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SPEC

# CHAPTER 2. SPECIFICATIONS

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Model	Vehicle	Frame	Engine	Dimensions Overall	Overall Overall	Seat H Whisker	Minimum	Basic W With C	Minimum	Engine: Engine	Cylinder	Displaced	Bored X	Comp	Standby	Lubricat	Engine
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## SPECIFICATIONS

## GENERAL SPECIFICATIONS

Model	XT260
Model Code Number:	3YF1: (A1B1D1D1K1F1G1B1G1I1J1I1N1L1) (P1R1T1S1S1F1) 3YF2: (C1N1R1E1) 48W1: (A1I1C1H1)
Vehicle Identification Number:	JYAS1YF50**MA029101: (C1N1R1E1)
Frame Starting Number:	3YF-000101: (A1B1D1D1K1F1G1B1G1I1J1I1N1L1) (P1R1T1S1S1F1) 48W-000101: (A1I1C1H1)
Engine Starting Number:	3YF-000101: (A1B1D1D1K1F1G1B1G1I1J1I1N1L1) (P1R1T1S1S1F1) 3YF-029101: (C1N1R1E1) 48W-000101: (A1I1C1H1)
Dimensions:	
Overall Length	2,265 mm (89.2 in)
Overall Width	2,355 mm (92.7 in); (CH1D1D1K1I1N1S1S1F1)
Overall Height	885 mm (34.8 in)
Sest Height	1,355 mm (53.3 in)
Wheelbase	895 mm (34.1 in)
Minimum Ground Clearance	1,435 mm (56.9 in)
Basic Weight:	245 mm (9.6 in)
With Oil and Full Fuel Tank	195 kg (430 lb)
Minimum Turning Radius:	2,400 mm (94.5 in)
Engine:	
Engine Type	Liquid cooled 4-stroke, SOHC
Cylinder Arrangement	Forward inclined single cylinder
Displacement	660 cm <sup>3</sup>
Bore x Stroke	100 x 84 mm (3.94 x 3.31 in)
Compression Ratio	9.2 : 1
Starting System	1,100 kPa (11.0 kg/cm <sup>2</sup> , 156 psi) Electric starter
Lubrication System:	Dry sump
Engine Oil Type or Grade:	

## GENERAL SPECIFICATIONS

Model	XT260
Engine Oil Capacity:	2.6 L (2.3 imp qt); 2.7 US qt)
Periodic Oil Change:	2.7 L (2.4 imp qt); 2.9 US qt)
With Oil Filter Replacement:	3.0 L (2.6 imp qt); 3.2 US qt)
Total Amount:	
Coolant Total Amount:	11.2 L (1.1 imp qt); 1.3 US qt)
(Including All Routes)	
Air Filter:	Dry type element
Fuel:	
Type	Regular unleaded gasoline with a research octane number of 91 or higher
Tank Capacity	20 L (17.6 imp qt); 21.1 US gal)
Reserve Amount	3.5 L (3.1 imp qt); 3.7 US gal)
Carburetor:	
Type x Quantity	X28PV x 1
Manufacturer	TEIKO
Spark Plug:	
Type	DPR8EA-9/DPR9EA-9
Manufacturer	NGK
Gap	0.8 - 0.9 mm (0.031 - 0.035 in)
Clutch Type:	Wet, multiple-disc
Transmission:	
Transmission Type	Constant mesh 5-speed
Operation	Left foot operation
Primary Reduction System	Spur gear
Primary Reduction Ratio	71/34 (2.088)
Secondary Reduction System	Chain Drive
Secondary Reduction Ratio	45/15 (3.000)
Gear Ratio	31/12 (2.583)
1st	27/17 (1.588)
2nd	24/20 (1.200)
3rd	21/22 (0.954)
4th	19/24 (0.792)
5th	
Chassis:	
Frame Type	Diamond
Caster Angle	28.0°
Tire:	112 mm (4.41 in)
Front:	
With tube:	120/90-17 6AS
90/90-21 5AS	BRIDGESTONE
BRIDGESTONE	(TW41)
DUNLOP	DUNLOP
(TRAIL MAX G)	(TRAIL MAX G)

# GENERAL SPECIFICATIONS

SPEC 99

B-1

Model	XTZ680	
Tire Pressure (Cold Tire): Maximum load*	180 kg (397 lb)	
Cold tire pressure Up to 90 kg (198 lb) load*	Front 200 kPa (12.00 kg/cm <sup>2</sup> , 28 psi)	Rear 200 kPa (12.00 kg/cm <sup>2</sup> , 28 psi)
90 kg (198 lb) - Maximum load*	200 kPa (12.00 kg/cm <sup>2</sup> , 28 psi)	225 kPa (12.25 kg/cm <sup>2</sup> , 32 psi)
*Load is total weight of cargo, rider, passenger, and accessories.		
Brake:	Single disc brake	
Front Brake Type	Right hand operation	
Operation	Single disc brake	
Rear Brake Type	Right foot operation	
Operation		
Suspension:	Telescopic fork	
Front Suspension	Swingarm (Link suspension)	
Shock absorber:	Coil-Air spring/Oil damper	
Front Shock Absorber	Coil-Gas spring/Oil damper	
Rear Shock Absorber		
Wheel Travel:	220 mm (8.66 in)	
Front Wheel Travel	200 mm (7.87 in)	
Rear Wheel Travel		
Electrical:	T.C.I. (Digital)	
Ignition System	A.C. magneto generator	
Generator System	YTX9-BS	
Battery Type or Model	12V, 8AH	
Battery Capacity	Quartz bulb (Halogen)	
Headlight Type	12V 60W/55W x 1	
Bulb Wattage x Quantity:	12V 4W x 1	
Headlight	12V 3.4W x 1 (GB)	
Auxiliary Light	12V 5W/21W x 1	
Tail/Brake Light	12V 21W x 4	
Flasher Light	12V 1.7W x 2	
Indicator Light:	12V 3.4W x 1	
Wattage x Quantity	12V 3.4W x 1	
	12V 3.4W x 2	
	"METER LIGHT"	
	"NEUTRAL"	
	"HIGH BEAM"	
	"TURN"	

# MAINTENANCE SPECIFICATIONS

SPEC 99

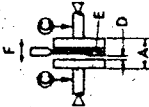
## ENGINE

Model	XTZ680	
Cylinder Head: Warp Limit*	0.03 mm (0.0012 in) * Lines indicate straightedge measurement.	
Cylinder: Bore Size/Measuring Point*	100.005 - 100.045 mm (3.9372 - 3.9388 in) 50 mm (1.97 in)	
< Wear limit >	100.1 mm (3.941 in)	
Camshaft:	Chain drive (Left)	
Drive Method	22.967 - 22.980 mm (0.9042 - 0.9047 in)	
Camshaft Outside Diameter	0.020 - 0.064 mm (0.0008 - 0.0021 in)	
Shaft-to-cap Clearance	35.89 - 36.79 mm (1.4051 - 1.4091 in)	
Cam Dimensions: Intake	35.54 mm (1.3952 in)	
"A"	< Limit >	
"B"	< Limit >	
"C"	< Limit >	
Exhaust	35.50 - 36.60 mm (1.4370 - 1.4408 in)	
"A"	< Limit >	
"B"	< Limit >	
"C"	< Limit >	
Camshaft Runout Limit	6.55 mm (0.2579 in) 0.03 mm (0.0012 in)	
Timing Chain:	75 RH 2015/128 Links	
Chain Type/No. of Links	Automatic	
Chain Adjustment Method	Rocker Arm/Rocker Arm Shaft:	
Rocker Arm/Rocker Arm Shaft:	12.000 - 12.018 mm (0.472 - 0.473 in)	
Rocker Arm Inside Diameter	11.976 - 11.991 mm (0.471 - 0.472 in)	
Shaft Outside Diameter	0.009 - 0.042 mm (0.0004 - 0.0020 in)	
Arm-to-shaft Clearance		

Model	XT2680
Valve, Valve Seat, Valve Guide, Valve Clearance (Cold):	IN. EX.
Valve Dimensions:	0.10 - 0.15 mm (0.004 - 0.006 in) 0.15 - 0.20 mm (0.006 - 0.008 in)
Head Dia.	29.8 - 30.1 mm (1.1772 - 1.1850 in)
"A" Head Dia.	31.9 - 32.1 mm (1.2560 - 1.2638 in)
"B" Face Width	2.25 mm (0.0886 in)
"C" Seat Width	2.26 mm (0.0890 in)
"D" Margin Thickness Limit	0.9 - 1.1 mm (0.035 - 0.043 in)
Stem Outside Diameter	0.86 - 1.15 mm (0.0336 - 0.0453 in)
< Limit >	0.86 - 1.15 mm (0.0336 - 0.0453 in)
Guide-Inside Diameter	5.975 - 5.980 mm (0.2352 - 0.2358 in)
< Limit >	5.980 - 5.975 mm (0.2348 - 0.2352 in)
Stem-to-Guide Clearance	5.96 mm (0.234 in)
< Limit >	5.93 mm (0.233 in)
Stem Runout Limit	6.000 - 6.012 mm (0.2362 - 0.2367 in)
Valve Seat Width	6.000 - 6.012 mm (0.2362 - 0.2367 in)
	6.05 mm (0.238 in)
	6.56 mm (0.258 in)
	0.010 - 0.037 mm (0.0004 - 0.0015 in)
	0.025 - 0.052 mm (0.0010 - 0.0020 in)
	0.08 mm (0.003 in)
	0.1 mm (0.004 in)
	0.01 mm (0.0004 in)

