

2004-2016



SERVICE MANUAL

TRX500FM1/FM2/FM5/FM6/FM7

TRX500FE1/FE2

TRX500FA5/FA6/FA7

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1. GENERAL INFORMATION

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GENERAL INFORMATION

SERVICE RULES

1. Use Honda Genuine or Honda-recommended parts and lubricants or their equivalents. Parts that don't meet Honda's design specifications may cause damage to the vehicle.
2. Use the special tools designed for this product to avoid damage and incorrect assembly.
3. Use only metric tools when servicing the vehicle. Metric bolts, nuts and screws are not interchangeable with English fasteners.
4. Install new gaskets, O-rings, cotter pins, and lock plates when reassembling.
5. When tightening bolts or nuts, begin with the larger diameter or inner bolt first. Then tighten to the specified torque diagonally in incremental steps unless a particular sequence is specified.
6. Clean parts in cleaning solvent upon disassembly. Lubricate any sliding surfaces before reassembly.
7. After reassembly, check all parts for proper installation and operation.
8. Route all electrical wires as shown in the Cable & Harness Routing (page 1-26).
9. Do not bend or twist control cables. Damaged control cables will not operate smoothly and may stick or bind.
10. Do not tow your ATV behind a car or other vehicle.

ABBREVIATION

Throughout this manual, the following abbreviations are used to identify the respective parts or systems.

| Abbrev. term | Full term |
|-----------------------|-----------------------------------------------------|
| 2WD | 2 Wheel Drive |
| 4WD | 4 Wheel Drive |
| CKP sensor | Crankshaft Position sensor |
| DCT | Dual Clutch Transmission |
| DLC | Data Link Connector |
| DTC | Diagnostic Trouble Code |
| ECM (FM models) | Engine Control Module |
| ECT sensor | Engine Coolant Temperature sensor |
| ECU | Electric Control Unit |
| EEPROM | Electrically Erasable Programmable Read Only Memory |
| EPS | Electric Power Steering |
| ESP | Electric Shift Program |
| IACV | Idle Air Control Valve |
| IAT sensor | Intake Air Temperature sensor |
| LCD | Liquid Crystal Display |
| MAP sensor | Manifold Absolute Pressure sensor |
| MCS | Motorcycle Communication System |
| MIL | Malfunction Indicator Lamp |
| PCM (FE/FA models) | Powertrain Control Module |
| PGM-FI | Programmed Fuel Injection |
| SCS service connector | Service Check Short service connector |
| TP sensor | Throttle Position sensor |
| VS sensor | Vehicle Speed sensor |

DESTINATION CODE

Throughout this manual, the following codes are used to identify individual types for each region.

| DESTINATION CODE | REGION |
|------------------|--------|
| AC | U.S.A. |
| CM | Canada |

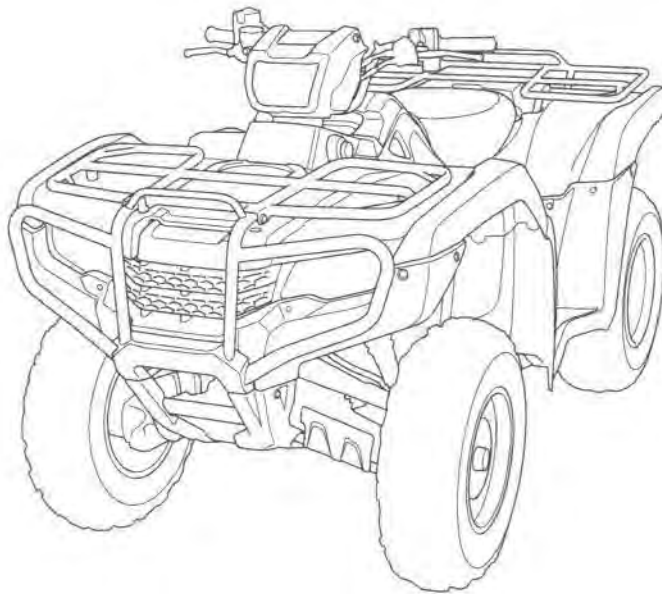
MODEL IDENTIFICATION

This manual covers 10 types of TRX500 models:

- FM1 – Left foot operated gearshift
- FM2 – Left foot operated gearshift/Electric Power Steering (EPS)
- FM5 – Left foot operated gearshift/Independent rear suspension
- FM6 – Left foot operated gearshift/Electric Power Steering (EPS)/Independent rear suspension
- FM7 – Left foot operated gearshift/Electric Power Steering (EPS)/Independent rear suspension/Aluminum wheel
- FE1 – Electric shift program (ESP)
- FE2 – Electric shift program (ESP)/Electric Power Steering (EPS)
- FA5 – Dual clutch transmission (DCT)/Independent rear suspension
- FA6 – Dual clutch transmission (DCT)/Electric Power Steering (EPS)/Independent rear suspension
- FA7 – Dual clutch transmission (DCT)/Electric Power Steering (EPS)/Independent rear suspension/Aluminum wheel

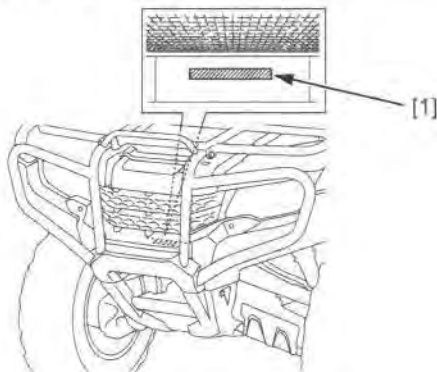
Be sure to refer to the procedure that pertains to the appropriate version of the TRX500.

'14 model shown:



SERIAL NUMBERS/LABELS

The Vehicle Identification Number (VIN) [1] is stamped on the front side of the frame through the front fender.



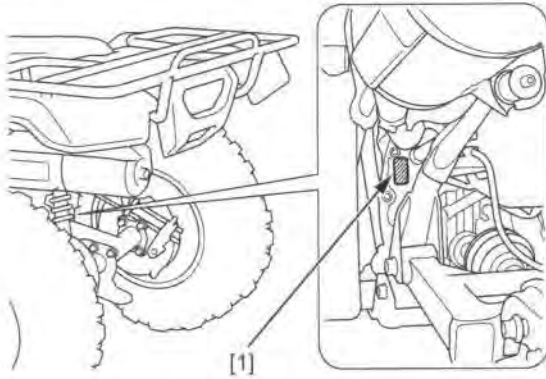
The throttle body identification number [1] is stamped on the lower side of the throttle body.



GENERAL INFORMATION

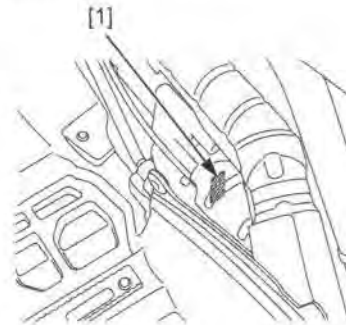
FM/FE models:

The engine serial number [1] is stamped on the left side of the rear crankcase.



