

## MAINTENANCE SPECIFICATIONS

**SPEC**



Tightening Torque:					
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Engine mount					Refer to "NOTE"
[Rear, upper]	M8 × 1.25	24	2.4	17	
[Rear, lower]	M8 × 1.25	24	2.4	17	
[Upper]	M8 × 1.25	24	2.4	17	
[Downtube upper]	M8 × 1.25	24	2.4	17	
[Downtube lower]	M8 × 1.25	24	2.4	17	
Pivot shaft and nut	M10 × 1.25	44	4.4	32	
Rear shock and frame	M10 × 1.25	30	3.0	22	
Rear shock and rear arm	M10 × 1.25	39	3.9	28	
Ring nut (Steering shaft)	M25 × 1.0				
Cap bolt (Front fork)	M10 × 1.25	30	3.0	22	
Handlebar crown and steering shaft	M10 × 1.25	30	3.0	22	
Handlebar crown and handlebar lower bracket	M10 × 1.25	30	3.0	22	
Handlebar upper bracket and handlebar lower bracket	M6 × 1.0	12	1.2	8.7	
Inner tube pinch bolt	M10 × 1.25	25	2.5	18	
Front wheel axle	M10 × 1.25	44	4.4	32	
Rear wheel axle	M10 × 1.25	45	4.5	32	
Driven sprocket and wheel hub	M8 × 1.25	24	2.4	17	
Tension bar and brake shoe plate	M8 × 1.25	18	1.8	13	
Tension bar and rear arm	M8 × 1.25	18	1.8	13	
Camshaft lever (Brake)	M6 × 1.0	9	0.9	6.5	
Frame and footrest	M8 × 1.25	24	2.4	17	
Frame and seat	M8 × 1.25	10	1.0	7.2	
Chain puller nut	M6 × 1.0	10	1.0	7.2	

**NOTE:**

Tighten the ring nut so all free play is taken up, but so the steering stem can still pivot freely from lock to lock. Recheck for free play after the entire fork unit has been installed.

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## ELECTRICAL

Model	FS-1
Voltage:	6V
Ignition System: Ignition Timing (B.T.D.C.) Advancer Type	22° at 5,000 r/min Centrifugal type
Ignition: Magnetto Model/Manufacturer Contact-Breaker-Point Gap Spring Pressure Condenser Capacity Source Coil Resistance	F355/YAMAHA 0.3~0.4 mm (0.012~0.016 in) 600~800 g (21.162~28.216 oz) 0.27~0.33 $\mu$ F 1.4~2.0 $\Omega$ at 20°C (68°F) (Black/White—Ground)
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Coil Resistance Secondary Coil Resistance	C481/YAMAHA 6 mm (0.24 in) 1.4~1.8 $\Omega$ at 20°C (68°F) 6.0~7.3k $\Omega$ at 20°C (68°F)
Spark Plug Cap: Type Plug Cap Resistance	Resin Type 5k $\Omega$ at 20°C (68°F)
Charging System: Type	Flywheel Magnetto
Flywheel Magnetto: Magnetto Model/Manufacturer Charging Current—Day (Min.) (Max.) Charging Current—Night (Min.) (Max.) Lighting Voltage (Min.) (Max.) Charging Coil Resistance	F355/YAMAHA 0.7A or more at 3,000 r/min 4.7A or less at 8,000 r/min 0.35A or more at 3,000 r/min 2.5A or less at 8,000 r/min 5.8V or more at 3,000 r/min 8.2V or less at 8,000 r/min 0.4~0.6 $\Omega$ at 20°C (68°F) (Ground—Yellow) 0.3~0.5 $\Omega$ at 20°C (68°F) (Ground—Green/Red)

