YAMAHA MBK

YP125E 2003

5XL1-SE1

YP180E

SERVICE INFORMATION

EB000000

YP125E'03
YP180E'03
SERVICE INFORMATION

1st Edition, November 2002.

EB001000

NOTICE

This manual was produced by the Yamaha Motor España, S.A., primarily for use by Yamaha/MBK dealers and their qualified mechanics. It is not possible to include all the knowledge of a mechanic in one manual, so it is assumed that anyone who uses this book to perform maintenance and repairs on Yamaha/MBK scooter has a basic understanding of the mechanical ideas and the procedures of scooter repair. Repairs attempted by anyone without this knowledge are likely to render the scooter unsafe and unfit for use.

Yamaha Motor España, S.A., is continually striving to improve all its models. Modifications and significant changes in specifications or procedures will be forwarded to all authorized Yamaha/MBK dealers and will appear in future editions of this manual where applicable.

NOTE:

Designs and specifications are subject to change without notice.

IMPORTANT INFORMATION

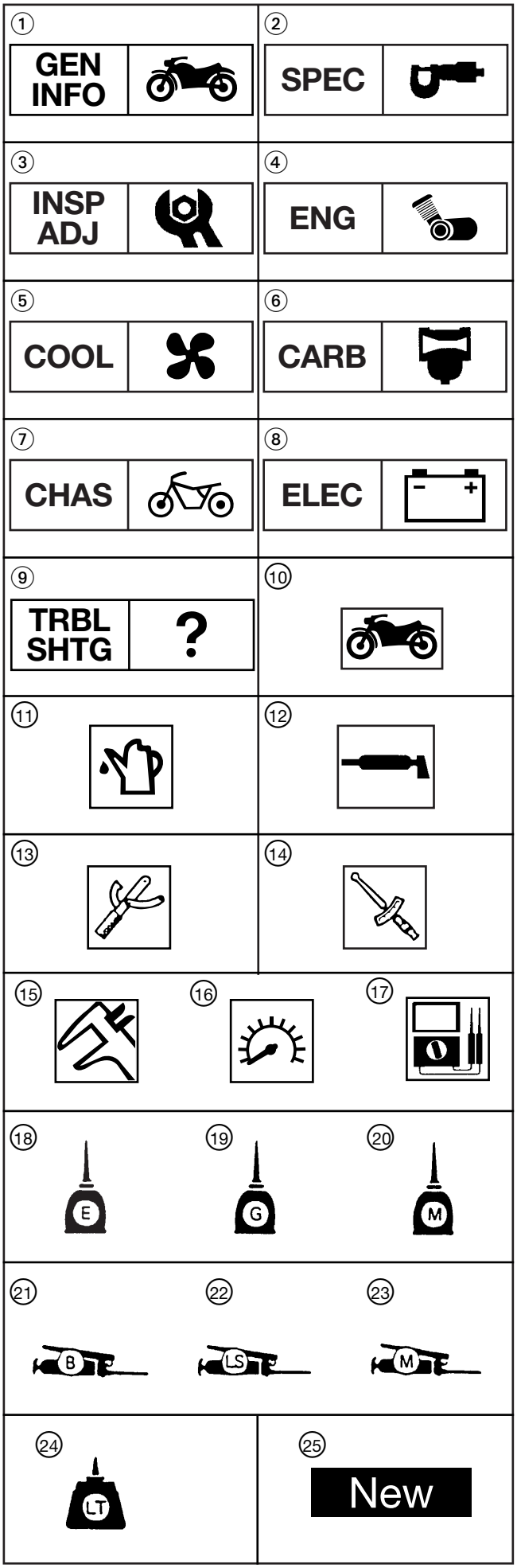
Particularly important information is distinguished in this manual by the following notations.

⚠ The Safety Alert Symbol means TTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!

⚠ WARNING Failure to follow WARNING instructions could result in severe injury or death to the scooter operator, a bystander or a person inspecting or repairing the scooter.

CAUTION: A CAUTION indicates special precautions that must be taken to avoid damage to the scooter.

NOTE: A NOTE provides key information to make procedures easier or clearer.



EB003000

ILLUSTRATED SYMBOLS

Illustrated symbols ① to ⑨ are designed as thumb tabs to indicate the chapeter's number and content.

① General information
② Specifications
③ Periodic checks and adjustments
④ Engine
⑤ Cooling system
⑥ Carburetion
⑦ Chassis
⑧ Electrical
⑨ Troubleshooting

Illustrate symbols ⑩ to ⑰ are used to identify the specifications appearing in the text.

⑩ Possible to maintain with engine mounted
⑪ Filling fluid
⑫ Lubricant
⑬ Special tool
⑭ Tightening
⑮ Wear limit, clearance
⑯ Engine speed
⑰ Ω, V, A

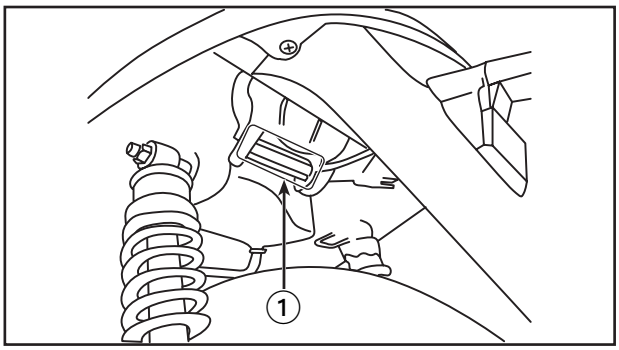
Illustrated symbols ⑱ to ㉓ in the exploded diagram indicate the types of lubricants and lubrication points.

⑱ Apply engine oil
⑲ Apply gear oil
⑳ Aply molybdenium disulfide oil
㉑ Apply wheel bearing grease
㉒ Apply lightweight lithium-soap grease
㉓ Apply molybdenium disulfide grease

Illustrated symbols ㉔ to ㉕ in the exploded diagram indicate the where to apply locking agent ㉔ and where to install new parts ㉕.

㉔ Apply locking agent (LOCTITE®)
㉕ Use new one

CONTENTS



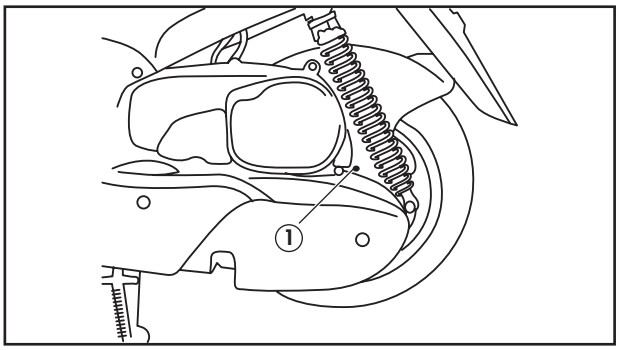
YP100000

GENERAL INFORMATION

SCOOTER IDENTIFICATION

YP100010

FRAME SERIAL NUMBER
The identification number (1) is stamped onto the frame.

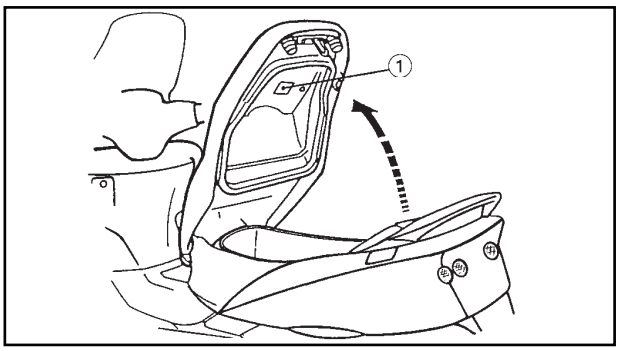


YP100020

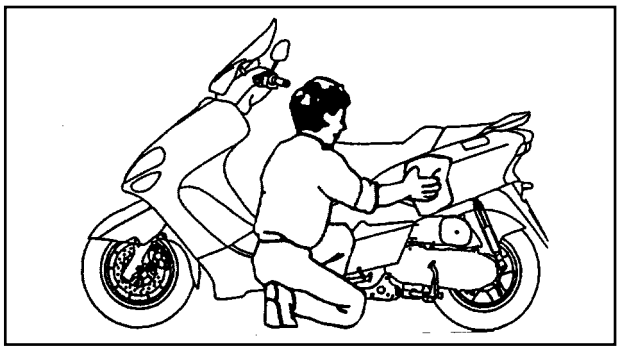
ENGINE SERIAL NUMBER
The engine serial number (1) is stamped onto the right side of the crankcase.

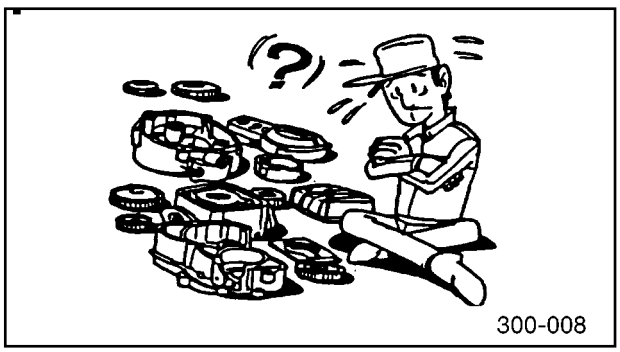
NOTE:

Design and specifications may change without notice.



MODEL LABEL
The model reference label (1) is affixed under the seat. This information will be needed to order sparre parts.



