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BD Ford 6.7L Screamer Turbo

Drop-in Performance Turbo Replacement

Part #	Compressor Size	Model years
1045826	64mm	2015-2019 Ford 6.7L Pickup

Turbo comes pre-assembled with the required pedestal and oil feed line as required

Cab & Chassis models may require an emissions compliant engine calibration

2015 Trucks require an updated OE coolant tube FC3Z-9U469-B

BD Engine Brake Inc.
Plant Address: 33541 MacLure Rd. Abbotsford, BC, Canada V2S 7W2
U.S. Shipping Address: 1124 Fir Avenue, Blaine, WA 98230 U.S. Mailing Address: P.O. Box 231, Sumas, WA 98295
Phone: 604-853-6096 | Fax: 604-853-8749 | Internet: www.bddiesel.com

PRE-INSTALLATION

A new turbocharger will not solve the following failures:

- Oil contamination
- Restrictive oil drain
- Over speed due to a boost leak
- Exhaust leaks due to faulty bellows, clamps, or seals

Turbo over speed will lead to premature turbo failure. Boost pressure can be used to estimate turbo speed. The table below shows maximum allowable turbo speed for a stock motor at 3500rpm. A turbo intake restriction, clogged filter, high altitude or boost leak will cause increased wheel speed.

Turbo	Airflow (lb/min)	Max Wheel speed (rpm)	Max boost (psi)	Max Boost with clogged filter (psi)
GT37 Screamer	81	121,000	39	36

*Operating the vehicle at 1200-1300rpm with 5psi boost, throttle lift-off will cause the EGR valve to open and a turbocharger surge condition to occur. This can also be felt if manually controlling a 5th to 6th gear upshift at full throttle under 1400rpm.

Kit Contents

1045826	BC3Z-6587-A
	
Turbo; Ford GT37 Screamer	Gasket; F67 Pedestal 17-18
Qty: 1	Qty: 1

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Introduction

The BD Screamer turbo series is now available for the 2015-2019 Ford 6.7L PowerStroke. The Screamer turbo is designed to be a drop-in stock-appearing performance turbocharger that increases the total airflow without affecting low-end drivability.

BD's Ford screamer line-up utilizes a custom mixed flow turbine (MFT) wheel with a large 65mm exducer. In the GT37 VNT, a MFT wheel geometry offers increased efficiency in both initial spool up and high flow operation. At high flow operation, the increased efficiency of the MFT wheel allows the variable nozzle technology to open up and act like a larger turbine housing, which reduces drive pressure and lowers the required exhaust gas temperatures. During turbocharger spool up, the vanes close, creating high velocity "jets" used to spool the turbocharger. The geometry of the MFT more efficiently harnesses these high velocity jets, allowing the use of a larger compressor wheel without compromising on drivability.

Model Years

The BD screamer turbo comes pre-assembled and includes everything needed to increase the flow of your GT37 turbocharger. This includes the pedestal, internal or external oil feed line, and corresponding gaskets.

The Ford 6.7L PowerStroke released in 2011 uses a "GT32" based turbocharger. The 2015 F250/F350 Pickup was released using a "GT37" based larger turbocharger. Please check your specific vehicle to ensure correct fitment.

2011-2014 Pickups, 2011-2016 Cab & Chassis vehicles should use the BD Turbo Retrofit Kit part numbers 1045824 / 1045825.

