YAMAHA

YP250R X-MAX

'05

1C01-SE0

SERVICE INFORMATION

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1st edition, May 2005

Printed in Spain.

WARNING

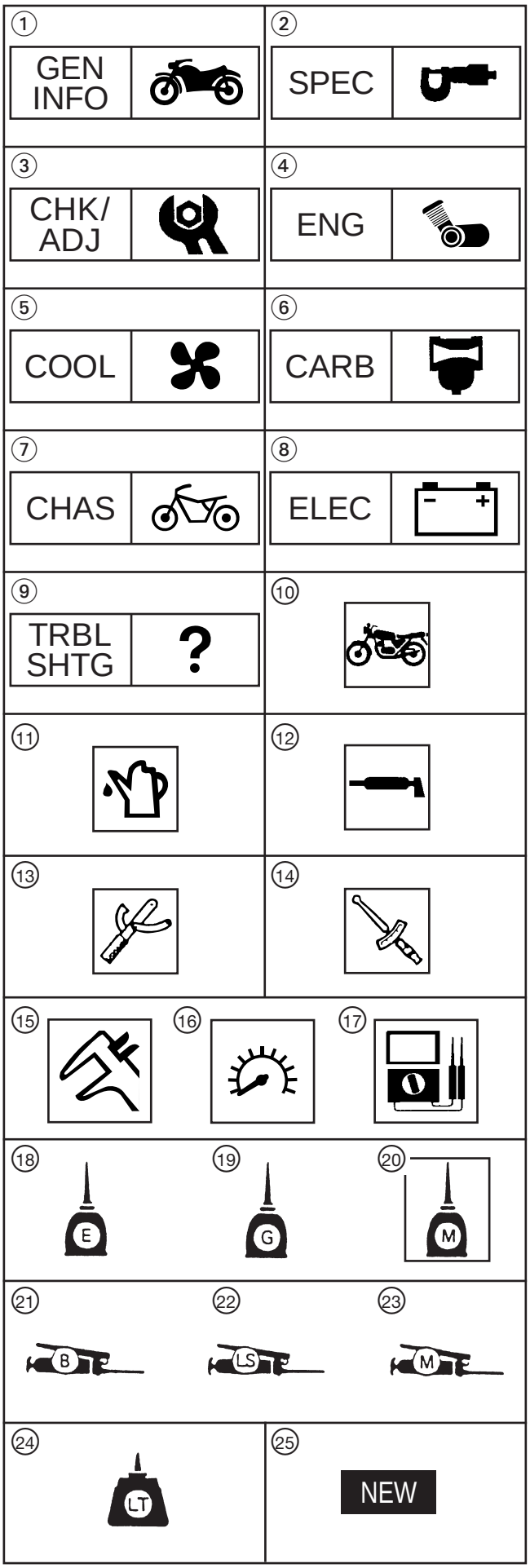
This manual has been edited by Yamaha Motor España, S.A. principally for use by YAMAHA dealers and their qualified mechanics. It is not possible to include the complete training for a mechanic in one volume, it has been assumed, therefore, that the persons that use this manual for the repair and maintenance of YAMAHA motorcycles already have the basic knowledge and understanding of the mechanics and of the repair techniques involved in the processes.
Without such previous knowledge, any attempt to carry out repairs or maintenance work on this model may render it inadequate for use or even dangerous.
YAMAHA MOTOR ESPAÑA, S.A. is continually striving to improve its products. All YAMAHA dealers will be notified about significant modifications and changes introduced in specifications and procedures, and when necessary, these changes will be included in future editions of this manual.

NOTE:
The design and specifications are subject to modification without prior notice.

IMPORTANT INFORMATION

Particularly important information are indicated by the following notations:

⚠	This warning symbol means: " WARNING!", "BE AWARE!", " YOUR SAFETY IS AT RISK!"
⚠ WARNING:	Disregard for the instructions given in the WARNING may result in serious injury or even death for the motorcycle user, for bystanders, or the person in charge of inspection, revision or repairs of the vehicle.
CAUTION:	This indication means that special procedures must be applied in order to avoid damage to a motorcycle.
NOTE :	The NOTES supply information in order to facilitate or clarify the procedures that must be applied.



SYMBOL USE

The symbols from ① to ⑨ are used to identify the different chapters and to indicate their content.

① General information
② Specifications
③ Inspection and periodic adjustments
④ Engine
⑤ Cooling system
⑥ Fuel
⑦ Chassis
⑧ Electric system
⑨ Fault finding.

The symbols from ⑩ to ⑰ may be used to identify the specifications found in the text.
⑩ Possible motorcycle engine maintenance
⑪ Liquid to be added
⑫ Lubricant
⑬ Special tools
⑭ Tightening
⑮ Wear limits, play
⑯ Engine idle speed
⑰ Ω, V, A

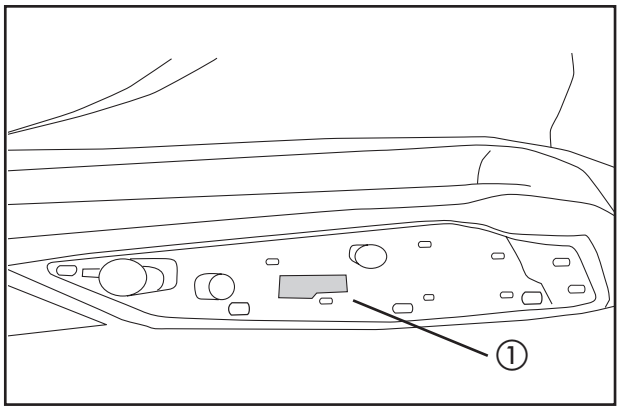
The symbols from ⑱ to ㉓ are used for disassembly indicate the lubricant application points and the type of lubricant specified.

⑱ Apply engine oil
⑲ Apply gear oil
⑳ Apply molybdenum disulphide oil
㉑ Apply wheel bearing grease
㉒ Apply light lithium soap base grease
㉓ Apply molybdenum disulphide grease

The symbols ㉔ and ㉕ are used for disassembly to indicate locations application of locking agent ㉔, and when to install new parts ㉕.

㉔ Apply thread locking agent (THREADLOCK®)
㉕ Use a new part

INDEX



GENERAL INFORMATION

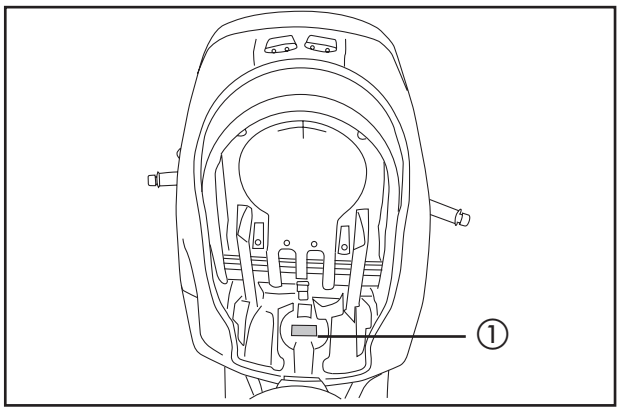
SCOOTER IDENTIFICATION

FRAME NUMBER

The frame number ① is stamped underneath the carpet of the right-hand side footrest.

NOTE:

The frame number is used to identify the motorcycle and may be used for the registration with any administration.



MODEL LABEL

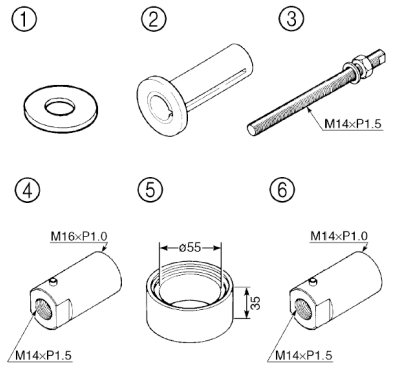
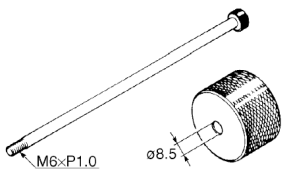
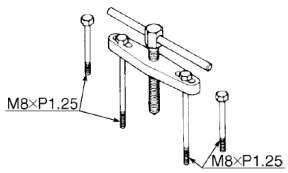
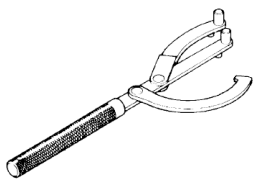
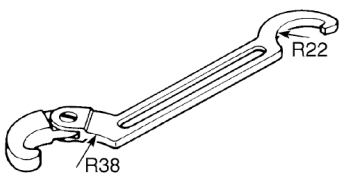
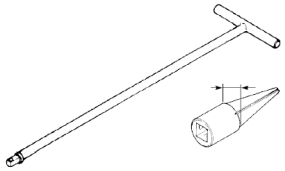
The model label ① is located underneath the seat. This information is necessary to order spare parts.

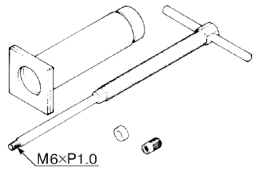
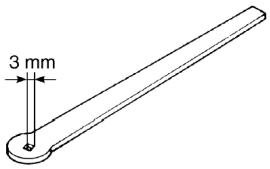
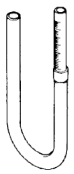
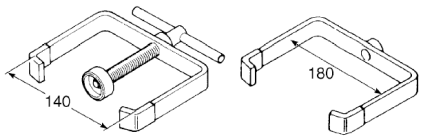
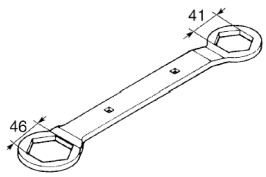
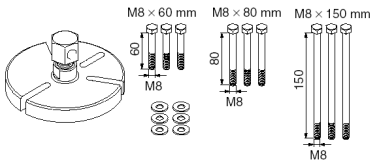
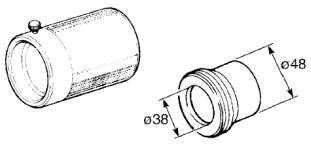
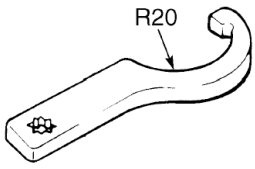
NOTE:

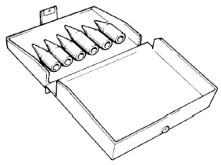
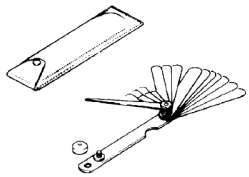
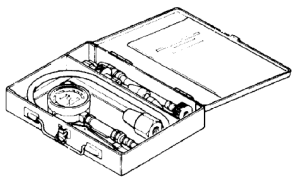
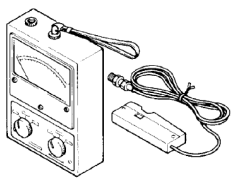
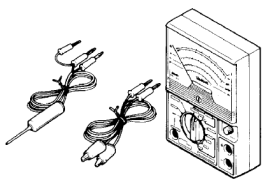
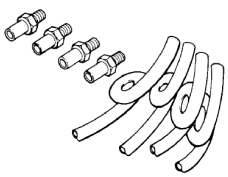
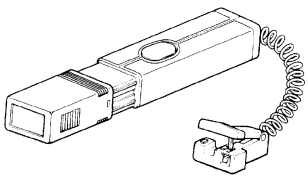
The design and characteristics may be modified without prior notice.

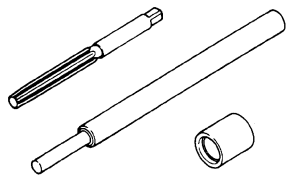
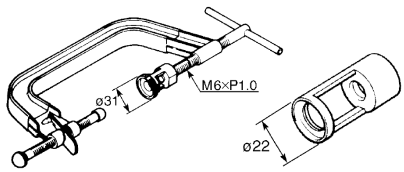
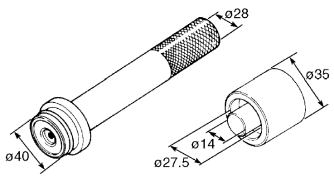
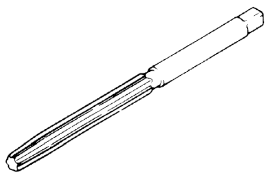
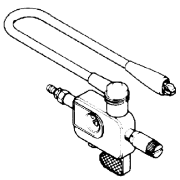
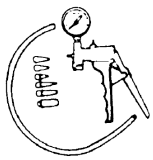
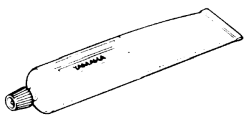
SPECIAL TOOLS

The following special tools are essential for a complete and precise repair and fitting. Only use the adequate special tools; this will prevent damage caused by an inappropriate tools or incorrect procedures.
When making an order, consult the following list to avoid possible errors.

