

SECTION 303-01D: Engine — 6.2L (2V)
IN-VEHICLE REPAIR

2014 F-150 Workshop Manual
Procedure revision date: 10/25/2013

Engine Support Insulators

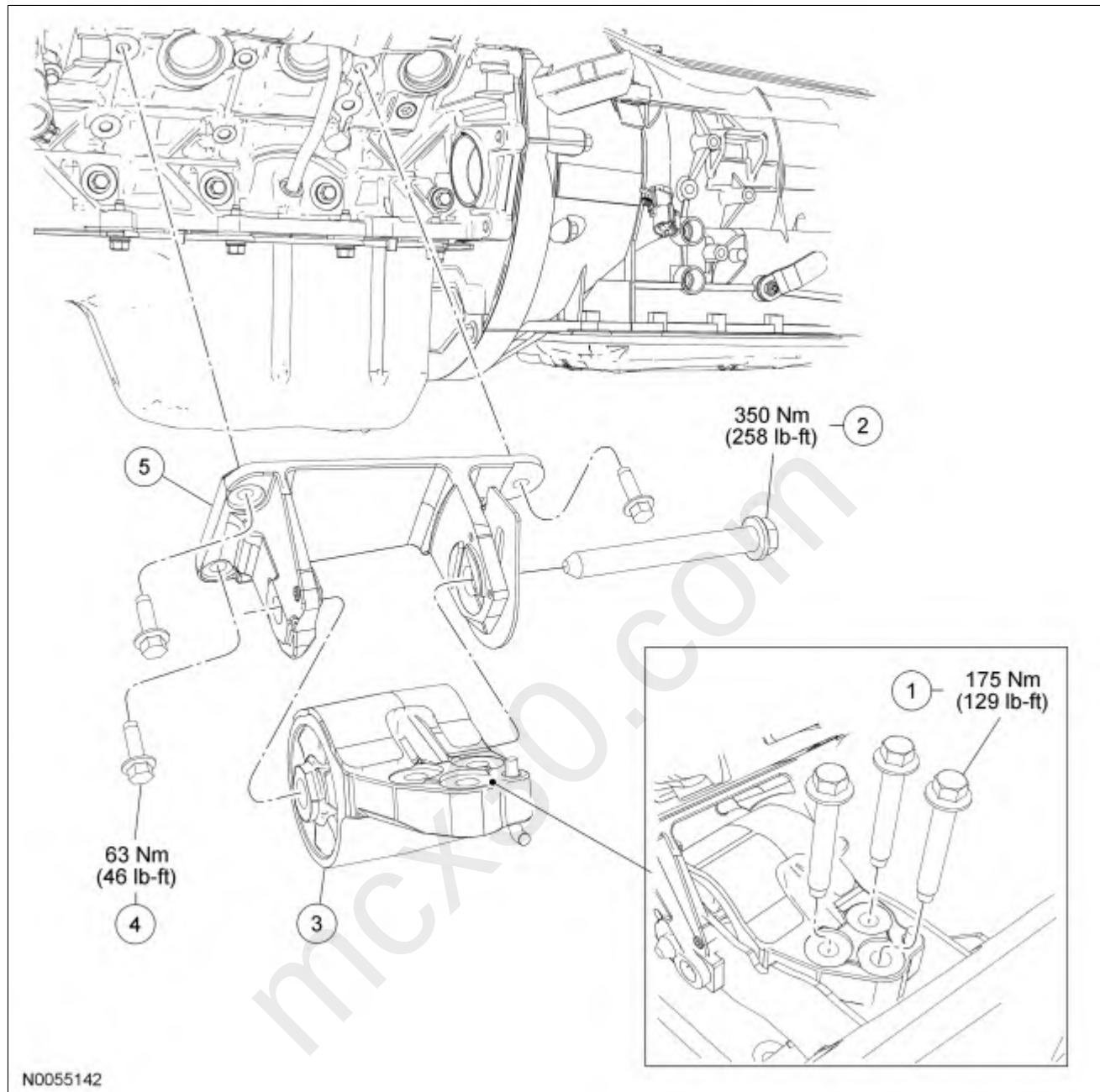
Special Tool(s)