Ford 6.7L Turbo Selection

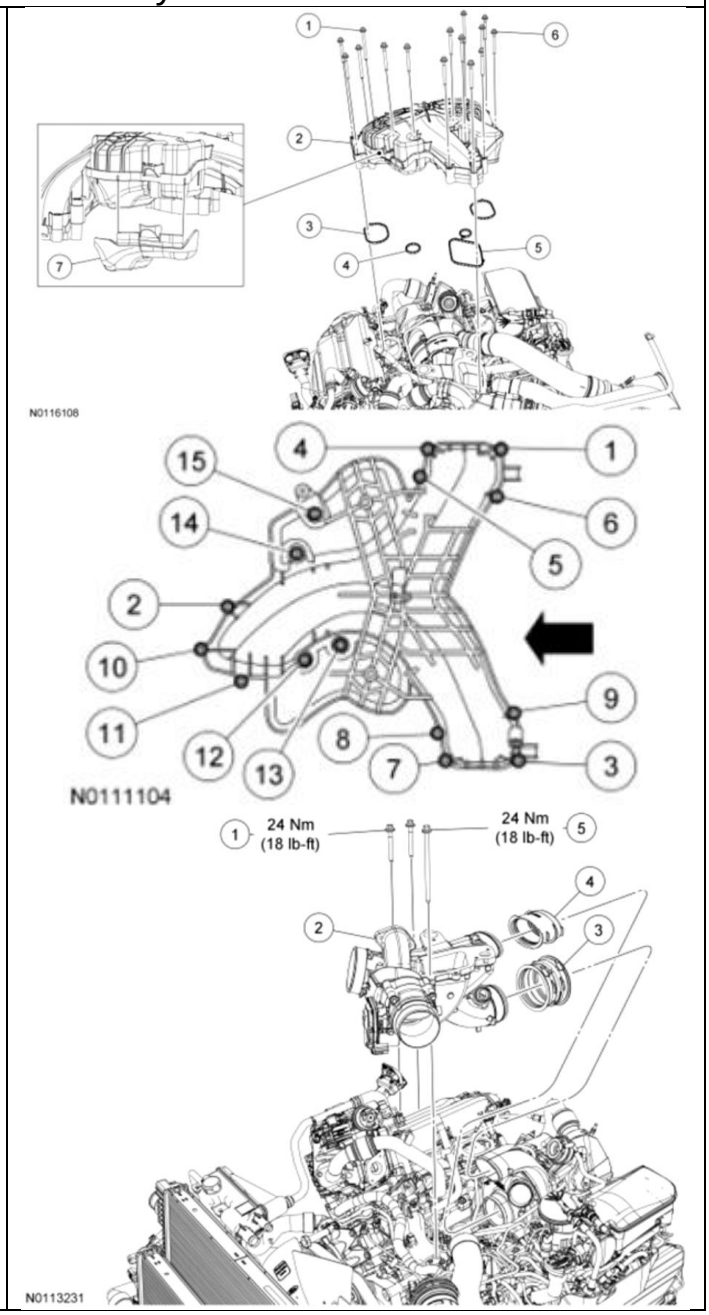
Model Year	Pickup (Wide Frame)				Cab & Chassis (Narrow Frame)			
	Stock Replacement	Performance Upgrade			Stock Replacement	Performance Upgrade		
		Retro GT37	Retro GT37 Screamer	GT37 Screamer		Retro GT37	Retro GT37 Screamer	GT37 Screamer
2011	851824-5001	1045824	1045825		854572-5001s	1045824	1045825	
2012	851824-5001	1045824	1045825		854572-5001s	1045824	1045825	
2013	851824-5001	1045824	1045825		854572-5001s	1045824	1045825	
2014	851824-5001	1045824	1045825		854572-5001s	1045824	1045825	
2015	1045810			1045826	854572-5001s	1045824	1045825	
2016	1045810			1045826	854572-5001s	1045824	1045825	
2017	1045811			1045826	1045812			1045826
2018	1045811			1045826	1045812			1045826
2019	1045811			1045826	1045812			1045826

Removal

1. Safely secure the vehicle, remove the front right wheel, and disconnect the battery ground cable.

   Drain the coolant system.

