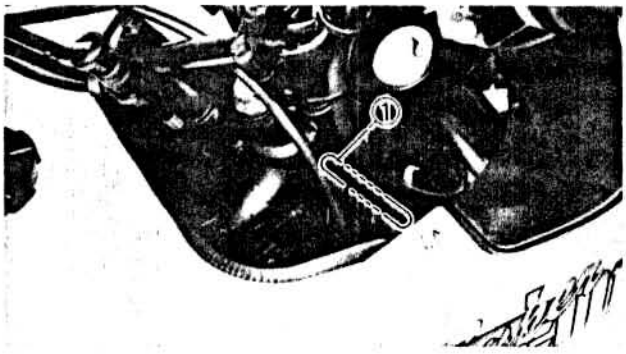
INDEX

CHAPTER 1. GENERAL INFORMATION

GENERAL INFORMATION

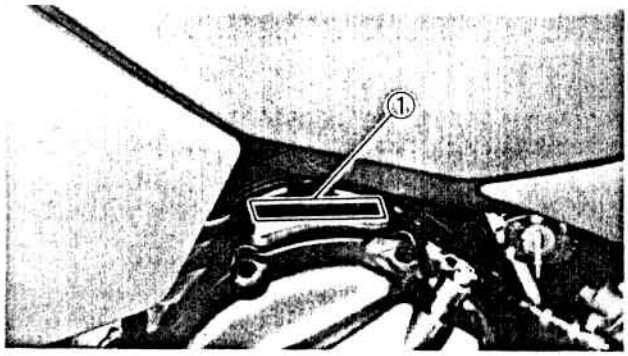


MOTORCYCLE IDENTIFICATION

FRAME SERIAL NUMBER

The frame serial number ① is stamped into the right side of the steering head.

Starting serial number:
3LD-000101
3SC-000101 (E)
3TD-000101 (CH)



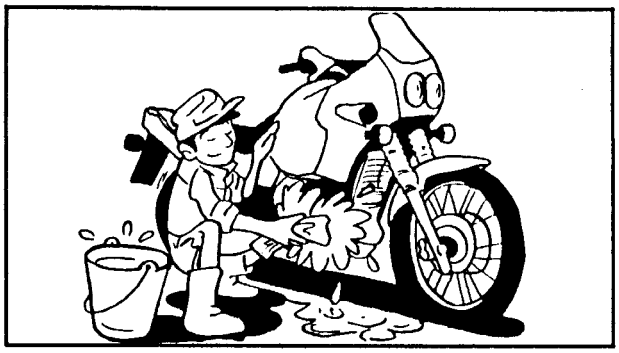
ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the right side of the engine.

Starting serial number:
3LD-000101
3SC-000101 (E)
3TD-000101 (CH)

NOTE:

- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.



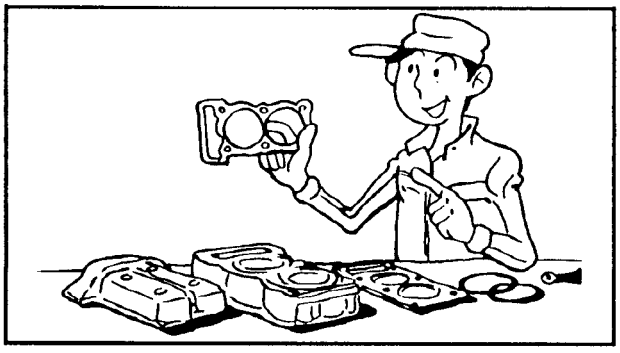
IMPORTANT INFORMATION

PREPARATION FOR REMOVAL

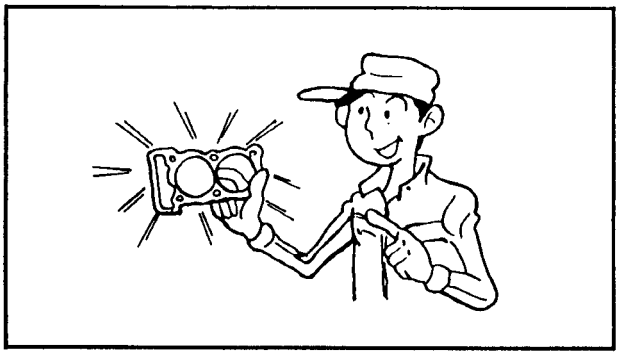
1. Remove all dirt, mud, dust, and foreign material before removal and disassembly.

2. Use proper tools and cleaning equipment. Refer to "SPECIAL TOOL".

3. When disassembling the machine, keep mated parts together. This includes gears, cylinders, pistons, and other mated parts that have been "mated" through normal wear. Mated parts must be reused as an assembly or replaced.



4. During the machine disassembly, clean all parts and place them in trays in the order of disassembly. This will speed up assembly time and help assure that all parts are correctly reinstalled.
5. Keep away from fire.



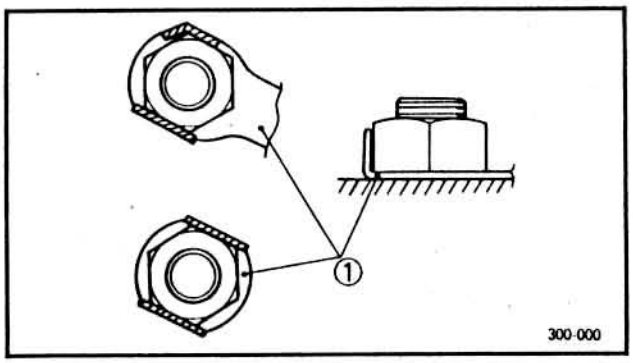
ALL REPLACEMENT PARTS

1. Use only genuine Yamaha parts for all replacements. Use oil and/or grease recommended by Yamaha for assembly and adjustment. Other brands may be similar in function and appearance, but inferior in quality.

GASKETS, OIL SEALS, AND O-RINGS

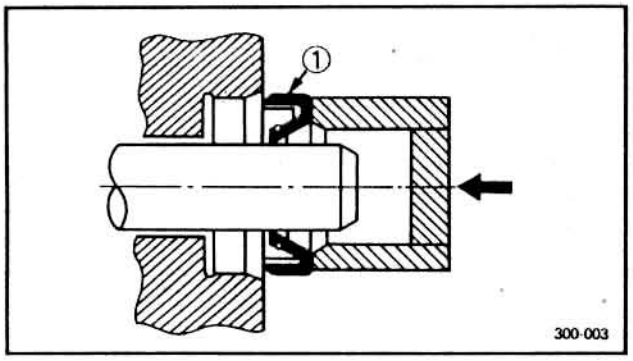
1. All gaskets, seals, and O-rings should be replaced when an engine is overhauled. All gasket surfaces, oil seal lips, and O-rings must be cleaned.

2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



LOCK WASHERS/PLATES AND COTTER PINS

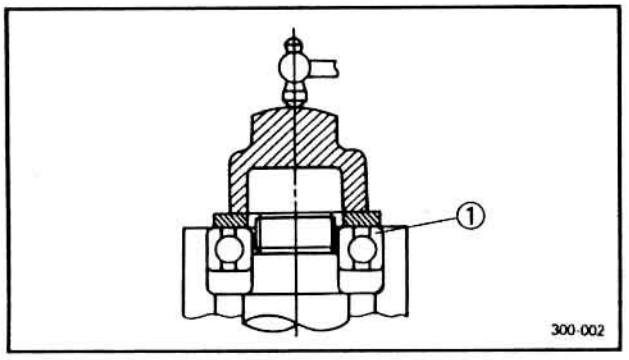
1. All lock washers/plates ① and cotter pins must be replaced when they are removed. Lock tab(s) should be bent along the bolt or nut flat(s) after the bolt or nut has been properly tightened.



BEARINGS AND OIL SEALS

1. Install the bearing(s) and oil seal(s) with their manufacturer's marks or numbers facing outward. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of light-weight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.

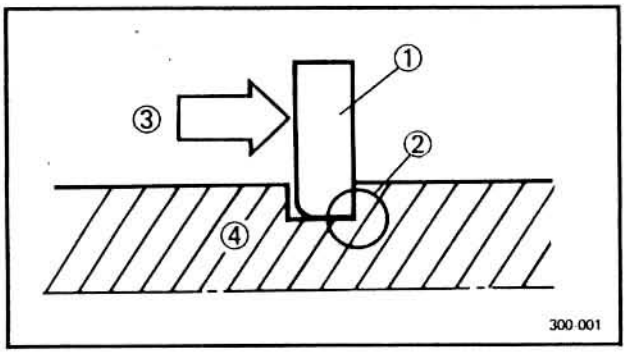
① Oil seal



⚠CAUTION:

Do not use compressed air to spin the bearings dry. This causes damage to the bearing surfaces.