 ST2176-B	Support Bar, Engine 303-F070
 ST3110-A	Support Brackets, Engine 303-1507 or equivalent

Material

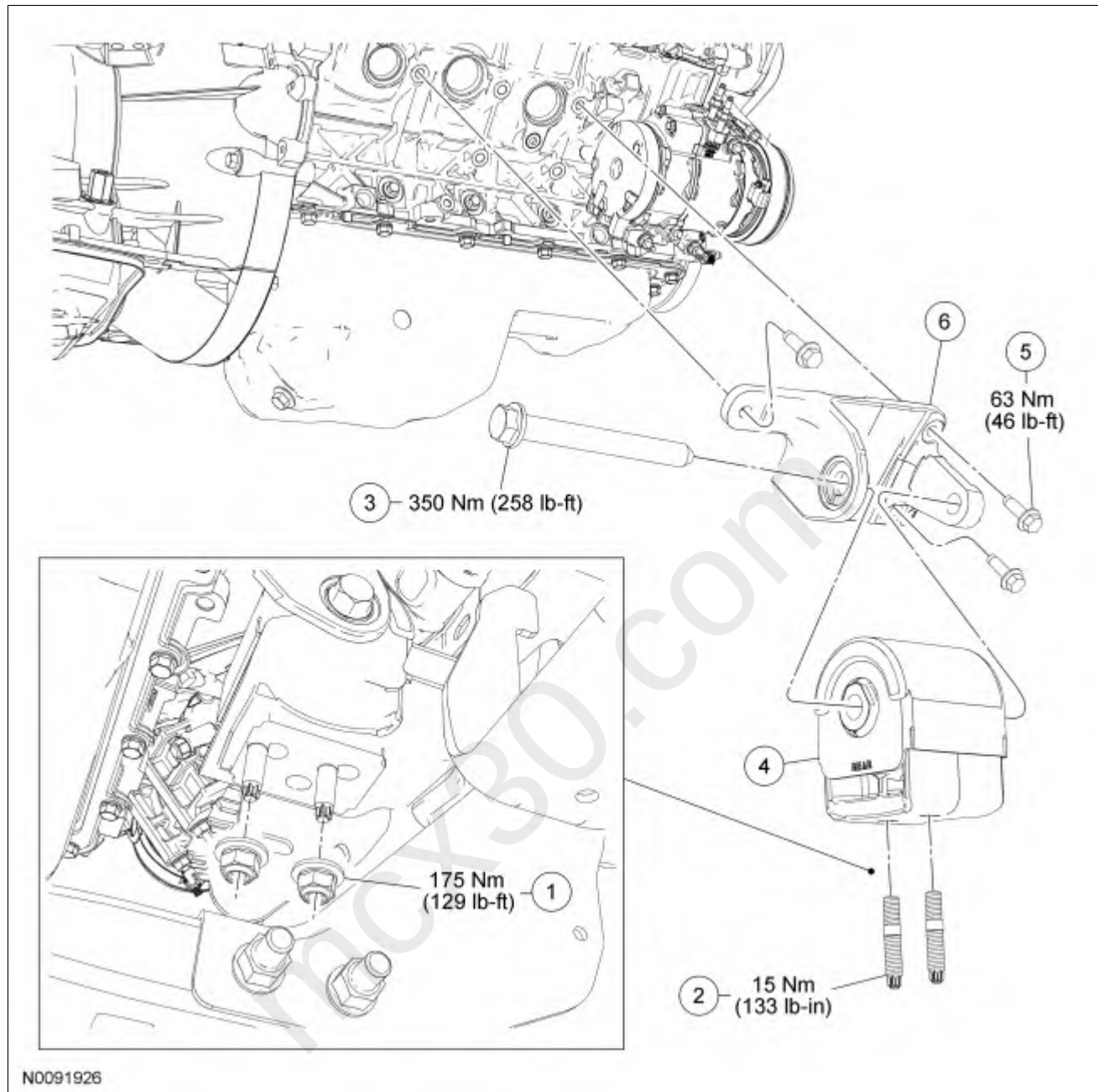
Item	Specification
Threadlock 262 TA-26	WSK-M2G351-A6