2. Remove the upper and lower intake manifold.



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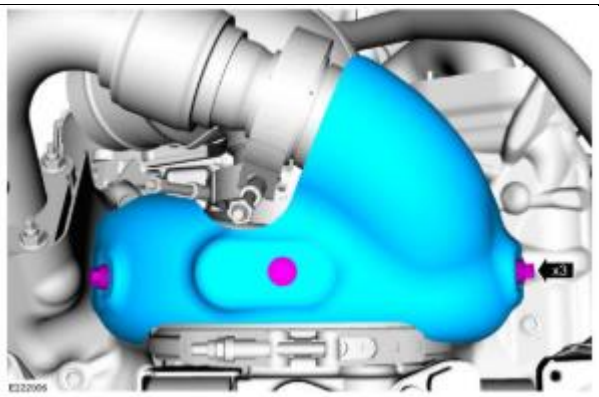
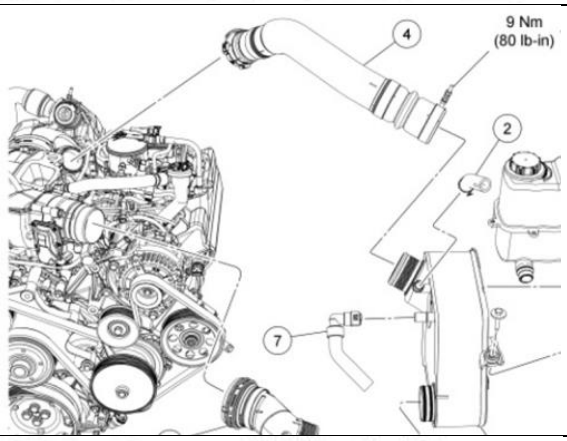
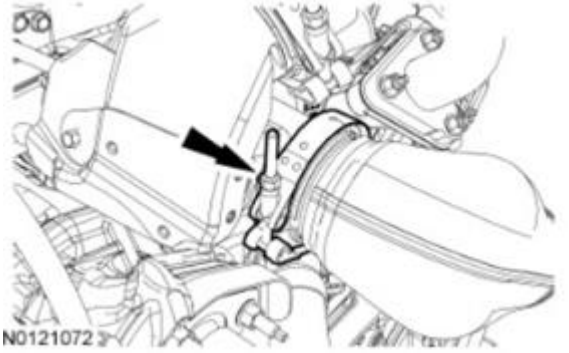
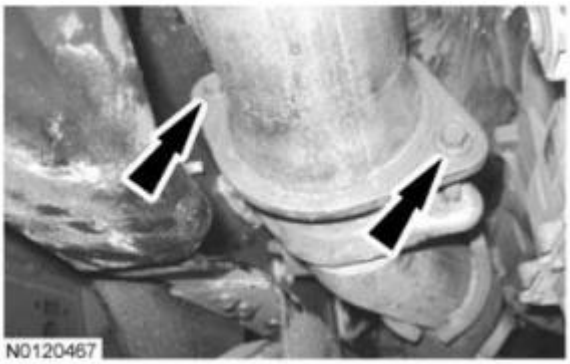
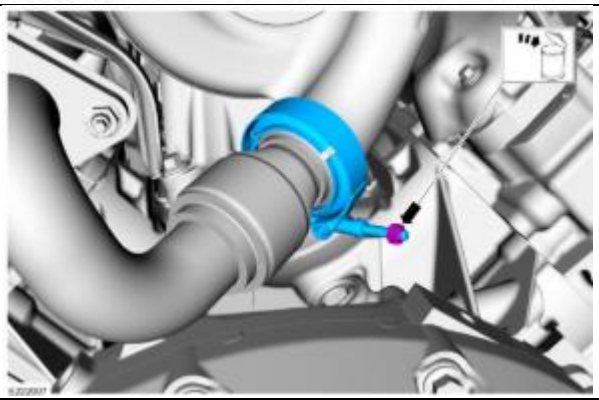
3. Remove turbocharger heat shield.	
4. Remove and inspect the CAC tube for debris.	
5. Remove the exhaust downpipe.	 
6. Remove the turbocharger inlet pipe clamps.	

