

Emissions Recall

Subject: Turbocharger Unison Ring Sticking

Date: 04/23/2007

Bulletin: R0019

Campaign #: A5050

Affected Models: 2005 & 2006, 238(ND), 258(ND), 268(NE), 268A(NJ), 338(NV)

J08E Model Engines

Important: *Verify on the Hino DCS Warranty System that the vehicle still needs to have this work performed.*

Description:

This Emissions Recall involves inspection of the turbocharger part number, vehicle mileage and possible turbocharger replacement.

Condition:

In some cases rust or corrosion may form between the turbocharger housing and unison ring. This may cause the unison ring to drag or stick, resulting in the illumination of the "Check Engine" lamp and the setting of a Diagnostic Trouble Code (DTC). This condition will also cause the ECU to go into De-Rate mode and the engine power will be limited.

Subject Vehicles:

2005, 2006 and 2007 Model Year, 238, 258 (ND8J), 268 (NE8J), 268A (NJ8J), and 338 (NV8J) vehicles produced in Japan and the United States.

Before You Begin:

Read and understand all instructions and procedures before you begin. Read and observe all Caution and Warning safety alerts that precede these instructions while following these procedures. The alerts help to avoid damage to components, serious personal injury, or both.



Once Recall is completed

Fill out the Recall Completion sticker as shown in the picture to the left. This sticker should be attached to the right door jam above the V.I.N. Plate.

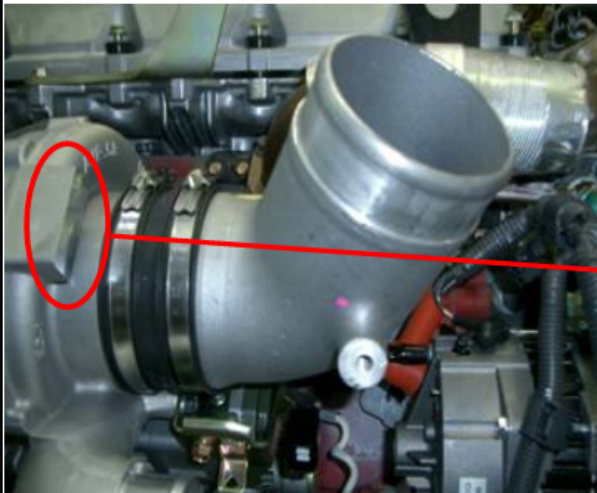
Emissions Recall

Turbocharger Identification:

Not all turbochargers will require replacement. Due to the nature of the materials used and the effects of heating and cooling cycles, some turbochargers will have developed a stable oxide layer on the surface of the exhaust housing. Only turbochargers with specific part numbers which have accumulated less than 40,000 miles will require replacement.

Use the diagrams below to locate the "Part Number Plate" and determine if the turbocharger requires replacement.

Location of turbocharger
PART NUMBER plate.



Sample photograph of JO8E



This part number requires replacement
(if under 40,000 miles)

2	4	1	0	0	4	3	2	0	

This part number **does not** require
replacement. (at any mileage)

1	7	2	0	1	E	0	1	4	0

Emissions Recall

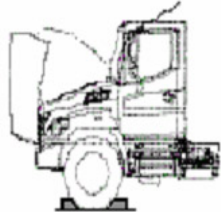
Required Parts:

Engine Model	Part Number	Description	Quantity
J08E	S0400-10440	Turbocharger Assembly	1
	S0400-10442	Installation Parts Kit	1

Turbocharger Installation Kit Contents		
New Part Number	Description	Quantity Contained in Kit
S2410-91820	GASKET	1
SZ116-10107	BOLT, STUD	6
SZ178-10007	NUT, FLANGE	8
SZ178-10012	NUT, FLANGE	8
S2410-91830	GASKET	1
SL722-01210	WASHER, SEAL	2
SL722-01415	WASHER, SEAL	2
S2413-51121	GASKET, OIL	2
SZ430-14003	GASKET	8
S1710-41580	GASKET EXHAUST MANIFOLD	2
SH562-41035	BOLT, FLANGE	4


WARNING

1. Apply parking brake and wheel chocks to prevent the vehicle from moving
2. Confirm that the engine has cooled down and is at a low temperature to prevent exposure to high temperatures.
3. Use care when opening or closing the hood to prevent injury.
4. Wear protective gloves and safety glasses when replacing inspecting or replacing the turbocharger to avoid injury to hands and eyes.

