

Technical Service Bulletin



SUBJECT:
No Restart/Rough Idle
After A Hot Soak

NO: 18-09-98 Rev. B
GROUP: Vehicle Performance
DATE: Jun. 12, 1998

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THIS BULLETIN SUPERSEDES TECHNICAL SERVICE BULLETIN 18-09-98 REV. A, DATED MAR. 13, 1998, WHICH SHOULD BE REMOVED FROM YOUR FILES. ALL REVISIONS ARE HIGHLIGHTED WITH **ASTERISKS**** AND INCLUDES NEW SOFTWARE FOR ALL APPLICATIONS, THE ADDITION OF THE 3.5L ENGINE, AND ADDED PROCEDURES FOR THE 2.7L ENGINE.**

MODELS:

1998 (LH) Concorde/Intrepid
****1999 (LH) LHS/300M****

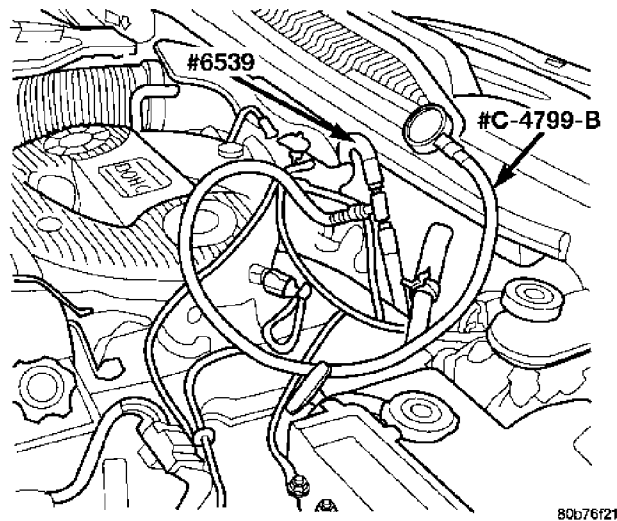
****NOTE: THE SOFTWARE CHANGE APPLIES TO ALL VEHICLES BUILT PRIOR TO MAY 12, 1998 (MDH 0504XX) AND THE 2.7L THERMOSTAT MODIFICATION APPLIES TO ENGINES WITH BUILD CODES PRIOR TO 04/20/98 (THE ENGINE BUILD DATE IS LOCATED ON A LABEL ATTACHED TO THE LEFT REAR VALVE COVER). IN-PLANT MODIFIED THERMOSTATS MAY HAVE A WHITE PAINT DOT ON THE THERMOSTAT HOUSING.****

SYMPTOM/CONDITION:

Some vehicles may exhibit a hot engine no start, hot engine restart with a rough idle, or hot engine restart/die-out. Some vehicles may also exhibit misfire DTC's. This condition occurs after a 10 to 20 minute hot soak and may be aggravated by alcohol blended fuels. Some vehicles may not restart until the engine cools. Fuel vapor build up in the fuel rail may be the cause for these conditions.

DIAGNOSIS:

Using the Diagnostic Scan Tool (DRB III®) 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. Cold soak the vehicle outdoors or in the shop for a minimum of 8 hours. Connect a fuel pressure gauge Miller Tool C4799 to the service port for the 3.2L or ****3.5L**** engine. On 2.7L engines, use Miller Tool C4799 plus adapter 6539. Perform fuel bleed procedures on the 2.7L and disconnect the quick connect fuel line at the rear of the engine, just below the throttle body (Figure 1). Connect the adapter 6539 to the fuel line and the pressure gauge C4799 to the adapter.

**FIGURE 1**

Switch the ignition key to the “run” position while monitoring fuel pressure. Do not start the vehicle. Allow the fuel pressure to stabilize (approximately 48 to 50 psi) and switch the ignition key to “off”. Monitor the fuel pressure gauge for 15 minutes. If the fuel pressure drops 20 PSI or more, the fuel pump module will require replacement along with the flash update Repair Procedure. If the fuel pressure drops less than 20 PSI, perform the flash update Repair Procedure only. **Additionally, If the vehicle has a 2.7L engine perform the thermostat modification and heater hose modification Repair Procedures.**

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

EQUIPMENT/PARTS REQUIRED:

1	CH6000	Scan Tool (DRB III®)
1	CH7035	General Purpose Interface Bus Cable (GPIB)
1	CH7000/7001	J1962 Cable
1	04669020	Label - Authorized Software Update
1	04275086	Label - Authorized Modification
AR(1)	5003958AA	Module, Fuel Pump
1	C4799	Fuel Gauge, Miller
1	6539	Gauge Adapter, Miller (For 2.7L Engine)
1	8195	Filling Aid Funnel, Miller
4	06502018	Clamps, Hose (2.7L)
2	04592126	Clamps, Hose (2.7L)
AR(1)	04596346AA	Supply Hose, Heater (2.7L)

