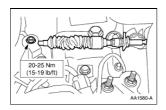
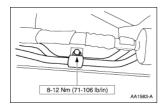


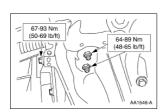
20. Connect the transaxle shift cable.



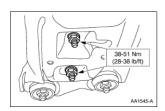
21. Install the bolts.



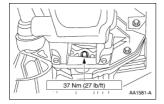
- 22. Install the air cleaner assembly. For additional information, refer to Section 303-12.
- 23. Install the throttle return spring (9B569). For additional information, refer to Section 303-04.
- 24. Install the hood. For additional information, refer to Section 501-02.
- 25. Install the driveshafts (4602). For additional information, refer to  $\underline{\text{Section } 205-04}$ .
- 26. Install the front roll restrictor bolts and nuts.



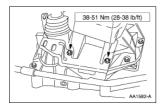
27. Install the rear roll restrictor.



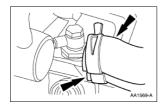
28. Install the torque converter nuts.



29. Install the torque converter inspection cover.



- 30. Connect the power steering pressure line. For additional information, refer to Section 211-02.
- 31. Connect the lower radiator hose (8286) and heater water hose.

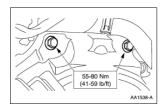


- 32. Install the A/C compressor (19703). For additional information, refer to Section 412-03.
- 33. Install the drive belt (8620). For additional information, refer to Section 303-05.
- 34. Connect the starter motor wiring. For additional information, refer to <u>Section 303-06</u>.
- 35. Install the radiator splash shield. For additional information, refer to Section 501-02.
- 36. Install a new oil bypass filter (6714).
- 37. Install the catalytic converter. For additional information, refer to Section 309-00.
- 38. Connect the heated oxygen sensor (HO2S) (9F472). For additional information, refer to <u>Section</u> 309-00.
- 39. Install the battery tray (10732). For additional information, refer to Section 414-01.
- 40. Install the battery (10653). For additional information, refer to Section 414-01.
- 41. Fill the engine with Super Premium 5W30 SAE Motor Oil XO-5W30-QSP or equivalent meeting Ford specification WSS-M2C153-G.
- 42. Fill and bleed the engine cooling system. For additional information, refer to Section 303-03.
- 43. Fill the transaxle. For additional information, refer to Section 307-01.
- 44. Fill and bleed the power steering system. For additional information, refer to Section 211-02.
- 45. Charge the A/C system. For additional information, refer to Section 412-03.

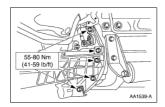
### **INSTALLATION**

# **Engine Manual Transaxle**

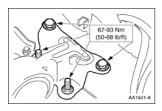
- 1. Install the lifting equipment.
- 2. Remove the engine from the engine stand.
- 3. Install the flywheel.
- 4. Install the transaxle. For additional information, refer to Section 303-08.



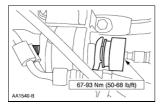
5. Install ten bolts.



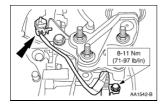
6. Position the engine in the vehicle and install the front engine isolator nuts and bolts.



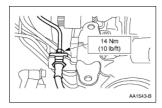
7. Install the front engine support isolator bolt.



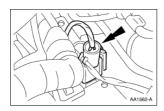
- 8. Remove the floor crane.
- 9. Install the power steering line bracket.
- 10. Connect the fuel charging wiring (9D930).
  - Connect the harness.
  - Install the bolts.



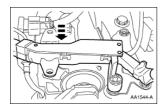
11. Connect the hydraulic clutch line.



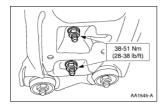
- 12. Connect the knock sensor wiring.
- 13. Connect the generator wiring harness. For additional information, refer to Section 414-02.
- 14. Connect the vehicle speed sensor (VSS) (9E731).



15. Connect the wiring harness guide to the engine and transaxle mount.



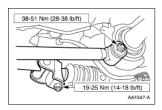
- 16. Raise the vehicle. For additional information, refer to Section 100-02.
- 17. Install the driveshafts (4602). For additional information, refer to Section 205-04.
- 18. Install the rear roll retainer nuts.



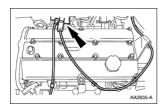
19. Install the front roll restrictor.



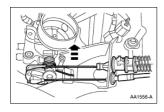
20. Connect the transaxle control rod and support.



- 21. Install a new oil bypass filter.
- 22. Install the catalytic converter. For additional information, refer to Section 309-00.
- 23. Connect the A/C compressor to condenser discharge line (19972). For additional information, refer to Section 412-03.
- 24. Connect the power steering return hose (3A713). For additional information, refer to Section 211-02.
- 25. Connect the heated oxygen sensors (HO2S) (9F472). For additional information, refer to  $\underline{\text{Section}}$  309-00.
- 26. Connect the accelerator cable (9A758), the speed control actuator cable (9A825) and the brackets.



27. Connect the accelerator cable and the speed control actuator cable.

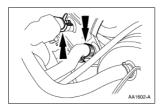


28. Connect the three vacuum lines.

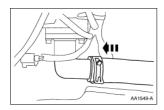


29. Install the radiator (8005), fan motor (8C607) and fan shroud (8146) as an assembly. For additional information, refer to Section 303-03.

