



GROUP
Campaign

MODEL
2003-05 Sorento with
3.5L Sigma Engine

NUMBER
073

DATE
May 2008

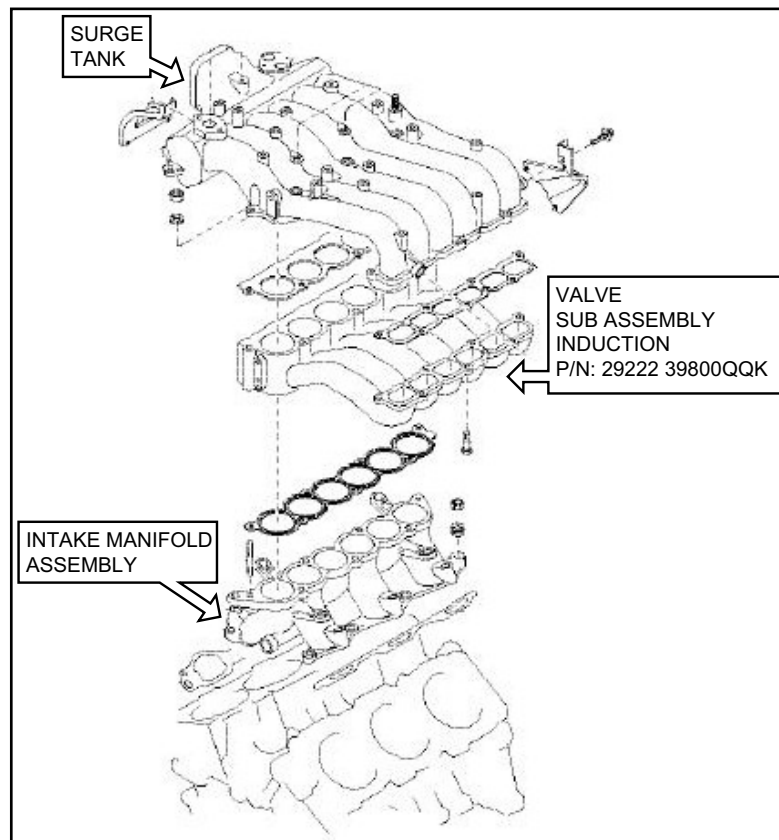
CAMPAIGN TECHNICAL SERVICE BULLETIN

SUBJECT:

SORENTO ICV REPLACEMENT

This Service Campaign provides information related to replacing the Induction Control Valve Sub Assembly (ICV). Some 2003~2005 MY Sorento's equipped with a 3.5L engine may exhibit engine noise or rattle type noise if the anti-rattle clip / throttle screws or two piece bushing become loose and get ingested into the engine assembly. **Vehicles that were previously repaired with the improved version part will be excluded from this service campaign.**

To correct this condition, Kia has outlined a service procedure to replace the induction control valve (ICV) with an improved version to prevent possible future engine damage. Changes and improvements were made on the throttle plate shaft bushing and sealing O-rings. Use **ONLY** the following part number (29222 39800QQK) to service the vehicle under this service campaign.



File Under: Service Campaign

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

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SORENTO ICV REPLACEMENT

Inspection Procedure:

Open hood and check for SC073 Campaign completion label on the panel above the under hood fuse box. If label exists, NO FURTHER ACTION IS REQUIRED.

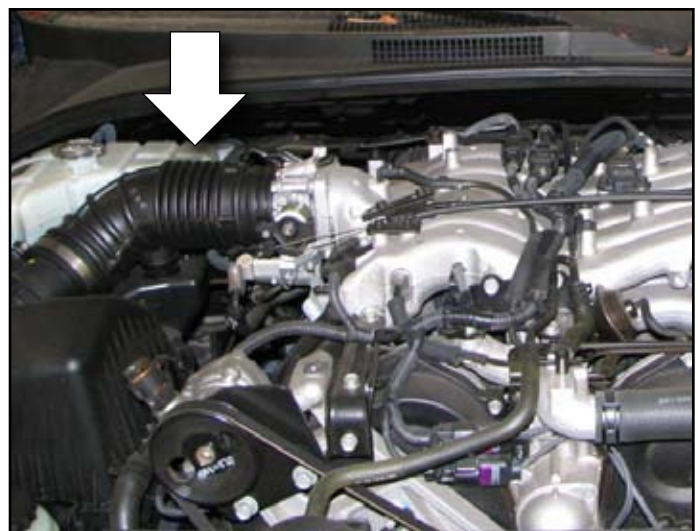
If label does not exist, continue to step 1.