Model	XT2680
Valve Spring: Free Length	IN. EX.
Set Length (Valve Closed)	32.63 mm (1.285 in) 36.46 mm (1.435 in) 27.50 mm (1.083 in) 31.00 mm (1.220 in)
Compressed Pressure (Valve Closed)	10.2 - 11.8 kg (22.49 - 26.01 lb) 12.3 - 14.1 kg (27.12 - 31.08 lb) 2.5°/1.4 mm (2.5°/0.055 in) 2.5°/1.6 mm (2.5°/0.063 in)
Tilt Limit	IN. EX.
Direction of Winding (Top View)	IN. EX.
Piston: Piston Size "D" Measuring Point "H"	99.345 - 99.965 mm (3.905 - 3.936 in) 2.5 mm (0.098 in)
Piston Off-set	1 mm (0.04 in)
Piston Off-set Direction	INSIDE
Piston-to-Cylinder Clearance < Limit >	0.050 - 0.070 mm (0.0020 - 0.0028 in) < 0.15 mm (0.0059 in) >
Piston Ring: Top Ring: Type	Barrel
Dimensions (B x T) End Gap (Installed)	1.2 x 3.8 mm (0.047 x 0.150 in) 0.30 - 0.45 mm (0.012 - 0.018 in)
Side Clearance (Installed)	0.04 - 0.08 mm (0.002 - 0.003 in)
2nd Ring: Type	Taper
Dimensions (B x T) End Gap (Installed)	1.2 x 4.0 mm (0.047 x 0.157 in) 0.30 - 0.45 mm (0.012 - 0.018 in)
Side Clearance	0.03 - 0.07 mm (0.001 - 0.003 in)
Oil Ring: Dimensions (B x T) End Gap (Installed) Side Clearance	2.6 x 3.4 mm (0.098 x 0.134 in) 0.2 - 0.7 mm (0.008 - 0.028 in) 0.015 - 0.042 mm (0.0006 - 0.0017 in)

## MAINTENANCE SPECIFICATIONS

Model	XTZ880
Crankshaft: Crank Width "A" Runout Limit "C" Big End Side Clearance "D" Big End Radial Clearance "E" Small End Free Play "F"	 74.95 - 75.00 mm (2.951 - 2.953 in) 0.03 mm (0.0012 in) 0.35 - 0.65 mm (0.014 - 0.026 in) 0.01 - 0.025 mm (0.0004 - 0.0010 in) 0.8 - 1.0 mm (0.0315 - 0.0394 in)
Balancer: Drive Method	Spur gear
Clutch: Friction Plate: Thickness Quantity Wear Limit Friction Plate: Thickness Quantity Wear Limit Clutch Plates: Thickness Quantity Warp Limit Clutch Spring: Free Length Quantity Minimum Free Length Clutch Release Method	2.74 - 2.86 mm (0.108 - 0.113 in) 6 pcs. 2.6 mm (0.102 in) 2.94 - 3.06 mm (0.116 - 0.120 in) 2 pcs. 2.8 mm (0.110 in) 1.2 mm (0.047 in) 7 pcs. 0.2 mm (0.008 in) 42.8 mm (1.685 in) 5 pcs. 40.8 mm (1.606 in) Outer pull, rack and pinion pull
Transmission: Main Axle Runout Limit Drive Axle Runout Limit	0.08 mm (0.003 in) 0.08 mm (0.003 in)
Stiffener: Type	Cam Drum and Guide bar
Decompression Device: Type	Auto

## MAINTENANCE SPECIFICATIONS

Model		XTZ660	
Carburetor: I.D. Mark		3YF 00, 4BW 00 (A/I/CH)	
		Primary	Secondary
Main Jet	(M.J.)	#130	#165
Main Air Jet	(M.A.J.)	ø1.0	ø1.0
Jet Needle	(J.N.)	5D96-3/5	5X7C-3/5
Needle Jet	(N.J.)	5D97-3/5 (A/I/CH)	ø2.7
Pilot Jet	(P.J.)	V00	—
Pilot Air Jet	(P.A.J.)	#48	—
Bypass	(B.P.)	ø0.6	—
Pilot Screw	(P.S.)	ø1.0	—
Valve Seat	(V.S.)	2 and 1/2 turns out	—
Starter Jet	(S.J.)	ø2.5	—
Pilot Outlet	(P.O.)	#76	—
Fuel Level	(F.L.)	ø0.8	—
Float Height	(F.H.)	6.0 ~ 8.0 mm (0.24 ~ 0.31 in)	
Engine Idling Speed		Blow from the float chamber mating surface	
Vacuum Pressure at Idling Speed		25 ~ 27 mm (0.98 ~ 1.06 in)	
		1,250 ~ 1,350 r/min	
		26.6 ~ 34.6 kPa	
		(200 ~ 260 mmHg, 7.87 ~ 10.24 in Hg)	
Lubrication System:		Paper type	
Oil Filter Type		Trochoid pump type	
Oil Pump Type		0.12 mm (0.005 in)	
Tip Clearance		0.03 ~ 0.08 mm (0.001 ~ 0.003 in)	
Side Clearance		80 ~ 120 kPa	
Bypass Valve Setting Pressure		(0.8 ~ 1.2 kg/cm <sup>2</sup> , 11.38 ~ 17.07 psi)	
Cooling System:			
Radiator Core Size		280 mm (11.02 in)	
	Width	147.8 mm (5.82 in)	
	Height	32 mm (1.26 in)	
	Thickness	95 ~ 125 kPa	
Radiator Cap Opening Pressure		10.95 ~ 1.25 kg/cm <sup>2</sup> , 13.51 ~ 17.77 psi	
Recovery Tank Capacity		0.29 L (0.26 imp qt, 0.31 US qt)	
< From Low to Full Level >		< 0.17 L (0.15 imp qt, 0.18 US qt) >	
Water Pump			
Type		Single-suction centrifugal pump	
Thermostat		33/34 (10.97 in)	
Opening Temperature		80 ~ 84°C (176 ~ 183°F)	

TIGHTENING TORQUE

Part to be tightened	Part name	Thread size	Qty	Tightening torque		Remarks
				Nm	m·kg	ft·lb
Cylinder head	Flange bolt	M8	4	38	3.8	27
	Flange bolt	M9	2	38	3.8	27
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Cylinder head (Exhaust pipe)	Stud bolt	M6	4	7	0.7	5.1
	Straight plug screw	M18	55	55	5.5	40
Spark plug		M12	1	17.5	1.75	13
Cylinder head cover	Hexagon socket head bolt	M6	16	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Cylinder head side cover	Hexagon socket head bolt	M6	4	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Gear unit assembly	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Tachometer cable stopper	Flange bolt	M8	1	7	0.7	5.1
	Flange bolt	M10	2	42	4.2	30
Cylinder	Flange bolt	M10	2	42	4.2	30
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Holder 1	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M16	1	60	6.0	43
Balance weight gear	Nut	M14	1	150	15.0	110
AC generator rotor	Nut	M6	4	14	1.4	10
	Hexagon head bolt	M6	2	8	0.8	5.8
Stopper guide 2	Flange bolt	M7	2	20	2.0	14
Cam sprocket	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Tensioner assembly	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Rocker shaft stopper	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Water pump	Hexagon socket head bolt	M6	3	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Joint 1	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Pipe 1	Flange bolt	M6	2	10	1.0	7.2
	Flange bolt	M8	1	10	1.0	7.2
Conduction	Flange bolt	M5	2	5	0.5	3.6
	Flange bolt	M6	3	10	1.0	7.2
Protector	Flange bolt	M6	3	10	1.0	7.2
	Flange bolt	M6	1	7	0.7	5.1
Oil pump assembly	Panhead screw	M6	1	7	0.7	5.1

Part to be tightened	Part name	Thread size	Qty	Tightening torque		Remarks
				Nm	m·kg	ft·lb
Strainer housing	Panhead screw	M6	2	7	0.7	5.1
	Straight screw plug	M14	1	30	3.0	22
Element cover	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Element cover	Screw head bolt	M5	1	5	0.5	3.6
	Hexagon socket head bolt	M6	4	10	1.0	7.2
Element cover air bleed screw	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Oil hose 1	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Oil hose 2	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Delivery pipe	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Delivery pipe	Hexagon socket head bolt	M6	2	10	1.0	7.2
	Hexagon socket head bolt	M6	2	10	1.0	7.2
Carburetor joint	Hexagon socket head bolt	M6	4	10	1.0	7.2
	Hexagon socket head bolt	M6	4	10	1.0	7.2
Carburetor joint (carburetor left)	Hose clamp	M4	1	2	0.2	1.4
	Hose clamp	M5	1	5	0.5	3.6
Carburetor joint (carburetor right)	Hose clamp	M4	1	2	0.2	1.4
	Hose clamp	M5	1	5	0.5	3.6
Carburetor joint (air filter left)	Hose clamp	M4	1	2	0.2	1.4
	Hose clamp	M5	1	5	0.5	3.6
Carburetor joint (air filter right)	Hose clamp	M4	1	2	0.2	1.4
	Hose clamp	M5	1	5	0.5	3.6
Air filter assembly	Flange bolt	M6	4	10	1.0	7.2
	Flange bolt	M6	3	10	1.0	7.2
Exhaust pipe 1 & 2	Flange bolt	M6	4	10	1.0	7.2
	Flange bolt	M6	4	10	1.0	7.2
Exhaust pipe 2	Flange bolt	M6	4	10	1.0	7.2
	Flange bolt	M6	4	10	1.0	7.2
Exhaust pipe protector	Flange bolt	M6	2	7	0.7	5.1
	Flange bolt	M6	2	7	0.7	5.1
Muffler protector (rubber)	Flange bolt	M6	2	7	0.7	5.1
	Flange bolt	M6	2	7	0.7	5.1
Muffler protector (cylindrical)	Flange bolt	M6	2	7	0.7	5.1
	Flange bolt	M6	2	7	0.7	5.1
Exhaust pipe & Muffler	Flange bolt	M8	1	20	2.0	14
	Flange bolt	M8	1	40	4.0	29
Muffler mounting (front, lower)	Hexagon socket head bolt	M8	1	40	4.0	29
	Hexagon socket head bolt	M8	1	40	4.0	29
Muffler mounting (upper)	Hexagon socket head bolt	M8	1	40	4.0	29
	Hexagon socket head bolt	M8	1	40	4.0	29
Muffler mounting (lower)	Hexagon socket head bolt	M8	1	40	4.0	29
	Hexagon socket head bolt	M8	1	40	4.0	29
Case 1 & 2	Hexagon socket head bolt	M6	9	10	1.0	7.2
	Hexagon socket head bolt	M6	4	10	1.0	7.2
Case 1 & 2	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Case 1 & 2	Hexagon socket head bolt	M6	1	10	1.0	7.2
	Hexagon socket head bolt	M6	1	10	1.0	7.2
Clamp (head)	Panhead screw	M6	1	7	0.7	5.1