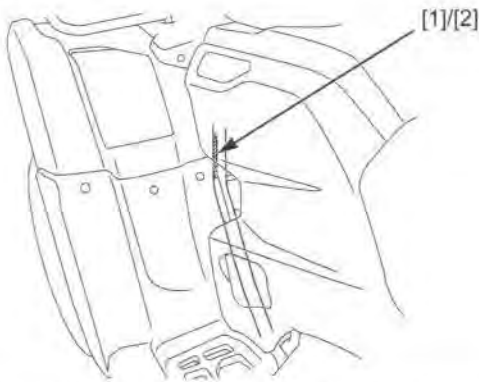
FA models:

The engine serial number [1] is stamped on the upper side of the rear crankcase.



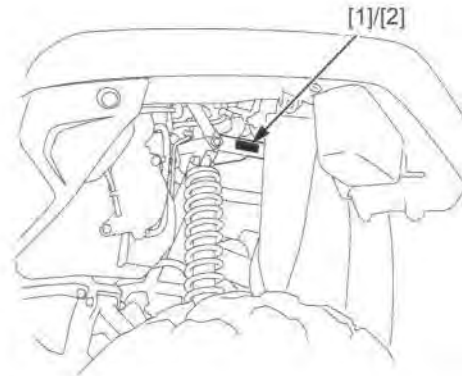
FM1/FM2/FE1/FE2:

The certification label [1] (U.S.A. type) or safety certification label [2] (Canada type) is attached on the left front frame down pipe.



FM5/FM6/FM7/FA5/FA6/FA7:

The certification label [1] (U.S.A. type) or safety certification label [2] (Canada type) is attached on the left front frame pipe.



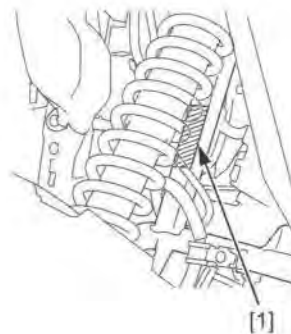
The color label [1] is attached on the left front frame down pipe. When ordering color-coded parts, always specify the designated color code.



The vehicle emission control information label [1] is attached on the left front frame pipe.

- U.S.A. and Canada type [1]
- Canada type [2]

U.S.A. and Canada type:



Canada type:



SPECIFICATIONS

GENERAL SPECIFICATIONS

| DIMENSIONS | | ITEM | SPECIFICATIONS |
|-------------------------|-------------------------|----------------------------------------------|----------------|
| Overall length | FM1/FM2/FE1/FE2 | 2,103 mm (82.8 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 2,147 mm (84.5 in) | |
| Overall width | | 1,205 mm (47.4 in) | |
| Overall height | FM1/FM2/FE1/FE2 | 1,219 mm (48.0 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 1,235 mm (48.6 in) | |
| Wheelbase | FM1/FM2/FE1/FE2 | 1,268 mm (49.9 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 1,292 mm (50.9 in) | |
| Front tread | FM1/FM2/FE1/FE2 | 910 mm (35.8 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 920 mm (36.2 in) | |
| Rear tread | FM1/FM2/FE1/FE2 | 920 mm (36.2 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 936 mm (36.9 in) | |
| Seat height | FM1/FM2/FE1/FE2 | 869 mm (34.2 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 909 mm (35.8 in) | |
| Footpeg height | FM1/FM2/FE1/FE2 | 358 mm (14.1 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 377 mm (14.8 in) | |
| Ground clearance | FM1/FM2/FE1/FE2 | 190 mm (7.5 in) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 239 mm (9.4 in) | |
| Curb weight | FM1 | AC: 286 kg (631 lbs) CM: 287 kg (633 lbs) | |
| | FE1 | AC: 286 kg (631 lbs) | |
| | FM2 | AC: 292 kg (644 lbs) | |
| | | CM: 293 kg (646 lbs) | |
| | FE2 | AC: 293 kg (646 lbs) | |
| | | CM: 294 kg (648 lbs) | |
| | FM5 | AC: 307 kg (677 lbs) | |
| | | CM: 308 kg (679 lbs) | |
| | FM6 | AC: 313 kg (690 lbs) | |
| | | CM: 314 kg (692 lbs) | |
| | FM7 | AC: 309 kg (681 lbs) | |
| | | CM: 311 kg (686 lbs) | |
| | FA5 | AC: 319 kg (703 lbs) | |
| | FA6 | AC: 326 kg (719 lbs) | |
| CM: 327 kg (721 lbs) | | | |
| FA7 | AC: 323 kg (712 lbs) | | |
| | CM: 325 kg (716 lbs) | | |
| Maximum weight capacity | FM1/FM2/FE1/FE2 | 250 kg (551 lbs) | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 260 kg (573 lbs) | |

