

YAMAHA








TW200/E

Service Manual

274 Pgs + 2 f/o

LIT-11616-06-26

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SPEC 2




INSP ADJ 3




ENG 4



CARB 5



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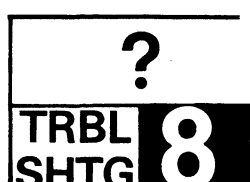
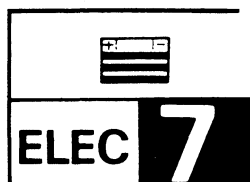
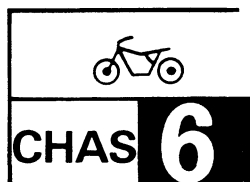
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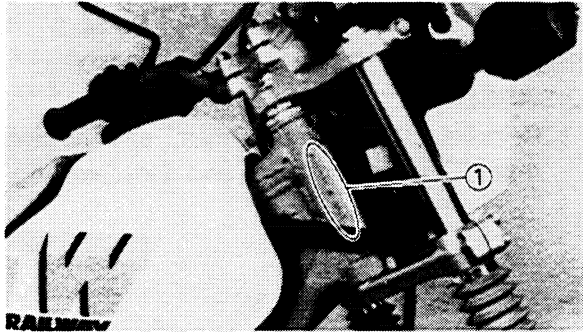
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GENERAL INFORMATION
MOTORCYCLE IDENTIFICATION
VEHICLE IDENTIFICATION NUMBER

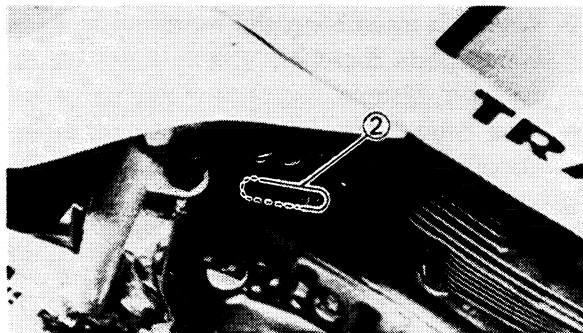
The vehicle identification number ① is on the right side of the steering head pipe.

Starting Serial Number:
TW200TJYA 2JY00*HC000101
TW200TCJYA 2JX00*HC000101

1

NOTE: _____

The vehicle identification number is used to identify your motorcycle and may be used to register your motorcycle with the licensing authority in your state.



ENGINE SERIAL NUMBER

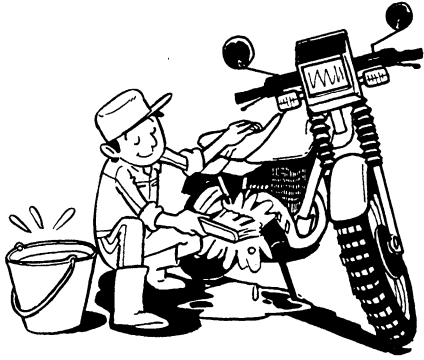
The engine serial number ② is stamped into the elevated part of the right rear section of the engine.

Starting Serial Number:
TW200T2JY-000101
TW200TC2JX-000101

NOTE: _____

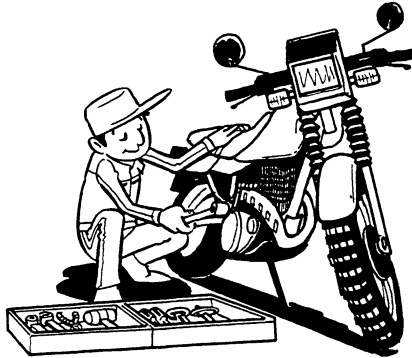
- The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.
- Designs and specifications are subject to change without notice.

1



**IMPORTANT INFORMATION
PREPARATION FOR REMOVAL AND
DISASSEMBLY**

1. Remove all dirt, mud, dust, and foreign material before removing and disassembling.



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



3. When disassembling the motorcycle, 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.

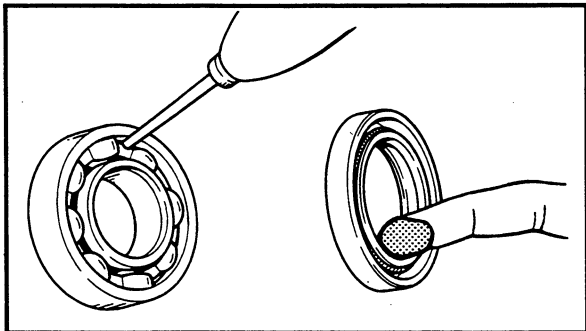
4. During the motorcycle disassembly, clean all parts and place them in trays in the order of disassembly. This will speed up assembly time and help assure that all parts are correctly reinstalled.



5. Keep away from fire.

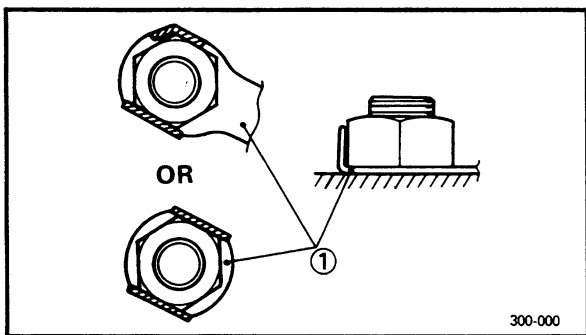
ALL REPLACEMENT PARTS

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.



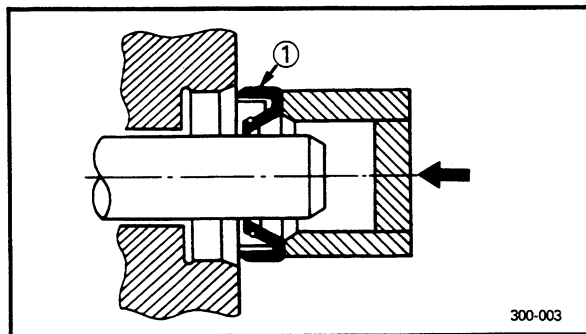
GASKETS, OIL SEALS, AND O-RINGS

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.



