# TECHNICAL DATA

## ENGINE

| | |
|---|---|
| Displacement | 573 cc (35.0 cu-in) × 2 rotors |
| Compression ratio | 9.4 : 1 |
| Compression pressure | |
| Limit | 600 kpa (85 lb/in²) at 250 rpm |
| Max. permissible difference between chambers | 150 kpa (21 lb/in²) |
| Port timing | |
| Intake opens | 32° ATDC |
| Intake closes | 40° ABDC |
| Exhaust opens | 75° BBDC |
| Exhaust close | 38° ATDC |
| Side housings (Front, intermediate and rear housings) | |
| Width standard | |
| Front | 40 mm (1.575 in) |
| Intermediate | 50 mm (1.969 in) |
| Rear | 60 mm (2.362 in) |
| Limit of distortion | 0.40 mm (0.0016 in) |
| Limit of wear | |
| Sliding surface | 0.10 mm (0.0039 in) |
| Rotor housing | |
| Width | 70 mm (2.7559 in) |
| Max. permissible difference in width | 0.06 mm (0.0024 in) |
| Rotor | |
| Width | 69.8 mm (2.748 in) |
| Clearance of side housing and rotor (△R) | |
| Standard | 0.12 ~ 0.19 mm (0.0047 ~ 0.0075 in) |
| Limit | 0.10 mm (0.004 in) |
| Apex seal | |
| Length | 69.8 mm (2.748 in) |
| Width | 3.0 mm (0.1181 in) |
| Height | |
| Standard | 8.5 mm (0.3347 in) |
| Limit | 7.0 mm (0.2756 in) |
| Clearance of apex seal and rotor groove (△G) | |
| Standard | 0.05 ~ 0.09 mm (0.0020 ~ 0.0035 in) |
| Limit | 0.15 mm (0.0059 in) |
| Apex seal spring | |
| Free height | |
| Standard | 6.9 mm (0.2717 in) or more |
| Limit | 5.5 mm (0.2165 in) |
| Side seal | |
| Thickness | 1.0 mm (0.0394 in) |
| Height | 3.5 mm (0.1378 in) |
| Clearance of side seal and rotor groove (△W) | |
| Standard | 0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in) |
| Limit | 0.10 mm (0.0039 in) |
| Clearance of side seal and corner seal (△E) | |
| Standard | 0.05 ~ 0.15 mm (0.0020 ~ 0.0059 in) |
| Limit | 0.40 mm (0.0157 in) |
| Side seal protrusion | More than 0.5 mm (0.0197 in) |
| Oil seal | |
| Height | 5.6 mm (0.2205 in) |
| Contact width of oil seal lip | Less than 0.5 mm (0.020 in) |
| Oil seal protrusion | More than 0.5 mm (0.020 in) |
| Corner seal | |
| Outer diameter | 11.0 mm (0.4331 in) |
| Height | 7.0 mm (0.2756 in) |
| Corner seal protrusion | More than 0.5 mm (0.020 in) |
| Main bearing clearance | |
| Standard | 0.04 ~ 0.08 mm (0.0016 ~ 0.0031 in) |
| Wear limit | 0.10 mm (0.0039 in) |
| Rotor bearing clearance | |
| Standard | 0.04 ~ 0.08 mm (0.0016 ~ 0.0031 in) |
| Wear limit | 0.10 mm (0.0039 in) |
| Eccentric shaft | |
| Eccentricity of rotor journal | 15.0 mm (0.5906 in) |
| Main journal diameter | 43 mm (1.6929 in) |
| Rotor journal diameter | 74 mm (2.9134 in) |
| Max. permissible run-out | 0.06 mm (0.0024 in) |
| End play | |
| Standard | 0.04 ~ 0.07 mm (0.0016 ~ 0.0028 in) |
| Limit | 0.09 mm (0.0035 in) |
| Alternator belt tension (slack) (Between alternator and eccentric shaft pulley) | |
| Belt deflection | 15 ± 2 mm (0.59 ± 0.08 in) |
| Air pump belt tension (slack) (Between air pump and water pump pulley) | |
| Belt deflection | 12 ± 1 mm (0.47 ± 0.04 in) |

## LUBRICATING SYSTEM

| | |
|---|---|
| Oil pump | |
| Type | Rotor |
| Feeding capacity at 1,000 rpm of engine | 7.0 liters/min. (7.4 U.S. quarts/min. 6.2 Imp. quarts/min.) |
| Oil pump driven by | Chain and sprocket |
| Limit of chain slack | 12 mm (0.47 in) |
| Outer rotor and body Clearance | |
| Standard | 0.20 ~ 0.25 mm (0.0079 ~ 0.0098 in) |
| Wear limit | 0.30 mm (0.0118 in) |
| Clearance between rotor lobes | |
| Standard | 0.01 ~ 0.09 mm (0.0004 ~ 0.0035 in) |
| Wear limit | 0.15 mm (0.0059 in) |
| Rotor end float | |
| Standard | 0.03 ~ 0.13 mm (0.0012 ~ 0.0051 in) |
| Wear limit | 0.15 mm (0.0059 in) |
| Oil pressure at 3,000 rpm of engine | 450 ~ 550 kpa (64 ~ 78 lb/in²) |