torque	Remarks	
	ft. lb.	
5.1		
7.2		
7.2		
7.2		
3.6		
7.2		
7.2		
14		
7.2		
7.2		
14		
3.6		
1.4		
3.6		
1.4		
3.6		
7.2		
7.2		
7.2		
14		
5.1		
5.1		
5.1		
14		
29		
29		
29		
7.2		
7.2		
7.2		
5.1		

## MAINTENANCE SPECIFICATIONS

Part to be tightened	Part name	Thread size	Tightening torque		Remarks
			Q/ty	Nm m.kg ft.lb	
Crankcase cover 1	Hexagon socket head bolt	M6	6	10 1.0 7.2	
Crankcase cover 1	Hexagon socket head bolt	M6	1	10 1.0 7.2	
Crankcase cover 1	Hexagon socket head bolt	M6	1	10 1.0 7.2	
Crankcase cover 1	Hexagon socket head bolt	M6	1	10 1.0 7.2	
Crankcase cover 1	Straight plug screw	M8	1	10 1.0 7.2	
Crankcase cover 2	Hexagon socket head bolt	M6	2	10 1.0 7.2	
Crankcase cover 3	Hexagon socket head bolt	M6	5	10 1.0 7.2	
Crankcase cover 3	Hexagon socket head bolt	M6	3	10 1.0 7.2	
Crankcase cover 3	Hexagon socket head bolt	M6	2	10 1.0 7.2	
Bearing plate cover	Flat head screw	M6	3	7 0.7 5.1	
Lock plate	Hexagon head bolt	M6	2	10 1.0 7.2	
Clutch spring	Screw with washer	M6	5	8 0.8 5.8	
Clutch boss	Nut	M20	1	90 9.0 66	Use lock washer
Primary drive gear	Nut	M20	1	120 12.0 85	Use lock washer
Push lever assembly (stopper)	Bolt	M6	1	6.5 0.65 4.7	
Push lever assembly	Screw	M8	1	12 1.2 8.7	
Drive sprocket	Nut	M18	1	110 11.0 80	
Oilseal cover	Hexagon head bolt	M6	2	10 1.0 7.2	
Stopper lever	Screw with washer	M6	1	10 1.0 7.2	
Shift arm	Bolt	M6	1	10 1.0 7.2	
Stator coil	Pinhead screw with washer	M6	3	7 0.7 5.1	
Neutral switch		M10	1	20 2.0 14	
Cylinder head side cover 1		M32	2	12 1.2 8.7	
Spring tensioner	Plug	M16	1	20 2.0 14	
Starting motor	Flange bolt	M6	2	10 1.0 7.2	
Cover 1	Hexagon socket head bolt	M6	1	10 1.0 7.2	

## MAINTENANCE SPECIFICATIONS

Part to be tightened	Part name	Thread size	Qty	Tightening torque			Remarks
				Nm	m.kg	ft.-lb	
Cover 1	Hexagon socket head bolt	M6	3	10	1.0	7.2	
Starter oneway clutch	Hexagon socket head bolt	M8	3	30	3.0	22	State
Pick up	Pinhead screw	M5	2	5	0.5	3.6	
Ignition coil	Hexagon head bolt	M5	2	5	0.5	3.6	
Ignition coil bracket	Flange bolt	M6	2	10	1.0	7.2	
Ignition unit	Pinhead screw	M6	2	5	0.5	3.6	
Thermo switch	Pinhead screw	M16	1	28	2.8	20	
Thermo unit	Pinhead screw	PT 1/8	1	15	1.5	11	



Item No.	Remarks
2	State
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PEC

9

MAINTENANCE SPECIFICATIONS

SPEC

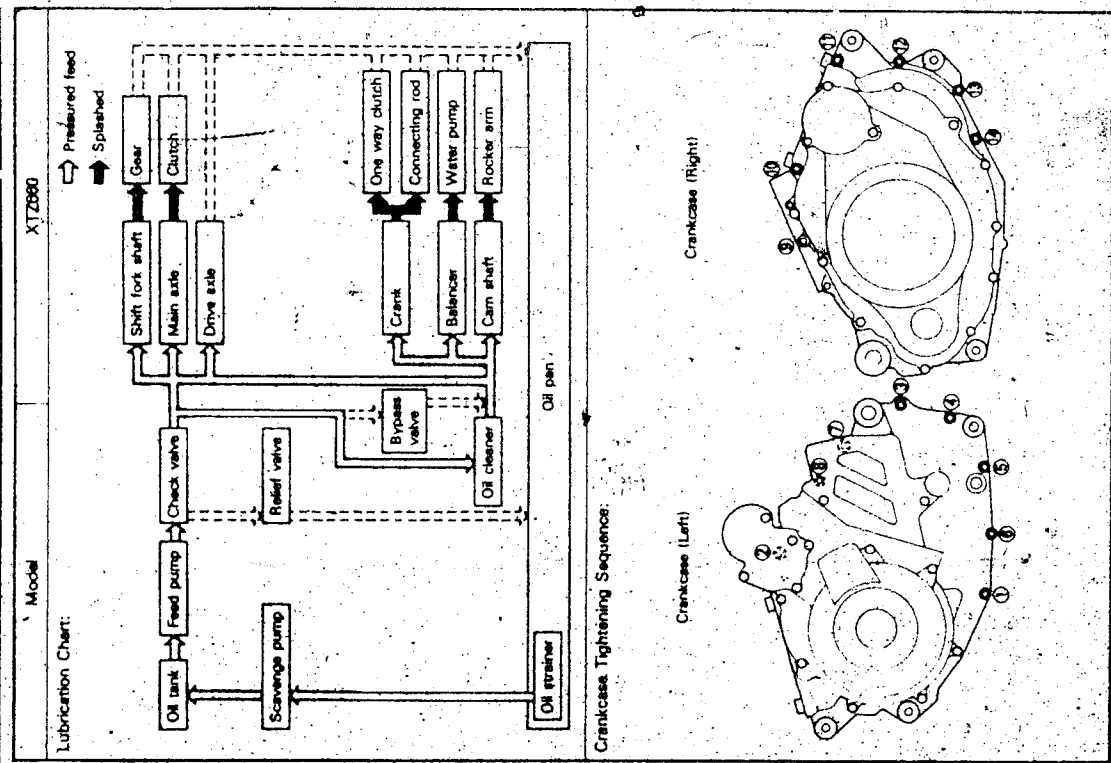
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B-6

MAINTENANCE SPECIFICATIONS

SPEC

9



CHASSIS	Model	XTZ680
Steering System:		Taper Roller Bearing
Steering Bearing Type		
Front Suspension:		
Front Fork Travel		220 mm (8.66 in)
Front Spring Free Length		407 mm (16.02 in)
< Limit >		< 402.9 mm (15.86 in) >
Spring Rate:	K1	4.25 N/mm (0.425 kg/mm, 23.80 lb/in)
Stroke	K1	0.0 - 220 mm (0.0 - 8.66 in)
Optional Spring		No
Oil Capacity		669 cm <sup>3</sup> (23.5 imp. oz, 22.6 US oz)
Oil Level		94 mm (3.70 in)
		From top of inner tube fully compressed without spring.
Oil Grade		Fork oil 10W or equivalent
Enclosed Air Pressure:		Zero
Standard		
Rear Suspension:		
Shock Absorber Travel		66 mm (2.60 in)
Spring Free Length		222 mm (8.74 in)
Fitting Length	X1	212 mm (8.35 in)
Spring Rate	K1	125 N/mm (12.5 kg/mm, 700 lb/in)
Stroke		0.0 - 83.0 mm (0.0 - 3.3 in)
Optional Spring		No
Enclosed Gas Pressure:		1,500 kPa (15 kg/cm <sup>2</sup> , 213 psi)
Standard		
Swingarm:		
Free Play Limit		1.0 mm (0.039 in) at swingarm end
Side Clearance		Move swingarm end side to side
		0.4 - 0.7 mm (0.016 - 0.028 in) at swingarm pivot
Front Wheel:		
Type		Spoke wheel
Rim Size		21 x 1.85
Rim Material		Aluminum
Rim Runout Limit	Vertical	2 mm (0.08 in)
	Lateral	2 mm (0.08 in)
Rear Wheel:		
Type		Spoke wheel
Rim Size		17 x 2.75
Rim Material		Aluminum
Rim Runout Limit	Vertical	2 mm (0.08 in)
	Lateral	2 mm (0.08 in)
Drive Chain:		
Type/Manufacturer		520V6/DAIDO, 520SM029/RK
No. of Links		110
Chain Free Play		20 - 45 mm (0.79 - 1.77 in)

