

**VOLUME****3**GROUP
EngineNUMBER
010MODEL
SedonaDATE
May 2003

Technical Service Bulletin

SUBJECT**Sedona Charging System**

This bulletin provides information related to charging system changes in 2003MY Sedona models to improve alternator output during high ambient temperature severe operating conditions.

Some 2002 and 2003MY Sedona models built before 2/28/03 production may experience battery discharge when operated in high ambient temperatures for extended periods of time at low speeds or at idle with A/C, headlamps and other accessories on. Typically this results in customers reporting an inability to restart vehicle. To reduce incidence of battery discharge complaints, the following changes were made from 2/28/03 production:

- Battery heat cover added
- New alternator with smaller pulley (65mm -> 55mm)
- ECM battery compensation revised.

For 2002 and 2003MY Sedona complaint vehicles produced before 2/28/03, the revised parts and logic software have been made available for use as a field fix.

Refer to the field fix procedures outlined in the following pages.



Old

New

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

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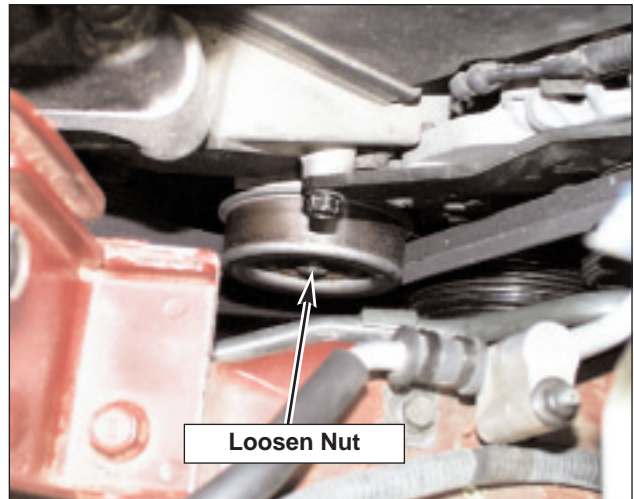
BATTERY TEST:

Test battery using Micro 570 Tester, refer to TSB, SST 002 for instructions.

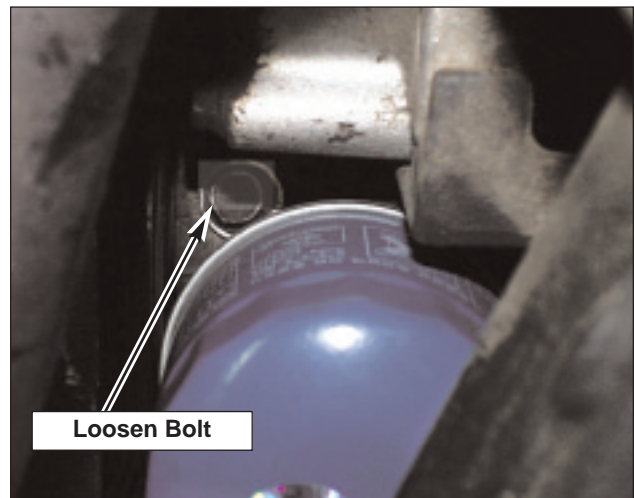


ALTERNATOR INSTALLATION PROCEDURE:

1. Disconnect battery negative cable.
2. Loosen nut on drive belt tensioner pulley.

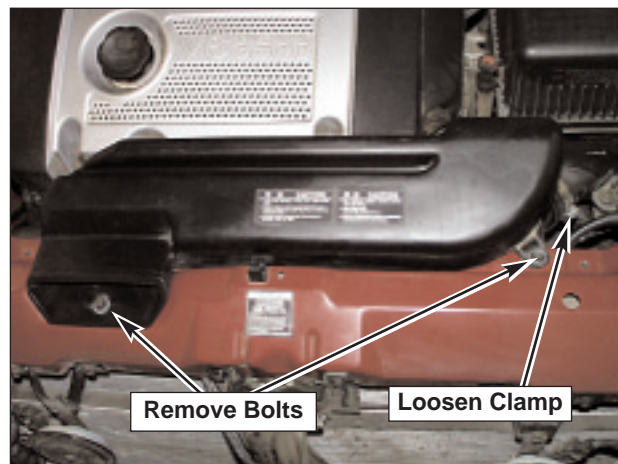


3. From under vehicle, loosen belt tensioning bolt.



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4. Remove drive belt.
5. Loosen clamp securing fresh air duct to air cleaner housing.
6. Remove two bolts securing fresh air duct to upper radiator support and remove fresh air duct.