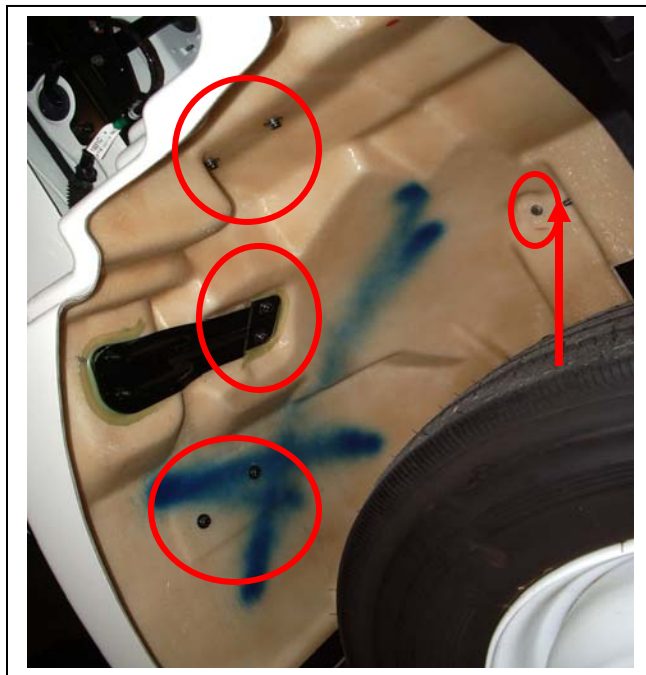


Emissions Recall

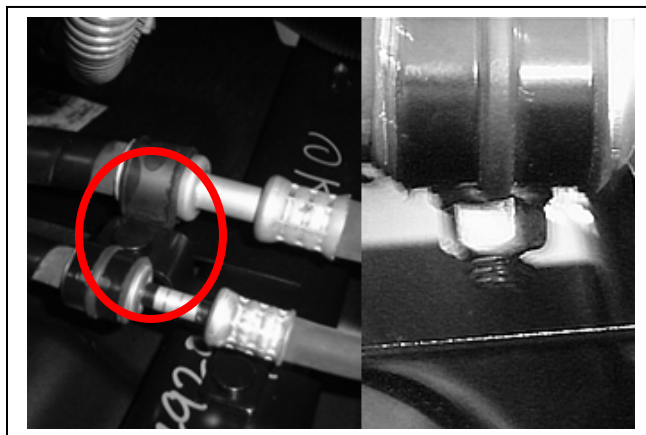
Recall Procedure:

1. Loosen and disconnect negative battery cable.

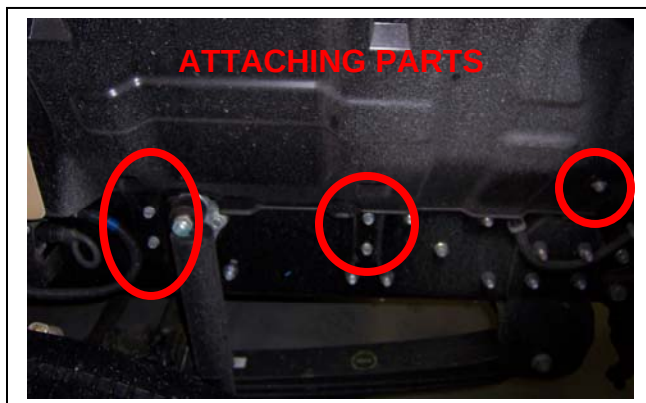
2. Remove the 7 right fender mounting bolts and the 1 push pin retainer holding the evaporator drain tube. Remove fender.



