# #10-06-02-001: Engine Over Heat/Poor Heater Performance (Install Two Valve in Cooling System) - (Feb 4, 2010)



Subject: Engine Over Heat/Poor Heater Performance (Install Two Valves in Cooling System)

Models: 2007-2009 Pontiac Solstice GXP 2007-2009 Saturn SKY Redline 2007-2009 Opel GT 2007-2009 Daewoo G2X All Equipped With RPO LNF

# **Condition**

Some customers may comment that the engine over heat warning lamp is on and/or that there is poor heat from the HVAC system.

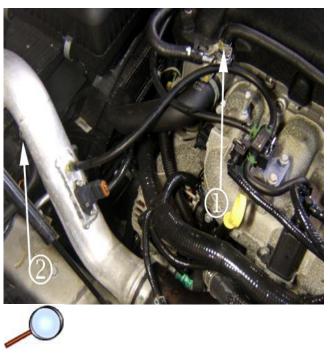
### <u>Cause</u>

This condition may be due to excess air in the cooling system which results in an air pocket in the heater core.

### **Correction**

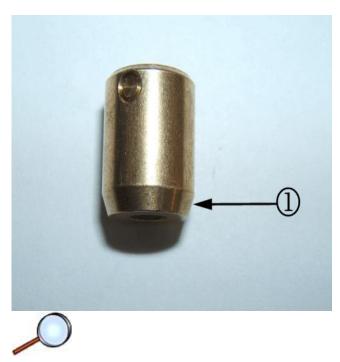
1. Verify the engine is operating above normal operating temperature and/or that there is poor heat from the HVAC system.

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- 2. With a cold cooling system, lower the coolant level enough that when removing the coolant return hoses from the cylinder head and radiator return ports coolant will NOT leak on to the ground or on surrounding components. Prior to removing the hoses, place shop towels around the bottom of the ports to absorb any lost coolant.
- 3. Remove the coolant return hose from the engine port. Carefully remove the clamp from the hose and set aside the clamp will be reused in the final step of installing the hose.





- 4. Using a non-silicon based tire lubricant, lightly coat the check valve (P/N 20876185) and insert it in to the engine return hose (1) 15 mm (0.5 in) in the hose with the tapered end pointing toward the nipple that is on the engine (1).
- 5. Press the hose on to the nipple and seat the hose to the base of the fitting (1). This will push the check valve further in to the hose, resulting in a slight bulge in the hose in the middle of the bend. The valve should not be pushed in the hose to the point that it is in the horizontal position. A check valve in the horizontal position will not function properly.
- 6. Remove the hose. Install the hose clamp on the hose and reinstall the hose.



**Important:** The tapered end of the check valve must face the nipple on the radiator. A check valve in the horizontal position will not function properly.

7. Remove the coolant return hose from the radiator. Carefully remove the clamp from the hose and set aside – the clamp will be reused in the final step of installing the hose.

Notice When performing the next step it is important that you press on the line in a straight motion. Excessive side load may result in a broken radiator nipple.

- 8. Using a non-silicon based tire lubricant, lightly coat the check valve (P/N 20876185) and insert it in to the radiator hose return line 15 mm (0.5 in) in the hose with the tapered end pointing toward the radiator nipple. Press the hose on to the nipple and seat the hose to the base of the fitting. This will push the check valve further in to the hose resulting in a slight bulge in the hose.
- 9. Remove the hose. Install the hose clamp on the hose and reinstall the hose on the radiator return.
- 10. Add coolant to the "Full Cold" line of the bottle. To purge any air from the system, use the vac-n-fill process per SI.
- 11. Inspect the cooling system for leaks.
- 12. Rinse away any excess coolant from the engine and the engine compartment.

# Parts Information

Part Number	Description	Qty
20876185	Check Valve	2

### Warranty Information

For vehicles repaired under warranty, use

Labor Operation	Description	Labor Time	
J7615*	Install Two Valve in Cooling System	0.8 hr	
*This is a unique labor operation for bulletin use only. It will not be published in the Labor Time Guide			

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