

REMOVAL AND INSTALLATION

Primary LOP	Related LOP	Description	Skill Level	Skill Category
09 45 01 D1	-	Manifold, Exhaust 3.0 liter diesel engine - Left Side - NAFTA only	2 - Skilled	10
	09450166	Manifold, Exhaust 3.0L Diesel - 4X4 Equipped	-	1
09 45 01 D2	-	Manifold, Exhaust 3.0 liter diesel engine - Right Side - NAFTA only	2 - Skilled	10
09 45 01 04	-	Manifold, Exhaust 5.7 liter engine - Right Side	1 - Semi Skilled	1
09 45 05 D1	-	Gasket, exhaust manifold 3.0 liter diesel engine - Left Side - NAFTA only	2 - Skilled	10
	09450166	Manifold, Exhaust 3.0L Diesel - 4X4 Equipped	-	1
	09450566	Gasket, exhaust manifold 4X4 equipped	-	1
09 45 05 D2	-	Gasket, exhaust manifold 3.0 liter diesel engine - Right Side - NAFTA - only	2 - Skilled	10
09 45 05 02	-	Gasket, exhaust manifold 5.7 liter engine - Right side	1 - Semi Skilled	1
09 45 05 03	-	Gasket, exhaust manifold 5.7 liter engine - Left side	1 - Semi Skilled	1
	09450566	Gasket, exhaust manifold 4X4 equipped	-	1

Special Tools:

[Click here to launch the form to order any tools you need.](#)

	8534C - Fixture, Driveline Support Originally Shipped In Kit Number(s) 8534, 8534B, 8849, 9565.
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REMOVAL

1. Disconnect and isolate the negative battery cable(s) (Refer to 08 - Electrical/Battery System/Standard Procedure).
2. Remove the air cleaner body (Refer to 09 - Engine/Air Intake System/BODY, Air Cleaner/Removal and Installation).
3. Remove the engine cover (Refer to 09 - Engine/COVER, Engine/Removal and Installation).
4. Install the Engine Support Fixture [8534C](#) .
5. Raise and support the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure).
6. Remove the right and left exhaust pipe/catalytic converter assembly (Refer to 11 - Exhaust System/CONVERTER, Catalytic/Removal and Installation).

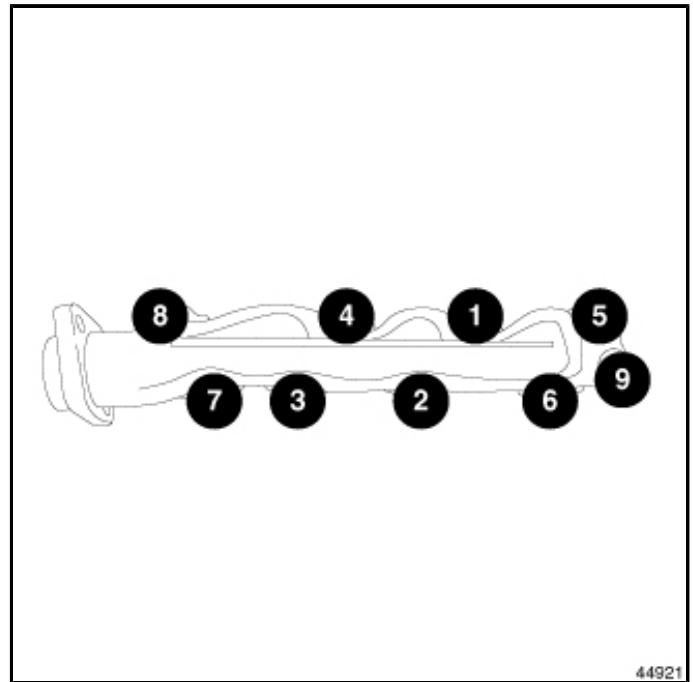
7. Remove the engine mount isolator to frame bolts (Refer to 09 - Engine/Engine Mounting/INSULATOR, Engine Mount/Removal and Installation).
8. Lower the vehicle.

CAUTION: Do not damage engine harness while raising the engine.

9. Using the Engine Support Fixture 8534C , raise the engine enough to gain access to the exhaust manifold retaining bolts.
10. Remove the exhaust manifold heat shield.