① Bearing



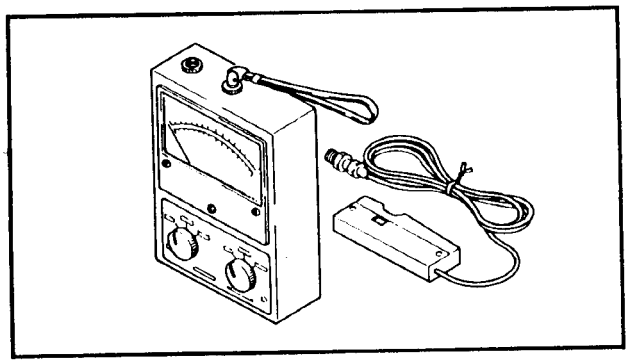
CIRCLIPS

1. All circlips should be inspected carefully before reassembly. Always replace piston pin clips after one use. Replace distorted circlips. When installing a circlip ①, make sure that the sharp edged corner ② is positioned opposite to the thrust ③ it receives. See the sectional view.

④ Shaft

SPECIAL TOOLS

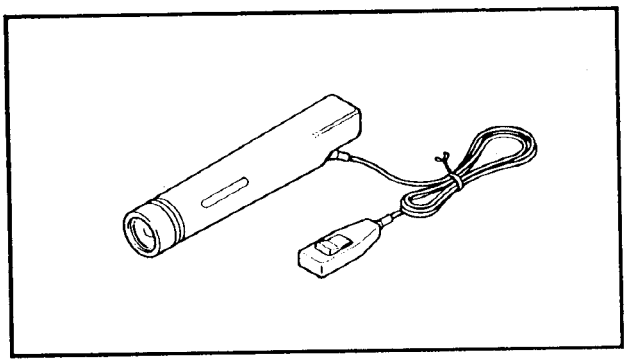
The proper special tools are necessary for complete and accurate tune-up and assembly. Using the correct special tool will help prevent damage caused by the use of improper tools or improvised techniques.



FOR TUNE UP

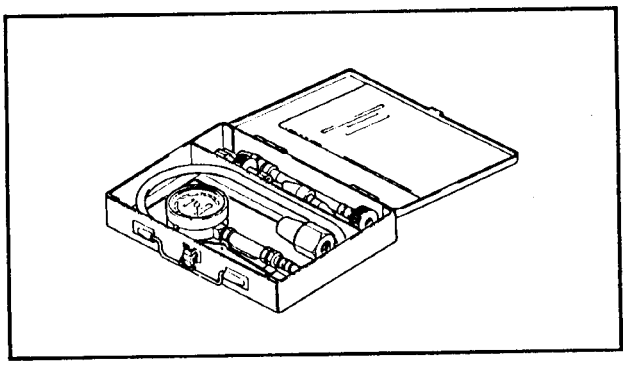
1. Inductive tachometer
   P/N 90890-03113

This tool is needed for detecting engine rpm.



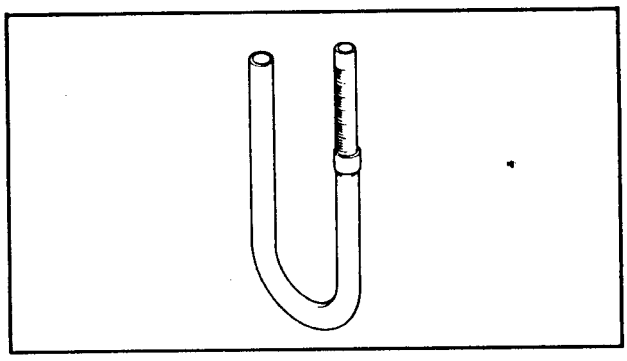
2. Inductive timing light
   P/N 90890-03109

This tool is necessary for checking ignition timing.



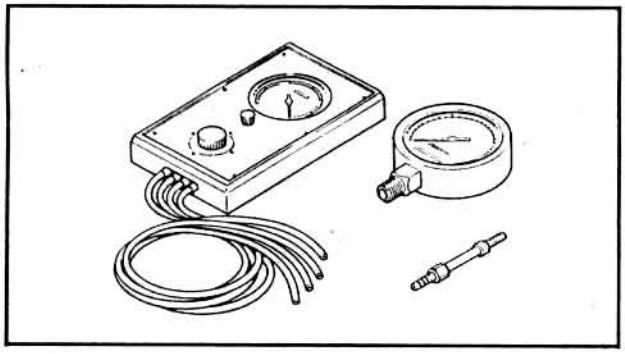
3. Compression gauge
   P/N 90890-03081

This gauge is used to measure the engine compression.



4. Fuel level gauge
   P/N 90890-01312

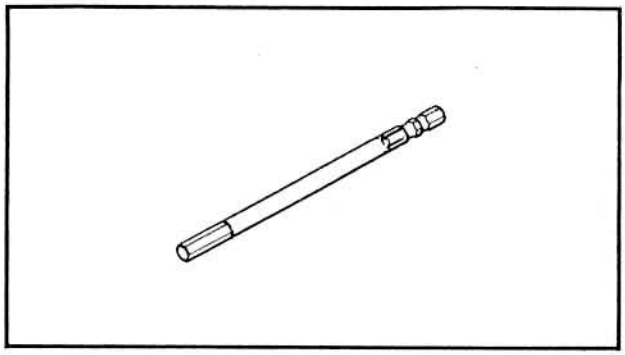
This gauge is used to measure the fuel level in the float chamber.



5. Vacuum gauge
   P/N 90890-03094

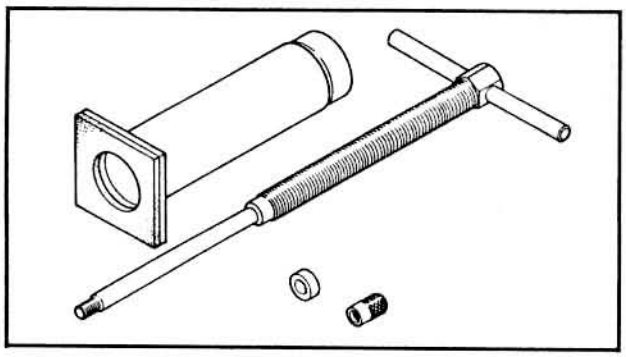
This gauge is needed for carburetor synchronization.

FOR ENGINE SERVICE



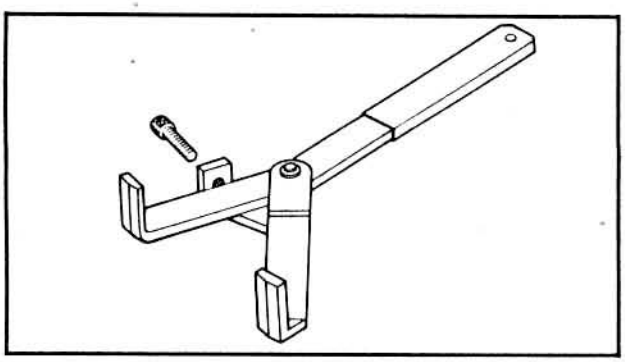
1. Hexagon wrench (6 mm)
   P/N 90890-01395

This tool is used to loosen or tighten the cylinder head securing nut.



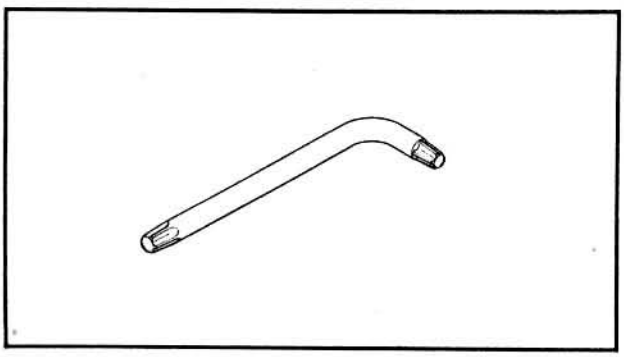
2. Piston pin puller
   P/N 90890-01304

This tool is used to remove the piston pin.



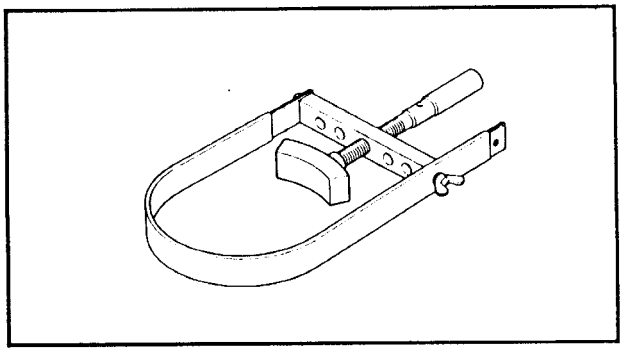
3. Universal clutch holder
   P/N 90890-04086

This tool is used to hold the clutch when removing or installing the clutch boss locknut.