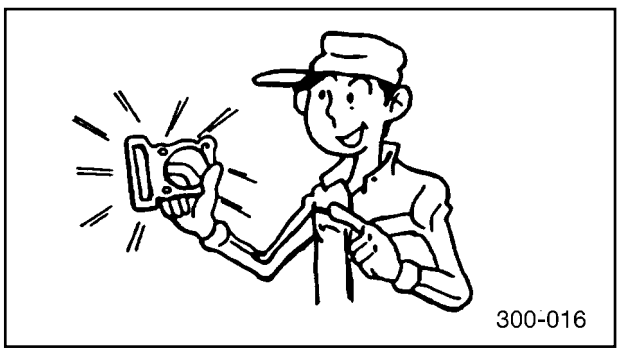


EB101000

IMPORTANT INFORMATION

PREPARATION FOR REMOVAL PROCEDURES

1. Remove all dirt, mud, dust and foreign material before removal and disassembly.
2. Use proper tools and cleaning equipment.
3. Refer to the “SPECIAL TOOLS” section.
4. When disassembling the machine, always keep mated parts together. This includes gears, cylinders, pistons and other parts that have been “mated” through normal wear. Mated parts must always be reused or replaced as an assembly.
5. During machine disassembly, clean all parts and place them in trays in the order o disassembly. This will speed up assembly and allow for the correct installation of all parts.
6. Keep all parts away from any source of fire.



EB101010

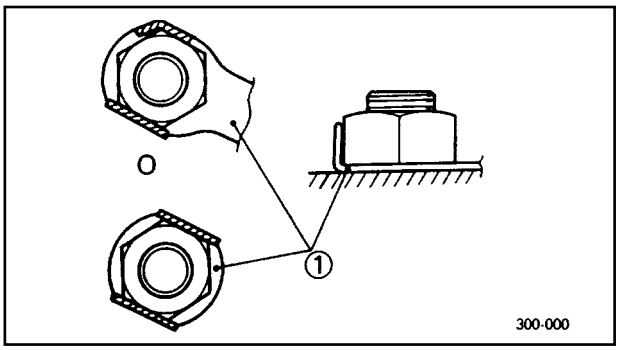
REPLACEMENT PARTS

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

EB101020

GASKETS, OIL SEALS AND O-RINGS

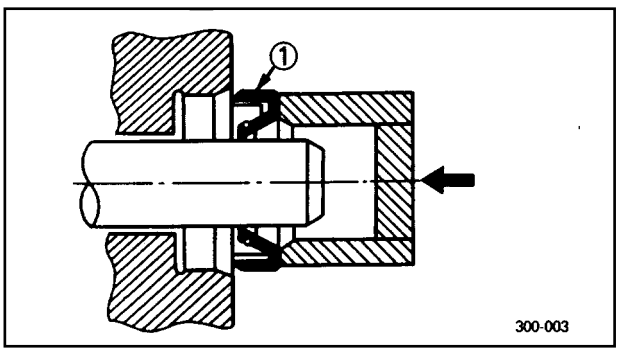
1. Replace all gaskets, seals and O-rings when overhauling the engine. All gasket surfaces, oil seal lips and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



EB101030

LOCK WASHERS/PLATES AND COTTER PINS

1. Replace all lock washers/plates ① and cotter pins after removal. Bend lock tabs along the bolt or nut flats after the bolt or nut has been tightened to specification.

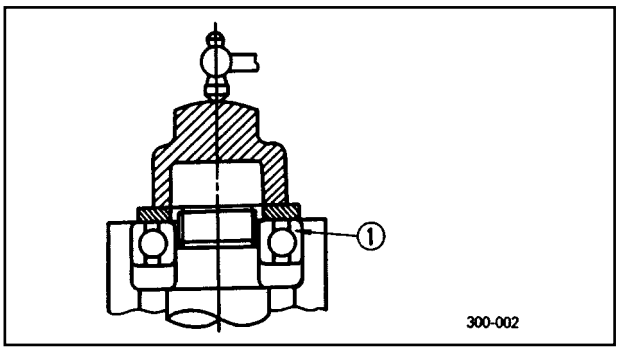


EB101040

BEARINGS AND OIL SEALS

Install bearings and oil seals so that the manufacturer's marks or numbers are visible. When installing oil seals, apply a light coating of lightweight lithium base grease to the seal lips. Oil bearings liberally when installing, if appropriate.

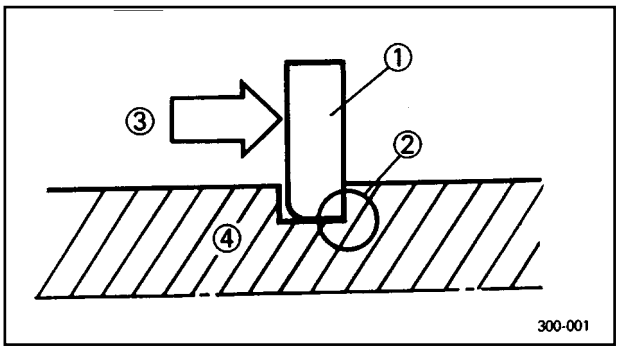
① Oil seal



CAUTION:

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

① Bearing

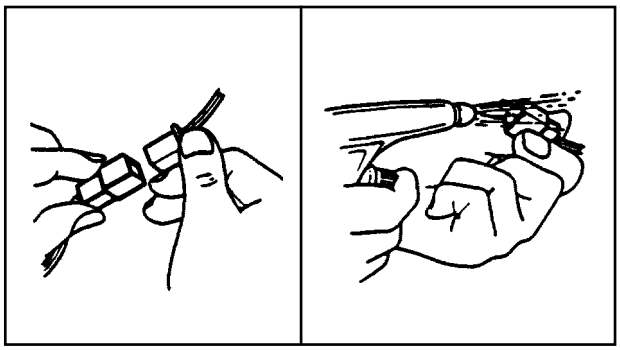


EB101050

CIRCLIPS

1. Check all circlips 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 the thurst ③ it receives. See sectional view.

④ Shaft

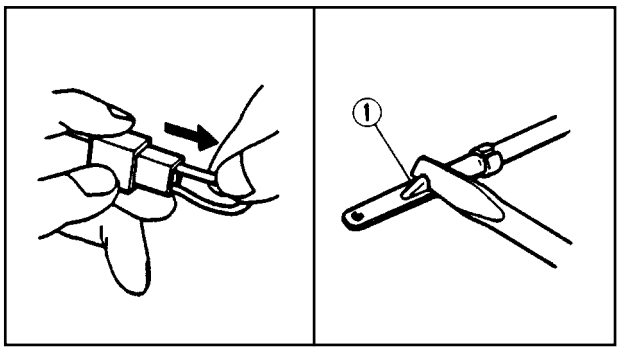


EB801000

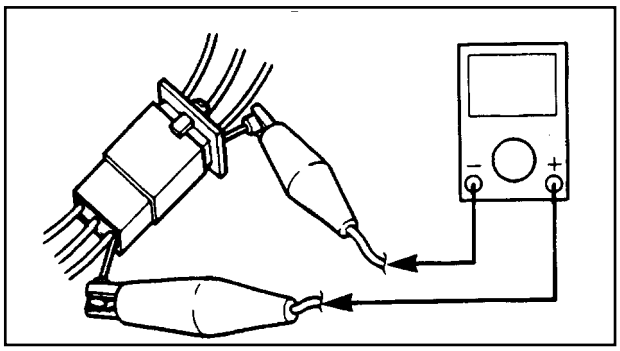
CHECKING OF CONNECTIONS

Dealing with stains, rust, moisture, etc. on the connector.

1. Disconnect:
   • Connector
2. Dry each terminal with an air blower.



3. Connect and disconnect the connector two or three times.
4. Pull the lead to check that it will not come off.
5. If the terminal comes off, bend up the pin ① and reinsert the terminal into the connector.

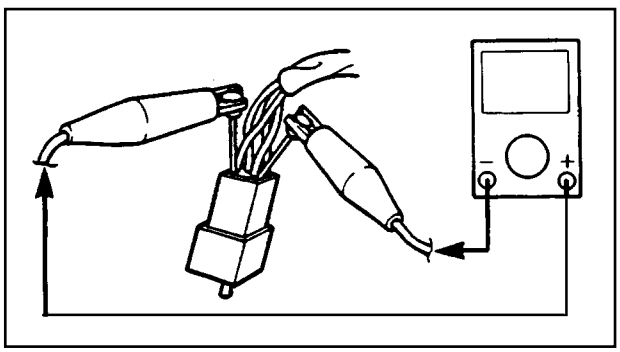


6. Connect:
   • Connector

NOTE:

The two connectors “click” together.

7. Check for continuity with a tester.



NOTE:

- If there is no continuity, clean the terminals.
- Be sure to perform the steps 1 to 7 listed above when checking the wireharness.
- For a field remedy, use a contact revitalizer available on the market.
- Use the tester on the connector as shown.