Tool Nº	Tool Name / Function	Illustration
90890-01016 90890-01274 90890-01275 90890-01280 90890-01288 90890-01478	Spacer ① Crankshaft calibrated spacer ② Crankshaft installation pin ③ Adapter (M16) ④ Spacer ⑤ Adapter (M14) ⑥ These tools are used for installing the crankshaft.	
90890-01083 90890-01084	Sliding hammer bolt Counterweight These tools are used to extract or install the rocker shafts.	
90890-01135	Crankcase separation tool These tools are used for extracting the crankshaft.	
90890-01235	Rotor retention tool This tool to machetes to hold the fixed primary pulley.	
90890-01268	Ring nut wrench This tool is used to loosen and tighten the steering ring nuts.	
90890-01294 90890-01460	Shock absorber rod bracket T sleeve These tools are used to hold a shock absorber bar bracket for it in and removing the same.	

Tool Nº	Tool Name / Function	Illustration
90890-01304	Spring pin extractor assembly These tools are used for extracting pins.	
90890-01311	Valve tappet adjustment tool This tool is used for valve adjustment. .	
90890-01312	Fuel level indicator This indicator is used to measure the fuel level in the floater chamber.	
90890-01337 90890-01464	Clutch spring bracket Clutch spring bracket arm These tools are used to support the compression spring when the clutch bracket nut is being fitted or removed.	
90890-01348	Counter nut wrench This tool is used to remove or fit the clutch bracket nut.	
90890-01362	Fly Wheel extractor This tool is used for extracting the alternator rotor..	
90890-01367 90890-01372	Guide weight for the fork seal Holder for the fork seal (ø38) These tools are used to fit the oil seal, the dust guard and the outer seals for one of the front fork arms.	
90890-01403	Steering nut wrench This tool is used to loosen and tighten the steering ring nuts.	

Tool Nº	Tool Name / Function	Illustration
90890-01996	Cylinder cup installation tool This tool is used to install the cylinder cup on the piston of the main cylinder.	
90890-03008	Micrometer (50 ~ 75 mm) This tool is used to measure the diameter of the piston skirt.	
90890-03079	Thickness gauge This tool is used to measure the valve clearance.	
90890-03081	Pressure manometer These tools are used to measure engine compression.	
90890-03112	Pocket tester This tool is used for tests on the electrical system.	
90890-03113	Engine tachometer This tool is used to measure engine speed.	
90890-03132	Pocket tester This tool is used to measure engine oil temperature.	
90890-03134	Exhaust accessory This tool is used to measure the carbon monoxide gas density.	
90890-03141	Stroboscope This tool is used to measure ignition distribution.	

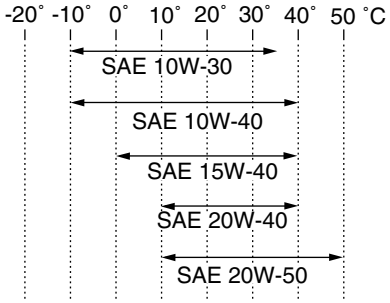
Tool Nº	Tool Name / Function	Illustration
90890-04016	Valve guide installation and removal tool (5,5 ø) These tools are used to extract or install the valve guides.	
90890-04019 90890-04108	Valve spring compressor Valve spring compressor accessory These tools are used for extracting or installing the valve and the valve spring.	
90890-04058 90890-04078	Intermediate driven shaft bearing installation tool Mechanical seal installation tool These tools are used to install mechanical seals.	
90890-04066	Valve guide reamer (6 ø) This tool is used to rectify new valve guides.	
90890-04101	Valve grinder This tool is used to extract and install the lift and also to polish the valve.	
90890-06754	Ignition tester This tool is used to test the ignition system components.	
90890-06756	Manometer/vacuum pump set This tool is used to check the air cut-off valve.	
90890-85505	Yamaha adhesive, Nº 1215 This adhesive is used to seal two coupling services (for example the engine sump coupling surfaces).	

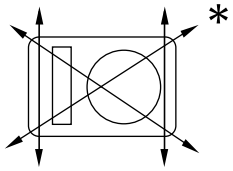
SPECIFICATIONS

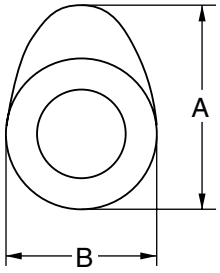
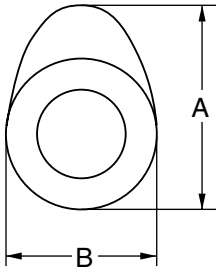
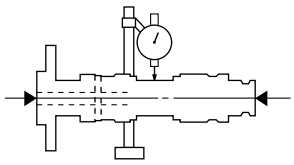
GENERAL SPECIFICATIONS

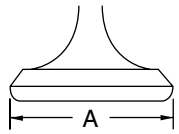
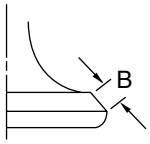
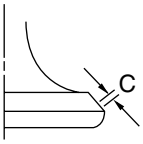
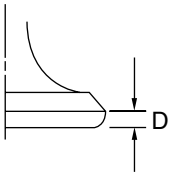
Item	Standard	Limit
Model code	1C01	---- ----
Dimensions		
Overall length	2,210 mm (87.0 in)	----
Overall width	790 mm (31.1 in)	----
Overall height	1,380 mm (54.3 in)	----
Seat height	775 mm (30.51 in)	----
Wheelbase	1,545 mm (60.8 in)	----
Minimum ground clearance	113 mm (4.45 in)	----
Minimum turning radius	3,650 mm (143.7 in)	----
Weight		
Wet (with oil and a full fuel tank)	174 kg (383.67 lb)	----
Maximum load (total of cargo, rider, passenger, and accessories)	164 kg (361.62 lb)	----

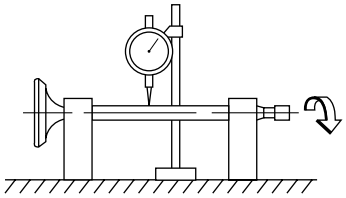
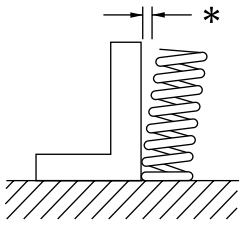
ENGINE SPECIFICATIONS

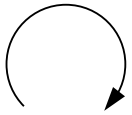
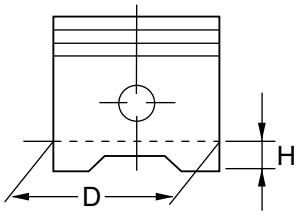
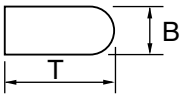
Item	Standard	Limit
Engine		
Engine type	Liquid cooled 4-stroke, SOHC	----
Displacement	249.7 cm^3 (15.24 cu.in)	----
Cylinder arrangement	Forward-inclined single cylinder	----
Bore × stroke	69.0 × 66.8 mm (2.72 × 2.63 in)	----
Compression ratio	10.1 : 1	----
Standard compression pressure (at sea level)	1400 kPa (14.0 kg/cm^2) at 500 r/min	----
Starting system type	Electric starter	----
Fuel		
Recommended fuel	Regular unleaded gasoline only	----
Fuel tank capacity		
Total	12.0 L (2.64 Imp gal, 3.17 US gal)	----
Engine oil		
Lubrication system	Wet sump	----
Recommended oil		
	SAE 10W30, SAE 10W40, SAE 15W40, SAE 20W40 or SAE 20W50 Refer to the chart for the engine oil grade.	----
Recommended engine oil grade	API service SG and also JASO MA type or higher	----
Quantity		
Total amount	1.60 L (1.41 Imp qt, 1.69 US qt)	----
Periodic oil change	1.42 L (1.05 Imp qt, 1.27 US qt)	----
Engine oil temperature	75 ~ 85 °C (167 ~ 185 °F)	----
Final transmission oil		
Type	SAE 10W30 type SE motor oil	----
Periodic replacement	0.25 L (0.21 Imp qt, 0.26 US qt)	----

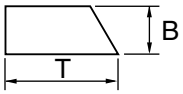
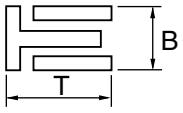
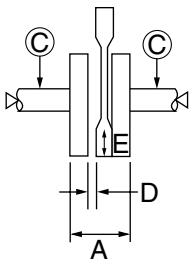
Item	Standard	Limit
Oil pump		
Oil pump type	Trochoid	----
Inner-rotor-to-outer-rotor-tip clearance	0.10 ~ 0.15 mm (0.003 ~ 0.013 in)	0.40 mm (0.0015 in)
Outer-rotor-to-oil-pump-housing clearance	0.013 ~ 0.036 mm (0.005 ~ 0.001 in)	0.15 mm (0.005 in)
Oil-pump-housing-to-inner-and-outer rotor clearance	0.04 ~ 0.09 mm (0.0015 ~ 0.0035 in)	0.15 mm (0.005 in)
Cooling system		
Radiator and engine capacity	0.70 L (0.62 Imp qt, 0.74 US qt)	----
Radiator cap opening pressure	100.0 ~ 120.0 kPa (1.00 ~ 1.20 kg/cm^2, 14.2 ~ 17.1 psi)	----
Radiator core		
Width	229.0 mm (9.02 in)	----
Height	111.5 mm (4.39 in)	----
Depth	23.0 mm (0.91 in)	----
Coolant reservoir		
Capacity (up to the maximum level mark)	0.26 L (0.23 Imp qt, 0.28 US qt)	----
Water pump		
Water pump type	Single suction centrifugal pump	----
Reduction ratio	37/22-25/37	
Coolant temperature	80 ~ 90 °C (176 ~ 194 °F)	----
Spark plug		
Model (manufacturer) × quantity	DR8EA (NGK) × 1	----
Spark plug gap	0.6 ~ 0.7 mm (0.023 ~ 0.027 in)	----
Cylinder head		
Maximum warpage * 	----	0.05 mm (0.0020 in)

Item	Standard	Limit
Camshaft		
Drive system	Chain drive (left)	----
Intake camshaft lobe dimensions 		
Measurement A	36.545 ~ 36.645 mm (1.4387 ~ 1.4427 in)	36.450 mm (1.4350 in)
Measurement B	30.021 ~ 30.121 mm (1.1819 ~ 1.1858 in)	29.920 mm (1.1779 in)
Exhaust camshaft lobe dimensions 		
Measurement A	36.547 ~ 36.647 mm (1.4388 ~ 1.4428 in)	36.450 mm (1.4350 in)
Measurement B	30.067 ~ 30.167 mm (1.1837 ~ 1.1876 in)	29.170 mm (1.1484 in)
Maximum camshaft runout 	----	0.030 mm (0.0012 in)
Timing chain		
Model/number of links	SC.A-0404A SDH/104	----
Tensioning system	Automatic	----