Model		XTZ660
Front Disc Brake: Type	Dual	262 x 5 mm (11.1 x 0.20 in)
Disc Outside Diameter x Thickness		5.0 mm (0.20 in)
Pad Thickness	Inner < Limit > *	< 1.0 mm (0.04 in) >
	Outer < Limit > *	5.0 mm (0.20 in)
		< 1.0 mm (0.04 in) >
Master Cylinder Inside Diameter		14 mm (0.55 in)
Caliper Cylinder Inside Diameter		32.03 mm (1.26 in)
Brake Fluid Type		DOT #4
Rear Disc Brake: Type	Single	220 x 5 mm (8.66 x 0.20 in)
Disc Outside Diameter x Thickness		8.0 mm (0.24 in)
Pad Thickness	Inner < Limit > *	< 0.8 mm (0.03 in) >
	Outer < Limit > *	6.0 mm (0.24 in)
		< 0.8 mm (0.03 in) >
Master Cylinder Inside Diameter		12.7 mm (0.50 in)
Caliper Cylinder Inside Diameter		34.9 mm (1.37 in)
Brake Fluid Type		DOT #4
Brake Lever and Brake Pedal: Brake Lever Free Play		2 - 5 mm (0.08 - 0.20 in)
		At brake lever end
Brake Pedal Position		26 mm (0.98 in)
		Below top of footrest
Clutch Lever and Throttle Grip: Clutch Lever Free Play		10 - 15 mm (0.39 - 0.59 in)
		At clutch lever end
Throttle Grip Free Play		3 - 5 mm (0.12 - 0.20 in)
		At grip flange

TIGHTENING TORQUE		Part to be tightened	Thread size	Tightening torque		Remarks
				Nm	in.-lb	
		Front fork/Handlebar:	M 8 x 1.25	23	2.3	17
		Handle crown and lower tube	M14 x 1.25	110	11	80
		Handle crown and steering shaft	M 8 x 1.25	23	2.3	17
		Handlebar holder (under) and handlebar holder (upper)				
		Steering shaft and ring nut	M25 x 1.0	7	0.7	5.1
		Front brake hose and clamp	M 8 x 1.0	7	0.7	5.1
		Front master cylinder cap	M 4 x 0.7	2	0.2	1.4
		Front master cylinder and handlebar	M 8 x 1.0	7	0.7	5.1
		Cowling stay and cowling	M 8 x 1.0	7	0.7	5.1
		Horn and frame	M 8 x 1.0	7	0.7	5.1
		Main switch and handle crown	M 8 x 1.0	7	0.7	5.1
		Handlebar holder (upper) and nut	M10 x 1.25	30	3.0	22
		Band (inner cables)	M 5 x 0.8	0.7	0.07	0.5
		Console panel and protector 1, 2	M 5 x 0.8	0.7	0.07	0.5
		Headlight and cowling stay	M 8 x 1.0	7	0.7	5.1
		Under bracket and lower tube	M 8 x 1.25	23	2.3	17
		Cowling stay and frame	M 8 x 1.25	15	1.5	11
		Cowling and fuel tank	M 8 x 1.0	7	0.7	5.1
		Protector 1, 2 and cowling	M 5 x 0.8	0.7	0.07	0.5
		Engine mount:				
		Front engine stay and frame	M10 x 1.25	65	6.5	47
		Top engine stay and frame	M10 x 1.25	65	6.5	47
		Engine (rear under) and frame	M10 x 1.25	65	6.5	47
		Engine protector and frame	M 8 x 1.0	9	0.9	6.5
		Swingarm/Rear shock absorber:				
		Pivot shaft and frame	M14 x 1.5	100	10.0	72
		Swingarm and relay arm	M14 x 1.5	80	8.0	58
		Relay arm and connecting rod	M10 x 1.25	48	4.8	35
		Connecting rod and frame	M10 x 1.25	48	4.8	35
		Rear shock absorber and frame	M12 x 1.25	58	5.8	42
		Chain tensioner securing bolt	M 8 x 1.25	23	2.3	17
		Chain case and swingarm	M 8 x 1.0	4	0.4	2.9
		Guard seat and swingarm	M 8 x 1.0	7	0.7	5.1
		Chain support and swingarm	M 8 x 1.0	7	0.7	5.1
		Fuel tank/Seat/Rear fender/Side cover:				
		License bracket and number plate stay	M 8 x 1.0	7	0.7	5.1
		Rear reflector and stay	M 5 x 0.8	4	0.4	2.9
		Fuel tank and fuel cock	M 8 x 1.0	7	0.7	5.1
		License bracket and flap	M 4 x 0.7	3	0.3	2.2
		Helmet holder and carrier	M 8 x 1.0	7	0.7	5.1
		Fuel tank back stay and frame	M 8 x 1.0	7	0.7	5.1
		Clutch cable and engine	M 6 x 1.0	8	0.9	6.5
		Starter relay and lead	M 8 x 1.0	3	0.3	2.2

TIGHTENING TORQUE		Part to be tightened	Thread size	Tightening torque		Remarks
				Nm	in.-lb	
		Front fork/Handlebar:	M 8 x 1.25	23	2.3	17
		Handle crown and lower tube	M14 x 1.25	110	11	80
		Handle crown and steering shaft	M 8 x 1.25	23	2.3	17
		Handlebar holder (under) and handlebar holder (upper)				
		Steering shaft and ring nut	M25 x 1.0	7	0.7	5.1
		Front brake hose and clamp	M 8 x 1.0	7	0.7	5.1
		Front master cylinder cap	M 4 x 0.7	2	0.2	1.4
		Front master cylinder and handlebar	M 8 x 1.0	7	0.7	5.1
		Cowling stay and cowling	M 8 x 1.0	7	0.7	5.1
		Horn and frame	M 8 x 1.0	7	0.7	5.1
		Main switch and handle crown	M 8 x 1.0	7	0.7	5.1
		Handlebar holder (upper) and nut	M10 x 1.25	30	3.0	22
		Band (inner cables)	M 5 x 0.8	0.7	0.07	0.5
		Console panel and protector 1, 2	M 5 x 0.8	0.7	0.07	0.5
		Headlight and cowling stay	M 8 x 1.0	7	0.7	5.1
		Under bracket and lower tube	M 8 x 1.25	23	2.3	17
		Cowling stay and frame	M 8 x 1.25	15	1.5	11
		Cowling and fuel tank	M 8 x 1.0	7	0.7	5.1
		Protector 1, 2 and cowling	M 5 x 0.8	0.7	0.07	0.5
		Engine mount:				
		Front engine stay and frame	M10 x 1.25	65	6.5	47
		Top engine stay and frame	M10 x 1.25	65	6.5	47
		Engine (rear under) and frame	M10 x 1.25	65	6.5	47
		Engine protector and frame	M 8 x 1.0	9	0.9	6.5
		Swingarm/Rear shock absorber:				
		Pivot shaft and frame	M14 x 1.5	100	10.0	72
		Swingarm and relay arm	M14 x 1.5	80	8.0	58
		Relay arm and connecting rod	M10 x 1.25	48	4.8	35
		Connecting rod and frame	M10 x 1.25	48	4.8	35
		Rear shock absorber and frame	M12 x 1.25	58	5.8	42
		Chain tensioner securing bolt	M 8 x 1.25	23	2.3	17
		Chain case and swingarm	M 8 x 1.0	4	0.4	2.9
		Guard seat and swingarm	M 8 x 1.0	7	0.7	5.1
		Chain support and swingarm	M 8 x 1.0	7	0.7	5.1
		Fuel tank/Seat/Rear fender/Side cover:				
		License bracket and number plate stay	M 8 x 1.0	7	0.7	5.1
		Rear reflector and stay	M 5 x 0.8	4	0.4	2.9
		Fuel tank and fuel cock	M 8 x 1.0	7	0.7	5.1
		License bracket and flap	M 4 x 0.7	3	0.3	2.2
		Helmet holder and carrier	M 8 x 1.0	7	0.7	5.1
		Fuel tank back stay and frame	M 8 x 1.0	7	0.7	5.1
		Clutch cable and engine	M 6 x 1.0	8	0.9	6.5
		Starter relay and lead	M 8 x 1.0	3	0.3	2.2