EB201000

HOW TO USE THE 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		IMP
** mm	x	0,03937	=	**in
2 mm	x	0,03937	=	0,08 in

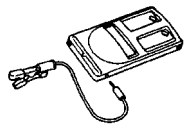
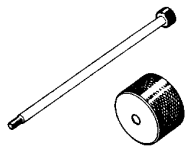
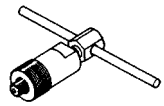
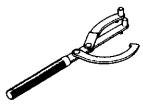
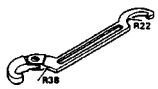
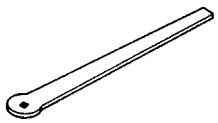
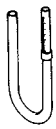
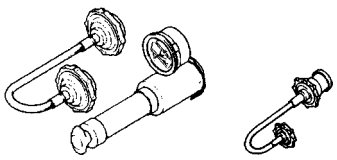
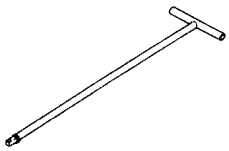
TABLA DE CONVERSIÓN

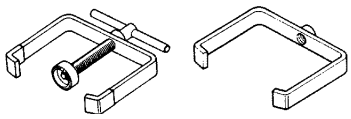
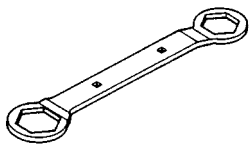
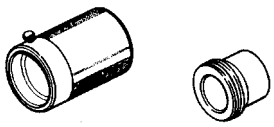
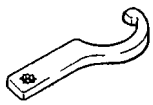
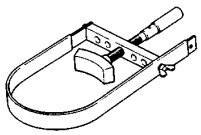
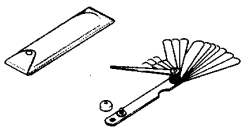
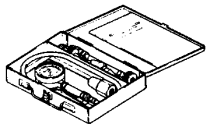
METRIQUES EN ANGLAISES			
	Connu	**Multiplicateur**	**Résultat**
Torque	m•kg m•kg cm•kg cm•kg	7,233 86,794 0,0723 0,8679	ft•lb in•lb ft•lb in•lb
Weight	kg g	2,205 0,03527	lb oz
Distance	km/h km m m cm mm	0,6214 0,6214 3,281 1,094 0,3937 0,03937	mph mi ft yd in in
Volume/ Capacity	cc (cm^3) cc (cm^3) lit (litre) lit (litre)	0,03527 0,06102 0,08799 0,2199	oz (IMP liq.) cu•in qt (IMP liq.) gal (IMP liq.)
Micescellaneous	kg/mm kg/cm^2 Centígrade	55,997 14,2234 9/5 (°C) + 32	lb/in psi (lb/in^2) Fahrenheit (°F)

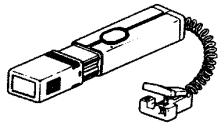
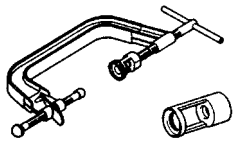
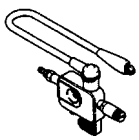
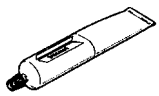
EB102000

SPECIAL TOOLS

The following special tools are necessary for complete and accurate tune-up and assembly.
Use only the appropriate special tools; this will help prevent damage caused by the use of inappropriate tools or improvised techniques.
When placing an order, refer to the list provided below to avoid any mistakes.

Tool No.	Tool name/Usage	Illustration
90793-80009	Engine tachometer This tools is needed for detecting engine rpm.	
90890-01083 -01084	Weight Rocker arm shaft puller bolt These tools are used when removing or installing the rocker arm shafts.	
90890-01189 flywheel magneto.	Rotor holding tool This tools is used to remove the	
90890-01235	Flywheel puller This tools is used for removing the rotor	
90890-01268	Ringnut wrench This tool is used to loosen and tighten the exhaust pipe.	
90890-01311	Valve adjusting tool This tools is necessary for adjusting valve clearance.	
90890-01312	Fuel level gauge This gauge is used to measure the fuel level in the float chamber.	
90890-01325 -01352	Radiator cap tester Adaptor These tools are used for checking the cooling system.	
90890-01326 -01294	T-handle Damper rod holder These tool are used for holding the damper rod holder when removing or installing the damper rod holder.	

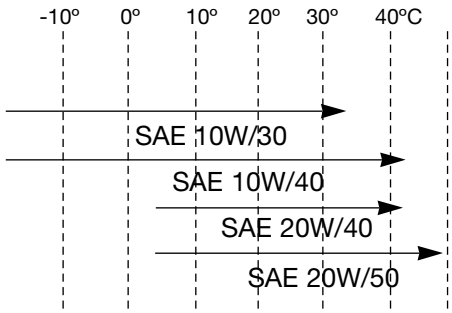
Tool No.	Tool name/Usage	Illustration
90890-01337 -01464	Clutch spring compressor These tools are used for removing the nut with holding the compression spring	
90890-01348	Locknut wrench This tool is used when removing or installing the secondary sheave nut.	
90890-01367 -01368	Fork seal driver weight Fork seal driver attachment (ø 33) This tool is used when installing the fork seal	
90890-01403	Ring nut wrench This tools is used to loosen and tighten the steering ring nut.	
90890-01701	Sheave holder This tool is used for holding the secondary sheave.	
90890-03079	Thickness gauge This tool is used to measure the valve clearance.	
90890-03081	Compression gauge These tools are used to measure the engine compression.	
90890-03112	Pocket tester These instruments are invaluable for checking the electrical system.	

Tool No.	Tool name/Usage	Illustration
90890-03141	Timing light This tools is needed for detecting ignition timing.	
90890-04101	Valve lapper This tools is used for removing and installing the lifter and for lapping the valve.	
90890-04019 -04108	Valve spring compressor Attachment These tools are used for removing or installing the valve and the valve spring.	
90890-04116	Valve guide puller	
90890-04117	Valve guide installer	
90890-04118	Valve guide reamer	
90890-06754	Ignition checker This instrument is necessary for checking the ignition system components.	
90890-85505	Yamaha bond No. 1215 This sealant (bond) is used for crankcase mating surface, etc.	

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YP125E	YP180E
Model code	5XL	5XM
Dimensions:		
Overall lenght	2,030 mm	
Overall width	745 mm	
Overall height	1,285 mm	
Seatheight	774 mm	
Wheelbase	1,480 mm	
Minimum ground clearance	102 mm	
Basic weight:		
With oil and full fuel tank	141 kg	
Engine:		
Engine type	Liquid cooled-4-stroke, SOHC	
Cylinder arrangement	Forward-inclined single cylinder	
Displacement	124,11 cm^3	175,6 cm^3
Bore x stroke	53,7 x 54,8 mm	62,2 x 57,8 mm
Compression ratio	11:1	
Starting system	Electrical starter	
Lubrication system:	Wet sump	
Oil type or grade:		
Engine oil	API STANDARD: SE or higher grade	
Standard type:	SAE 10W-30 or 10W-40	
Periodic oil change	1,3 L	
Total amount	1,4 L	
Transmission oil		
Standard type:	SAE 10W-30	
Total amount	0,15 l	
Radiator capacity:		
Total amount (including all routes)	1,1 L	
Air filter:		
Carburetor side	Dry tpe element	
Crankcase side	Wet type element	
Fuel:		
Type	Regular unleaded gasoline	
Fuel tank capacity	10,5 L	



Model		YP125E	YP180E
Carburetor:			
Type/quantity		Y28V-1K/1	Y28V-1L/1
Manufacturer		TEIKEI	
Spark plug:			
Type		CR8E	
Manufacturer		NGK	
Spark plug gap		0,7 ~ 0,8 mm	
Clutch type:		Dry, centrigual automatic	
Transmission:			
Primary reduction system		Helical gear	
Primary reduction ratio		40/15(2.666)	
Secondary reduction system		Sper gear	
Secondary reduction ratio		44/12 (3.666)	42/14 (3.000)
Transmission type		Single speed automatic (V-belt type)	
Operation		Centrifugal automatic type	
Chassis:			
Chassis type		Steel tube under-bone	
Caster angle		28°	
Trail		104 mm	
Tyre:			
Type		Tubeless	
Size	front	120/70-12 51 L	
	rear	130/70-12 56 L	
Tyre pressure (cold tire):			
Maximum load (excluding motorcycle)		183kg	
Loading condition A*		0 ~ 90kg	
	front	190 kPa (1,9 kg/cm^2, 1,9 bar)	
	rear	220 kPa (2,2 kg/cm^2, 2,2 bar)	
Loading condition B*		90 ~ kg	
	front	190 kPa (1,9 kg/cm^2, 1,9 bar)	
	rear	240 kPa (2,4 kg/cm^2, 2,4 bar)	

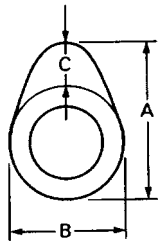
*Load is the total weigh of cargo, rider, passenger, and accessories.