Item	Standard	Limit
Rocker arms/rocker arm shafts		
Rocker arm inside diameter	12.000 ~ 12.0.18 mm (0.4724 ~ 0.4731 in)	12.030 mm (0.4736 in)
Rocker arm shaft outside diameter	11.981 ~ 11.991 mm (0.4717 ~ 0.4720 in)	11.950 mm (0.4704 in)
Rocker-arm-to-rocker-arm-shaft clearance	0.009 ~ 0.037 mm (0.0004 ~ 0.0014 in)	0.080 mm (0.0031 in)
Valves, valve seats, valve guides		
Valve clearance (cold)		
Intake	0.08 ~ 0.12 mm (0.0031 ~ 0.0047 in)	----
Exhaust	0.16 ~ 0.20 mm (0.0062 ~ 0.0078 in)	----
Valve dimensions		
 Head Diameter	 Face Width	 Seat Width	 Margin Thickness
Valve head diameter A		
Intake	33.90 ~ 34.10 mm (1.3346 ~ 1.3425 in)	----
Exhaust	28.40 ~ 28.60 mm (1.1181 ~ 1.1259 in)	----
Valve face width B		
Intake	3.394 ~ 3.960 mm (0.1336 ~ 0.1559 in)	----
Exhaust	3.394 ~ 3.960 mm (0.1336 ~ 0.1559 in)	----
Valve seat width C		
Intake	0.90 ~ 1.10 mm (0.0354 ~ 0.0433 in)	1.6 mm (0.06 in)
Exhaust	0.90 ~ 1.10 mm (0.0354 ~ 0.0433 in)	1.6 mm (0.06 in)
Valve margin thickness D		
Intake	0.80 ~ 1.20 mm (0.0314 ~ 0.0472 in)	----
Exhaust	0.80 ~ 1.20 mm (0.0314 ~ 0.0472 in)	----
Valve stem diameter		
Intake	5.975 ~ 5.990 mm (0.2352 ~ 0.2358 in)	5.940 mm (0.2338 in)
Exhaust	5.960 ~ 5.975 mm (0.2346 ~ 0.2352 in)	5.920 mm (0.2082 in)
Valve guide inside diameter		
Intake	6.000 ~ 6.012 mm (0.2362 ~ 0.2366 in)	6.050 mm (0.2381 in)
Exhaust	6.000 ~ 6.012 mm (0.2362 ~ 0.2366 in)	6.050 mm (0.2381 in)

Item	Standard	Limit
Valve-stem-to-valve-guide clearance		
Intake	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)	0.080 mm (0.0031 in)
Exhaust	0.025 ~ 0.052 mm (0.0010 ~ 0.0020 in)	0.100 mm (0.0039 in)
Valve stem runout	----	0.010 mm (0.0004 in)
		
Cylinder head valve seat width		
Intake	0.90 ~ 1.10 mm (0.0354 ~ 0.0433 in)	1.6 mm (0.06 in)
Exhaust	0.90 ~ 1.10 mm (0.0354 ~ 0.0433 in)	1.6 mm (0.06 in)
Valve springs		
Free length		
Intake and exhaust (inner)	38.10 mm (1.50 in)	36.10 mm (1.42 in)
Intake and exhaust (outer)	36.93 mm (1.45 in)	35.00 mm (1.38 in)
Installed length (valve closed)		
Intake	30.10 mm (1.18 in)	----
Exhaust	30.10 mm (1.18 in)	----
Compressed spring force (installed)		
Intake and exhaust (inner)	76.5 ~ 88.3 N (7.80 ~ 9.00 kg, 436.83 ~ 504.21 lb)	----
Intake and exhaust (outer)	115 ~ 133 N (11.7 ~ 13.5 kg, 655.47 ~ 756.31 lb)	----
Spring tilt *		
		
Inner	----	2.5°/1.7 mm (2.5°/0.07 in)
Outer	----	2.5°/1.6 mm (2.5°/0.06 in)

Item	Standard	Limit
Winding direction (top view)		
Inner	Counterclockwise	----
Outer	Clockwise	----
		
Cylinder		
Cylinder arrangement	Forward-inclined single cylinder	----
Bore × stroke	69.0 × 66.8 mm (2.72 × 2.63 in)	----
Compression ratio	10.1 : 1	----
Bore	69.000 ~ 69.005 mm (2.7165 ~ 2.7167 in)	69.100 mm (2.7204 in)
Maximum taper	----	0.050 mm (0.0020 in)
Maximum out of round	----	0.003 mm (0.0001 in)
Piston		
Piston-to-cylinder clearance	0.020 ~ 0.040 mm (0.0007 ~ 0.0015 in)	0.15 mm (0.0059 in)
Diameter D	68.965 ~ 68.980 mm (2.7151 ~ 2.7157 in)	----
		
Height H	5.0 mm (0.20 in)	----
Piston pin bore (in the piston)		
Diameter	17.004 ~ 17.015 mm (0.6694 ~ 0.6698 in)	17.045 mm (0.6710 in)
Offset	0.5 mm (0.0197 in)	----
Offset direction	Intake side	----
Piston pin		
Outside diameter	16.991 ~ 17.000 mm (0.6689 ~ 0.6692 in)	16.975 mm (0.6683 in)
Piston-pin-to-piston-pin-bore clearance	0.004 ~ 0.024 mm (0.0001 ~ 0.0009 in)	0.068 mm (0.0027 in)
Piston rings		
Top ring		
		
Ring type	Barrel	----
Dimensions (B × T)	1.00 × 2.60 mm (0.03 × 0.10 in)	----

Item	Standard	Limit
End gap (installed)	0.15 ~ 0.30 mm (0.0059 ~ 0.0118 in)	0.45 mm (0.0177 in)
Ring side clearance	0.040 ~ 0.080 mm (0.0015 ~ 0.0031 in)	0.120 mm (0.0047 in)
2nd ring 		
Ring type	Taper	----
Dimensions (B × T)	1.00 × 2.90 mm (0.03 × 0.11 in)	----
End gap (installed)	0.30 ~ 0.45 mm (0.0118 ~ 0.0177 in)	0.70 mm (0.0275 in)
Ring side clearance	0.030 ~ 0.070 mm (0.0011 ~ 0.0027 in)	0.120 mm (0.0047 in)
Oil ring 		
Dimensions (B × T)	1.50 × 2.50 mm (0.06 × 0.09 in)	----
End gap (installed)	0.20 ~ 0.70 mm (0.0079 ~ 0.0276 in)	----
Ring side clearance	0.060 ~ 0.150 mm (0.0023 ~ 0.0059 in)	----
Crankshaft 		
Width A	59.95 ~ 60.00 mm (2.3602 ~ 2.3622 in)	----
Maximum runout C	----	0.030 mm (0.0012 in)
Big end side clearance D	0.350 ~ 0.850 mm (0.0137 ~ 0.0334 in)	----
Big end radial clearance E	0.010 ~ 0.025 mm (0.0003 ~ 0.001in)	----
Automatic centrifugal clutch		
Clutch shoe thickness	3.3 mm (0.1299 in)	2.0 mm (0.078 in)
Clutch shoe spring free length	28.1 mm (1.1063 in)	----
Clutch housing inside diameter	145.0 mm (5.71 in)	145.5 mm (5.73 in)
Compression spring free length	102.4 mm (4.03 in)	90.0 mm (3.54 in)
Weight outside diameter	20.0 mm (0.79 in)	19.5 mm (0.77 in)

Item	Standard	Limit
Clutch-in revolution	2,250 ~ 2,850 r/min	----
Clutch-stall revolution	3,700 ~ 4,700 r/min	----
V-belt		
V-belt width	22.6 mm (0.89 in)	20.3 mm (0.79 in)
Transmission		
Primary reduction system	Helical gear	----
Primary reduction ratio	40 × 15 (2.666)	----
Secondary reduction system	Helical gear	----
Secondary reduction ratio	38 × 15 (2.533)	----
Clutch type	Dry, centrifugal automatic	----
Transmission type	V-belt automatic	----
Operation	Centrifugal automatic type	----
Single speed automatic	2.440 ~ 0.830:1	----
Air filter		
Air filter element	Wet element	----
Fuel pump		
Pump type	Electrical	----
Model (manufacturer)	2GV (MITSUBISHI)	----
Output pressure	12.5 kPa (0.13 kg/cm^2, 1.85 psi)	----
Carburettor		
Model x qty.	CVEK30 x 1	----
Manufacturer	KEIHIN	----
Needle jet	#2.6	----
Main jet	#122	----
Main air jet	90	----
Jet needle	JPBL	----
ID mark	1C0C00	----
Guide air jet 1	#35	----
Guide bolt rotations outwards	1- 7/8	----
Valve seat size	1.6	----
Starter jet 1	38	----
Co %	4%	----
Throttle cable free play (at the flange of the throttle grip)	3 ~ 5 mm (0.12 ~ 0.20 in)	----

CHASSIS SPECIFICATIONS

Item	Standard	Limit
Frame		
Frame type	Steel tube underbone	----
Caster angle	28°	----
Trail	100.0 mm (3.94 in)	----
Front wheel		
Wheel type	Cast wheel	----
Rim		
Size	15 × MT3.5	----
Material	Aluminum	----
Wheel travel	94.0 mm (3.70 in)	----
Wheel runout		
Maximum radial wheel runout	----	1.0 mm (0.04 in)
Maximum lateral wheel runout	----	1.0 mm (0.04 in)
Wheel axle bending limit	----	0.03 mm (0.0012 in)
Rear wheel		
Wheel type	Cast wheel	----
Rim		
Size	14 × MT3.75	----
Material	Aluminum	----
Wheel travel	83.0 mm (3.27 in)	----
Wheel runout		
Maximum radial wheel runout	----	1.0 mm (0.04 in)
Maximum lateral wheel runout	----	1.0 mm (0.04 in)
Front tire		
Tire type	Tubeless	----
Size	120/70-15M/C 56P or 56S	----
Model (manufacturer)	GOLD STANDARD (MICHELIN)	----
	GTS 23 (PIRELLI)	----
Tire pressure (cold)		
0 ~ 90 kg (0 ~ 198 lb)	190 kPa (1.90 kgf/cm2, 27 psi)	----
90 ~ 189 kg (198 ~ 417 lb)	210 kPa (2.10 kgf/cm2, 30 psi)	----
Minimum tire tread depth	----	1.6 mm (0.06 in)

Item	Standard	Limit
Rear tire		
Tire type	Tubeless	----
Size	140/70-14M/C 68P or 68S	----
Model (manufacturer)	GOLD STANDARD (MICHELIN)	----
	GTS 24 (PIRELLI)	----
Tire pressure (cold)		
0 ~ 90 kg (0 ~ 198 lb)	220 kPa (2.20 kgf/cm2, 31 psi)	----
90 ~ 189 kg (198 ~ 417 lb)	250 kPa (2.50 kgf/cm2, 36 psi)	----
Minimum tire tread depth	----	1.6 mm (0.06 in)
Front brake		
Brake type	Single disc brake	----
Operation	Right hand operation	----
Recommended fluid	DOT 4	----
Brake disc		
Diameter × thickness	267.0 × 5.0 mm (10.51 × 0.20 in)	----
Minimum thickness	----	4.5 mm (0.18 in)
Maximum deflection	----	0.15 mm (0.0059 in)
Brake pad lining thickness (inner)	4.5 mm (0.18 in)	0.5 mm (0.02 in)
Brake pad lining thickness (outer)	4.5 mm (0.18 in)	0.5 mm (0.02 in)
Master cylinder inside diameter	12.70 mm (0.50 in)	----
Caliper cylinder inside diameter	25.00 mm × 1 and 28.00 mm × 1 (0.98 in × 1 and 1.10 in × 1)	----
Rear brake		
Brake type	Single disc brake	----
Operation	Left hand operation	----
Recommended fluid	DOT 4	----
Brake disc		
Diameter × thickness	240.0 × 5.0 mm (9.45 × 0.20 in)	----
Minimum thickness	----	4.5 mm (0.18 in)
Maximum deflection	----	0.15 mm (0.0059 in)
Brake pad lining thickness (inner)	4.5 mm (0.18 in)	0.5 mm (0.02 in)
Brake pad lining thickness (outer)	4.5 mm (0.18 in)	0.5 mm (0.02 in)
Master cylinder inside diameter	11.0 mm (0.43 in)	----
Caliper cylinder inside diameter	22.2 mm × 2 (0.87 in × 2)	----