| | |
|---|---|
| Oil pressure at idle speed of engine | 90 ~ 270 kpa (12.8 ~ 38.4 lb/in²) |
| Pressure regulator valve (Rear housing) | |
| Operating pressure | 500 kpa (71.1 lb/in²) at 3,000 rpm of engine |
| Free length of spring | 46.4 mm (1.8267 in) |
| Pressure control valve (Front cover) | |
| Operating pressure | 800 kpa (114 lb/in²) |
| Free length of spring | 69.6 mm (2.74 in) |
| By-pass valve (Oil cooler) | |
| Opening pressure | 300 kpa at 60°C (42.7 lb/in² at 140°F) |
| Oil filter | |
| Type | Full flow, cartridge |
| Relief valve opens at | 80 ~ 120 kpa (11 ~ 17 lb/in²) |
| Oil metering pump | |
| Feeding capacity of 2,000 rpm of engine | 2.0 ~ 2.4 cc/6 min. (0.068 ~ 0.081 U.S. oz/6 min.) |
| Lubricant | |
| Classification | A.P.I. Service SD, SE or SF |
| Above −10°C (15°F) | SAE 20W-40 or 20W-50 |
| −25°C ~ 30°C (−13°F ~ 86°F) | SAE 10W-30 |
| Above −25°C (−13°F) | SAE 10W-40 or 10W-50 |
| Below −20°C (−4°F) | SAE 5W-20 |
| Below 0°C (32°F) | SAE 5W-30 |
| Oil capacity | |
| Full capacity | 4.6 liters (4.9 U.S. quarts / 4.0 Imp. quarts) |
| Oil pan capacity | 4.2 liters (4.4 U.S. quarts / 3.7 Imp. quarts) |

## COOLING SYSTEM

| | |
|---|---|
| Water pump | |
| Type | Centrifugal impeller |
| Feeding capacity at 6,500 rpm of engine | 150 ~ 160 liters/min (39.6 ~ 42.3 U.S. gal/min. / 33.0 ~ 35.2 Imp. gal/min.) |
| Pump driven by | "V" belt |
| Pulley ratio of eccentric shaft and pump | 1 : 1.18 |
| Fan | |
| Fan diameter | 410 mm (16.1 in) |
| Number of fan blades | 7 |
| Fan drive | |
| Standard revolution of fan | Less than 800 rpm at 4,200 rpm of engine |
| Thermostat | |
| Type | Wax pellet |
| Starts to open | 82 ± 1.5°C (180 ± 2.7°F) |
| Fully opens at | 95°C (203°F) |
| Lift | 8 ~ 10 mm (0.3 ~ 0.4 in) |
| Radiator | |
| Type | Corrugated fin, with expansion tank |
| Pressure cap opens at | 90 ± 15 kpa (13.0 ± 2 lb/in²) |
| Cooling capacity | |
| With heater | 9.5 liters (10 U.S. quarts / 8.4 Imp. quarts) |
| Without heater | 8.5 liters (9.0 U.S. quarts / 7.5 Imp. quarts) |

## FUEL SYSTEM

| | |
|---|---|
| Fuel tank capacity | 63 liters (16.4 U.S. gal / 13.9 Imp. gal) |
| Fuel pump | |
| Type | Motor |
| Fuel pressure | 20 ~ 25 kpa (2.84 ~ 3.55 lb/in²) |
| Feeding capacity | More than 1,400 cc/min. (1.48 U.S. quarts/min. / 1.23 Imp. quarts/min.) |
| Fuel filter | Cartridge, paper element |
| Carburetor | |
| Type | Down draft, 2 stage 4 barrel |
| Throat diameter | |
| Primary | 28 mm (1.10 in) |
| Secondary | 34 mm (1.34 in) |
| Venturi diameter | |
| Primary | 20 X 13 X 6.5 mm (0.79 X 0.51 X 0.26 in) |
| Secondary | 28 X 10 mm (1.10 x 0.39 in) |

| | Manual transmission | Automatic transmission |
|---|---|---|
| Main jet | | |
| Primary | # 92 | # 91 |
| Secondary | # 160 | # 160 |
| Main air bleed | | |
| Primary | # 70 | # 60 |
| Secondary | # 140 | # 140 |
| Slow jet | | |
| Primary. | # 46 | # 46 |
| Secondary | # 110 | # 110 |
| Slow air bleed | | |
| Primary No. 1 | # 70 | # 70 |
| No. 2 | # 180 | # 160 |
| Secondary No. 1 | # 160 | # 160 |
| No. 2 | # 60 | # 60 |
| Vacuum jet | | |
| Primary | 1.8 mm (0.0709 in) | 1.8 mm (0.0709 in) |
| Fast idle ajustment (Clearance between primary throttle valve and bore when choke knob is fully pulled) | 1.0 ~ 1.2 mm (0.039 ~ 0.047 in) | |
| Float level (from surface of gasket) | 16.0 ± 0.5 mm (0.63 ± 0.020 in) | |
| Float drop (from surface of gasket) | 51 ± 0.5 mm (2.0 ± 0.02 in) | |
| Idle speed | | |
| Manual transmission | 750 rpm | |
| Automatic transmission ("D" range) | 750 rpm | |
| Sub-zero starting assist fluid | Anti-freeze 90% Water 10% | |