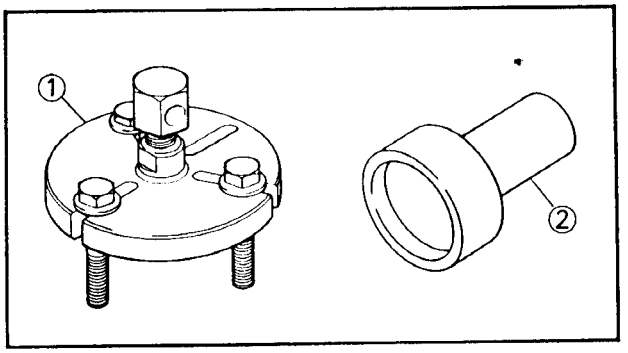
4. Torx wrench (T30)
   P/N 90890-05245

This tool is used to loosen or tighten the main axle bearing retainer bolt.



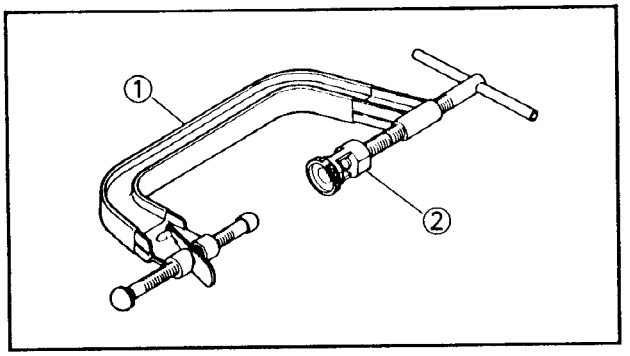
5. Rotor holder
   P/N 90890-01701

This tool is used to hold the rotor.



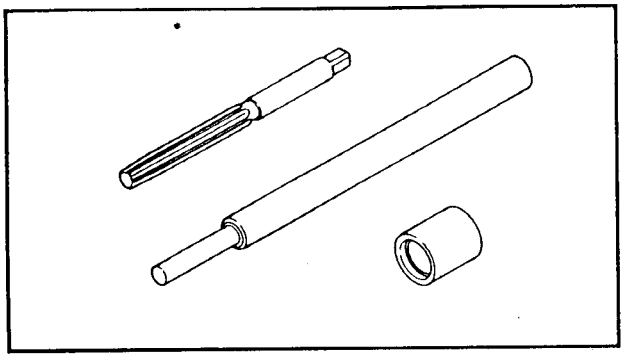
6. Rotor puller
   P/N 90890-01362 ..... ①
   Adapter
   P/N 90890-01382 ..... ②

These tools are used to remove the rotor.



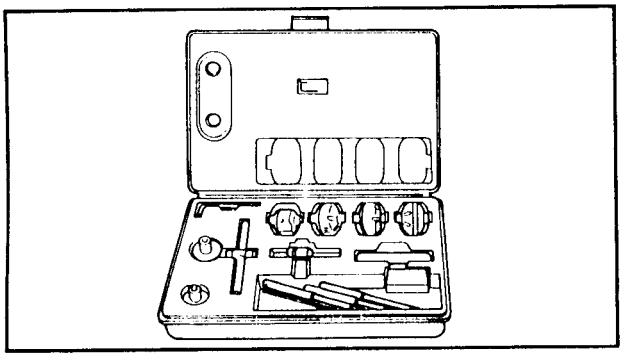
7. Valve spring compressor
   P/N 90890-04019 ..... ①
   Attachment
   P/N 90890-04114 ..... ②

These tools are used to remove and install the valve assemblies.



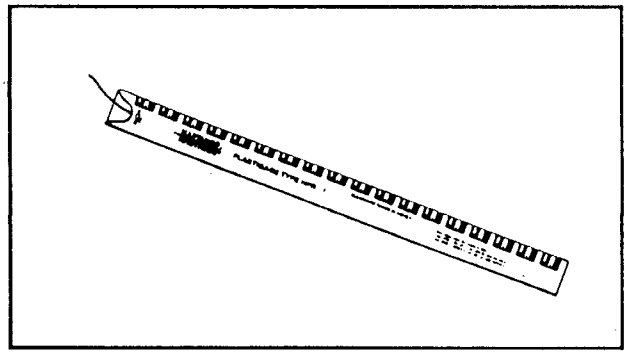
8. Valve guide remover and installer set (5.5 mm)
   P/N 90890-04016

These tools are used to remove, install and re-bore the valve guide.



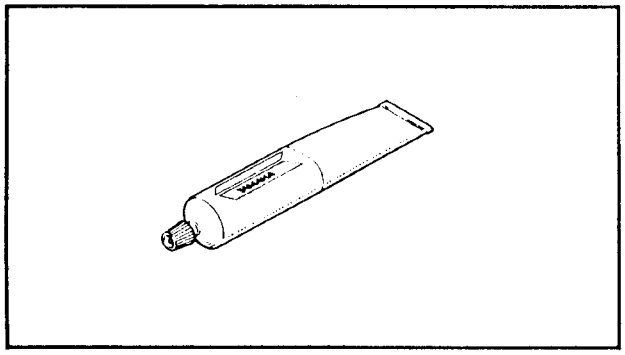
9. Valve seat cutter
   P/N YM-91043

This tool is used to adjust the valve clearance.



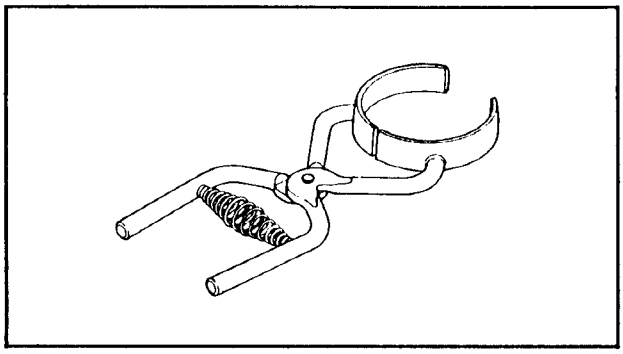
10. Plastigage® set "Green"
    P/N YU-33210

This gauge is needed to measure the clearance for the connecting rod bearing and the crankshaft bearing.



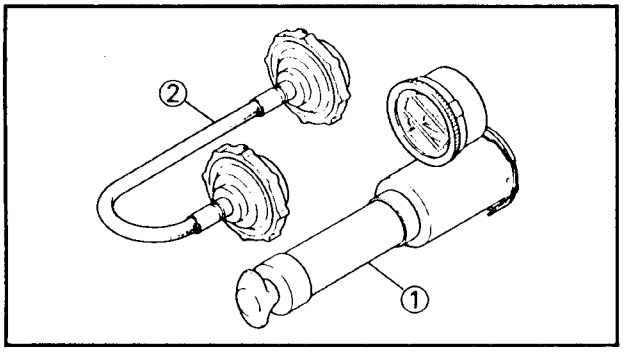
11. YAMAHA bond No. 1215
    P/N 90890-85505

This sealant (bond) is used for crankcase mating surfaces, etc.



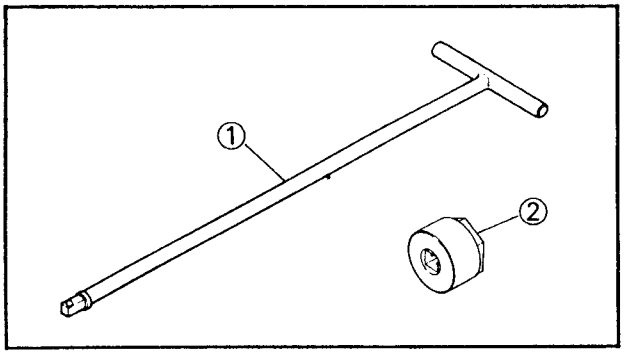
12. Piston ring compressor
    P/N 90890-04121

This tool is used to compress piston rings when installing the cylinder.



13. Radiator cap tester
    P/N 90890-01325 ..... ①
    Adapter
    P/N 90890-01352 ..... ②

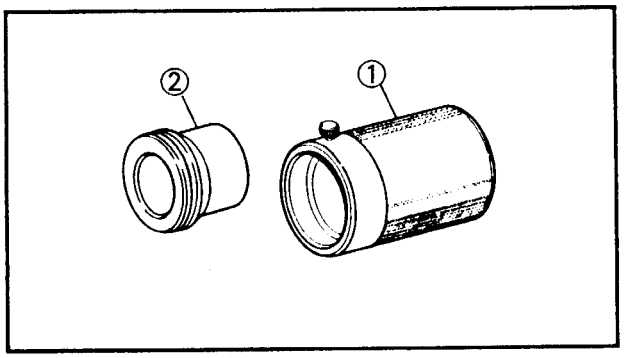
This tester is used for checking the cooling system.