Item	Standard	Limit
Front suspension		
Suspension type	Telescopic fork	----
Front fork type	Coil spring/oil damper	----
Front fork travel	110.0 mm (4.33 in)	----
Spring		
Free length	308.0 mm (12.126 in)	301.87 mm (11.885 in)
Installed length	288.5 mm (11.360 in)	----
Spring rate (K1)	10.00 N/mm (1.02 kg/mm, 57.10 lb/in)	----
Spring rate (K2)	17.00 N/mm (1.73 kg/mm, 97.07 lb/in)	----
Spring stroke (K1)	0 ~ 80.0 mm (0 ~ 3.15 in)	----
Spring stroke (K2)	80.0 ~ 100.0 mm (3.15 ~ 3.94 in)	----
Inner tube outer diameter	36 mm (1.42 in)	----
Inner tube bending limit	----	0.2 mm (0.008 in)
Optional spring available	No	----
Fork oil		
Recommended oil	Yamaha fork oil 15WT	----
Quantity (each front fork leg)	195.0 cm^3 (6.86 Imp oz, 6.59 US oz)	----
Level (from the top of the inner tube, with the inner tube fully compressed, and without the fork spring)	105.0 mm (4.13 in)	----
Steering		
Steering bearing type	Angular bearing	----
Lock-to-lock angle (left)	62°	----
Lock-to-lock angle (right)	62°	----
Rear suspension		
Suspension type	Unit swing	----
Rear shock absorber assembly type	Coil spring/oil damper	----
Rear shock absorber assembly travel	95.0 mm (3.74 in)	----
Spring		
Free length	269.5 mm (10.61 in)	264.1 mm (10.40 in)
Installed length	249 mm (9.80 in)	----
Spring rate (K1)	8.00 N/mm (0.82 kg/mm, 45.68 lb/in)	----
Spring rate (K2)	13.70 N/mm (1.40 kg/mm, 78.23 lb/in)	----
Spring rate (K3)	20.30 N/mm (2.07 kg/mm, 115.91 lb/in)	----
Spring stroke (K1)	0 ~ 33.0 mm (0 ~ 1.30 in)	----
Spring stroke (K2)	33.0 ~ 75.0 mm (1.30 ~ 2.95 in)	----
Spring stroke (K3)	70.0 ~ 95.0 mm (2.76 ~ 3.74 in)	----
Optional spring available	No	----

Item	Standard	Limit
Spring preload adjusting positions		
Standard	1	----
Minimum	1	----
Maximum	4	----

ELECTRICAL SPECIFICATIONS

Item	Standard	Limit
System voltage	12 V	----
Ignition system		
Ignition system type	DC.C.D.I.	----
Ignition timing	10° BTDC at 1,700 r/min	----
Advancer type	Digital	----
Engine control unit model (manufacturer)	1C00-00 (MORIC)	----
Ignition coil		
Model (manufacturer)	4719 (MITSUBA)	----
Minimum ignition spark gap	6 mm (0.24 in)	----
Primary coil resistance	187 ~ 312 Ω at 20 °C (68 °F)	----
Secondary coil resistance	1.89 ~ 2.31 kΩ at 20 °C (68 °F)	----
Spark plug cap		
Material	Resin	----
Resistance	10.0 kΩ at 20 °C (68 °F)	----
Charging system		
System type	A.C. magneto	----
Model (manufacturer)	5425-E (MITSUBA)	----
Nominal output	14 V / 18 A at 4,000 r/min	----
Stator coil resistance/color	0.38 ~ 0.41 Ω at 20 °C (68 °F)/ white–white	----
Rectifier/regulator		
Regulator type	Semi conductor-short circuit	----
Model (manufacturer)	SH678 M (SHINDENGEN)	----
No-load regulated voltage	14.1 ~ 14.9 V	----
Rectifier capacity	22.0 A	----
Withstand voltage	200.0 V	----
Battery		
Battery type	YTX9-BS	----
Battery voltage/capacity	12 V/8.0 Ah	----
Manufacturer	YUASA	----
Ten hour rate amperage	0.8 A	----
Headlight		
Bulb type	Halogen bulb	----

Item	Standard	Limit
Bulbs (voltage/wattage × quantity)		
Headlight	12 V 35/35.0 W × 2	----
Auxiliary light	12 V 5.0 W × 2	----
Tail/brake light	12 V 21.0/5.0 W × 2	----
Front turn signal light	12 V 10.0 W × 2	----
Rear turn signal light	12 V 10.0 W × 2	----
Licence plate light	12 V 5.0 W × 1	----
Meter light	LED × 1	----
Indicator light (voltage/wattage × quantity)		
High beam indicator light	LED × 1	----
Turn signal indicator light	LED × 2	----
Immobilizer system indicator light	LED × 1	----
Fuel level warning light	LED × 1	----
Electric starting system		
System type	Constant mesh	----
Starter motor		
Model (manufacturer)	SM13-454/MOTOR UNIT START S.P.	----
Power output	0.65 kW	----
Brushes		
Overall length	18 mm (0.709 in)	4.0 mm (0.15 in)
Spring force	7.65 ~ 10.01 N (780 ~ 1021 gf, 27.54 ~ 36.02 oz)	----
Armature coil resistance	0.0017 ~ 0.0027 Ω at 20 °C (68 °F)	----
Insulation resistance	Above 1 MΩ at 20 °C (68 °F)	----
Commutator diameter	17.6 mm (0.69 in)	16.6 mm (0.65 in)
Mica undercut	1.35 mm (0.053 in)	----
Starter relay		
Model (manufacturer)	MS5F-634 (JIDECO)	----
Amperage	180.0 A	----
Horn		
Horn type	Plane	----
Model (manufacturer) × quantity	YF-12 (NIKKO) × 1	----
Maximum amperage	3.0 A	----
Performance	105 ~ 113 dB/2 m	----
Coil resistance	1.15 ~ 1.25 Ω at 20 °C (68 °F)	----

Item	Standard	Limit
Turn signal/hazard relay		
Relay type	Full transistor	----
Model (manufacturer)	01 8610 (GUILERA)	----
Self-cancelling device built-in	No	----
Turn signal blinking frequency	70.0 ~ 100.0 cycles/minute	----
Wattage	10 W × 2 + 1.2 W	----
Fuses (amperage × quantity)		
Main fuse	30.0 A × 1	----
Headlight fuse	15.0 A × 1	----
Signaling system fuse	15.0 A × 1	----
Ignition fuse	5.0 A × 1	----
Radiator fan motor fuse	10.0 A × 1	----
Backup fuse (immobilizer unit and meter assembly)	5.0 A × 1	----
Reserve fuse	30.0 A × 1	----
	15.0 A × 1	----
	10.0 A × 1	----
	5.0 A × 1	----
Fuel gauge		
Model (manufacturer)	1B9 (BITRON)	----
Sender unit resistance-full	0 ~ 7 Ω at 20 °C (68 °F)	----
Sender unit resistance-empty	87 ~ 103 Ω at 20 °C (68 °F)	----
Starting circuit cut-off relay		
Model (manufacturer)	ACA12115-1 (MATSUSHITA)	----
Coil resistance	72 ~ 88 Ω	----
Headlight relay		
Coil resistance	96 Ω	----
Fuel injection system relay		
Coil resistance	96 Ω	----
Radiator fan motor		
Model (manufacturer)	VA32-A101-62A (VENTILATOR SPAL)	----
Running rpm	7,500 r/min	----
Coolant temperature sensor		
Model (manufacturer)	179700-0480 (DENSO)	----
Resistance at 20 °C (68 °F)	2.32 ~ 2.59 kΩ	----
Resistance at 80 °C (176 °F)	0.310 ~ 0.326 kΩ	----
Resistance at 110 °C (230 °F)	0.1399 ~ 0.1435 kΩ	----

Item	Standard	Limit
Speed sensor		
Output voltage		
When sensor is on	DC 4.8 V or more	----
When sensor is off	DC 0.6 V or less	----

EAS00028
CONVERSION TABLE

All specification data in this manual are listed in SI and METRIC UNITS.
Use this table to convert METRIC unit data to IMPERIAL unit data.

Ex.

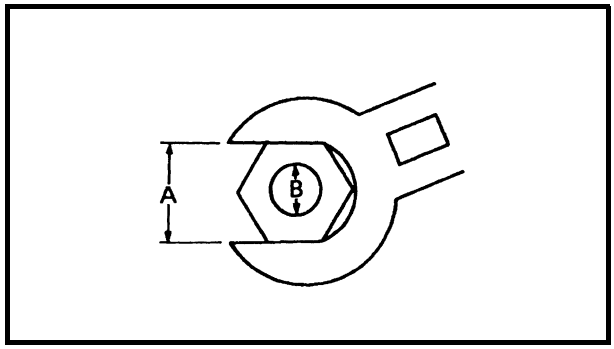
METRIC		MULTIPLIER		IMPERIAL
** mm	×	0.03937	=	** in
2 mm	×	0.03937	=	0.08 in

CONVERSION TABLE

METRIC TO IMPERIAL			
	Metric unit	Multiplier	Imperial unit
Tightening torque	m·kg m·kg cm·kg cm·kg	7.233 86.794 0.0723 0.8679	ft·lb in·lb ft·lb in·lb
Weight	kg g	2.205 0.03527	lb oz
Speed	km/hr	0.6214	mph
Distance	km m m cm mm	0.6214 3.281 1.094 0.3937 0.03937	mi ft yd in in
Volume/ Capacity	cc (cm^3) cc (cm^3) lt (liter) lt (liter)	0.03527 0.06102 0.8799 0.2199	oz (IMP lip.) cu.in qt (IMP liq.) gal (IMP liq.)
Misc.	kg/mm kg/cm^2 Centigrade (°C)	55.997 14.2234 9/5+32	lb/in psi (lb/in^2) Fahrenheit (°F)

EAS00029
GENERAL TIGHTENING TORQUE SPECIFICATIONS

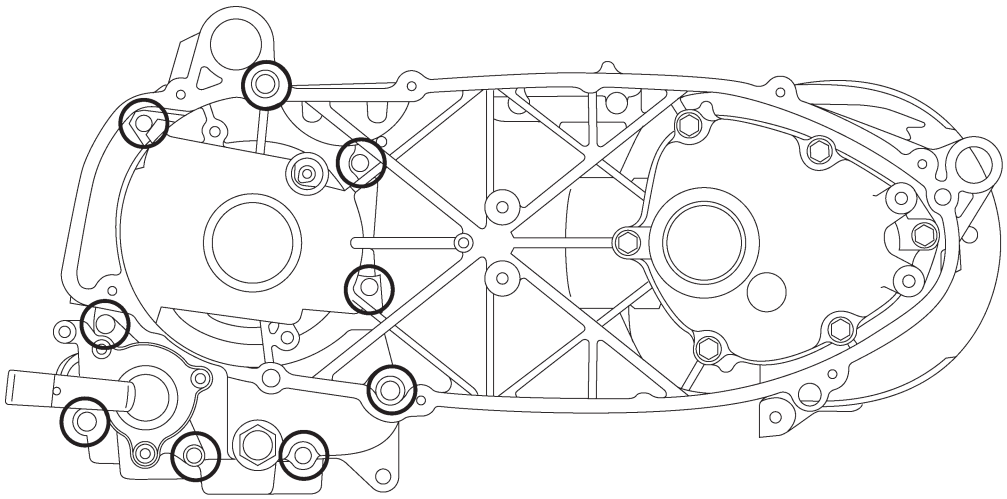
This chart specifies tightening torques for standard fasteners with a standard ISO thread pitch. Tightening torque specifications for special components or assemblies are provided for each chapter of this manual. To avoid warpage, tighten multi-fastener assemblies in a crisscross pattern and progressive stages until the specified tightening torque is reached. Unless otherwise specified, tightening torque specifications require clean, dry threads. Components should be at room temperature.