GENERAL INFORMATION

| ITEM | | SPECIFICATIONS | | |
|----------------------------|-------------------------|-------------------------------------------|------------------------------|----------|
| FRAME | Frame type | Double cradle | | |
| | Front suspension | Double wishbone | | |
| | Front wheel travel | 185 mm (7.3 in) | | |
| | Front damper | Double tube | | |
| | Rear suspension | FM1/FM2/FE1/FE2 | Swingarm (trailing type) | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | Double wishbone | |
| | Rear wheel travel | FM1/FM2/FE1/FE2 | 185 mm (7.3 in) | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | 215 mm (8.5 in) | |
| | Rear damper | Double tube | | |
| | Front tire size | AT25 x 8-12 ** | | |
| | Rear tire size | AT25 x 10-12 ** | | |
| | Front rim size | 12 x 6.0 AT | | |
| | Rear rim size | 12 x 7.5 AT | | |
| | Front tire brand | FM1/FM2/FE1/FE2 | M975 (MAXXIS) | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | MU25 (MAXXIS) | |
| | Rear tire brand | FM1/FM2/FE1/FE2 | M978 (MAXXIS) | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | MU26 (MAXXIS) | |
| | Front brake | | Hydraulic disc brake | |
| | Rear brake | FM1/FM2/FE1/FE2 | Mechanical drum brake | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | Hydraulic disc brake | |
| | Caster angle | FM1/FM2/FE1/FE2 | 2° | |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | 1° | |
| | Trail length | FM1/FM2/FE1/FE2 | 6.0 mm (0.24 in) | |
| FM5/FM6/FM7/FA5/FA6/FA7 | | - 1.0 mm (0.04 in) | | |
| Front camber angle | FM1/FM2/FE1/FE2 | 0° | | |
| | FM5/FM6/FM7/FA5/FA6/FA7 | 0.1° | | |
| Rear camber angle | FM5/FM6/FM7/FA5/FA6/FA7 | - 0.2° | | |
| Fuel tank capacity | | 14.7 liters (3.88 US gal, 3.23 Imp gal) | | |
| Fuel tank reserve capacity | | 4.9 liters (1.29 US gal, 1.08 Imp gal) | | |
| ENGINE | Cylinder arrangement | Single cylinder, longitudinally installed | | |
| | Bore and stroke | 92.0 x 71.5 mm (3.62 x 2.81 in) | | |
| | Displacement | 475 cm ³ (29.0 cu-in) | | |
| | Compression ratio | 9.5:1 | | |
| | Valve train | OHV | | |
| | Intake valve | opens: at 1 mm (0.04 in) lift | FM/FE models | 9° BTDC |
| | | | FA models | 5° BTDC |
| | | closes: at 1 mm (0.04 in) lift | FM/FE models | 46° ABDC |
| | | | FA models | 50° ABDC |
| | Exhaust valve | opens: at 1 mm (0.04 in) lift | FM/FE models | 46° BBDC |
| | | | FA models | 42° BBDC |
| | | closes: at 1 mm (0.04 in) lift | FM/FE models | 4° ATDC |
| | | | FA models | 8° ATDC |
| | Lubrication system | | Forced pressure and wet sump | |
| | Oil pump type | | Trochoid | |
| | Cooling system | | Liquid cooled | |
| | Air filtration | | Oiled double urethane foam | |
| Engine dry weight | FM1/FM2 | 51.4 kg (113.3 lbs) | | |
| | FE1/FE2 | 52.4 kg (115.5 lbs) | | |
| | FM5/FM6/ FM7 | AC: 51.4 kg (113.3 lbs) | | |
| | | CM: 52.5 kg (115.7 lbs) | | |
| | FA5 | 62.1 kg (136.9 lbs) | | |
| | FA6/FA7 | AC: 62.1 kg (136.9 lbs) | | |
| CM: 63.2 kg (139.3 lbs) | | | | |
| FUEL DELIVERY SYSTEM | Type | PGM-FI | | |
| | Throttle bore | 36 mm (1.4 in) | | |

GENERAL INFORMATION

| ITEM | | SPECIFICATIONS | |
|------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------|----------------------------------------------------|
| DRIVE TRAIN (FM/FE models) | Clutch system | Centrifugal and multi-plate, wet | |
| | Clutch operation system | Automatic | |
| | Transmission | Constant mesh, 5-speeds with reverse | |
| | Primary reduction | 2.103 (61/29) | |
| | Secondary reduction | 1.875 (30/16) | |
| | Final reduction | Front | 3.231 (42/13) |
| | | Rear | 3.154 (41/13) |
| | Gear ratio | 1st | 4.230 (55/13) |
| | | 2nd | 2.388 (43/18) |
| | | 3rd | 1.608 (37/23) |
| | | 4th | 1.178 (33/28) |
| | | 5th | 0.848 (28/33) |
| | | Reverse | 5.743 (48/13 x 28/18) |
| Gearshift pattern | Pattern | R - N - 1 - 2 - 3 - 4 - 5 | |
| | FM models | Left foot operated return system | |
| | FE models | Electric shift (left hand operated) return system | |
| DRIVE TRAIN (FA models) | Clutch system | Centrifugal and 2 multi-plate wet clutches | |
| | Clutch operation system | Automatic | |
| | Transmission | Automatic, 5-speeds with reverse | |
| | Primary reduction | 2.680 (67/25) | |
| | Secondary reduction | 1.520 (38/25) | |
| | Final reduction | Front | 3.230 (42/13) |
| | | Rear | 3.153 (41/13) |
| | Transmission gear ratio | 1st | 3.058 (52/17) |
| | | 2nd | 2.157 (41/19) |
| | | 3rd | 1.588 (27/17) |
| | | 4th | 1.181 (26/22) |
| | | 5th | 0.848 (28/33) |
| | | Reverse | 3.996 (45/16 x 27/19) |
| | Transmission gearshift pattern | R - N - 1 - 2 - 3 - 4 - 5 Automatic and Electric shift (left hand operated) return system | |
| | Sub transmission gear ratio | L | 2.187 (35/16) |
| D | | 1.520 (38/25) | |
| Sub transmission gearshift pattern | L - D Lever operated system | | |
| ELECTRICAL | Ignition system | Full transistorized ignition | |
| | Starting system | AC | Electric starter motor |
| | | CM | Electric starter motor and emergency recoil stater |
| | Charging system | Triple phase output alternator | |
| | Regulator/rectifier | FET shorted, triple phase full wave rectification | |
| | Lighting system | Battery | |

PGM-FI SYSTEM SPECIFICATIONS

| ITEM | SPECIFICATIONS |
|--------------------------------------|----------------|
| IAT sensor resistance (40°C/104°F) | 2.2 - 2.7 kΩ |
| ECT sensor resistance (20°C/68°F) | 1.0 - 1.3 kΩ |
| Fuel injector resistance (20°C/68°F) | 11.1 - 12.3 Ω |

IGNITION SYSTEM SPECIFICATIONS

| ITEM | SPECIFICATIONS |
|---------------------------------------|-----------------------------------|
| Spark plug | BKR5E-11 (NGK), K16PR-U11 (DENSO) |
| Spark plug gap | 1.0 - 1.1 mm (0.039 - 0.043 in) |
| Ignition coil primary peak voltage | 100 V minimum |
| Ignition pulse generator peak voltage | 0.7 V minimum |
| Ignition timing ("F" mark) | 10° BTDC at idle |

GENERAL INFORMATION

FUEL SYSTEM SPECIFICATIONS

| ITEM | SPECIFICATIONS |
|-------------------------------------|------------------------------------------------------------------|
| Throttle body identification number | GQ3QA |
| Idle speed | 1,400 ± 100 rpm |
| Throttle lever freeplay | 3 – 8 mm (0.1 – 0.3 in) |
| Fuel pressure at idle | 331 – 367 kPa (3.4 – 3.7 kgf/cm ² , 48 – 53 psi) |
| Fuel pump flow (at 12 V) | 356 cm ³ (12.0 US oz, 12.5 Imp oz) minimum/10 seconds |

COOLING SYSTEM SPECIFICATIONS

| ITEM | SPECIFICATIONS | |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| Coolant capacity | Radiator and engine | 1.54 liters (1.63 US qt, 1.36 Imp qt) |
| | Reserve tank | 0.15 liter (0.16 US qt, 0.13 Imp qt) |
| Radiator cap relief pressure | 108 – 137 kPa (1.1 – 1.4 kgf/cm ² , 16 – 20 psi) | |
| Thermostat | Begin to open | 80 – 84°C (176 – 183°F) |
| | Fully open | 95°C (203°F) |
| | Valve lift | 8 mm (0.3 in) minimum at 95°C (203°F) |
| Recommended antifreeze | Pro Honda HP Coolant or an equivalent high quality ethylene glycol antifreeze containing corrosion protection inhibitors | |
| Standard coolant concentration | 1:1 mixture with distilled water | |