**AR(1) 04767170AB
**AR(2) 05011764AB

Supply Hose, Heater (2.7L)**
Coolant, Long Life**

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NOTE: THE MDS AND DRB III® ARE REQUIRED TO PERFORM THIS REPAIR AND THE SYSTEM MUST BE OPERATING WITH RELEASE 21 OR HIGHER AND TIL CD RELEASE **1161 OR HIGHER MUST BE INSTALLED.**

REPAIR PROCEDURE:

This bulletin involves replacing the fuel pump module if required (per the diagnosis section) and/or selectively erasing and reprogramming the Powertrain Control Module (PCM) with new software (calibration changes). **On 2.7L applications, an additional thermostat modification will be required along with a modification to the heater supply hose.**

1. If necessary, follow the procedures listed in the service manual publication number 81-270-8140 to replace the fuel pump module. Follow the reflash procedures after fuel pump module replacement. If fuel pump module replacement is not required, perform the following reflash procedure only.
2. Connect the MDS (Mopar Diagnostic System) and DRB III® (Scan Tool) to the vehicle and power them up.
3. Use the arrow keys and select #2 MDS DIAGNOSTICS on the DRB III® MAIN MENU Screen.
4. Use the arrow keys and select DIAGNOSTIC MENU on the MDS, then press NEXT MENU.
5. Use the arrow keys and select VEHICLE CONTROLLER PROGRAMMING on the MDS, then press NEXT MENU.
6. Use the arrow keys and select PROGRAMMING OF ALL OTHER CONTROLLERS USING MDS & DRB III® on the MDS, then press NEXT MENU.
7. Follow the steps presented on the MDS and DRB III® which will allow the DRB III® to obtain the current part number of the PCM.
8. The MDS will display the part number of the PCM on the vehicle and the appropriate replacement part number, then press NEXT MENU to begin programming.

If the PCM on the vehicle has already been updated or programmed, a NO

UPDATES AVAILABLE message will be displayed. Check the part number of the PCM on the vehicle and compare it to the part number displayed. If the PCM has already been updated, then another condition exists that will require further diagnosis and repair.


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9. The MDS and DRB III® will prompt for any operator action needed during the remainder of the programming process.

NOTE: THE FOLLOWING STEPS ARE REQUIRED BY LAW.

10. Type the necessary information on the "Authorized Software Update Label" p/n 04669020 (Figure 2). Attach the label to the PCM and cover the label with the clear plastic overlay.



 P/N:

 DLR CODE:


 DATE:

 AUTHORIZED SOFTWARE UPDATE

4669020
AFFIX TO CONTROLLER

FIGURE 2

11. Type the necessary information on the "Authorized Modification Label" p/n 04275086 and attach the label near the VECI Label (Figure 3).

	AUTHORIZED MODIFICATIONS	THESE MODIFICATIONS HAVE BEEN APPROVED AS APPROPRIATE, BY EPA AND CARB.
THE FOLLOWING MODIFICATIONS HAVE BEEN MADE:		
POWERTRAIN CONTROL MODULE P/N _____ * _____ USED		
CHANGE AUTHORITY	DEALER CODE	DATE
TSB XX-XX-XX	XXXXXX	XXXXXX
4275086		

* Insert P/N Used

FIGURE 3

****2.7L THERMOSTAT AND HEATER SUPPLY HOSE MODIFICATION****

The 2.7L thermostat modification applies to engines with build codes prior to 04/20/98 (the engine build date is located on a label attached to the left rear valve cover). In-plant modified thermostats may have a white paint dot on the thermostat housing. All 2.7L engines must have the heater hose modification performed.

1. Follow the procedures listed in the 1998 Concorde/Intrepid service manual publication number 81-270-8140 to remove the thermostat on 2.7L engine applications.

WARNING: DO NOT REMOVE THE PRESSURE CAP WITH THE SYSTEM HOT AND UNDER PRESSURE. SERIOUS BURNS FROM HOT COOLANT CAN OCCUR.