7. Detach wire harness retainers from upper radiator support.



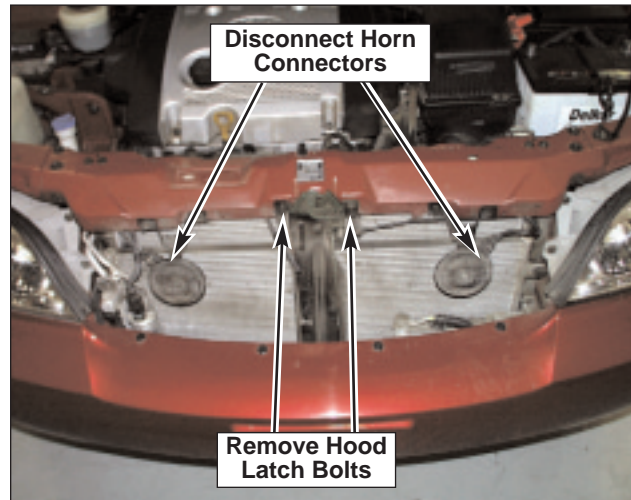
8. Detach hood release cable retainer from upper radiator support.



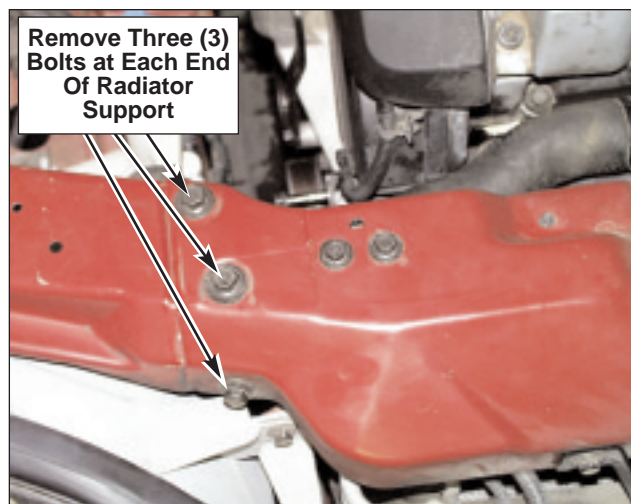
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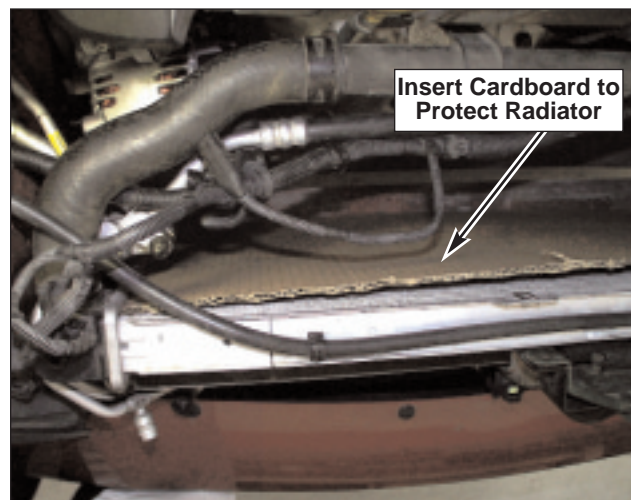
- 9. Remove two bolts securing hood latch to upper radiator support.
- 10. Disconnect both horn electrical connectors.



- 11. Remove three bolts from each end of upper radiator support, remove support.



