

CRANKSHAFT/TRANSMISSION

Unit: mm (in)

| ITEM | | | STANDARD | | SERVICE LIMIT |
|-----------------------|--------------------------------|------------------|---------------|-----------------|----------------|
| Output gear | Backlash | Final drive gear | 0.08–0.023 | (0.0031–0.0091) | 0.40 (0.0157) |
| | Damper shaft gear | Gear I.D. | 24.000–24.021 | (0.9449–0.9457) | 24.10 (0.9488) |
| | | Bushing O.D. | 23.959–23.980 | (0.9433–0.9441) | 23.70 (0.9331) |
| | | Bushing I.D. | 20.020–20.041 | (0.7882–0.7890) | 20.10 (0.7913) |
| | Final drive shaft O.D. | | 19.979–20.000 | (0.7866–0.7874) | 20.05 (0.7894) |
| | Damper spring free length | | 65.1 (2.5630) | | 63.8 (2.5118) |
| Shift fork/fork shaft | Claw thickness | | 6.50–6.57 | (0.2559–0.2587) | 6.20 (0.2441) |
| | Right and left shift fork I.D. | | 14.000–14.021 | (0.5512–0.5520) | 14.04 (0.5528) |
| | Shaft O.D. | | 13.966–13.984 | (0.5498–0.5506) | 13.90 (0.5472) |
| Shift drum | Shift drum I.D. | | 12.500–12.518 | (0.4921–0.4928) | 12.54 (0.4937) |
| | Shift drum holder O.D. | | 12.457–12.484 | (0.4904–0.4915) | 12.33 (0.4854) |

TORQUE

| | | |
|------------------------------|---------------------------------------|---|
| Connecting rod | 41–45 N·m (4.1–4.5 kg-m, 30–33 ft-lb) | |
| Final drive shaft | 35–45 N·m (3.5–4.5 kg-m, 25–33 ft-lb) | |
| Countershaft | 35–45 N·m (3.5–4.5 kg-m, 25–33 ft-lb) | |
| Output gear case | 8 mm cap nut | 21–25 N·m (2.1–2.5 kg-m, 15–18 ft-lb) |
| | 8 mm lock nut | 21–25 N·m (2.1–2.5 kg-m, 15–18 ft-lb) |
| | 8 mm socket bolt | 30–40 N·m (3.0–4.0 kg-m, 22–29 ft-lb) |
| Output gear bearing lock nut | (Inner) | 70–80 N·m (7.0–8.0 kg-m, 51–58 ft-lb) |
| | (Outer) | 90–110 N·m (9.0–11.0 kg-m, 65–80 ft-lb) |
| Shift fork | 16–20 N·m (1.6–2.0 kg-m, 12–14 ft-lb) | |

TOOLS

Special

| | |
|-------------------------------------|---------------|
| Lock Nut Wrench, 30 x 64 mm | 07916–MB00000 |
| Shaft Holder | 07923–6890101 |
| Main Bearing Remover Attachment | 07946–ME90100 |
| Main Bearing Drive Attachment | 07946–ME90200 |
| Remover Handle | 07936–3710100 |
| Remover Weight | 07936–3710200 |
| Bearing Remover, 17 mm | 07936–3710300 |
| Main Journal Bearing Remover/Driver | 07973–MC70000 |
| Ring gear Dis/Assembly Tool | 07965–3710100 |
| Damper Compressor | 07964–3710000 |
| Bearing remover, 20 mm | 07936–3710600 |
| Driver | 07949–3710000 |
| Attachment | 07946–3710200 |

Common

| | |
|------------------------|---------------|
| Remover weight | 07741–0010201 |
| Attachment, 32 x 35 mm | 07746–0010100 |
| Attachment, 42 x 47 mm | 07746–0010300 |
| Attachment, 52 x 55 mm | 07746–0010400 |
| Attachment, 62 x 68 mm | 07746–0010500 |
| Pilot, 17 mm | 07746–0040400 |
| Pilot, 25 mm | 07746–0040600 |
| Pilot, 30 mm | 07746–0040700 |
| Driver | 07749–0010000 |
| Attachment, 30 mm I.D. | 07746–0030300 |

TROUBLESHOOTING

Excessive noise

1. Crankshaft
 - Worn main bearing
 - Worn rod bearing
2. Connecting rod
 - Worn rod small end

Hard to shift

1. Air in clutch system
2. Shift fork bent
3. Shift fork shaft bent
4. Shift spindle claw bent
5. Shift drum cam grooves damaged
6. Shift fork guide pin damaged

Transmission jumps out of gear

1. Gear dogs worn
2. Shift shaft bent
3. Shift shaft stopper broken
4. Shift forks bent

Excessive output gear noise

1. Output drive and driven gears worn or damaged
2. Bearings worn or damaged
3. Excessive backlash between output drive and driven gears
4. Improper shim thickness