LUBRICATION SYSTEM SPECIFICATIONS

| ITEM | | STANDARD | SERVICE LIMIT |
|------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|
| Engine oil capacity | FM/FE models | After draining | 2.9 liters (3.1 US qt, 2.6 Imp qt) |
| | | After draining/filter change | 3.0 liters (3.2 US qt, 2.6 Imp qt) |
| | | After disassembly | 3.3 liters (3.5 US qt, 2.9 Imp qt) |
| | FA models | After draining | 3.6 liters (3.8 US qt, 3.2 Imp qt) |
| | | After draining/filter change | 3.8 liters (4.0 US qt, 3.3 Imp qt) |
| | | After disassembly | 4.4 liters (4.6 US qt, 3.8 Imp qt) |
| Recommended engine oil | | Pro Honda GN4 4-stroke oil (U.S.A. and Canada) or equivalent motorcycle oil API service classification: SG or higher (except oils labeled as energy conserving on the circular API service label) JASO T 903 standard: MA Viscosity: SAE 10W-30 | – |
| Oil pressure at 5,000 min ⁻¹ (rpm) (80°C/176°F) | | 510 kPa (5.2 kgf/cm ² , 74 psi) | – |
| Oil pump | Tip clearance | 0.15 (0.006) | 0.20 (0.008) |

Unit: mm (in)

CYLINDER HEAD/VALVE SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | | SERVICE LIMIT |
|---------------------------------|--------------------------------------------|--------------------------------------------|---------------------------------------|---------------|
| Cylinder compression at 450 rpm | | 680 kPa (6.9 kgf/cm ² , 99 psi) | | - |
| Valve clearance | | IN | 0.15 ± 0.02 (0.006 ± 0.001) | - |
| | | EX | 0.23 ± 0.02 (0.009 ± 0.001) | - |
| Valve, valve guide | Valve stem O.D. | IN | 5.975 – 5.990 (0.2352 – 0.2358) | 5.95 (0.234) |
| | | EX | 5.955 – 5.970 (0.2344 – 0.2350) | 5.93 (0.233) |
| | Valve guide I.D. | IN/EX | 6.000 – 6.012 (0.2362 – 0.2367) | 6.02 (0.237) |
| | Valve guide projection above cylinder head | IN/EX | 14.8 – 15.0 (0.58 – 0.59) | - |
| Valve seat width | | IN/EX | 1.2 (0.05) | 1.5 (0.06) |
| Valve spring | Free length | Inner | 42.94 (1.691) | 42.08 (1.657) |
| | | Outer | 43.63 (1.718) | 42.76 (1.683) |
| Rocker arm | Arm I.D. | IN/EX | 12.000 – 12.018 (0.4724 – 0.4731) | 12.05 (0.474) |
| | Shaft O.D. | IN/EX | 11.966 – 11.984 (0.4711 – 0.4718) | - |
| Camshaft and cam follower | Cam lobe height | IN | 35.9400 – 36.1800 (1.41496 – 1.42441) | 35.74 (1.407) |
| | | EX | 35.6811 – 35.9211 (1.40476 – 1.41421) | 35.48 (1.397) |
| | Cam follower O.D. | IN/EX | 22.467 – 22.482 (0.8845 – 0.8851) | 22.46 (0.884) |
| Follower bore I.D. | | IN/EX | 22.510 – 22.526 (0.8862 – 0.8868) | 22.54 (0.887) |
| Cylinder head warpage | | - | | 0.10 (0.004) |

CYLINDER/PISTON SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | | SERVICE LIMIT |
|--------------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|---------------|
| Cylinder | I.D. | 92.000 – 92.010 (3.6220 – 3.6224) | | 92.10 (3.626) |
| | Out-of-round | - | | 0.10 (0.004) |
| Piston, piston pin, piston ring | Piston O.D. at 15 (0.6) from bottom | | 91.970 – 91.990 (3.6209 – 3.6216) | 91.90 (3.618) |
| | Piston pin hole I.D. | | 19.002 – 19.008 (0.7481 – 0.7483) | 19.04 (0.750) |
| | Piston pin O.D. | | 18.994 – 19.000 (0.7478 – 0.7480) | 18.96 (0.746) |
| | Piston ring end gap | Top | 0.15 – 0.30 (0.006 – 0.012) | 0.5 (0.02) |
| | | Second | 0.30 – 0.45 (0.012 – 0.018) | 0.6 (0.02) |
| | | Oil (side rail) | 0.20 – 0.70 (0.008 – 0.028) | 0.9 (0.04) |
| Piston ring-to-ring groove clearance | Top | 0.030 – 0.060 (0.0012 – 0.0024) | 0.09 (0.004) | |
| | Second | 0.030 – 0.060 (0.0012 – 0.0024) | 0.09 (0.004) | |
| Connecting rod small end I.D. | | 19.020 – 19.041 (0.7488 – 0.7496) | | 19.07 (0.751) |

CLUTCH/GEARSHIFT LINKAGE SPECIFICATIONS (FM/FE models)

Unit: mm (in)

| ITEM | | STANDARD | | SERVICE LIMIT |
|--------------------------------------|----------------------------------|-----------------------------------|-----------------------------------|---------------|
| Centrifugal clutch | Drum I.D. | | 150.0 – 150.2 (5.906 – 5.913) | 150.4 (5.92) |
| | Weight lining thickness | | 2.0 (0.08) | 1.3 (0.05) |
| | Clutch spring height | | 2.96 (0.117) | 2.84 (0.112) |
| | Clutch weight spring free length | | 24.72 (0.973) | 25.7 (1.01) |
| Change clutch | Spring free length | FM1/FM2 | 52.2 (2.06) | 50.7 (2.00) |
| | | FE1/FE2 | 46.8 (1.84) | 45.3 (1.78) |
| | Disc thickness | | 2.62 – 2.78 (0.103 – 0.109) | 2.3 (0.09) |
| | Plate warpage | | - | 0.20 (0.008) |
| | Outer I.D. | | 29.000 – 29.021 (1.1417 – 1.1426) | - |
| | Outer guide | I.D. | 22.000 – 22.021 (0.8661 – 0.8670) | - |
| | | O.D. | 28.959 – 28.980 (1.1401 – 1.1409) | - |
| Mainshaft O.D. at clutch outer guide | | 21.967 – 21.980 (0.8648 – 0.8654) | - | |
| Primary drive gear | Gear I.D. | | 29.000 – 29.021 (1.1417 – 1.1426) | 29.05 (1.144) |
| | Crankshaft O.D. at drive gear | | 28.959 – 28.980 (1.1401 – 1.1409) | 28.93 (1.139) |

GENERAL INFORMATION

DUAL CLUTCH TRANSMISSION SPECIFICATIONS (FA models)