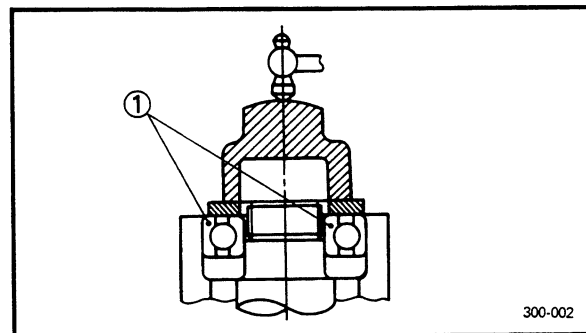
BEARINGS AND OIL SEALS

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

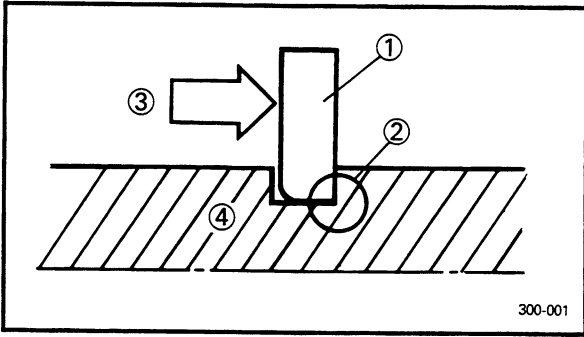
CAUTION:

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



① Bearing

1



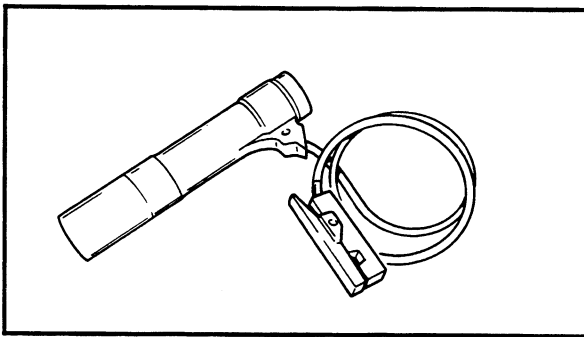
CIRCLIPS

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

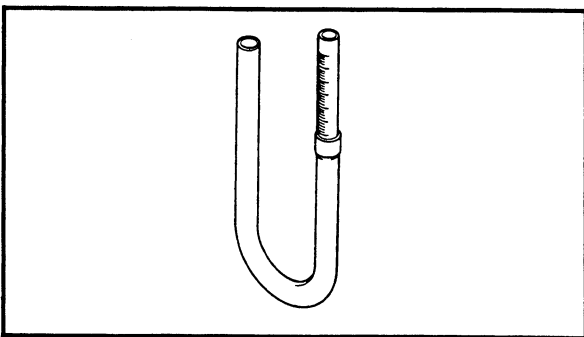
The proper special tools are necessary for complete and accurate tune-up and assembly. Using the correct special tool will help prevent damage caused by the use of improper tools or improvised techniques.



FOR TUNE-UP

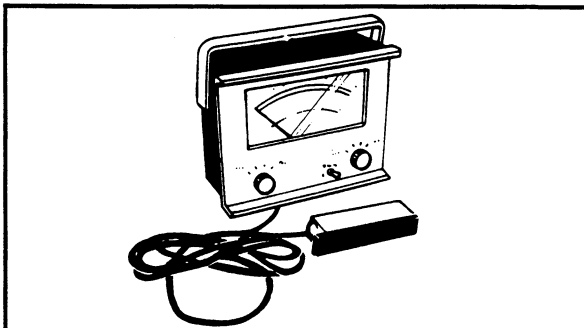
1. Inductive Timing Light
P/N. YU-33277

This tool is necessary for adjusting the ignition timing.



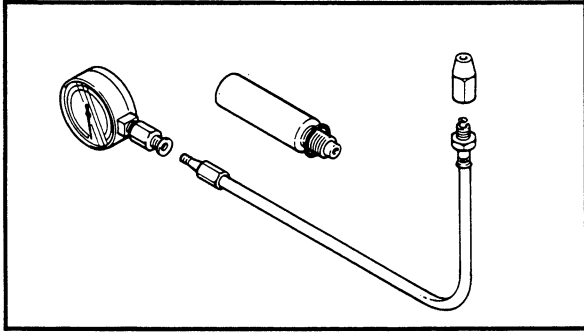
2. Fuel Level Gauge
P/N. YM-01312

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



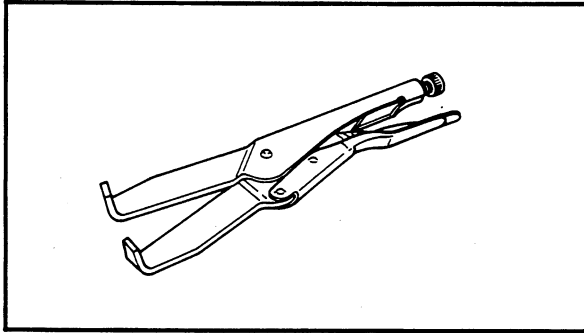
3. Inductive Tachometer
P/N. YU-08036

This tool is needed for detecting engine r.p.m.



4. Compression Gauge
P/N. YU-33223

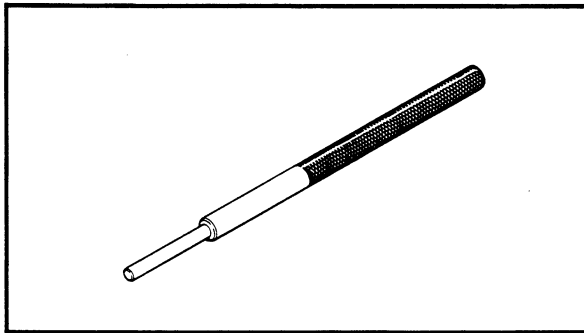
This gauge is used to measure the engine compression.



FOR ENGINE SERVICE

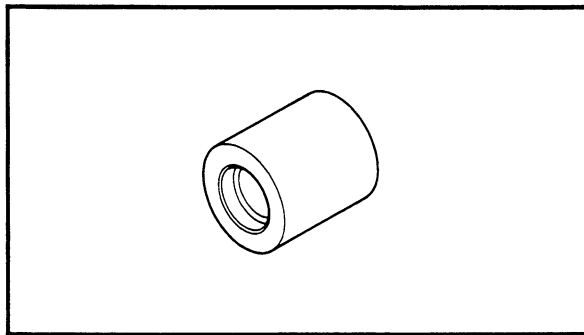
1. Universal Clutch Holder
P/N. YM-91042

This tool is used to hold the clutch when loosening or tightening the clutch boss locknut.



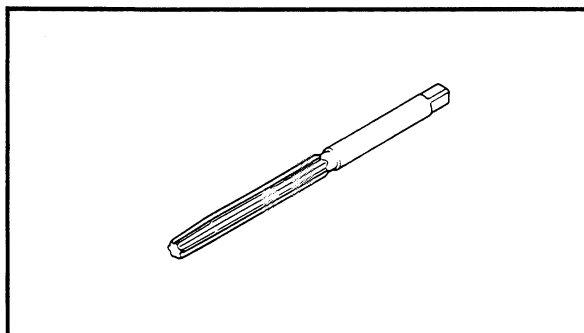
2. Valve Guide Remover (6.0 mm)
P/N. YM-04064-A

This tool is used to remove the valve guide.



3. Valve Guide Installer (6.0 mm)
P/N. YM-04065-A

This tool is needed to install the valve guide properly together with the valve guide remover.



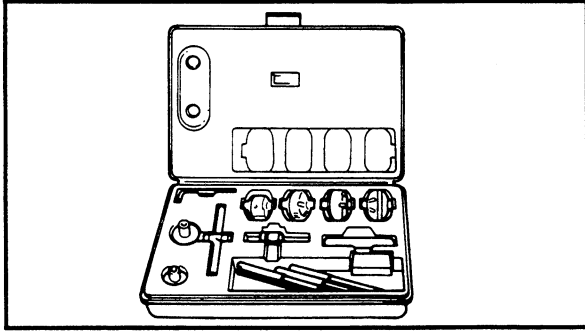
4. Valve Guide Reamer (6.0 mm)
P/N. YM-04066

This tool is used to rebore the new valve guide.