## ELECTRICAL SYSTEM

| | |
|---|---|
| Battery | |
| Type | |
| California | 50D20R |
| Except for California | |
| Manual transmission | 50D20R, 65D23R |
| Automatic transmission | 65D23R |
| Capacity (20hours Rate) | 55 amp. 65D23R<br>50 amp. 50D20R |
| Voltage | 12 Volt |
| Terminal ground | Negative |
| Specific gravity at 20°C (68°F) | 50D20R, 65D23R |
| Fully charged | 1.280 |
| Recharged at | 1.220 |
| Distributor | |
| Air gap | 0.5 ~ 0.9 mm<br>(0.020 ~ 0.035 in) |
| Centrifugal advance | |
| Leading | Starts:<br>0° at 500 rpm<br>Maximum:<br>10° at 1,750 rpm |
| Trailing | Starts:<br>0° at 500 rpm<br>Maximum:<br>10° at 1,750 rpm |
| Vacuum advance | |
| Leading | Starts:<br>0° at −100 mm-Hg<br>Maximum:<br>4.5° at −190 mm-Hg |
| Trailing | Start:<br>0° at −100 mm-Hg<br>Maximum:<br>15° at −400 mm-Hg |
| Condenser capacity | 0.24 ~ 0.30 μF |
| Ignition timing | |
| Leading | 0° ATDC |
| Trailing | 20° ATDC |
| Timing mark location | Eccentric shaft pulley |
| Spark plug | |
| Type | NGK: BR7EQ14, BR8EQ14<br>BR9EQ14<br>NIPPON DENSO<br>W22EDR14<br>W25EDR14<br>W27EDR14 |
| Initial gap | 1.4 ± 0.05 mm<br>(0.055 ± 0.002 in) |
| Alternator | |
| Ground | Negative |
| Rated output | 12V 50A |
| Number of poles | 12 |
| Load test | |
| Voltage | 13.5V |
| Current | 36 amp. |
| Revolution | Less than 2,500 rpm |
| Number of brushers | 2 |
| Brush length | 18 mm (0.71 in) |
| Wear limit | 8 mm (0.31 in) |
| Brush spring pressure | 3.15 ~ 4.26 N (11 ~ 15 oz) |
| Pulley ratio of eccentric shaft and alternator | 1 : 2.08 |

| | |
|---|---|
| Ignition coil (Leading) | |
| Type | LB-84 or FTC-3 |
| Primary resistance | 0.9 ± 0.09 Ω at 20°C (68°F) |
| Ignition coil (Trailing) | |
| Type | LB-84 or FTC-3 |
| Primary resistance | 0.9 ± 0.09 Ω at 20°C (68°F) |

| | Manual transmission | Automatic transmission |
|---|---|---|
| Starting motor | | |
| Capacity | 1.2 KW | 2.0 KW |
| Lock test | | |
| Voltage | 5.0 volt | 4.0 volt |
| Current | Less than 420 amp. | Less than 1,100 amp. |
| Torque | 9.6 N-m (6.9 ft-lb) | 31 N-m (22.4 ft-lb) |
| Free running test | | |
| Voltage | 11.5 volt | 11.5 volt |
| Current | Less than 60 amp. | Less than 100 amp. |
| Speed | More than 6,500 rpm | More than 3,500 rpm |
| Number of brushes | 3 | 4 |
| Brush length | 17 mm (0.67 in) | 17 mm (0.67 in) |
| Wear limit | 11.5 mm (0.45 in) | 11.5 mm (0.45 in) |
| Standard spring tension | 14 ~ 26N (49 ~ 92 oz) | 14 ~ 26N (49 ~ 92 oz) |
| Control switch | Solenoid | Solenoid |
| Voltage required to close solenoid contacts | Less than 8 volt | Less than 8 volt |
| Undercutting mica | 0.5 ~ 0.8 mm (0.020 ~ 0.031 in) | 0.5 ~ 0.8 mm (0.020 ~ 0.031 in) |
| Clearance between armature shaft and bush | Less than 0.2 mm (0.008 in) | 0 mm (0.008 in) |
| Armature shaft end play | 0.1 ~ 0.5 mm (0.004 ~ 0.02 in) | 0.1 ~ 0.5 mm (0.004 ~ 0.02 in) |
| Clearance between pinion and stop collar | 0.5 ~ 2.0 mm (0.020 ~ 0.079 in) | 0.5 ~ 2.0 mm (0.020 ~ 0.079 in) |