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|----------------------------------------|----------------------------------|--------------------------------------------|-----------------------------|
| Centrifugal clutch | Drum I.D. | 140.0 – 140.2 (5.512 – 5.520) | 140.4 (5.53) |
| | Weight lining thickness | 2.0 (0.08) | 1.3 (0.05) |
| | Clutch spring height | 3.8 (0.15) | 3.68 (0.145) |
| | Clutch weight spring free length | 24.65 (0.970) | 25.6 (1.01) |
| Oil pressure at 5,000 rpm (80°C/176°F) | Line | 510 kPa (5.2 kgf/cm ² , 74 psi) | – |
| | Shift clutch | 510 kPa (5.2 kgf/cm ² , 74 psi) | – |
| Shift clutch | Initial clearance | 1st | 0.70 – 0.90 (0.028 – 0.035) |
| | | 2nd | 0.65 – 0.95 (0.026 – 0.037) |
| | Disc thickness | 1.88 – 2.00 (0.074 – 0.079) | worn out lining |
| | Plate thickness | 1.55 – 1.65 (0.061 – 0.065) | discoloration |
| Primary drive gear | Gear I.D. | 29.000 – 29.021 (1.1417 – 1.1426) | – |
| | Crankshaft O.D. at drive gear | 28.959 – 28.980 (1.1401 – 1.1409) | – |

SUB-TRANSMISSION SPECIFICATIONS (FA models)

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|--------------|-----------------------------|-----------------------------|-----------------------------------|
| Shift fork | Claw thickness | 4.93 – 5.00 (0.194 – 0.197) | – |
| Transmission | Gear I.D. | Low, drive | 23.000 – 23.021 (0.9055 – 0.9063) |
| | | Low, drive | 22.959 – 22.980 (0.9039 – 0.9047) |
| | Gear bushing O.D. | Low, drive | 20.000 – 20.021 (0.7874 – 0.7882) |
| | Sub-transmission shaft O.D. | at Low, drive | 19.959 – 19.980 (0.7858 – 0.7866) |

ALTERNATOR/STARTER CLUTCH SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|----------------------------------------|------|-----------------------------------|---------------|
| Starter driven gear boss | O.D. | 51.705 – 51.718 (2.0356 – 2.0361) | – |
| | I.D. | 31.946 – 31.962 (1.2577 – 1.2583) | – |
| Crankshaft O.D. at starter driven gear | | 31.884 – 31.900 (1.2553 – 1.2559) | 31.85 (1.254) |

CRANKCASE/TRANSMISSION/CRANKSHAFT/BALANCER SPECIFICATIONS

FM/FE models:

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---------------------------------|--------------------------|-----------------------------------|-----------------------------------|
| Reverse selector lever freeplay | | 2 – 4 (0.1 – 0.2) | – |
| Shift fork | I.D. | Front, rear | 13.000 – 13.021 (0.5118 – 0.5126) |
| | | Center | 13.000 – 13.018 (0.5118 – 0.5125) |
| | Claw thickness | 4.93 – 5.00 (0.194 – 0.197) | – |
| | Shaft O.D. | 12.966 – 12.984 (0.5105 – 0.5112) | – |
| Transmission | Gear I.D. | M3 | 25.000 – 25.021 (0.9843 – 0.9851) |
| | | M5 | 20.000 – 20.021 (0.7874 – 0.7882) |
| | | C1, C2, C4, CR | 28.020 – 28.041 (1.1031 – 1.1040) |
| | | Reverse idle | 13.000 – 13.021 (0.5118 – 0.5126) |
| | | – | – |
| | Gear bushing O.D. | M3 | 24.959 – 24.980 (0.9826 – 0.9835) |
| | | M5 | 19.966 – 19.984 (0.7861 – 0.7868) |
| | | C2 | 27.984 – 28.005 (1.1017 – 1.1026) |
| | | C1, C4, CR | 27.979 – 28.000 (1.1015 – 1.1024) |
| | Gear bushing I.D. | M3 | 22.000 – 22.021 (0.8661 – 0.8670) |
| | | M5 | 17.016 – 17.034 (0.6699 – 0.6706) |
| | | C4 | 25.000 – 25.021 (0.9843 – 0.9851) |
| | Mainshaft O.D. | at M3 | 21.959 – 21.980 (0.8645 – 0.8654) |
| at M5 | | 16.976 – 16.987 (0.6683 – 0.6688) | |
| Countershaft O.D. | at C4 | 24.959 – 24.980 (0.9826 – 0.9835) | |
| Reverse idle shaft O.D. | – | 12.966 – 12.984 (0.5105 – 0.5112) | |
| Crankshaft | Runout | – | 0.15 (0.006) |
| | Big end side clearance | 0.05 – 0.65 (0.002 – 0.026) | 0.8 (0.03) |
| | Big end radial clearance | 0.006 – 0.018 (0.0002 – 0.0007) | 0.05 (0.002) |

FA models:

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---------------------------------|--------------------------|-----------------------------------|-----------------------------------|
| Reverse selector lever freeplay | | 2 – 4 (0.1 – 0.2) | – |
| Shift fork | I.D. | 13.000 – 13.018 (0.5118 – 0.5125) | – |
| | Claw thickness | 5.93 – 6.00 (0.233 – 0.236) | – |
| | Shaft O.D. | 12.966 – 12.984 (0.5105 – 0.5112) | – |
| Transmission | Gear I.D. | M1 | 20.000 – 20.021 (0.7874 – 0.7882) |
| | | M3 | 25.000 – 25.021 (0.9843 – 0.9851) |
| | | C2, C4, CR | 28.020 – 28.041 (1.1031 – 1.1040) |
| | | C5 | 31.000 – 31.025 (1.2205 – 1.2215) |
| | | Reverse idle | 13.000 – 13.018 (0.5118 – 0.5125) |
| | Gear bushing O.D. | M1 | 19.966 – 19.984 (0.7861 – 0.7868) |
| | | M3 | 24.959 – 24.980 (0.9826 – 0.9835) |
| | | C2/CR | 27.979 – 28.000 (1.1015 – 1.1024) |
| | | C4 | 27.984 – 28.005 (1.1017 – 1.1026) |
| | | C5 | 30.950 – 30.975 (1.2185 – 1.2195) |
| | Gear bushing I.D. | M1 | 17.000 – 17.018 (0.6692 – 0.6700) |
| | | M3 | 22.000 – 22.021 (0.8661 – 0.8670) |
| | | C2/CR | 25.000 – 25.013 (0.9843 – 0.9848) |
| | | C5 | 28.000 – 28.021 (1.1024 – 1.1032) |
| | Mainshaft O.D. | at M1 | 16.976 – 16.987 (0.6683 – 0.6688) |
| at M3 | | 21.959 – 21.980 (0.8645 – 0.8654) | |
| Countershaft O.D. | at C2/CR | 24.959 – 24.980 (0.9826 – 0.9835) | |
| | at C5 | 27.959 – 27.980 (1.1007 – 1.1016) | |
| Reverse idle shaft O.D. | | 12.966 – 12.984 (0.5105 – 0.5112) | – |
| Crankshaft | Runout | – | 0.15 (0.006) |
| | Big end side clearance | 0.05 – 0.65 (0.002 – 0.026) | 0.8 (0.03) |
| | Big end radial clearance | 0.006 – 0.018 (0.0002 – 0.0007) | 0.05 (0.002) |