3. Disconnect the A/C line clamps from the right side cover support bracket.



4. Remove the 5 right side cover bolts along with the side cover support brackets.



Emissions Recall

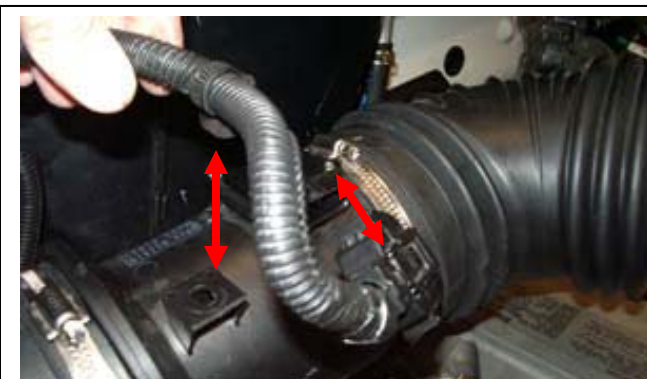
5. Drain engine coolant by loosening drain plug on oil cooler.

Note:

Use a clean container and save the coolant for reuse.



6. Disconnect the mass airflow sensor harness and connector.



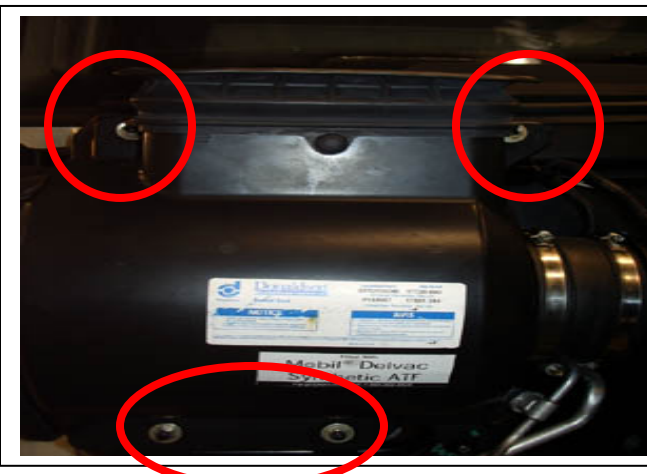
7. Remove the 2 air inlet hose support bolts.

Loosen the hose clamps at the turbo inlet pipe.



8. Remove the 4 air cleaner assembly mounting bolts.

Remove the air cleaner and the inlet hose assembly.



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9. Disconnect the harness and “P” clip below the inter-cooler pipe.



10. Remove the harness “P” clip bolt at the Inter-cooler pipe.

Disconnect the “P” clips at the inter-cooler pipe.



11. Remove the 2 inter-cooler pipe mounting bolts.



12. Loosen the inter-cooler pipe hose clamp at the turbo outlet and the inter-cooler inlet pipe and remove pipe and hoses.

Caution: Cover inter-cooler opening to prevent foreign material from entering the intake system.



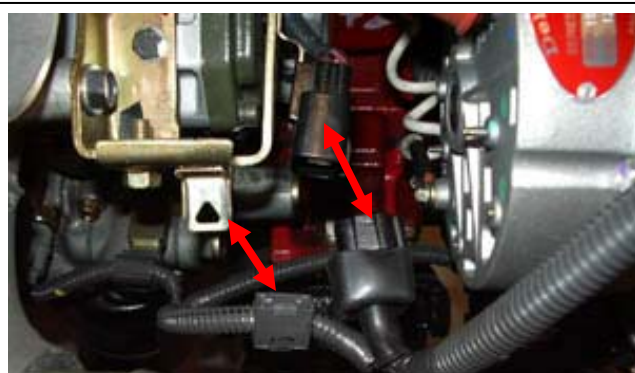
Emissions Recall

13. Remove the 2 turbo inlet pipe mounting bolts.

Loosen the 2 turbo inlet pipe hose clamps and remove the pipe assembly.



14. Disconnect the "P" clip and the REA harness connector.



15. Remove the 6 insulator mounting bolts and the turbo upper insulator.



16. Disconnect the exhaust pipe support brackets and exhaust pipe flange at front of muffler.

Remove the 4 exhaust pipe flange nuts from the turbo exhaust outlet.



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17. Remove the 2 lower insulator mounting bolts and remove the lower turbo insulator.