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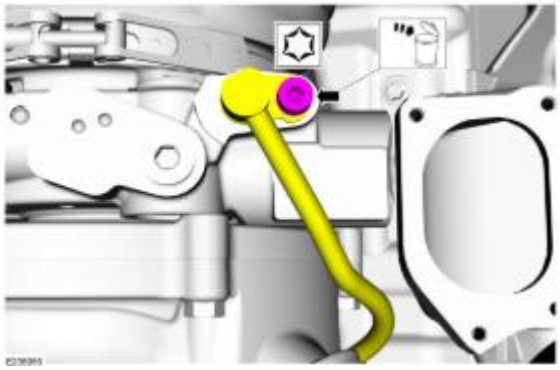
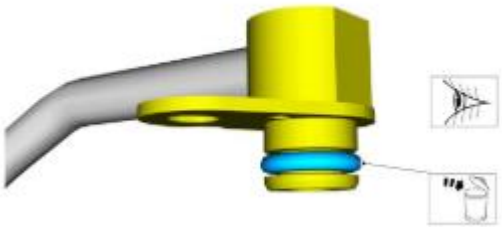
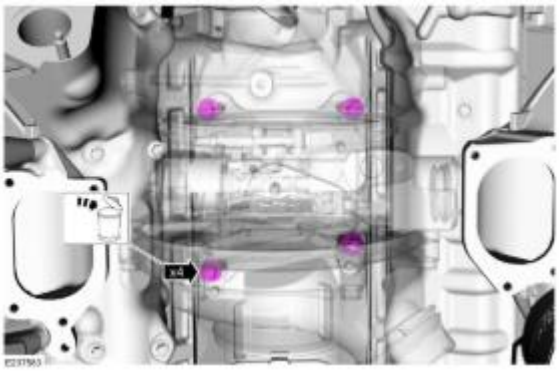
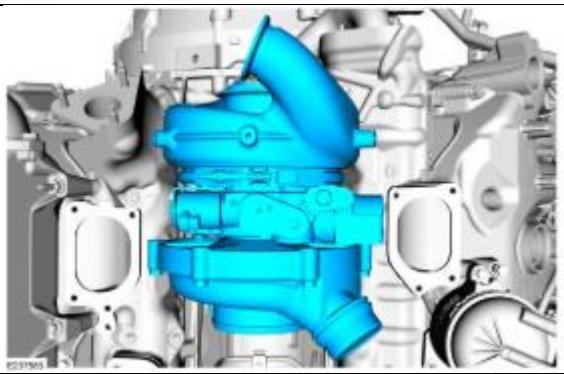
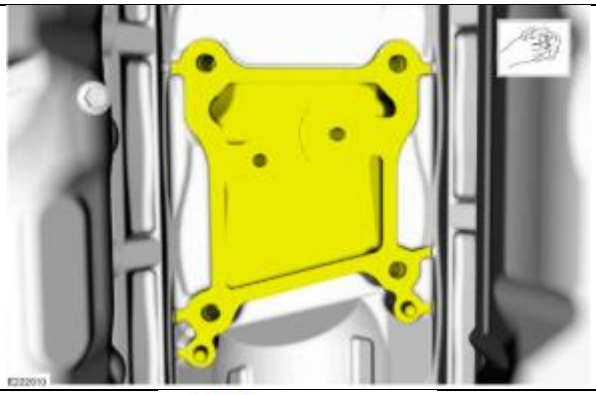
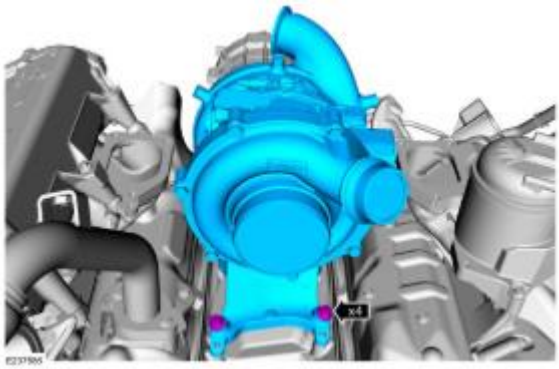
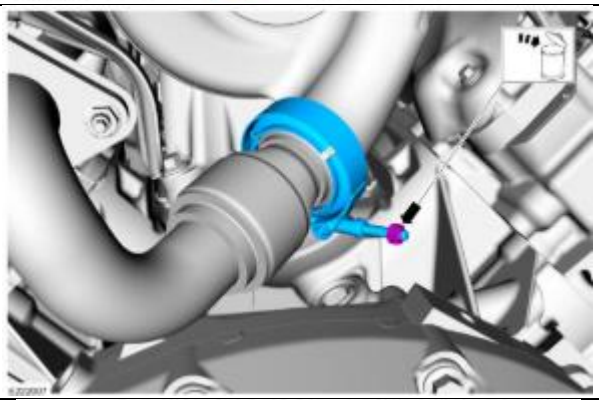
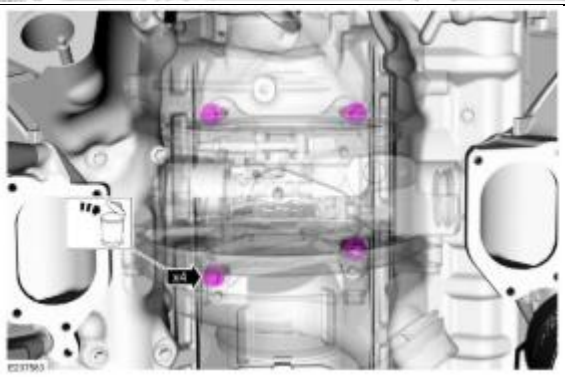
7. Remove the turbocharger coolant return tube. Inspect the coolant tube O-ring. Replace if necessary.	 
8. Loosen off and remove the turbocharger mounting bolts.	
9. Remove the turbocharger. Do not damage turbocharger sealing surfaces when removing turbocharger.	