SPECIAL TOOLS

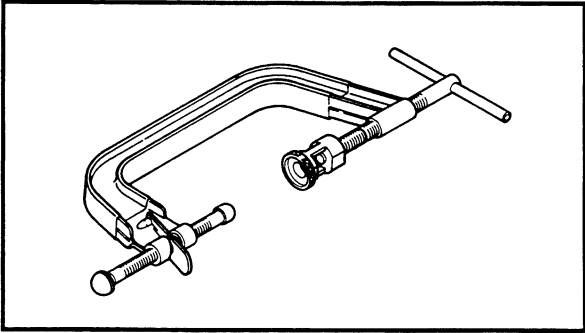


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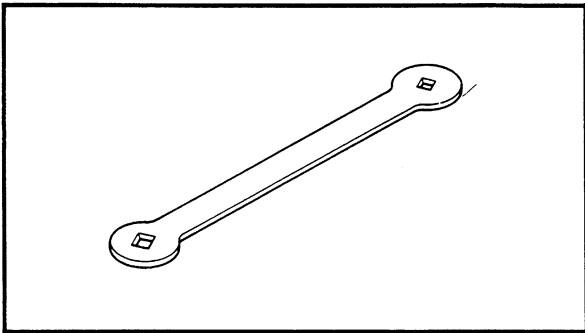
5. Valve Seat Cutter
P/N. YM-91043

This tool is needed to reface the valve seat.



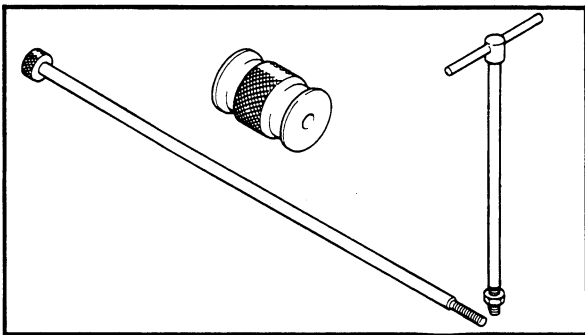
6. Valve Spring Compressor
P/N. YM-04019

This tool is needed to remove and install the valve assemblies.



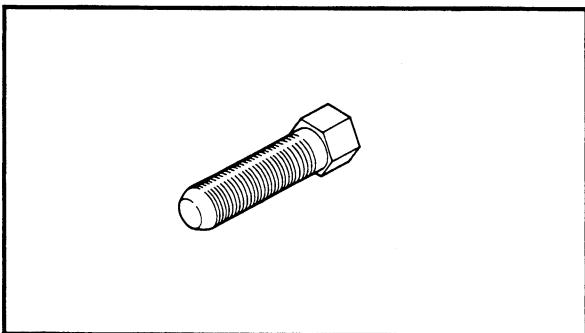
7. Valve Adjusting Tool
P/N. YM-08035

This tool is used for adjusting the valve clearance.



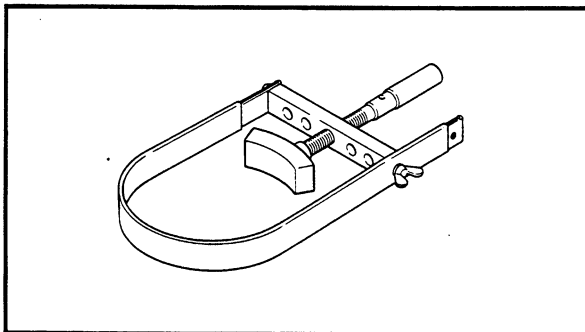
8. Slide Hammer Set
P/N. YU-01083

These tools are used for removing the rocker arm shaft.



9. Rotor Puller
P/N. YM-01080

This tool is used for removing the C.D.I. magneto.

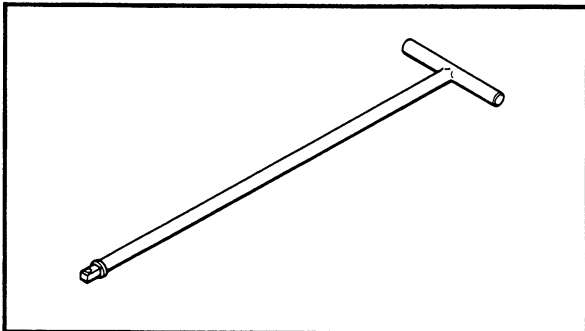


10. Sheave Holder
P/N. YS-01880

This tool is used when loosening or tightening the flywheel magneto securing bolt.

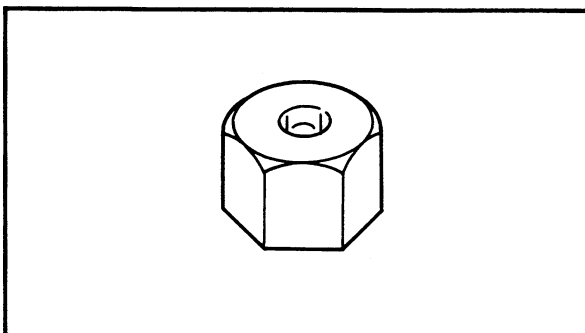
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FOR CHASSIS SERVICE



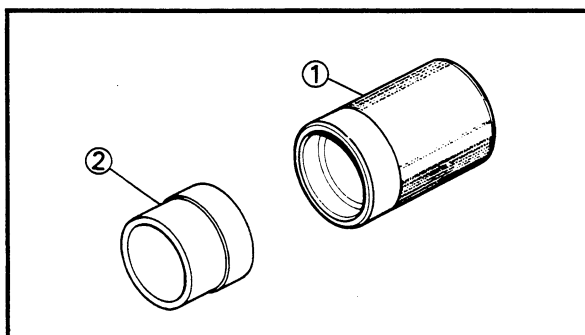
1. T-Handle
P/N. YM-01326

This tool is used to loosen and tighten the front fork cylinder holding bolt.



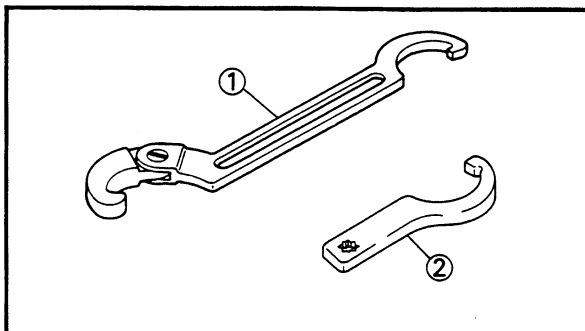
2. Fork Damper Rod Holder (19 mm)
P/N. YM-33256

This tool is used to loosen and tighten the front fork cylinder holding bolt.