1. Record the radio presets, open the hood and disconnect the negative battery cable.



2. Remove the engine cover as shown and remove the air intake hose to the throttle body.

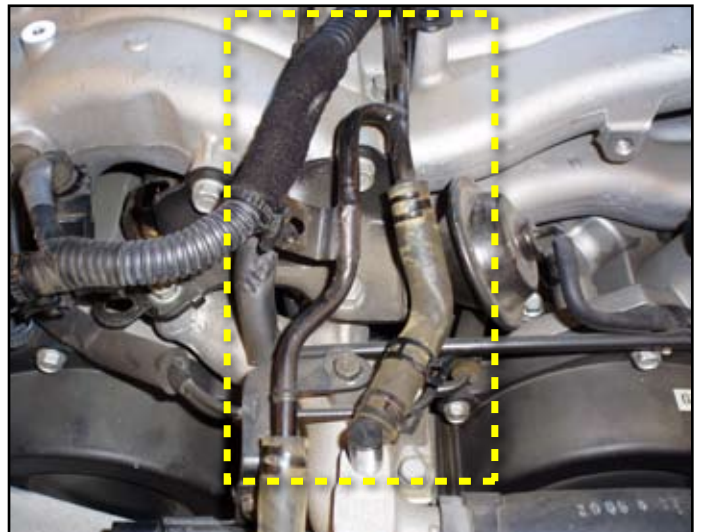


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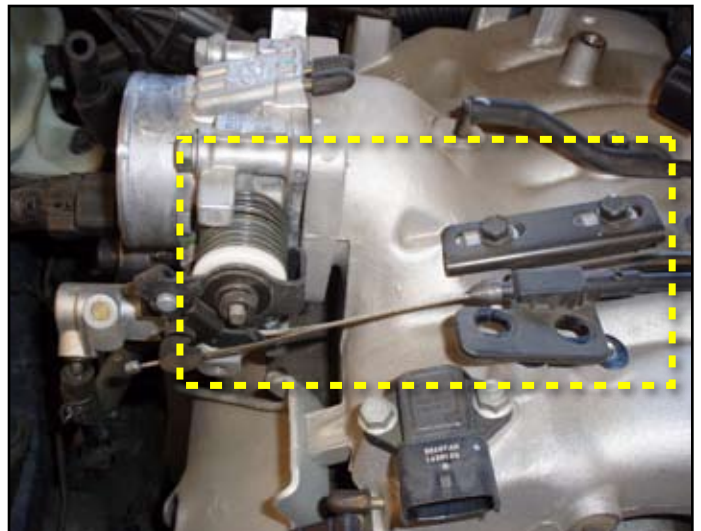
3. Disconnect the electrical connectors from the intake manifold assembly and throttle body and reposition to allow manifold removal.
 - a) Partially drain cooling system.



