

**COOLING SYSTEM All Models**

|                                 |   |
|---------------------------------|---|
| Type of System .....            | Pressurized liquid w/recirculating by-pass  |
| Water Pump:                     |   |
| Type .....                      | Centrifugal   |
| Drive .....                     | V-belt  |
| Belt Deflection (tension) ..... | 10 to 15 mm (7/16 to 9/16 inch) when<br>9 - 11 kg (20 - 25 lbs.) is applied<br>midway between pulleys |
| Fan Diameter .....              | 340 mm (13.4 in.)   |
| Thermostat:                     |   |
| Starts to Open .....            | 82°C (180°F)  |
| Fully Open .....                | 95°C (203°F)  |
| Radiator Cap Pressure           |   |
| Rating .....                    | 0.9 bar (13 psi)  |
| Coolant .....                   | Ethylene glycol and water in a 50/50 mixture  |
| Capacity .....                  | 5.6 Liters (5.9 Qts.)   |

**BOLT TORQUE VALUES**

|                             |  |
|-----------------------------|--|
| Description .....           | All Models                               |
| Connecting Rod Caps .....   | 49.0 - 53.9 N·m (36.2 - 39.8 ft lbs)     |
| Flywheel Bolts .....        | 59.0 - 69.0 N·m (43.4 - 50.6 ft lbs)     |
| Main Bearing Holder .....   | 49.0 - 53.9 N·m (36.2 - 39.8 ft lbs)     |
| Bearing Holder              |  |
| Retaining Bolts .....       | 49.0 - 53.9 N·m (36.2 - 39.8 ft lbs)     |
| Rear Bearing Cover          |  |
| Retaining Bolts .....       | 12.7 - 16.7 N·m (9.4 - 12.3 ft lbs)      |
| Camshaft Assembly           |  |
| Retaining Plate .....       | 8.8 - 12.7 N·m (6.5 - 9.4 ft lbs)        |
| Crankshaft Pulley Nut ..... | 274.4 - 333.2 N·m (202.5 - 245.9 ft lbs) |
| Oil Pump Relief Valve ..... | 58.8 - 68.6 N·m (43.4 - 50.6 ft lbs)     |
| Front Mounting Bolts .....  | 4.9 - 6.86 N·m (3.62 - 5.06 ft lbs)      |
| Injection Pump Delivery     |  |
| Valve Holder .....          | 39.2 - 44.1 N·m (28.9 - 32.5 ft lbs)     |
| Oil Transfer Tube           |  |
| Banjo Bolts .....           | 98 - 12.7 N·m (7.2 - 9.4 ft lbs)         |
| Head Bolts .....            | 88 - 94 N·m (65.1 - 68.7 ft lbs)         |

## METRIC BOLT TORQUE SPECIFICATIONS

| Bolt Size | Grade No. | Coarse Thread |             |              | Fine Thread |             |              |
|-----------|-----------|---------------|-------------|--------------|-------------|-------------|--------------|
|           |           | Pitch (mm)    | Foot-Pounds | Newton-Meter | Pitch (mm)  | Foot-Pounds | Newton-Meter |
|           | 4T        |               | 3.6-5.1     | 4.9-6.9      |             |             |              |
| M6        | 7T        | 1.0           | 6.1-8.3     | 8.3-11.3     | ---         | ---         | ---          |
|           | 10T       |               | 8.7-11.6    | 11.8-15.7    |             |             |              |
|           | 4T        |               | 9.4-12.3    | 12.7-16.7    |             | 11.2-14.8   | 15.2-20.1    |
| M8        | 7T        | 1.25          | 16.6-21.0   | 22.6-28.4    | 1.0         | 19.5-25.3   | 26.5-34.3    |
|           | 10T       |               | 21.0-26.8   | 28.4-36.3    |             | 22.4-29.7   | 30.4-40.2    |
|           | 4T        |               | 18.8-24.6   | 25.5-33.3    |             | 21.0-26.8   | 28.4-36.3    |
| M10       | 7T        | 1.5           | 32.5-41.2   | 44.1-55.9    | 1.25        | 36.2-46.3   | 49.0-62.8    |
|           | 10T       |               | 39.8-51.4   | 53.9-69.6    |             | 42.7-54.2   | 57.9-73.5    |
|           | 4T        |               | 27.5-34.7   | 37.3-47.1    |             | 31.8-40.5   | 43.1-54.9    |
| M12       | 7T        | 1.75          | 48.5-61.5   | 65.7-83.4    | 1.25        | 55.0-69.4   | 74.5-94.1    |
|           | 10T       |               | 68.0-85.4   | 92.2-116     |             | 73.1-93.3   | 99.0-127     |
|           | 4T        |               | 46.3-59.3   | 62.8-80.4    |             | 51.4-64.4   | 69.6-87.3    |
| M14       | 7T        | 2.0           | 76.7-96.9   | 104-131      | 1.5         | 86.1-109    | 117-148      |
|           | 11T       |               | 102-129     | 139-175      |             | 108-137     | 147-186      |
|           | 4T        |               | 63.6-81.0   | 86.3-110     |             | 67.3-84.6   | 91.2-115     |
| M16       | 7T        | 2.0           | 110-136     | 140-184      | 1.5         | 116-142     | 157-192      |
|           | 11T       |               | 152-188     | 206-255      |             | 163-199     | 221-270      |
|           | 4T        |               | 83.9-104    | 114-141      |             | 96.9-120    | 131-163      |
| M18       | 7T        | 2.0           | 145-174     | 196-235      | 1.5         | 170-206     | 230-279      |
|           | 11T       |               | 203-246     | 275-333      |             | 221-271     | 299-368      |
|           | 4T        |               | 106-132     | 144-141      |             | 127-156     | 172-211      |
| M20       | 7T        | 2.5           | 177-213     | 240-289      | 1.5         | 203-246     | 275-333      |
|           | 11T       |               | 268-325     | 363-441      |             | 293-358     | 397-485      |