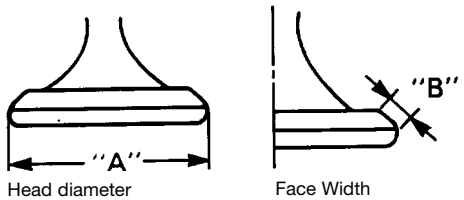
Model	YP125E	YP180E
Brake:		
Front brake		
type	Single disc brake	
operation	Right hand operation	
Rear brake		
type	Single disc brake	
operation	Left hand operation	
Suspension:		
Front suspension	Telescopic fork	
Rear suspension	Unit swing	
Shock absorber:		
Front shock absorber	Coil spring/oil damper	
Rear shock absorber	Coil spring/oil damper	
Wheel travel:		
Front wheel travel	90 mm	
Rear wheel travel	90 mm	
Electrical:		
Igntion system	CDI	
Generator	A.C. magneto	
Batter y type	CB7L-B2	
Batter y capacity	12V 8 AH	
Bullbs, wattage x quantity:		
Headlight	12V 35 W/35 W x 2	
Marker light	12 V 5W x 2	
Tail/brake light	12 V 5 W/21 W x 2	
Front flasher light	12V 21 W x 2	
Rear flasher light	12 V 10 W x 2	
Meter light	12V LED x 3	
Hight beam indicator light	12 V 3,4 W x 1	
Turn indiactor light	12V 3,4 W x 2	
Coolant temperature warning light	12V LED x 1	
License light	12V 5W x1	

MAINTENANCE SPECIFICATIONS

ENGINE

Item		Standard		Limit
		YP125E	YP180E	
Cylinder head:				
Warp limit		•••		0,03 mm
Cylinder:				
Bore size		53,700 ~ 53,715	62,200 ~ 62,215	•••
Out of round limit		•••		0,03 mm
Camshaft:				
Cam dimensions				
Intake	"A"	30,811 ~ 30,911 mm		30,711 mm
	"B"	25,145 ~ 25,245 mm		25,045 mm
	"C"	5,666 mm		•••
Exhaust	"A"	30,811 ~ 30,911 mm		30,711 mm
	"B"	25,152 ~ 25,252 mm		25,052 mm
	"C"	5,659 mm		•••
Camshaft runout limit		•••		0,03 mm
Cam chain:				
Cam chain type/No. of links		82 RH2005 / 94		•••
Rocker arm/rocker arm shaft:				
Rocker arm inside diameter		11,990 ~ 12,028 mm		•••
Shaft outside diameter		11,981 ~ 11,991 mm		•••
Arm-to-shaft clearance		0,009 ~ 0,037 mm		•••
Valve, valve seat, valve guide:				
Valve clearance (cold)	IN	0,10 ~ 0,14 mm		•••
	EX	0,16 ~ 0,20 mm		•••
Valve dimensions				
"A" Head diameter	IN	26,9 ~ 27,1 mm	28,9 ~ 29,1 mm	•••
	EX	22,9 ~ 23,1 mm	23,9 ~ 24,1 mm	•••
"B" Face width	IN	1,402 ~ 2,568 mm		•••
	EX	1,402 ~ 2,568 mm		•••
Stem outside diameter	IN	4,475 ~ 4,490 mm		•••
	EX	4,460 ~ 4,475 mm		•••
Stem inside dimater	IN	4,500 ~ 4,512 mm		•••
	EX	4,500 ~ 4,512 mm		•••





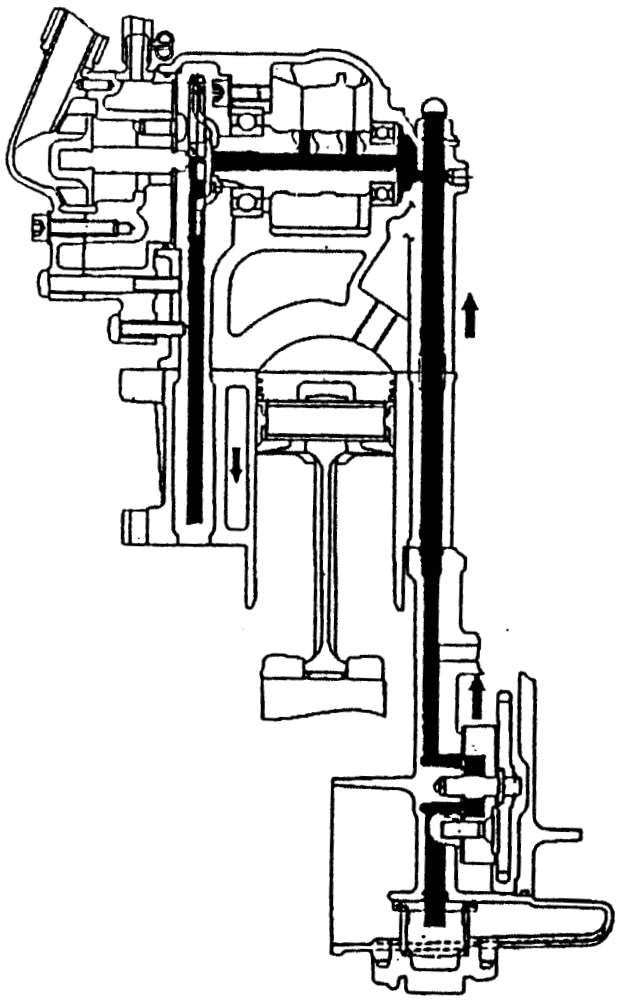
Item		Standard		Limit
		YP125E	YP180E	
Valve spring:				
Free length	IN/EX	41,94 mm		39,8 mm
Set length (valve closed)	IN/EX	37,5 mm		•••
Compressed pressure	IN/EX	45,1 - 50,9 kg		•••
Tilt	IN/EX	•••		2,5 ° / 1,9 mm
Piston:				
Piston to cylinder clearance		0,013 ~ 0,045 mm		0,15 mm
Piston size “D”		53,670~53,687 mm	62,170~62,187 mm	•••
Measuring point “H”		5 mm		•••
Piston pin bore in side diameter		15,002 ~ 15,013 mm		•••
Piston pin outside diameter		14,991 ~ 15,000 mm		•••
Piston rings:				
Top ring:				
Type		Barrel		•••
End gap (installed)		0,15 ~ 0,25 mm	0,15 ~ 0,30 mm	0,45 mm
Side clearance (installed)		0,03 ~ 0,07 mm		0,12 mm
2nd ring:				
Type		Taper		•••
End gap (installed)		0,15 ~ 0,30 mm	0,30 ~ 0,45 mm	0,45/0,70 mm
Side clearance (installed)		0,02 ~ 0,06 mm		0,12 mm
Oil ring:				
End gap (installed)		0,2 ~ 0,7 mm		•••
Crankshaft:				
Crank width “A”		47,95 ~ 48,00 mm	48,95 ~ 49,00 mm	•••
Runout limit “C”		0,03 mm		•••
Big end side clearance “D”		0,15 ~ 0,45 mm		•••

Item		Standard		Limit
		YP125E	YP180E	
Automatic centrigual clutch:				
Clutch shoe tickness		2,0 mm	2,75 mm	1/1,75 mm
Clutch shoe spring free length		28,5 mm	32 mm	•••
Clutch - in revolution		3800±250 r/min	3400±250 r/min	•••
Cluth - stall revolution		5800±500 r/min	5300±500 r/min	•••
V-belt:				
V-belt width		21 mm		•••
Carburetor:				
Type		Y28V-1K	Y28V-1L	
I.D. mark		5XL	5XM	•••
Main jet	(M.J.)	# 112	# 112	•••
Main air jet	(M.A.J.)	ø 0,9	ø 0,9	•••
Jet needle	(J.N.)	5D34-3/5	5D35-3/5	•••
Pilot air jet	(P.A.J.1)	ø 1,2	ø 1,1	•••
Needle Jet	(N.J.)	ø 2,585	ø 2,585	•••
Pilot jet	(P.J.)	# 38	# 44	•••
Pilot screw	(P.S.)	3 3/4 ± 1/2	1 3/4 ± 1/2	•••
Valve seat size	(V.S.)	2,5 mm	2,5 mm	•••
Starter jet 1	(G.S.1)	# 45	# 45	•••
Engine idle speed		1700 ~ 1900 rpm	1600 ~ 1800 rpm	•••
Intake vacuum		200 ~ 260 mmHg	280 ~ 340 mmHg	•••
Oil temperature		65 ~ 75 ºC		•••
Coolant temperature		75 º ~ 85 º C		•••
CO%		2 ~ 4 %	2,5 ~ 4,5%	•••
Oil pump				
Type		Trochoid type		•••
Tip clearance		•••		0,15 mm
Side clearance		•••		0,17 mm
Housing and rotor clearance		•••		0,07 mm
Radiator:				
Type		Cooling fin with electric fan		•••
Width/height/thickness		166,4/220/23		•••
Radiator cap opening pressure		110 kPa (1,1 kg/cm^2 ,1,1 bar)		•••
Reservoir tank capacity		1,2 L		•••