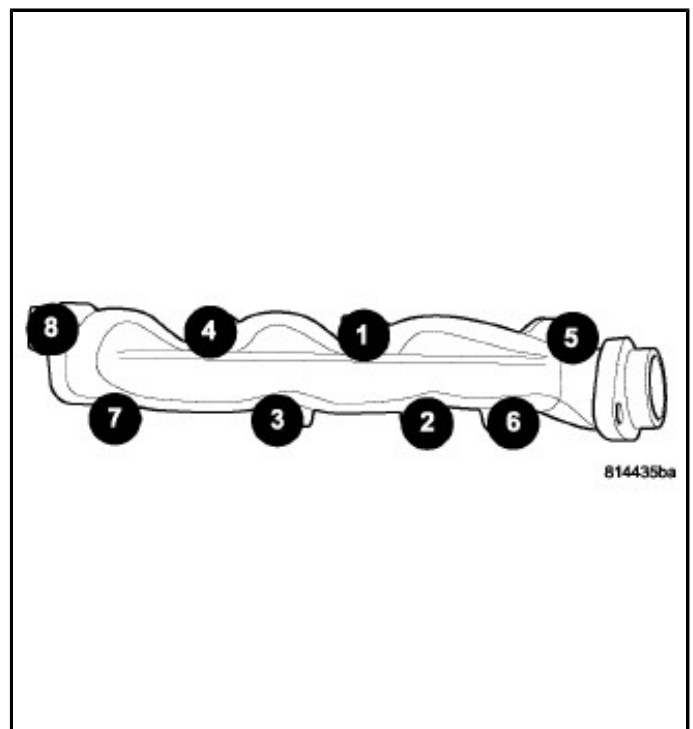
NOTE: The bolts used to secure the exhaust manifold are stainless steel at locations 7 and 8. All bolts removed must be installed in the same location were they were removed from.

11. **Right Side:** Using the sequence shown, remove the exhaust manifold retaining bolts.



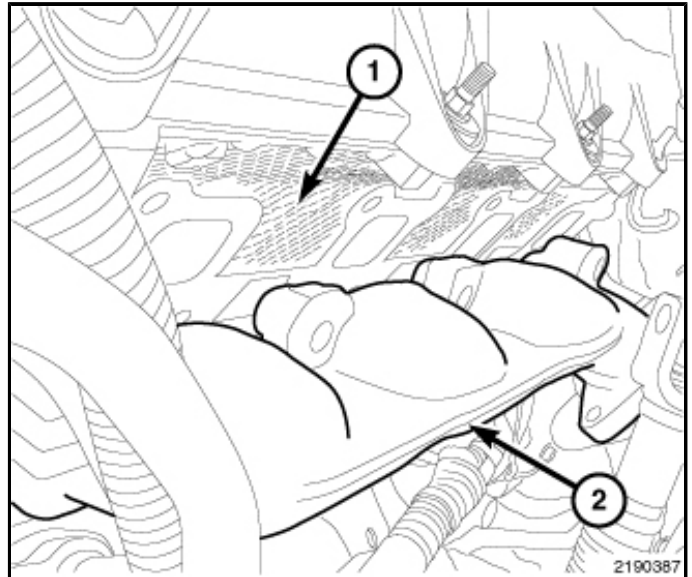
NOTE: The bolts used to secure the exhaust manifold are stainless steel at locations 5 and 6. All bolts removed must be installed in the same location were they were removed from.

12. **Left Side:** Using the sequence shown, remove the exhaust manifold retaining bolts.



Left side shown, right similar.

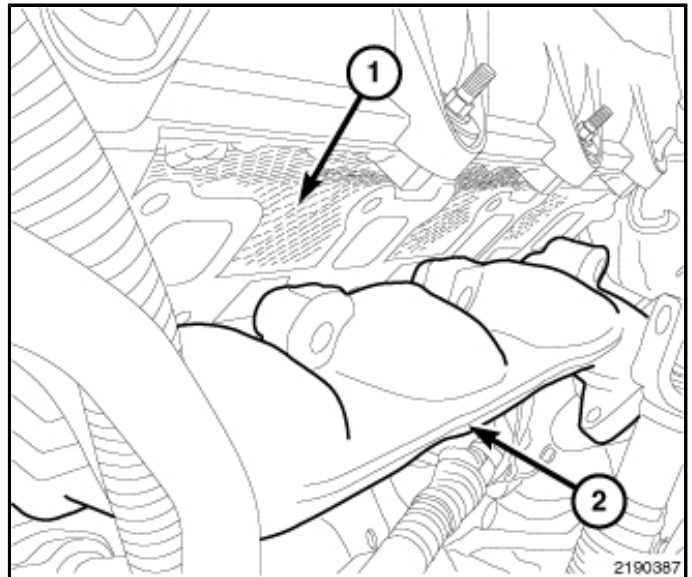
13. Remove the exhaust manifold (2) and gasket.
14. Inspect the exhaust manifold for any damage (Refer to 09 - Engine/Manifolds/MANIFOLD, Exhaust - Inspection).
15. Clean the mating surfaces.