LH Engine Support Insulator



Item	Part Number	Description
1	W712805	LH engine support insulator-to-frame bolt (3 required)
2	W711142	LH engine support insulator through bolt
3	6B032	LH engine support insulator
4	W711141	LH engine support insulator-to-cylinder block bracket bolt (3 required)
5	6061	LH engine support insulator-to-cylinder block bracket

RH Engine Support Insulator

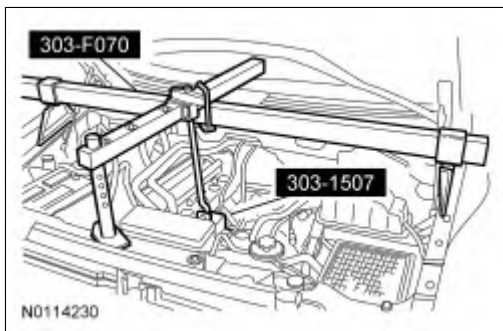


Item	Part Number	Description
1	W707251	RH engine support insulator-to-frame nut (2 required)
2	W711144	RH engine support insulator-to-frame stud bolt (2 required)
3	W711142	RH engine support insulator through bolt
4	6H028	RH engine support insulator
5	W711141	RH engine support insulator-to-cylinder block bracket bolt (3 required)
6	—	RH engine support insulator-to-cylinder block bracket

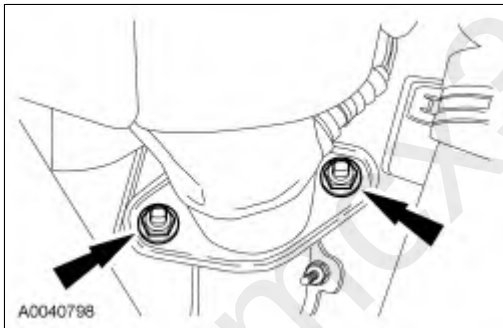
Removal

All engine support insulators

1. With the vehicle in NEUTRAL, position it on a hoist. For additional information, refer to [Section 100-02](#).
2. Remove the intake manifold. For additional information, refer to [Intake Manifold](#) in this section.
3. Remove the starter. For additional information, refer to [Section 303-06](#).
4. Remove the front drive shaft. For additional information, refer to [Section 205-01](#).
5. Install the Engine Support Bar and Engine Support Bracket.

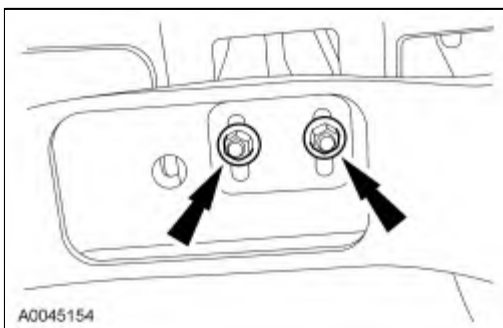


6. Remove the 4 Y-pipe flange nuts (2 RH and 2 LH).



7. **NOTICE:** Only use hand tools when removing the transmission mount-to-crossmember nuts or damage to the transmission mount can occur.

Loosen the 2 transmission mount-to-crossmember nuts.



RH engine support insulator

8. **NOTICE:** Only use hand tools when loosening the engine support insulator through bolts or damage to the engine support insulator-to-cylinder block bracket can occur.

Loosen the LH engine support insulator through bolt.

9. **NOTICE:** Only use hand tools when removing the engine support insulator through bolts or damage to the engine support insulator-to-cylinder block bracket can occur.

Remove the RH engine support insulator through bolt.

10. **NOTICE:** Only use hand tools when removing the engine support insulator nuts or damage to the engine support insulator can occur.