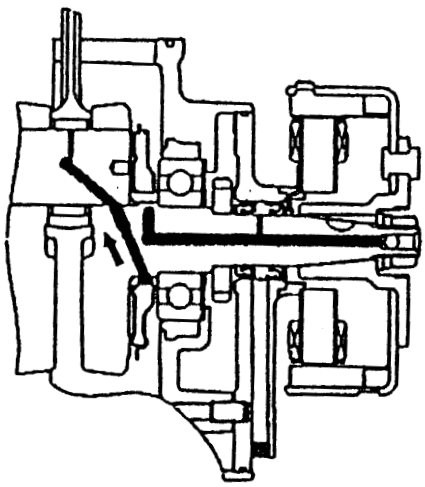
LUBRICATION DIAGRAM

1) Cylinder head lubrication
2) Crankshaft lubrication

1



2

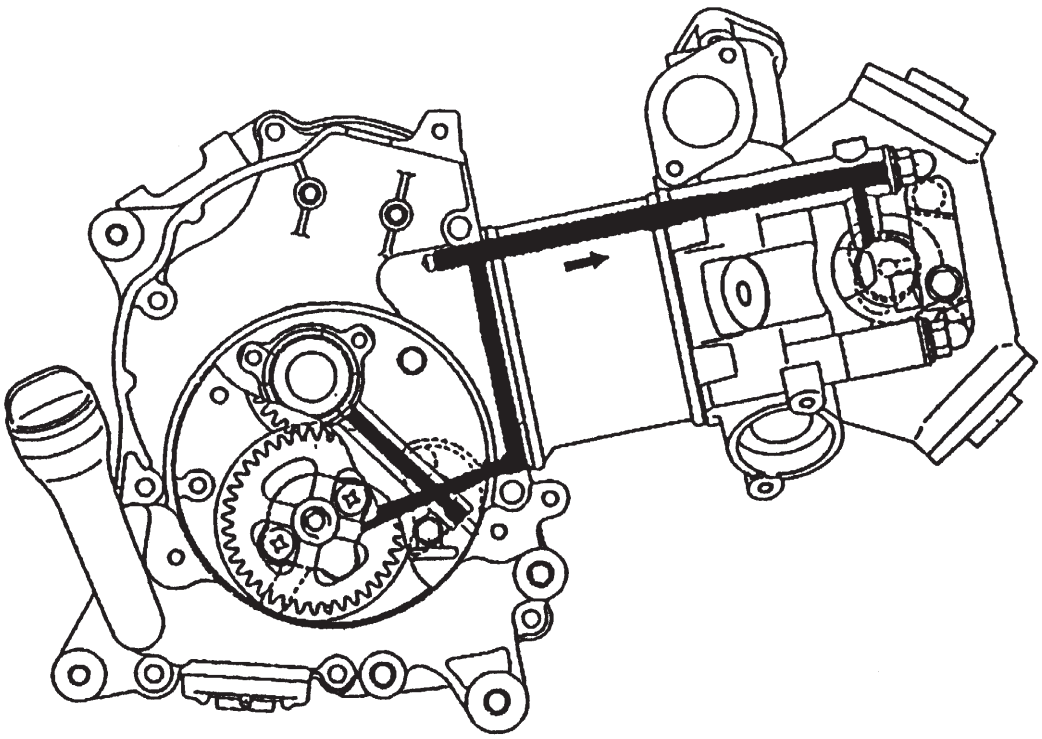


LUBRICATION DIAGRAM

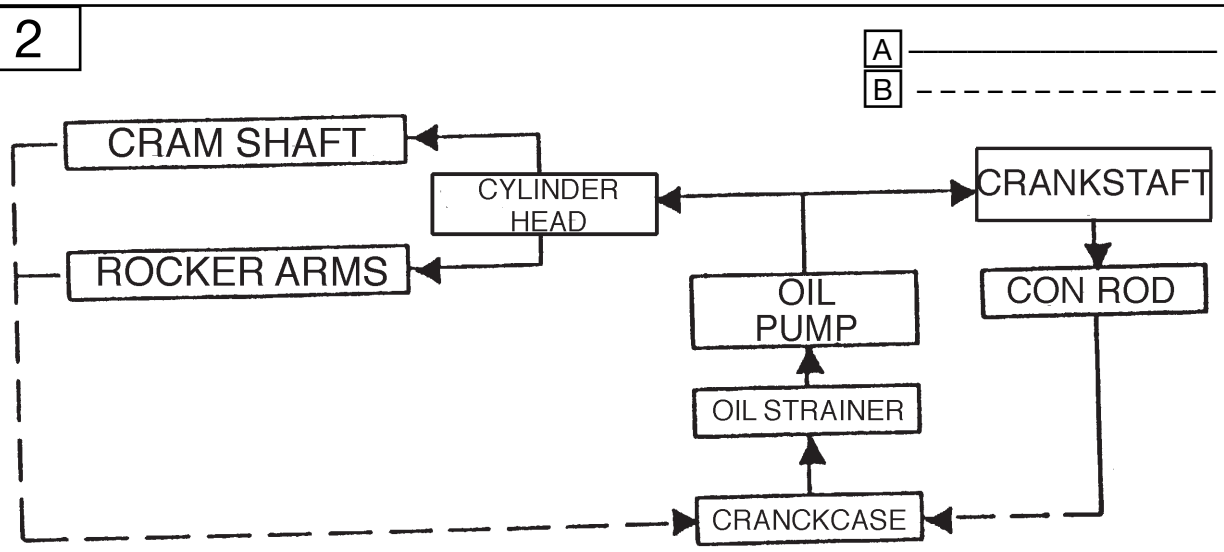
1) Oil routing
2) Lubrication chart

A Pressure circuit
B Oil overflow circuit

1



2



TIGHTENING TORQUES

ENGINE

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque		Remarks
				Nm	m•kg	
Oil check bolt	—	M6	1	9	0,9	
Exhaust pipe stud bolt	—	M6	2	7	0,7	
Spark plug	—	M10	1	12,5	1,25	
Cylinder head and cylinder	Nut	M8	4	22	2,2	
Cylinder head and cylinder (Cam chain side)	Bolt	M6	2	12	1,2	
Rotor	Nut	M12	1	70	7,0	
Drain bolt (water)	Bolt	M6	2	9	0,9	
Cam shaft bearing stopper	Bolt	M6	2	12	1,2	
Cam sprocket	Bolt	M8	1	30	3,0	
Cam chain tensioner	Bolt	M6	2	6,5	0,65	
Rocker arm axle stopper	Bolt	M6	1	10	1,0	
Water pump housing cover	Bolt	M6	4	10	1,0	
Water pump	Bolt	M6	3	7	0,7	
Thermostatic valve cover	Bolt	M6	2	10	1,0	
Oil pump	Screw	M6	2	6,5	0,65	
Oil pump cover	Bolt	M6	3	6,5	0,65	
Drain plug	Bolt	M35	1	32	3,2	
Carburetor joint	Bolt	M5	2	10	1,0	
Fuel pump	—	M6	2	10	1,0	
Exhaust pipe	Nut	M6	2	10	1,0	
Muffler	Nut	M8	2	31	3,1	
Exhaust pipe clamp	Bolt	M8	1	19	1,9	
Protector (Muffler)	Screw	M8	1	14	1,4	
Protector (Exhaust pipe)	Screw	M6	3	14	1,4	
Crankcase (left and right)	Bolt	M6	8	9	0,9	
Drain bolt	Bolt	M8	1	22	2,2	
Transmission case cover	Bolt	M6	6	10	1,0	
Crankcase cover (left)	Bolt	M6	11	10	1,0	
Crankcase filter cover	Bolt	M6	3	7	0,7	
Crankcase cover protector	Bolt	M6	2	7	0,7	
Magnet cover	Bolt	M6	3	7	0,7	

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque		Remarks
				Nm	m•kg	
Cylinder	Bolt	M6	1	12	1,2	
Cylinder	Screw	M8	4	12,5	1,25	
Cluth boss	Nut	M14	1	60	6,0	
Cluth shoes	Nut	M36	1	90	9,0	
Primary pulley	Nut	M12	1	55	5,5	
Cluth housing	Nut	M14	1	60	6,0	
Stator	—	M6	3	7	0,7	
Pick up coil	—	M6	2	7	0,7	
Starter motor	Bolt	M6	2	6,5	0,65	
Thermo switch	—	M16	2	22,5	2,25	
Thermo unit	—	Pt1/8	1	7,5	0,75	

CHASSIS

Item	Standard		Limit
	YP125E	YP180E	
Steering system:			
Steering bearing type	Ball bearing		•••
Front suspension:			
Front fork travel	90 mm		•••
Fork spring free length	287,4 mm		281,7 mm
Spring rate (K1)	5,4 N/mm (0,54 kg/mm)		•••
Stroke (K1)	0 ~ 80 mm		•••
Oil capacity	125 cm^3		•••
Oil level	85 mm		•••
Oil grade	Fork oil SAE 20 or equivalent		•••
Inner tube vend limit	•••		0,2 mm
Rear suspension:			
Shock absorber stroke	90 mm		•••
Spring free length	266 mm		257 mm
Fitting length	247 ± 1 mm		•••
Spring rate (K1)	11 N/mm (1,1 kg/mm)		•••
Spring stroke (K1)	0 ~ 90 mm		•••
Front wheel:			
Type	Cast wheel		•••
Rim size	MT3,50 x 12		•••
Rim material	Aluminium		•••
Rim runout limit			
radial	•••		1 mm
lateral	•••		0,5 mm
Rear wheel:			
Type	Cast wheel		•••
Rim size	MT3,50 x 12		•••
Rim material	Aluminium		•••
Rim runout limit			
radial	•••		1 mm
lateral	•••		0,5 mm
Front disc brake:			
Type	Single disc		•••
Disc outside diameter x thickness	220 x 4,5 mm		4 mm
Pad thickness	4,5 mm		0,8 mm
Master cylinder inside diameter	13 mm		•••
Caliper cylinder outside diameter	28 mm x 2		•••
Brake fluid type	DOT 4		•••
Rear disck brake:			
Type	Single disc		•••
Disc outside diameter x tickness	190 x 5,0 mm		•••
Pad thickness	4,5 mm		0,5 mm
Master cylinder inside diameter	12 mm		•••
Caliper cylinder outside diameter	32 mm x 1		•••
Brake fluid type	DOT 4		•••
Front brake lever:			
Brake lever free play (front at lever side)	2 ~ 5 mm		•••
Rear brake lever:			
Brake lever free play (front at lever side)	2 ~ 5 mm		•••
Throttle cable:			
Free play	3 ~ 5 mm		•••