3. Front Fork Oil Seal Driver (Weight)
P/N. YM-33963 ①
Attachment
P/N. YM-1368 ②

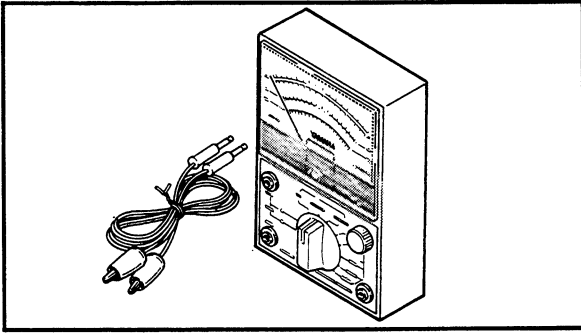
These tools are used for installing the fork seal.



4. Ring Nut Wrench
P/N. YU-01268 ①
P/N. YU-33975 ②

These tools are used to loosen and tighten the steering ring nut.

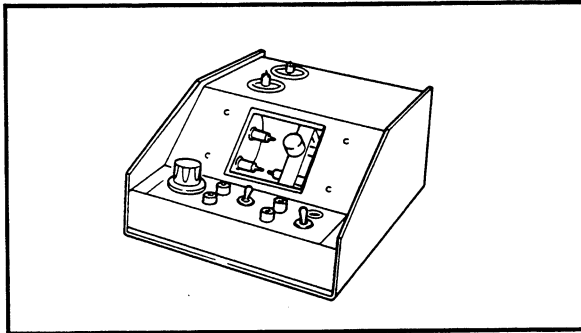
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FOR ELECTRICAL COMPONENTS

1. Pocket Tester
P/N. YU-03112

This instrument is invaluable for checking the electrical system.



2. Electro Tester
P/N. YU-33261

This instrument is necessary for checking the ignition system components.



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	TW200T/TC
Model Code Number:	TW200T: 2JY TW200TC: 2JX
Frame Starting Number:	TW200T: JYA2JY00*HC000101 TW200TC: JYA2JX00*HC000101
Engine Starting Number:	TW200T: 2JY-000101 TW200TC: 2JX-000101
Dimensions:	
Overall Length	2,060 mm (81.1 in)
Overall Width	830 mm (32.7 in)
Overall Height	1,105 mm (43.5 in)
Seat Height	790 mm (31.1 in)
Wheelbase	1,325 mm (52.2 in)
Minimum Ground Clearance	250 mm (9.8 in)
Basic Weight:	
With Oil and Full Fuel Tank	TW200T: 126 kg (278 lb) TW200TC: 127 kg (280 lb)
Minimum Turning Radius:	1,900 mm (75 in)
Engine:	
Engine Type	Air cooled 4-stroke, SOHC
Cylinder Arrangement	Single cylinder
Displacement	196 cm ³
Bore × Stroke	67.0 × 55.7 mm (2.638 × 2.193 in)
Compression Ratio	9.5 : 1
Compression Pressure (Standard)	900 kPa (9 kg/cm ² , 128 psi)
Starting System	Electric and kick starter
Lubrication System:	Wet sump
Oil Type or Grade:	
Engine Oil	Yamalube 4-cycle oil, SAE 20W40 type SE or SAE 10W30 type SE motor oil
Oil Capacity:	
Engine Oil:	
Periodic Oil Change	1.0 L (0.9 Imp qt, 1.1 US qt)
With Oil Filter Replacement	1.1 L (1.0 Imp qt, 1.2 US qt)
Total Amount	1.3 L (1.1 Imp qt, 1.4 US qt)
Air Filter:	Wet type element
Fuel:	
Type	Regular gasoline
Tank Capacity	7.0 L (1.5 Imp gal, 1.8 US gal)
Reserve Amount	1.0 L (0.2 Imp gal, 0.3 US gal)

2

GENERAL SPECIFICATIONS

SPEC



Model	TW200T/TC	
Carburetor: Type/Manufacturer	TW200T: Y24P-5C/TEIKEI KIKAKI TW200TC: Y24P-5B/TEIKEI KIKAKI	
Spark Plug: Type/Manufacturer Gap	D8EA (NGK), X24ES-U (N.D.) 0.6~0.7 mm (0.024~0.028 in)	
Clutch Type:	Wet, multiple-disc	
Transmission: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio 1st 2nd 3rd 4th 5th	Gear 73/22 (3.318) Chain 50/14 (3.571) Constant mesh, 5-speed Left foot operation 34/12 (2.833) 34/19 (1.789) 29/22 (1.318) 26/25 (1.040) 23/28 (0.821)	
Chassis: Frame Type Caster Angle Trail	Diamond 26.5° 94 mm (3.7 in)	
Tire: Type Size (F) Size (R) Wear Limit	With tube 130/80-18 BRIDGESTONE TW31 180/80-14 BRIDGESTONE TW32 < 1.0 mm (0.04 in) >	
Basic Weight: With Oil and Full Fuel Tank Maximum Load* Cold Tire Pressure: Up to 80 kg (176 lb) Load* 80 kg (176 lb) ~ Maximum Load* Off-road Riding High Speed Riding	126 kg (278 lb)/(TW200T), 127 kg (280 lb) (TW200TC) 157 kg (346 lb)/(TW200T), 156 kg (344 lb) (TW200TC)	
	Front	Rear
	130 kPa (1.3 kg/cm ² , 18 psi)	130 kPa (1.3 kg/cm ² , 18 psi)
	150 kPa (1.5 kg/cm ² , 22 psi)	180 kPa (1.8 kg/cm ² , 26 psi)
	130 kPa (1.3 kg/cm ² , 18 psi)	130 kPa (1.3 kg/cm ² , 18 psi)
	150 kPa (1.5 kg/cm ² , 22 psi)	180 kPa (1.8 kg/cm ² , 26 psi)

*Load is the total weight of cargo, rider, passenger and accessories.

2

GENERAL SPECIFICATIONS

SPEC



Model	TW200T/TC
Brake: Front Brake Type Operation Rear Brake Type Operation	Drum brake Right hand operation Drum brake Right foot operation
Suspension: Front Suspension Rear Suspension	Telescopic fork Swingarm (Monocross suspension)
Shock Absorber: Front Shock Absorber Rear Shock Absorber	Air and coil spring/Oil damper Gas and coil spring/Oil damper
Wheel Travel: Front Wheel Travel Rear Wheel Travel	160 mm (6.3 in) 150 mm (5.9 in)
Electrical: Ignition System Generator System Battery Type Battery Capacity	CDI Flywheel magneto GM7CZ-3D 12V, 7AH
Headlight Type:	Quartz bulb
Bulb Wattage/Quantity: Headlight Tail/Brake Light Flasher Light Meter Light	12V, 35W/35W × 1 12V, 8W/27W × 2 12V, 27W × 4 12V, 3.4W × 1
Indicator Light Wattage/Quantity: "NEUTRAL" "HIGH BEAM" "TURN"	3.4W × 1 3.4W × 1 3.4W × 1