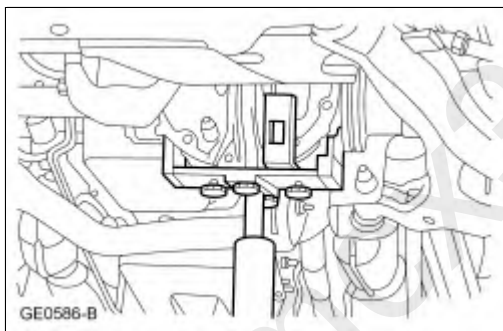
NOTE: If during nut removal the stud bolt is extracted from the engine support insulator, separate the nut from the stud bolt prior to stud bolt installation.

Remove the 2 RH engine support insulator nuts.

11. **NOTICE:** Only use hand tools when removing the engine support insulator stud bolts or damage to the engine support insulator can occur.

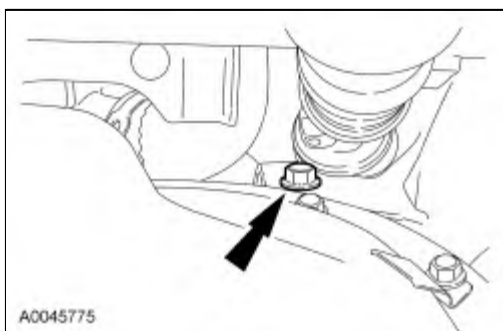
Remove the 2 RH engine support insulator stud bolts.

12. Position a suitable hydraulic jack under the front axle. Securely strap the jack to the axle.

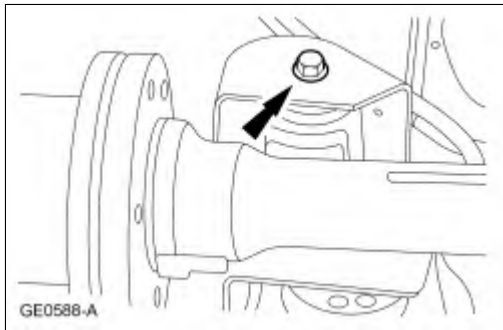


13. **NOTE:** Rotate the steering column so the pinch bolt for the steering column coupling allows clearance for the isolator bolt.

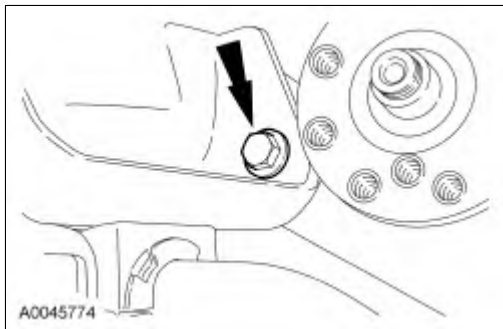
Remove the upper front axle carrier mounting bushing bolt.



14. Remove the axle shaft housing carrier bushing bolt.



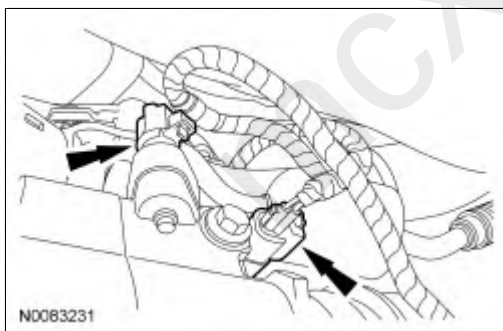
15. Remove the lower front axle carrier mounting bushing bolt.



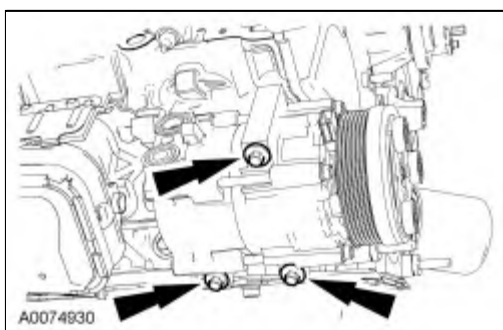
16. **NOTICE:** Use care when lowering the front axle housing or when vacuum lines to the axle solenoid may become disconnected or damaged.

Lower the axle to allow clearance to the RH lower front mount bracket bolt.

