

## GENERAL INFORMATION

# TORQUE VALUES

## STANDARD TORQUE VALUES

FASTENER TYPE	N·m (kgf·m, lbf·ft)	FASTENER TYPE	N·m (kgf·m, lbf·ft)
5 mm hex bolt and nut	5 (0.5, 3.7)	5 mm screw	4 (0.4, 3.0)
6 mm hex bolt and nut	10 (1.0, 7)	6 mm screw	9 (0.9, 6.6)
8 mm hex bolt and nut	22 (2.2, 16)	6 mm flange bolt (8 mm head, small flange)	10 (1.0, 7)
10 mm hex bolt and nut	34 (3.5, 25)	6 mm flange bolt (8 mm head, large flange)	12 (1.2, 9)
12 mm hex bolt and nut	54 (5.5, 40)	6 mm flange bolt (10 mm head) and nut	12 (1.2, 9)
		8 mm flange bolt and nut	27 (2.8, 20)
		10 mm flange bolt and nut	39 (4.0, 29)

## 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
Right/left rear seat back bolt (5 person type only)	4	8	33 (3.4, 24)	
Right/left rear side cover bolt	2	6	9 (0.9, 6.6)	
Right/left rear side cover screw	8	6	8 (0.8, 5.9)	
Rear footwell socket screws	4	6	9 (0.9, 6.6)	
Rear mud guard screw	6	6	9 (0.9, 6.6)	
Floor panel socket screw	2	6	8 (0.8, 5.9)	
Front bumper socket screw	2	5	4.2 (0.4, 3.1)	
Front fender bolt	4	6	9 (0.9, 6.6)	
Front fender screw	2	6	9 (0.9, 6.6)	
Snorkel duct connecting hose band screw	1	—	1.5 (0.2, 1.1)	
Right/left front door cover screw (After '16)	8	6	9 (0.9, 6.6)	
Right/left front door panel screw (After '16)	6	6	9 (0.9, 6.6)	
Right/left front door latch cover socket screw ('16)	6	6	8 (0.8, 5.9)	
Right/left front door latch cover socket screw (After '16)	6	6	9 (0.9, 6.6)	
Right/left rear door latch cover bolt (5 person type only)	6	6	9 (0.9, 6.6)	
Right/left rear door plate bolt (5 person type only)	4	6	9 (0.9, 6.6)	
Rear seat latch cover screw (5 person type only)	6	6	8 (0.8, 5.9)	
Front floor cover socket screw	7	6	9 (0.9, 6.6)	
Front floor lid socket screw	2	6	9 (0.9, 6.6)	
Front seat belt anchor bolt	6	7/16"	32 (3.3, 24)	
Front seat belt retractor nut	3	7/16"	32 (3.3, 24)	
Rear seat belt anchor bolt (5 person type only)	2	7/16"	32 (3.3, 24)	
Front seat belt buckle bolt	3	7/16"	32 (3.3, 24)	
Rear seat belt buckle bolt (5 person type only)	2	7/16"	32 (3.3, 24)	
Rear seat back mounting bolt	4	8	33 (3.4, 24)	
Middle skid plate bolt	10	6	8 (0.8, 5.9)	
Front skid plate bolt (Except M5L/M3L)	6	6	8 (0.8, 5.9)	
Front skid plate bolt (M5L/M3L)	15	6	8 (0.8, 5.9)	
Rear cross pipe mounting nut (5 person type only)	4	10	49 (5.0, 36)	
Right/left rear OPS mounting nut (5 person type only)	2	10	49 (5.0, 36)	

