscriptions allows you to bring more vehicles into the shop.

Expanded Business Potential

- One tool can cover multiple brands for both flashing and diagnostics.
- Have access to OEM level tools with affordable short term subscriptions – no need to buy yearly updates.
- The more brands you can confidently service, the more cars you can bring for the bigger tickets, and more in depth services.

Who Offers Re-Flashing with J2534?

- All manufacturers who sell more than 5000 cars per year in the U.S.
- Must provide update capability for emissions controllers, i.e. Engine & Transmission.
- All vehicles sold in the U.S. since 2004.
- Coverage previous to 2004 is voluntary.
- Euro 5 requires all module flashing through J2534 for 2010 and newer vehicles. Diagnostics developed at the same time. This means more OEM level subscriptions will be available in the U.S. in the near future.

Many issues can only be fixed with
a re-flash

Some issues can only be fixed with Flashing

- Certain TSBs don't call for any parts, simply an update to the software in the ECM.
 - Always check TSBs first.
 - Many drivability issues addressed by a re-flash from the OEMs.
- Industry Experts say as many as 7 out of 10 vehicles on the road have outdated calibrations.
- Re-flashes addressing various issues were found for nearly every vehicle we searched for using a popular service information resource

TSB Examples

- The following TSBs show different cases where re-flashing is required to solve an issue.
 - Reflash due to problem with DTC information.
 - Reflash to solve Idle issue.
 - Reflash to cure poor running condition due to changes in fuel quality.

Engine Controls - MIL ON with 'Unknown' DTC Set

03-077

October 24, 2003

Applies To:

2001-02 Civic DX, HX, LX, and EX - ALL

MIL Is On With "Unknown" DTC

SYMPTOM

The MIL is on, and when you try to retrieve the DTC with the HDS, "Unknown" is displayed.

PROBABLE CAUSE

The ECM/PCM software does not properly communicate the DTC to the HDS. When this happens, "Unknown" is displayed on the HDS screen.

CORRECTIVE ACTION

Use the Honda Interface Module (with September 2003 or later software) to update the ECM/PCM.

WARRANTY CLAIM INFORMATION

In warranty: The normal warranty applies.

Operation Number: 123503

Flat Rate Time: 0.3 hour

Failed Part: P/N 37820-PLR-L55
H/C 7064371

Defect Code: 03214

Symptom Code: 03203

Template ID: 03-077A

Skill Level: Repair Technician

Out of warranty:

Any repair performed after warranty expiration may be eligible for goodwill consideration by the District Parts and Service Manager or your Zone Office. You must request consideration, and get a decision, before starting work.

REPAIR PROCEDURE

1. If not already done, load the September 2003 or later iN (Interactive Network) CD onto the iN master terminal. Loading instructions are included in the CD's mailing.
2. Update the ECM/PCM with the Honda Interface Module (HIM). For instructions, refer to Service Bulletin 01-023, Using the Honda Interface Module to Update Control Units/Modules.
3. Check if the MIL comes on:

^ If the MIL comes on, retrieve the DTC(s), and do the appropriate troubleshooting.

Engine Controls - Occasional Stalling When Stopping

02-083

February 20, 2004

*Applies To:

2001-02 Civic DX, LX, HX, EX - ALL

2001-02 Civic: Stalls Intermittently After a Stop
(Supersedes 02-083, dated December 23, 2002)

Updated information is shown with asterisks.

SYMPTOM

The engine occasionally stalls after the vehicle comes to a stop.

PROBABLE CAUSE

Ignition timing and the idle air control (IAC) valve response time may be insufficient when the engine idle speed falls below the PCM's learned idle speed value.

CORRECTIVE ACTION

Use the Honda Interface Module (HIM) to update the software in the ECM/PCM.

TOOL INFORMATION

You will need these tools and equipment items:

^iN Workstation

^Honda Interface Module (HIM): T/N EQS05A35570

^PC Interface Cable (RS232): T/N VET-02002832

* This is the same cable you use to connect the HIM to the iN workstation. The cable is blue with an attached adapter.*

^AC Adapter (110 VAC/12 VDC Power Supply): T/N: VET-02002426

This is the adapter needed for the HIM.

These tools are already at your dealership. To order additional HIMs, interface cables, or AC adapters, call the Honda Tool and Equipment Program at 1-888-424-6857. Phone lines are open Monday through Friday from 7:30 a.m. to 7:00 p.m. CT.

WARRANTY CLAIM INFORMATION

PCM - Sag/Hesitation/Stumble/Stall

NUMBER: 18-05-99

GROUP: Vehicle Performance

DATE: Feb. 26, 1999

SUBJECT:

Sags/Hesitation/Stumble/Start & Stall, A/C Bump Improvements, Addition Of Leak Detection Pump (LDP) Monitor Test

OVERVIEW:

This bulletin involves selectively erasing and reprogramming the powertrain control module (PCM) with new software (calibration changes).