4. Remove and re-position the steel coolant transfer line.



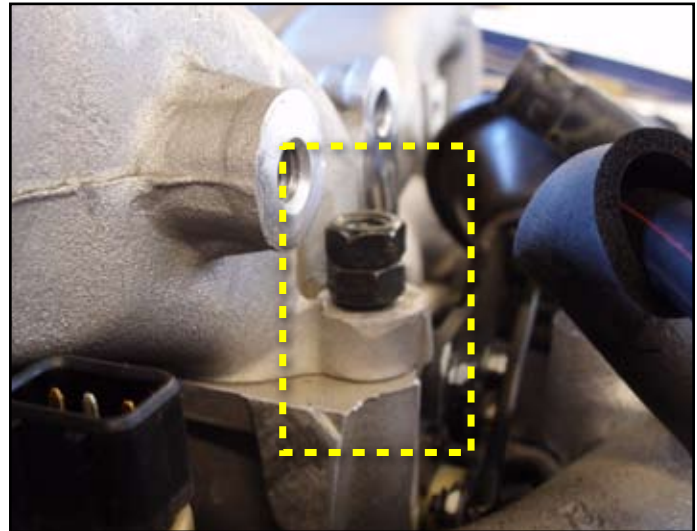
5. Disconnect the accelerator and cruise control cables from the throttle body and intake manifold.
 - a) Disconnect coolant hoses at the bottom of the throttle body.



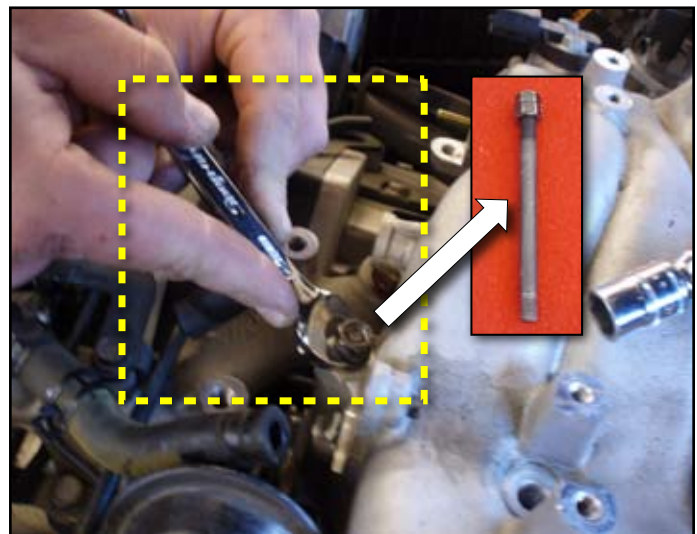
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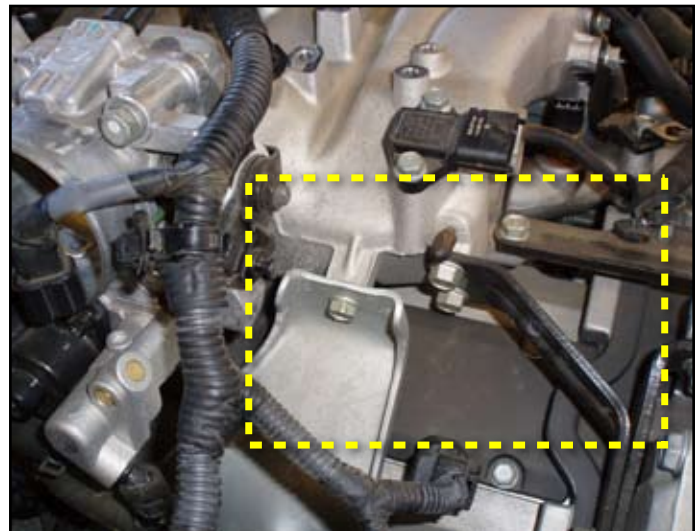
6. Remove the front and rear intake manifold assembly retaining nuts and washers.
 - a) Install the nuts and tighten together as shown in photo.



