



VOLUME

3

GROUP  
Engine

NUMBER  
015 (Revised)

MODEL  
Amanti, Sorento,  
Sedona

DATE  
January 2004

## Technical Service Bulletin

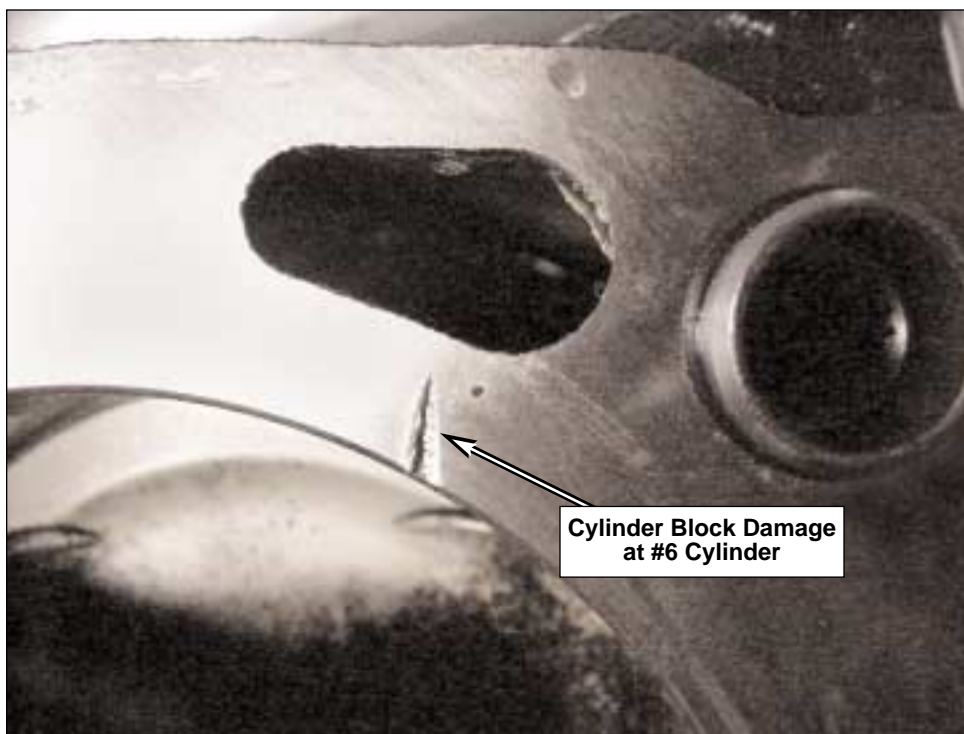
**SUBJECT**

### 3.5L Sigma Engine Cylinder Block Damage

This bulletin provides information about possible cylinder block damage on certain 3.5L Sigma engines. A small number of the Sorento, Sedona and Amanti vehicles built between 10/27/03 and 11/24/03 may experience a head gasket leak as a result of damage to the block near cylinder #6. The head gasket leak may result in one or more of the following symptoms:

- Poor running or hard start
- Excessive white smoke and/or coolant smell from exhaust
- Misfire DTC

Use the procedure on the following pages to test for cylinder head gasket leak.



**File Under: Engine**

**Circulate To:**  General Manager  Service Manager  Parts Manager  
 Service Advisor(s)  Technician(s)  Body Shop Manager

**SUBJECT:**

**3.5L Sigma Engine Cylinder Block Damage**

**INSPECTION PROCEDURE:**

1. Engine must be cool before removing radiator cap.



**WARNING**

**Radiator coolant may be extremely hot, never remove radiator cap on a hot engine. Allow the engine to cool.**

2. Open hood of vehicle and remove radiator cap.
3. Add coolant, if necessary to bring level to bottom of filler neck.
4. Start engine and allow to idle until coolant circulates and radiator fan cycles on, while watching for bubbles at filler neck.

**Note: Engine must be at operating temperature.**

**Time required will vary with ambient temperature.**

5. If no bubbles or a few intermittent bubbles are noted after the radiator fan cycles 2 times, NO FURTHER ACTION IS REQUIRED. If vigorous, continuous bubbles are noted, proceed to REPAIR PROCEDURE.



Note: For clarification see internet video link on KSIS by typing in the following internet address:

Defective Click Here:

<http://archpartner.aqueduct.com/resource/203/attachment/bubbles%20-%20defective%20engine.mpg>

Normal: Click Here:

<http://archpartner.aqueduct.com/resource/203/attachment/bubbles%20-%20normal%20engine.mpg>

To view the video, you will need to have QuickTime software loaded onto your computer. To load QuickTime, go to the following address: <http://www.apple.com/quicktime/download/>

**SUBJECT:****3.5L Sigma Engine Cylinder Block Damage**

**Note: To confirm combustion gas leak into the cooling system, recheck with fluid type block tester (combustion leak test).**

Block tester available as:

Snap-On GDCT16

Napa BK. 700-1006

6. With radiator cap still off, drain or siphon fluid down to the bottom of filler neck.
7. Add test fluid to tester and perform test according to instructions for your equipment.
8. If fluid turns yellow, go to REPAIR PROCEDURE.  
If fluid stays blue, NO FURTHER ACTION IS REQUIRED.

9. Clean up any spilled coolant with water, install radiator cap.

**REPAIR PROCEDURE:**

1. **Contact your District Parts and Service Manager for a new engine sub-assembly, and install according to instructions in the Service Manual.**

**Prior Work Authorization (PWA) required**

2. After replacing the engine sub-assembly, using the Hi-Scan Pro, check for set or pending DTCs, and clear as necessary.

**SUBJECT:****3.5L Sigma Engine Cylinder Block Damage****AFFECTED PRODUCTION RANGE:**

2004 Amanti, Sorento and Sedona vehicles with production dates from 10/27/03 through 11/24/03.

**WARRANTY CLAIM INFORMATION:**

Claim Type	Causal P/N	Qty.	Nature Code	Cause Code	Repair Description	Labor OP Code	Time	Related Parts	Qty.
R	Use Applicable Causal P/N Listed Below	0	N88	C03	Inspection of Amanti, Sorento, Sedona	04P002I0	0.3	N/A	N/A
R	21101 39C02	1	N88	C03	Amanti Inspection & Replacement (Includes A/C)	04P002R1	15.0	N/A	N/A
R	21101 39E00	1	N88	C03	Sorento Inspection & Replacement (Includes A/C & M/T)	04P002R4	6.3	N/A	N/A
R	21101 39E00	1	N88	C03	Sorento Inspection & Replacement (Includes A/C & A/T)	04P002R5	6.8	N/A	N/A
R	21101 39B00	1	N88	C03	Sedona Inspection & Replacement (Includes A/C & A/T)	04P002R9	7.2	N/A	N/A

Note: Re: fluid cost reimbursement - use sublet code x1 for \$1.00.

**Note: All engine assemblies replaced for this condition are subject to inspection by KMA or subject to return upon request.**