



DETROITTM
DEMAND PERFORMANCESM

18SP687 – DD15/16 EGR Actuator Replacement Service Kit (P/N: E23539699)

KIT DESCRIPTION

Service kit (P/N: E23539699) contains all the necessary components needed to replace the EGR actuator on the DD15/16 from an old to new style. Parts are not backwards compatible.

KIT CONTENTS

Service kit P/N: E23539699, shown in Table 1, contains the following parts:

Part No.	Qty.	Description
EA4701500494	1	EGR Actuator
A4731421240	1	Bracket
A4739980145	8	Vibration Damper
N000000007421	4	Bolt M8x35
N007349008007	4	Washer
N910105008011	3	Bolt M8x20
A0049908450	2	Nut
A4731400646	1	Pull Rod
A4732001051	1	Coolant Outlet Line
A4732001151	1	Coolant Inlet Line
A0029976571	2	Coolant Fitting
A4730900434	1	Heat Shield
A0109902201	3	Bolt
A4731421040	1	Bracket
A4731400124	1	Lever
18SP687	1	Installation Instructions

Table 1 DD15/16 EGR Actuator Replacement Service Kit (P/N: E23539699)

Removal of the DD15 Exhaust Gas Recirculation Valve Actuator (Old style)

Remove as follows:

1. Disconnect the batteries. Refer to the OEM procedure.

 **CAUTION:**

ELECTRICAL SHOCK

To avoid injury from electrical shock, use care when disconnecting battery cables. The magnetic switch studs are at battery voltage.

 **WARNING:**

PERSONAL INJURY

To avoid injury, never remove any engine component while the engine is running.

 **WARNING:**

PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

2. Open the hood.
3. Drain the coolant. Refer to Power Service Literature section "Cooling System Drain Procedure."
4. Remove one nut connecting actuator to linkage and remove linkage from Exhaust Gas Recirculation (EGR) valve.
5. Disconnect the electrical harness connector from the EGR Valve actuator and unclip the actuator harness from the block.
6. Remove the coolant outlet line from the EGR actuator adaptor fitting and water manifold adaptor fitting.
7. Remove the coolant inlet line from the EGR actuator and cylinder block adaptor fitting.
8. Remove the three bolts and washers from actuator and remove actuator from bracket.
9. Remove four bolts and eight vibration dampers from actuator bracket and exhaust manifold; remove actuator bracket.

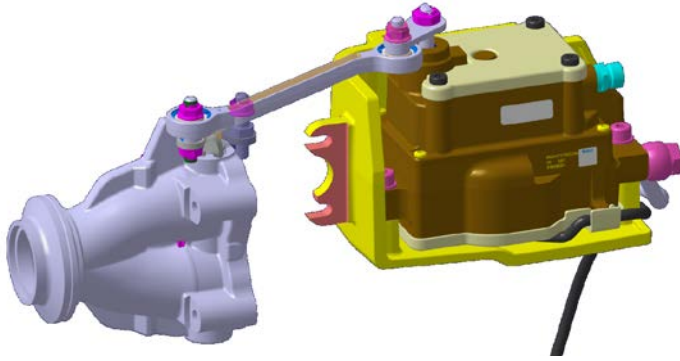


Figure 1 Old Style Actuator

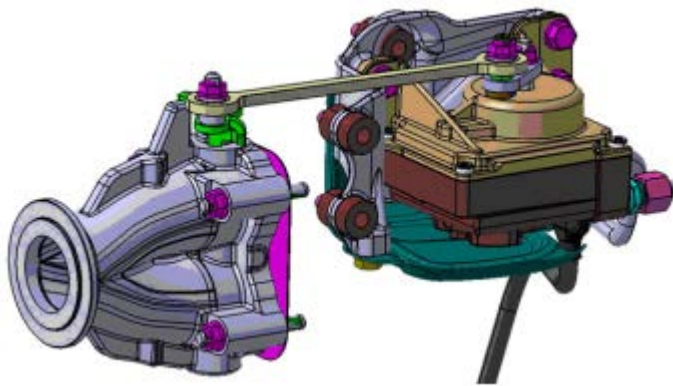


Figure 2 New Style Actuator

Installation of the DD15 Exhaust Gas Recirculation Valve Actuator (New style)

Install as follows:

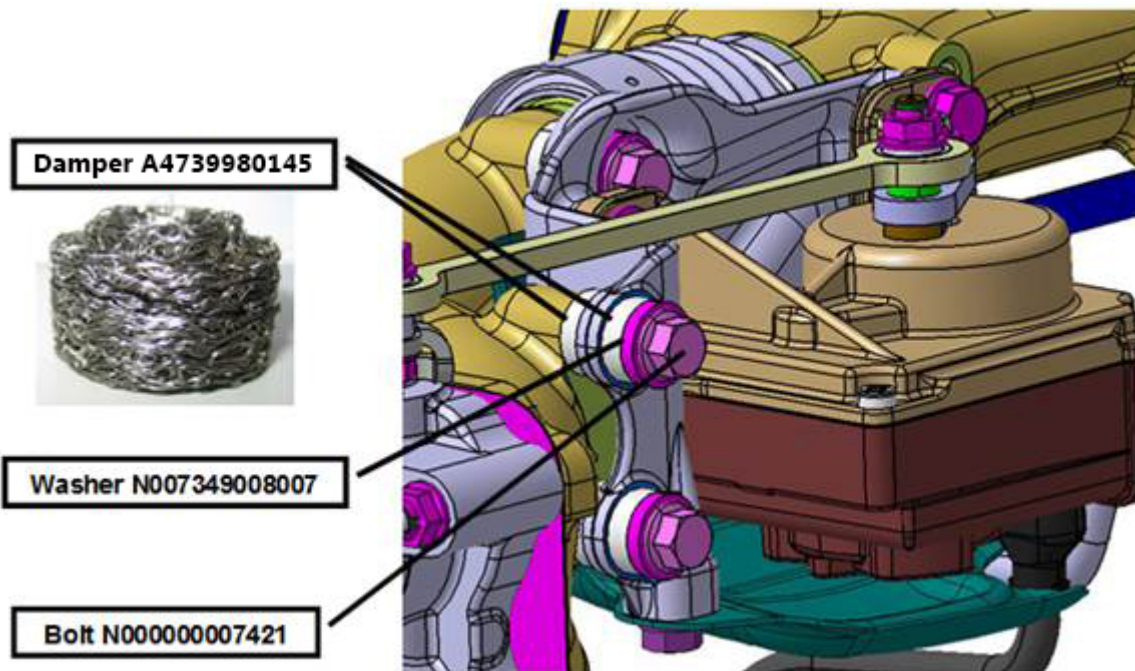
Note:

Ensure the bracket and exhaust manifold are at ambient temperature when the actuator bracket bolts are torqued.

Note:

Do not turn on the ignition power until all of the installation steps are completed.

1. Shut down the engine and apply the parking brake, chock the wheels, and perform any other applicable safety steps.
2. Open the hood.
3. Install heat shield (P/N: A4730900434) onto bracket (P/N: A4731421240) using three bolts (P/N: A0109902201). Torque to 30 N·m (15 lb·ft).
4. Install the actuator bracket (P/N: A4731421240) to the exhaust manifold using four bolts (P/N: N000000007421), eight vibration dampers (P/N: A4739980145), and four washers (P/N: N007349008007). Torque the bolts for the bracket to exhaust manifold to 30 N·m (22 lb·ft).



5. Install EGR actuator (P/N: A4701500494) onto bracket using three bolts (P/N: N910105008011). Torque bolts to 20 N·m (15 lb·ft).
6. Install two fittings (P/N: A0029976571) into the coolant ports on the EGR actuator. Torque fittings to 40 N·m (30 lb·ft).

NOTICE:

To prevent damage to the coolant inlet and outlet lines, hold the adaptor fittings with a wrench during line installation.

7. Install the coolant inlet line (P/N: A4732001151) to the adaptor fitting on the actuator and cylinder block. Torque the coolant inlet line on both fittings to 40 N·m (30 lb·ft).
8. Install the coolant outlet line (P/N: A4732001051) to the actuator and water manifold. Torque the coolant outlet line on both fittings to 40 N·m (30 lb·ft).

NOTICE:

To prevent damage to the EGR actuator hold the actuator lever when torquing the nut.

9. Install the EGR actuator lever (P/N: A4731400224) onto the actuator using nut (P/N: A0049908450). Orientate the lever away from the mounting bracket. Torque nut to 25 N·m (18 lb·ft).
10. Install the EGR actuator valve pull rod (P/N: A4731400646) on the EGR valve linkage stud (P/N: A0049908450) and the EGR actuator lever (P/N: A4731400224).

NOTICE:

Hold the EGR valve actuator pull rod when torquing the nut, so the pull rod will not come into contact with the stops.

11. With the EGR valve actuator pull rod installed on the EGR valve and the EGR valve actuator, apply a small amount of copper-based, anti-seize compound to the nut threads. Torque to 20 N·m (15 lb·ft).
12. Connect the EGR valve actuator to the engine wiring harness.
13. Fill the coolant system. Refer to Power Service Literature section “Cooling System Fill Procedure.”
14. Connect the batteries. Refer to the OEM procedure.
15. Use DiagnosticLink[®] to perform the *EGR Actuator Slow Learn Service Routine* under the Actions » EGR menu.
16. Close the hood.



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18SP687 1409 As technical advances continue, specifications will change. Printed in U.S.A.