7. Use the jam-nuts to remove the front and rear stud from the Surge Tank assembly to the lower intake manifold.

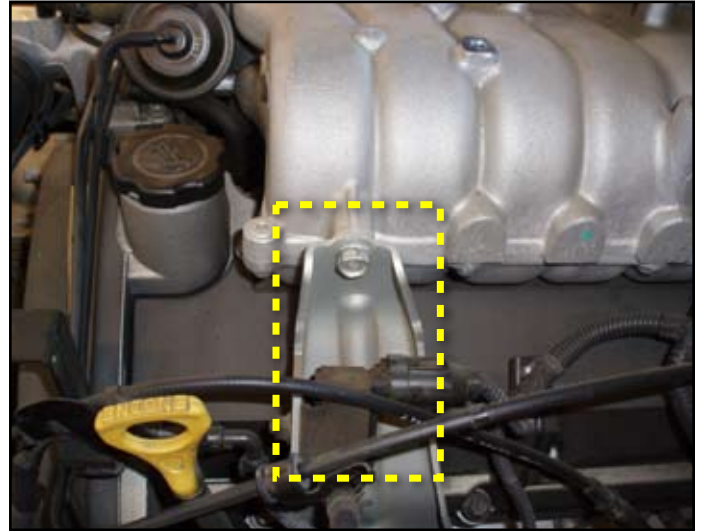


8. Loosen the retaining bolts on the stay brackets and remove the upper bolts from the bracket only. Removing the RH stay brackets is not necessary.

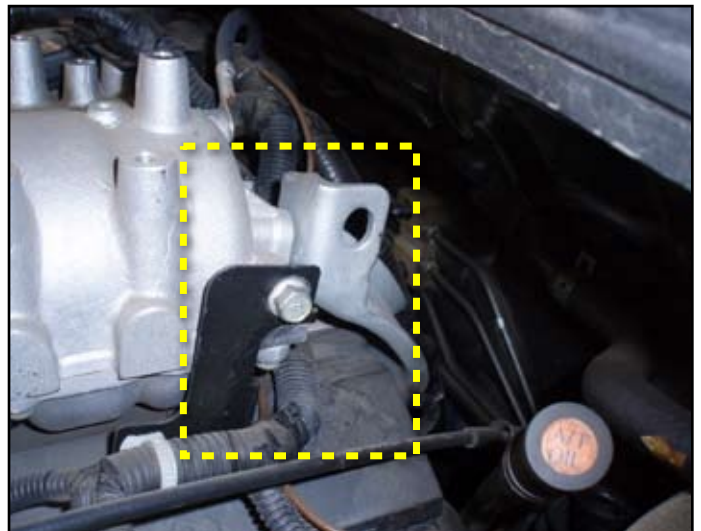


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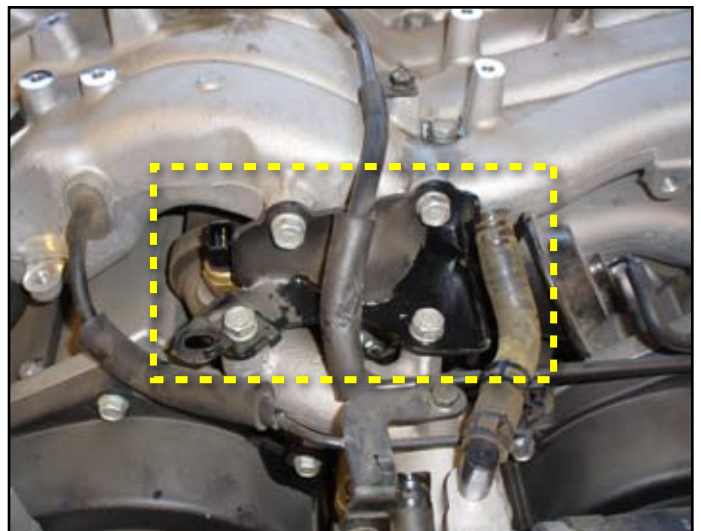
9. Remove bolt for L/F corner stay bracket to Surge Tank and loosen the lower retaining bolts.



10. Remove bolt for L/R stay bracket and wiring harness retainer.
- a) Disconnect the negative ground cable from the manifold assembly.