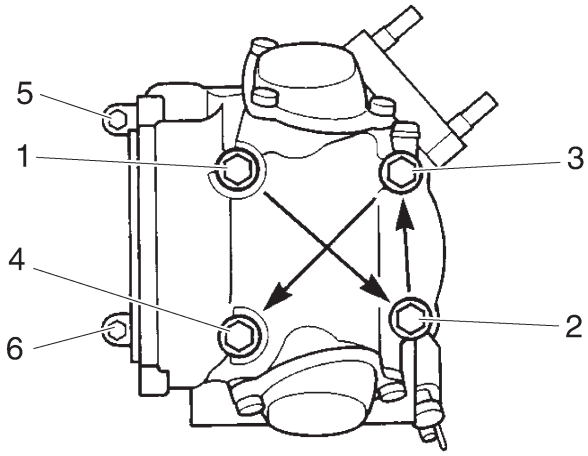
A: Distance between flats
B: Outside thread diameter

A (nut)	B (bolt)	General tightening torques		
		Nm	m · kg	ft · lb
10 mm	6 mm	6	0.6	4.3
12 mm	8 mm	15	1.5	11
14 mm	10 mm	30	3.0	22
17 mm	12 mm	55	5.5	40
19 mm	14 mm	85	8.5	61
22 mm	16 mm	130	13.0	94

Crankcase tightening sequence:



Cylinder head tightening sequence:



TIGHTENING TORQUES

ENGINE TIGHTENING TORQUES

Element	Screw threrad size	Tightening torque		Notes
		N·m	m·kg	
Oil level verification bolt	M20	7	0.7	
Exhaust tube double end stud	M8	12.5	1.25	
Air induction system tube stud	M6	10	1.0	
Spark plug	M12	17.5	1.75	
Camshaft pinion cover	M6	8	0.8	
Cylinder and cylinder head (nut)	M8	22	2.2	
Cylinder and cylinder head (Pin) (distribution chain side)	M6	10	1.0	
Generator rotor	M16	80	8.0	
Valve adjustment bolt counter nut	M6	13.5	1.35	
Camshaft attachment	M6	8	0.8	
Camshaft pinion	M10	6	0.6	
Distribution chain tension device (body)	M6	10	1.0	
Distribution chain tension device (Cover)	M8	7.5	0.75	
Guide stop 2	M6	10	1.0	
Water pump allotment	M6	10	1.0	
Tube seal	M6	7	0.7	
Thermostat cover	M6	10	0.1	
Filling neck bracket	M4	4	0.4	
Oil pump assembly	M6	6.5	0.65	
Oil pump cover	M3	1	0.1	
Oil intake cover	M35	32	3.2	
Carburettor seal	M6	10	0.1	
Air induction system tube	M6	12	1.2	
Air supply cut off valve assembly	M6	10	1.0	
Sump	M6	10	1.0	
Cylinder head pin	M8	12.5	1.25	
Transmission oil drain bolt	M8	22	2.2	
Gearbox oil filler plug	M14	3	0.3	
Transmission box cover	M8	16	1.6	
Trapezoidal belt housing cover (left)	M6	10	1.0	
Trapezoidal belt housing filter cover	M5	1.2	0.12	
Trapezoidal belt housing cover protection	M6	6.5	0.65	
Generator cover	M6	10	1.0	
Rotor shaft and oil pump gear cover	M6	12	1.2	LOCTITE bolt locking glue
Adjustment verification plug	M16	8	0.8	
Starter motor clutch	M8	30	3.0	LOCTITE bolt locking glue
Secondary pulley	M14	60	6.0	
Grease obturator plug for the primary pulley	M4	3	0.3	
Fixed primary pulley	M14	80	8.0	
Clutch bracket	M36	90	9.0	
Secondary pulley bracket	8	22	2.2	LOCTITE bolt locking glue
Stator coil	M6	10	1.0	LOCTITE bolt locking glue
Detection coil	M5	7	0.7	LOCTITE bolt locking glue
Starter motor	M6	10	1.0	
Thermostat	Pt 1/8	8	0.8	
Air filter housing assembly	M6	10	1.0	
Exhaust tube nut	M8	20	2.0	
Silencer attachment nut	M12	65	6.5	

TIGHTENING TORQUES

CHASSIS TIGHTENING TORQUES

Element	Screw thread size	Tightening torque		Notes
		N·m	m·kg	
Radiator bolts	M6	9.75	0.9	
Exhaust manifold nuts	M8	20	2.0	
Exhaust / silencer joining flange nut	M8	14	1.4	
Rocker silencer nuts	M12	55	5.5	
Large / small exhaust protection	M6	10	1.0	Use sealant
Exhaust end trim	M6	10	1.0	Use sealant
Engine bracket rod shaft (nut)	M10	31.5	3.15	
Engine bracket nut to frame	M12	58.2	5.8	
Rods to frame bolt	M10	63.2	6.3	
Reader rocker arm to sump	M10	28	2.8	
Shock absorber to rocker arm / sump	M8	17.5	1.7	
Shock absorbers to frame	M10	31.5	3.1	
Guide hose to rear rocker arm nut	M6	9.75	0.9	
Seat lock	M6	9.75	0.9	
Rear wheel axle (nut)	M14	135	13.5	
Front wheel axle (nut)	M14	69.5	6.9	
Front brake calliper to fork	M8	23	2.3	
Rear brake calliper to rocker arm	M10	23	2.3	
Rear / front brake hose	M10	23	2.3	
Steering shaft upper nut (Crowned)	M25	75	7.5	
Handlebar bracket nut	M20	120	12.0	
Handlebar bracket bolts	M8	23	2.3	
Bar bracket bolts	M8	23.5	2.3	
Side stand bolts	M10	23	2.3	
Side stand nuts	M10	40	4.0	
Side stand switch nut	M5	5.7	0.6	
Rear footrests	M8	25	2.5	
Spider bolts	M8	23	2.3	
Rear / front brake bleeder	M8	6	0.6	
Handgrips to frame	M8	23	2.3	
Front / rear brake cylinder attachment bolts	M6	6.5	0.6	
Fuel tank to frame	M6	6.5	0.6	
Expansion tank	M6	9.75	1.0	
Battery bracket to frame bolt	M8	23	2.3	

GREASE APPLICATION POINTS AND TYPES OF ENGINE LUBRICANT

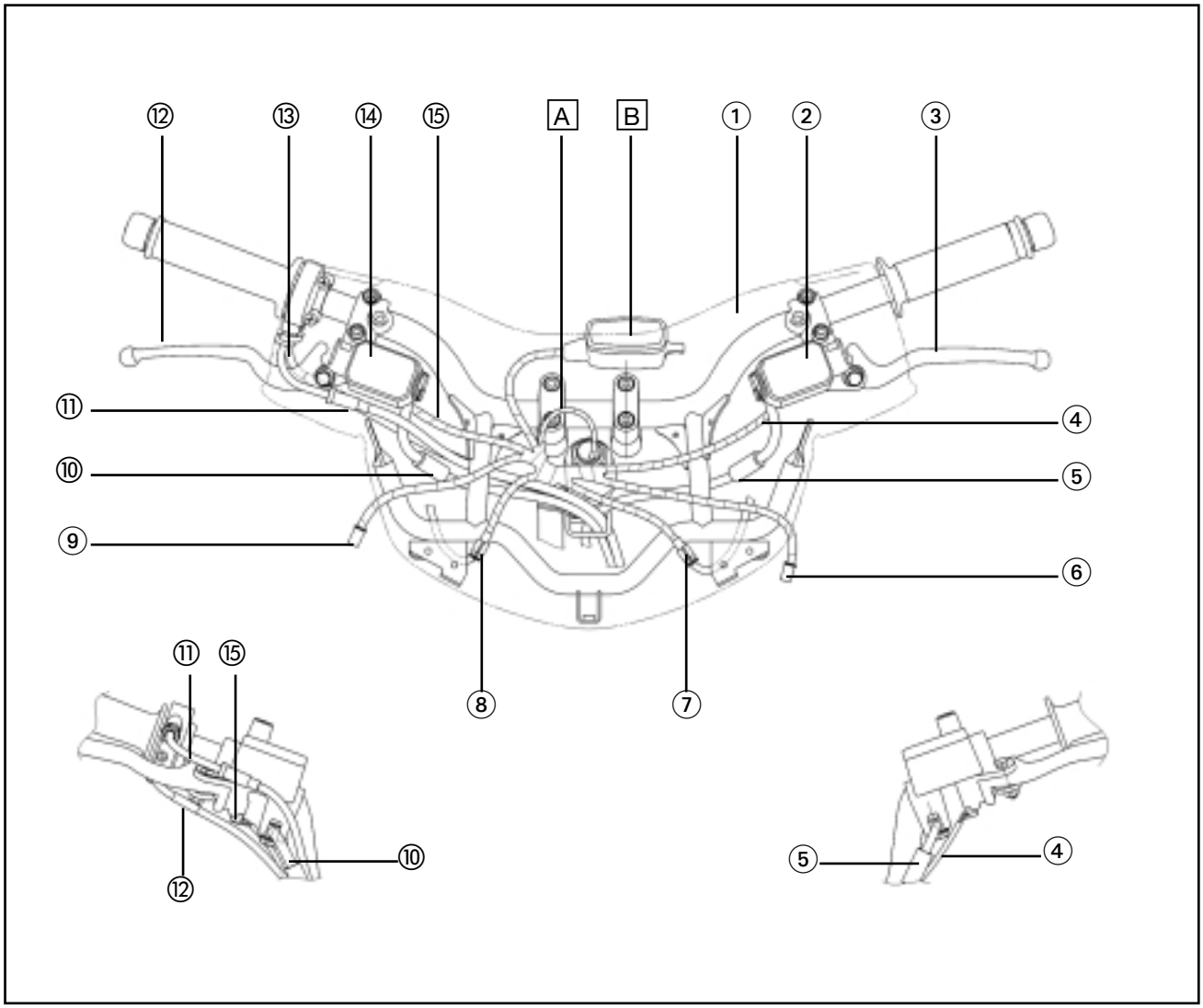
Grease application points	Symbol
Oil seal lips	LS
O-ring (except for the trapezoidal belt unit	LS
Cylinder head tightening nut installation surface	E
Cylinder head peg	E
Crankshaft pin exterior	E
Piston rod support surface	E
Rotational filter interior surface	E
Transmission gear interior surface	E
Distribution chain exterior pinion interior surface	E
Piston pin	E
Annular canal and piston exterior	E
Camshaft cam profile	M
Valve stem (IN, EX)	M
Valve stem and end (IN, EX)	M
Rocker shaft	E
Valve rocker interior surface	M
Shaft	E
Shaft (oil pump assembly)	LS
Seal (oil pump assembly)	LS
Bracket	LS
Intermediate gear 1 support surfaces	E
Shaft 1	E
Intermediate gear 2 support surfaces	E
Intermediate gear 2 interior surfaces	E
Primary shaft support surfaces	E
Engine shaft and primary shaft grooves	E
Sump contact surfaces	Yamaha sealant, No. 1215
Sump ventilator plug	S
Stator grommet	Yamaha sealant, No. 1215
Suction tube	S
Primary pulley counterweight	Shell BT 3® Grease
Secondary pulley guide Pin	BEL-RAY® assembly grease

LUBRICATION AND GREASE
CHASSIS

Lubrication application points	Symbol
The front wheel seal lips (left and right)	LS
Steering bearings (upper and lower)	LS
Steering dust guard lips (upper and lower)	LS
Seat bracket pin	LS
Seat lock	LS
Throttle cable guide interior surface	LS
Engine bracket shaft	LS
Front / rear brake cylinder	LS
Front support friction surface	LS
Centre stand friction surface and attachment pin	LS
Centre stands stop shaft	LS
Rear wheel seal lips (left and right)	LS

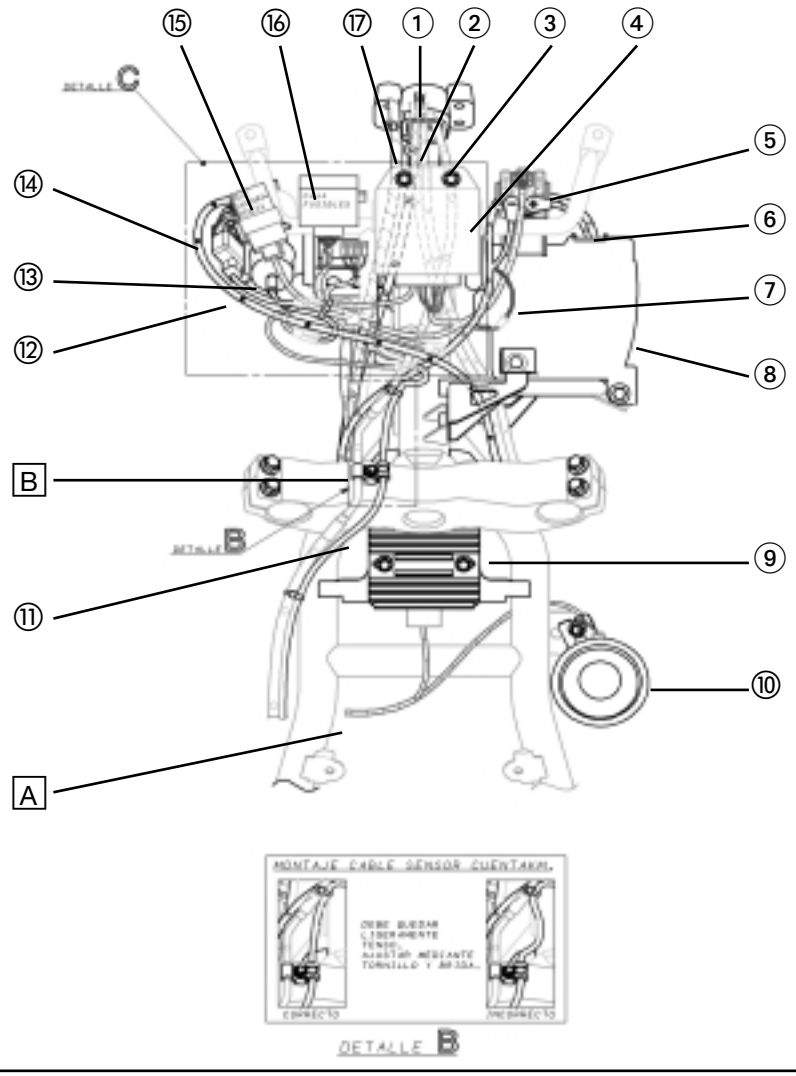
① Handlebars
② Rear brake cylinder
③ Rear brake lever
④ Rear brake switch cable
⑤ Rear brake conduit
⑥ Left-hand side indicator cable
⑦ Left-hand side handlebar switches cable
⑧ Right-hand side handle bar switches cable
⑨ Right-hand side indicator cable
⑩ Front brake conduit
⑪ Throttle cable 1
⑫ Front brake lever
⑬ Throttle cable 2
⑭ Front brake cylinder
⑮ Front brake switch cable

A Inserted temperature probe cable all the way into the steering shaft.
B Connect and fit the rubber cap to the speedometer cabling.