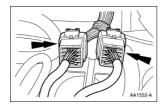
- 30. Connect the fuel lines. For additional information, refer to Section 303-04.
- 31. Connect the heater water hoses (18472).



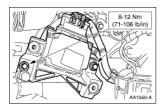
32. Connect the upper radiator hose (8260).



33. Connect the fuel charging wiring to the connectors.



- 34. Install the radiator coolant recovery reservoir (8A080). For additional information, refer to  $\underline{\text{Section}}$  303-03.
- 35. Install the constant control relay module and bracket as an assembly.



- 36. Install the air cleaner assembly. For additional information, refer to Section 303-12.
- 37. Install the air cleaner outlet tube. For additional information, refer to Section 303-12.
- 38. Install the battery tray (10732). For additional information, refer to Section 414-01.
- 39. Install the battery (10653). For additional information, refer to Section 414-01.
- 40. Fill the engine with Super Premium 5W30 SAE Motor Oil XO-5W30-QSP or equivalent meeting Ford specification WSS-M2C153-G.
- 41. Fill and bleed the engine cooling system. For additional information, refer to Section 303-03.
- 42. Fill and bleed the hydraulic clutch system. For additional information, refer to Section 308-00.
- 43. Fill and bleed the power steering system. For additional information, refer to Section 211-00.

- 44. Charge the A/C system. For additional information, refer to  $\underline{\text{Section 412-03}}$ .
- 45. Install the hood. For additional information, refer to  $\underline{Section\ 501\text{-}02}$  .

# **General Specifications**

Item	Specification
Cooling system refill capacities (2.0L Zetec) <sup>a</sup>	Auto transmission 7.1L (7.5 qt) Manual transmission 6.6L (7.0 qt)
Cooling system refill capacities (2.0L SPI) <sup>a</sup>	Auto transmission 7.5L (7.9 qt) Manual transmission 5.5L (5.8 qt)
Radiator pressure test	138 kPa (20 psi)
Radiator cap pressure	110 kPa (16 psi) + 14 kPa (2 psi) -21 kPa (3psi)
Thermostat starts to open (2.0L SPI)	87°C-90°C (188°F-195°F)
Thermostat fully open (2.0L SPI)	100°C (212°F)
Thermostat starts to open (2.0L Zetec)	90°C-94°C (194°F-201°F)
Thermostat fully open (2.0L Zetec)	106°C (223°F)
Premium Long Life Grease XG-1-C or K	ESA-M1C75-B
Ford Premium Engine Coolant E2FZ-19549-AA In Oregon, F5FZ-19549-CC In Canada, Motorcraft CXC-8-B	ESE-M97B44-A
Silicone Rubber (Clear) D6AZ-19562-AA	ESB-M4G92-A

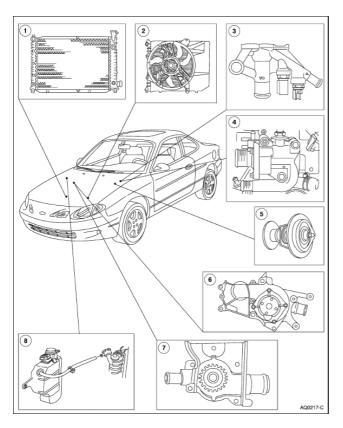
<sup>&</sup>lt;sup>a</sup> To convert to imperial measure, multiply U.S. quarts shown by 0.83.

# **Torque Specifications**

Description	Nm	lb-ft	lb-in
Fan shroud-to-radiator bolts	2.7-5.4		24-48
Water temperature indicator sender unit (2.0 SPI)	17-24	13-17	
Water thermostat housing-to-cylinder head bolts (2.0L Zetec)	10-16	8-12	
Water outlet connection-to-water thermostat housing bolts (2.0L Zetec)	8-11		71-97
Engine shield	7-11		62-97
Water thermostat housing bolts (2.0L SPI)	10-16	8-12	
Water pump bolts (2.0L SPI)	20-30	15-22	
Timing belt tensioner bolt (2.0L SPI)	20-30	15-22	
Water pump bolts (2.0L Zetec)	24	17	
Water temperature indicator sender unit (2.0L Zetec)	10-14		89-124
Block heater screw	3		27

## **Engine Cooling**

## **Component Location**



Item	Part Number	Description
1	8005	Radiator
2	8C607	Fan shroud
3		Water thermostat housing (2.0L SPI)
4		Water thermostat housing (2.0L Zetec)
5	8575	Thermostat
6	8501	Water pump (2.0L Zetec)
7	8501	Water pump (2.0L SPI)
8	8A080	Coolant recovery reservoir

#### **Radiator**

The radiator (8005):

- is a crossflow-type with an aluminum core and two glass-filled nylon end tanks.
- is equipped with automatic transmission fluid cooler which is an integral part of the RH end tank.

With the introduction of a new radiator braze process:

- there is no approved service method for repairing radiator core leaks.
- due to the type of flux used during brazing, the two component epoxy materials previously used will not adhere to the aluminum radiator core.
- if the radiator core leaks, the radiator should be replaced.

Engine Cooling 723