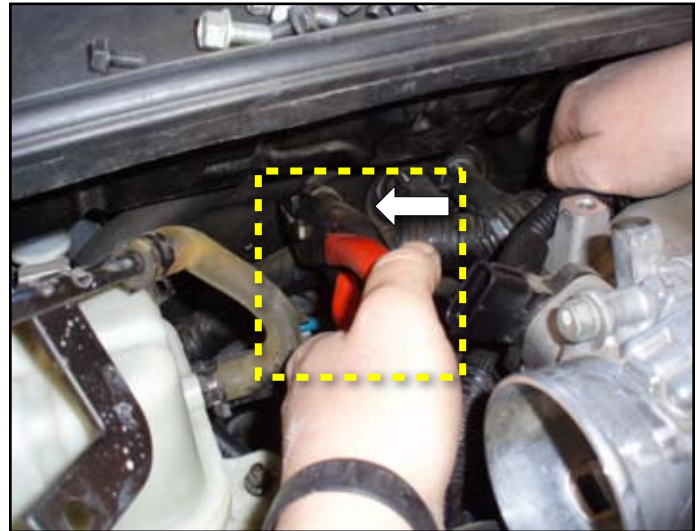
11. Remove the front stay bracket from the intake manifold assembly.



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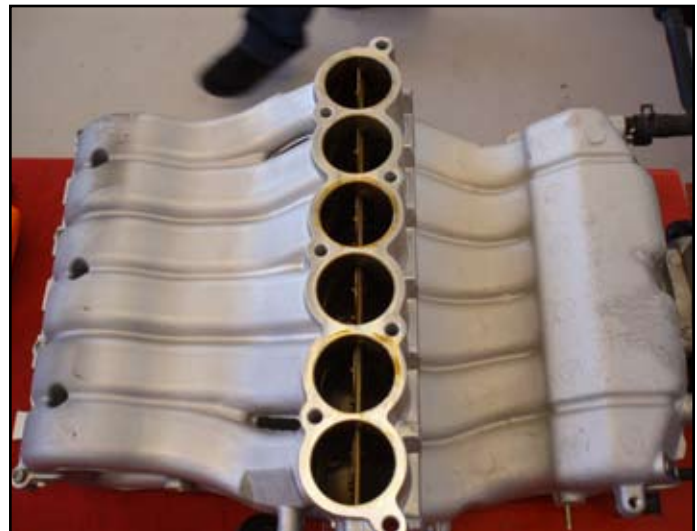
12. Remove the brake booster vacuum hose clamp and disconnect the rubber hose from the steel line mounted on the bulkhead.
 - a) Disconnect the fuel pressure regulator vacuum supply hose located next to brake booster hose on Intake Manifold Assembly.



13. Remove the surge tank assembly from the vehicle.



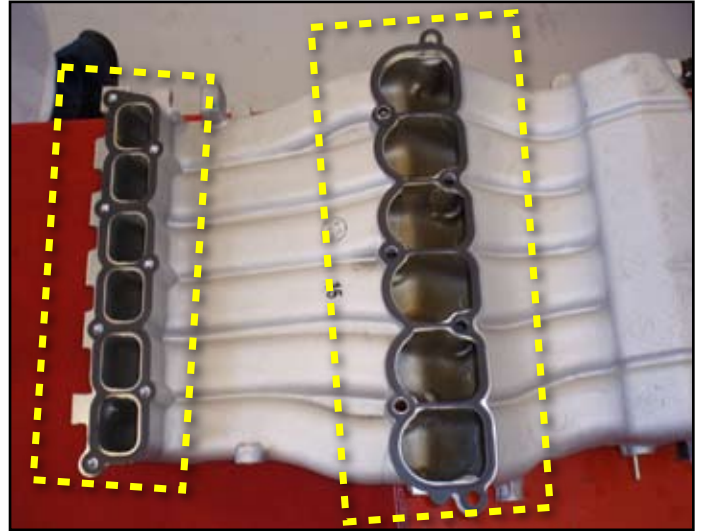
14. Using a clean work surface, remove the Intake Control Valve (ICV) from the Surge Tank.