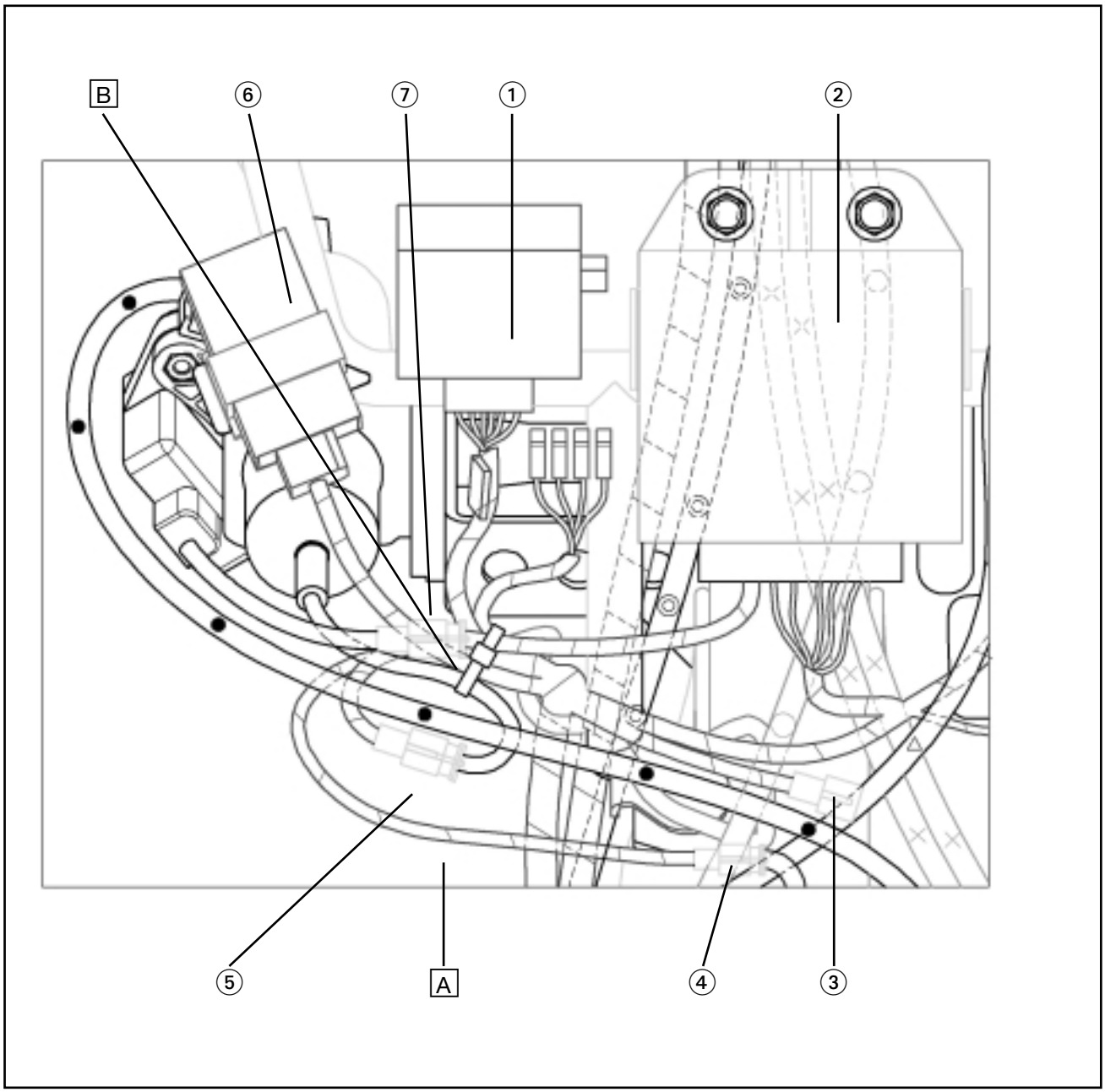
① Rear brake
② Throttle cable
③ Front brake
④ ECU
⑤ Starter relay
⑥ Starter motor cable
⑦ Neutral terminal
⑧ Battery housing
⑨ Regulator
⑩ Horn
⑪ Trip distance sensor cable
⑫ Seat lock cable
⑬ Main switch
⑭ Relay
⑮ Indicator relay
⑯ Fuse box
⑰ Main installation

[A] Connect to the main installation
[B] see detail B

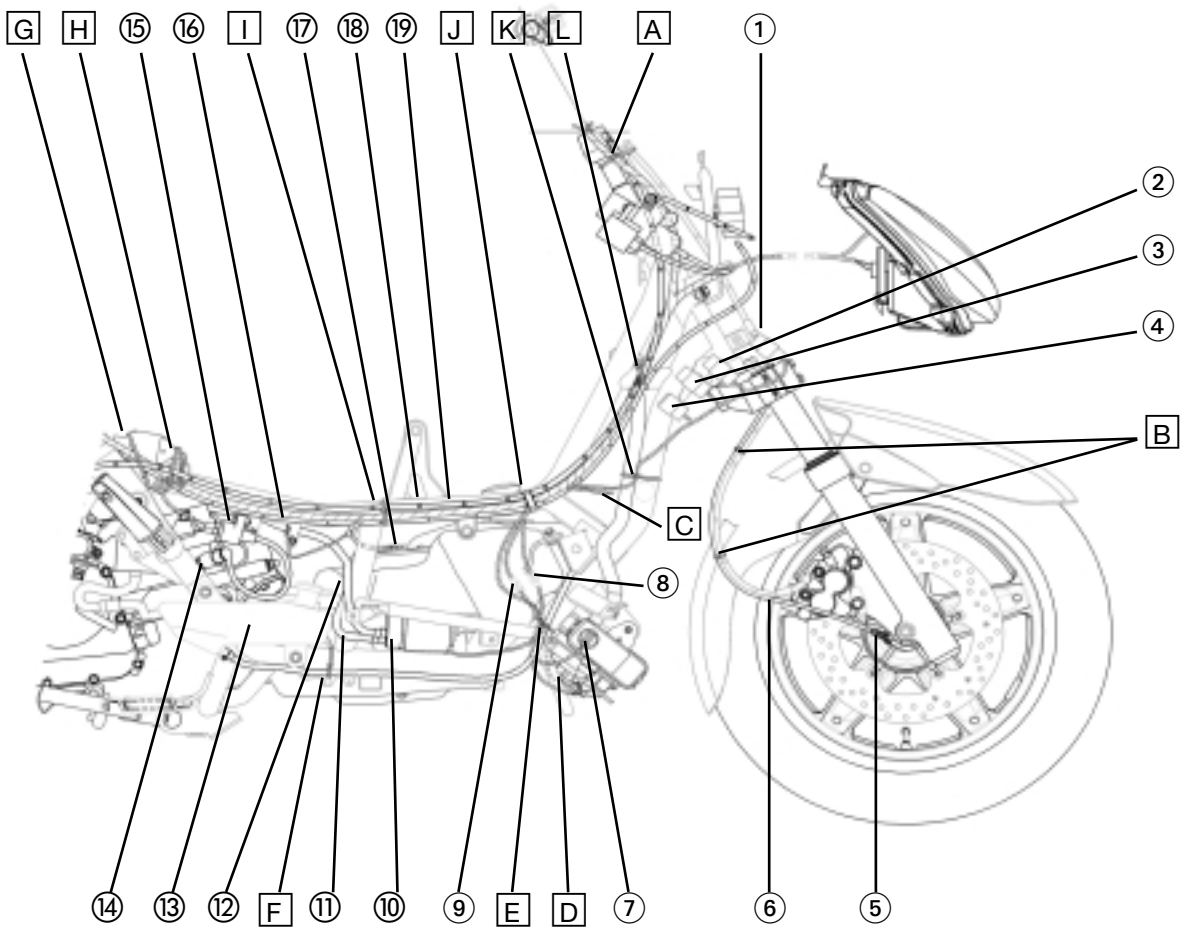


① Fuse box
② ECU
③ Front light terminal
④ Trip sensor terminal
⑤ Antenna terminal
⑥ Flasher relay
⑦ Main switch terminal

[A] Allow sufficient clearance to turn the handle bars.
[B] Take by the flange: Main switch cable, flasher relay cable, fuse box, cable antenna cable, trip counter cable



① Light relay
② Ventilator relay
③ ECU relay
④ Stand relay
⑤ Speedometer sensor cable
⑥ Brake hose
⑦ Thermal contact
⑧ Ventilator terminal
⑨ Fuel pump terminal
⑩ Fuel pump
⑪ Fuel tank line to pump
⑫ Fuel tank line to carburettor
⑬ Coolant expansion tank
⑭ Spark plug hood
⑮ Coil
⑯ Earth terminal
⑰ Fuel probe terminal
⑱ Rear brake
⑲ Main installation



[A] Take the main installation by the flange

[B] Join the speed sensor and hose. Distribute the flanges evenly.

[C] A regulator and horn

[D] Pass the ventilator cable behind the protection

[E] Secure with the flange: Coolant tank line, fuel pump cable, ventilator cable and thermal contacts cable.

[F] Take by the flange: Coolant tank tube

[G] Take by the flange: Main installation, rear brake, starter motor cable, generator cables.