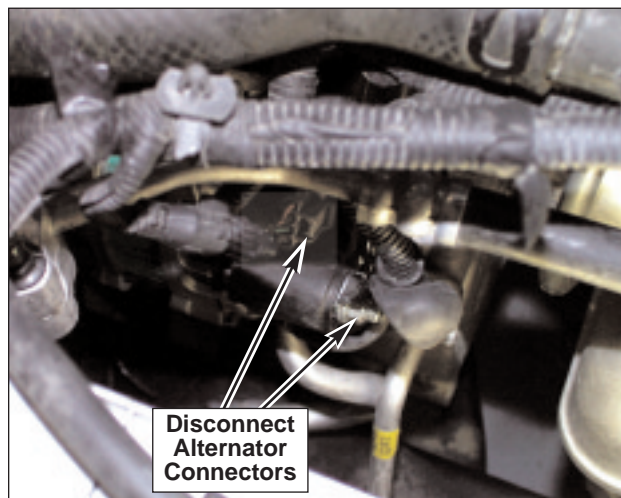
- 12. Disconnect electrical connectors from both engine cooling fans.
- 13. Remove bolts securing cooling fans, remove both engine cooling fans, (left one first).
- 14. Insert a piece of cardboard behind radiator to protect radiator fins when removing alternator.



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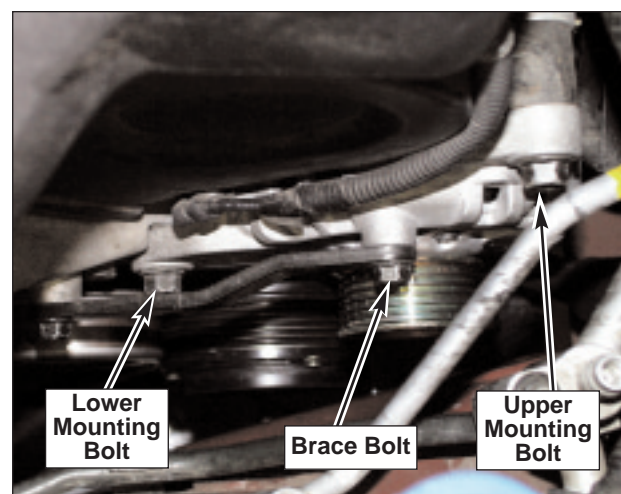
15. Disconnect electrical connections at back of alternator.



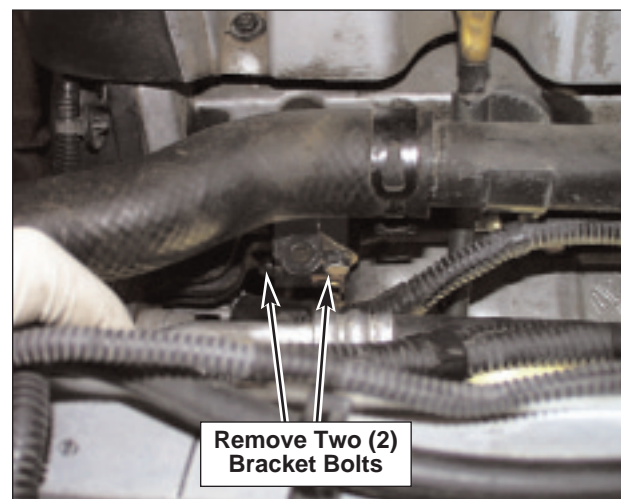
16. Remove alternator brace bolt and lower mounting bolt from alternator.

Note: Lower mounting bolt will interfere with body before clearing alternator. Remove bolt with alternator.

17. Loosen but do not remove upper mounting bolt.



18. Remove two bolts securing upper alternator bracket to engine.



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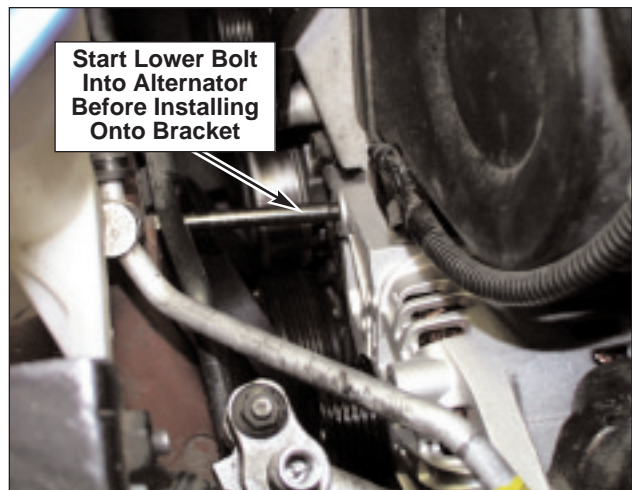
19. Slide alternator straight up until it clears lower mount, remove lower mounting bolt and remove alternator from vehicle.

Note: If lower mounting bolt will not clear threads in mounting bracket, it may be necessary to loosen bolt at engine mount and pry engine rearward on engine.