TIGHTENING TORQUE		Part to be tightened	Thread size	Tightening torque		Remarks
				Nm	in.-lb	
		Front fork/Handlebar:	M 8 x 1.25	23	2.3	17
		Handle crown and lower tube	M14 x 1.25	110	11	80
		Handle crown and steering shaft	M 8 x 1.25	23	2.3	17
		Handlebar holder (under) and handlebar holder (upper)				
		Steering shaft and ring nut	M25 x 1.0	7	0.7	5.1
		Front brake hose and clamp	M 8 x 1.0	7	0.7	5.1
		Front master cylinder cap	M 4 x 0.7	2	0.2	1.4
		Front master cylinder and handlebar	M 8 x 1.0	7	0.7	5.1
		Cowling stay and cowling	M 8 x 1.0	7	0.7	5.1
		Horn and frame	M 8 x 1.0	7	0.7	5.1
		Main switch and handle crown	M 8 x 1.0	7	0.7	5.1
		Handlebar holder (upper) and nut	M10 x 1.25	30	3.0	22
		Band (inner cables)	M 5 x 0.8	0.7	0.07	0.5
		Console panel and protector 1, 2	M 5 x 0.8	0.7	0.07	0.5
		Headlight and cowling stay	M 8 x 1.0	7	0.7	5.1
		Under bracket and lower tube	M 8 x 1.25	23	2.3	17
		Cowling stay and frame	M 8 x 1.25	15	1.5	11
		Cowling and fuel tank	M 8 x 1.0	7	0.7	5.1
		Protector 1, 2 and cowling	M 5 x 0.8	0.7	0.07	0.5
		Engine mount:				
		Front engine stay and frame	M10 x 1.25	65	6.5	47
		Top engine stay and frame	M10 x 1.25	65	6.5	47
		Engine (rear under) and frame	M10 x 1.25	65	6.5	47
		Engine protector and frame	M 8 x 1.0	9	0.9	6.5
		Swingarm/Rear shock absorber:				
		Pivot shaft and frame	M14 x 1.5	100	10.0	72
		Swingarm and relay arm	M14 x 1.5	80	8.0	58
		Relay arm and connecting rod	M10 x 1.25	48	4.8	35
		Connecting rod and frame	M10 x 1.25	48	4.8	35
		Rear shock absorber and frame	M12 x 1.25	58	5.8	42
		Chain tensioner securing bolt	M 8 x 1.25	23	2.3	17
		Chain case and swingarm	M 8 x 1.0	4	0.4	2.9
		Guard seat and swingarm	M 8 x 1.0	7	0.7	5.1
		Chain support and swingarm	M 8 x 1.0	7	0.7	5.1
		Fuel tank/Seat/Rear fender/Side cover:				
		License bracket and number plate stay	M 8 x 1.0	7	0.7	5.1
		Rear reflector and stay	M 5 x 0.8	4	0.4	2.9
		Fuel tank and fuel cock	M 8 x 1.0	7	0.7	5.1
		License bracket and flap	M 4 x 0.7	3	0.3	2.2
		Helmet holder and carrier	M 8 x 1.0	7	0.7	5.1
		Fuel tank back stay and frame	M 8 x 1.0	7	0.7	5.1
		Clutch cable and engine	M 6 x 1.0	8	0.9	6.5
		Starter relay and lead	M 8 x 1.0	3	0.3	2.2

TIGHTENING TORQUE		Part to be tightened	Thread size	Tightening torque		Remarks
				Nm	in.-lb	
		Front fork/Handlebar:	M 8 x 1.25	23	2.3	17
		Handle crown and lower tube	M14 x 1.25	110	11	80
		Handle crown and steering shaft	M 8 x 1.25	23	2.3	17
		Handlebar holder (under) and handlebar holder (upper)				
		Steering shaft and ring nut	M25 x 1.0	7	0.7	5.1
		Front brake hose and clamp	M 8 x 1.0	7	0.7	5.1
		Front master cylinder cap	M 4 x 0.7	2	0.2	1.4
		Front master cylinder and handlebar	M 8 x 1.0	7	0.7	5.1
		Cowling stay and cowling	M 8 x 1.0	7	0.7	5.1
		Horn and frame	M 8 x 1.0	7	0.7	5.1
		Main switch and handle crown	M 8 x 1.0	7	0.7	5.1
		Handlebar holder (upper) and nut	M10 x 1.25	30	3.0	22
		Band (inner cables)	M 5 x 0.8	0.7	0.07	0.5
		Console panel and protector 1, 2	M 5 x 0.8	0.7	0.07	0.5
		Headlight and cowling stay	M 8 x 1.0	7	0.7	5.1
		Under bracket and lower tube	M 8 x 1.25	23	2.3	17
		Cowling stay and frame	M 8 x 1.25	15	1.5	11
		Cowling and fuel tank	M 8 x 1.0	7	0.7	5.1
		Protector 1, 2 and cowling	M 5 x 0.8	0.7	0.07	0.5
		Engine mount:				
		Front engine stay and frame	M10 x 1.25	65	6.5	47
		Top engine stay and frame	M10 x 1.25	65	6.5	47
		Engine (rear under) and frame	M10 x 1.25	65	6.5	47
		Engine protector and frame	M 8 x 1.0	9	0.9	6.5
		Swingarm/Rear shock absorber:				
		Pivot shaft and frame	M14 x 1.5	100	10.0	72
		Swingarm and relay arm	M14 x 1.5	80	8.0	58
		Relay arm and connecting rod	M10 x 1.25	48	4.8	35
		Connecting rod and frame	M10 x 1.25	48	4.8	35
		Rear shock absorber and frame	M12 x 1.25	58	5.8	42
		Chain tensioner securing bolt	M 8 x 1.25	23	2.3	17
		Chain case and swingarm	M 8 x 1.0	4	0.4	2.9
		Guard seat and swingarm	M 8 x 1.0	7	0.7	5.1
		Chain support and swingarm	M 8 x 1.0	7	0.7	5.1
		Fuel tank/Seat/Rear fender/Side cover:				
		License bracket and number plate stay	M 8 x 1.0	7	0.7	5.1
		Rear reflector and stay	M 5 x 0.8	4	0.4	2.9
		Fuel tank and fuel cock	M 8 x 1.0	7	0.7	5.1
		License bracket and flap	M 4 x 0.7	3	0.3	2.2
		Helmet holder and carrier	M 8 x 1.0	7	0.7	5.1
		Fuel tank back stay and frame	M 8 x 1.0	7	0.7	5.1
		Clutch cable and engine	M 6 x 1.0	8	0.9	6.5
		Starter relay and lead	M 8 x 1.0	3	0.3	2.2

TIGHTENING TORQUE		Part to be tightened	Thread size	Tightening torque		Remarks
				Nm	in.-lb	
Front fork/Handlebar:						
		Handle crown and inner tube	M 8 x 1.25	23	2.3	17
		Handle crown and steering shaft	M14 x 1.25	110	11	80
		Handlebar holder (under) and handlebar holder (upper)	M 8 x 1.25	23	2.3	17
Steering shaft and ring nut						
		Front brake hose and clamp	M25 x 1.0	7	0.7	5.1
		Front master cylinder cap	M 6 x 1.0	7	0.7	5.1
		Front master cylinder and handlebar	M 6 x 1.0	7	0.7	5.1
		Cowling stay and cowling	M 6 x 1.0	7	0.7	5.1
Horn and frame						
		Main switch and handle crown	M 6 x 1.0	7	0.7	5.1
		Handlebar holder (upper) and nut	M10 x 1.25	30	3.0	22
		Band (inner cables)	M 5 x 0.8	0.7	0.07	0.5
		Console panel and protector 1, 2	M 5 x 0.8	0.7	0.07	0.5
		Headlight and cowling stay	M 6 x 1.0	7	0.7	5.1
		Under bracket and inner tube	M 8 x 1.25	23	2.3	17
		Cowling stay and frame	M 8 x 1.25	15	1.5	11
		Cowling and fuel tank	M 6 x 1.0	7	0.7	5.1
		Protector 1, 2 and cowling	M 5 x 0.8	0.7	0.07	0.5
Engine mount:						
		Front engine stay and frame	M10 x 1.25	65	6.5	47
		Top engine stay and frame	M10 x 1.25	65	6.5	47
		Engine (rear under) and frame	M10 x 1.25	65	6.5	47
		Engine protector and frame	M 6 x 1.0	9	0.9	6.5
Swingarm/Rear shock absorber						
		Pivot shaft and frame	M14 x 1.25	100	10.0	72
		Swingarm and relay arm	M12 x 1.25	80	8.0	58
		Relay arm and connecting rod	M10 x 1.25	48	4.8	35
		Connecting rod and frame	M10 x 1.25	48	4.8	35
		Rear shock absorber and frame	M12 x 1.25	58	5.8	42
		Chain tensioner securing bolt	M 8 x 1.25	23	2.3	17
		Chain case and swingarm	M 6 x 1.0	4	0.4	2.9
		Guard seal and swingarm	M 6 x 1.0	7	0.7	5.1
		Chain support and swingarm	M 6 x 1.0	7	0.7	5.1
Fuel tank/Seat/Rear fender/Side cover:						
		License bracket and number plate stay	M 6 x 1.0	7	0.7	5.1
		Rear reflector and stay	M 5 x 0.8	4	0.4	2.9
		Fuel tank and fuel cock	M 6 x 1.0	7	0.7	5.1
		License bracket and flap	M 4 x 0.7	3	0.3	2.2
		Helmet holder and carrier	M 6 x 1.0	7	0.7	5.1
		Fuel tank back stay and frame	M 6 x 1.0	7	0.7	5.1
		Clutch cable and engine	M 6 x 1.0	9	0.9	6.5
		Starter relay and lead	M 6 x 1.0	3	0.3	2.2