Installation

When an engine or turbocharger is replaced due to a failure, inspect components for debris.

CAC and CAC tubes
Exhaust manifolds
EGR cooler and pipes
Diesel Oxidation Catalyst

1. Clean all surfaces before proceeding. Install the supplied new turbocharger mounting gasket. BC3Z-6587-A	
2. Ensure turbocharger pedestal bolts are tight and torqued to 26 lb ft (35 Nm)	
3. Install the turbocharger and loosely install the mounting bolts.	
4. Position and loosely tighten the inlet pipe clamps.	
5. Tighten the new turbocharger mounting bolts in the following sequence. Stage 1: 133 lb in (15 Nm) Stage 2: 42 lb ft (55 Nm)	

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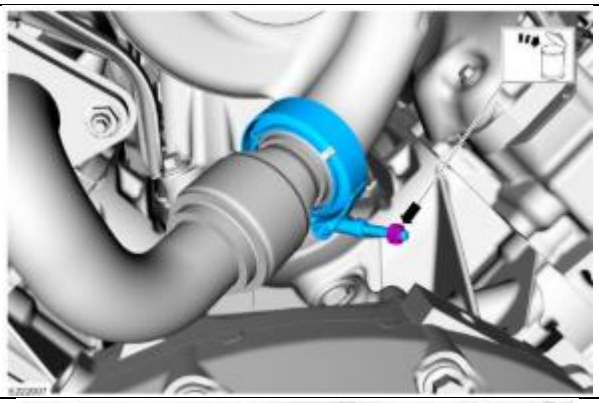
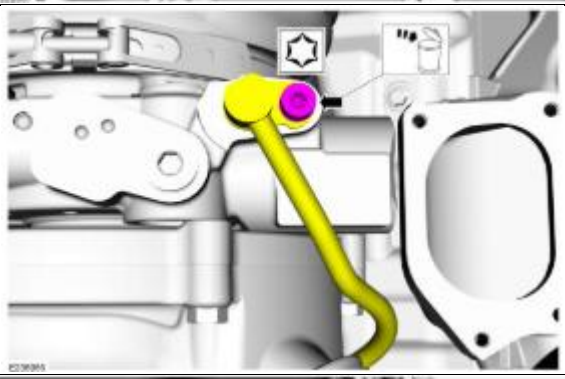
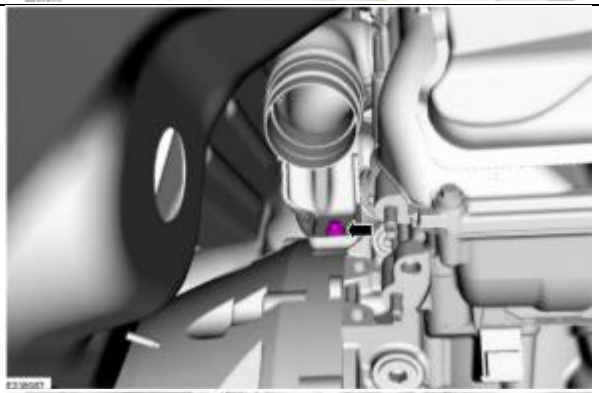
