

TORQUE SPECIFICATIONS

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Application	Ft. Lbs. (N.m)
Camshaft Sprocket Bolt	82-95 (110-130)
Connecting Rod Bolt ⁽¹⁾	
Step 1	15-18 (20-25)
Step 2	30-33 (41-45)
Step 3	Additional 90-120 Degrees
Crankshaft Damper Bolt	
Step 1	66 (90)
Step 2	Loosen 360 Degrees
Step 3	35-39 (47-53)
Step 4	Additional 85-90 Degrees
Cylinder Head Bolt ⁽¹⁾ ⁽²⁾	
Step 1	28-31 (37-43)
Step 2	Additional 85-95 Degrees
Step 3	Loosen 360 Degrees
Step 4	28-31 (37-43)
Step 5	Additional 85-95 Degrees
Step 6	Additional 85-95 Degrees
EGR Tube Fitting-To-Exhaust Manifold	33-48 (45-65)
EGR Tube-To-Exhaust Manifold	26-33 (35-45)
EGR Valve-To-Intake Manifold Bolt	15-22 (20-30)
Engine Mount Through Bolt	15-22 (20-30)
Engine-To-Transmission Bolts	30-44 (41-60)
Exhaust Manifold Bolt ⁽³⁾	17-20 (23-27)
Flexplate-To-Crankshaft Bolt	54-64 (73-87)
Front Cover Bolt/Stud ⁽⁴⁾	
Romeo Engine	15-22 (20-30)
Windsor Engine	
Bolts 1-5	15-22 (20-30)
Bolts 6-15	29-40 (39-54)
Intake Manifold Bolt ⁽⁵⁾	15-22 (20-30)
Main Bearing Cap Bolt ⁽¹⁾ ⁽⁶⁾	
Step 1	27-32 (37-43)
Step 2	Additional 85-95 Degrees
Main Bearing Cap Side Bolt ⁽⁶⁾	
Romeo Engine	
Step 1	(7)
Step 2	14-17 (19-23)
Windsor Engine ⁽¹⁾	
Step 1	20-24 (27-33)

Step 2	Additional 85-95 Degrees
Oil Pan Bolt ⁽⁸⁾	
Step 1	(10)
Step 2	15 (20)
Step 3	Additional 60 Degrees
Oxygen Sensor	27-33 (37-45)
Pick-Up Tube-To-Main Bearing Cap Nut	15-22 (20-30)
Power Steering Pump-To-Mount Nut	15-22 (20-30)
Thermostat Housing Bolt	15-22 (20-30)
Timing Chain Tensioner Bolt	15-22 (20-30)
Torque Converter Nut	23-25 (30-35)
Water Pump Bolt	15-22 (20-30)
Water Pump Pulley Bolt	15-22 (20-30)
	INCH Lbs. (N.m)
Camshaft Cap Bolt ⁽⁹⁾	71-106 (8-12)
Camshaft Cover Bolt	71-106 (8-12)
Chain Guide Bolt	71-106 (8-12)
Crankshaft Seal Retainer Bolt	71-106 (8-12)
Fuel Pressure Regulator Bolt	27-35 (3-4)
Fuel Rail Bolt	71-106 (8-12)
Main Bearing Cap Jack Screw ⁽⁵⁾	80-97 (9-11)
Oil Pump-To-Cylinder Block Bolt	71-106 (8-12)
Pick-Up Tube-To-Oil Pump Bolt	71-106 (8-12)
Throttle Body Bolt	71-106 (8-12)
Upper Intake Manifold-To-Lower Intake Manifold Bolt	
Step 1	18 (2)
Step 2	71-106 (8-12)
Valve Cover Bolt	71-106 (8-12)

- (1) Use new bolts. DO NOT reuse bolts.
- (2) Tighten bolts in sequence. See **Fig. 5** or **Fig. 6**.
- (3) Tighten bolts in sequence. See **Fig. 4**.
- (4) Tighten bolts in sequence. See **Fig. 11**.
- (5) Tighten bolts in sequence. See **Fig. 3**.
- (6) Tighten bolts in sequence. See **Fig. 94** or **Fig. 93**.
- (7) Tighten bolts to 89 INCH lbs. (10 N.m).
- (8) Tighten bolts in sequence. See **Fig. 56**.
- (9) Tighten bolts in sequence. See **Fig. 51**.
- (10) Tighten bolts to 18 INCH lbs. (2 N.m).