## MAINTENANCE SPECIFICATIONS

## 8-22

## MAINTENANCE SPECIFICATIONS

**ELECTRICAL**

Voltage Ignition System: Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.) Advancer Type	Model XT7660	12V 12° at 1,300 r/min 38° at 6,500 r/min Electrical type		Ignitor: Pickup Coil Resistance (Color) Ignitor Unit/Manufacturer	184 - 276 $\Omega$ at 20°C (68°F) (Blue/Yellow - Green/White) TNDF13-NIPPONDENSO	Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance Spark Plug Gap: Type Resistance	J0268/NIPPONDENSO 6 mm (0.24 in.) 3.4 - 4.6 $\Omega$ at 20°C (68°F) 10.4 - 15.6 k $\Omega$ at 20°C (68°F) Resin type 10 k $\Omega$ at 20°C (68°F)	Charging System: Type	A.C. magneto generator
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Part to be tightened	Thread size	Tightening torque		Remarks
		Nm	m·kg ft·lb	
License bracket and taillight	M 6 x 1.0	7	0.7 5.1	 
Regulator and frame	M 6 x 1.0	7	0.7 5.1	
Fuel tank upper bracket and frame	M 8 x 1.25	15	1.5 11	
Fuel tank lower bracket and frame	M 8 x 1.25	15	1.5 11	
Fuel pump and frame	M 6 x 1.0	7	0.7 5.1	
Carrier and frame (front and rear)	M 8 x 1.25	15	1.5 11	
Fuel tank bracket and fuel tank	M 6 x 1.0	7	0.7 5.1	
Tool box and frame	M 8 x 1.0	7	0.7 5.1	
License bracket and frame	M 6 x 1.0	7	0.7 5.1	
Bracket 1 and frame	M 6 x 1.0	23	2.3 17	
Front wheel/Rear wheel:				
Front wheel axle and brake disc	M 8 x 1.25	20	2.0 14	
Rear wheel axle and front fork	M 14 x 1.5	58	5.8 42	
Rear wheel axle and nut	M 16 x 1.5	100	10.0 72	
Front axle holder	M 6 x 1.0	9	0.9 6.5	
Front brake caliper and front fork	M 10 x 1.25	35	3.5 25	
Union bolt	M 10 x 1.25	26	2.6 19	
Front brake caliper and bleed screw	M 8 x 1.25	6	0.6 4.3	
Rear brake caliper and bleed screw	M 7 x 1.0	6	0.6 4.3	
Rear wheel and sprocket	M 10 x 1.25	60	6.0 4.3	
Rear wheel and brake disc	M 6 x 1.0	10	1.0 7.2	
Footrest/Pedal:				
Sidestand securing bolt and nut	M 12 x 1.25	45	4.5 32	
Sidestand securing bolt and frame	M 12 x 1.25	45	4.5 32	
Rear brake switch and frame	M 6 x 1.0	4	0.4 2.9	
Footrest and frame	M 10 x 1.25	50	5.0 36	
Rear footrest and frame	M 8 x 1.25	23	2.3 17	
Rear master cylinder and frame	M 8 x 1.25	23	2.3 17	
Rear brake reservoir tank and frame	M 6 x 1.0	4	0.4 2.9	
Rear brake pedal shaft and frame	M 10 x 1.25	35	3.5 25	

**NOTE:**

1. First, tighten the ring nut (lower) approximately 43 Nm (4.3 m·kg; 31 ft·lb) by using the torque wrench. Turn the handlebar to the left and right making sure there is no binding and then fully loosen the ring nut.
2. Resighten the ring nut (lower) to specification.
3. Install the rubber washer on the ring nut (lower); then finger tighten the ring nut (upper) until it contacts the rubber washer. Align the grooves of the lower and upper nuts and install the stopper washer.

XTZ860	
500 mm	
9 10	
68°F	
/White)	
450	
10	
80°F	
C (68°F)	
101	

Model	XTZ860
A.C. Generator:	
Model/Manufacturer	TLMZ56/NIPPONDENSO
Nominal Output	14V 24.5A at 5,000 r/min
Stator Coil Resistance (Color)	0.20 - 0.30 Ω at 20°C (68°F) (White - White)
Rectifier/Regulator:	
Model/Manufacturer	SH568/SINDENGEN
Type	Semi conductor - Short circuit type
Voltage Regulator	
No load Regulated Voltage	14.3 - 15.3V
Rectifier	
Capacity	25A
Withstand Voltage	240V
Battery:	
Specific Gravity	1.320
Electrical Starter System:	
Type	Constant mesh type
Starter Motor:	
Model/Manufacturer	SM-13/MITSUBA
Output	0.8 kW
Brush - Overall Length	12.5 mm (0.49 in)
< Limit >	< 5 mm (0.20 in) >
Commutator Dia	28.0 mm (1.10 in)
Wear Limit	27.0 mm (1.06 in)
Mica Undercut	0.7 mm (0.028 in)
Starter Relay:	
Model/Manufacturer	MS50-191/HITACHI
Amperage Rating	100A
Horn:	
Type/Quantity	Plane type/1 pc.
Model/Manufacturer	YF-12/NIKKO
Maximum Amperage	2.5A

Model	XTZ860
Flasher Relay (Relay Assembly):	
Type	Condenser type
Model/Manufacturer	FB257M/NIPPONDENSO, G8A-101/OMRON
Self-Cancelling Device	No
Flasher Frequency	60 - 120 cpl/min
Wattage	21W x 4 + 3.4W
Starting Circuit Cut-Off Relay:	
Model/Manufacturer	G8MS/OMRON
Coil Winding Resistance	90 - 110 Ω
Diode	Yes
Electric Fan:	
Model/Manufacturer	NAAF48/NIPPONDENSO
Thermostat Switch:	
Model/Manufacturer	VF105A/N. THERMOSTAT
Function Temperature	102 - 108°C (215.6 - 226.4°F) ON 98°C (208.4°F) OFF
Thermo Unit:	
Model/Manufacturer	11H/NIPPON SEIKI
Coil Winding Resistance	153.9 Ω at 50°C (122°F) 47.5 - 52.8 Ω at 80°C (176°F) 26.2 - 29.3 Ω at 100°C (212°F) 16.1 Ω at 120°C (248°F)
Circuit Breaker:	
Type	Fuse
Amperage for Individual Circuit x Quantity:	20A/1 pc.
MAIN	20A/1 pc.
RESERVE	

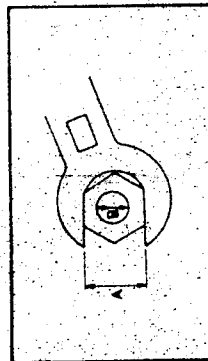
**GENERAL TORQUE SPECIFICATIONS/  
DEFINITION OF UNITS**

9  
SPEC

**B-10**

## 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	16	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

## 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	$\text{N/mm}$	Spring rate
l	Liter	—	Volume or capacity
$\text{cm}^3$	Cubic centimeter	—	Volume or capacity
r/min	Revolution per minute	—	Engine speed

## LUBRICATION POINTS AND LUBRICANT TYPE

99  
SPEC

ENGINE	LUBRICATION POINTS AND LUBRICANT TYPE	
	Lubrication points (part name)	Lubricant type
	Oil seal lips (all)	SAE
	Bearing retainer	E
	Crank pin	E
	Connecting rod (big end)	E
	Piston and piston ring	E
	Boss (balancer drive gear)	E
	Piston pin	E
	Valve stem and valve guide	M
	Oil seal (valve stem end)	M
	Rocker arm shaft and rocker arm	E
	Cam and bearing (camshaft)	E
	Decomp cam and decomp shaft	E
	Rotor and rotor housing (oil pump)	E
	Push rod	SAE
	Primary driven gear and main axle	E
	Sliding gear (transmission)	M
	Free movement gear (transmission)	M
	Driven gear and drive gear (tachometer gear unit)	E
	Shift fork and guide bar	E
	Shift cam and bearing (shift cam)	E
	Shift shaft	E
	Crankcase mating surfaces	Sealant (quick gasket)* Yamaha Bond No. 1215
	Mating surfaces (cylinder head and cylinder head cover)	Sealant (quick gasket)* Yamaha Bond No. 1215

CHARGES

Lubrication points (part name)	Lubricant type
Gear unit (speedometer)	SAE 5W
Oil seal lips (all)	SAE 5W
Wheel axle (front wheel and rear wheel)	SAE 5W
Rear wheel hub and clutch hub	SAE 5W
Bush (swingarm) and thrust cover	SAE 5W
Pivot shaft (swingarm)	SAE 5W
Bushes (rear shock absorber)	SAE 5W
Bushes (relay arm and connecting rod)	SAE 5W
Bearings (relay arm and connecting rod)	SAE 5W
Pivoting points (brake pedal and change pedal)	SAE 5W
Bearings (steering head)	SAE 5W
Right handlebar end	SAE 5W
Pivoting points (brake lever and clutch lever)	SAE 5W
Clutch cable end	SAE 5W
Pivoting point (sidestand)	SAE 5W
Bushes (chain tensioner)	SAE 5W
Grease nipple (swingarm)	SAE 5W
Grease nipple (relay arm)	SAE 5W
Grease nipple (connecting rod)	SAE 5W

[illegible]

### LUBRICATION DIAGRAM

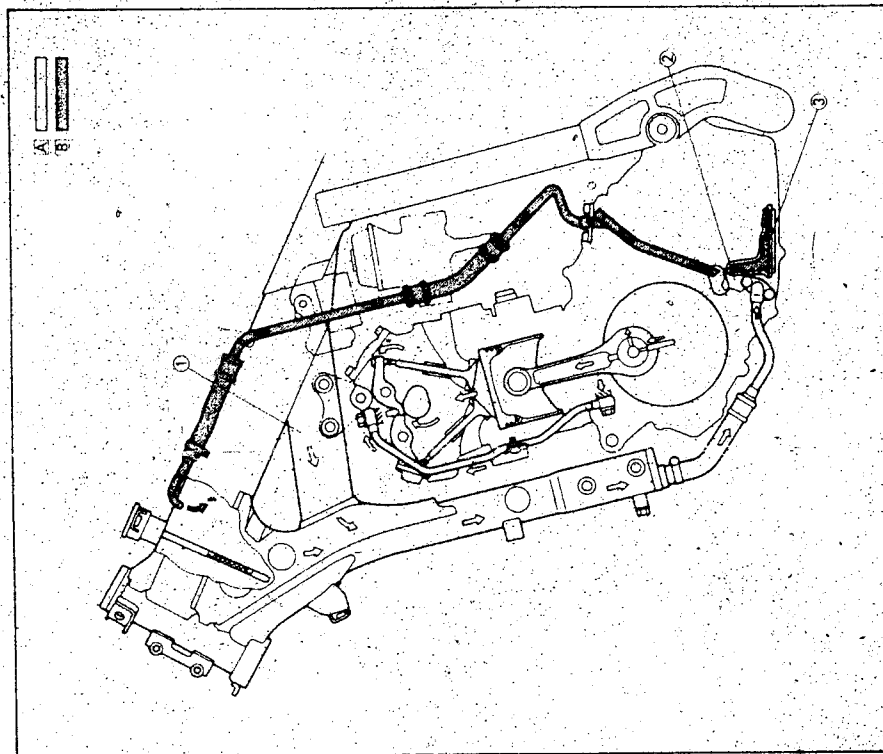
- ① Oil tank  
② Oil pump  
③ Oil strainer (engine)