2



MAINTENANCE SPECIFICATIONS

ENGINE

2

Model	TW200T/TC	
Cylinder Head: Warp Limit*		<0.03 mm (0.0012 in)> *Lines indicate straightedge measurement
Cylinder: Bore Size/Measuring Point* Wear Limit		66.97 ~ 67.02 mm (2.637 ~ 2.639 in)/40 mm (1.6 in)* <67.10 mm (2.642 in)>
Camshaft: Drive Method Cam Cap Inside Diameter Camshaft Outside Diameter Shaft-to-cap Clearance Cam Dimensions: Intake: Exhaust: Camshaft Runout Limit Cam Chain Type/Number of Links Cam Chain Adjustment Method	Chain (Left) 25.000 ~ 25.021 mm (0.984 ~ 0.985 in) 24.96 ~ 24.98 mm (0.983 ~ 0.983 in) 0.020 ~ 0.061 mm (0.0008 ~ 0.0024 in) Intake: "A" 36.538 ~ 36.638 mm (1.438 ~ 1.442 in) "B" 30.152 ~ 30.252 mm (1.187 ~ 1.191 in) "C" 6.588 mm (0.259 in) Exhaust: "A" 36.58 ~ 36.68 mm (1.440 ~ 1.444 in) "B" 30.266 ~ 30.366 mm (1.192 ~ 1.196 in) "C" 6.63 mm (0.261 in) <0.03 mm (0.0012 in)> DID 25SH/104 Links Manual	
Rocker Arm/Rocker Arm Shaft: Arm Inside Diameter Shaft Outside Diameter Arm-to-shaft Clearance < Limit >	12.00 ~ 12.02 mm (0.4724 ~ 0.4731 in) 11.98 ~ 11.99 mm (0.4717 ~ 0.4721 in) 0.009 ~ 0.037 mm (0.0004 ~ 0.0015 in) <0.1 mm (0.04 in)>	

MAINTENANCE SPECIFICATIONS

SPEC



Model	TW200T/TC										
Valve, Valve Seat, Valve Guide: Valve Clearance (Cold): <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>0.05 ~ 0.09 mm (0.002 ~ 0.004 in)</td> </tr> <tr> <td>EX.</td> <td>0.11 ~ 0.15 mm (0.004 ~ 0.006 in)</td> </tr> </table>		IN.	0.05 ~ 0.09 mm (0.002 ~ 0.004 in)	EX.	0.11 ~ 0.15 mm (0.004 ~ 0.006 in)						
IN.	0.05 ~ 0.09 mm (0.002 ~ 0.004 in)										
EX.	0.11 ~ 0.15 mm (0.004 ~ 0.006 in)										
Valve Dimensions: <div style="text-align: center; margin: 10px 0;"> </div>											
"A" Head Diameter: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>33.9 ~ 34.1 mm (1.33 ~ 1.34 in)</td> </tr> <tr> <td>EX.</td> <td>28.4 ~ 28.6 mm (1.12 ~ 1.13 in)</td> </tr> </table>	IN.	33.9 ~ 34.1 mm (1.33 ~ 1.34 in)	EX.	28.4 ~ 28.6 mm (1.12 ~ 1.13 in)							
IN.	33.9 ~ 34.1 mm (1.33 ~ 1.34 in)										
EX.	28.4 ~ 28.6 mm (1.12 ~ 1.13 in)										
"B" Face Width: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>2.26 mm (0.089 in)</td> </tr> <tr> <td>EX.</td> <td>2.26 mm (0.089 in)</td> </tr> </table>	IN.	2.26 mm (0.089 in)	EX.	2.26 mm (0.089 in)							
IN.	2.26 mm (0.089 in)										
EX.	2.26 mm (0.089 in)										
"C" Seat Width: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</td> </tr> <tr> <td>EX.</td> <td>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</td> </tr> </table>	IN.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)	EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)							
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: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>0.8 ~ 1.2 mm (0.032 ~ 0.047 in)</td> </tr> <tr> <td>EX.</td> <td>0.8 ~ 1.2 mm (0.032 ~ 0.047 in)</td> </tr> </table>	IN.	0.8 ~ 1.2 mm (0.032 ~ 0.047 in)	EX.	0.8 ~ 1.2 mm (0.032 ~ 0.047 in)							
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: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>5.975 ~ 5.990 mm (0.235 ~ 0.236 in)</td> </tr> <tr> <td>EX.</td> <td>5.960 ~ 5.975 mm (0.234 ~ 0.235 in)</td> </tr> </table>	IN.	5.975 ~ 5.990 mm (0.235 ~ 0.236 in)	EX.	5.960 ~ 5.975 mm (0.234 ~ 0.235 in)							
IN.	5.975 ~ 5.990 mm (0.235 ~ 0.236 in)										
EX.	5.960 ~ 5.975 mm (0.234 ~ 0.235 in)										
Guide Inside Diameter: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>6.000 ~ 6.012 mm (0.236 ~ 0.237 in)</td> </tr> <tr> <td>EX.</td> <td>6.000 ~ 6.012 mm (0.236 ~ 0.237 in)</td> </tr> </table>	IN.	6.000 ~ 6.012 mm (0.236 ~ 0.237 in)	EX.	6.000 ~ 6.012 mm (0.236 ~ 0.237 in)							
IN.	6.000 ~ 6.012 mm (0.236 ~ 0.237 in)										
EX.	6.000 ~ 6.012 mm (0.236 ~ 0.237 in)										
Stem-to-guide Clearance: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)</td> </tr> <tr> <td>EX.</td> <td>0.025 ~ 0.052 mm (0.001 ~ 0.002 in)</td> </tr> </table>	IN.	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)	EX.	0.025 ~ 0.052 mm (0.001 ~ 0.002 in)							
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Valve Face Material: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>Stellite</td> </tr> </table>	IN.	Stellite									
IN.	Stellite										
Valve Seat Width: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</td> </tr> <tr> <td>EX.</td> <td>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</td> </tr> </table>	IN.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)	EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)							
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EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)										
Valve Seat Material: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>PB7W</td> </tr> <tr> <td>EX.</td> <td>PB7W</td> </tr> </table>	IN.	PB7W	EX.	PB7W							
IN.	PB7W										
EX.	PB7W										
Stem Runout Limit: <table style="margin-left: 200px; border: none;"> <tr> <td style="padding-right: 20px;">IN.</td> <td>< 0.01 mm (0.0004 in) ></td> </tr> </table>	IN.	< 0.01 mm (0.0004 in) >									
IN.	< 0.01 mm (0.0004 in) >										
Valve Spring: <table style="margin-left: 200px; border: none;"> <tr> <td colspan="2">Free Length:</td> </tr> <tr> <td style="padding-right: 20px;">Inner Spring</td> <td>IN. 36.2 mm (1.43 in)</td> </tr> <tr> <td></td> <td>EX. 36.2 mm (1.43 in)</td> </tr> <tr> <td style="padding-right: 20px;">Outer Spring</td> <td>IN. 36.6 mm (1.44 in)</td> </tr> <tr> <td></td> <td>EX. 36.6 mm (1.44 in)</td> </tr> </table>		Free Length:		Inner Spring	IN. 36.2 mm (1.43 in)		EX. 36.2 mm (1.43 in)	Outer Spring	IN. 36.6 mm (1.44 in)		EX. 36.6 mm (1.44 in)
Free Length:											
Inner Spring	IN. 36.2 mm (1.43 in)										
	EX. 36.2 mm (1.43 in)										
Outer Spring	IN. 36.6 mm (1.44 in)										
	EX. 36.6 mm (1.44 in)										