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Right/left rear OPS mounting bolt (5 person type only)	8	10	49 (5.0, 36)	
Front OPS mounting nut	4	10	49 (5.0, 36)	
	4	12	64 (6.5, 47)	
Middle OPS mounting nut	4	10	49 (5.0, 36)	
Bed front panel screw (5 person type)	18	6	8 (0.8, 5.9)	
Bed front panel screw (3 person type)	13	6	8 (0.8, 5.9)	
Tailgate lock bracket bolt	4	6	12 (1.2, 9)	
Tailgate stopper wire screw	4	6	12 (1.2, 9)	
Tailgate tapping screw	3	5	8 (0.8, 5.9)	
Right/left bed side cover panel socket screw (5 person type)	6	6	9 (0.9, 6.6)	
Right/left bed side cover bolt (3 person type)	8	8	26 (2.7, 19)	
Rear bed top cover screw (5 person type)	15	6	8 (0.8, 5.9)	
Rear bed top cover screw (3 person type)	17	6	8 (0.8, 5.9)	
Lock lever holder bolt	8	6	14 (1.4, 10)	
Muffler joint bolt	2	8	21.6 (2.2, 16)	
Muffler protector bolt	4	6	12 (1.2, 9)	
Exhaust pipe joint nut	4	8	26.5 (2.7, 20)	
Exhaust pipe stud bolt	4	8	—	See page 2-51
Front muffler cover (lower)	2	6	14 (1.4, 10)	
Right/left step pipe bolt	4	12	64 (6.5, 47)	
Frame joint nut	8	10	56 (5.7, 41)	Only for proper torque confirmation
Instrument panel mounting screw	4	5	4.2 (0.4, 3.1)	
	6	6	9 (0.9, 6.6)	

## MAINTENANCE

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Throttle cable adjuster lock nut	1	6	5 (0.5, 3.7)	
Air cleaner housing cover screw	10	5	5 (0.5, 3.7)	
Spark plug	2	10	22 (2.2, 16)	
Valve adjusting screw lock nut	4	5	10 (1.0, 7)	Apply engine oil to the threads and seating surface.
Timing hole cap	1	14	10 (1.0, 7)	Apply grease to the threads.
Crankshaft hole cap	1	36	12 (1.2, 9)	Apply grease to the threads.
Engine oil drain bolt	2	12	30 (3.1, 22)	
Sub-transmission oil drain bolt	1	14	29 (3.0, 21)	
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)	
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)	
Rack guide screw	1	32	—	See page 3-24
Rack guide screw lock nut	1	32	24 (2.4, 18)	
Tie-rod end lock nut	2	14	44 (4.5, 32)	

## PGM-FI SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Sensor unit screw	3	5	3.4 (0.3, 2.5)	
ECT sensor	1	10	12 (1.2, 9)	
O <sub>2</sub> 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)	

## GENERAL INFORMATION

### FUEL SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Air cleaner housing mounting bolt	2	6	12 (1.2, 9)	
Air cleaner connecting hose band screw	2	—	—	See page 7-16
Snorkel duct B mounting bolt	2	6	12 (1.2, 9)	
Snorkel duct connecting hose band screw	6	—	1.5 (0.2, 1.1)	
Insulator band screw	4	5	—	See page 7-25
Throttle body setting plate screw	5	5	4.2 (0.4, 3.1)	
Throttle drum cover screw/washer	1	4	1.8 (0.2, 1.3)	
Fuel injector assembly bolt	4	—	5.1 (0.5, 3.8)	
IACV plate screw	2	4	2.1 (0.2, 1.5)	
IACV holder plate screw	3	5	3.4 (0.3, 2.5)	

### LUBRICATION SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Oil cooler bolt	1	20	59 (6.0, 43)	Apply engine oil to the threads and seating surface.
22 mm sealing bolt (for engine oil pressure relief valve)	1	22	30 (3.1, 22)	Apply locking agent to the threads.
24 mm sealing bolt (for DCT oil pressure relief valve)	1	24	31 (3.2, 23)	Apply locking agent to the threads.

### COOLING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Fan motor mounting bolt	3	5	5.2 (0.5, 3.8)	
Cooling fan mounting nut	1	5	2.6 (0.3, 2.0)	Apply locking agent to the threads.

### CYLINDER HEAD/VALVE/CAMSHAFT

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Cylinder head cover bolt	3	6	10 (1.0, 7)	
Rocker arm shaft stopper bolt	1	14	18 (1.8, 13)	Apply engine oil to the threads and seating surface.
Rocker arm shaft bolt	2	6	12 (1.2, 9)	Apply engine oil to the threads and seating surface.
Cam sprocket bolt	2	7	20 (2.0, 15)	Apply locking agent to the threads.
Camshaft holder bolt	6	6	12 (1.2, 9)	Apply engine oil to the threads and seating surface.
Cylinder head bolt	6	12	74 (7.5, 55)	Apply molybdenum oil solution to the threads and seating surface.