TIGHTENING TORQUES

CHASSIS

Part to be tightened	Thread size	Tightening torque		Remarks
		Nm	m•kg	
Frame and engine swingarm	M10 x 1,25	40	4,0	
Swingarm and engine bracket	M10 x 1,25	32	3,2	
Engine and engine bracket	M10 x 1,25	55	5,5	
Sidestand (bolt and frame)	M10 x 1,25	23	2,3	
Sidestand (bolt and nut)	M10 x 1,25	40	4,0	
Swingarm	M 8 x 1,25	28	2,8	
Rear shock absorber and frame	M10 x 1,25	32	3,2	
Rear shock absorber and engine	M 8 x 1,25	35	3,5	
Steering ring nut	M25 x 1,0	22	2,2	See “note””
Handle set screw	M10 x 1,25	42	4,2	
Brake hose and master cylinder	M10 x 1,25	26	2,6	
Fuel sender	M 5 x 0,8	65	0,65	
Plastic parts & cover	M 5	2	0,2	
Front wheel axle and nut	M12	70	7	
Rear wheel axle and nut	M14	105	10,5	
Front brake caliper and front fork	M 8	23	2,3	
Front brake disc and hub	M 8	23	2,3	
Brake hose and caliper	M10 x 1,25	30	3,0	
Rear brake bracket (swingarm/caliper bracket)	M8	28	2,8	
Rear brake disck	M8	23	2,3	
Caliper bracket / Rear brake caliper	M8	28	2,8	
Brake caliper and bleed screw	M 7	6	0,6	

NOTE:

1. First, tighten the ring nut (lower) approximately 38 Nm (3.8 m•kg) by using the torque wrech, then loosen the ring nut 1/4 turn.
2. Second, tighten the ring nut (lower) approximately 22 Nm (2.2 m•kg) by using the torque wrench, then finger tighten the ring nut (center). Align the slots of both ring nuts and install the lock washer.
3. final, hold the ring nuts (loser and center) and tighten the ring nut (upper) 75 Nm (7.5 m•kg) by using the torque wrench.

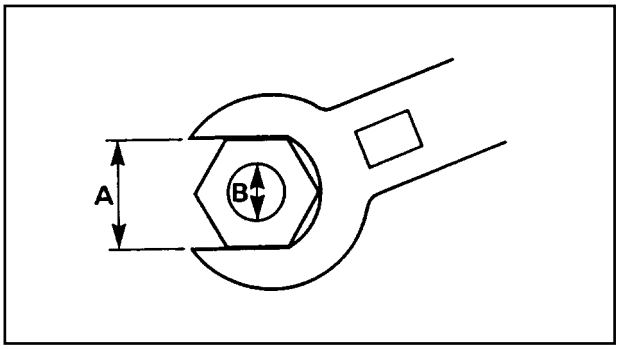
ELECTRICAL

Item	Standard		Limit
	YP125E	YP180E	
Igntion timing:			
Igntion timing (B.T.D.C.)	10º at 1800 r/min		•••
Advanced timing (B.T.D.C.)	26º at 8000 r/min		•••
Advanced type	Electrical type		•••
CDI:			
Pickup coil resistance/color	248 ~ 372 Ω at 20 ºC/ White/Red - White/Blue		•••
Source coil resistance/color	720 ~ 1,080 Ω at 20 °C/ Brown/Green - White		•••
Unit model/manufacturer	/MORIC		
Ignition coil:			
Minimum spark gap	6 mm		•••
Primary winding resistance	0,19 ~ 0,27 Ω at 20 ºC		•••
Secondary winding resistance	6,3 ~ 9,5 kΩ at 20 °C		•••
Spark plug cap:			
Type	Resin type		•••
Resistance	10 KΩ		•••
Charging system:			
Type	A.C. magneto		•••
Normal output	14 V 170w at 5.000 r/min		•••
Stator coil resistance/color	0,6 ~0,9 Ω at 20 ºC/ White - White		•••
Rectifier/regulator:			
Model/manufacturer	SH640 FA / SHINDENGUEN		•••
No load regulated voltage	14,5 V		•••
Capacity	25 A		•••
Withstand voltage	200 V		•••
Battery:			
Specific gravity	1,280		•••
Electric starter system:			
Type	Constant mesh type		
Starter motor			
Model / manufactuter	DUCATI	MORIC	
Operation voltage	12 V		•••
Output	0,3 kW		•••
Armature coil resistance	0,0306 ~ 0,0374 Ω at 20 ºC		•••
Brush overall lengt	9,5 mm		3,5 mm
Brush quantity	2 pcs.		•••
Spring force	563 ~ 843 g		563 g
Commutator diameter	22 mm		21 mm
Mica undercut (depth)	1,5 mm		•••

Item		Standard		Limit
		YP125E	YP180E	
Starter relay:				
Model/manufacturer		3 MW/JIDECO		•••
Amperage rating		100 A		•••
Coil winding resistance		4,2 ~ 4,6 Ω at 20 °C		•••
Horn:				
Model/manufacturer		K80N/LEB		•••
Maximum amperage		4 A		•••
Flasher relay:				
Type		Electronic		•••
Model/manufacturer		5SE/GUILERA		•••
Flasher frequency		60 ~ 120 cycle/min		•••
Wattage		10W+21W+1,2W		•••
Fuel gauge:				
Model/manufacturer		5DS/JORDA IND.		•••
Sender unit resistance	-Full	4 ~ 10 Ω		•••
	-Empty	100 ~ 90 Ω		•••
Circuit breaker:				
Type		Fuse		•••
MAIN		20 A x 1 pc.		•••
FAN		4 A x 1 pc.		•••
Reserve		20 A x 1 pc.		•••
		4 A x 1 pc.		•••

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 shoud be at room temperature.