FOR CHASSIS SERVICE

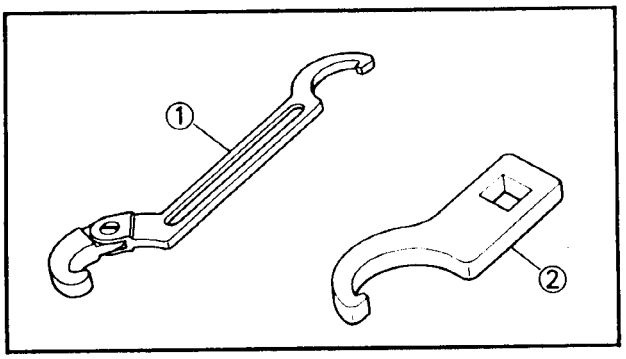
1. T-handle
    P/N 90890-01326 ..... ①
    Fork damper rod holder (30 mm)
    P/N 90890-01327 ..... ②

These tools are used to loosen and tighten the front fork damper rod holding bolt.



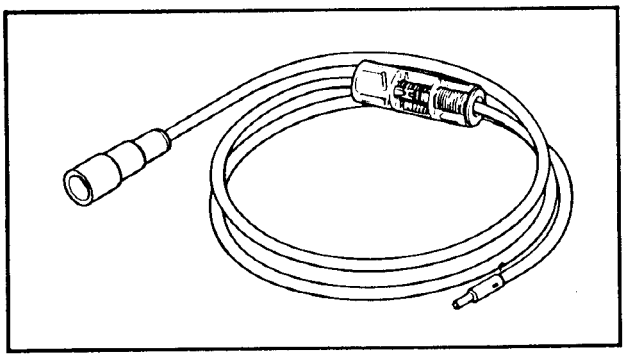
2. Front fork seal driver (weight)
   P/N 90890-01367 ..... ①
   Adapter (43 mm)
   P/N 90890-01374 ..... ②

These tools are used when installing the fork oil seal.



3. Ring nut wrench
   P/N 90890-01268 ..... ①
   P/N 90890-01403 ..... ②

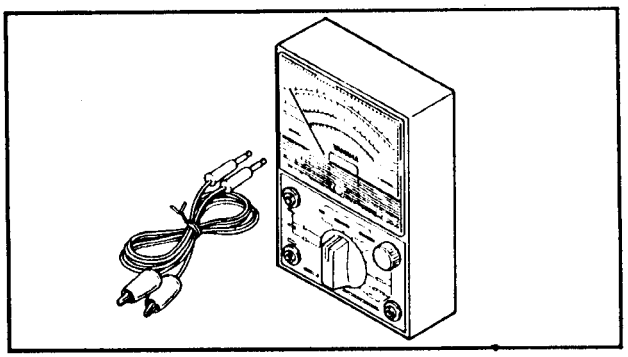
This tool is used to loosen and tighten the steering ring nut.



FOR ELECTRICAL COMPONENTS

1. Dynamic spark tester
   P/N 90890-03144

This instrument is necessary for checking the ignition system components.



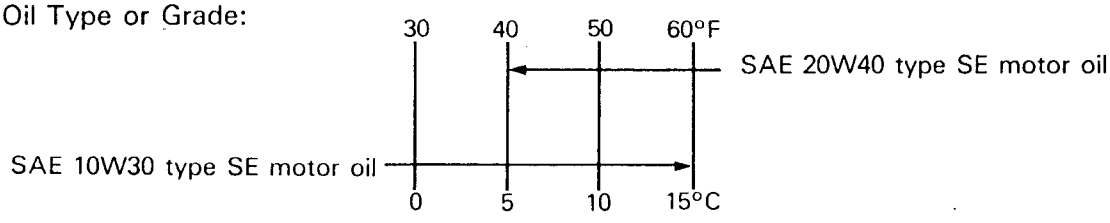
2. Pocket tester
   P/N 90890-03112

This instrument is invaluable for checking the electrical system.

CHAPTER 2.
SPECIFICATIONS

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	XTZ750
Model Code Number:	3LD 3SC (E) 3TD (CH)
Frame Starting Number:	3LD-000101 3SC-000101 (E) 3TD-000101 (CH)
Engine Starting Number:	3LD-000101 3SC-000101 (E) 3TD-000101 (CH)
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	 2,285 mm (90.0 in) (B)(F)(GB)(NL)(E)(I) 2,355 mm (92.7 in) (D)(S)(DK)(SF)(N)(CH) 815 mm (32.1 in) 1,355 mm (53.3 in) 865 mm (34.1 in) 1,505 mm (59.3 in) 240 mm (9.5 in)
Basic Weight: With Oil and Full Fuel Tank	 226 kg (498 lb)
Minimum Turning Radius:	2,400 mm (94.5 in)
Engine: Engine Type Cylinder Arrangement Displacement Bore × Stroke Compression Ratio Compression Pressure Starting System	 Liquid cooled 4-stroke, DOHC Forward inclined parallel 2-cylinder 749 cm^3 87 × 63 mm (3.43 × 2.48 in) 9.5 : 1 950 kPa (9.5 kg/cm^2, 135 psi) Electric starter
Lubrication System:	Dry sump
Engine Oil Type or Grade:	

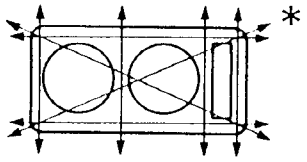
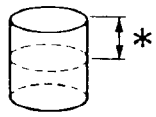
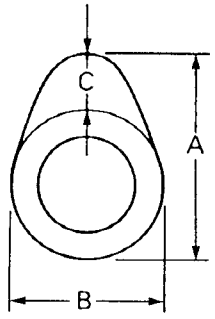
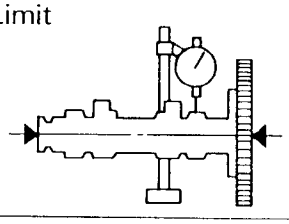
Model	XTZ750	
Engine Oil Capacity:		
Periodic Oil Change:	4.0 L (3.5 Imp qt, 4.2 US qt)	
With Oil Filter Replacement	4.1 L (3.6 Imp qt, 4.3 US qt)	
Total Amount	4.4 L (3.9 Imp qt, 4.7 US qt)	
Coolant Total Amount: (Including All Routes)	1.7 L (1.5 Imp qt, 1.8 US qt)	
Air Filter:	Dry type element	
Fuel:		
Type	Regular gasoline	
Tank Capacity	26 L (5.7 Imp qt, 6.9 US gal)	
Reserve Amount	5 L (1.1 Imp qt, 1.3 US gal)	
Carburetor:		
Type × Quantity	BDST 38 × 2	
Manufacturer	MIKUNI	
Spark Plug:		
Type	DPR8EA-9/X24EPRU-9	
Manufacturer	NGK/NIPPON DENSO	
Gap	0.8 ~ 0.9 mm (0.031 ~ 0.035 in)	
Clutch Type:	Wet, multiple-disc	
Transmission:		
Primary Reduction System	Spur gear	
Primary Reduction Ratio	67/39 (1.718)	
Secondary Reduction System	Chain Drive	
Secondary Reduction Ratio	46/16 (2.875)	
Transmission Type	Constant mesh 5-speed	
Operation	Left foot operation	
Gear Ratio 1st	37/13 (2.846)	
2nd	37/20 (1.850)	
3rd	30/21 (1.429)	
4th	27/23 (1.174)	
5th	28/27 (1.037)	
Chassis:		
Frame Type	Double cradle	
Caster Angle	26.5°	
Trail	101 mm (3.98 in)	
Tire:	Front	Rear
Type	With tube	With tube
Size	90/90-21 54H	140/80-17 69H
Manufacturer (Type)	BRIDGESTONE (TW47)	BRIDGESTONE (TW48)

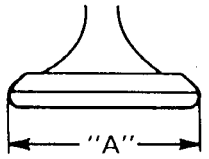
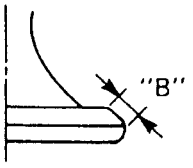
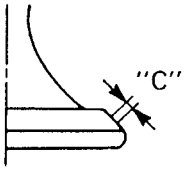
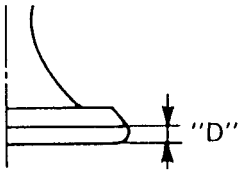
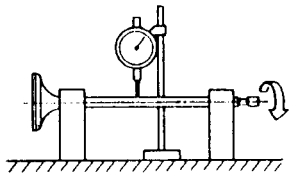
Model	XTZ750	
Tire Pressure (Cold Tire):		
Maximum load*	184 kg (406 lb)	
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	225 kPa (2.25 kg/cm^2, 33 psi)	225 kPa (2.25 kg/cm^2, 33 psi)
90 kg (198 lb) ~ Maximum load*	225 kPa (2.25 kg/cm^2, 33 psi)	250 kPa (2.5 kg/cm^2, 36 psi)
High speed riding	225 kPa (2.25 kg/cm^2, 33 psi)	250 kPa (2.5 kg/cm^2, 36 psi)
*Load is total weight of cargo, rider, passenger, and accessories.		
Brake:		
Front Brake Type	Dual disc brake	
Operation	Right hand operation	
Rear Brake Type	Single disc brake	
Operation	Right foot operation	
Suspension:		
Front Suspension	Telescopic fork	
Rear Suspension	Swingarm (Link suspention)	
Shock Absorber:		
Front Shock Absorber	Coil-Air spring/Oil damper	
Rear Shock Absorber	Coil-Gas spring/Oil damper	
Wheel Travel:		
Front Wheel Travel	235 mm (9.25 in)	
Rear Wheel Travel	215 mm (8.46 in)	
Electrical:		
Ignition System	T.C.I. (Digital)	
Generator System	A.C. magneto generator	
Battery Type or Model	YB14L-A	
Battery Capacity	12V, 14AH	
Headlight Type:	Quartz bulb (Halogen)	
Bulb Wattage × Quantity:		
Headlight	12V 55W + 12V 60/55W (D, F, B, S) 12V 45/40W × 2 (SF, NL, E, DK, N) 12V 35/35W × 2 (I, GB)	
Auxiliary Light	12V 4W × 1 (D, F, B, S, SF, NL) 12V 4W × 2 (E, DK, N) 12V 3W × 2 (I) 12V 3.4W × 2 (GB)	
Tail/Brake Light	12V 5W/21W × 1	
Flasher Light	12V 21W × 4	