**DUAL CLUTCH TRANSMISSION (DCT)**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Shift spindle angle sensor bolt	1	6	12 (1.2, 9)	
TR sensor bolt	1	6	12 (1.2, 9)	
Clutch EOP sensor	3	10	20 (2.0, 15)	
Emergency valve stopper plate bolt	1	6	7 (0.7, 5.2)	
EOT sensor	1	10	15 (1.5, 11)	
Neutral switch	1	10	12 (1.2, 9)	
Primary drive gear lock nut	1	22	118 (12.0, 87)	Left hand threads Apply engine oil to the threads and seating surface.
Clutch control body bolt	7	6	14 (1.4, 10)	Apply engine oil to the threads and seating surface.
Shift drum center bolt	1	8	31 (3.2, 23)	Apply locking agent to the threads. (*1)
Front VS sensor bolt	1	6	10 (1.0, 7)	

**SUB-TRANSMISSION/GEARSHIFT LINKAGE**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Sub-transmission mounting bolt (cover side)	2	8	27 (2.8, 20)	Apply engine oil to the threads and seating surface.
Sub-transmission mounting cap nut (cover side)	2	8	27 (2.8, 20)	Apply engine oil to the threads and seating surface.
Sub-transmission mounting bolt (case side)	3	8	29 (3.0, 21)	Apply engine oil to the threads and seating surface.
Sub-transmission stud bolt	2	8	—	See page 12-7
Shift drum stopper arm pivot bolt	1	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)
Sub-transmission shift drum center bolt	1	8	27 (2.8, 20)	Apply locking agent to the threads. (*1)
Control shaft set screw	1	6	14 (1.4, 10)	
Shift select lever pivot nut	1	8	26 (2.7, 19)	
Shift change cable lock nut	2	14	26 (2.7, 19)	
Shift arm pinch bolt	1	6	16 (1.6, 12)	
Front final gear case mounting nut	3	10	54 (5.5, 40)	Self lock nut: replace with a new one.

**ALTERNATOR/STARTER CLUTCH**

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Starter clutch outer bolt	6	8	23 (2.3, 17)	Apply locking agent to the threads.
Flywheel bolt	1	12	110 (11.2, 81)	Apply engine oil to the threads and seating surface.
Alternator stator bolt	4	6	10 (1.0, 7)	Apply locking agent to the threads. (*1)
CKP sensor bolt	2	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)
Alternator wire clamp bolt	1	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)

## GENERAL INFORMATION

### CRANKCASE/TRANSMISSION/BALANCER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Crankcase main journal bolt	6	10	22 (2.2, 16) + 40°	Apply molybdenum oil solution to the threads and seating surface. See page 14-17
Crankcase 8 mm flange bolt	4	8	24 (2.4, 18)	
Cam chain tensioner bolt	1	8	23 (2.3, 17)	Apply locking agent to the threads. (*1)
Mainshaft bearing set plate bolt	3	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)
Shift drum setting bolt	2	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)
Balancer driven gear bolt	1	10	75 (7.6, 55)	Left hand threads Apply engine oil to the threads and seating surface.
Balancer bearing set plate bolt	6	6	12 (1.2, 9)	Apply locking agent to the threads. (*1)

### CRANKSHAFT/PISTON/CYLINDER

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Connecting rod nut	4	9	49 (5.0, 36)	Apply engine oil to the threads and seating surface.
Crankcase main journal bolt	6	10	22 (2.2, 16) + 40°	Apply molybdenum oil solution to the threads and seating surface. See page 14-17

### ENGINE REMOVAL/INSTALLATION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Left engine hanger bolt	2	10	49 (5.0, 36)	
Throttle drum cover screw/washer	1	4	1.8 (0.2, 1.3)	
Shift arm pinch bolt	1	6	16 (1.6, 12)	
Front final gear case mounting nut	3	10	54 (5.5, 40)	Self lock nut: replace with a new one.
Rear final gear case mounting nut	3	10	54 (5.5, 40)	Self lock nut: replace with a new one.