FRONT WHEEL/SUSPENSION/STEERING SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|------------------------------------------|--------------|---------------------------------------------|---------------|
| Cold tire pressure | Standard | 30 kPa (0.30 kgf/cm ² , 4.4 psi) | – |
| | With cargo | 30 kPa (0.30 kgf/cm ² , 4.4 psi) | – |
| Tie-rod distance between the ball joints | FM/FE models | 387.9 (15.27) | – |
| | FA models | 388.4 (15.29) | – |
| Toe | | Toe-out: 25 ± 15 (1.0 ± 0.6) | – |

REAR WHEEL/SUSPENSION SPECIFICATIONS

| ITEM | | STANDARD | SERVICE LIMIT |
|--------------------|------------|---------------------------------------------|---------------|
| Cold tire pressure | Standard | 30 kPa (0.30 kgf/cm ² , 4.4 psi) | – |
| | With cargo | 30 kPa (0.30 kgf/cm ² , 4.4 psi) | – |

GENERAL INFORMATION

BRAKE SYSTEM SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|-------------------------------------------------|-------------------------------------|-----------------------------------|---------------|
| Front brake | Recommended brake fluid | Honda DOT 4 brake fluid | - |
| | Disc thickness | 3.3 - 3.7 (0.13 - 0.15) | 3.0 (0.12) |
| | Disc runout | - | 0.30 (0.012) |
| | Master cylinder I.D. | 14.000 - 14.043 (0.5512 - 0.5529) | - |
| | Master piston O.D. | 13.957 - 13.984 (0.5495 - 0.5506) | - |
| | Caliper cylinder I.D. | 32.030 - 32.080 (1.2610 - 1.2630) | - |
| | Caliper piston O.D. | 31.948 - 31.998 (1.2578 - 1.2598) | - |
| Rear brake (FM1/FM2/ FE1/FE2) | Rear (parking) brake lever freeplay | 15 - 20 (0.6 - 0.8) | - |
| | Rear brake pedal freeplay | 15 - 20 (0.6 - 0.8) | - |
| | Rear brake drum I.D. | 160.0 - 160.2 (6.30 - 6.31) | 161.0 (6.34) |
| Rear brake (FM5/FM6/ FM7/FA5/FA6/ FA7) | Rear (parking) brake lever freeplay | 25 - 30 (1.0 - 1.2) | - |
| | Recommended brake fluid | Honda DOT 4 brake fluid | - |
| | Disc thickness | 7.3 - 7.7 (0.29 - 0.30) | 6.0 (0.24) |
| | Disc runout | - | 0.30 (0.012) |
| | Master cylinder I.D. | 15.870 - 15.913 (0.6248 - 0.6265) | - |
| | Master piston O.D. | 15.827 - 15.854 (0.6231 - 0.6242) | - |
| | Caliper cylinder I.D. | 30.230 - 30.280 (1.1902 - 1.1921) | - |
| | Caliper piston O.D. | 30.165 - 30.198 (1.1876 - 1.1889) | - |

FRONT DRIVING MECHANISM SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|-------------------|------------------------------|----------------------------------------------------------------|-----------------------------------------------|
| Front final drive | Oil capacity | After draining | 325 cm ³ (11.0 US oz, 11.4 Imp oz) |
| | | After disassembly | 370 cm ³ (12.5 US oz, 13.0 Imp oz) |
| | Recommended oil | Honda shaft drive oil or equivalent hypoid gear oil, SAE 80W90 | - |
| | Gear backlash | 0.05 - 0.25 (0.002 - 0.010) | 0.4 (0.02) |
| | Backlash difference | - | 0.2 (0.01) |
| | Slip torque | 14 - 17 N·m (1.45 - 1.75 kgf·m, 10 - 13 lbf·ft) | 12 N·m (1.2 kgf·m, 9 lbf·ft) |
| | Face cam-to-housing distance | 3.3 - 3.7 (0.13 - 0.15) | 3.3 (0.13) |
| | Differential ring gear depth | 6.55 - 6.65 (0.258 - 0.262) | 6.55 (0.258) |
| | Cone spring free height | 2.8 (0.11) | 2.6 (0.10) |

REAR DRIVING MECHANISM SPECIFICATIONS

Unit: mm (in)

| ITEM | | STANDARD | SERVICE LIMIT |
|---------------------------------|---------------------------------------------------|----------------------------------------------------------------|---------------------------------------------|
| Axle runout (FM1/FM2/FE1/FE2) | | - | 3.0 (0.12) |
| Rear final drive | Oil capacity (FM1/FM2/ FE1/FE2) | After draining | 85 cm ³ (2.9 US oz, 3.0 Imp oz) |
| | | After disassembly | 100 cm ³ (3.4 US oz, 3.5 Imp oz) |
| | Oil capacity (FM5/FM6/ FM7/FA5/FA6/ FA7) | After draining | 125 cm ³ (4.2 US oz, 4.4 Imp oz) |
| | | After disassembly | 145 cm ³ (4.9 US oz, 5.5 Imp oz) |
| | Recommended oil | Honda shaft drive oil or equivalent hypoid gear oil, SAE 80W90 | - |
| | Gear backlash | 0.05 - 0.25 (0.002 - 0.010) | 0.4 (0.02) |
| | Backlash difference | - | 0.2 (0.01) |
| Ring gear-to-stop pin clearance | 0.3 - 0.6 (0.01 - 0.02) | - | |

BATTERY/CHARGING SYSTEM SPECIFICATIONS

| ITEM | | SPECIFICATIONS | |
|------------|--------------------------------------|--------------------------------------------|--------------------|
| Battery | Type | GYZ16H | |
| | Capacity | 12 V – 16 Ah (10 HR)/12 V – 16.8Ah (20 HR) | |
| | Current leakage | FM1/FM2/FE1/FE2 | 1 mA max. |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | 0.31 mA max. |
| | Voltage (20°C/68°F) | Fully charged | 13.0 – 13.2 V |
| | | Needs charging | Below 12.4 V |
| | Charging current | Normal | 1.6 A x 5 – 10 h |
| Quick | | 8.0 A x 1.0 h | |
| Alternator | Capacity | FM/FE models | 0.481 kW/5,000 rpm |
| | | FA models | 0.595 kW/5,000 rpm |
| | Charging coil resistance (20°C/68°F) | | 0.1 – 1.0 Ω |

