

YAMAHA

TT 600 R '97

5CH-SE1

**SERVICE
INFORMATION**

INTRODUCTION

This booklet has been created in order to provide further information about the Yamaha TT 600 R ('97) model. For a full understanding of the information on the service procedures, use this booklet together with the microfiches of the Service Manual.

TT 600 R ('97) SERVICE MANUAL: 5CH-ME1

**TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE GROUP
BELGARDA S.p.A.**

**TT 600 R '97
SERVICE INFORMATION
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5CH-SE1**

WARNING

This manual has been written by Belgarda S.p.A. mainly for use by Yamaha dealers and their skilled mechanics. It is impossible to provide a mechanic with all the information necessary in a single manual. Presumably, though, the people who use this manual for the maintenance and repair of Yamaha motorcycles will already have elementary knowledge of the principles of mechanics and the procedures for motorcycle repair techniques. Without this knowledge, repair or maintenance work on this model could prove inefficient and/or dangerous.

Belgarda S.p.A. makes constant efforts to improve all its models. Important alterations or changes to procedures characteristics will be communicated to all Yamaha dealers and published in future editions of this manual.

NOTE:

Specifications and design are subject to change without notice.

PARTICULARLY IMPORTANT INFORMATION

The manual includes the following symbols and relative remarks:



This safety alert symbol means: ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!



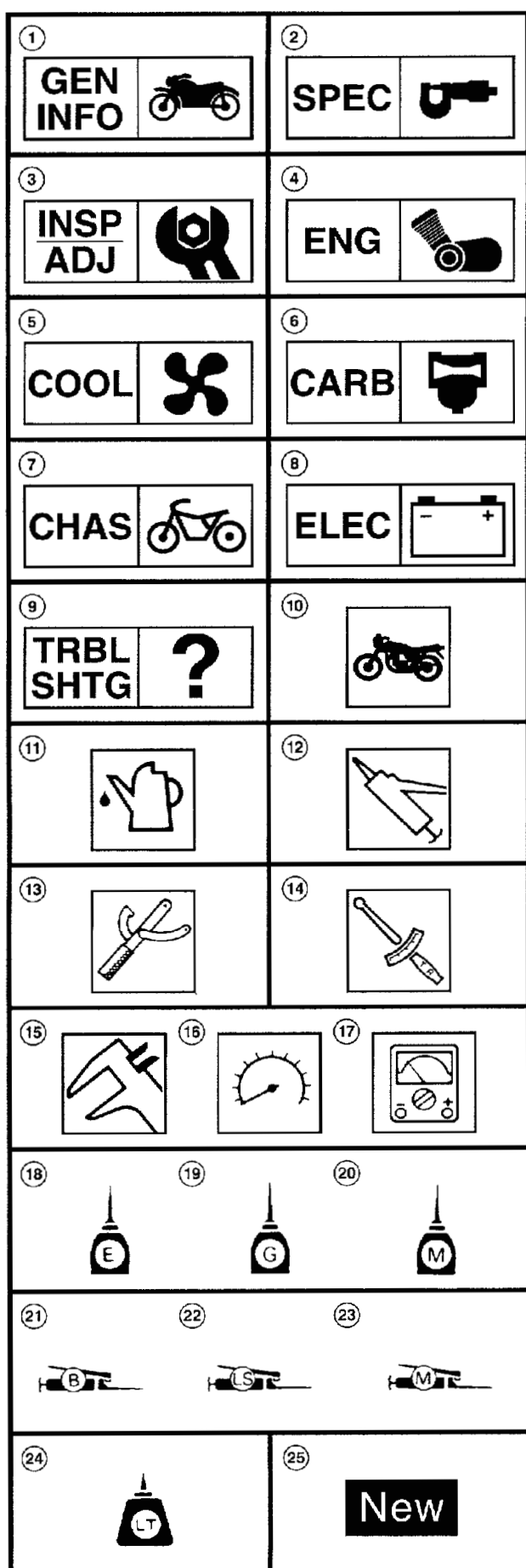
The WARNING symbol indicates special procedures to be followed to avoid severe injury or death to the rider or the person inspecting or repairing the motorcycle.

CAUTION:

CAUTION indicates special precautions to be taken to avoid damage to the motorcycle.

NOTE:

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



ILLUSTRATED SYMBOLS

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

- (1) General information
- (2) Specifications
- (3) Periodic inspection and adjustment
- (4) Engine
- (5) Cooling system
- (6) Carburetion
- (7) Chassis
- (8) Electrical
- (9) Troubleshooting

Illustrated 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 diagrams indicate the types of lubricants and lubrication points.