2

MAINTENANCE SPECIFICATIONS



2

Model	TW200T/TC	
<p>Compression Length (Valve Closed):</p> <p>Inner Spring: IN. 30.5 mm (1.20 in) EX. 30.5 mm (1.20 in)</p> <p>Outer Spring: IN. 32.0 mm (1.26 in) EX. 32.0 mm (1.26 in)</p> <p>Tilt Limit*:</p> <p>Inner Spring IN. and EX. 2.5° or 1.6 mm (0.063 in) Outer Spring IN. and EX. 2.5° or 1.6 mm (0.063 in)</p>		
<p>Direction of Winding (Top View)</p>	<p>Inner Spring</p>	<p>Outer Spring</p>
<p>Piston:</p> <p>Piston Size "D"/ Measuring Point "H"</p> <p>Piston to Cylinder Clearance < Limit ></p> <p>Oversize: 1st 2nd 3rd 4th</p>		<p>66.935 ~ 66.985 mm (2.635 ~ 2.637 in) / 7.5 mm (0.30 in) (From bottom line of piston skirt) 0.025 ~ 0.045 mm (0.001 ~ 0.002 in) < 0.1 mm (0.04 in) ></p> <p>— 67.5 mm (2.66 in) — 68.0 mm (2.68 in)</p>
<p>Piston Ring:</p> <p>Sectional Sketch:</p> <p>Top Ring</p> <p>2nd Ring</p> <p>Oil Ring</p>		<p>Barrel</p> <p>B = 1.2 mm (0.047 in) T = 2.7 mm (0.106 in)</p> <p>Plain</p> <p>B = 1.2 mm (0.047 in) T = 2.7 mm (0.106 in)</p> <p>Expander</p> <p>B = 2.5 mm (0.098 in) T = 2.8 mm (0.110 in)</p>

MAINTENANCE SPECIFICATIONS

SPEC



Model	TW200T/TC
End Gap (Installed): Top Ring 2nd Ring Oil Ring Side Clearance: Top Ring 2nd Ring	0.15~0.30 mm (0.006~0.012 in) 0.15~0.30 mm (0.006~0.012 in) 0.3~0.9 mm (0.012~0.035 in) 0.03~0.07 mm (0.001~0.003 in) 0.02~0.06 mm (0.001~0.002 in)
Crankshaft: <div style="text-align: center; margin: 10px 0;"> </div> Crank Width "A" Runout Limit "B" Small End Free Play "F" Big End Side Clearance "C"	55.95~56.00 mm (2.203~2.204 in) <0.03 mm (0.001 in)> 0.8 mm (0.031 in) 0.35~0.65 mm (0.014~0.026 in)
Balancer Drive Method:	Gear
Clutch: Friction Plate Thickness/Quantity Wear Limit Clutch Plate Thickness/Quantity Warp Limit Clutch Spring Free Length/Quantity Clutch Spring Minimum Length Primary Reduction Gear Backlash Tolerance Clutch Release Method Push Rod Bending Limit	2.9~3.1 mm (0.11~0.12 in)/5 <2.80 mm (0.110 in)> 1.5~1.7 mm (0.06~0.07 in)/4 <0.2 mm (0.008 in)> 37.3 mm (1.47 in)/4 35.3 mm (1.39 in) 9~73μ Inner push (Cam push) <0.5 mm (0.02 in)>
Kick Starter: Kick Starter Type	Kick and mesh
Air Filter Oil Grade (Oiled Filter):	Foam-Air-filter Oil or SAE 10W30 SE motor oil

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MAINTENANCE SPECIFICATIONS



2

Model	TW200T/TC
Carburetor:	
I.D. Mark	TW200T: 2JY00 TW200TC: 2JX00
Main Jet (M.J.)	# 114
Main Air Jet (M.A.J.)	φ1.0
Jet Needle-clip/Position (J.N.)	5C74-1/1
Main Nozzle (M.N.)	φ2.610
Cutaway (C.A.)	#3.5
Pilot Jet (P.J.)	#40
Pilot Air Jet (P.A.J.)	φ1.0
Pilot Screw (P.S.)	1-1/2 ~ 2-1/2
Valve Seat (V.S.)	φ2.0
Starter Jet (G.S ₁)	#52
(G.S ₂)	φ0.7
Fuel Level (F.L.)	7.5 ~ 8.5 mm (0.30 ~ 0.33 in)
Float Height	26 ~ 28 mm (1.02 ~ 1.10 in)
Float Valve Seat	φ2.0
Engine Idling Speed	1,350 ~ 1,450 r/min
Vacuum Pressure at Idling Speed	25.3 kPa (190 mmHg, 7.5 inHg) or more
Lubrication System:	
Oil Filter Type	Paper, Wire mesh
Oil Pump Type	Trochoid Type
Tip Clearance	0.15 mm (0.006 in)
Side Clearance	0.03 ~ 0.09 mm (0.001 ~ 0.004 in)
Bypass Valve Setting Pressure	78.5 ~ 117.7 kPa (0.8 ~ 1.2 kg/cm ² , 11.38 ~ 17.06 psi)
Oil Pressure	7.9 kPa (0.08 kg/cm ² , 1.14 psi)

TIGHTENING TORQUE

Parts to be tightened		Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Cylinder head	Checking bolt	M6	1	7	0.7	5.1	Apply engine oil onto the plain washer.
	Bolt	M8	4	22	2.2	16	
Cylinder head cover	Bolt	M8	2	20	2.0	14	Use lock washer.
	Screw	M6	2	7	0.7	5.1	
	Bolt	M6	4	10	1.0	7.2	
	Bolt	M6	2	8	0.8	5.8	
Spark plug		M12	1	17.5	1.75	12	
Cylinder	Bolt	M6	2	10	1.0	7.2	Use lock washer.
Balancer drive gear	Nut	M14	1	50	5.0	36	
Rotor	Bolt	M10	1	50	5.0	36	
Cam chain sprocket	Bolt	M10	1	60	6.0	43	
Cam chain tensioner	Nut	M14	1	30	3.0	22	
Cam chain tensioner cap		M14	1	5	0.5	3.6	
Stopper guide	Bolt	M6	2	8	0.8	5.8	
Oil pump	Screw	M6	3	7	0.7	5.1	
Valve clearance adjuster lock nut		M6	2	14	1.4	10	
Engine oil drain bolt		M35	1	43	4.3	31	
Oil filter cover	Screw	M6	2	7	0.7	5.1	
	Bolt	M6	1	10	1.0	7.2	
Carburetor joint	Bolt	M6	2	12	1.2	8.7	
Carburetor	Screw	M5	2	2	0.2	1.4	
Air cleaner	Bolt	M6	3	10	1.0	7.2	
Overflow hose	Bolt	M8	1	17	1.7	12	
Muffler	Bolt (Front)	M8	1	42	4.2	30	
	Bolt (Rear)	M8	1	27	2.7	19	
Exhaust pipe	Bolt	M6	2	10	1.0	7.2	
Exhaust pipe protector	Screw	M6	2	10	1.0	7.2	Apply LOCTITE®
Muffler protector	Screw	M8	2	7	0.7	5.1	Apply LOCTITE®
Muffler and exhaust pipe connecting bolt	Bolt		1	20	2.0	14	
Crankcase breather hose	Screw	M6	1	10	1.0	7.2	
Crankcase	Screw	M6	12	7	0.7	5.1	
Crankcase cover (Left)	Screw	M6	9	7	0.7	5.1	
Crankcase cover (Right)	Screw	M6	12	7	0.7	5.1	
Kick pedal boss	Bolt	M8	1	20	2.0	14	
Kick pedal	Screw	M6	1	7	0.7	5.1	
Primary drive gear	Nut	M14	1	50	5.0	36	Use lock washer.
Clutch spring	Screw	M5	4	6	0.6	4.2	
Clutch boss	Nut	M14	1	50	5.0	36	Use lock washer.
Push lever	Screw	M8	1	12	1.2	8.7	
	Nut	M6	1	8	0.8	5.8	
Drive sprocket	Bolt	M5	1	4	0.4	2.9	
Cover plate	Screw	M6	2	7	0.7	5.1	
Starter clutch	Bolt	M8	3	30	3.0	22	Apply LOCTITE®

