SB-10049422-7391

SI M17 10 12
Cooling Systems

October 2012
Technical Service

SUBJECT
Engine Cranks, No Start and/or Engine Coolant Temperature Faults

MODEL
All with the N18 engine

Produced from 3/2012 to 8/2012

SITUATION 1
The engine either exhibits a crank, no start or a hard start (long crank), usually on a cold engine. No faults may be stored in the DME.

SITUATION 2
The Service Engine Soon lamp is illuminated, with one or more of the following fault codes stored:

- 0x2943 coolant temperature sensor, signal change too fast
- 0x2937 coolant temperature sensor, electrical: short circuit to positive
- 0x2936 coolant temperature sensor, electrical: short circuit to earth
- 0x293A coolant temperature sensor, plausibility, cold start: temperature too high
- 0x2947 coolant temperature sensor, signal: fixed on low

CAUSE
Poor solder contacts in the engine coolant temperature sensor integrated into the engine thermostat housing

PROCEDURE 1
Fault codes are stored:

- Retrofit a remote engine temperature sensor.

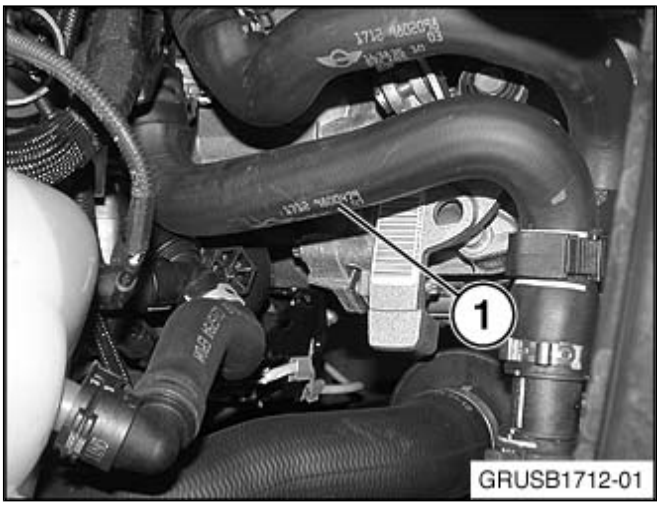
PROCEDURE 2
If no fault codes are stored:

- Read out the ambient air temperature and engine coolant temperature in the DME through Diagnostic Query.
- If the vehicle has been sitting overnight, these two temperatures should be within ± 2° C.
- If the engine coolant temperature is still showing an engine at operating temperature, the engine coolant temperature sensor has failed, retrofit a remote engine temperature sensor.

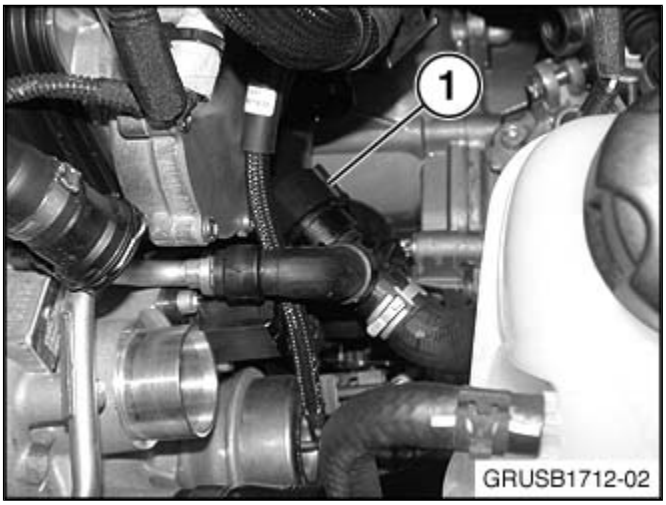
This procedure requires the replacement of the upper coolant hose with a modified hose that houses a

new engine temperature sensor. An adapter harness needs to be fitted to the car to utilize this new sensor.

Remove the fresh air intake tube and the intake tube from the air box to the turbo, to gain access to the coolant hose.

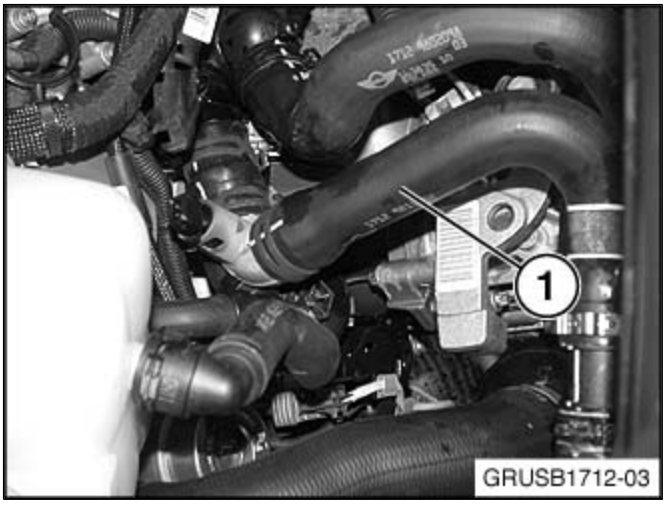


Remove the coolant hose (1). This hose will not be reused.