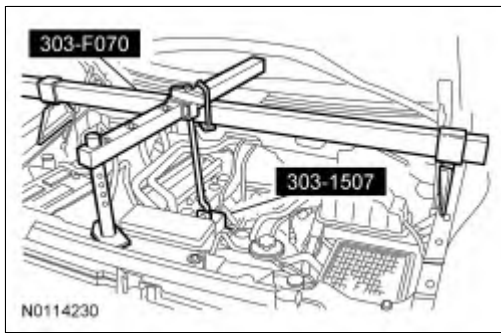
17. Disconnect the A/C compressor electrical connector and the wiring harness retainer.



18. Remove the 3 bolts and position the A/C compressor aside.



19. Using the Engine Support Bar and Engine Support Bracket, raise the engine.



20. Remove the 3 bolts and the RH engine support insulator-to-cylinder block bracket.
21. Remove the RH engine support insulator.

LH engine support insulator

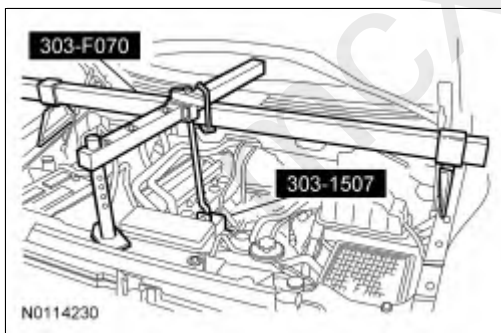
22. **NOTICE:** Only use hand tools when loosening the engine support insulator through bolts or damage to the engine support insulator-to-cylinder block bracket can occur.

Loosen the RH engine support insulator through bolt.

23. **NOTICE:** Only use hand tools when removing the engine support insulator through bolts or damage to the engine support insulator-to-cylinder block bracket can occur.

Remove the LH engine support insulator through bolt.

24. Using the Engine Support Bar and Engine Support Bracket, raise the engine.



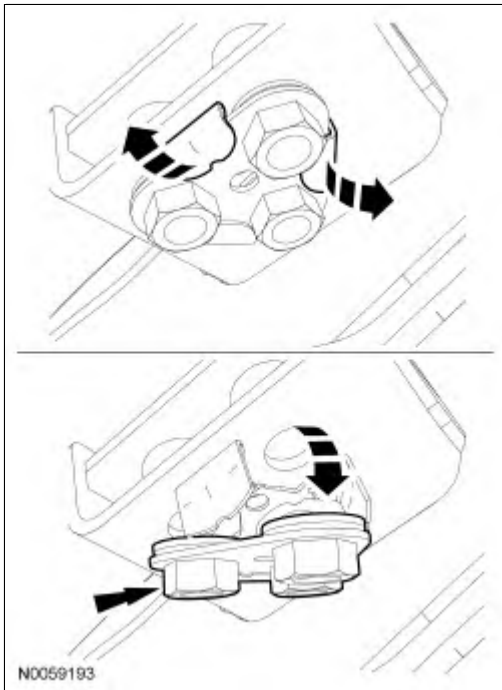
25. **NOTICE:** Only use hand tools when removing the engine support insulator-to-frame bolts or damage to the engine support insulator-to-frame nut plate can occur.

Remove the 3 engine support insulator-to-frame bolts.

- Discard the 3 bolts.

26. Remove the 3 bolts and the LH engine support insulator-to-cylinder block bracket.
27. Remove the LH engine support insulator.
28. Inspect the engine support insulator-to-frame nut plate for thread damage. If the nut plate is damaged, bend 2 tabs back and remove the nut plate. Replace the nut plate with service part number

56190 and bend the 2 tabs back to the original position.



Installation

RH engine support insulator

1. Clean the engine support insulator-to-cylinder block and engine support insulator-to-frame mating surfaces of any dirt or foreign material prior to installation.
2. **NOTICE: Only use hand tools when installing the engine support insulator stud bolts or damage to the engine support insulator can occur.**

Position the RH engine support insulator into the vehicle and install the 2 stud bolts.

- Tighten to 15 Nm (133 lb-in).