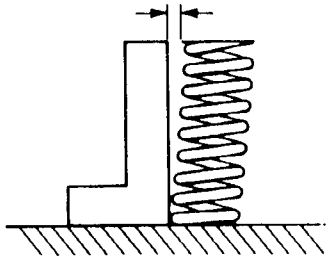
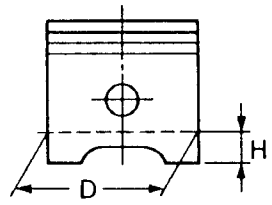
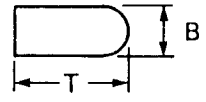
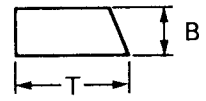
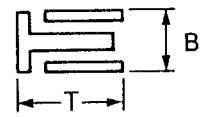
Model		XTZ750
Indicator Light:		
Wattage × Quantity	"METER LIGHT"	12V 3.4W × 2
	"NEUTRAL"	12V 3.4W × 1
	"HIGH BEAM"	12V 3.4W × 1
	"TURN"	12V 3.4W × 2

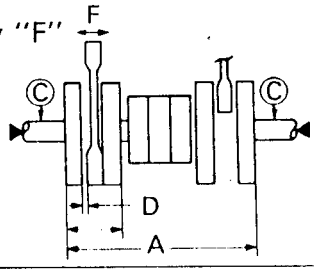
MAINTENANCE SPECIFICATIONS

ENGINE

Model	XTZ750
Cylinder Head: Warp Limit* 	0.03 mm (0.0012 in) * Lines indicate straightedge measurement.
Cylinder: Bore Size/Measureing Point*  <Wear Limit>	87.000 ~ 87.005 mm (3.4252 ~ 3.4254 in) 40 mm (1.6 in) 87.1 mm (3.429 in)
Camshaft: Drive Method Camshaft Outside Diameter Shaft-to-cap Clearance Cam Dimensions: Intake "A" <Limit> "B" <Limit> "C" Exhaust "A" <Limit> "B" <Limit> "C"  Camshaft Runout Limit 	Chain drive (Right) 24.967 ~ 24.980 mm (0.9830 ~ 0.9835 in) 0.020 ~ 0.054 mm (0.0008 ~ 0.0021 in) 35.7 ~ 35.8 mm (1.4055 ~ 1.4094 in) 35.6 mm (1.4 in) 27.95 ~ 28.05 mm (1.1004 ~ 1.1043 in) 27.85 mm (1.1 in) 7.65 ~ 7.85 mm (0.3012 ~ 0.3091 in) 35.95 ~ 36.05 mm (1.4154 ~ 1.4193 in) 35.85 mm (1.41 in) 27.95 ~ 28.05 mm (1.1004 ~ 1.1043 in) 27.85 mm (1.1 in) 7.9 ~ 8.1 mm (0.3110 ~ 0.3189 in) 0.03 mm (0.0012 in)
Timing Chain: Chain Type/No. of Links Chain Adjustment Method	82 RH 2015/138 Links Automatic

Model		XTZ750
Valve, Valve Seat, Valve Guide:		
Valve Clearance (Cold):		
	IN.	0.15 ~ 0.20 mm (0.006 ~ 0.008 in)
	EX.	0.25 ~ 0.30 mm (0.010 ~ 0.012 in)
Valve Dimensions:		
 Head Dia.	 Face Width	 Seat Width  Margin Thickness
"A" Head Dia.	IN.	25.9 ~ 26.1 mm (1.020 ~ 1.028 in)
	EX.	27.9 ~ 28.1 mm (1.098 ~ 1.106 in)
"B" Face Width	IN.	2.06 ~ 2.46 mm (0.081 ~ 0.097 in)
	EX.	2.06 ~ 2.46 mm (0.081 ~ 0.097 in)
"C" Seat Limit Width	IN.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
	EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
"D" Margin Thickness Limit	IN.	0.8 ~ 1.2 mm (0.032 ~ 0.047 in)
	EX.	0.8 ~ 1.2 mm (0.032 ~ 0.047 in)
Stem Outside Diameter	IN.	5.475 ~ 5.490 mm (0.2156 ~ 0.2161 in)
	EX.	5.460 ~ 5.475 mm (0.2150 ~ 0.2156 in)
<Limit>	IN.	5.45 mm (0.214 in)
	EX.	5.43 mm (0.214 in)
Guide Inside Diameter	IN.	5.50 ~ 5.51 mm (0.216 ~ 0.217 in)
	EX.	5.50 ~ 5.51 mm (0.216 ~ 0.217 in)
<Limit>	IN.	5.55 mm (0.219 in)
	EX.	5.55 mm (0.219 in)
Stem-to-Guide Clearance	IN.	0.01 ~ 0.04 mm (0.0004 ~ 0.0015 in)
	EX.	0.03 ~ 0.05 mm (0.001 ~ 0.002 in)
<Limit>	IN.	0.08 mm (0.003 in)
	EX.	0.1 mm (0.004 in)
Stem Runout Limit		0.01 mm (0.004 in)
		
Valve Seat Width	IN.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
	EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)

Model		XTZ750
Valve Spring:		
Free Length	IN.	37.29 mm (1.47 in)
	EX.	37.29 mm (1.47 in)
Set Length (Valve Closed)	IN.	30.39 mm (1.2 in)
	EX.	30.39 mm (1.2 in)
Compressed Pressure	IN.	10.00 ~ 11.60 kg (22.05 ~ 22.57 lb) at 30.39 mm
(Valve Closed)	EX.	10.00 ~ 11.60 kg (22.05 ~ 22.57 lb) at 30.39 mm
Tilt Limit	IN.	2.5°/1.7 mm (2.5°/0.067 in)
	EX.	2.5°/1.7 mm (2.5°/0.067 in)
		
Direction of Winding (Top View)	IN.	Clockwise
	EX.	Clockwise
Piston:		
Piston Size "D"		86.920 ~ 86.935 mm (3.422 ~ 3.423 in)
Measuring Point "H"		4.7 mm (0.185 in)
		
Piston Off-set		1 mm (0.04 in)
Piston Off-set Direction		INSIDE
Piston-to-Cylinder Clearance		0.065 ~ 0.085 mm (0.0026 ~ 0.0033 in)
<Limit>		<0.15 mm (0.0059 in)>
Piston Ring:		
Top Ring:		
Type		Barrel
		
Dimensions (B × T)		1.0 × 3.3 mm (0.039 × 0.130 in)
End Gap (Installed)		0.3 ~ 0.5 mm (0.012 ~ 0.020 in)
Side Clearance (Installed)		0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in)
2nd Ring:		
Type		Taper
		
Dimensions (B × T)		1.0 × 3.3 mm (0.039 × 0.130 in)
End Gap (Installed)		0.3 ~ 0.5 mm (0.012 ~ 0.020 in)
Side Clearance		0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in)
Oil Ring:		
		
Dimensions (B × T)		2.0 × 2.8 mm (0.079 × 0.110 in)
End Gap (Installed)		0.2 ~ 0.7 mm (0.008 ~ 0.028 in)