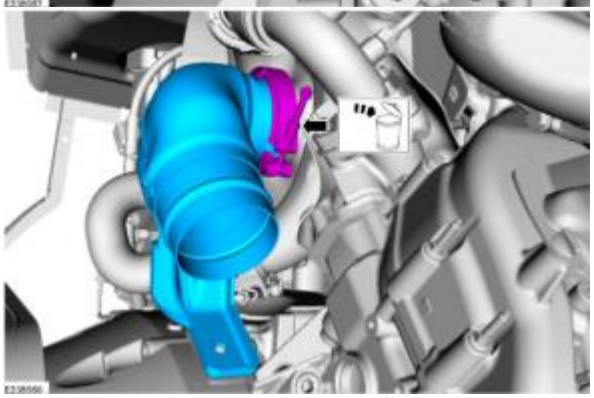
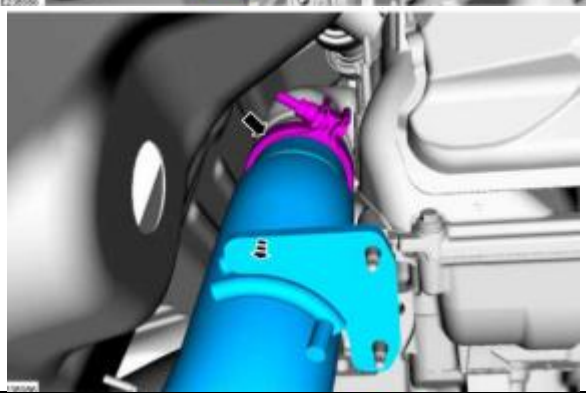
6. Tighten the turbo inlet tube clamps. Stage 1: 150 lb in (17 Nm) Stage 2: Loosen 3 turns Stage 3: 159 lb in (18 Nm)	
7. Install the coolant return tube and new o-ring if needed. Tighten the coolant return tube bolt: Stage 1: 106 lb in (12 Nm) Stage 2: 30 degrees	
8. Install the turbo downpipe. Upper downpipe bracket bolt: 18 lb ft (25 Nm) Downpipe V-band Clamp to turbo: 159 lb in (18 Nm) Upper to lower downpipe clamp: 41 lb ft (55 Nm) Downpipe bracket nuts: 22 lb ft (30 Nm) Exhaust lower downpipe bolts: 26 lb ft (35 Nm)	  

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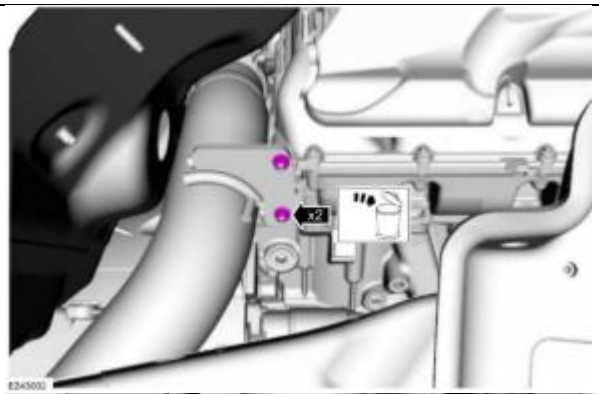
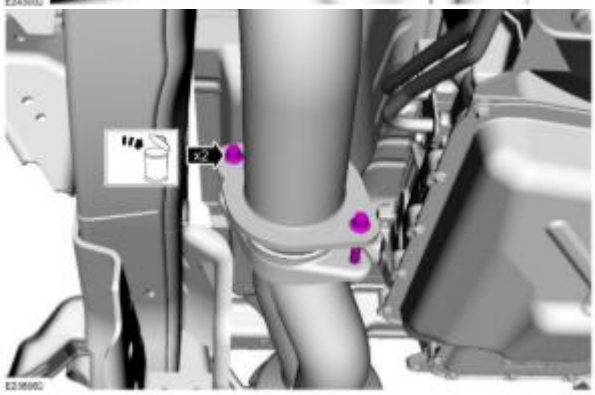
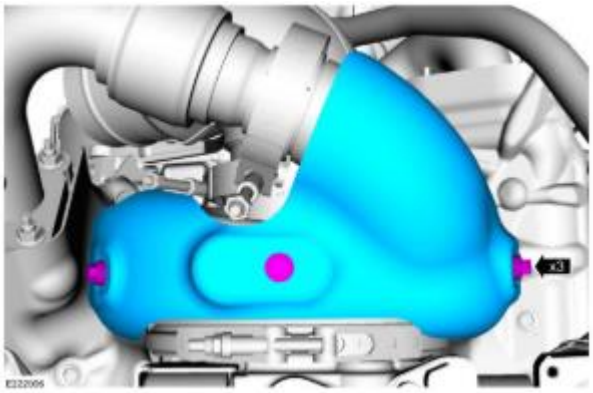