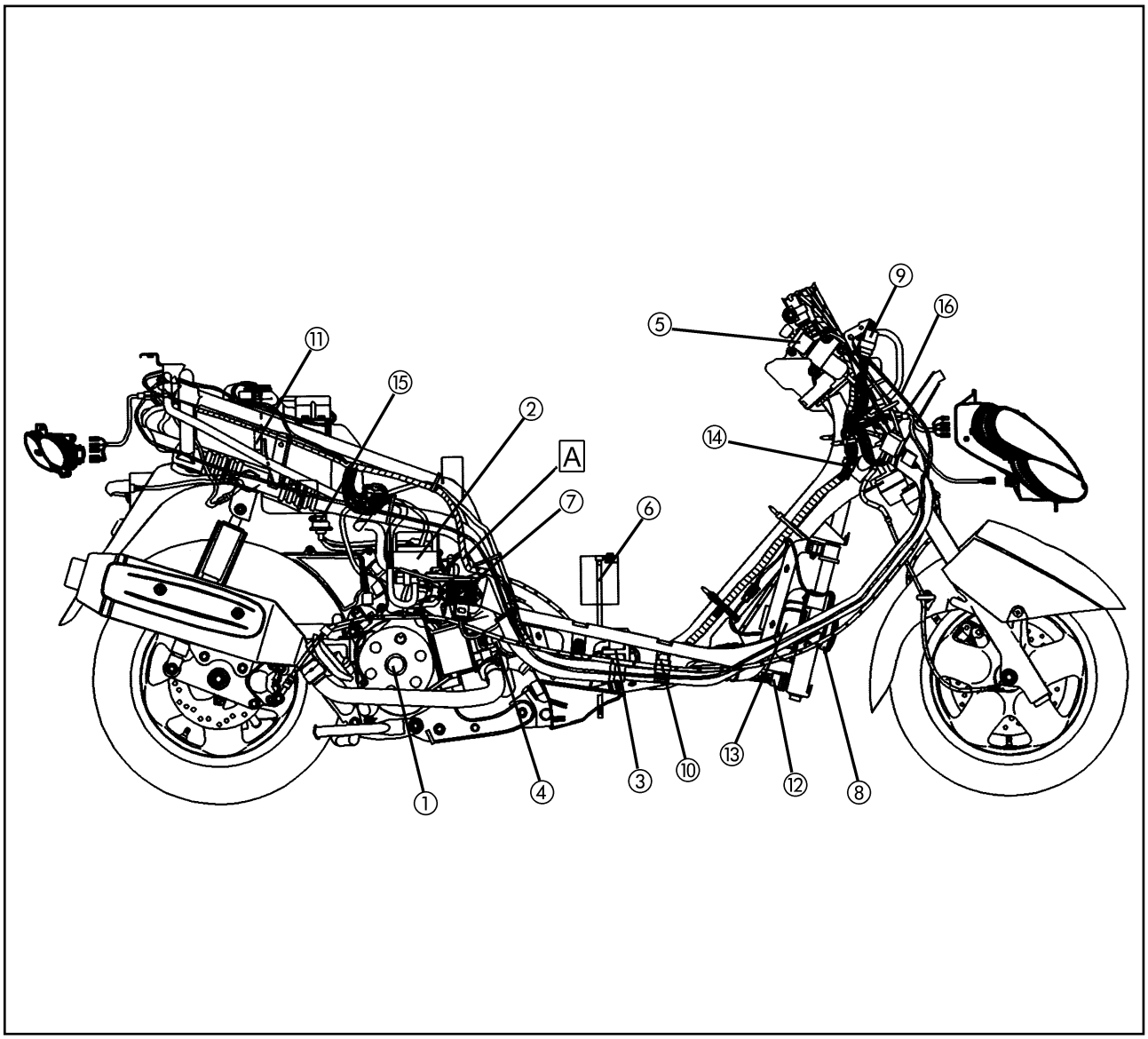


A: Distance across flats
B: Outside thread diameter

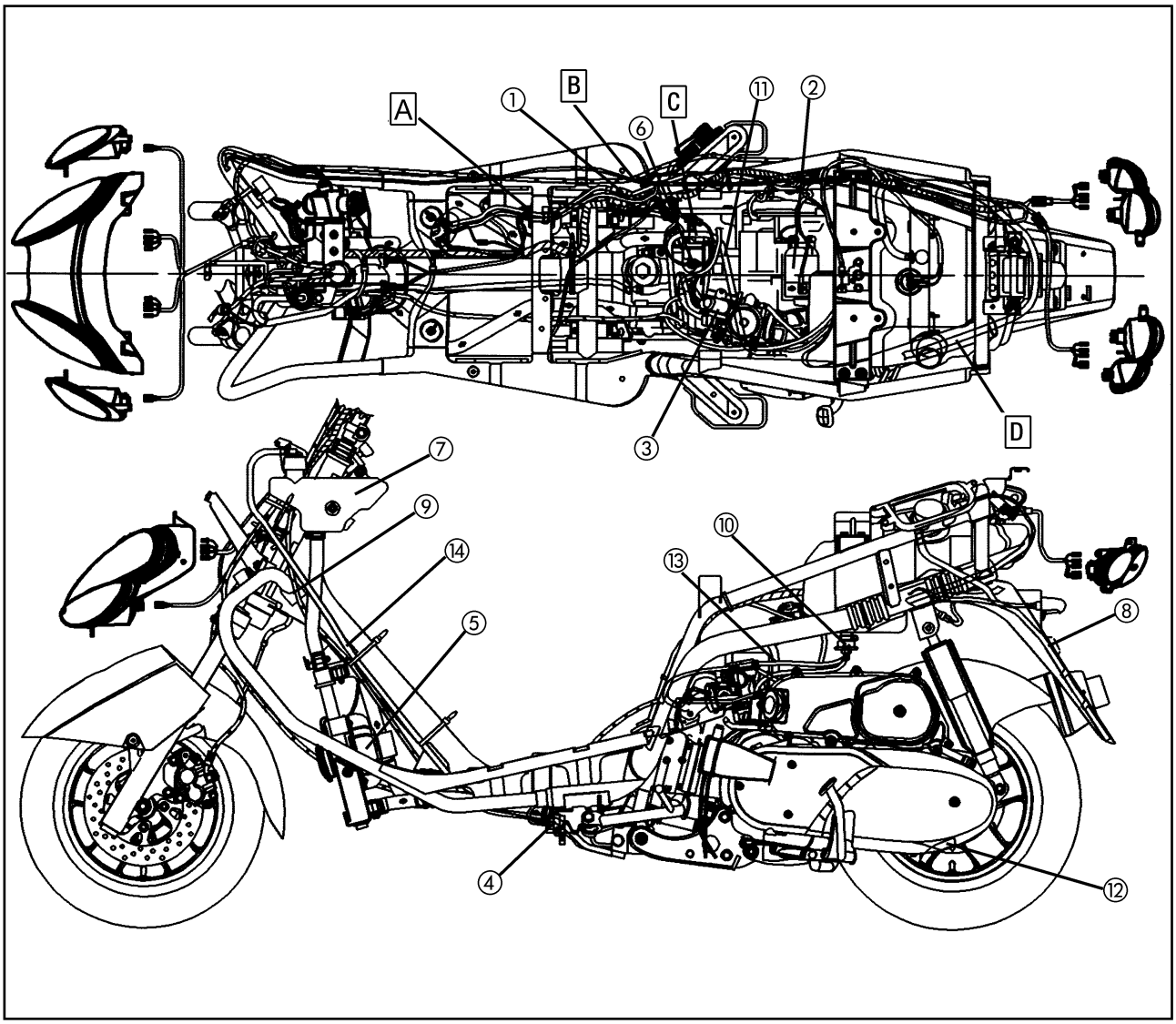
A (Nut)	B (Bolt)	General torque specifications	
		Nm	m• kg
10 mm	6 mm	6	0,6
12 mm	8 mm	15	1,5
14 mm	10 mm	30	3,0
17 mm	12 mm	55	5,5
19 mm	14 mm	85	8,5
22 mm	16 mm	130	13,0

CABLE ROUTING

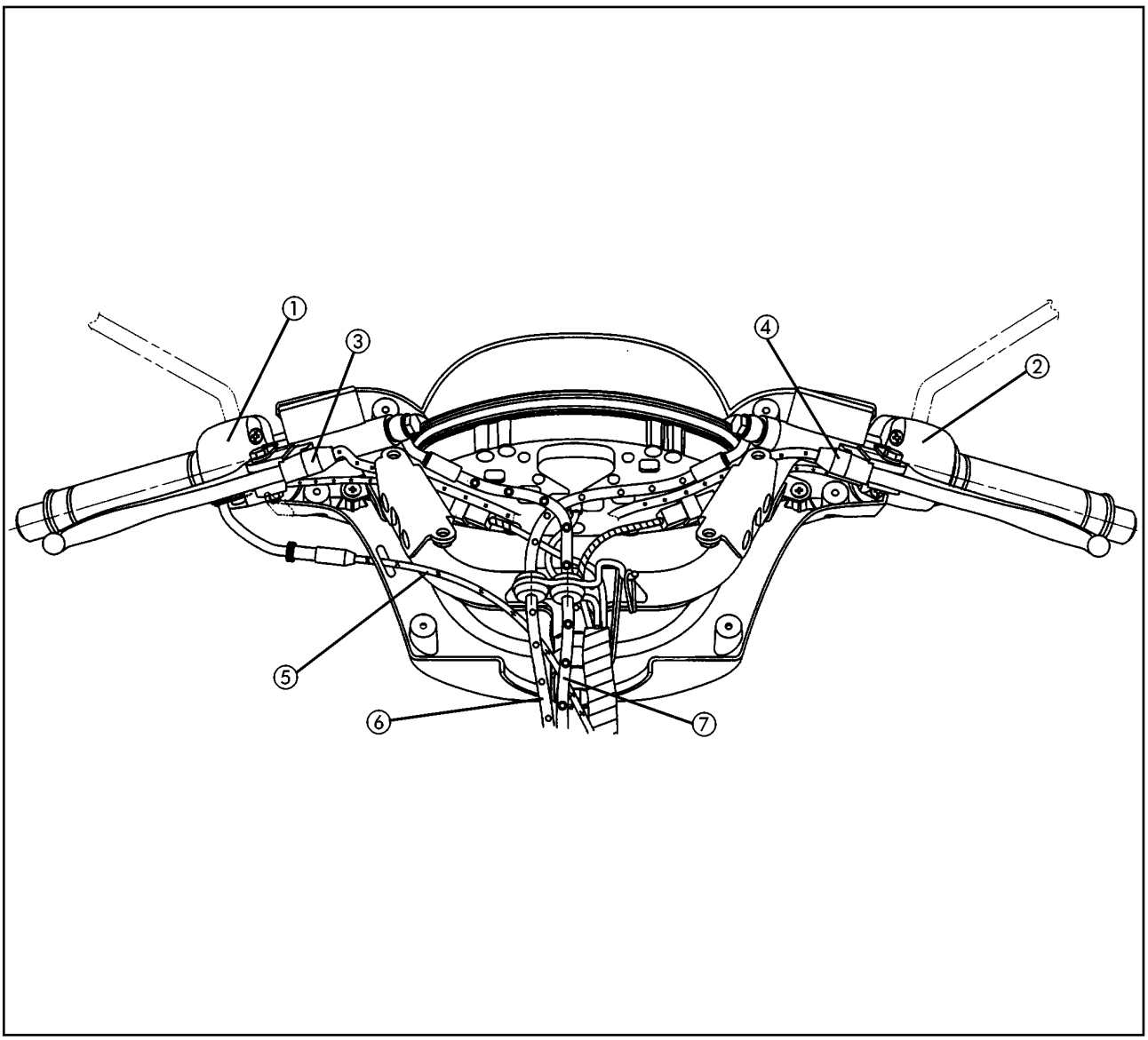
① CDI flywheel
② CDI unit
③ Ignition coil
④ Spark plug
⑤ Main switch
⑥ Battery
⑦ Regulator/rectifier
⑧ Horn
⑨ Flasher relay
⑩ Sidestand relay
⑪ Fuel sender
⑫ Fan thermoswitch
⑬ Fan
⑭ Anti-theft connections
⑮ Fuel cock
⑯ Seat lock cable
Ⓐ Place the wire harness as shown to prevent it from getting pinched by the helmet box carrier.



① Starter relay
② Starter motor
③ Autochoke
④ Sidestand switch
⑤ Fan
⑥ Thermoswitch (temperature)
⑦ Recovering tank
⑧ Fuel overflow pipe
⑨ Throttle cable
⑩ Fuel filter
⑪ Pipe 1 (engine breather)
⑫ Engine transmission overflow pipe
⑬ Vacuum hose for the cock
⑭ Radiator overflow pipe
A Tighten together the ground cable and the ignition coil.
B Clamp the main harness and the sidestand switch cable to the frame.
C Pass pipe 1 through the clamp.
D Insert the breather pipe into the frame.