Model	XTZ750
Connecting Rod:	
Oil Clearance	0.026 ~ 0.050 mm (0.001 ~ 0.002 in)
Bearing Color Code	1. Blue 2. Black 3. Brown 4. Green
Crankshaft:	
Crank Width "A"	64.75 ~ 65.25 mm (2.549 ~ 2.569 in)
Runout Limit "C"	0.02 mm (0.0008 in)
Big End Side Clearance "D"	0.16 ~ 0.27 mm (0.006 ~ 0.011 in)
Small End Free Play "F" 	0.8 ~ 1.0 mm (0.0315 ~ 0.0394 in)
Oil Clearance	0.020 ~ 0.038 mm (0.0007 ~ 0.0015 in)
Bearing Color Code	1. Blue 2. Black 3. Brown, 4. Green 5. Yellow 6. Pink 7. Red
Balancer:	
Drive Method	Spur gear
Clutch:	
Friction Plate:	
Thickness	2.9 ~ 3.1 mm (0.114 ~ 0.122 in)
Quantity	8 pcs.
Wear Limit	2.8 mm (0.11 in)
Clutch Plate:	
Thickness	2.2 ~ 2.4 mm (0.087 ~ 0.094 in)
Quantity	1 pc.
Warp Limit	0.1 mm (0.004 in)
Clutch Plate:	
Thickness	1.9 ~ 2.1 mm (0.075 ~ 0.083 in)
Quantity	7 pcs.
Warp Limit	0.1 mm (0.004 in)
Clutch Spring:	
Free Length	51.8 mm (2.04 in)
Quantity	6 pcs.
Minimum Free Length	50 mm (1.97 in)
Clutch Release Method	Outer pull, rack & pinion pull
Transmission:	
Main Axle Runout Limit	0.08 mm (0.003 in)
Drive Axle Runout Limit	0.08 mm (0.003 in)
Shifter:	
Type	Guide bar

Model		XTZ750
Carburetor:		
I.D. Mark		3LD 00, 3TD 00 (CH)
Main Jet	(M.J.)	#142.5, #140 (CH)
Main Air Jet	(M.A.J.)	#60
Jet Needle	(J.N.)	5C19-3, 5C20-3 (CH)
Needle Jet	(N.J.)	Y-4 (611)
Throttle Valve Size	(Th.V)	#130
Pilot Jet	(P.J.)	#42.5, #35 (CH)
Pilot Air Jet	(P.A.J.)	#60
Bypass 1	(B.P.1)	φ0.8
2	(B.P.2)	φ0.8
3	(B.P.3)	φ0.8
Pilot Screw	(P.S.)	2 turns out
Valve Seat	(V.S.)	φ1.7
Starter Jet 1	(G.S.1)	#70
2	(G.S.2)	φ0.8
Pilot Outlet	(P.O.)	φ0.85, φ0.9 (CH)
Fuel Level		5.1 ~ 6.1 mm (0.2 ~ 0.24 in) Above from the float chamber line
Engine Idling Speed		1,100 ~ 1,200 r/min
Vacuum Pressure at Idling Speed		31.9 ~ 34.6 kPa (240 ~ 260 mmHg, 8.1 ~ 8.8 inHg)
Lubrication System:		
Oil Filter Type		Paper type
Oil Pump Type		Trochoid pump type
Tip Clearance		0 ~ 0.12 mm (0 ~ 0.005 in)
Side Clearance		0.03 ~ 0.08 mm (0.001 ~ 0.003 in)
Bypass Valve Setting Pressure		40 ~ 80 kPa (0.4 ~ 0.8 kg/cm^2, 5.69 ~ 11.38 psi)
Relief Valve Operating Pressure		350 ~ 450 kPa (3.5 ~ 4.5 kg/cm^2, 49.77 ~ 63.99 psi)
Cooling System:		
Radiator Core Size	Width	380 mm (15 in)
	Height	147.8 mm (5.82 in)
	Thickness	32 mm (1.26 in)
Radiator Cap Opening Pressure		95 ~ 125 kPa (0.95 ~ 1.25 kg/cm^2, 13.51 ~ 17.77 psi)
Reservoir Tank Capacity		0.45 L (0.40 Imp qt, 0.47 US qt)
<From Low to Full Level>		<0.15 L (0.13 Imp qt, 0.16 US qt)>
Water Pump		
Type		Single-suction centrifugal pump
Reduction Ratio		44/44 × 38/27 (1.407)
Thermostat		
Opening Temperature		80 ~ 84°C (176 ~ 183°F)

