

FORD:

2004-2005 Excursion
2004-2006 F-Super Duty

This article supersedes TSB **04-18-4** to update the vehicle model years and Service Procedure.

ISSUE

Some 2004-2006 F-Super Duty and 2004-2005 Excursion vehicles built after 9/29/2003 with a 6.0L engine may exhibit a turbo-induced exhaust moan/drone between 1500-2000 RPM.

ACTION

Install a turbocharger bracket A-brace. For vehicles built before 1/17/2005, if the noise is still at an unacceptable level after installing the A-brace, install a revised turbocharger pedestal mounting bracket and neutralize the exhaust system.

SERVICE PROCEDURE

A-BRACE INSTALLATION

1. Remove air cleaner assembly (refer to Workshop Manual Section 303-12).
2. Remove turbocharger intake tube (refer to Workshop Manual Section 303-04D).
3. Separate degas bottle from cowl sheet metal and set aside. It is not necessary to completely remove or disconnect coolant lines (refer to Workshop Manual Section 303-04D).
4. Remove FICM module (refer to Workshop Manual Section 303-01C).
5. Remove the two (2) left hand side (LHS) forward high pressure pump cover bolts. Replace with two (2) M6/M6 studs provided in the A-brace kit and tighten to 96 lb-in (11 N•m).
6. Remove LHS rear attaching bolt from turbocharger bracket to turbocharger.
7. Install A-brace on top of the two (2) M6/M6 stud bolts. Hand tighten nuts until snug.

8. Apply Motorcraft High Temperature Nickel Anti-Seize Lubricant (XL-2) to threads of M8 x 45 hex head bolt provided in the A-brace kit, and install into turbocharger housing (turbine side). Torque to 18 lb-ft (25 N•m).
9. Tighten the two (2) M6 nuts attaching A-brace to pump cover to 96 lb-in (11 N•m).
10. Install FICM module.
11. Install degas bottle.
12. Install turbocharger intake tube.
13. Install air cleaner assembly.
14. If vehicle was built before 1/17/2005, test drive the vehicle and verify if the noise was eliminated or reduced. If the noise is still unacceptable, follow Exhaust Neutralization And Turbocharger Pedestal Mounting Bracket Installation procedure. Vehicles built on/after this date already have the updated turbocharger pedestal mounting bracket.

**EXHAUST NEUTRALIZATION AND
TURBOCHARGER PEDESTAL MOUNTING
BRACKET INSTALLATION (Vehicles built
9/30/2003 to 1/16/2005 - only if needed)**

1. Inspect exhaust system, confirm hangers and isolators are properly positioned. Correct any bent or damaged hangers and/or bound up isolators.
2. Loosen turbocharger exhaust down pipe (6N646) at the V-band clamp and connecting flange at the catalyst inlet pipe.
3. Confirm proper turbocharger downpipe alignment to catalyst inlet pipe. With turbo downpipe in a neutralized position retighten turbo downpipe V-band clamp at turbo and connecting flange at catalyst.

NOTE: The information in Technical Service Bulletins is intended for use by trained, professional technicians with the knowledge, tools, and equipment to do the job properly and safely. It informs these technicians of conditions that may occur on some vehicles, or provides information that could assist in proper vehicle service. The procedures should not be performed by "do-it-yourselfers". Do not assume that a condition described affects your car or truck. Contact a Ford, Lincoln, or Mercury dealership to determine whether the Bulletin applies to your vehicle. Warranty Policy and Extended Service Plan documentation determine Warranty and/or Extended Service Plan coverage unless stated otherwise in the TSB article. The information in this Technical Service Bulletin (TSB) was current at the time of printing. Ford Motor Company reserves the right to supersede this information with updates. The most recent information is available through Ford Motor Company's on-line technical resources.