2

MAINTENANCE SPECIFICATIONS

SPEC



Parts to be tightened		Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Change pedal	Bolt	M6	1	10	1.0	7.2	Apply LOCTITE®
	Screw	M6	1	12	1.2	8.7	
Pulser coil	Screw	M6	2	7	0.7	5.1	
Neutral switch		M10	1	20	2.0	14	
Lighting coil	Screw	M5	2	4	0.4	2.9	
Charge coil	Screw	M5	2	4	0.4	2.9	

2

MAINTENANCE SPECIFICATIONS



CHASSIS

Model	TW200T/TC												
Steering System: Steering Bearing Type No./Size of Steel Balls <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">Upper</td> <td>Ball bearing</td> </tr> <tr> <td style="padding-right: 20px;">Lower</td> <td>22 pcs. 3/16 in</td> </tr> <tr> <td></td> <td>19 pcs. 1/4 in</td> </tr> </table>	Upper	Ball bearing	Lower	22 pcs. 3/16 in		19 pcs. 1/4 in							
Upper	Ball bearing												
Lower	22 pcs. 3/16 in												
	19 pcs. 1/4 in												
Front Suspension: Front Fork Travel Fork Spring Free Length Standard/Limit Spring Rate/Stroke Optional Spring Oil Capacity or Oil Level Oil Grade Enclosed Air Pressure Collar Length	160 mm (6.3 in) 312 mm (12.3 in)/ <307 mm (12.1 in)> 5.0 N/mm (0.5 kg/mm, 28 lb/in)/ 0~165 mm (0~6.5 in) No. 238 cm ³ (8.38 Imp oz, 8.05 US oz) 135 mm (5.31 in) (From top of inner tube fully compressed without spring) Yamaha fork oil 10WT or Equivalent 0 kPa (0 kg/cm ² , 0 psi) 190 mm (7.48 in)												
Rear Suspension: Shock Absorber Travel Spring Free Length Spring Rate/Stroke <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">K₁</td> <td>48 mm (1.9 in)</td> </tr> <tr> <td></td> <td>190 mm (7.5 in)</td> </tr> <tr> <td></td> <td>130 N/mm (13.0 kg/mm, 728 lb/in)/</td> </tr> <tr> <td></td> <td>0~32 mm (0~1.26 in)</td> </tr> <tr> <td style="padding-right: 20px;">K₂</td> <td>190 N/mm (19.0 kg/mm, 1,064 lb/in)/</td> </tr> <tr> <td></td> <td>32~48 mm (1.26~1.89 in)</td> </tr> </table> Optional Spring Enclosed Gas Pressure	K ₁	48 mm (1.9 in)		190 mm (7.5 in)		130 N/mm (13.0 kg/mm, 728 lb/in)/		0~32 mm (0~1.26 in)	K ₂	190 N/mm (19.0 kg/mm, 1,064 lb/in)/		32~48 mm (1.26~1.89 in)	No. 2,500 kPa (25 kg/cm ² , 356 psi)
K ₁	48 mm (1.9 in)												
	190 mm (7.5 in)												
	130 N/mm (13.0 kg/mm, 728 lb/in)/												
	0~32 mm (0~1.26 in)												
K ₂	190 N/mm (19.0 kg/mm, 1,064 lb/in)/												
	32~48 mm (1.26~1.89 in)												
Swingarm: Swingarm Free Play Limit (At Swingarm End) Swingarm Side Clearance (At Arm Pivot)	1.0 mm (0.04 in) 0.4~0.7 mm (0.016~0.028 in)												
Wheel: Front Wheel Type Rear Wheel Type Front Rim Size/Material Rear Rim Size/Material Rim Runout Limit—Vertical —Lateral	Spoke wheel Spoke wheel 2.50×18/Aluminum MT4.50×14/Steel <1.0 mm (0.04 in)> <0.5 mm (0.02 in)>												
Drive Chain: Type/Manufacturer Number of Links Chain Free Play	428DS/DAIDO 121 Links + Joint 30~40 mm (1.2~1.6 in)												

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MAINTENANCE SPECIFICATIONS

SPEC

Model	TW200T/TC	
Drum Brake: Type Drum Inside Dia. < Limit > < Limit > Lining Thickness < Limit > Shoe Spring Free Length	Front Rear Front Rear Front Rear	Leading and trailing Leading and trailing 130 mm (5.12 in) < 131 mm (5.16 in) > 110 mm (4.33 in) < 111 mm (4.37 in) > 4 mm (0.16 in) < 2 mm (0.08 in) > 36.5 mm (1.44 in) 50.5 mm (1.99 in)
Brake Lever and Brake Pedal: Brake Lever Free Play (At Lever End) Brake Pedal Free Play (At Pedal End) Brake Pedal Position		10 ~ 20 mm (0.4 ~ 0.8 in) 20 ~ 30 mm (0.8 ~ 1.2 in) 10 mm (0.4 in) (Vertical height below footrest top.)
Clutch Lever Free Play (At Lever Pivot):		2 ~ 3 mm (0.08 ~ 0.12 in)