18. Remove the exhaust elbow and disconnect the support bracket.



19. Remove the oil supply line support bolt.

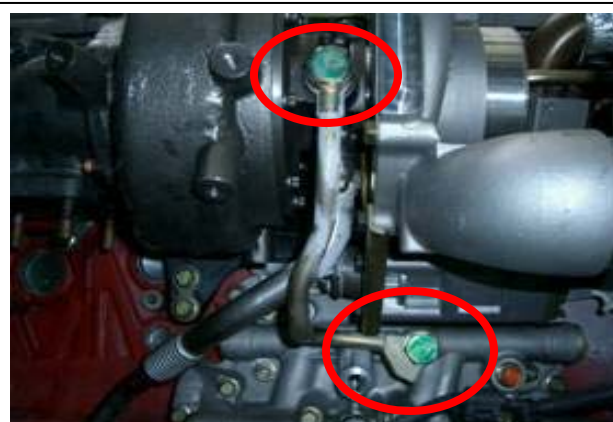
Remove the oil supply line mounting bolt at the turbo.

Remove the oil supply line mounting bolt at the oil cooler.



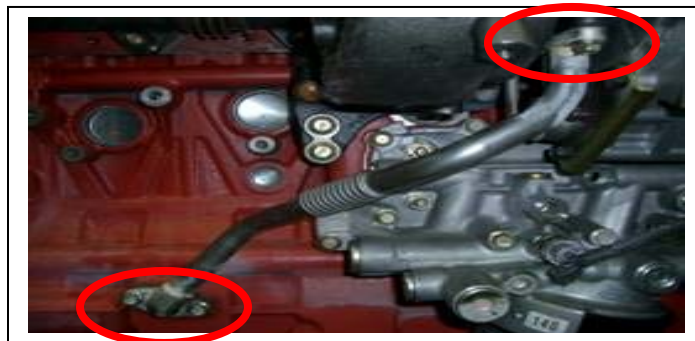
20. Remove the water pipe between the turbo and the oil cooler.

Remove the water pipe from the turbo to the thermostat housing.

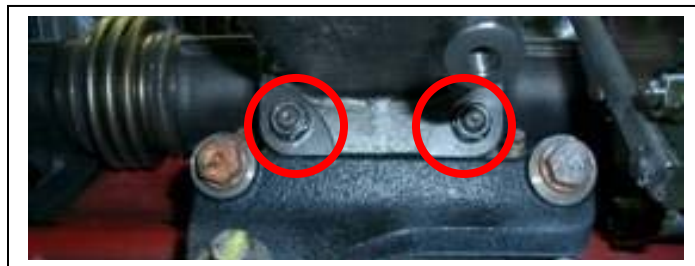


Emissions Recall

21. Remove the oil return pipe.



22. Remove the 2 lower turbo mounting nuts.



23. Remove the 2 upper turbo mounting nuts and remove the turbo assembly.

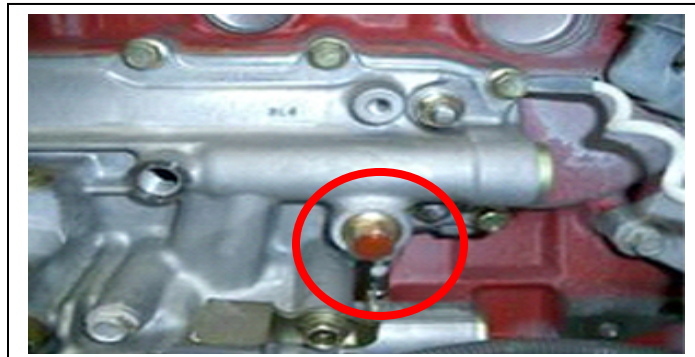


24. Remove the harness support bracket from the REA.



25. Close the engine coolant drain plug at the oil cooler.

Tighten to specified torque.
22 lbf/ft (29.5 Nm)



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Caution:

Before installing the new turbo, pour 5 to 7 drops of new engine oil into the turbo's oil supply hole and turn the turbine wheel by hand for internal lubrication.