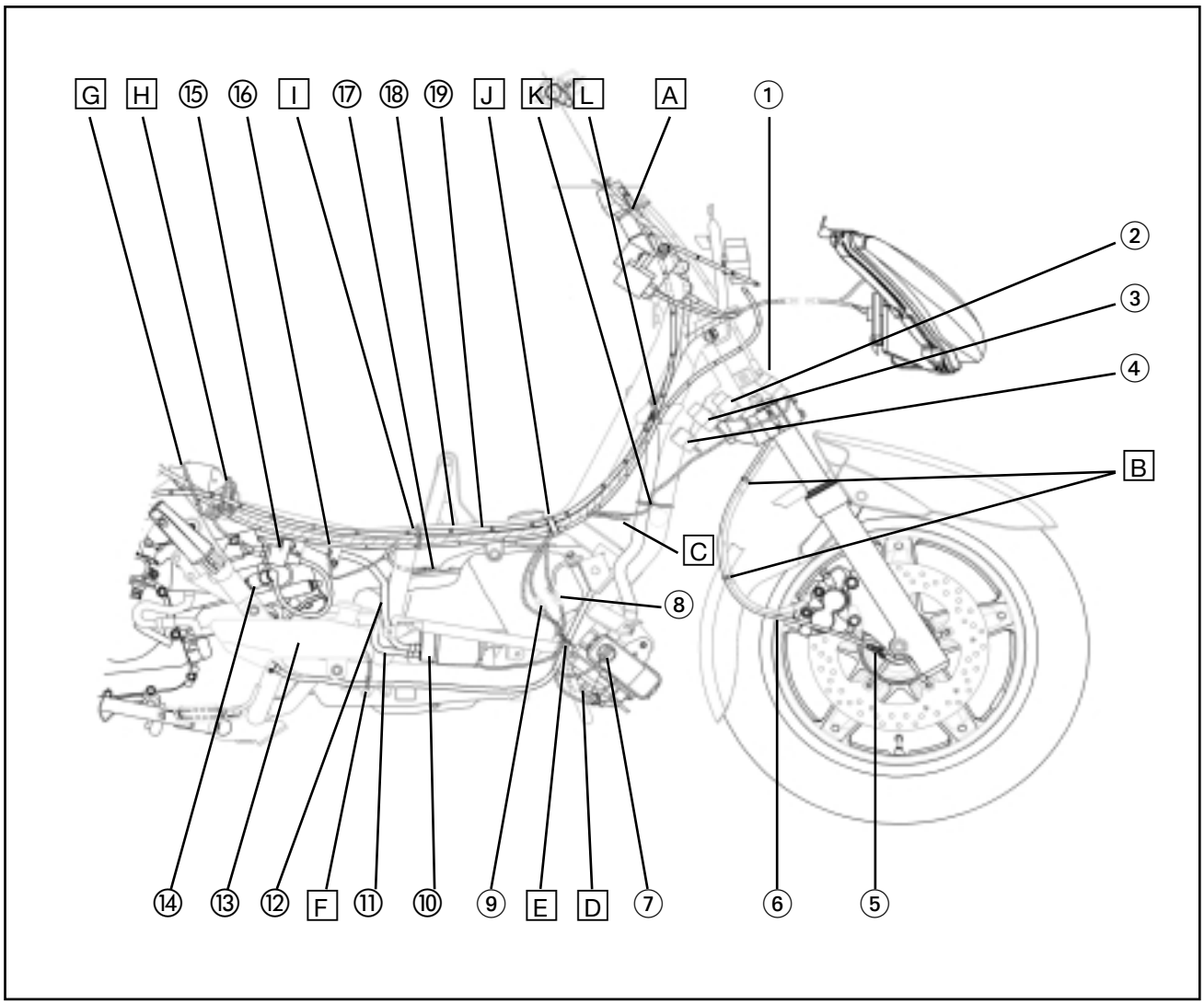
[H] Take by the flange: Main installation, rear brake, starter motor cable, coil cables, starter cables, thermal contact cabling, generator cabling.

[I] Take by the flange: Main installation, rear brake, starter motor cable, stand cable.

[J] Take by the welded flange: Main installation, rear brake, starter motor cable.

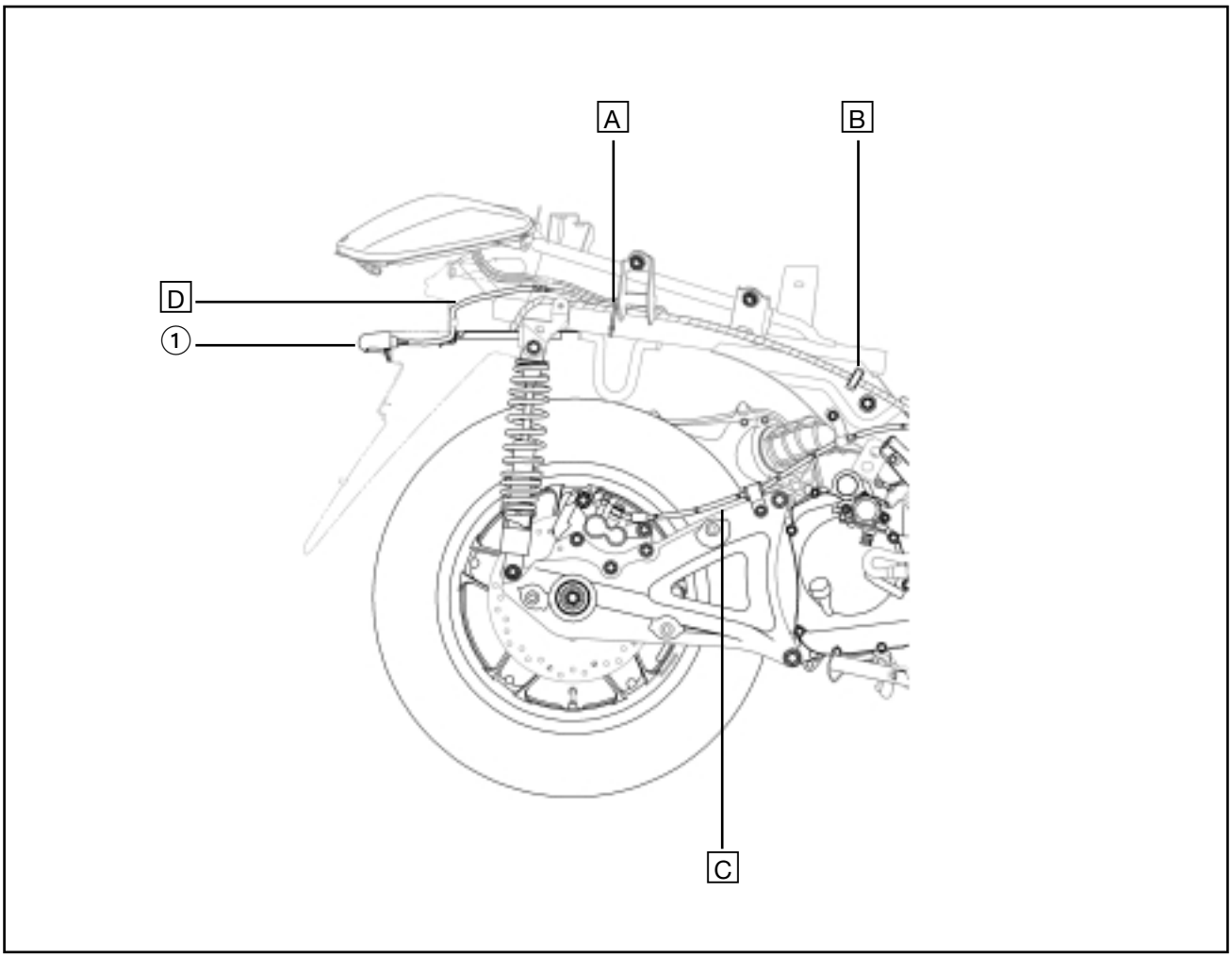
[K] Take the main installation by the flange above the frame.

[L] Take by the flange: main installation, rear brake, starter motor cable.



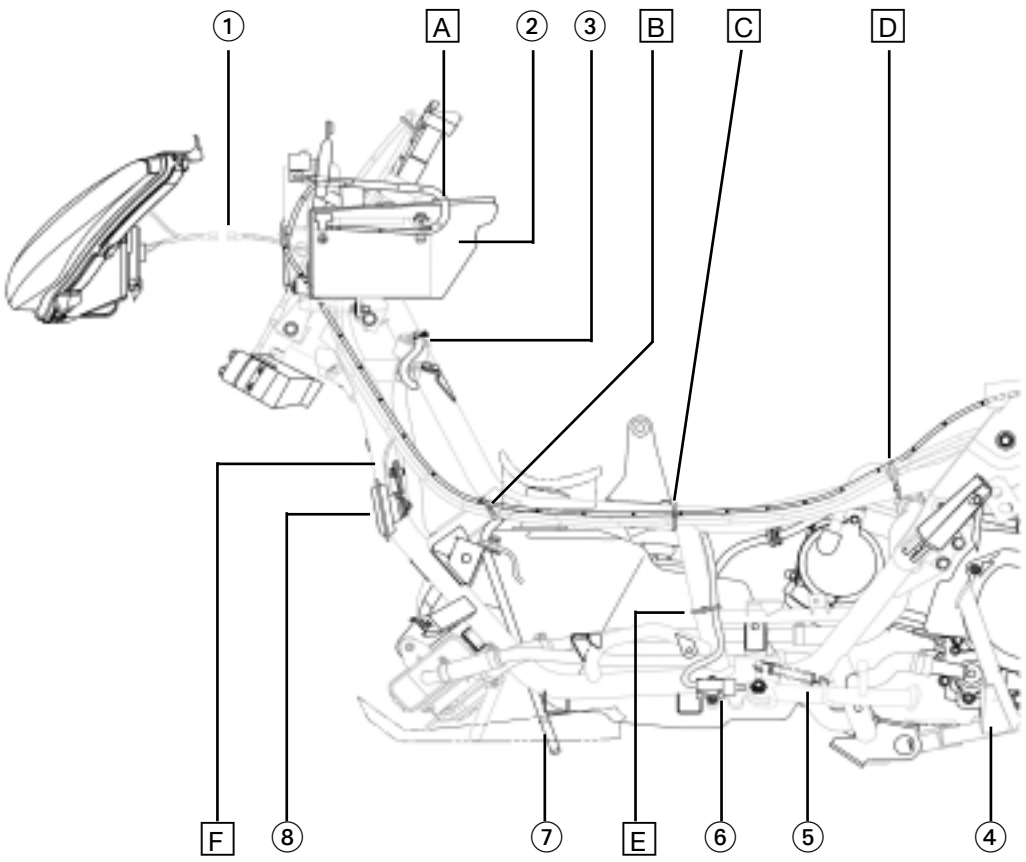
① Registration light

[A] Take by the flange: The main installation, rear light cables, registration light
[B] Take the main installation by the welded flange
[C] Pass the brake hose by the guide
[D] Pass the registration light according to the illustration



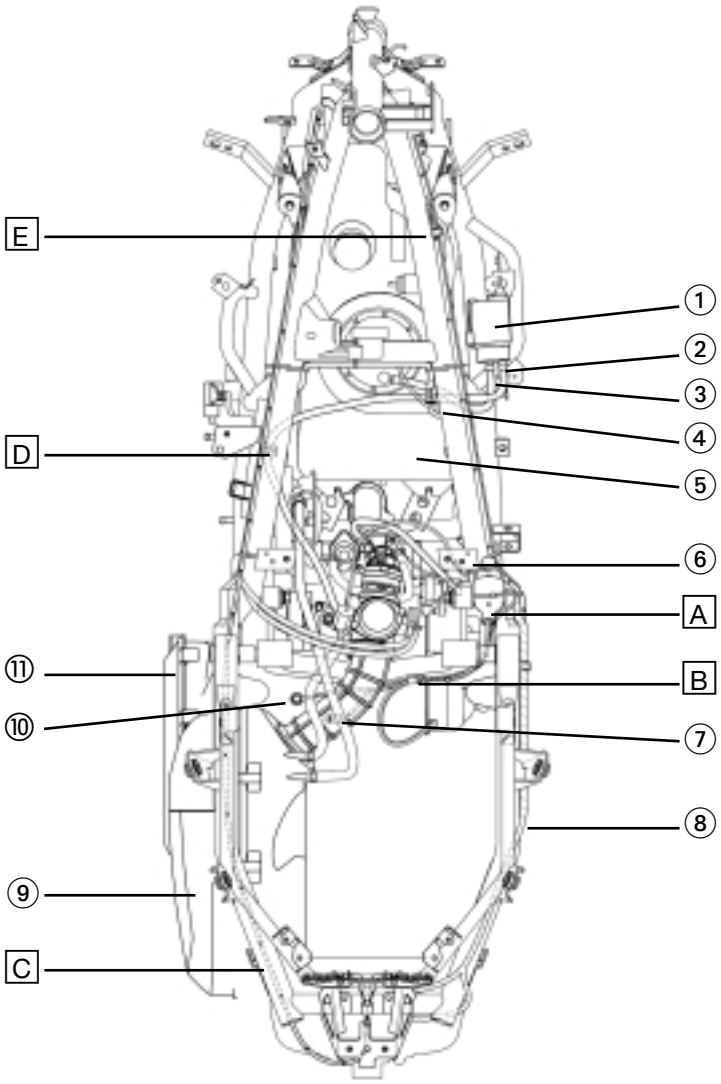
① Front light terminal
② Battery assembly
③ Radiator filler cap
④ Centre stand
⑤ Side stand
⑥ Side stand switch
⑦ Fuel filler tube (passes through a hole in the frame)
⑧ Horn

A Pass the starter motor cable by the window in the battery housing
B Take in the back: Seat lock cable, throttle cable.
C Take by the flange: Seat lock cable, stand cable, throttle cable.
D Pass the seat lock cable through the interior of the frame tubing
E Take side stand cable with flange
F Pass the horn cables behind the frame