LIGHTS/METERS/SWITCHES SPECIFICATIONS

| ITEM | | SPECIFICATIONS | |
|----------|-----------------------------------------|-------------------------|------------------------------|
| Bulbs | Headlight (high/low beam) | 12 V - 35/35 W x 2 | |
| | Assist headlight | FM1/FM2/FE1/FE2 | 12 V - 45 W |
| | | FM5/FM6/FM7/FA5/FA6/FA7 | 12 V - 50 W |
| | Brake/taillight | LED | |
| | Neutral indicator | LED | |
| | Reverse indicator | LED | |
| | High coolant temperature indicator | LED | |
| | MIL | LED | |
| | Meter light | LED | |
| | EPS indicator (FM2/FM6/FM7/FE2/FA6/FA7) | LED | |
| | Differential lock indicator | LED | |
| Fuse | Main fuse | 40 A | |
| | Sub-fuse | FM1/FM2/FM5 | 20 A x 4, 10 A x 2 |
| | | FE/FA models | 30 A x 1, 20 A x 3, 10 A x 2 |
| | | FM6/FM7 | 20 A x 3, 10 A x 2 |
| EPS fuse | FM2/FE2/FM6/FM7/FA6/FA7 | 40 A | |

TORQUE VALUES

STANDARD TORQUE VALUES

| FASTENER TYPE | TORQUE N·m (kgf·m, lbf·ft) | FASTENER TYPE | TORQUE N·m (kgf·m, lbf·ft) |
|-----------------------------------------------|-------------------------------|-----------------------------------------------------------------|-------------------------------|
| 5 mm bolt and nut | 5.2 (0.5, 3.8) | 5 mm screw | 4.2 (0.4, 3.1) |
| 6 mm bolt and nut (Include SH flange bolt) | 10 (1.0, 7) | 6 mm screw | 9 (0.9, 6.6) |
| | | 6 mm flange bolt and nut (Include 8 mm head, large flange bolt) | 12 (1.2, 9) |
| 8 mm bolt and nut | 22 (2.2, 16) | 8 mm flange bolt and nut | 27 (2.8, 20) |
| 10 mm bolt and nut | 34 (3.5, 25) | 10 mm flange bolt and nut | 39 (4.0, 29) |
| 12 mm bolt and nut | 54 (5.5, 40) | | |

GENERAL INFORMATION

ENGINE & FRAME TORQUE VALUES

- Torque specifications listed below are for important fasteners.
- Others should be tightened to standard torque values listed above.

FRAME/BODY PANELS/EXHAUST SYSTEM

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-----------------------------------------------------------------|------|---------------------|----------------------------------|---------------|
| Step bracket nut | 8 | 8 | 32 (3.3, 24) | |
| Muffler cover bolt | 2 | 6 | 12 (1.2, 9) | |
| Exhaust pipe cover band screw | 2 | — | 2.0 (0.2, 1.5) | |
| Exhaust pipe cover rear band screw (FM5/FM6/FM7/FA5/FA6/FA7) | 1 | — | 3.2 (0.3, 2.4) | |
| Front muffler cover band screw (FM1/FM2/FE1/FE2) | 1 | — | 2.0 (0.2, 1.5) | |
| Front muffler cover band screw (FM5/FM6/FM7/FA5/FA6/FA7) | 1 | — | 3.2 (0.3, 2.4) | |
| Muffler cover band screw | 2 | — | 3.2 (0.3, 2.4) | |
| Exhaust pipe stud bolt | 2 | 8 | 6 (0.6, 4.4) | See page 2-13 |

MAINTENANCE

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-------------------------------------------------------------------------------------|------|---------------------|----------------------------------|----------------------------------|
| Spark plug | 1 | 14 | 22 (2.2, 16) | |
| Valve adjusting screw lock nut | 2 | 6 | 17 (1.7, 13) | |
| Valve adjusting hole cap | 2 | 36 | 12 (1.2, 9) | |
| Timing hole cap | 1 | 14 | 10 (1.0, 7) | |
| Engine oil drain bolt | 1 | 12 | 25 (2.5, 18) | |
| Rear final gear case oil check bolt (FM1/FM2/FE1/FE2) | 1 | 8 | 12 (1.2, 9) | |
| Rear final gear case oil filler cap | 1 | 30 | 12 (1.2, 9) | |
| Rear final gear case oil drain bolt | 1 | 8 | 12 (1.2, 9) | |
| Front final gear case oil filler cap | 1 | 30 | 12 (1.2, 9) | |
| Front final gear case oil drain bolt | 1 | 8 | 12 (1.2, 9) | |
| Range select cable lock nut (FA5/ FA6/FA7) | 2 | 14 | 26 (2.7, 19) | |
| Front master cylinder reservoir cap screw | 2 | 4 | 2.0 (0.2, 1.5) | |
| Rear brake master cylinder push rod joint lock nut (FM5/FM6/FM7/FA5/ FA6/FA7) | 1 | 8 | 17 (1.7, 13) | |
| Tie-rod lock nut (knuckle side) | 2 | 12 | 54 (5.5, 40) | See page 3-31 |
| Tie-rod lock nut (steering arm side) | 2 | 12 | 54 (5.5, 40) | Left hand threads. See page 3-31 |

PGM-FI SYSTEM

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|---------------------------------|------|---------------------|----------------------------------|---------|
| Sensor unit torx screw (T25) | 3 | 5 | 3.4 (0.3, 2.5) | |
| ECT sensor | 1 | 10 | 12 (1.2, 9) | |
| Bank angle sensor mounting bolt | 2 | 6 | 10 (1.0, 7) | |
| O ₂ sensor | 1 | 12 | 24.5 (2.5, 18) | |

IGNITION SYSTEM

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-----------------|------|---------------------|----------------------------------|---------|
| Timing hole cap | 1 | 14 | 10 (1.0, 7) | |

ELECTRIC STARTER

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|--------------------------|------|---------------------|----------------------------------|---------|
| Starter motor case bolt | 2 | 5 | 4.9 (0.5, 3.6) | |
| Negative brush set screw | 1 | 5 | 3.7 (0.4, 2.7) | |

FUEL SYSTEM

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|----------------------------------------------|------|---------------------|----------------------------------|---------------|
| Harness clip stay screw | 1 | 5 | 3.4 (0.3, 2.5) | |
| Fuel hose clamp stay screw | 1 | 5 | 3.4 (0.3, 2.5) | |
| Insulator band screw (Cylinder head side) | 1 | 5 | – | See page 7-21 |
| Insulator band screw (Throttle body side) | 1 | 5 | – | See page 7-22 |
| Throttle drum cover screw | 1 | 4 | 1.8 (0.2, 1.3) | |
| IACV torx screw (T20) | 2 | 4 | 2.1 (0.2, 1.5) | |
| Fuel injector mounting bolt | 2 | 5 | 5.1 (0.5, 3.8) | |