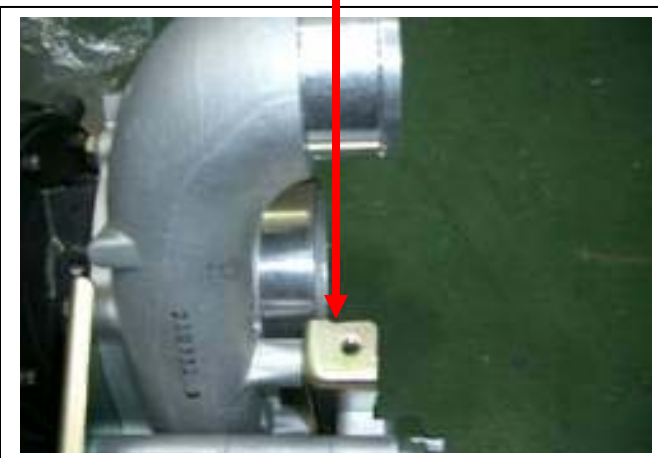
Clean gasket surfaces before installing new gaskets.

Use designated heat resistant fasteners where required.



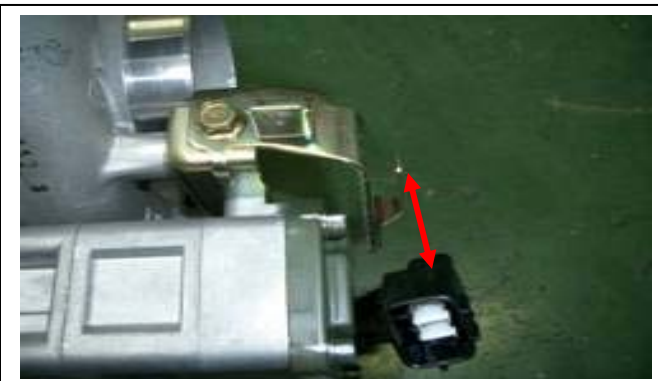
26. Using previously removed bracket re-install REA harness support bracket to new turbo and tighten to specified torque.

21 lbf/ft (28.5 Nm)



27. Attach the harness connector to the bracket.

Note: Check that the connector is securely mounted.



28. Install 2 new heat resistant studs in The exhaust inlet flange of turbo.



Emissions Recall

29. Using a new gasket, install turbo and tighten the 4 attaching nuts to their specified torque.

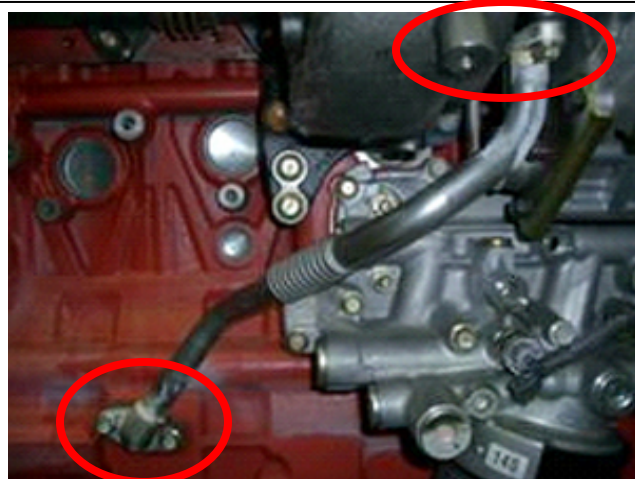
51 lbf/ft (69 Nm)



30. Using new gaskets, install the oil return pipe.

Tighten attaching bolts to their specified torque.

21 lbf/ft (28.5 Nm)



31. Using new soft washers on both sides of each banjo fitting. Install the turbo to thermostat housing water pipe and tighten to specified torque.

18 lbf/ft (24.5 Nm)



Emissions Recall

32. Using new soft washers on both sides of each banjo fitting. Install the turbo to oil cooler water pipe and tighten to specified torque.