**Feed**

- [A] Feed**  
**[B] Scave**

Age Group	2006	2007	2008
18-29	~85	~85	~85
30-49	~75	~75	~75
50-69	~65	~65	~65
70+	~55	~55	~55

- ① Cam shaft
- ② Oil delivery
- ③ Oil filter
- ④ Oil pump
- ⑤ Main axle
- ⑥ Drive axle
- ⑦ Oil hose
- ⑧ Oil delivery



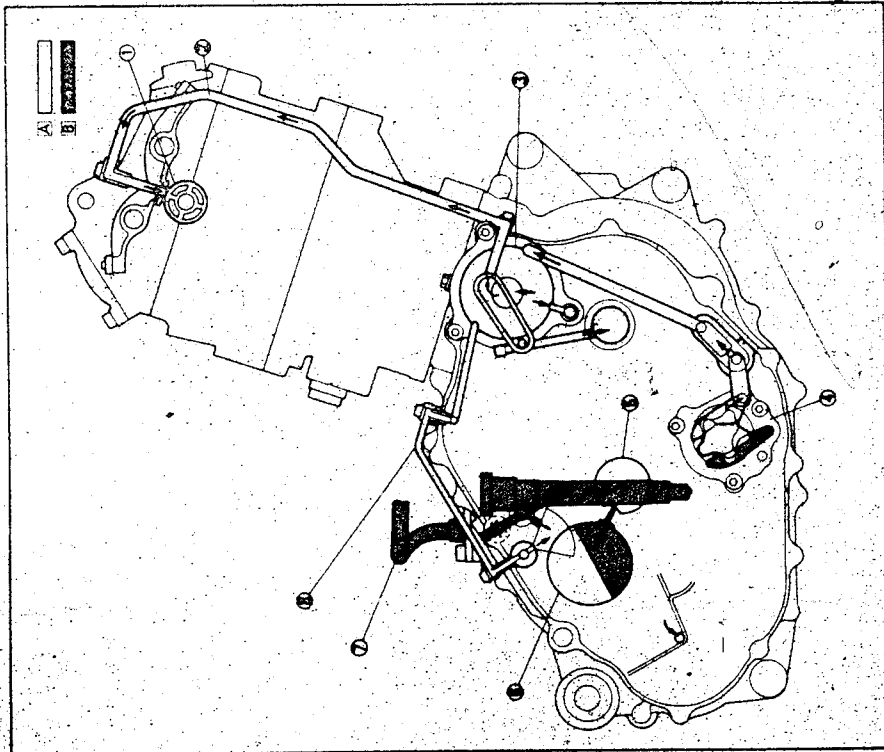
LUBRICATION DIAGRAM

B-12

LUBRICATION DIAGRAM

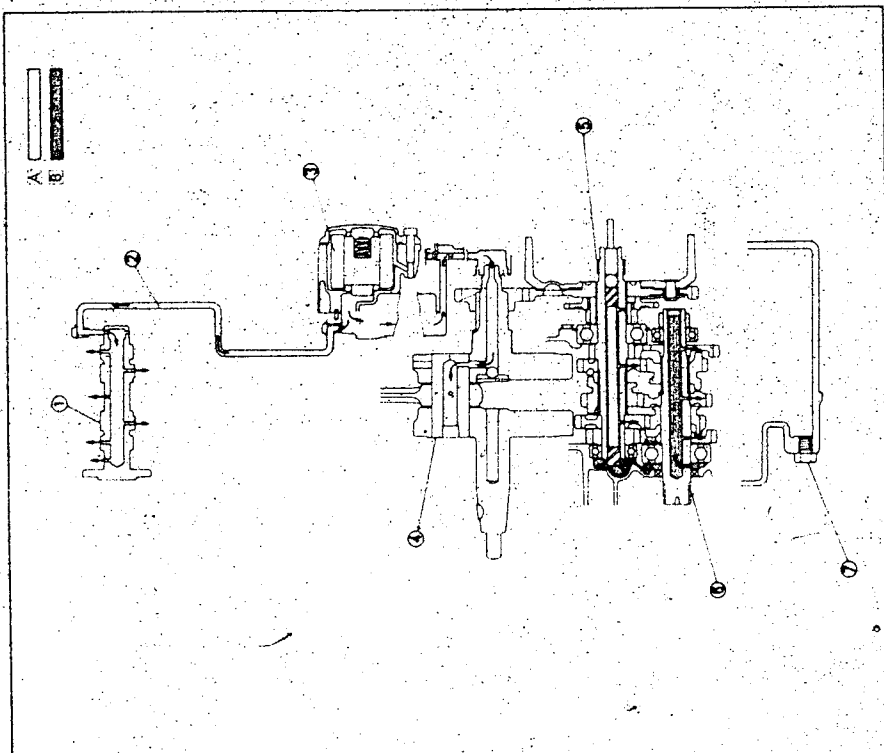
- ① Cam shaft
- ② Oil delivery pipe
- ③ Oil filter
- ④ Oil pump
- ⑤ Main axle
- ⑥ Drive axle
- ⑦ Oil hose
- ⑧ Oil delivery pipe

Feed  
Scavenge



- ① Cam shaft
- ② Oil delivery pipe
- ③ Oil filter
- ④ Crank pin
- ⑤ Main axle
- ⑥ Drive axle
- ⑦ Drain bolt

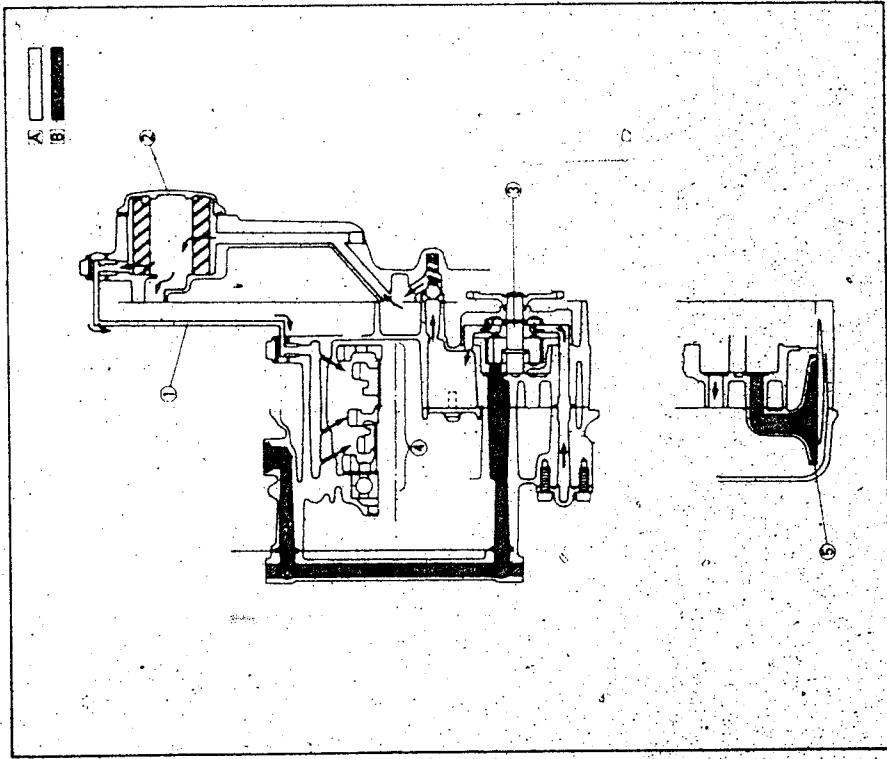
Feed  
Scavenge



LUBRICATION DIAGRAM

- 1 Oil delivery pipe
- 2 Oil filter
- 3 Oil pump
- 4 Transmission
- 5 Oil strainer