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4. Re-evaluate for exhaust/turbo moan. If condition is corrected return the vehicle to customer. If not corrected, replace the turbocharger pedestal mounting bracket with service Part Number 5C3Z-6N639-AA, following Workshop Manual Section 303-04D (Fuel Charging and Controls - Turbocharger). Perform the following Neutralization Procedure before performing final torque procedure of pedestal to block and reinstalling/refastening turbocharger.

NEUTRALIZATION PROCEDURE - MOUNTING BRACKET INSTALLATION

NOTE

PROPER ASSEMBLY AND TORQUE SEQUENCE OF THE LHS TURBO Y-PIPE (6K854) AND RIGHT HAND SIDE (RHS) STRAIGHT-PIPE (6K854) CONNECTIONS, TO TURBO, EGR COOLER, AND EXHAUST MANIFOLDS, IS CRITICAL TO ENSURE THE DURABILITY OF THE EXHAUST PIPE FLEX BELLOWS, AND MINIMIZE TURBO INDUCED EXHAUST MOAN/DRONE NOISE.

NOTE

APPLY MOTORCRAFT HIGH TEMPERATURE NICKEL ANTI-SEIZE (XL-2) TO BOLT THREADS PRIOR TO REASSEMBLY.

1. Loosen the V-band clamp at the EGR cooler.

NOTE

DO NOT REMOVE METAL GASKET BETWEEN THE EGR COOLER AND THE UP-PIPE.

2. Loosen the M8 bolts at the intermediate flat flanges connecting the exhaust Y-pipe to the RHS exhaust straight-pipe.

NOTE

DO NOT REMOVE METAL GASKET BETWEEN THE RHS EXHAUST STRAIGHT-PIPE AND Y-PIPE FLANGES.

3. Loosen the two (2) M8 bolts securing the RHS straight-pipe to the RHS exhaust manifold.

4. Loosen the M8 bolts at the LHS Y-pipe to the LHS exhaust manifold.
5. Reposition the Y-pipe and straight-pipe lower legs from the exhaust manifolds to provide a straight inner and outer pipe alignment through the flex bellows and eliminate any distortion in the bellows.
6. Using hand tools snug the flat flange fasteners between the Y-pipe and straight-pipe.
7. Re-secure with the V-band clamp at the EGR cooler. Final torque to 53 lb-in (6 N•m).

NOTE

BEFORE FINAL TORQUE OF TURBO PEDESTAL FASTENERS, PLACE TURBOCHARGER ONTO MOUNTING PEDESTAL AND CHECK Y-PIPE FLANGE TO TURBO FLANGE MATING ALIGNMENT. IF NOT ALIGNED, REPOSITION TURBO AND PEDESTAL FOR PROPER FLUSH ALIGNMENT TO MATING Y-PIPE FLANGE.

8. Final torque pedestal fasteners to 23 lb-ft (31 N•m).
9. Complete turbocharger installation, final torque turbo mounting fasteners per Workshop Manual Section 303 instructions.
10. Re-secure LHS Y-pipe V-band clamp at the turbo. Final torque to 9 lb-ft (12 N•m).
11. Check for good alignment and fit of the lower LHS Y-pipe and RHS straight-pipe flanges at the mating exhaust manifold outlets. Secure the LHS Y-pipe and RHS straight-pipe to the exhaust manifold outlets using M8 bolts (two (2) per side). Using hand tools snug fasteners evenly to position the pipe flanges square to the pipe and parallel to the exhaust manifold flanges. There should be an equal gap spacing between the pipe flange and exhaust manifold flange at both the top and bottom bolts (Figure 1).

