



TSB

Date: **September 29, 2006**
 No.: **987 revision 2**
 Supersedes: **TSB 987 rev. ,dated April 24, 2006**
 Group: **09.41**

Revision History

Revision	Date	Purpose
2	9/29/06	Warranty Information Updated, Op Code 54 – 1012 Removed
1	4/24/06	Parts Information Updated
-	1/27/06	Initial issue

SUBJECT: Model 170.466
Model 203.065
Model 211.076/276
Model 215.374/376/379
Model 219.376
Model 220.174/176/179
Model 230.474/476/479
Model 463.271

Check Engine Light On, Low Engine Output (charge air cooling)

If you receive customer reports in the above model vehicles of the check engine light being on and/or the engine has poor output, this may be due to the circulation pump for low temperature circuit (charge air cooler) being nonfunctional.
 Possible fault codes are listed below.

Control Unit	Fault Code	Fault Text
ME-SFI 2.7.1	P20E1	Charge air coolant circuit: Charge air temperature is too high
ME-SFI 2.7.1	P2002	M44 (charge air cooler circulation pump)
ME-SFI 2.8	P2027	Intake air temperature too high/Check coolant pump & additional radiator.
ME-SFI 2.8	P2006 (002)	B17/8 (Charge air temperature sensor): Short circuit to positive or open Circuit; or B2/5b1 (Intake air temperature sensor): Short circuit to positive or Open circuit.

The following are possible causes for the malfunction of the circulation pump:

1. Carbon brush is worn due to the effects of vibration and/or its switching cycles.
2. Water ingress in the pump housing.
3. Deposits of ingredients from the coolant in the pump chamber.
4. Magnetic clutch broken.

To resolve, perform the below remedy.

1. Check fuse for circulation pump controller according to model series. Replace fuse if necessary.
2. Check circulation pump (component M44) via DAS in the general listing of guided tests. Replace the circulation pump if the diagnosis results show replacement is necessary.

i Note: It is imperative to bleed the system to complete the circulation pump replacement. Improved pump, part number **A000 500 03 86**, replaces part number **A000 550 48 83**. Old parts must not be re-used.

Parts Information

Qty.	Part Name	Part Number
1	Circulation Pump	A000 500 03 86

i Note: The following allowable labour operations should be used when submitting a warranty claim for this repair.

In Case of Warranty

Operation: Short test, perform (54-1011)
 Fuse – specify location, replace (54-1286)
 Engine compartment panel, bottom – front part, R&R (61-1071)
 Engine compartment panels – bottom front, R&R (61-1077)
 Engine compartment panel, bottom – one piece version, R&R (61-1105)
 Circulation pump – low temperature water circuit, R&R/replace (09-6925)

Damage Code	Operation Number	Time (hrs.)	Model Indicator (s)
50324 52	54 1011	0.3 hrs.	G4, M8, M9, J3, N4, N5, N6, P3, R2, R3, R4, T3, U5, Y2, L3
	54 1286	0.1 hrs.	G4, M8, M9, J3, N4, N5, N6, P3, R2, R3, R4, T3, U5, Y2, L3
	61 1071	0.2 hrs.	Y2
		0.3 hrs.	P3
		0.4 hrs.	T3, U5
		0.5 hrs.	M8, M9, J3, N4, N5, N6
	61 1077	0.3 hrs.	R2, R3, R4
	61 1105	0.2 hrs.	G4
	09 6925	0.8 hrs.	T3, U5, Y2, L3
		0.9 hrs.	M9, N5
		1.0 hrs.	G4, P3
		1.1 hrs.	R2
		1.3 hrs.	M8, J3, N4
		1.4 hrs.	N6
		2.8 hrs.	R3, R4

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