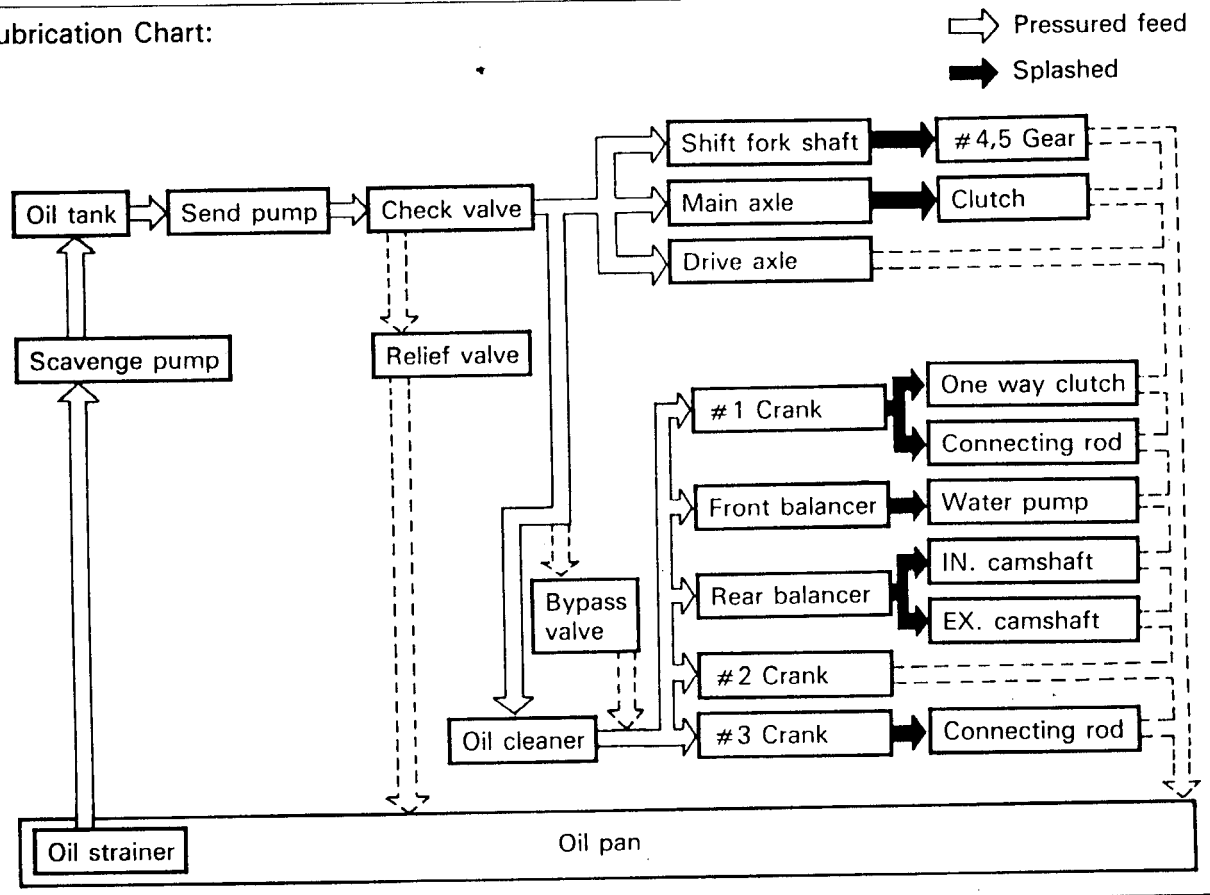
TIGHTENING TORQUE

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Cylinder head (exhaust pipe)	Stud bolt	M 8	4	15	1.5	11	E
Cylinder head (camshaft cap)	Flange bolt	M 6	16	10	1.0	7.2	
Cylinder head	Nut	M10	6	40	4.0	29	E
Cylinder head cover	Bolt	M 6	4	10	1.0	7.2	
Cylinder body drain bolt	Flange bolt	M 6	1	10	1.0	7.2	
Spark plug	—	M12	2	17.5	1.75	12.5	
Connecting rod	Nut	M 9	4	48	4.8	35	
Flywheel magneto	Flange bolt	M12	1	130	13	94	
Timing chain sprocket	Flange bolt	M 7	4	24	2.4	17	
Timing chain tensioner	Bolt	M 6	1	10	1.0	7.2	
Thermostat	Flange bolt	M16	1	13	1.3	9.4	L
Hose clamp (thermostat-radiator)	Panhead screw	M 5	2	2	0.2	1.4	
(cylinder-thermostat)	Panhead screw	M 5	2	2	0.2	1.4	
(radiator-water pump)	Panhead screw	M 5	2	2	0.2	1.4	
Radiator protector	Panhead screw	M 5	4	5	0.5	3.6	
Radiator	Flange bolt	M 6	2	7	0.7	5.1	
Delivery hose (crankcase-cylinder)	Bolt	M10	2	21	2.1	15	
Oil pump assembly	Panhead screw	M 6	6	6	0.6	4.3	
Oil buffle plate	Flange bolt	M 6	2	10	1.0	7.2	
Drain plug (oil pan)	—	M14	1	35	3.5	25	
Oil strainer	Panhead screw	M 6	4	7	0.7	5	Stake L
Relief valve stay	Flange bolt	M 6	1	10	1.0	7.2	L
Drain bolt (oil strainer case)	Flange bolt	M10	1	30	3.0	22	
Carburetor joint	Bolt	M 6	4	10	1.0	7.2	
Air cleaner	Flange bolt	M 6	1	7	0.7	5.1	
Muffler protector	Screw	M 6	8	4	0.4	2.9	
Exhaust pipe (CO test)	Bolt	M 6	2	10	1.0	7.2	
Exhaust pipe	Nut	M 8	4	20	2.0	14	
Exhaust pipe protector	Screw	M 6	3	4	0.4	2.9	
Exhaust pipe and muffler	Bolt	M 8	2	20	2.0	14	
Muffler	Bolt	M 8	2	24	2.4	17	
Crankcase	Flange bolt	M10	6	40	4.0	29	M
Crankcase	Flange bolt	M 6	10	12	1.2	8.7	E
Crankcase	Flange bolt	M 8	11	24	2.4	17	E
Balancer shaft	Screw	M 6	2	12	1.2	8.7	
Holder	Flange bolt	M 6	4	10	1.0	7.2	
Chain cover	Flange bolt	M 6	2	5	0.5	3.6	
Crankcase cover (left-rear)	Flange bolt	M 6	5	5	0.5	3.6	

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Crankcase cover (left-front)	Panhead screw	M 5	2	4	0.4	2.9	Stake (S)
Starter clutch	Bolt	M 6	3	10	1.0	7.2	
Clutch spring	Screw	M 6	6	8	0.8	5.8	
Clutch boss	Nut	M20	1	7	0.7	5.1	Use lock washer
Main axle bearing stopper	Screw	M 6	3	12	1.2	8.7	
Drive sprocket	Nut	M18	1	70	7.0	51	Use lock washer
Drive axle cover plate	Bolt	M 6	5	7	7.0	5.1	
Shift cam	Screw	M 5	1	4	0.4	2.9	
Shift cam stopper lever	Bolt	M 6	1	12	1.2	8.7	
Shift fork guide	Flange bolt	M 6	2	12	1.2	8.7	
Shift arm	Flange bolt	M 6	1	12	1.2	8.7	
Shift rod	Nut	M 6	2	8	0.8	5.8	
Stopper lever	Bolt	M 8	1	22	2.2	16	(G)
Crankcase	Screw	M 6	1	12	1.2	8.7	
Stator	Screw	M 6	3	7	0.7	5.1	(G)
Stator assembly sensor	Screw	M 5	2	4	0.4	2.9	(G)
Ignition coil	Screw	M 6	2	10	1.0	7.2	
Neutral switch	Screw	M 6	2	4	0.4	2.9	
Starter motor	Flange bolt	M 6	2	10	1.0	7.2	
Thermo switch	—	M 6	1	28	2.8	20	
Thermo switch housing	—	PT 1/8	1	15	1.5	11	
Other engine part	Flange bolt	M 6	—	10	1.0	7.2	
	Screw	M 6	—	7	0.7	5	
	Flange bolt	M 8	—	20	2.0	14	

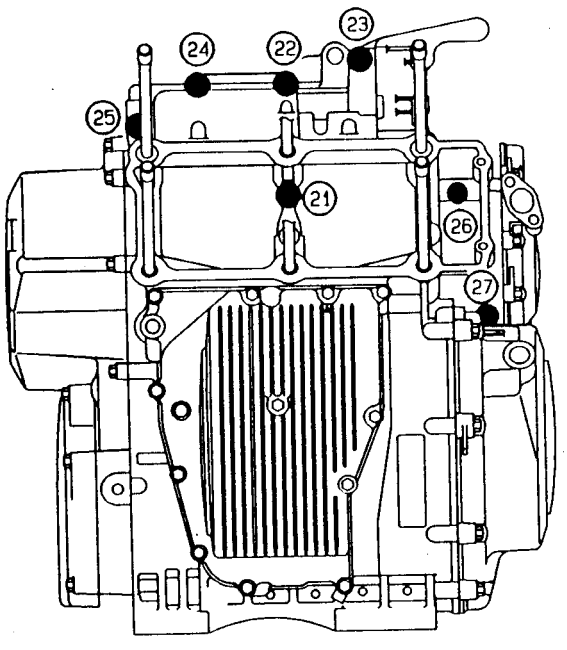
Model	XTZ750

Lubrication Chart:

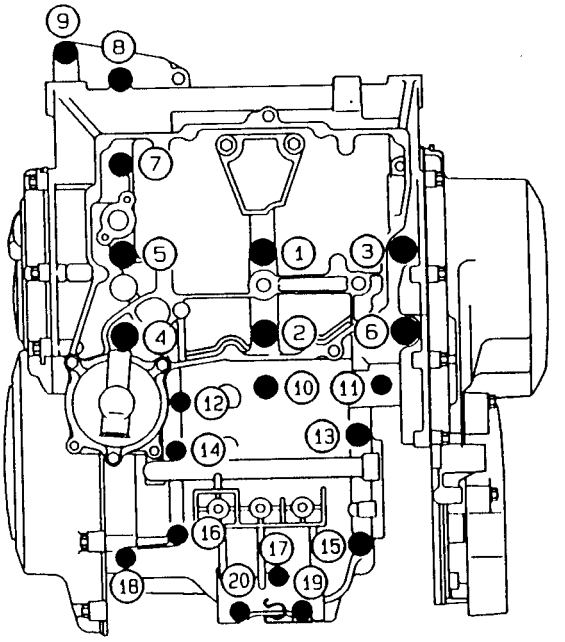


Crankcase Tightening Sequence:

Crankcase (Upper)

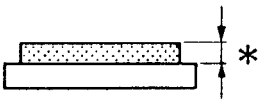
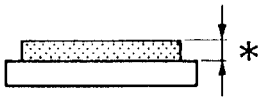


Crankcase (Lower)



CHASSIS

Model		XTZ750
Steering System:		
Steering Bearing Type		Taper Roller Bearing
Front Suspension:		
Front Fork Travel		235 mm (9.25 in)
Front Spring Free Length		544.5 mm (21.4 in)
<Limit>		<517 mm (20.4 in)>
Spring Rate:	K1	4.5 N/mm (0.45 kg/mm, 25.2 lb/in)
Stroke	K1	0.0 ~ 235 mm (0.0 ~ 9.25 in)
Optional Spring		No
Oil Capacity		669 cm^3 (23.5 Imp oz, 22.6 US oz)
Oil Level		130 mm (5.12 in) From top of inner tube fully compressed without spring.
Oil Grade		Fork oil 10W or equivalent
Enclosed Air Pressure:		
Standard		100 kPa (1 kg/cm^2, 14.2 psi)
Rear Suspension:		
Shock Absorber Travel		82 mm (3.23 in)
Spring Free Length		240 mm (9.45 in)
Fitting Length		457 mm (18 in)
Spring Rate	K1	140 N/mm (14.0 kg/mm, 784 lb/in)
Stroke	K1	0.0 ~ 82.0 mm (0.0 ~ 3.2 in)
Optional Spring		No
Enclosed Gas Pressure:		
Standard		2,000 kPa (20 kg/cm^2, 284 psi)
Swingarm:		
Free Play Limit		1.0 mm (0.039 in) at swingarm end Move swingarm end side to side
Side Clearance		0.3 mm (0.012 in) at swingarm pivot
Front Wheel:		
Type		Spoke wheel
Rim Size		1.85 × 21
Rim Material		Aluminum
Rim Runout Limit	Radial	1.0 mm (0.039 in)
	Lateral	0.5 mm (0.020 in)
Rear Wheel:		
Type		Spoke wheel
Rim Size		MT3.00 × 17
Rim Material		Aluminum
Rim Runout Limit	Radial	1.0 mm (0.039 in)
	Lateral	0.5 mm (0.020 in)
Drive Chain:		
Type/Manufacturer		520VL2/DAIDO
No. of Links		112
Chain Free Play		25 ~ 35 mm (0.98 ~ 1.38 in)

Model	XTZ750
Front Disc Brake:	
Type	Dual
Disc Outside Diameter × Thickness	245 × 4 mm (9.65 × 0.16 in)
Pad Thickness Inner	5.2 mm (0.21 in)
<Limit> *	<1.5 mm (0.06 in)>
Pad Thickness Outer	5.2 mm (0.21 in)
<Limit> *	<1.5 mm (0.06 in)>
	
Master Cylinder Inside Diameter	14 mm (0.55 in)
Caliper Cylinder Inside Diameter	27 mm (1.06 in)
Brake Fluid Type	DOT #4 If DOT #4 is not available, DOT #3 can be used
Rear Disc Brake:	
Type	Single
Disc Outside Diameter × Thickness	245 × 5 mm (9.65 × 0.20 in)
Pad Thickness Inner	5.2 mm (0.21 in)
<Limit> *	<1.5 mm (0.06 in)>
Pad Thickness Outer	5.2 mm (0.21 in)
<Limit> *	<1.5 mm (0.06 in)>
	
Master Cylinder Inside Diameter	14 mm (0.55 in)
Caliper Cylinder Inside Diameter	2, mm (1.06 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	5 ~ 25 mm (0.20 ~ 0.98 in) Below top of footrest.