2



TIGHTENING TORQUE

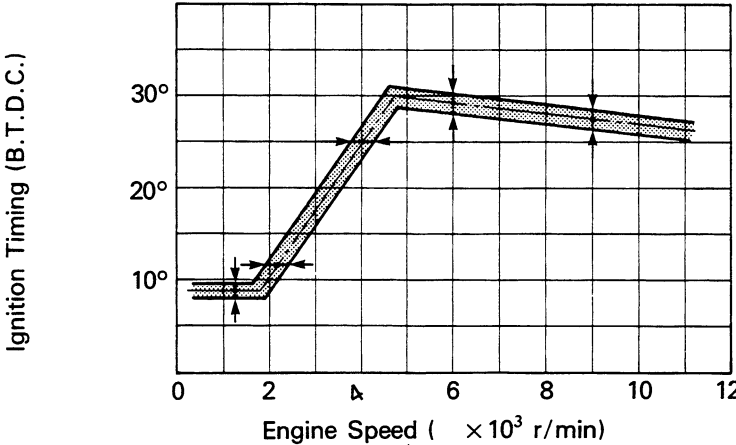
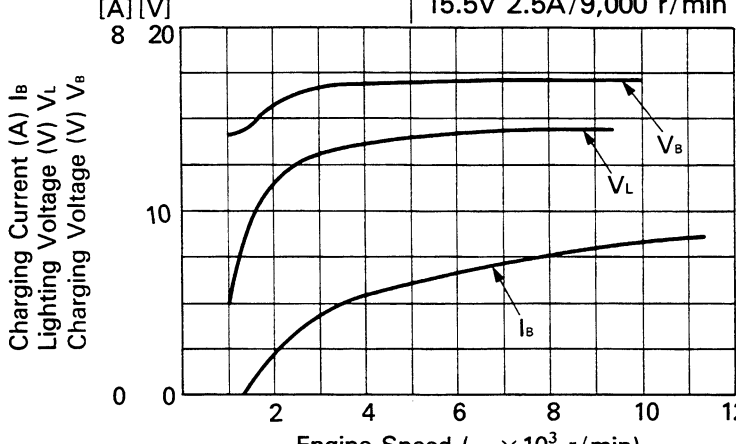
Parts to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Engine stay (Front) and engine/frame	M8 × 1.25	33	3.3	24	
Engine stay (Top) and engine/frame	M8 × 1.25	33	3.3	24	
Engine and frame	M8 × 1.25	33	3.3	24	
Helmet holder and frame	M6 × 1.0	4	0.4	2.9	
Engine protector and engine/frame	M6 × 1.0	7	0.7	5.1	
License bracket and frame	M6 × 1.0	5	0.5	3.6	
Air cleaner case and frame	M6 × 1.0	5	0.5	3.6	
Pivot shaft and nut	M12×1.25	80	8.0	58	
Rear shock absorber and frame	M12×1.25	50	5.0	36	
Drive chain case and rear arm	M5 × 0.8	4	0.4	2.9	
Drive chain guard and rear arm	M6 × 1.0	5	0.5	3.6	
Drive chain support and rear arm	M6 × 1.0	5	0.5	3.6	
Handle crown and inner tube	M8 × 1.25	23	2.3	17	
Under bracket and inner tube		23	2.3	17	
Handle crown and steering shaft	M14×1.25	90	9.0	65	
Steering shaft and ring nut	M25×1.0	6	0.6	4.4	
		Refer to NOTE			
Headlight stay and handle crown	M6 × 1.0	7	0.7	5.1	
Fuel tank and frame	M6 × 1.0	7	0.7	5.1	
Front wheel axle and nut	M14×1.5	90	9.0	65	
Brake cam lever and shaft	M6 × 1.0	9	0.9	6.5	
Brake drum mounting bolt	M8 × 1.25	28	2.8	20	
Rear wheel axle and nut	M16×1.5	90	9.0	65	
Rear wheel sprocket and wheel hub	M8 × 1.25	35	3.5	25	
Footrest (Right) and frame	M10×1.25	45	4.5	32	
Footrest (Left) and frame	M12×1.25	60	6.0	43	
Rear footrest and frame	M8 × 1.25	14	1.4	10	
Sidestand and frame	M10×1.25	40	4.0	29	
Horn and frame	M6 × 1.0	7	0.7	5.1	
Main switch and handle crown	M6 × 1.0	7	0.7	5.1	
Rectifier with regulator and frame	M6 × 1.0	7	0.7	5.1	

2

NOTE:

- Ring nut (lower):
- 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 completely.
- 2) Retighten the ring nut 6 Nm (0.6 m•kg, 4.4 ft•lb).

ELECTRICAL

Model	TW200T/TC
Voltage:	12V
Ignition System: Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.)	9°/1,300 r/min 29°/6,000 r/min
	
Advancer Type	Electric type
C.D.I.: Magneto Model/Manufacturer Pickup Coil Resistance (Color) Source Coil Resistance (Color) C.D.I. Unit-Model/Manufacturer	2JX/YAMAHA 650~790Ω at 20°C (68°F) (G-W) 400~450Ω at 20°C (68°F) (Br-R) 2JX/YAMAHA
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	2JX/YAMAHA 6 mm (0.24 in) or more at 500 r/min 1.3~1.9Ω at 20°C (68°F) 5.3~7.9Ω at 20°C (68°F)
Charging System: Type Model/Manufacturer Output	A.C. Magneto Generator 2JX/YAMAHA 12V 0.7A/3,000 r/min 15.5V 2.5A/9,000 r/min
	
Charging Coil Resistance (Color)	0.3~0.5Ω at 20°C (68°F) (W-Y)

2

MAINTENANCE SPECIFICATIONS

SPEC



Model	TW200T/TC
Voltage Regulator: Type Model/Manufacturer	Semi conductor type SH582/SHINDENGEN
Rectifier: Model/Manufacturer Capacity Withstand Voltage	SH582/SHINDENGEN 8A 120V
Battery: Capacity Specific Gravity	12V 7AH 1.280
Electric Starter System: Type	Constant Mesh Type
Starter Motor: Model/Manufacturer Output Brush Overall Length < Limit > Brush Spring Pressure < Limit > Commutator Dia. < Limit > Mica Undercut	2JX/YAMAHA 0.4kW 10 mm (0.39 in) < 3.5 mm (0.14 in) > 560 ~ 840 g (19.8 ~ 29.6 oz) < 450 g (0.98 oz) > 22 mm (0.87 in) < 21 mm (0.83 in) > 1.5 mm (0.06 in)
Starter Switch: Model/Manufacturer Amperage Rating	22U/HONDA LOCK 150A
Horn: Type/Quantity Model/Manufacturer Maximum-Amperage	Plain type/1 MF-12/NIKKO 1.5A
Flasher Relay: Type Model/Manufacturer Self Cancelling Device Flasher Frequency Wattage	Condenser type FZ257SD/NIPPONDENSO No. 75 ~ 95 cycle/min 27W × 2 + 3.4W
Circuit Breaker: Type Amperage for Individual Circuit Main	Fuse 10A

2

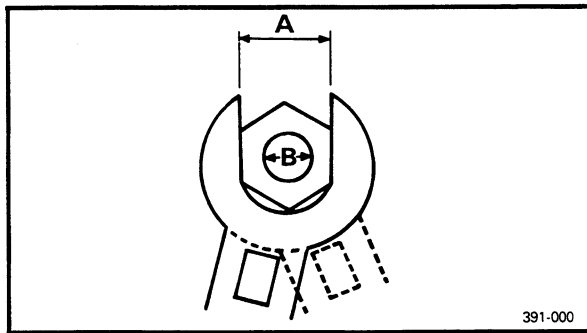


GENERAL TORQUE SPECIFICATIONS

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	6.1
22 mm	16 mm	130	13.0	94

2



A: Distance cross 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	$1 \text{ kg} \times \text{m}/\text{sec}^2$	Force
Nm	Newton meter	$\text{N} \times \text{m}$	Torque
m•kg	Meter kilogram	$\text{m} \times \text{kg}$	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	—	Volume or Capacity
cm^3	Cubic centimeter	—	
r/min	Rotation per minute	—	Engine Speed



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