- (18) Apply engine oil
- (19) Apply gear oil
- (20) Apply molybdenum disulfide oil
- (21) Apply wheel bearing grease
- (22) Apply lightweight lithium-soap base grease
- (23) Apply molybdenum disulfide grease

- Illustrated symbols (24) to (25) in the exploded diagrams indicate the where to apply locking agent (24) and when to install new parts (25).
- (24) Apply locking agent (LOCTITE®)
 - (25) Use new one

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GENERAL INFORMATION

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PERIODIC INSPECTIONS AND ADJUSTMENTS

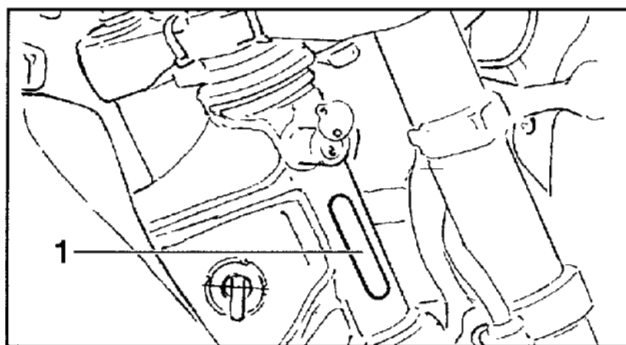
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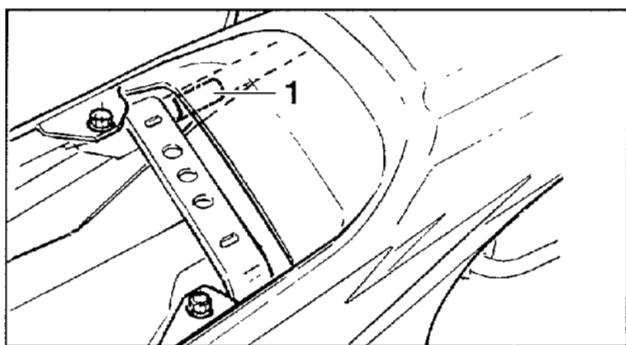


GENERAL INFORMATION

VEHICLE IDENTIFICATION

VEHICLE IDENTIFICATION NUMBER

The vehicle identification number (1) is stamped into the right side of the steering head pipe.



MODEL/COLOUR IDENTIFICATION LABEL

The model/colour identification label (1) is affixed to the rear frame. This information will be needed to order spare parts.

GENERAL SPECIFICATIONS

SPEC



Item		Standard
Carburetor:		
Type		Y30PV-2ATK
Manufacturer		TEIKEI
Spark plug:		
Type		DPR8EA-9/DPR9EA-9
Manufacturer		NGK
Electrode gap		0.8 ~ 0.9 mm
Clutch type		Wet, multi-disc
Transmission:		
Primary reduction system		Straight-tooth gears
Primary reduction ratio		74/31 (2.387)
Secondary reduction system		Chain drive
Secondary reduction ratio		44/15 (2.933)
Transmission type		Constant mesh 5-speed
Operation		Left foot operation
Gear ratio	1 st	30/13 (2.308)
	2 nd	27/17 (1.588)
	3 rd	24/20 (1.200)
	4 th	21/22 (0.954)
	5 th	19/24 (0.792)
Frame:		
Frame type		Open-cradle backbone frame and removable rear frame
Caster angle		26° 30'
Trail		114 mm
Tyres:		
Type		With tube
Size	front	90/90-21"-54R / 90/90-21"-54S
	rear	130/90-18"-69R / 130/80-18"-66R
		140/80-18"-70R / 130/80-18"-66S
Manufacturer/model	front	PIRELLI MT21 or MT70
		MICHELIN BAJA or T63
	rear	PIRELLI MT21 or MT70
		MICHELIN BAJA or T63
Maximum load* - except motorcycle		180 kg
Tire pressure (cold tire):		
Rider only	front	150 kPa (1.50 kg/cm ² , 1.50 bar)
	rear	180 kPa (1.80 kg/cm ² , 1.80 bar)
With maximum load*	front	200 kPa (2.00 kg/cm ² , 2.00 bar)
	rear	220 kPa (2.20 kg/cm ² , 2.20 bar)
Off-road	front	100 kPa (1.00 kg/cm ² , 1.00 bar)
	rear	100 kPa (1.00 kg/cm ² , 1.00 bar)
		* Load is the total weight of cargo, rider, passenger, and accessories.
Brakes:		
Front brake	type	Single dia. 267 mm disk brake
	operation	Right hand operation
Rear brake	type	Single dia. 220 mm disk brake
	operation	Right foot operation