3. Position the RH engine support insulator-to-cylinder block bracket and install the 3 bolts.
 - Tighten to 63 Nm (46 lb-ft).

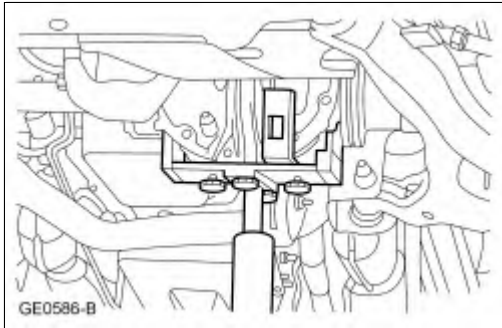
4. **NOTICE: Only use hand tools when installing the RH engine support insulator nuts or damage to the engine support insulator can occur.**

Install the 2 RH engine support insulator nuts.

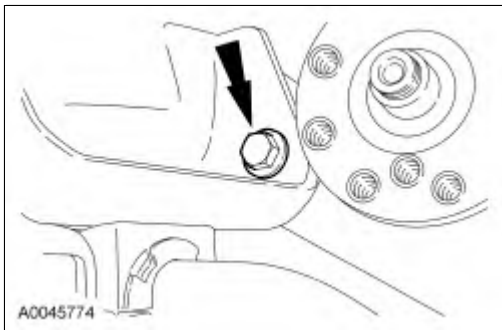
- Tighten to 175 Nm (129 lb-ft).

5. **NOTICE: Use care when positioning the front axle housing or the vacuum lines to the axle solenoid may become disconnected or damaged.**

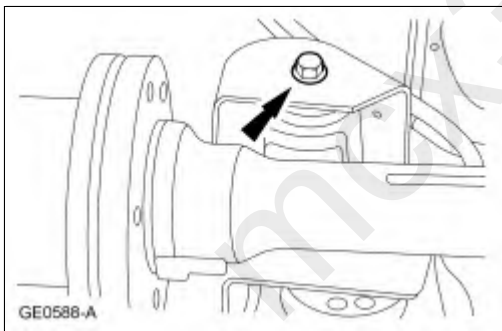
Raise the front axle carrier into position.



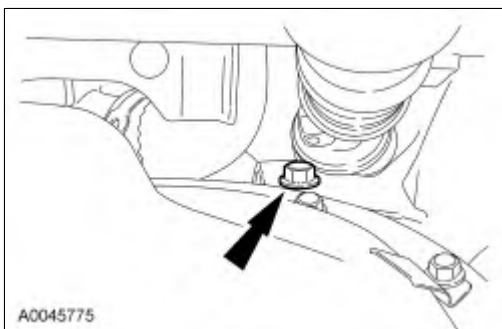
6. Install the lower front axle carrier mounting bushing bolt.
 - Tighten to 115 Nm (85 lb-ft).



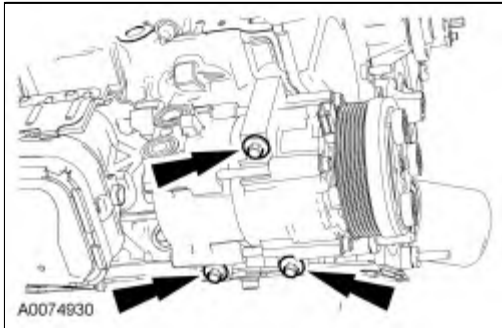
7. Install the axle shaft housing carrier bushing bolt.
 - Tighten to 115 Nm (85 lb-ft).



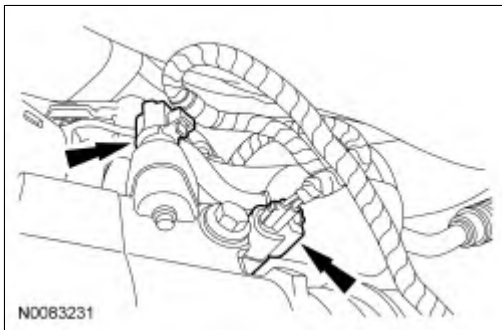
8. Install the upper front axle carrier mounting bushing bolt.
 - Tighten to 115 Nm (85 lb-ft).