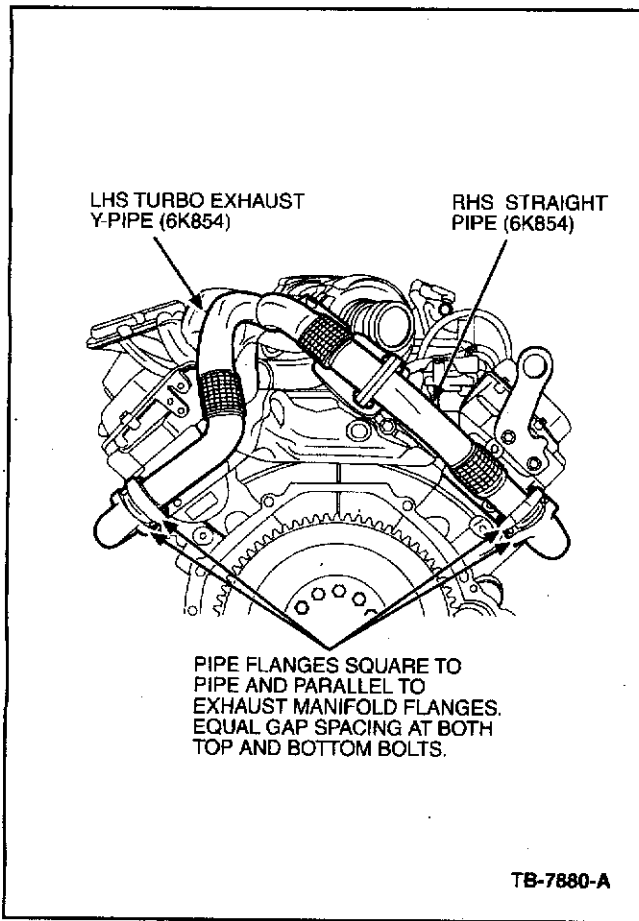


Figure 1 - Article 05-19-12

12. Final torque LHS Y-pipe to RHS straight-pipe flat flange fasteners to 20 lb-ft (27 N•m).
13. Final torque LHS Y-pipe and RHS straight-pipe exhaust manifold flange fasteners to 20 lb-ft (27 N•m).
14. Re-secure exhaust down pipe V-band clamp and final torque to 89 lb-in (10 N•m).
15. After complete reassembly, road test vehicle to confirm no exhaust leaks and exhaust moan condition is resolved.

PART NUMBER	PART NAME
5C3Z-6N639-BA	Turbocharger Bracket A-brace
5C3Z-6N639-AA	Turbocharger Pedestal
XL-2	Motorcraft High Temperature Nickel Anti-Seize Lubricant

WARRANTY STATUS: Eligible Under Provisions Of New Vehicle Limited Warranty Coverage

OPERATION	DESCRIPTION	TIME
051912A	2005-2006 F-Super Duty 6.0L 2005 Excursion 6.0L: (Vehicles Built After 1-17-2005) Install Turbo Charger A-Brace (Do not use with 9600A, 6646A, 12650D67, 9438A, 9438A3)	0.9 Hr.
051912B	2004-2005 F-Super Duty 6.0L, Excursion 6.0L: (Vehicles Built 9-30-2003 to 1-16-2005) Install Turbo Charger A-Brace Road Test To Verify Repair: (Do not use with 9600A, 6646A, 12650D67, 9438A, 9438A3)	1.2 Hrs.
051912C	2004-2005 F-Super Duty 6.0L, Excursion 6.0L: (Vehicles Built 9-30-2003 to 1-16-2005) Install Turbo Charger A-Brace, Road Test To Verify Repair, Noise Still Present Neutralize Exhaust Road Test to Verify Repair: (Do not use with 9600A, 6646A, 12650D67, 9438A, 9438A3)	1.9 Hrs.
051912D	2004-2005 F-Super Duty 6.0L, Excursion 6.0L: (Vehicles Built 9-30-2003 to 1-16-2005) Install Turbo Charger A-Brace, Road Test To Verify Repair, Noise Still Present Neutralize Exhaust, Road Test to Verify Repair, Then Replace The Turbo Charger Pedestal Mounting Bracket: (Do not use with 9600A, 6646A, 12650D67, 9438A, 9438A3)	4.2 Hrs

DEALER CODING

BASIC PART NO.
6N639

CONDITION
CODE
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