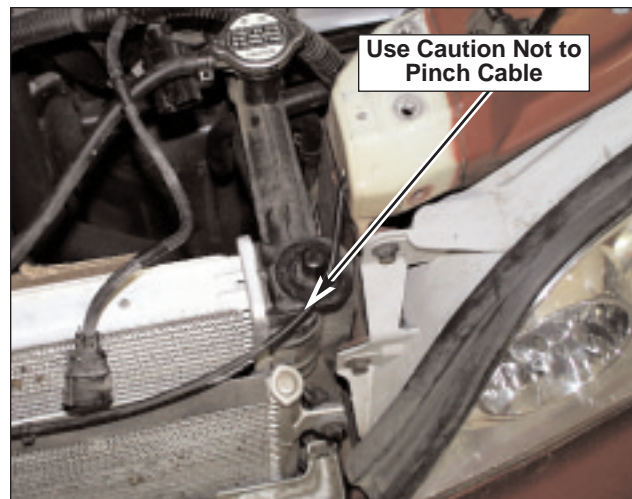
20. Transfer upper alternator bracket to new alternator, leave bolt loose.



21. Install alternator into place. Start lower mounting bolt before installing alternator onto lower mounting bracket.



22. Install upper alternator bracket bolts, brace bolt and torque all alternator mounting bolts.
23. Install new drive belt and adjust tension.
24. Reconnect alternator electrical connections.
25. Reinstall engine cooling fans in reverse order of removal.
26. Reinstall upper radiator support, using caution not to pinch hood release cable at left radiator mount.



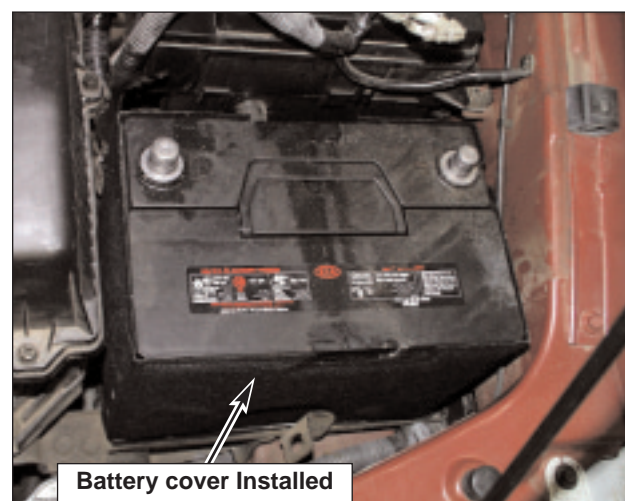
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27. Reattach harness retaining clips and hood release cable retainer to upper radiator support.
28. Reinstall bolts securing hood latch to upper radiator support.
29. Reconnect horn connectors.
30. Reinstall fresh air duct.
31.
 - If vehicle has OEM battery, continue on to Battery Cover Installation below.
 - If vehicle has a replacement battery, reconnect negative battery cable and continue on to ECM Reprogram Procedure on Page 8.

BATTERY COVER INSTALLATION:*** NOTICE**

Battery cover will only fit OEM battery.

1. Disconnect both battery cables.
2. Loosen 'J' bolts and remove battery hold-down.
3. Slide battery cover down over battery.
4. Reinstall hold-down and reconnect battery cables.



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ECM REPROGRAMMING PROCEDURE:

1. Remove program card from the upper slot of the Hi-Scan Pro and insert the reprogramming card.
2. Connect reprogramming adapter to Hi-Scan Pro.
3. Connect DLC adapter to reprogramming adapter cable.
4. Connect power supply adapter to Hi-Scan Pro.
5. Connect reprogramming adapter power supply cable to Hi-Scan Pro power supply adapter.
6. Connect power supply adapter to vehicle battery.
7. Connect Hi-Scan Pro to under hood DLC located near vehicle battery.




*** NOTICE**

Any interruptions will prevent proper reprogramming. Make sure connectors are securely and completely inserted. Leave ignition key in the "ON" position during reprogramming.