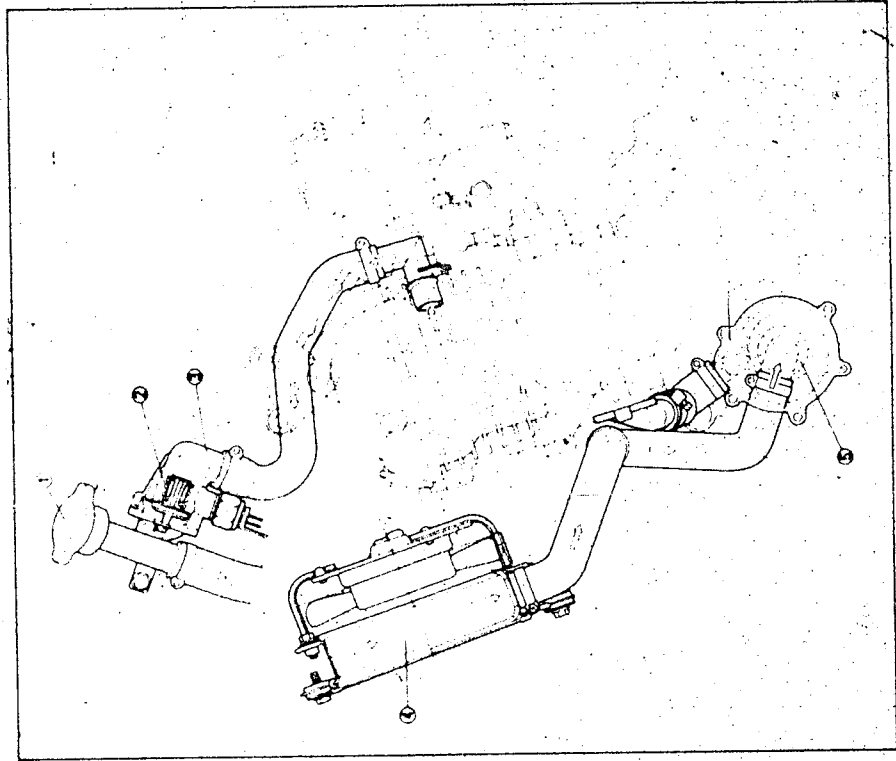
- A Feed
- B Scavenge



COOLANT DIAGRAM

COOLANT DIAGRAM

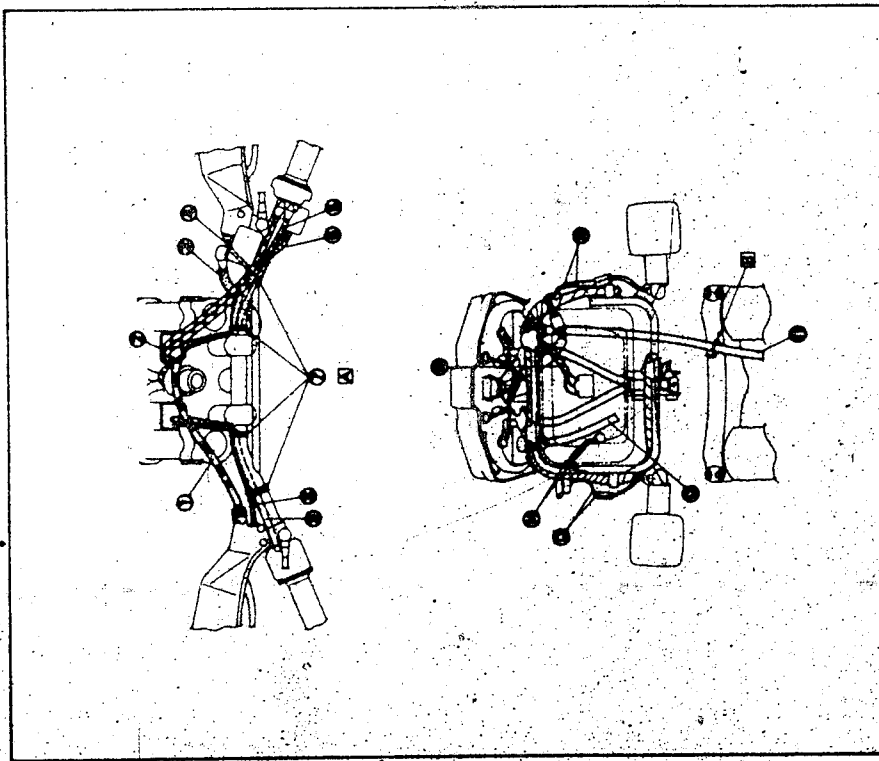
- 1 Radiator cap
- 2 Thermostat
- 3 Thermostat housing
- 4 Radiator
- 5 Water pump



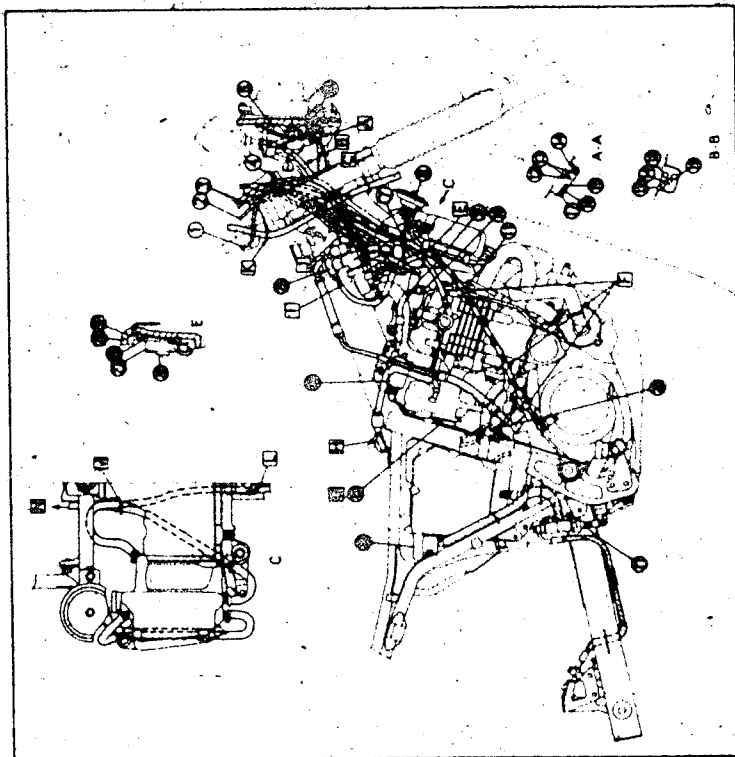


CABLE ROUTING

- 1 Clutch cable
- 2 Cable guide
- 3 Brake hose
- 4 Front brake switch lead
- 5 Throttle cable
- 6 Handbrake switch lead
- 7 Band
- 8 Clutch switch lead
- 9 Handbrake switch lead
- 10 Flasher light lead (Left)
- 11 Speedometer cable
- 12 Tachometer cable
- 13 Flasher light lead (Right)
- 14 Headlight lead (Auxiliary light)
- 15 Headlight lead
- 16 Do not clamp the lead tightly when turning the handbrake.
- 17 Pass the speedometer cable through the cable guide.



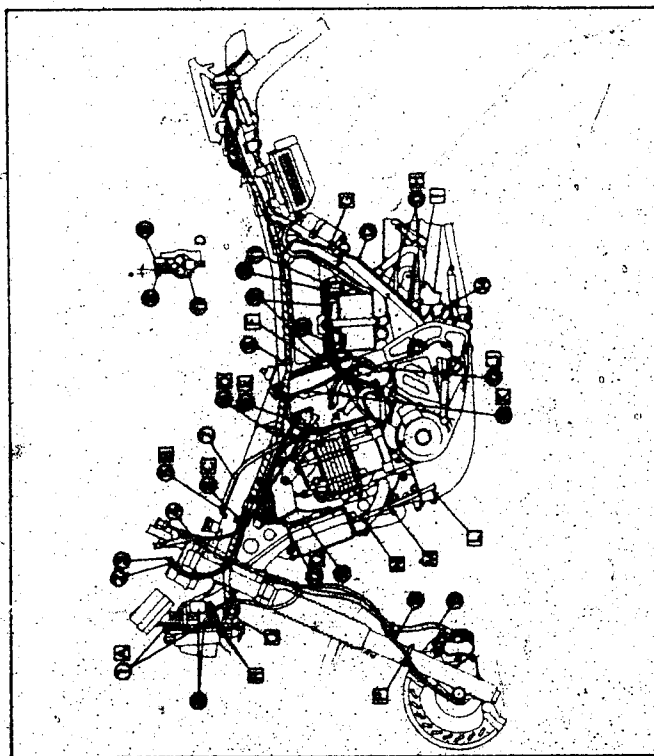
- 1 Master cylinder
- 2 Reservoir tank
- 3 Clutch cable
- 4 Ignition coil
- 5 Conduction
- 6 Earth lead
- 7 Rectifier/regulator
- 8 Pliers
- 9 Main harness
- 10 Cowling stay
- 11 Handbrake switch lead (Right)
- 12 Throttle cable
- 13 Rectifier/regulator
- 14 Pliers
- 15 Main harness
- 16 Cowling stay
- 17 High tension cord
- 18 Spark plug cap
- 19 Cable holder
- 20 Tachometer cable
- 21 Throttle cable
- 22 Clutch cable
- 23 Front brake switch lead
- 24 Main switch lead
- 25 Handbrake switch lead (Right)
- 26 Recovery tank breather hose
- 27 Recovery tank conduction hose
- 28 Rear brake switch
- 29 Connect to the rectifier/regulator
- 30 Pass the tachometer cable inside of all the cables and harnesses. (Side of head pipe)
- 31 Pass the tachometer cable through the cable guide.
- 32 Pass the throttle cable through the cable guide.
- 33 Pass through the cable guide (View B-B).
- 34 Clamp the clutch cable to the holder.
- 35 Clamp the rear brake switch lead.
- 36 Insert the end of the air vent hose into the frame.
- 37 Clip (Insert the recovery tank hose and clamp securely).
- 38 Cable guide (Pass all the cables and harnesses inside of it).
- 39 Cable guide (Pass the brake hose).
- 40 Pass the recovery tank breather hose through the frame bracket.
- 41 Pass through the cable guide (View B-B).
- 42 To conduction



1. Ignitor unit  
2. Clamp

CABLE ROUTING

1. Clamp
2. Clutch switch lead
3. Handbrake switch lead (Left)
4. Starter cable
5. Clutch
6. Oil tank breather hose
7. Battery lead
8. Battery lead
9. Starter lead
10. Starter relay assembly
11. Sidestand switch lead
12. Clamp
13. Sidestand switch
14. Cable guide
15. Fan motor lead (Headlight)
16. Clamp
17. Speedometer cable
18. Brake hose
19. Relay



CABLE ROUTING

1. Ignitor unit
2. Clamp

1. Clamp the rear flasher light lead (Right).
2. Connect the rear flasher light lead (Right) and the wire harness.
3. Pass through the rear fender hole (Left and right).
4. Connect the taillight lead and the wire harness.
5. Connect to the ignitor unit.
6. Pass the rear flasher light lead (Left) under the wire harness and clamp.
7. Connect the rear flasher light lead (Left) and the wire harness.
8. Clamp the main harness.