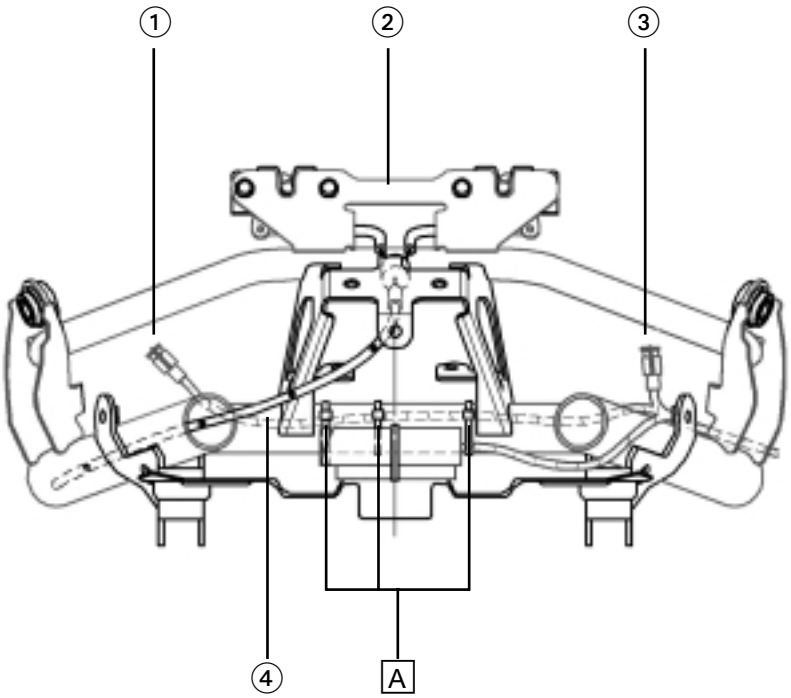
① Fuel pump
② Fuel tank line from carburettor
③ Fuel tank tube to pump
④ Stand terminal
⑤ Fuel tank
⑥ Starter terminal
⑦ Starter motor positive
⑧ Main installation
⑨ Air filter
⑩ Motor neutral
⑪ Trapezoidal belt air filter

[A] Connect and cover the generator cables with hood and position according to the illustration.
[B] Take by the welded flange: motor cables (coincide with mark), starter motor cable
[C] Pass seat lock cable through the frame.
[D] Pass the accelerator cables above the carburettor nozzle to the air filter.
[E] Fuel line from the carburettor, stick to the rubber onto the welded bracket at the frame.
[F] Take the stand cable by the flange.



① Rear left-hand side light terminal
② Seat lock
③ Rear right-hand side light terminal
④ Seat lock cable

[A] Take the rear left-hand side light connection cable by the flanges.



MAINTENANCE AND PERIODIC LUBRICATION TABLE

NOTE:

- The verifications marked annual must be carried out each year, unless verifications are made according to the kilometre counter.
- From 50,000 km , repeat maintenance intervals every 10,000 km.
- The operations marked with an asterisk should be made by Yamaha dealer, given that the required tools and specific data as well as the technical qualifications will be required.

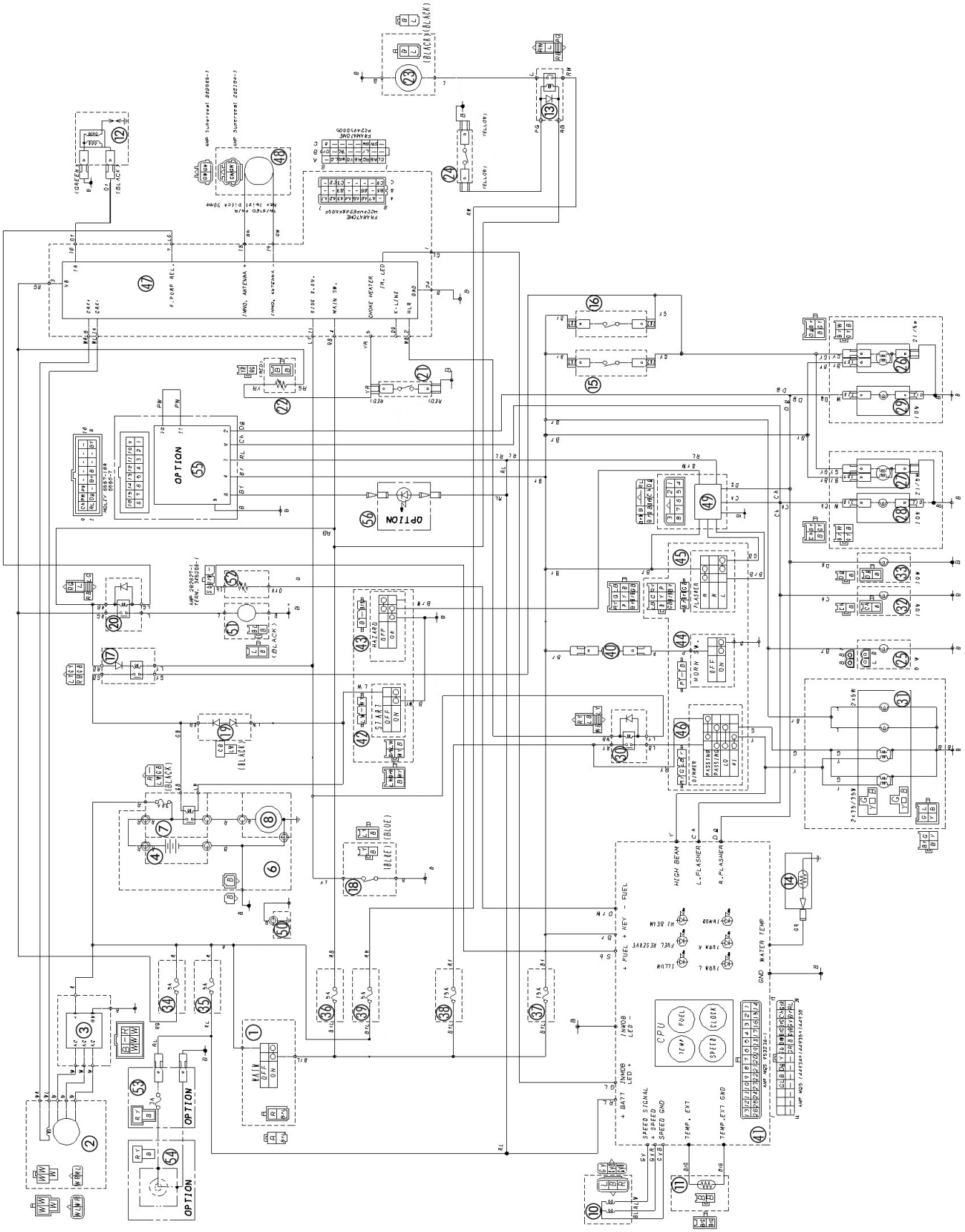
Nº		ELEMENT	VERIFICATION AND MAINTENANCE OPERATION	KILOMETER COUNTER READING (x 1.000 km)					ANNUAL REVISION
				1	10	20	30	40	
1	*	Fuel line	• Check all the fuel lines and vacuum tubes for cracks and damage.		√	√	√	√	√
2		Spark plug	• Check condition. • Clean and adjust the distance between the electrodes.		√		√		
			• Replace.			√		√	
3	*	Valves	• Check the valve clearance. • Adjustment.			√		√	
4		Air filter	• Replace.			√		√	
5	*	Trapezoidal belt housing air filter	• Clean.		√		√		
			• Replace.			√		√	
6		Front brake	• Check operation, fluid level and check for leaks.	√	√	√	√	√	√
			• Change brake pads.	Always when the wear limit is reached					
7		Rear brake	• Check operation, fluid level and check for leaks.	√	√	√	√	√	√
			• Change brake pads.	Always when the wear limit is reached					
8	*	Brake line	• Check for cracks and damage.		√	√	√	√	√
			• Replace.	Every 4 years					
9	*	Wheels	• Check off-centre and damage.		√	√	√	√	
10	*	Tyres	• Check tread depth, check for damage. • Change if necessary. • Check tyre pressure. • Correct if necessary.		√	√	√	√	√
11		Wheel bearings	• Check if the bearings are loose or damaged.		√	√	√	√	
12		Steering bearings	• Check the bearing play and if the steering is difficult.	√	√	√	√	√	
			• Lubricate using lithium soap base grease.	Every 20,000 km					
13		Frame attachments	• Check that all of the nuts, pins and bolts are correctly tightened.		√	√	√	√	√
14		Side stand, centre stand	• Check operation. • Lubricate.		√	√	√	√	√
15		Side stand switch	• Check operation.	√	√	√	√	√	√
16	*	Front forks	• Check operation check for oil leaks.		√	√	√	√	
17		Shock absorbers	• Check operations and if the shock absorbers loose oil		√	√	√	√	
18	*	Carburettor	• Adjust the engine idle.	√	√	√	√	√	√
19		Engine oil	• Replace. (See page six 6-7.)	√	When the oil change indicator is lit (every 3000 kilometres)				
			• Check oil level, check for oil leaks.		Every 3,000 km				
20		Engine oil filter	• Clean.	√					
21	*	Cooling system	• Check coolant level, check for oil leaks.		√	√	√	√	√
			• Replace.	Every 3 years					
22		Final transmission oil	• Check for leaks.	√	√		√		
			• Replace.	√		√		√	
23	*	Trapezoidal belt	• Replace.	Every 20,000 km					

Nº		ELEMENT	VERIFICATION AND MAINTENANCE OPERATION	KILOMETER COUNTER READING (x 1.000 km)					ANNUAL REVISION
				1	10	20	30	40	
24		Front and rear brake switches	• Check operation.	√	√	√	√	√	√
25		Mobile elements and cables	• Lubricate.		√	√	√	√	√
26	*	Throttle grip and cable box	• Check operation and play. • Adjust the throttle cable play if necessary. • Lubricate the throttle grip and cable.		√	√	√	√	√
27		Silencer and exhaust tube	• Check that the bolted flange is correctly tightened.	√	√	√	√	√	
28		Lights, signals and witches	• Check operation. • Adjust the headlight.	√	√	√	√	√	√

NOTE:

- The air filter requires more frequent servicing when the vehicle is used in especially humid or dusty areas.
- Maintenance of hydraulic brakes
  - Check the brake fluid level regularly and corrected it if necessary.
  - Every two years, change the internal components of the break cylinder and of the calliper as well as the brake fluid.
  - Change the brake lines every four years or if there are damaged or cracked.

ELECTRIC DIAGRAM YP250R X-MAX



ELECTRIC DIAGRAM YP250R X-MAX

COLOUR CODE

B .....black
Br.....Brown
Ch.....Chocolate
Dg.....Dark green
G .....Green
Gy.....Grey
L .....Blue
O.....Orange
P .....Pink
R .....Red
Sb.....Sky blue
W .....White
Y .....Yellow
B/W.....Black / White
Br/G.....Brown / Green
BR/L .....Brown /Blue
G/R .....Green / Red
G/Y .....Green / Yellow
L/B.....Blue/Black
L/G.....Blue/Green
L/Y .....Blue/Yellow
L/W .....Blue/White
R/G .....Red/Green
R/W.....Red/White
R/Y.....Red/Yellow
W/B.....White/Black
W/L .....White/Blue
W/G .....White/Green
W/R.....White/Red
Y/R.....Yellow/Red

COMPONENTS

1 Main switch
2 generator
3 rectifier / regulator
4 battery
5
6 battery cable
7 starter relay
8 starter motor
9
10 speed sensor
11 atmospheric temperature sensor
12 ignition coil
13 ventilator radiator relay
14 water temperature sensor
15 front brake switch
16 front brake switch
17 side stand relay
18 side stand switch
19 diode
20 ECU relay
21 starter thermal switch
22 automatic starter
23 ventilator radiator motor
24 thermal switch for the radiator ventilator
25 registration light
26 right-hand rear light
27 left-hand side rear light
28 rear left indicator
29 rear right indicator
30 headlight relay
31 front headlight
32 front left-hand side indicator
33 front right-hand side indicator
34 fuse (ECU)
35 fuse (backup)
36 fuse (ignition)
37 fuse (signals)
38 fuse (front headlight)
39 fuse (ventilator)
40 horn
41 speedometer
42 starter motor switch
43 warning light switch
44 horn switch
45 indicator switch
46 light switch
47 DC CDI
48 Immobiliser 10 antenna
49 flasher relay
50 earth connection
51 fuel pump
52 Capacity gauge stick (OPTIONAL)
53 fuse (connection)
54 telephone connection
55 alarm unit
56 alarm LED

YAMAHA

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05.2005 (E)