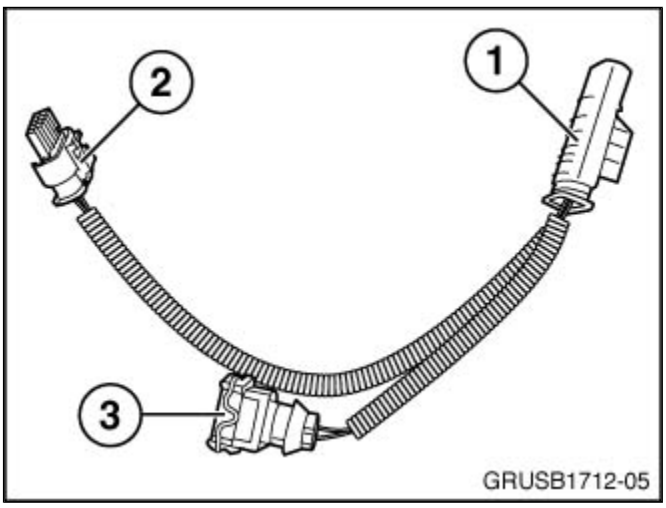


Install spacer P/N 64 53 7 578 707 (1) on the coolant line, as shown.
Note: The spacer needs to stay in this position when installing the new coolant hose (next step).

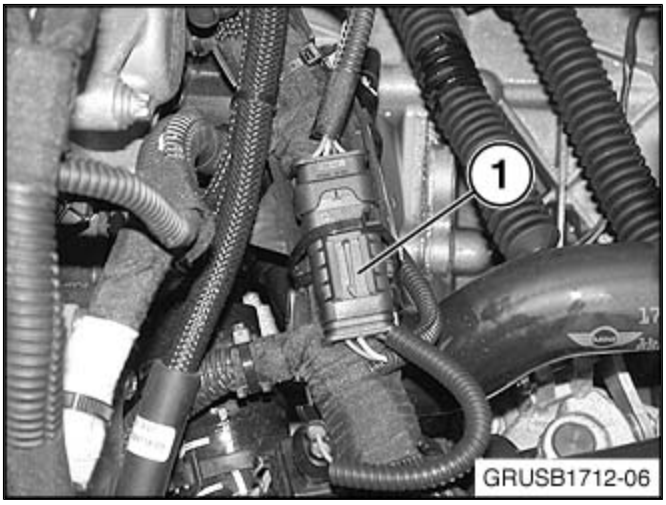
Install the new coolant hose with the engine coolant temperature sensor (1).
Note: Reference the Parts Information section for the correct hose, based on model.



Unplug connector X6279 from the engine thermostat (1).



Plug connector X6279 into the 4-pin male connector (1) of adapter harness P/N 12 51 7 647 200. Insert the 4-pin female connector (2) of the adapter harness into the engine thermostat. Plug the 2-pin female connector (3) from the adapter harness into the engine temperature sensor of the new coolant hose.



Secure the connector (1) to the engine wiring harness with a cable tie.

Reinstall the intake components and vent/refill the cooling system (Repair Instruction 17 00 039).

Note: This repair procedure involves draining a quantity of coolant to allow the replacement of the upper radiator hose; refill the drained quantity with new MINI Long-term Antifreeze/Coolant (50/50 mixture). Do not reuse the drained coolant.

PARTS INFORMATION

Part Number	Description	Quantity
17 12 7 647 004	Coolant hose (R5x w/manual transmission)	1
17 12 7 647 009	Coolant hose (R5x w/auto transmission)	1
17 12 9 811 352	Coolant hose (R60 w/auto transmission)	1
17 12 9 811 351	Coolant hose (R60 w/manual transmission)	1
12 51 7 647 200	Adapter cable	1
64 53 7 578 707	Spacer	1
61 13 1 367 599	Cable tie	1

WARRANTY INFORMATION

Covered under the terms of the MINI New Passenger Car Limited Warranty or the MINI NEXT Certified Pre-Owned Limited Warranty.

Defect Code:	**13 62 02 11 00**	
Labor Operation:	**Labor Allowance:**	**Description:**
00 00 006	Refer to KSD2	Performing “vehicle test” (with vehicle diagnosis system – checking faults)
and if necessary, also		
61 21 528	Refer to KSD2	Charging battery

and		
17 00 505	Refer to KSD2	Draining and filling coolant (as required to replace the upper radiator hose)
and		
11 53 770	Refer to KSD2	Replace coolant hose (between connecting piece/radiator at top and the thermostat)
and		
11 99 000	1 FRU	Work time to add and connect the adapter cable
and		
Sublet Code 4	See sublet reimbursement calculation below	Reimbursement for replacing the drained quantity of antifreeze/coolant (bulk container reference P/N 82 14 0 031 133, one gallon container. Do not use this part number for claim submission)

Labor operation code 00 00 006 is a Main labor operation. If you are using a Main labor code for another repair, use the Plus code labor operation 00 00 556 instead.

Refer to KSD2 for the corresponding flat rate unit (FRU) allowance. Enter the Chassis Number, which consists of the last 7 digits of the Vehicle Identification Number (VIN). Click on the “Search” button, and then enter the applicable flat rate labor operation in the FR code field

Sublet calculation: MINI antifreeze/coolant (bulk container reference P/N 82 14 0 031 133 only) -- partial refill/used quantity (50/50 mixture) at dealer net plus handling. Enter this material cost in sublet and itemize the amount in the claim comment section.