## CLUTCH

| | |
|---|---|
| Clutch pedal | |
| Free play (at pedal pad) | 0.6 ~ 3.1 mm<br>(0.024 ~ 0.122 in) |
| Engagement height (from floor) | More than 75 mm (2.95 in) |

| | |
|---|---|
| Master cylinder | |
| Bore | 15.87 mm (0.625 in) |
| Clearance between piston and bore | |
| Standard | 0.032 ~ 0.102 mm (0.0013 ~ 0.0040 in) |
| Limit | 0.15 mm (0.006 in) |
| Release cylinder | |
| Bore | 19.05 mm (0.750 in) |
| Clearance between piston and bore | |
| Standard | 0.040 ~ 0.125 mm (0.0016 ~ 0.0049 in) |
| Limit | 0.15 mm (0.006 in) |
| Clutch disc | |
| Thickness limit | 7.0 mm (0.276 in) |
| Rivet depth limit | 0.3 mm (0.012 in) |
| Lateral run-out limit | 1.0 mm (0.039 in) |
| Diaphragm | |
| Finger out of alignment Limit | 1.0 mm (0.039 in) |
| Finger groove wear depth Limit | 1.0 mm (0.039 in) |

## MANUAL TRANSMISSION

| | |
|---|---|
| Gear ratio | |
| First | 3.674 |
| Second | 2.217 |
| Third | 1.432 |
| Fourth | 1.000 |
| Reverse | 3.542 |
| Fifth | 0.825 |
| Oil capacity | 2.0 liters (2.1 U.S. quarts / 1.8 Imp. quarts.) |
| Main shaft | |
| Max. permissible run-out | 0.03 mm (0.0012 in) |
| Clearance between main shaft and gear (or bush) | |
| Wear limit | 0.15 mm (0.006 in) |
| Reverse idle gear | |
| Clearance between reverse idle gear bush and shaft | |
| Wear limit | 0.15 mm (0.006 in) |
| Shift fork and rod | |
| Clearance between shift fork and clutch sleeve | |
| Wear limit | 0.5 mm (0.020 in) |
| Clearance between shift rod gate and control lever | |
| Wear limit | 0.8 mm (0.031 in) |
| Synchronizer ring | |
| Clearance between synchronizer ring and side of gear when fitted | |
| Standard | 1.5 mm (0.059 in) |
| Wear limit | 0.8 mm (0.031 in) |
| Lubricant | |
| Above −18°C (0°F) | A.P.I. Service GL-4 or GL-5 SAE90 or 80W-90 |
| Below −18°C (0°F) | A.P.I. Service GL-4 or GL-5 SAE80 or 80W-90 |

## AUTOMATIC TRANSMISSION

| | |
|---|---|
| Gear ratio | |
| Low | 2.458 |
| Second | 1.458 |
| Top | 1.000 |
| Reverse | 2.181 |
| Fluid type | M2C33F (Type F) |
| Fluid capacity | 6.2 liters (6.6 U.S. quarts / 5.5 Imp. quarts) |
| Drive plate run-out | |
| Limit | 0.5 mm (0.020 in) |
| Oil pump | |
| Side play of inner gear and outer gear | |
| Limit | 0.08 mm (0.003 in) |
| Clearance between outer gear and crescent | |
| Limit | 0.25 mm (0.010 in) |
| Clearance between outer gear and housing | |
| Limit | 0.25 mm (0.010 in) |
| Side clearance between oil seal ring and groove on oil pump cover | 0.04 ~ 0.16 mm (0.002 ~ 0.006 in) |
| Front clutch | |
| Thickness of drive plate Limit | 1.4 mm (0.055 in) |
| Total clearance measured between retaining plate and snap ring | 1.6 ~ 1.8 mm (0.063 ~ 0.071 in) |
| End play of front clutch drum | 0.5 ~ 0.8 mm (0.020 ~ 0.031 in) |
| Rear clutch | |
| Thickness of drive plate Limit | 1.4 mm (0.055 in) |
| Total clearance measured between retaining plate and snap ring | 0.8 ~ 1.5 mm (0.031 ~ 0.059 in) |
| Low and reverse brake | |
| Thickness of friction plate Limit | 1.8 mm (0.071 in) |
| Total clearance measured between retaining plate and snap ring | 0.8 ~ 1.05 mm (0.031 ~ 0.041 in) |
| Gear assembly | |
| Total end play | 0.25 ~ 0.50 mm (0.010 ~ 0.020 in) |
| Planetary gear side play Limit | 0.8 mm (0.031 in) |
| Engine stall speed | |
| In break-in period | 2,300 ~ 2,550 rpm |
| After break-in period | 2,350 ~ 2,600 rpm |

| | Wire diameter | Free length |
|---|---|---|
| Valve body spring | | |
| Pressure regulator valve | 1.20 ± 0.03 mm (0.047 ± 0.001 in) | 43.0 ± 1.0 mm (1.69 ± 0.039 in) |
| 1st−2nd shift valve | 0.55 ± 0.015 mm (0.022 ± 0.0006 in) | 32.0 ± 2.0 mm (1.260 ± 0.079 in) |
| 2nd−3rd shift valve | 0.70 ± 0.015 mm (0.028 ± 0.0006 in) | 41.0 ± 1.0 mm (1.61 ± 0.039 in) |

| | Wire diameter | Fee length |
|---|---|---|
| Pressure modifier valve | 0.40 ± 0.01 mm (0.016 ± 0.0004 in) | 18.5 ± 1.0 mm (0.73 ± 0.039 in) |
| Throttle back-up valve | 0.80 ± 0.015 mm (0.031 ± 0.0006 in) | 36.0 ± 1.0 mm (1.42 ± 0.039 in) |
| Solenoid down shift valve | 0.55 ± 0.015 mm (0.022 ± 0.0006 in) | 21.9 ± 1.0 mm (0.86 ± 0.039 in) |
| 2nd lock valve | 0.55 ± 0.015 mm (0.022 ± 0.0006 in) | 33.5 ± 1.0 mm (1.32 ± 0.039 in) |
| Throttle relief valve | 0.90 ± 0.03 mm (0.035 ± 0.001 in) | 26.8 ± 1.0 mm (1.06 ± 0.039 in) |
| Orifice check valve | 0.23 ± 0.01 mm (0.009 ± 0.0004 in) | 15.5 ± 2.0 mm (0.61 ± 0.079 in) |