2. Press down on the secondary poppet spring. Remove and discard the secondary poppet c-clip, and spring (Figure 4).

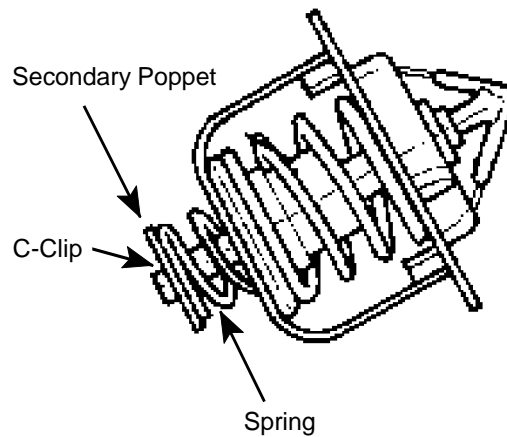


FIGURE 4

3. Reinstall the thermostat into the engine following service manual procedures.

NOTE: THE THERMOSTAT AIR BLEED MUST BE AT THE 12:00 O-CLOCK POSITION (FIGURE 5).

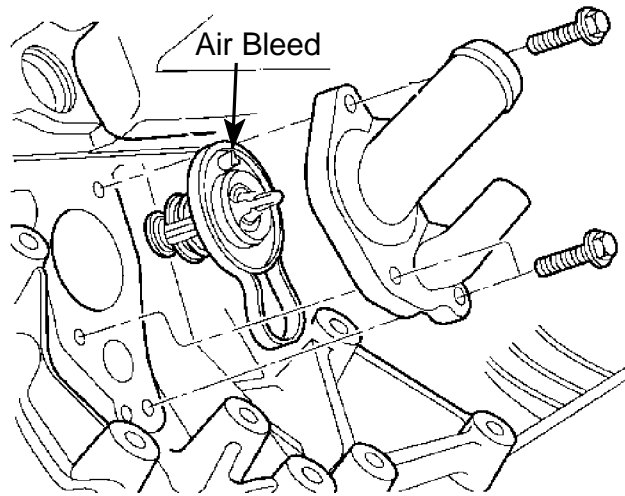


FIGURE 5

4. Identify the heater supply hose (Figure 6).

NOTE: THE VEHICLE MAY HAVE ONE OF TWO CONFIGURATIONS. CONFIGURATION WILL DETERMINE PARTS REQUIREMENT.

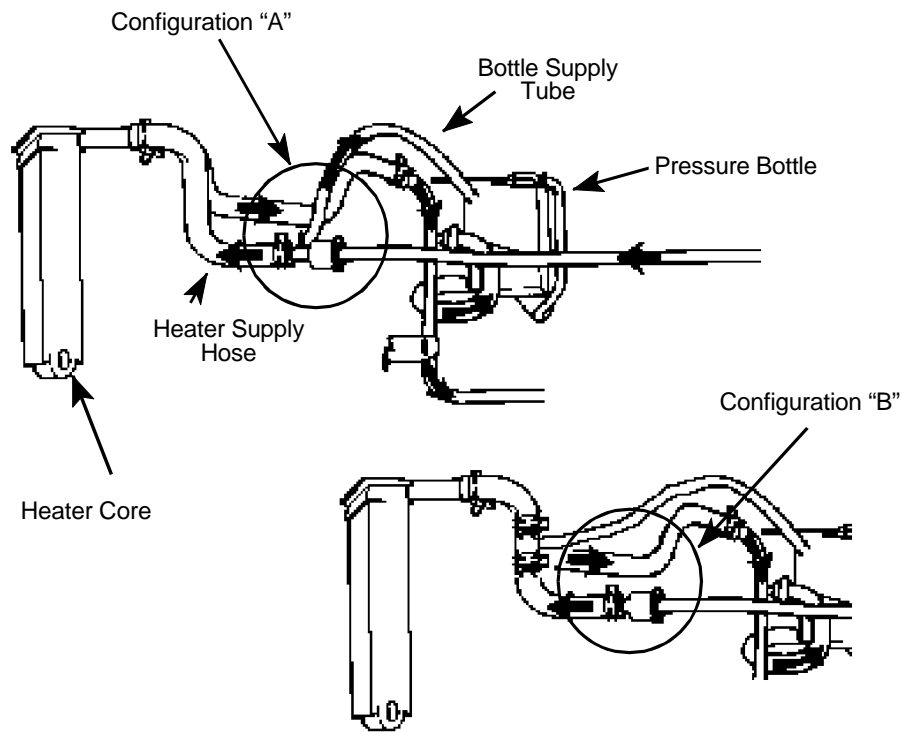


FIGURE 6

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5. If the heater supply hose is configured as shown in Figure 6 "A", obtain p/n's heater supply hose 04596346AA, heater supply hose 04767170AB, four hose clamps 06502018 and two hose clamps 04592126. If the heater supply hose is configured as shown in Figure 6 "B", obtain p/n's heater supply hose 04767170AB, four hose clamps 06502018 and two hose clamps 04592126.