INSTALLATION

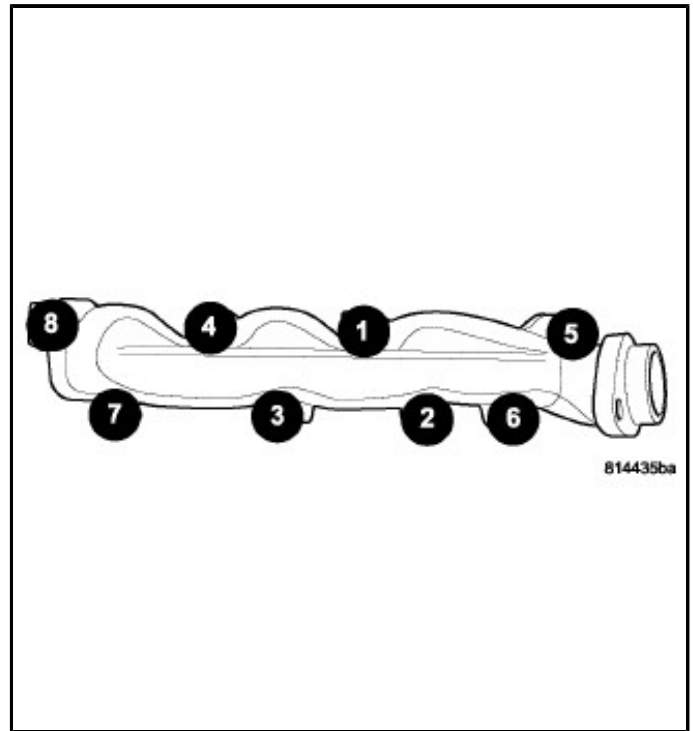
Left side shown, right similar.

1. Prior to installation, make sure all gasket mating surfaces (1, 2) are clean and free of any debris.
2. Position the exhaust manifold gasket and manifold.



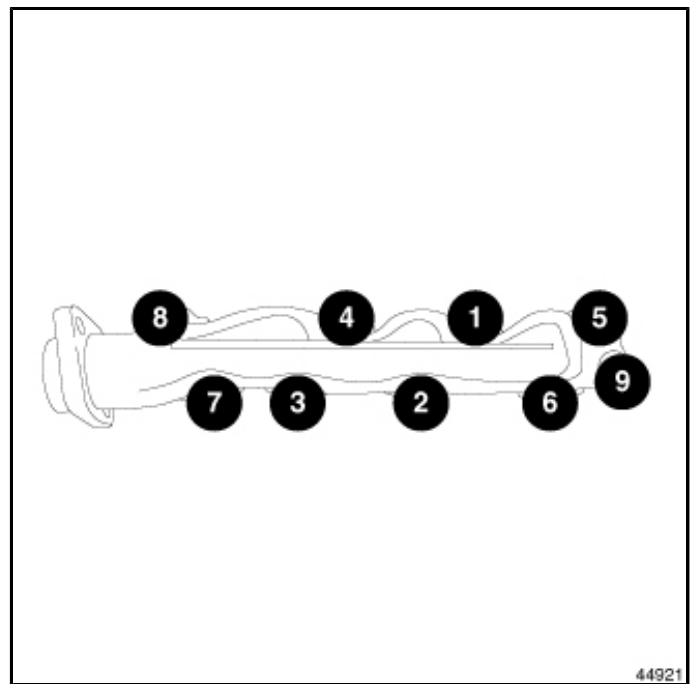
NOTE: The bolts used to secure the exhaust manifold are stainless steel at locations 5 and 6. All bolts removed must be installed in the same location were they were removed from.

3. **Left Side:** Using the sequence shown, Install the exhaust manifold retaining bolts and pre-tighten to 25 N·m (18 ft. lbs.) allowing the gasket to seat to the exhaust manifold and cylinder head.
4. Re-check the torque at 25 N·m (18 ft. lbs.) using the sequence shown.
5. Install the heat shield and tighten nuts to 8 N·m (70 in. lbs.).



NOTE: The bolts used to secure the exhaust manifold are stainless steel at locations 7 and 8. All bolts removed must be installed in the same location were they were removed from.

6. **Right Side:** Using the sequence shown, install the exhaust manifold retaining bolts and tighten to 25 N·m (18 ft. lbs.) allowing the gasket to seat to the exhaust manifold and cylinder head.
7. Re-check the torque at 25 N·m (18 ft. lbs.) using the sequence shown.
8. Install the heat shield and tighten nuts to 8 N·m (70 in. lbs.).



9. Using the Engine Support Fixture [8534C](#) , lower the engine into position.
10. Raise and support the vehicle (Refer to 04 - Vehicle Quick Reference/Hoisting/Standard Procedure).
11. Install the engine mount isolator to frame bolts (Refer to 09 - Engine/Engine Mounting/INSULATOR, Engine Mount/Removal and Installation).
12. Install the right and left exhaust pipe/catalytic converter assembly (Refer to 11 - Exhaust System/CONVERTER, Catalytic/Removal and Installation).
13. Lower the vehicle.
14. Remove the Engine Support Fixture [8534C](#) .
15. Install the engine cover (Refer to 09 - Engine/COVER, Engine/Removal and Installation).
16. Install the air cleaner body (Refer to 09 - Engine/Air Intake System/BODY, Air Cleaner/Removal and Installation).

17. Connect the negative battery cable(s) (Refer to 08 - Electrical/Battery System/Standard Procedure).
18. Start the engine and check for leaks.