GENERAL SPECIFICATIONS

SPEC

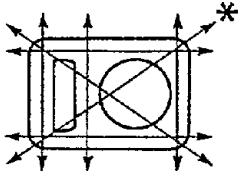
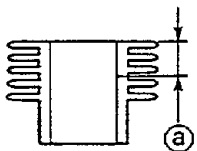
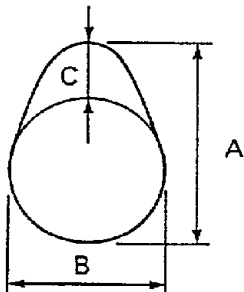
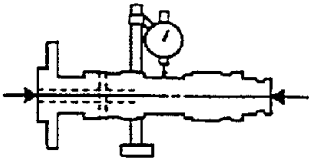


Item	Standard
Suspension: Front suspension Rear suspension	Adjustable telescopic fork (dia. 43 mm) DELTA-BOX SWINGARM
Shock absorber: Front shock absorber Rear shock absorber	Adjustable / Coil spring / Oil damper Adjustable / Coil spring / Oil-gas damper with separated tank
Wheel travel: Front wheel travel Rear wheel travel	280 mm 280 mm
Electric system: Type Ignition system Generator	Without battery C.D.I. (digital) A.C. magneto 12V
Headlight type	Quartz bulb (halogen)
Bulb wattage x quantity: Headlight Headlight (only for Australian market) Tail / brake light Flasher light Front marker light Meter light Neutral indicator light High beam indicator light Turn indicator light	12 V 60 W / 55 W 12 V 35 W / 35 W 12 V 5 W / 21 W 12 V 10 W x 4 12 V 5 W x 1 12 V 3 W x 1 12 V 1,2 W x 1 12 V 1,2 W x 1 12 V 1,2 W x 1



MAINTENANCE SPECIFICATIONS

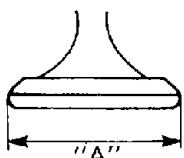
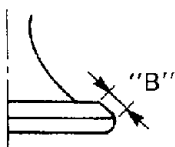
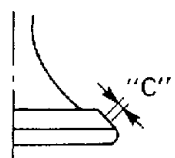
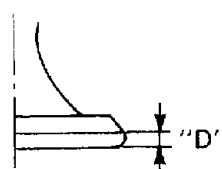
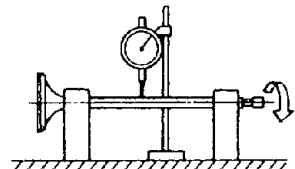
ENGINE

Item	Standard	Limit
Cylinder head: Warp limit  <p>* The lines show where you have to site the measuring slide rule.</p>	----	0.03 mm
Cylinder: Bore size Measurement point (a) 	94.97 ~ 95.02 mm (a) = 50 mm	95.1 mm ----
Camshaft: Advance method Camshaft outer diameter Backlash between camshaft and cap Cam dimensions 	Chain advance (left) 22.967 ~ 22.980 mm 0.020 ~ 0.054 mm	---- ---- ----
Intake " A " 36.47 ~ 36.57 mm " B " 30.06 ~ 30.16 mm " C " 6.41 mm		---- ---- ----
Exhaust " A " 36.62 ~ 36.72 mm " B " 30.11 ~ 30.21 mm " C " 6.51 mm		---- ---- ----
Camshaft runout limit 	----	0.03 mm

MAINTENANCE SPECIFICATIONS

SPEC

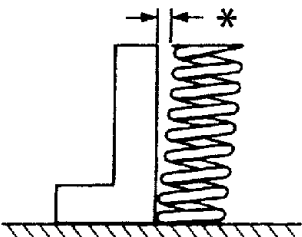
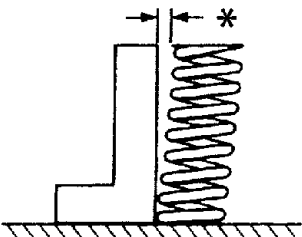
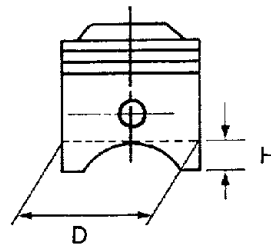
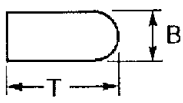


Item		Standard		Limit
Timing chain				
Timing chain type/		75-010		
Link number		126		----
Timing chain adjustment method		Automatic		----
Rocker arm / rocker armshaft:				
Rocker arm inner diameter		12.000 mm ~ 12.018 mm		----
Rocker shaft outer diameter		11.976 mm ~ 11.991 mm		----
Rocker arm-to-rocker armshaft clearance		0.009 mm ~ 0.042 mm		----
Valves, valve seat, valve guide:				
Valve clearance (cold)	IN	0.05 ~ 0.10 mm		----
	EX	0.12 ~ 0.17 mm		----
Valve dimensions				
				