**Shift speed**

| Throttle condition (Manifold vacuum) | | mph |
|---|---|---|
| Kick-down (0 ~ 100 mm-Hg / 0 ~ 3.94 in-Hg) | D1 → D2 | 31 ~ 44 |
| | D2 → D3 | 57 ~ 74 |
| | D3 → D2 | 49 ~ 63 |
| | D2 → D1 | 20 ~ 30 |
| Half throttle (200 ± 10 mm-Hg / 7.87 ± 0.39 in-Hg) | D1 → D2 | 7 ~ 19 |
| | D2 → D3 | 18 ~ 39 |
| Fully closed throttle | D3 → D1 | 6 ~ 12 |
| Manual 1 | 12 → 11 | 24 ~ 32 |

**Governor pressure**

| Driving speed | Output shaft speed | Governor pressure | |
|---|---|---|---|
| mph | rpm | kpa | lb/in² |
| 20 | 1,190 ~ 1,070 | 80 ~ 130 | 11 ~ 18 |
| 35 | 1.940 ~ 2,100 | 160 ~ 230 | 23 ~ 33 |
| 55 | 3,100 ~ 3,300 | 340 ~ 450 | 48 ~ 64 |

**Line pressure**

| Manual range | Engine idling condition | | Engine stall condition | |
|---|---|---|---|---|
| | kpa | lb/in² | kpa | lb/in² |
| R | 400 ~ 700 | 57 ~ 100 | 1600 ~ 1900 | 228 ~ 270 |
| D | 300 ~ 400 | 43 ~ 57 | 900 ~ 1100 | 128 ~ 156 |
| 2 | 800 ~ 1200 | 114 ~ 171 | 800 ~ 1200 | 114 ~ 171 |
| 1 | 300 ~ 400 | 43 ~ 57 | 900 ~ 1100 | 128 ~ 156 |

## PROPELLER SHAFT

| | |
|---|---|
| Max. permissible run-out | 0.4 mm (0.016 in) |
| Max. permissible unbalance at 4,000 rpm | |
| At front | 15 cm-gr (0.21 in-oz) |
| At rear | 15 cm-gr (0.21 in-oz) |
| Universal joint | |
| Journal swinging torque | 0.3 ~ 0.8 N-m (2.6 ~ 6.9 in-lb) |

## REAR AXLE

| | |
|---|---|
| Reduction ratio | 3.933 |
| Backlash of ring gear and pinion | 0.09 ~ 0.11 mm (0.0035 ~ 0.0043 in) |
| Pinion bearing preload (Without pinion oil seal) | 0.9 ~ 1.4 N-m (7.8 ~ 12.2 in-lb) |
| Differential side bearing preload (Without pinion) | 0.6 ~ 2.1 N-m (5.2 ~ 18.2 in-lb) |
| Backlash of side gear and pinion gear | 0 ~ 0.1 mm (0 ~ 0.004 in) |
| Rear wheel bearing end play | 0 ~ 0.1 mm (0 ~ 0.004 in) |
| Lubricant | |
| Above −18°C (0°F) | A.P.I. Service GL-5 GL-6 SAE90 |
| Below −18°C (0°F) | A.P.I. Service GL-5 GL-6 SAE80 |
| Oil capacity | 1.2 liters (1.3 U.S. quarts / 1.1 Imp. quarts) |
| "L" (Case spread) | 185.428 ~ 185.500 mm (7.3004 ~ 7.3033 in) |

## LIMITED SLIP DIFFERENTIAL

| | |
|---|---|
| Reduction ratio | 3.933 |
| Backlash of ring gear and pinion | 0.09 ~ 0.11 mm (0.0035 ~ 0.0043 in) |
| Pinion bearing preload (Without pinion oil seal) | 0.9 ~ 1.4 N-m (7.8 ~ 12.2 in-lb) |
| Differential side bearing preload (Without pinion) | 0.6 ~ 2.1 N-m (5.2 ~ 18.2 in-lb) |
| Lubricant | A.P.I. Service GL-5 SAE90 (Special Lubricant For Limited Slip Differentials) |
| Oil capacity | 1.6 liters (1.7 U.S. quarts / 1.4 Imp. quarts) |
| "L" (Case spread) | 185.428 ~ 185.500 mm (7.3004 ~ 7.3033 in) |