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8. Turn ignition key to the "ON" position.
9. Turn Hi-Scan Pro on and select "14. SEDONA 3.5D 02/03MY BATTERY DRAIN" and press the "ENTER" key.

| ITEM SELECTION  |
|--|
| 09.SPECTRA 1.8D START ABILITY |
| 10.OPTIMA 2.5/2.7 BATTERY |
| 11.OPTIMA 2.4 01/02MY BATTERY DRAIN |
| 12.OPTIMA 2.4 03MY BATTERY DRAIN |
| 13.SEDONA ABS REPROGRAMMING |
| 14.SEDONA 3.5D 02/03MY BATTERY DRAIN |
| 15.SOFTWARE DOWNLOAD |
| F1 : CARD INFORMATION |

10. Select "01. SEDONA 02/03MY BATT. DRAIN [AUTO]" and press the "ENTER" key.

| SEDONA RE-PROGRAMMING |
|--------------------------------------|
| 01.SEDONA 02/03MY BATT.DRAIN [AUTO] |
| 02.SEDONA 02/03MY BATT.DRAIN [ERROR] |

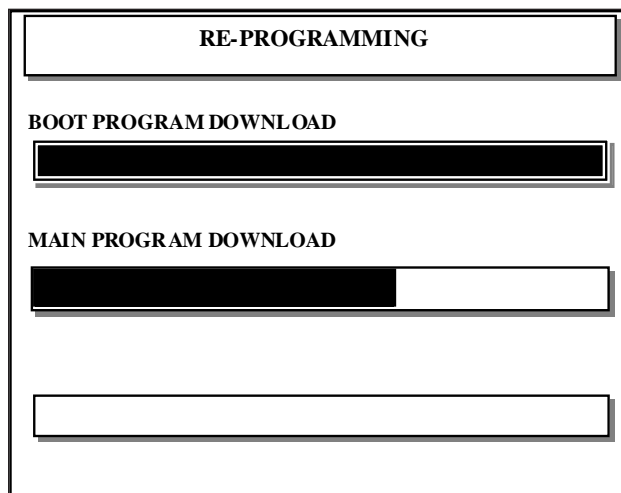
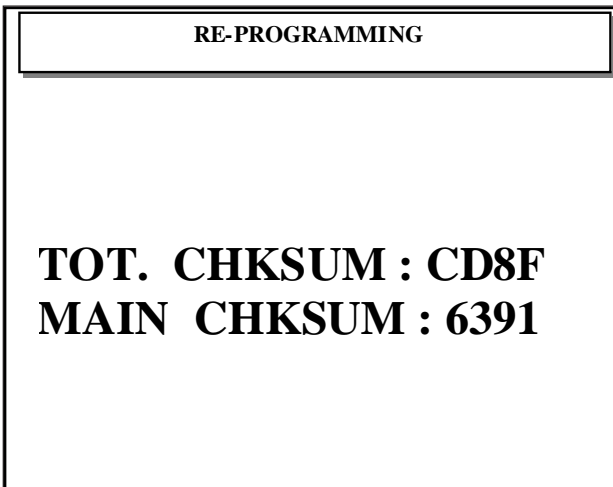
11. At the prompt, enter your password "0525" and press the "ENTER" key.

| SEDONA RE-PROGRAMMING | |
|---|----------------------------|
| 01.SEDONA 02/03MY BATT.DRAIN [AUTO] | |
| 02.SEDONA 02/03MY BATT.DRAIN [ERROR] | |
| <table border="1" style="margin: 10px auto;"> <tr> <td>ENTER YOUR PASSWORD : 0525</td> </tr> </table> | ENTER YOUR PASSWORD : 0525 |
| ENTER YOUR PASSWORD : 0525 | |

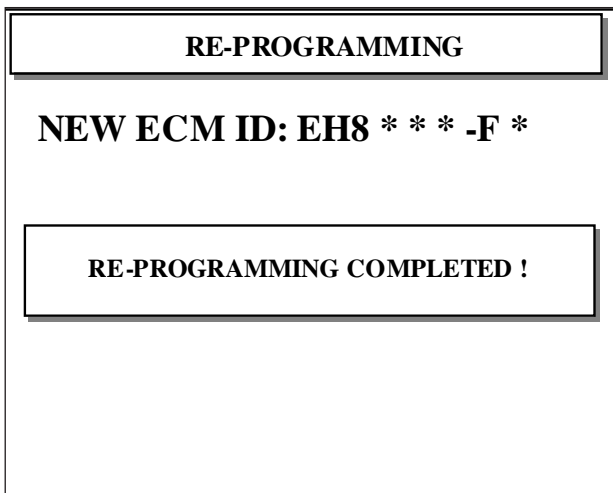
SUBJECT:

Sedona Charging System

12. Reprogramming will proceed as shown.



13. When "REPROGRAMMING COMPLETED" message is displayed, turn ignition key to the "OFF" position and disconnect Hi-Scan Pro from the vehicle. Wait at least 20 seconds, start vehicle and verify normal operation.