① Right handlebar switch
② Left handlebar switch
③ Front brake switch
④ Rear brake switch
⑤ Throttle cable
⑥ Rear brake hose
⑦ Front brake cable



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PERIODIC MAINTENANCE AND LUBRICATION CHART

NOTE:

- The annual checks must be performed every year, except if a kilometer-based maintenance is performed instead.
- From 30,000 km, repeat the maintenance intervals starting from 6,000 km.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

No		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1.000 km)					ANUAL CHECK
				1	6	12	18	24	
1	*	Fuel line	• Check fuel hoses and vacuum hose for cracks or damage		√	√	√	√	√
2	*	Fuel filter	• Check condition			√		√	
3		Spark plug	• Check condition • Clean and regap		√		√		
			• Replace			√		√	
4	*	Valves	• Check valve clearance • Adjust			√		√	
5		Air filter element	• Clean		√		√		
			• Replace			√		√	
6		V-belt case air filter element	• Clean		√	√	√	√	
7	*	Battery	• Check electrolyte level and specific gravity • Make sure that the breather hose is properly routed		√	√	√	√	√
8	*	Front brake	• Check operation, fluid level and vehicle for fluid leakage (See NOTE on page 28)	√	√	√	√	√	√
			• Replace brake pads.	Whenever worn to the limit					
9	*	Rear brake	• Check operation, fluid level and vehicle for fluid leakage (See NOTE on page 28)	√	√	√	√	√	√
			• Replace brake pads.		Whenever worn to the limit				
10	*	Brake hoses	• Check for cracks or damage		√	√	√	√	√
			• Replace. (See NOTE on page 6-4)		Every 4 years				
11	*	Wheels	• Check runout and for damage		√	√	√	√	
12	*	Tires	• Check tread depth and for damage • Replace if necessary • Check air pressure • Correct if necessary		√	√	√	√	
13	*	Wheel bearings	• Check bearing for looseness or damage		√	√	√	√	

No		ITEM	CHECK OR MAINTENANCE JOB	ODOMETER READING (x 1.000 km)					ANUAL CHECK
				1	6	12	18	24	
14	*	Steering	• Check bearing play and steering for roughness	√	√	√	√	√	
		bearings	• Lubricate with lithium-soap-based grease	Every 24,000 km					
15	*	Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened		√	√	√	√	√
16		Sidestand/ centerstand	• Check operation • Lubricate		√	√	√	√	√
17	*	Sidestand switch	• Check operation	√	√	√	√	√	√
18	*	Front fork	• Check operation and for oil leakage		√	√	√	√	
19	*	Rear shock absorber assemblies	• Check operation and shock absorbers for oil leakage		√	√	√	√	
20	*	Carburetor	• Check starter (choke) operation • Adjust engine idling speed	√	√	√	√	√	√
21		Engine oil	• Change	√	When the oil change indicator light comes on (every 3,000 km)				
22	*	Engine oil strainer	• Clean	√		√		√	
23	*	Cooling system	• Check coolant level and vehicle for coolant leakage		√	√	√	√	√
			• Change	Every 3 years					
24		Final gear oil	• Check oil level and vehicle for oil leakage	√	√		√		
			• Change	√		√		√	
25	*	V-belt	• Change			√		√	
26	*	Front and rear brake switches	• Check operation	√	√	√	√	√	√
27		Moving parts and cables	• Lubricate		√	√	√	√	√
28	*	Muffler and exhaust pipe	• Check the screw clamp for looseness		√	√	√	√	
29	*	Lights, signals and switches	• Check operation • Adjust headlight beam	√	√	√	√	√	√

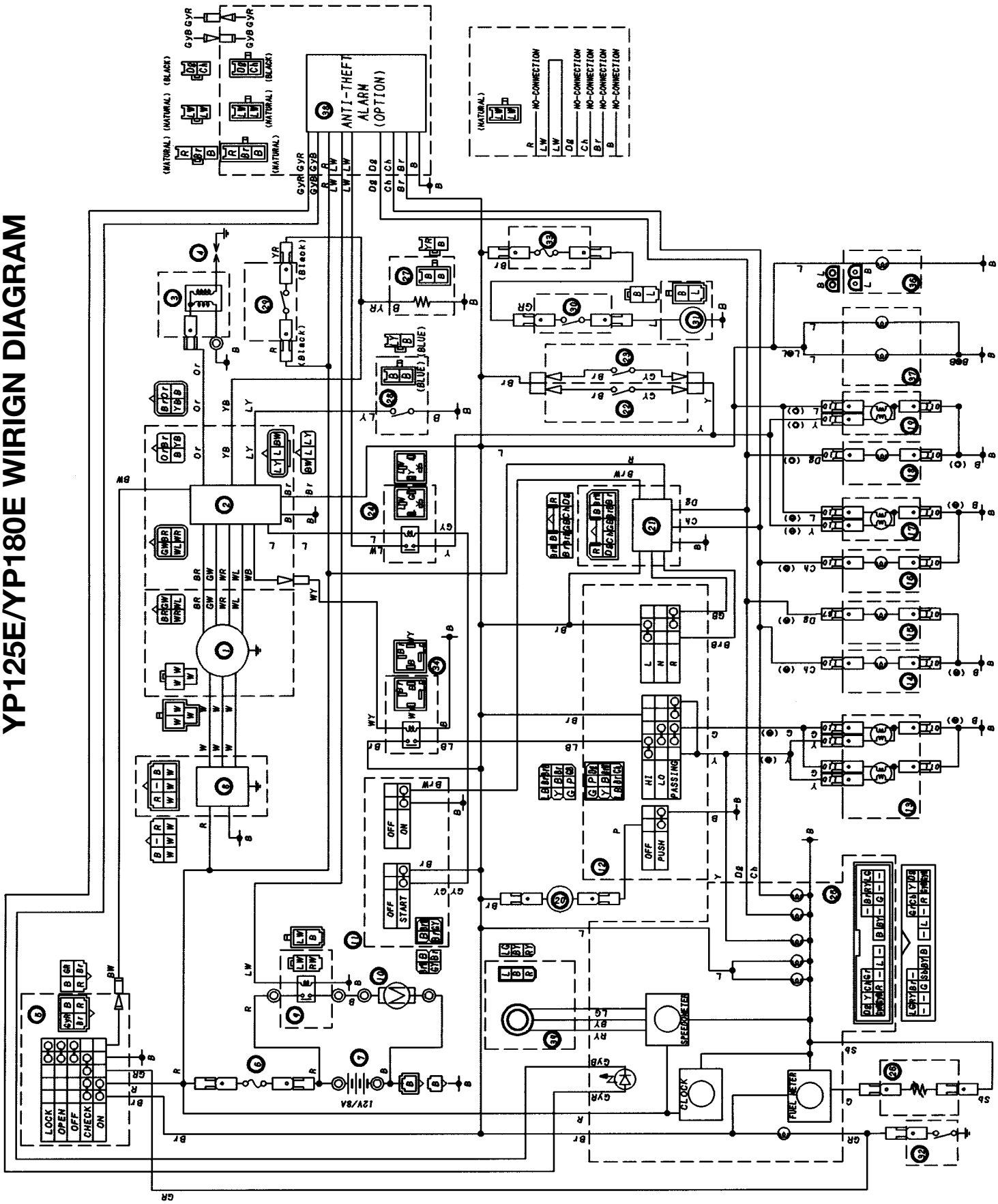
EAUS0029*

NOTE:

- The air filter and V-belt case air filter need more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake service

•• Regularly check and, if necessary, correct the brake fluid level.
•• Every two years change the brake fluid.
•• Replace the brake hoses every four years and if cracked or damaged.

YP125E/YP180E WIRIGN DIAGRAM



COMPONENTS

1. FLYWHEEL CDI
2. CDI
3. IGNITION COIL
4. SPARK PLUG
5. MAIN SWITCH
6. FUSE (MAIN)
7. BATTERY
8. RECTIFIER/REGULATOR
9. STARTER RELAY
10. STARTER MOTOR
11. HANDLEBAR SWITCHES (RIGHT)
12. HANDLEBAR SWITCHES (LEFT)
13. HEADLAMP
14. FRONT LEFT FLASHER LIGHT
15. FRONT RIGHT FLASHER LIGHT
16. REAR LEFT FLASHER LIGHT
17. TAIL/BRAKE LEFT LIGHT
18. REAR RIGHT FLASHER LIGHT
19. TAIL/BRAKE RIGHT LIGHT
20. HORN
21. FLASHER RELAY
22. FRONT BRAKE SWITCH
23. REAR BRAKE SWITCH
24. RELAY (SIDE STAND)
25. SPEEDOMETER
26. SENDER
27. AUTOCHOKE
28. SIDESTAND SWITCH
29. THERMOSWITCH (CHOKE)
30. THERMOSWITCH (FAN)
31. FAN
32. THERMOSWITCH (TEMPERATURE)
33. FUSE (FAN)
34. LIGHTINING RELAY
36. LICENCE LIGHT
37. POSITION LIGHT
38. ANTITHEFT UNIT (OPTION)
39. SPEEDOMETER SENDER

COLOR CODE

B .....Balck
Br.....Brown
Ch.....Chocolate
Dg.....Dark green
G.....Green
L .....Blue
O.....Orange
P .....Pink
R.....Red
Sb.....Skip blue
W .....White
Y .....Yellow
B/R .....Black/Red
Br/W .....Brown/White
G/R.....Green/Red
G/Y .....Green/Yellow
L/B.....Blue/Black
L/R.....Blue/Red
L/W.....Blue/White
L/Y.....Blue/Yellow
R/B .....Red/Black
R/W .....Red/White
R/Y .....Red/Yellow
W/G .....White/Green
Y/W.....Yellow/White

YAMAHA

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