## STEERING

| | |
|---|---|
| Reduction ratio | 17.0 ~ 20.0 : 1 |
| Free play of steering wheel (Turning direction) | |
| Standard | 5 ~ 20 mm (0.2 ~ 0.8 in) |
| Limit | 40 mm (1.57 in) |

| | |
|---|---|
| Backlash between rack and sector gear | Adjust to 0 mm |
| Worm bearing preload | |
| Without sector shaft and column bush | 0.2 ~ 0.5 N-m (0.44 ~ 1.1 in-lb) |
| With sector shaft and column bush | 0.6 ~ 1.2 N-m (1.32 ~ 2.65 in-lb) |
| Clearance between sector shaft and housing bush | |
| Wear limit | 0.1 mm (0.004 in) |
| End clearance of adjusting screw and sector shaft | 0 ~ 0.1 mm (0 ~ 0.004 in) |
| Lubricant | A.P.I. Service GL-4 SAE 90 |
| Oil capacity | 290 cc (0.31 U.S. quarts / 0.26 Imp. quarts) |
| Max. Wheel angle on full lock | |
| Wheel on inside of curve | 39°40′ ± 2° |
| Wheel on outside of curve | 32°14′ ± 2° |
| Idler arm revolving torque | 20 ~ 60 N/135 mm (4.4 ~ 13.2 lb/5.315 in) |
| Knuckle arm ball stud revolving torque | More than 4 N (14 oz) |
| Steering geometry | |
| King-pin inclination | 10°44′ |
| Camber | 1°00′ ± 30′ |
| Max. permissible difference in camber between sides | ±30′ |
| Camber offset | 38 mm (1.50 in) |
| Caster | Right-hand side 4°10′ ±30′ Left-hand side 3°40′ ± 30′ |
| Max. premissible difference in caster between sides | ± 30′ |
| Caster trail | 20 mm (0.79 ihn) |
| Toe-in | 0 ~ 6 mm (0 ~ 0.24 in) |

## BRAKES

| | |
|---|---|
| Brake pedal free travel | |
| Before power brake piston operates | 7 ~ 9 mm (0.28 ~ 0.35 in) |
| Brake pedal height (from floor) | 190 ~ 195 mm (7.48 ~ 7.68 in) |
| Master cylinder | |
| Bore | 20.64 mm (0.813 in) |
| Clearance between piston and bore | |
| Standard | 0.040 ~ 0.125 mm (0.0016 ~ 0.0049 in) |
| Wear limit | 0.15 mm (0.006 in) |
| Power brake unit | |
| Clearance between piston and push rod | 0.1 ~ 0.3 mm (0.004 ~ 0.020 in) |
| Front disc brake | |
| Thickness of brake disc | |
| Standard | 18 mm (0.7087 in) |
| Limit | 17 mm (0.6693 in) |
| Max. allowable lateral run-out of brake disc | 0.1 mm (0.0039 in) |
| Thickness of lining | |
| Standard | 9 mm (0.3543 in) |
| Thickness limit | 1 mm (0.039 in) |
| Caliper cylinder bore | 50.80 mm (2.0 in) |
| Rear disc brake | |
| Thickness of brake disc | |
| Standard | 10 mm (0.3937 in) |
| Limit | 9 mm (0.3543 in) |
| Max. allowable lateral run-out of brake disc | 0.1 mm (0.0039 in) |
| Thickness of lining | |
| Standard | 6 mm (0.2362 in) |
| Thickness limit | 1 mm (0.039 in) |
| Caliper cylinder bore | 34.93 mm (1.3752 in) |
| Rear drum brake | |
| Drum diameter | |
| Standard | 200 mm (7.8741 in) |
| Limit | 201 mm (7.9135 in) |
| Thickness of lining | |
| Standard | 4.0 mm (0.1575 in) |
| Thickness limit | 1.0 mm (0.039 in) |
| Wheel cylinder bore | 19.05 mm (0.750 in) |
| Clearance between piston and bore | |
| Standard | 0.040 ~ 0.125 mm (0.0016 ~ 0.0049 in) |
| Limit | 0.15 mm (0.006 in) |
| Remaining pressure | 50 ~ 100 kpa (7.1 ~ 14.2 lb/in²) |
| Clearance between drum and lining | 0.1 ~ 0.15 mm (0.004 ~ 0.006 in) |
| Parking brake | |
| Lever travel | 6 ~ 8 notches at 100N (22 lb) |

## WHEEL AND TIRES

| | |
|---|---|
| Wheel disc | |
| Front | 5–J x 13 WDC<br>5½–JJ x 13 WDC (Aluminum) |
| Rear | 5–J x 13 WDC<br>5½–JJ x 13 WDC (Aluminum) |
| Temporary spare tire | 4–T x 15 |
| Run-out limit | |
| Radial | 1.0 mm (0.04 in)<br>0.5 mm (0.020 in) Aluminum |
| Lateral | 1.0 mm (0.04 in)<br>0.5 mm (0.020 in) Aluminum |
| Tire | |
| Front | 185/70 HR 13<br>165HR 13 |
| Rear | 185/70 HR 13<br>165 HR 13 |
| Temporary spare tire | T135/70 D 15 |
| Inflation pressure | |
| Front | 190 kpa (27 psi) |
| Rear | 190 kpa (27 psi) |
| Temporary spare tire | 420 kpa (60 psi) |
| Run-out limit (with wheel disc) | |
| Radial | 2.5 mm (0.098 in) |
| Lateral | 3.0 mm (0.118 in) |
| Front wheel bearing preload (at wheel set bolt) | 4.5 ~ 6.5 N (0.99 ~ 1.43 lb) |