COOLING SYSTEM

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-----------------------|------|---------------------|----------------------------------|-------------------------------------|
| Water hose band screw | 8 | – | – | See page 8-8 |
| Cooling fan nut | 1 | 5 | 2.7 (0.3, 2.0) | Apply locking agent to the threads. |
| Fan motor bolt | 3 | 5 | 5.2 (0.5, 3.8) | |
| Fan motor stay bolt | 3 | 6 | 8.4 (0.9, 6.2) | |

CYLINDER HEAD/VALVE

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-------------------------------------------|------|---------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Cylinder head nut | 4 | 10 | 48 (4.9, 35) | Apply engine oil to the threads and seating surface. |
| Upper engine hanger nut (frame side) | 1 | 10 | 63 (6.4, 46) | |
| Upper engine hanger bolt (engine side) | 2 | 8 | 32 (3.3, 24) | |
| Cam chain tensioner pivot bolt | 1 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 8.0 ± 1.0 mm (0.31 ± 0.04 in) except 2.0 ± 1.0 mm (0.08 ± 0.04 in) from tip |
| Spark plug | 1 | 14 | 22 (2.2, 16) | |
| ECT sensor | 1 | 10 | 12 (1.2, 9) | |

CYLINDER/PISTON

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|--------------------|------|---------------------|----------------------------------|---------------|
| Cylinder stud bolt | 4 | 10 | 12 (1.2, 9) | See page 11-5 |



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GENERAL INFORMATION

CLUTCH/GEARSHIFT LINKAGE (FM/FE models)

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|----------------------------------------------|------|---------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Centrifugal clutch lock nut | 1 | 20 | 118 (12.0, 87) | Lock nut: replace with a new one. Apply engine oil to the threads and seating surface. Stake. |
| Change clutch lock nut | 1 | 18 | 108 (11.0, 80) | Lock nut: replace with a new one. Apply engine oil to the threads and seating surface. Stake. |
| Clutch spring bolt | 4 | 6 | 13 (1.3, 10) | |
| Gearshift spindle return spring pin | 1 | 8 | 22 (2.2, 16) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Gearshift cam bolt | 1 | 6 | 16 (1.6, 12) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Shift drum stopper arm pivot bolt | 1 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 8.0 ± 1.0 mm (0.31 ± 0.04 in) except 2.0 ± 1.0 mm (0.08 ± 0.04 in) from tip |
| Gearshift spindle A stopper bolt (FM models) | 1 | 8 | 27 (2.8, 20) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 6.0 – 8.0 mm (0.24 – 0.31 in) from tip |

DUAL CLUTCH TRANSMISSION (FA models)

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|----------------------------------------|------|---------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Centrifugal clutch lock nut | 1 | 20 | 118 (12.0, 87) | Lock nut: replace with a new one. Apply engine oil to the threads. Stake. |
| Oil feed pipe setting cap | 1 | 24 | 21 (2.1, 15) | |
| Orifice relief valve socket bolt | 1 | 10 | 34 (3.5, 25) | Do not remove unless necessary. |
| Sealing bolt | 1 | 8 | 16 (1.6, 12) | Do not remove unless necessary. |
| Gear shift spindle return spring pin | 1 | 8 | 22 (2.2, 16) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Shift clutch lock nut | 1 | 18 | 108 (11.0, 80) | Lock nut: replace with a new one. Apply engine oil to the threads and seating surface. Stake. |
| Shift drum stopper arm pivot bolt | 1 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 8.0 ± 1.0 mm (0.31 ± 0.04 in) except 2.0 ± 1.0 mm (0.08 ± 0.04 in) from tip |
| Shift drum center bolt | 1 | 8 | 23 (2.3, 17) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Shift drum guide plate bolt | 2 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Shift spindle angle sensor socket bolt | 2 | 5 | 6 (0.6, 4.4) | Apply locking agent to the threads. Coating width: 5.0 ± 1.0 mm (0.2 ± 0.04 in) except 1.0 – 2.0 mm (0.04 – 0.08 in) from tip |

GENERAL INFORMATION

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|--------------------------------------------|------|---------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Shift drum position switch wire clamp bolt | 2 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Shift drum position switch retaining bolt | 1 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 1.0 – 2.0 mm (0.04 – 0.08 in) from tip |
| EOT sensor | 1 | 10 | 18 (1.8, 13) | |
| Reverse switch | 1 | 10 | 13 (1.3, 10) | |
| Rear VS sensor mounting bolt | 1 | 6 | 10 (1.0, 7) | |

SUB-TRANSMISSION (FA models)

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-----------------------------------|------|---------------------|----------------------------------|-----------------------------------|
| Rear sub-frame lower mounting nut | 2 | 12 | 130 (13.3, 96) | Lock nut: replace with a new one. |
| Rear sub-frame rear mounting nut | 1 | 12 | 130 (13.3, 96) | Lock nut: replace with a new one. |
| Range select lever pivot nut | 1 | 8 | 21 (2.1, 15) | |
| Range select arm socket bolt | 1 | 6 | 12 (1.2, 9) | |
| Range select gate special bolt | 2 | 6 | 12 (1.2, 9) | |
| Setting cap | 1 | 18 | 18 (1.8, 13) | |
| Shift arm pinch bolt | 1 | 6 | 16 (1.6, 12) | |

ALTERNATOR/STARTER CLUTCH

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|-------------------------------------------|------|---------------------|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------|
| Starter clutch bolt (T40) | 6 | 8 | 37 (3.8, 27) | Apply locking agent to the threads. Coating width: 6.5 ± 1.0 mm (0.26 ± 0.04 in) except 3.0 – 4.0 mm (0.12 – 0.16 in) from tip |
| Flywheel bolt (U.S.A. type) | 1 | 12 | 108 (11.0, 80) | Apply engine oil to the threads and seating surface. |
| Flywheel/driven pulley bolt (Canada type) | 1 | 12 | 108 (11.0, 80) | Apply engine oil to the threads and seating surface. |
| CKP sensor bolt | 2 | 5 | 6 (0.6, 4.4) | Apply locking agent to the threads. Coating width: 6.0 ± 1.0 mm (0.24 ± 0.04 in) except 1.0 – 3.0 mm (0.04 – 0.12 in) from tip |
| Stator mounting bolt (FM/FE models) | 4 | 6 | 12 (1.2, 9) | |
| Stator mounting bolt (FA models) | 4 | 6 | 10 (1.0, 7) | |

CRANKCASE/TRANSMISSION/CRANKSHAFT/BALANCER

| ITEM | Q'TY | THREAD DIA. (mm) | TORQUE N·m (kgf·m, lbf·ft) | REMARKS |
|------------------------------------------|------|---------------------|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Shift drum bearing set plate (FA models) | 2 | 6 | 12 (1.2, 9) | Apply locking agent to the threads. Coating width: 5.0 ± 1.0 mm (0.2 ± 0.04 in) except 1.0 – 3.0 mm (0.04 – 0.12 in) from tip |

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