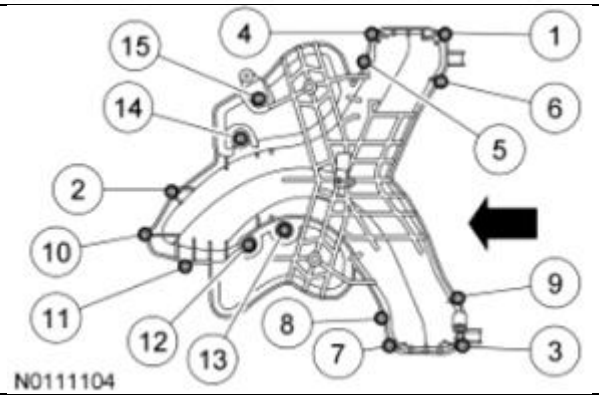


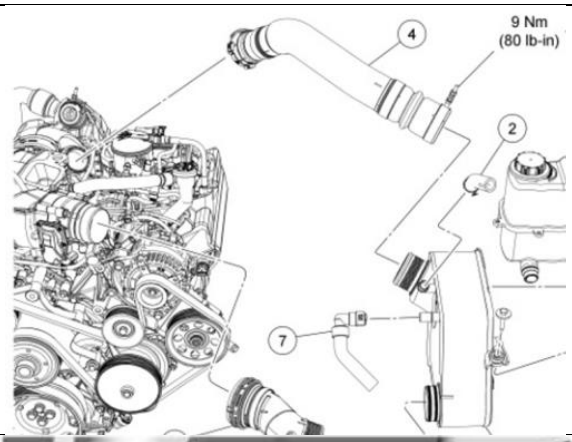
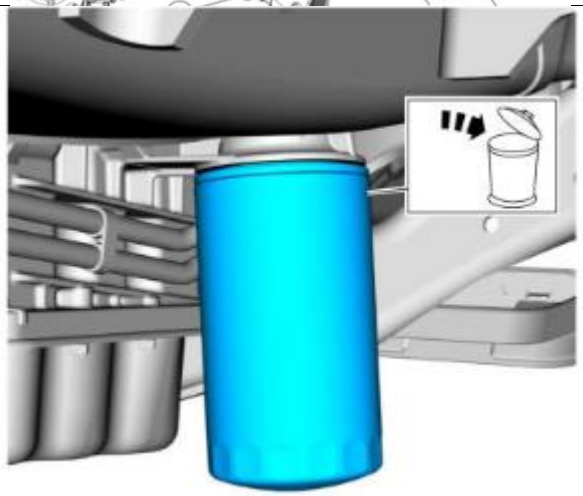
9. Install the turbocharger heat shield.



10. Re-install the upper and lower intake manifold.

Torque to 89 in lbs (10 Nm)



11. Reinstall the CAC tube.	
12. Change the oil, oil filter, and refill the engine coolant. Perform an engine coolant pressure test to ensure there are no leaks.	

13. Install a new air filter or clean your current air filter.