*** NOTICE**

If reprogramming did not complete properly or was interrupted, repeat the process using the following procedure.

SUBJECT:

Sedona Charging System**MANUAL REPROGRAMMING
PROCEDURE:**

1. Turn ignition key to the "ON" position.
2. Turn Hi-Scan Pro on and select "14. SEDONA 3.5D 02/03MY BATTERY DRAIN" and press the "ENTER" key.
3. Select "02. SEDONA 02/03MY BATT.DRAIN [ERROR]" and press the "ENTER" key.
4. Select vehicle model year from the list and press the "ENTER" key.

ITEM SELECTION

- 09.SPECTRA 1.8D START ABILITY
- 10.OPTIMA 2.5/2.7 BATTERY
- 11.OPTIMA 2.4 01/02MY BATTERY DRAIN
- 12.OPTIMA 2.4 03MY BATTERY DRAIN
- 13.SEDONA ABS REPROGRAMMING
- 14.SEDONA 3.5D 02/03MY BATTERY DRAIN**
- 15.SOFTWARE DOWNLOAD

F1 : CARD INFORMATION

SEDONA RE-PROGRAMMING

- 01.SEDONA 02/03MY BATT.DRAIN [AUTO]
- 02.SEDONA 02/03MY BATT.DRAIN [ERROR]**

SEDONA RE-PROGRAMMING

- 01.02MY BATTERY DRAIN : 39110-39600**
- 02.03MY BATTERY DRAIN : 39110-39650**

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5. At the prompt, enter your password from the password table and press the "ENTER" key.

| <Password> | | |
|------------|---|------|
| 02MY | : | 9600 |
| 03MY | : | 9650 |

Password Table

SEDONA RE-PROGRAMMING

01.02MY BATTERY DRAIN : 39110-39600

02.03MY BATTERY DRAIN : 39110-39650

ENTER YOUR PASSWORD : - - - -

6. Manual reprogramming will proceed as shown.

RE-PROGRAMMING

TOT. CHKSUM : CD8F

MAIN CHKSUM : 6391

RE-PROGRAMMING

BOOT PROGRAM DOWNLOAD

MAIN PROGRAM DOWNLOAD

SUBJECT:**Sedona Charging System**

7. When "REPROGRAMMING COMPLETED" message is displayed, turn ignition key to the "OFF" position and disconnect Hi-Scan Pro from the vehicle. Wait at least 20 seconds, start vehicle and verify normal operation.

RE-PROGRAMMING**NEW ECM ID: EH8 * * * -F *****RE-PROGRAMMING COMPLETED !****ROM ID TABLE:**

| Model Year | PCM P/N | Previous ROM ID | New ROM ID |
|------------|-------------|----------------------|------------|
| '02MY | 39110 39600 | EH8105-F0 through F6 | EH8105-F7 |
| '03MY | 39106 39650 | EH8487-F0 through F2 | EH8487-F3 |

AFFECTED PRODUCTION RANGE:

2002 and 2003 Sedona models produced before 2/28/03.

PART NUMBER INFORMATION:

| Description | Previous P/N | New P/N |
|--------------------|----------------------|---------------|
| Alternator | 37300 39600 | 37300 39435R |
| Alternator Belt | 1K52Y 15 909A | 1K52Y 15 909B |
| Battery Heat Cover | N/A | 0K52Y 18 590 |

WARRANTY CLAIM INFORMATION:

| Claim Type | Causal P/N | Qty. | Cond. Code | Cause Code | Repair Description | Labor OP Code | Time | Related Parts | Qty. |
|------------|-------------|------|------------|------------|---------------------|---------------|------|---|------|
| W | 37300 39600 | 0 | N61 | C99 | Charging System F/F | 37300A0F | 2.4 | 37300 39435R 1K52Y 15 909B 0K52Y 18 590 | 1 |

Revision in Bold