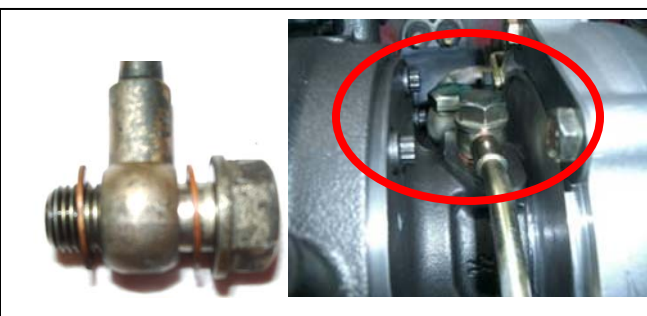
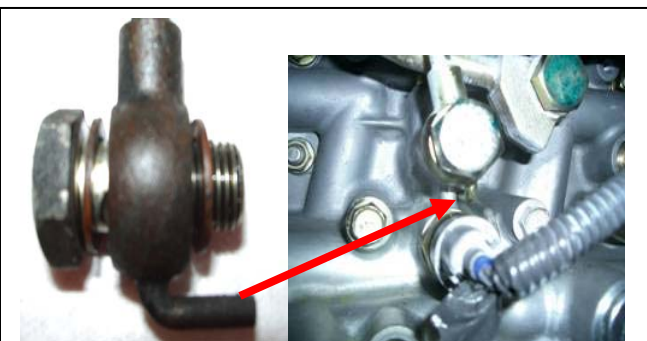
18 lbf/ft (24.5 Nm)



33. Using new copper washers, install the oil supply line at the oil cooler and hand tighten.

Note: Confirm proper stopper pin location.

Using new copper washers, install the Oil supply line at the turbo and hand tighten.



34. Install the oil supply line support bolt and hand tighten.

Tighten both ends of the oil supply line to specified torque.

18 lbf/ft (24.5 Nm)

Note: Both bolts must be tightened to the same torque value.

Tighten the oil supply line support bolt to the specified torque.

21 lbf/ft (28.5 Nm)



Emissions Recall

35. Install 4 new heat resistant studs in the exhaust outlet flange of the turbo.



36. Using a new gasket, install the exhaust elbow pipe and support bracket and hand tighten bolts and nuts.

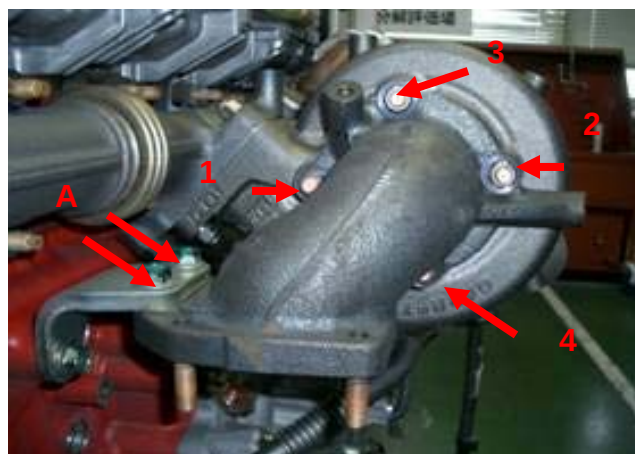


37. Follow the tightening sequence (see photo) tighten the exhaust elbow pipe mounting nuts to the specified torque in incremental steps.

51 lbf/ft (69 Nm)

Tighten the support bracket bolts (A) to specified torque.

51 lbf/ft (69 Nm)



Emissions Recall

38. Install the lower insulator and tighten the 2 mounting bolts to their specified torque.

18.5 lbf/ft (25 Nm)

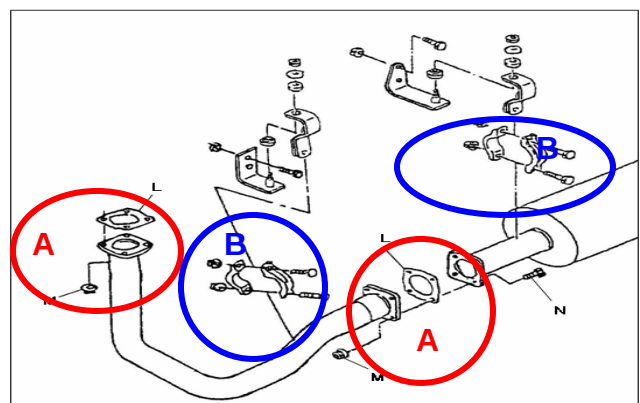


39. Using new gaskets (L), bolts and nuts install the front muffler flange, exhaust pipe to elbow and exhaust pipe support brackets.