9. Position the A/C compressor and install the 3 bolts.
 - Tighten to 25 Nm (18 lb-ft).



10. Connect the A/C compressor electrical connector and the wiring harness retainer.

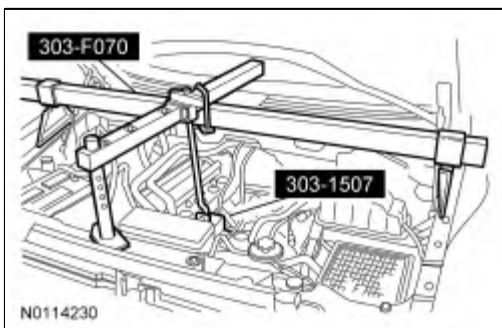


LH engine support insulator

11. Clean the engine support insulator-to-cylinder block and engine support insulator-to-frame mating surfaces of any dirt or foreign material prior to installation.
12. Position the LH engine support insulator and hand start the 3 new engine support insulator-to-frame bolts.
 - Tighten to 175 Nm (129 lb-ft).
13. Position the LH engine support insulator-to-cylinder block bracket and install the 3 bolts.
 - Tighten to 63 Nm (46 lb-ft).

All engine support insulators

14. Using the Engine Support Bar and Engine Support Bracket, lower the engine into position.



15. **NOTICE:** Only use hand tools when installing the engine support insulator through bolt or damage to the engine support insulator-to-cylinder block bracket can occur.

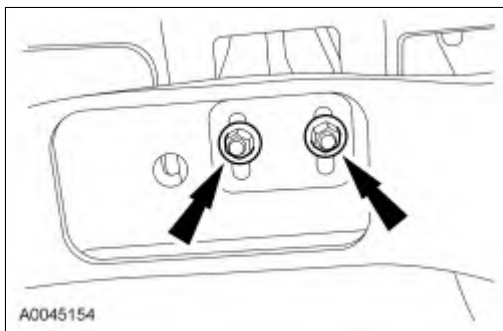
Install the LH and RH engine support insulator through bolts.

- Apply threadlock to the bolt threads prior to installation.
- Tighten to 350 Nm (258 lb-ft).

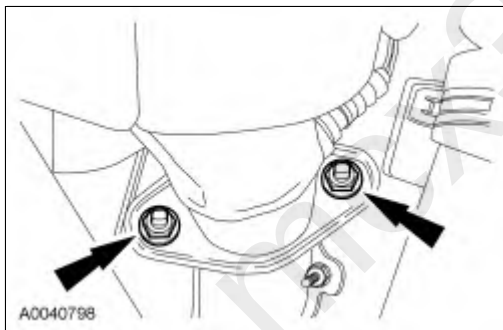
16. **NOTICE:** Only use hand tools when installing the transmission mount-to-crossmember nuts or damage to the transmission mount can occur.

Install the transmission mount-to-crossmember nuts.

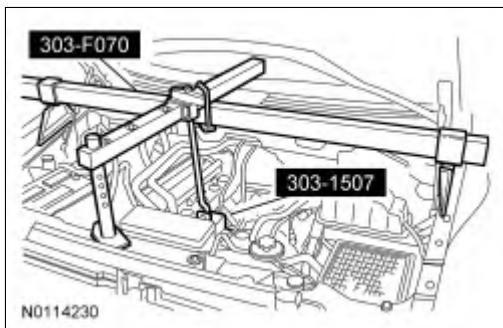
- Tighten to 103 Nm (76 lb-ft).



17. Position the Y-pipe and install the 4 nuts (2 RH and 2 LH).
- Tighten to 40 Nm (30 lb-ft).



18. Remove the Engine Support Bar and Engine Support Bracket.



19. Install the starter. For additional information, refer to [Section 303-06](#).

20. Install the front driveshaft. For additional information, refer to [Section 205-01](#).
 21. Install the intake manifold. For additional information, refer to [Intake Manifold](#) in this section.
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