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Model	FS-1
<div data-bbox="172 286 367 318">[Reference date]</div> <div data-bbox="395 286 997 795"> <p>Lighting Voltage (V) Charging Current (A)</p> <p>Lighting Voltage-Night</p> <p>Charging Current-Day</p> <p>Charging Current-Night</p> <p>Engine Speed ( × 1,000 r/min)</p> </div>	
Rectifier: Model/Manufacturer Capacity Withstand Voltage	DE4504/STANLEY 4A 400V
Battery: Specific Gravity	1.260
Horn: (Except for Holland) Type Quantity Model/Manufacturer Maximum Amperage	Plane Type 1 pc. MF-6/NIKKO 1.5A
Flasher Relay: Type Model/Manufacturer  Self Cancelling Device Flasher Frequency Wattage	Condenser Type FZ618SD/NIPPON DENSO (H), FZ650SD/NIPPON DENSO (B)(E) No. 60 ~ 120 cycles/min 10W × 2 (H)(B), 21W × 2 + 3W (E)
Circuit Breaker: Type	Fuse
Circuit (Fuse): Main Reserve	10A (1 pc.) 10A (1 pc.)

## GENERAL TORQUE SPECIFICATIONS/ DEFINITION OF UNITS

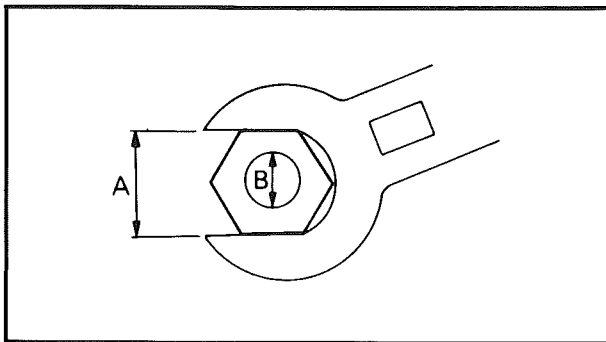
**SPEC**



### GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

A (Nut)	B (Bolt)	General torque specifications		
		Nm	m•kg	ft•lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94



A: Distance across flats  
B: Outside thread diameter

### DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	$10^{-3}$ meter	Length
cm	centimeter	$10^{-2}$ meter	Length
kg	kilogram	$10^3$ gram	Weight
N	Newton	$1 \text{ kg} \times \text{m/sec}^2$	Force
Nm	Newton meter	$\text{N} \times \text{m}$	Torque
m•kg	Meter kilogram	$\text{m} \times \text{kg}$	Torque
Pa	Pascal	$\text{N/m}^2$	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	—	Volume or capacity
cm <sup>3</sup>	Cubic centimeter	—	Volume or capacity
r/min	Rotation per minute	—	Engine speed

# LUBRICATION POINTS AND LUBRICANT TYPE

SPEC



## LUBRICATION POINTS AND LUBRICANT TYPE

### ENGINE

Lubrication Points (Part name)	Lubricant Type
Oil seal lips (All)	
O-rings (All)	
Bearing retainer Crankshaft bearings (Left and center) Needle bearings (Connecting rod) Main axle bearings Drive axle bearings	
Crank pins	
Piston rings, piston pins and pistons	
Warm shaft (Autolube pump)	
Kick idle gear	
Kick axle	
Primary driven gear (Clutch housing)	
Push rod	
Push screw (Push lever)	
Sliding gear (Transmission)	
Free movement gear (Transmission)	
Guide bar (Shift forks)	
Crankcase mating surfaces	Yamaha bond No. 4

## LUBRICATION POINTS AND LUBRICANT TYPE

**SPEC**



### CHASSIS

Lubrication Points (Part name)	Lubricant Type
Ball bearings (Steering shaft)	<del>5TL5</del>
Oil seal lips (Front wheel and rear wheel)	<del>5TL5</del>
Pivoting point (Brake pedal)	<del>5TL5</del>
Pivoting point (Centerstand)	<del>5TL5</del>
Right handlebar end	<del>5TL5</del>
Throttle cable end (Throttle grip)	<del>5TL5</del>
Pivoting point (Clutch lever)	<del>5TL5</del>
Clutch cable end (Clutch lever)	<del>5TL5</del>
Pivoting point (Brake lever)	<del>5TL5</del>
Pivot shaft (Swingarm)	<del>5TL5</del>
Bushes (Swingarm)	<del>5TL5</del>
Front wheel axle	<del>5TL5</del>
Rear wheel axle	<del>5TL5</del>
Collar (Front wheel)	<del>5TL5</del>
Speedometer gear unit	<del>5TL5</del>