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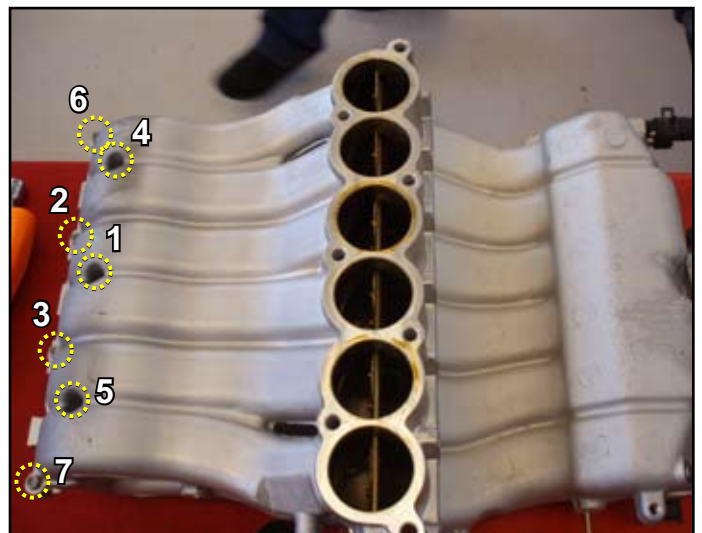
SORENTO ICV REPLACEMENT

15. Clean the mating surfaces and install new sealing gaskets between the ICV and Surge Tank. These gaskets are included in the service kit.



***NOTICE**

Follow torque procedure as outlined during assembly.



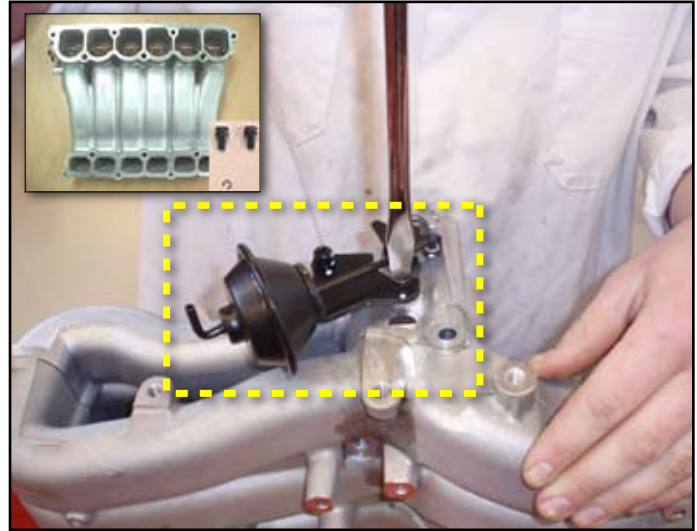
16. Install ICV to the Surge Tank. Install the seven (7) Allen Head screws and torque to 84 inch lbs. (9.4 Nm).



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17. Transfer the vacuum valve to the new lower intake manifold, tighten the screws to 84 inch lbs. (9.4 Nm).
 - a) Use new supplied C-clip and screws when transferring vacuum control Valve.



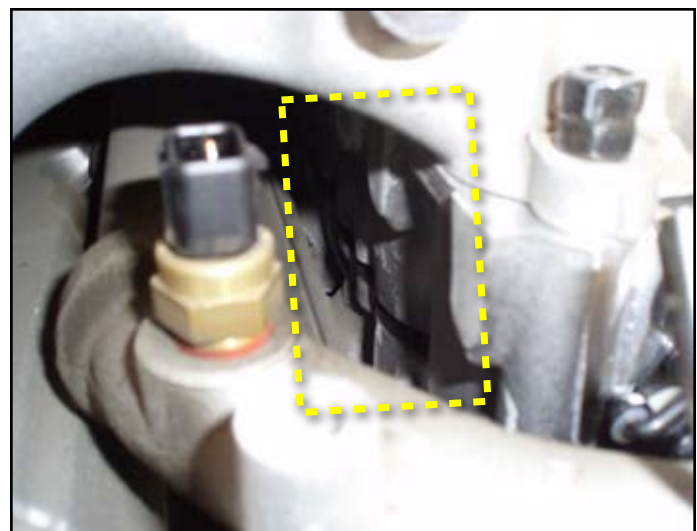
18. Clean the mating surfaces and install new Intake Manifold to Surge Tank Assembly gasket. Carefully install the Surge Tank Assembly.