## SUSPENSION

| | |
|---|---|
| Front coil spring | |
| Spring constant | 2.16 ± 0.15 kg/mm |
| Free length | |
| Standard left | 334.5 mm (13.17 in) |
| Right | 325 mm (12.80 in) |
| Front shock absorber | |
| Fluid capacity | $225 \begin{smallmatrix}+5\\-0\end{smallmatrix}$ cc ($0.23 \begin{smallmatrix}+0.05\\-0\end{smallmatrix}$ U.S. quarts) |
| Rear coil spring | |
| Spring constant | 1.8 ± 0.13 kg/mm |
| Free length | |
| Standard | 323.5 mm (12.74 in) |

## DIMENSION

| | |
|---|---|
| Overall length | 4,285 mm (169 in) |
| Overall width | |
| (Without side protector) | 1,650 mm (65 in) |
| (With side portector) | 1,675 mm (66 in) |
| Overall height | 1,260 mm (50 in) |
| Distance between wheel center and fender line | |
| Front | 364 ± 20 mm (14.3 ± 0.8 in) |
| Rear | 358 ± 20 mm (14.0 ± 0.8 in) |
| Wheel base | 2,420 mm (95 in) |
| Tread | |
| Front | 1,420 mm (56 in) |
| Rear | 1,400 mm (55 in) |
| Minimum road clearance | 160 mm (6 in) |
| Minimum turning radius | 4.8 m (15 ft 9 in) |
| Seating capacity | 2 |

## TIGHTENING TORQUE

| | N-m | ft-lb |
|---|---|---|
| **Engine** | | |
| Oil pump sprocket | 32 ~ 47 | 23 ~ 34 |
| Oil pan | 8 ~ 11 | 6 ~ 8 |
| Inlet manifold | 19 ~ 26 | 14 ~ 19 |
| Exhaust manifold | 32 ~ 47 | 23 ~ 34 |
| Spark plugs | 13 ~ 18 | 9 ~ 11 |
| Eccentric shaft pulley | 100 ~ 120 | 72 ~ 87 |
| Temperature gauge unit | 7 ~ 8 | 5 ~ 6 |
| Tension bolts | 32 ~ 38 | 23 ~ 27 |
| Water temperature switch | 35 ~ 45 | 25 ~ 33 |
| **Clutch** | | |
| Flywheel | 400 ~ 500 | 289 ~ 362 |
| Clutch cover | 18 ~ 27 | 13 ~ 20 |
| **Transmission** | | |
| Plug for interlock pin hole | 10 ~ 15 | 7 ~ 11 |
| Control lever to control rod end | 8 ~ 12 | 6 ~ 9 |
| Shift fork set bolts | 12 ~ 16 | 9 ~ 12 |

## TIGHTENING TORQUE

| | N-m | ft-lb |
|---|---|---|
| Shift rod end | 8 ~ 12 | 6 ~ 9 |
| Main shaft lock nut | 130 ~ 210 | 94 ~ 152 |
| Top switch | 25 ~ 35 | 18 ~ 25 |
| Overdrive switch | 25 ~ 35 | 18 ~ 25 |
| Back-up light switch | 25 ~ 35 | 18 ~ 25 |
| Speedometer driven gear | 8 ~ 11 | 6 ~ 8 |
| **Automatic transmission** | | |
| Drive plate to converter weight | 42 ~ 63 | 30 ~ 46 |
| Drive plate to torque converter | 35 ~ 50 | 25 ~ 36 |
| Converter housing to engine | 32 ~ 47 | 23 ~ 34 |
| Converter housing to transmission case | 45 ~ 55 | 33 ~ 40 |
| Extension housing to transmission case | 20 ~ 25 | 14 ~ 18 |
| Oil pan | 5 ~ 7 | 36 ~ 51 |
| Piston stem (when adjusting band barke) | 12 ~ 15 | 9 ~ 11 |
| Piston stem lock nut | 15 ~ 40 | 11 ~ 29 |
| Servo piston retainer | 10 ~ 15 | 7 ~ 11 |
| Servo cover | 5 ~ 7 | 3.6 ~ 5.1 |
| One-way clutch inner race | 13 ~ 18 | 9 ~ 13 |
| Control valve body to transmission case | 5.5 ~ 7.5 | 4.0 ~ 5.4 |
| Lower valve body to upper valve body | 2.5 ~ 3.5 | 1.8 ~ 2.5 |
| Side plate to control valve body | 2.5 ~ 3.5 | 1.8 ~ 2.5 |
| Reamer bolt of control valve body | 5 ~ 7 | 3.6 ~ 5.1 |
| Oil strainer | 3 ~ 4 | 2.2 ~ 2.9 |
| Governor valve body to oil distributor | 5 ~ 7 | 3.6 ~ 5.1 |
| Oil pump cover | 6 ~ 8 | 4.3 ~ 5.8 |
| Inhibitor switch | 5 ~ 7 | 3.6 ~ 5.1 |
| Manual shaft lock nut | 30 ~ 40 | 22 ~ 29 |
| Oil cooler pipe set bolt | 16 ~ 24 | 12 ~ 17 |
| Oil pressure test plug | 5 ~ 10 | 3.6 ~ 7.2 |
| Actuator for parking rod to extension housing | 8 ~ 11 | 5.8 ~ 8.0 |
| **Propeller shaft** | | |
| Yoke to rear axle companion flange | 35 ~ 38 | 25 ~ 27 |
| **Rear axle** | | |
| Ring gear | 70 ~ 85 | 51 ~ 61 |
| Differential side bearing caps | 38 ~ 53 | 27 ~ 38 |
| Companion flange to pinion | 13 ~ 18 | 94 ~ 130 |
| **Steering** | | |
| Steering wheel nut | 40 ~ 50 | 29 ~ 36 |
| Steering gear housing to frame | 44 ~ 55 | 32 ~ 40 |
| Pitman arm to sector shaft | 150 ~ 180 | 108 ~ 130 |
| Idler arm bracket to frame | 44 ~ 55 | 32 ~ 40 |
| Idler arm to center link | 25 ~ 35 | 18 ~ 25 |
| Pitman arm to center link | 30 ~ 45 | 22 ~ 33 |
| Tie-rod to center link | 30 ~ 45 | 22 ~ 33 |