### STEERING SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Steering wheel nut	1	12	49 (5.0, 36)	Self lock nut: replace with a new one.
Shift change switch screw	2	3	0.6 (0.06, 0.4)	
Steering shaft pinch bolt (EPS model)	8	8	27 (2.8, 20)	Replace the bolt and washer with new ones.
Steering shaft pinch bolt (Except EPS model)	4	8	27 (2.8, 20)	Replace the bolt and washer with new ones.
Tie-rod ball joint nut	2	12	65 (6.6, 48)	
Rack end joint	2	12	54 (5.5, 40)	
Steering gear box mounting nut	4	10	39 (4.0, 29)	Self lock nut: replace with a new one
Rack guide screw lock nut	1	32	24 (2.4, 18)	
Upper paddle cover mounting screw	1	6	9 (0.9, 6.6)	

## FRONT DRIVING MECHANISM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Front final gear case mounting nut	3	10	54 (5.5, 40)	Self lock nut: replace with a new one.
Final clutch housing bolt	3	8	25 (2.5, 18)	
4WD select switch	1	10	12 (1.2, 9)	
Drive mode select lever pivot bolt	1	8	26 (2.7, 19)	
Final clutch shift fork bolt	1	6	10 (1.0, 7)	ALOC bolt: replace with a new one.
Final clutch cable stay bolt	1	8	25 (2.5, 18)	
Final clutch cable adjustment lock nut	1	6	5 (0.5, 3.7)	
Differential lock switch	1	10	12 (1.2, 9)	
Front VS sensor bolt	1	6	10 (1.0, 7)	
Front final gear case cover bolt	2	10	47 (4.8, 35)	Apply locking agent to the threads. Coating width: 4 mm (0.12 in) minimum (3 – 5 threads)
	6	8	25 (2.5, 18)	
Front pinion bearing lock nut	1	64	98 (10.0, 72)	Self lock nut: replace with a new one. Stake.
Differential ring gear bolt	10	10	100 (10.2, 74)	ALOC bolt: replace with a new one.
Differential lock shift fork bolt	1	6	10 (1.0, 7)	ALOC bolt: replace with a new one.
2WD/4WD selector cable lock nut	1	6	5 (0.5, 3.7)	
Front differential lock cable lock nut	1	6	5 (0.5, 3.7)	
Rear differential lock cable A lock nut	1	6	5 (0.5, 3.7)	
Rear differential lock cable B lock nut	1	6	5 (0.5, 3.7)	
Shift gate socket bolt (After '16)	3	6	9 (0.9, 6.6)	

## REAR DRIVING MECHANISM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Rear final gear case mounting nut	3	10	54 (5.5, 40)	Self lock nut: replace with a new one.
Differential lock switch	1	10	12 (1.2, 9)	
Rear final gear case cover bolt	2	10	47 (4.8, 35)	Apply locking agent to the threads. Coating width: 4 mm (0.12 in) minimum (3 – 5 threads)
	6	8	25 (2.5, 18)	
Rear pinion bearing lock nut	1	72	98 (10.0, 72)	Self lock nut: replace with a new one. Stake.
Differential ring gear bolt	10	10	100 (10.2, 74)	ALOC bolt: replace with a new one.
Differential lock shift fork bolt	1	6	10 (1.0, 7)	ALOC bolt: replace with a new one.
Differential lock cable stay bolt	2	6	10 (1.0, 7)	
Differential lock cable stay bolt (M5L/M3L)	2	8	25 (2.5, 18)	
VS sensor bolt	1	6	10 (1.0, 7)	
Maintenance lid screw	1	6	8 (0.8, 5.9)	