Tighten the flanges and exhaust pipe support brackets to their specified torque.

(A) 48 – 55 lbf/ft (65-75 Nm)

(B) 20 – 24 lbf/ft (26.5-32.5 Nm)



40. Install the upper insulator and tighten the 6 mounting bolts to their specified torque.

18.5 lbf/ft (25 Nm)



41. Attach the "P" clip and the REA harness connector.



42. Install turbo inlet pipe and tighten the mounting bolts to their specified torque.

21 lbf/ft (28.5 Nm)

Tighten the hose clamps to their specified torque.

4.5 lbf/ft (6 Nm)



43. Install the inter-cooler pipe and hoses.

NOTE: Do not tighten the hose clamps at this time.



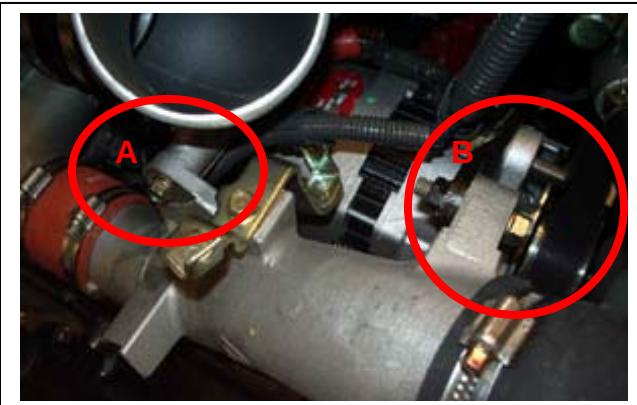
44. Install the inter-cooler mounting bolts and tighten to their specified torque.

(A) 21 lbf/ft (28.5 Nm)

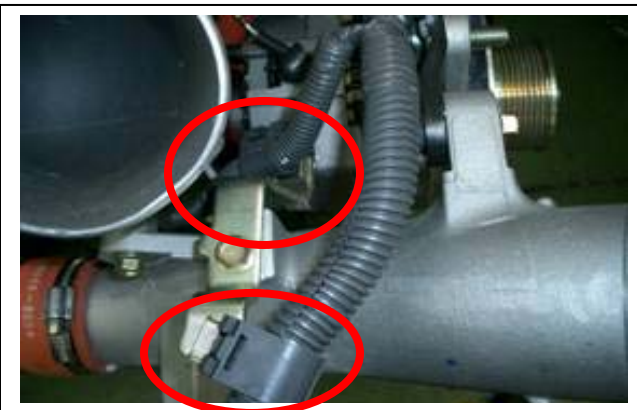
(B) 41 lbf/ft (55 Nm)

Now tighten the inter-cooler pipe hose clamps to their specified torque.

4.5 lbf/ft (6 Nm)



45. Connect the harness "P" clips at the inter-cooler pipe



Emissions Recall

46. Install the harness "P" clip at the inter-cooler pipe and tighten the bolt to the specified torque.

21 lbf/ft (28.5 Nm)



47. Connect the harness connectors and "P" clip below the inter-cooler pipe.



48. Position the air inlet hose and air cleaner assembly onto the vehicle.

Install the 2 air inlet hose support bolts and tighten them to their specified torque.