MODELS:

1997 - 1998 (NS) Town & Country/Caravan/Voyager

SYMPTOM/CONDITION:

1997/1998 3.0L ATX Powertrains

^Sags/Hesitation/Stumble/Start & Stall after a cold start in ambient temperatures of -7°- 30°C (20°- 86°F). This condition may persist for up to a minute into a drive cycle and is attributed to high driveability index (DI) fuel. See TSB 14-08-97 for more detail on Driveability Index fuel.

1997/1998 2.4/3.0/3.3/3.8L Powertrains

^Provides further enhancements to the software originally released in Technical Service Bulletins 18-19-97 Rev A dated Oct. 17, 1997 and 18-20-98 dated Apr. 17, 1998 for "Bump" Feel during A/C Compressor Engagement. See TSB 18-19-97A and/or 18-20-98 for further details regarding this subject.

1997/1998 2.4/3.0/3.3/3.8L Powertrains Equipped With Leak Detection Pump (1998 California Emission (Sales Code NAE) only included LDP)

^Addition of LDP Monitor Test. This test makes the DRB III(R) capable of running the LDP monitor. This will allow technicians to verify LDP repairs easily.

DIAGNOSIS:

Using the Mopar Diagnostic System (MDS/MDS2) and or the Diagnostic Scan Tool (DRB III(R)) with the appropriate Diagnostic Procedures Manual, verify all engine/transmission systems are functioning as designed. If Diagnostic Trouble Codes (DTC's) are present, record them on the repair order and repair as necessary before proceeding further with this bulletin. If no DTC's are present and the customer has described the above symptoms, perform the Repair Procedure.

NOTE :WHENEVER A POWERTRAIN CONTROL MODULE (PCM) IS REPLACED DUE TO FAILURE, THE SOFTWARE OF THE REPLACEMENT CONTROLLER MUST BE VERIFIED FOR THE LATEST REVISION LEVEL. USE THE FLASH PROCEDURE TO UPDATE REPLACED CONTROLLERS AS NECESSARY.

PARTS REQUIRED:

1	04669020	Label, Authorized Software Update
1	04275086	Label, Authorized Modification

EQUIPMENT REQUIRED:

1	CH6000	Scan Tool (DRB III(R))
1	CH7035	General Purpose Interface Bus Cable (GPIB)
1	CH7000/7001	J1962 Cable
1		MDS1 or MDS2

Alternatives to Re-flashing

- Outsource re-flash (dealer, mobile jobber)
– lost business
- Buy OEM tooling
- Turn the job away
- Physical issues may be fixed by calibration update only – fixing only physical parts may result in vehicle re-turning to shop.

Getting Started

Logical Process

- Re-flashing is only part of a repair process

- Logical repair work flow:
 - Diagnostics – What is wrong with the vehicle?
 - Check repair information
 - What is involved with the fix?
 - Is there a re-flash that addresses the problem?
 - What is involved in the re-flash? (Extra procedures?)
 - Re-flash and complete any extra procedures
 - Vehicle repaired

State of Mind

- Re-flashing requires a clear state of mind
- Impatient, angry, anxious, etc. technicians have the highest rate of re-flash failure
- Be a continuous learner
 - Take notes on new processes, software changes constantly
 - New vehicle technologies are emerging daily
 - Seek additional training, learn from experience technicians and talk to other technicians who may have the same questions you do.

Continued learning

- Re-flashing is not a Plug and Play process
- Different manufacturers have different re-flashing process
- Seek out and attend a course tailored to re-flashing
- Many re-sources are available online.

J2534 Resources

- J2534 Toolbox
 - Specific OEM information
 - Current OEM Issues
 - How-to videos
- NASTF
 - Specific Manufacturer information
 - Security Professional documentation, licensing, etc.
- J2534 Tool Manufacturers
 - Provide tool Support
 - Typically happy to pass information along
- Yourself!
 - Take notes on new processes
 - Takes more time initially, saves exponentially more time in long run
 - Technical support may not be available for something you have done in the past.

Re-Flashing Checklist:

- Power Supply connected to Vehicle
- Current version of OEM software installed
- Pass thru tool updated with most current drivers
- Screen Saver Disabled
- Module ready to be replaced/module already replaced (brand dependent)
- Security information/Keys available for possible re-learn.

Checklist Continued...

■ Laptops

- Battery fully Charged/power supply plugged in
 - Power management profile set to not power down, sleep or hibernate from lack of user actions.
 - Internet connection stable for applications that require internet access.
 - Stable surface for laptop.
- Certain brands will give the opportunity to clear DTCs after reflash as part of after programming procedure.