## GENERAL INFORMATION

### WHEEL/SUSPENSION

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Wheel nut (front/rear)	16	12	108 (11.0, 80)	
Wheel hub nut (front/rear)	4	20	137 (14.0, 101)	Castle nut: tighten to the specified torque and further tighten until its grooves aligns with the cotter pin hole.
Brake disc bolt (front/rear)	16	8	42 (4.3, 31)	ALOC bolt: replace with a new one.
Front brake disc splash guard socket screw	4	6	11 (1.1, 8)	ALOC screw: replace with a new one.
Front brake caliper mounting bolt	4	12	108 (11.0, 80)	ALOC bolt: replace with a new one.
Front outboard guard bolt	4	6	11 (1.1, 8)	ALOC bolt: replace with a new one.
Front shock absorber mounting nut	4	12	64 (6.5, 47)	Self lock nut: replace with a new one.
Front upper arm pivot nut	2	10	44 (4.5, 32)	Self lock nut: replace with a new one.
Front lower arm pivot nut	4	12	64 (6.5, 47)	Self lock nut: replace with a new one.
Front upper arm ball joint nut	2	12	29 (3.0, 21)	Castle nut: tighten to the specified torque and further tighten until its grooves aligns with the cotter pin hole.
Front lower arm ball joint nut	2	14	49 (5.0, 36)	Castle nut: tighten to the specified torque and further tighten until its grooves aligns with the cotter pin hole.
Tie-rod ball joint nut	2	12	65 (6.6, 48)	
Rear brake disc splash guard socket screw	6	6	11 (1.1, 8)	ALOC bolt: replace with a new one.
Rear brake caliper mounting bolt	4	10	49 (5.0, 36)	ALOC bolt: replace with a new one.
Rear shock absorber mounting nut	4	12	64 (6.5, 47)	Self lock nut: replace with a new one.
Rear upper/lower arm pivot nut (frame side)	8	12	64 (6.5, 47)	Self lock nut: replace with a new one.
Rear upper/lower arm pivot nut (knuckle side)	4	10	44 (4.5, 32)	Self lock nut: replace with a new one.
Stabilizer arm mounting bolt	4	8	27 (2.8, 20)	
Stabilizer link nut	2	10	46 (4.7, 34)	
Brake hose clamp bolt	6	6	12 (1.2, 9)	ALOC bolt: replace with a new one.
Suspension arm cover mounting socket bolts (front/rear) (M5L/M3L)	32	8	26 (2.7, 19)	ALOC bolt: replace with a new one.
Arm cover holder nuts (front/rear) (M5L/M3L)	4	6	12 (1.2, 9)	
Damping adjust knob torx bolt (front/rear) (M5L/M3L)	4	—	0.8 (0.1, 0.6)	

## BRAKE SYSTEM

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Brake hose oil bolt	4	10	34 (3.5, 25)	
Brake caliper bleed valve	4	8	5.4 (0.6, 4.0)	
Front outboard guard bolt	4	6	11 (1.1, 8)	ALOC bolt: replace with a new one.
Brake pipe joint nut ('16)	14	10	14 (1.4, 10)	
Brake pipe joint nut (After '16 M5L/M3L)	12	10	15 (1.5, 11)	
Brake pipe joint nut (After '16 except M5L/M3L)	10	10	15 (1.5, 11)	
Brake pipe joint nut (After '16)	4	12	22 (2.2, 16)	
Master cylinder push rod joint nut	1	8	17.2 (1.8, 13)	
Master cylinder reservoir band	1	6	6.2 (0.6, 4.6)	
Master cylinder stop bolt	1	6	8.9 (0.9, 6.5)	
Front brake caliper mounting bolt	4	12	108 (11.0, 80)	ALOC bolt: replace with a new one.
Front brake caliper slide pin bolt	4	8	22 (2.2, 16)	
Rear brake caliper mounting bolt	4	10	49 (5.0, 36)	ALOC bolt: replace with a new one.
Rear brake caliper slide pin bolt	4	8	22 (2.2, 16)	
Master cylinder reservoir mounting bolt (After '16)	1	6	12 (1.2, 9)	

## LIGHTS/METERS/SWITCHES

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
VS sensor bolt	1	6	10 (1.0, 7)	
Front differential lock switch	1	10	12 (1.2, 9)	
Rear differential lock switch	1	10	12 (1.2, 9)	
4WD select switch	1	10	12 (1.2, 9)	

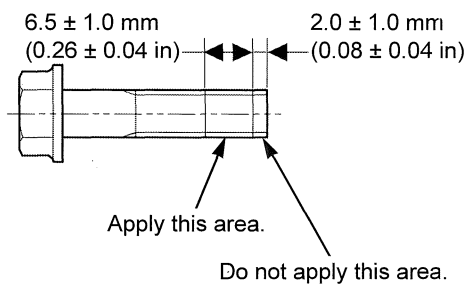
## I-4WD (Intelligent 4 Wheel Drive) (After '16)

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Modulator mounting bolts	3	6	9.5 (1.0, 7)	
Modulator cover bolt	1	6	12 (1.2, 9)	
Front wheel speed sensor bolt	2	6	10 (1.0, 7)	
Rear wheel speed sensor bolt	2	6	10 (1.0, 7)	

## OTHERS

ITEM	Q'TY	THREAD DIA. (mm)	TORQUE N·m (kgf·m, lbf·ft)	REMARKS
Shift lock cable mounting bolt (After '16)	1	6	10 (1.0, 7)	

\*1: Apply locking agent to the threads as shown.



The bolt shown is typical.