TIGHTENING TORQUE

Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Handle crown and inner tube	M 8	23	2.3	17	
Handle crown and steering shaft	M14	80	8.0	58	
Handlebar holder (upper) and handlebar holder (under)	M 8	20	2.0	14	
Steering shaft and ring nut	M25	5.5	0.55	4	See Note
Cowling stay and frame	M 8	15	1.5	11	
Cowling stay and cowling (front)	M 6	7	0.7	5.1	
Cowling stay and ignitor unit	M 6	7	0.7	5.1	
Frame and rectifier/regulator	M 6	7	0.7	5.1	
Cowling stay and conduction unit	M 6	7	0.7	5.1	
Cowling stay and horn	M 6	7	0.7	5.1	
Cowling (front) and side cowling (left and right)	M 5	5	0.5	3.6	
Side cowling (left and right) and fuel tank	M 5	5	0.5	3.6	
Under bracket and joint	M 6	7	0.7	5.1	
Front master cylinder and master cylinder cap	M 4	1.5	0.15	1	
Speedometer and cowling stay	M 6	7	0.7	5.1	
Handle crown and main switch	M 6	7	0.7	5.1	
Handlebar holder (under) and nut	M10	27	2.7	19	
Engine mounting and frame	M10	58	5.8	42	
Frame and down tube (front)	M 8	23	2.3	17	
Frame and down tube (rear-left)	M10	32	3.2	23	
Frame and down tube (rear-right)	M 8	23	2.3	17	
Engine protector and frame	M 6	7	0.7	5.1	
Pivot shaft and frame	M16	90	9.0	65	
Swingarm and relay arm	M14	50	5.0	36	
Relay arm and connecting rod	M14	50	5.0	36	
Connecting rod and rear arm	M14	50	5.0	36	
Rear shock absorber and frame	M10	35	3.5	25	
Rear shock absorber and relay arm	M10	35	3.5	25	
Chain tensioner	M 8	23	2.3	17	
Chain case and swingarm	M 6	4	0.4	2.9	
Chain protector and swingarm	M 6	7	0.7	5.1	
Chain guide and swingarm	M 6	7	0.7	5.1	
Fuel tank bracket and fuel tank	M 6	7	0.7	5.1	
Fuel tank bracket and frame	M 8	15	1.5	11	
Fuel tank and frame	M 6	7	0.7	5.1	
Fuel pump and frame	M 6	7	0.7	5.1	
Ignition coil and frame	M 6	7	0.7	5.1	
Rear carrier (front) and frame	M 8	20	2.0	14	
Rear carrier (rear) and frame	M 6	10	1.0	7.2	
Rear side cover and rear carrier	M 5	4	0.4	2.9	
Rear carrier and flasher bracket	M 6	7	0.7	5.1	
Helmet holder and flasher bracket	M 6	7	0.7	5.1	
Seat and frame	M 6	7	0.7	5.1	
Fuel cock and fuel tank	M 6	5	0.5	3.6	
Frame and battery box	M 6	7	0.7	5.1	

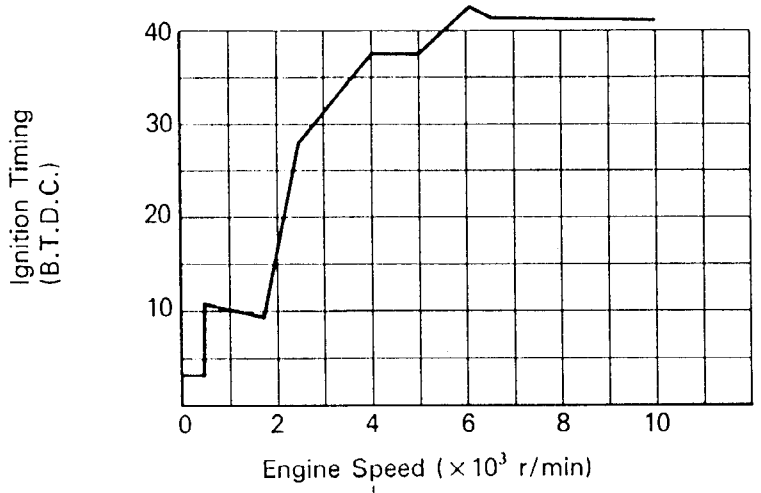
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Mud guard and frame	M 6	7	0.7	5.1	
Oil tank and frame	M 6	7	0.7	5.1	
Side cover and frame	M 6	4	0.4	2.9	
Recovery tank and frame	M 6	6	0.6	4.3	
License bracket and frame	M 8	8	0.8	5.8	
License bracket and tail/brake light	M 6	7	0.7	5.1	
Rear reflector and stay	M 5	4	0.4	2.9	
License bracket number plate stay	M 6	4	0.4	2.9	
Front wheel axle and nut	M14	100	10.0	72	
Rear wheel axle and nut	M16	90	9.0	6.5	
Brake caliper (front) and front fork	M10	35	3.5	25	
Brake caliper (rear) and bracket	M10	35	3.5	25	
Sidestand and frame	M10	40	4.0	29	
Footrest bracket and frame	M10	45	4.5	32	
Footrest (for passenger) and frame	M 8	20	2.0	14	
Master cylinder (rear brake) and frame	M 8	20	2.0	14	
Reservoir tank (rear brake) and frame	M 6	4	0.4	2.9	
Sidestand switch and frame	M 5	4	0.4	2.9	
Brake hose (union bolt)	M10	25	2.5	18	
Brake hose and brake hose holder	M10	18	1.8	13	

NOTE:

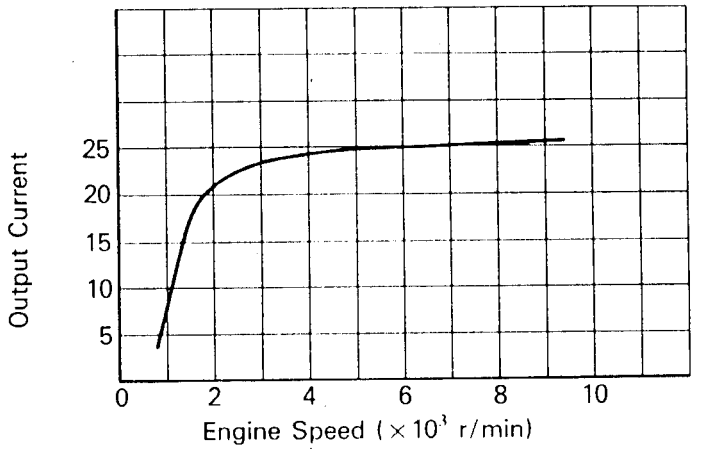
1. First, tighten the ring nut approximately 38 Nm (3.8 m•kg, 27 ft•lb) by using the torque wrench, then loosen the ring nut one turn.
2. Retighten the ring nut to specification.

ELECTRICAL

Model	XTZ750
Voltage	12V
Ignition System:	
Ignition Timing (B.T.D.C.)	10° at 1,150 r/min
Advanced Timing (B.T.D.C.)	43° at 6,000 r/min
Advancer Type	Electrical type



T.C.I.:	
Pickup Coil Resistance	184 ~ 276Ω at 20°C (68°F)
(Color)	(Blue/Yellow – Green/White)
T.C.I. Unit/Manufacturer	TNDF06/NIPPON DENSO
Ignition Coil:	
Model/Manufacturer	JO246/NIPPON DENSO
Minimum Spark Gap	6 mm (0.24 in)
Primary Winding Resistance	2.38 ~ 3.22Ω at 20°C (68°F)
Secondary Winding Resistance	12 ~ 18 kΩ at 20°C (68°F)
Spark Plug Cap:	
Type	Resin type
Resistance	10 kΩ at 20°C (68°F)
Charging System:	
Type	A.C. magneto generator

Model	XTZ750
A.C. Generator:	
Model/Manufacturer	TLNZ29/NIPPON DENSO
Nominal Output	14V 25A at 5,000 r/min
	
Stator Coil Resistance	0.20 ~ 0.30Ω at 20°C (68°F) (White—White)
Rectifier/Regulator:	
Model/Manufacturer	SH569/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	1.280
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	MS5D-191/HITACHI
Amperage Rating	100A
Horn:	
Type/Quantity	Plane type/1 pc.
Model/Manufacturer	YF-12/NIKKO
Maximum Amperage	2.5A