*NOTICE

Take care not to pinch wire harness or vacuum hose between the ICV and lower Intake Manifold.

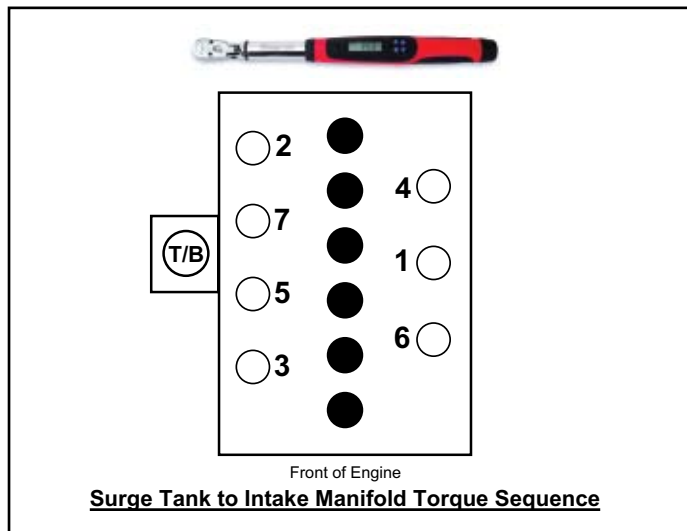


19. Install the front mounting stud first as shown, make sure gasket is in proper position. Hand tighten the stud two (2) complete revolutions, leave loose until all bolts are installed on both the manifold and stay brackets.
 - a) Lift the rear of the manifold until the gasket and bolt aligns in the proper position.
 - b) Using a flashlight, inspect the marked area for proper gasket alignment before proceeding.
 - c) Continue to install remainder of Surge Tank to Lower Intake Manifold bolts and stud.



SUBJECT:**SORENTO ICV REPLACEMENT****Torque Specifications:**

- Depression Chamber Body (Vacuum Valve) 84 inch lbs. (9.4 Nm).
- Surge Tank to Induction Control Valve – 84 in. lbs. (9.4 Nm).
- Complete Upper Intake Manifold to Lower Intake Manifold Bolt and Nuts – 11~14 ft lbs. (14.9 ~ 18.9 Nm).
- All stay brackets from Intake Manifold Assembly to other related engine components – 15 ~ 20 ft. lbs. (20.3 ~ 27.1 Nm).



20. Install the remainder of the components in the reverse order of removal.
21. Re-fill and bleed the cooling system using removed coolant.
22. Connect the negative battery cable and set the customers preset radio stations and clock time.
 - a) If equipped with overhead console, convert to US measurements by pressing the Up/Down button for 1 second.
 - b) If equipped with Automatic Climate Control, convert to US measurements by depressing the temperature down button and AMB button for 3 seconds.
23. Road test to verify proper operation as normal service procedure.



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24. Install the SC073 completion label on the panel above the under hood fuse box.

**AFFECTED VEHICLE RANGE:**

Vehicle Production Range from 6/19/2002 ~ 4/21/2005 (*unless previously repaired*)

PARTS INFORMATION:

Part Name	New Part No.	Quantity
Valve Sub-Assembly Induction	29222 39800QQK	1
SC073 Campaign Completion Label	UK030 SC073	1

Part Number 29222 39800 QQK includes the following:

- Intake Control Valve (ICV)
- Vacuum Valve C-clip
- Vacuum Valve screws
- Surge Tank Gasket
- Gasket S - ICV
- Gasket P - ICV

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Time	Replacement Parts	Qty.
R	29221 39800	0	N29	C04	Replace Intake Control Valve (ICV)	080003R0	1.5*	29222 39800QQK	1

**Includes drain/refill coolant, clear codes, install ICV.*

Use sublet code of S7 for reimbursement of \$2.25 per vehicle; this will provide a coolant allowance for 1 pint of concentrate Kia Engine Coolant mixed at 50/50. This will equal 1 qt. total of engine coolant. **Only fill with new coolant if necessary.**