18.5 lbf/ft (25 Nm)



49. Tighten the hose clamps at the turbo inlet pipe to the specified torque.

4.5 lbf/ft (6 Nm)



Emissions Recall

50. Tighten the 4 nuts on the air cleaner housing to their specified torque.

**16.2 +/- 3.0 lbf/ft
(22.0 +/- 4.0 Nm)**

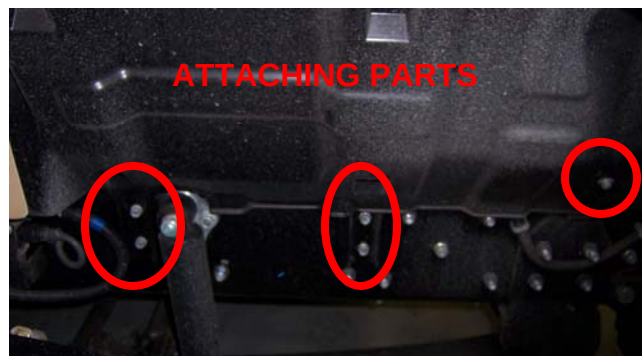


51. Connect the mass airflow sensor harness connector and harness retainer.



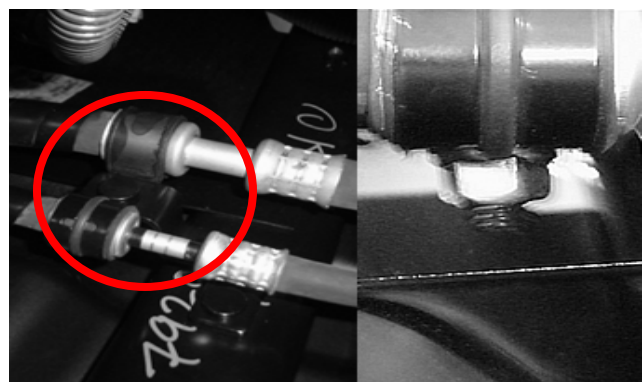
52. Install the right side cover and the support brackets. Tighten the 5 bolts to their specified torque.

**16.2 +/- 3.0 lbf/ft
(22.0 +/- 4.0 Nm)**



53. Attach the A/C line clamps to the right side cover support bracket and tighten the nut to its specified torque.

**16.2 +/- 3.0 lbf/ft
(22.0 +/- 4.0 Nm)**



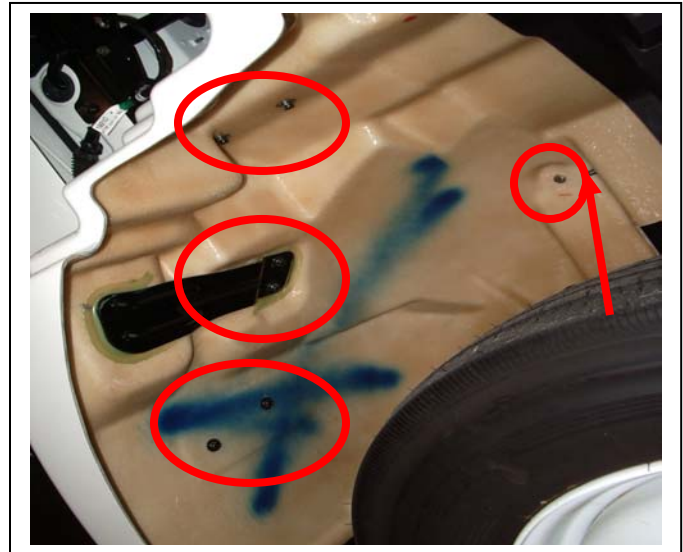
Emissions Recall

54. Install the right side fender and tighten the 7 bolts to their specified torque.

**10.0 +/- 2.0 lbf/ft
(14 +/- 2.5 Nm)**

Install the 1 push pin holding the evaporator drain tube.

55. Connect the negative battery cable.
56. Fill and bleed the cooling system with long life coolant.

**Confirmation:**

Idle the engine and confirm there are no coolant or oil leaks.

Confirm proper coolant level.

Claim Information:***Part Number Inspection Only:***

CAMPAIGN NUMBER: A5050

TIME ALLOWANCE: 0.3 HOURS

WARRANTY CODE: 0811298

OPERATION CODE: 08010ARE

ORIGINAL PART NUMBER: 24100-4320A

Turbo Replacement :

(Includes Inspection)

CAMPAIGN NUMBER: A5050

TIME ALLOWANCE: 4.0 HOURS

WARRANTY CODE: 0811298

OPERATION CODE: 08010ARE

ORIGINAL PART NUMBER: 24100-4320A