6. For configuration "A", remove and discard the existing heater supply hose.

7. For configuration "A", remove the quick connector from heater supply hose p/n 04596346AA and install it onto the heater supply tube coming out of the back of the engine.

NOTE: ORIENT THE QUICK CONNECT SO THE HOLES FACE UP/DOWN AND THE FLATS FACE LEFT/RIGHT.

8. For configuration "B", leave the quick connect attached to the heater supply tube and remove and discard the rest of the supply hose assembly.

9. For both configurations, cut the new hose p/n 04767170AB as shown in Figure 7.

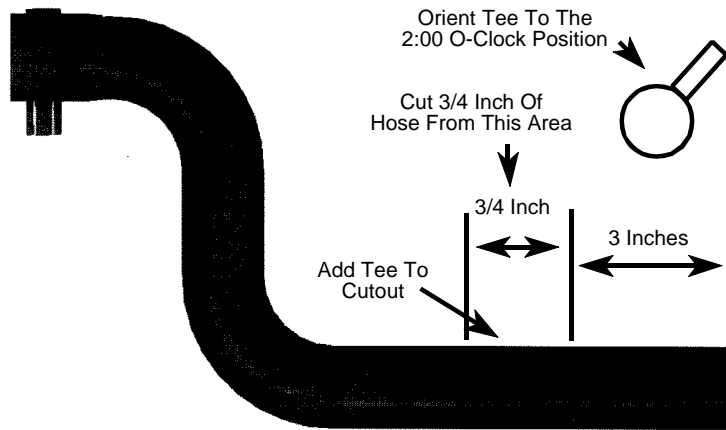


FIGURE 7

10. For both configurations, insert the Tee into the cut section of the heater hose. Use two hose clamps p/n 06502018 to complete the assembly. Before tightening the clamps, orient the Tee to the 2:00 O-Clock position as viewed from the front of the vehicle (Figure 7).
 11. Install one end of the 3/8 inch hose onto the Tee using hose clamp p/n 04592126.
 12. Install the heater hose onto the heater supply tube and heater core. Use clamps p/n 06502018 to secure both ends.
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13. Install the remaining end of the 3/8 inch hose to the coolant pressure bottle. Use clamp p/n 04592126. The final heater hose configuration is shown in Figure 8.

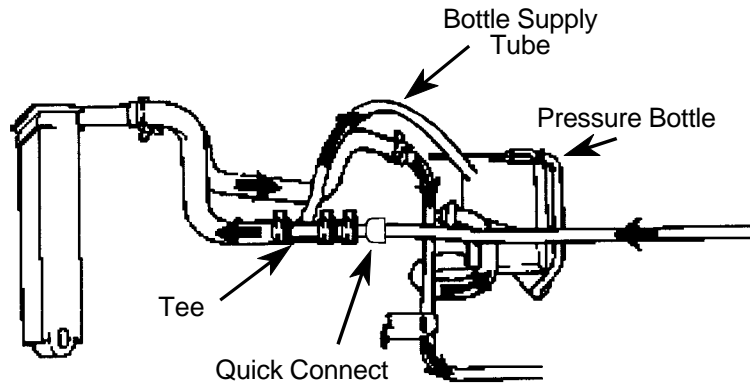


FIGURE 8

14. Use Mopar long life coolant p/n 05011764AB and follow all cooling system fill procedures listed in the service manual. It will take approximately 8.5 L (9 quarts) to refill the system.

NOTE: COOLING SYSTEM FILL PROCEDURES ARE CRITICAL TO OVERALL COOLING SYSTEM PERFORMANCE.

15. Operate the engine at 2000 to 2300 RPM for 20 minutes. This will remove any remaining air from the cooling system. The DRB III® can be used to set the engine RPM within engine actuators, RPM set. Periodic monitoring of this procedure is necessary since the actuator test will time out in 5 minutes. The reset feature can be used to continue the engine RPM actuator feature.

NOTE: DO NOT EXCEED 2500 RPM DURING THE AIR PURGE PROCEDURE.

POLICY: Reimbursable within the provisions of the warranty.

TIME ALLOWANCE:

Labor Operation No:	08-19-40-97 Reprogram, PCM	0.5 Hrs.
	14-50-01-90 Module, Fuel Pump Replace	0.8 Hrs.
	07-40-01-91 Thermostat, Modify 2.7L	1.6 Hrs.
	24-46-10-96 Heater Hose, Modify 2.7L	0.5 Hrs.

FAILURE CODE: FM - Flash Module XX - Service Adjustment