## TIGHTENING TORQUE

| | N-m | ft-lb |
|---|---|---|
| Tie-rod to knuckle arm | 30 ~ 45 | 22 ~ 33 |
| Tie-rod lock nut | 70 ~ 80 | 51 ~ 58 |
| Steering gear box end cover lock nut | 230 ~ 260 | 166 ~ 188 |
| **Brake** | | |
| Master cylinder union bolt | 10 ~ 16 | 7 ~ 12 |
| Master cylinder outlet plug | 60 ~ 70 | 43 ~ 50 |
| Brake tube union nut | 13 ~ 22 | 9 ~ 16 |
| Flexible hose union | 25 ~ 35 | 18 ~ 25 |
| Wheel cylinder union bolt | 7 ~ 10 | 5 ~ 7 |
| **Wheels** | | |
| Wheel bolts | 90 ~ 120 | 65 ~ 87 |
| **Suspension** | | |
| Suspension arm to cross member | 40 ~ 55 | 29 ~ 40 |
| Knuckle arm to shock absorber | 64 ~ 95 | 46 ~ 69 |
| Suspension arm ball joint to knuckle arm | 60 ~ 80 | 43 ~ 58 |
| Front shock absorber | | |
| Piston rod to mounting block | 65 ~ 82 | 47 ~ 59 |
| Seal cap nut | 50 ~ 60 | 36 ~ 43 |
| Tension rod to lower suspension arm | 55 ~ 69 | 40 ~ 50 |
| Tension rod to bracket | 110 ~ 150 | 80 ~ 108 |
| Tension rod bracket to fram | 76 ~ 107 | 55 ~ 77 |
| Stabilizer bar to suspension lower arm | 12 ~ 18 | 9 ~ 13 |

| | N-m | ft-lb |
|---|---|---|
| Front stabilizer support plate | 38 ~ 47 | 27 ~ 34 |
| Shock absorber to axle housing | 65 ~ 82 | 47 ~ 59 |
| Upper link to axle housing | 77 ~ 105 | 56 ~ 76 |
| Upper link to frame | 77 ~ 105 | 56 ~ 76 |
| Lower link to axle housing | 77 ~ 105 | 56 ~ 76 |
| Lower link to frame | 77 ~ 105 | 56 ~ 76 |
| Shock absorber upper | 13 ~ 25 | 9 ~ 18 |
| Watt link bracket | 77 ~ 105 | 56 ~ 76 |
| Watt link to axle housing | 65 ~ 82 | 47 ~ 59 |
| Watt link to bracket | 65 ~ 82 | 47 ~ 59 |
| Rear stabilizer support plate | 32 ~ 47 | 23 ~ 34 |
| Stabilizer lock nut | 10 ~ 16 | 7 ~ 12 |
| **Unless otherwise specified** | | |
| **6T** | | |
| 6 mm bolt/nut | 7 ~ 10 | 5 ~ 7 |
| 8 mm bolt/nut | 16 ~ 23 | 12 ~ 17 |
| 10 mm bolt/nut | 32 ~ 47 | 23 ~ 34 |
| 12 mm bolt/nut | 56 ~ 82 | 41 ~ 59 |
| 14 mm bolt/nut | 77 ~ 105 | 56 ~ 76 |
| **8T** | | |
| 6 mm bolt/nut | 8 ~ 12 | 6 ~ 9 |
| 8 mm bolt/nut | 18 ~ 27 | 13 ~ 20 |
| 10 mm bolt/nut | 37 ~ 55 | 27 ~ 40 |
| 12 mm bolt/nut | 64 ~ 95 | 46 ~ 69 |
| 14 mm bolt/nut | 104 ~ 140 | 75 ~ 101 |