Head diameter		Face width	Seat width	Margin thickness
"A" head diameter	IN	36.9 ~ 37.1 mm		----
	EX	31.9 ~ 32.1 mm		----
"B" face width	IN	2.26 mm		----
	EX	2.26 mm		----
"C" seat width	IN	1.0 ~ 1.2 mm		1.8 mm
	EX	1.0 ~ 1.2 mm		1.8 mm
"D" margin thickness	IN	1.0 ~ 1.4 mm		0.8 mm
	EX	0.8 ~ 1.2 mm		0.65 mm
Stem outside diameter	IN	6.975 ~ 6.990 mm		6.955 mm
	EX	6.955 ~ 6.970 mm		6.925 mm
Guide inside diameter	IN	7.000 ~ 7.012 mm		7.042 mm
	EX	7.000 ~ 7.012 mm		7.042 mm
Stem-to-guide clearance	IN	0.010 ~ 0.037 mm		0.08 mm
	EX	0.025 ~ 0.052 mm		0.10 mm
Stem runout limit		----		0.01 mm
				
Valve seat width	IN	1.1 mm		1.8 mm
	EX	1.1 mm		1.8 mm
Valve spring:		Inner spring	Outer spring	
Free length	IN	40.1 mm	43.8 mm	38.1 mm
	EX	40.1 mm	43.8 mm	38.1 mm
Position size	IN	22.7 mm	34.2 mm	----
(valve closed)	EX	22.7 mm	34.2 mm	----

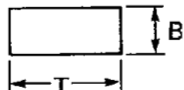
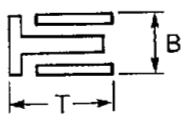
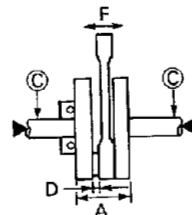
MAINTENANCE SPECIFICATIONS

SPEC



Item		Standard		Limit
Compressed pressure (spring installed)	IN	Inner spring 164.8 ~ 190.2 N 16.80 ~ 19.39 kg	Outer spring 71.6 ~ 87.3 N 7.3 ~ 8.9 kg	----
	EX	164.8 ~ 190.2 N 16.80 ~ 19.39 kg	149.1 ~ 182.4 N 15.2 ~ 18.6 kg	----
	IN	----	----	2.5°/1.7 mm
	EX	----	----	2.5°/1.9 mm
Tilt limit*				
				
Winding sense (top view)		IN	EX	
		Counterclockwise	Counterclockwise	----
		Counterclockwise	Counterclockwise	----
Piston:				
Piston to cylinder clearance		0.045 ~ 0.065 mm		0.1 mm
Piston size "D"		94.915 ~ 94.965 mm		----
				
Measuring point "H"		5 mm		----
2° oversize		95.5 mm		----
4° oversize		96.0 mm		----
Piston allowance		2 mm		----
Piston pin off-centring		Intake side		----
Piston pin bore inside diameter		22.004 ~ 22.015 mm		----
Piston pin outside diameter		21.995 ~ 22.000 mm		----
Piston rings:				
Top ring:				
				
Type		Barrel		----
Sizes (B x T)		1.2 x 3.2 mm		----
End gap (installed)		0.15 ~ 0.30 mm		0.7 mm
Side clearance (installed)		0.03 ~ 0.07 mm		0.13 mm



Item	Standard	Limit
<p>2nd ring:</p>  <p>Type Sizes (B x T) End gap (installed) Side clearance (installed)</p> <p>Oil ring:</p>  <p>Sizes (B x T) End gap (installed)</p>	<p>Plat 1.2 x 3.8 mm 0.30 ~ 0.45 mm 0.03 ~ 0.07 mm</p> <p>2.5 x 3.4 mm 0.02 ~ 0.06 mm</p>	<p>---- 0.8 mm 0.13 mm</p> <p>---- ----</p>
<p>Crankshaft:</p>  <p>Crank width "A" Runout limit "C" Big end side clearance "D" Small end backlash "F"</p>	<p>74.95 ~ 75.00 mm 0.35 ~ 0.65 mm 0.8 mm</p>	<p>---- 0.03 mm ---- ----</p>
<p>Balancing weight: Advance method</p>	<p>Straight-tooth gear</p>	<p>----</p>
<p>Clutch:</p> <p>Friction plate: Thickness Quantity Wear limit</p> <p>Friction plate: Thickness Quantity Wear limit</p> <p>Clutch plate: Thickness Quantity Wear limit</p>	<p>2.72 ~ 2.88 mm 6 parts ----</p> <p>2.94 ~ 3.06 mm 2 parts ----</p> <p>1.2 mm 7 parts ----</p>	<p>---- ---- 2.6 mm</p> <p>---- ---- 2.8 mm</p> <p>---- ---- 0.2 mm</p>

MAINTENANCE SPECIFICATIONS

SPEC



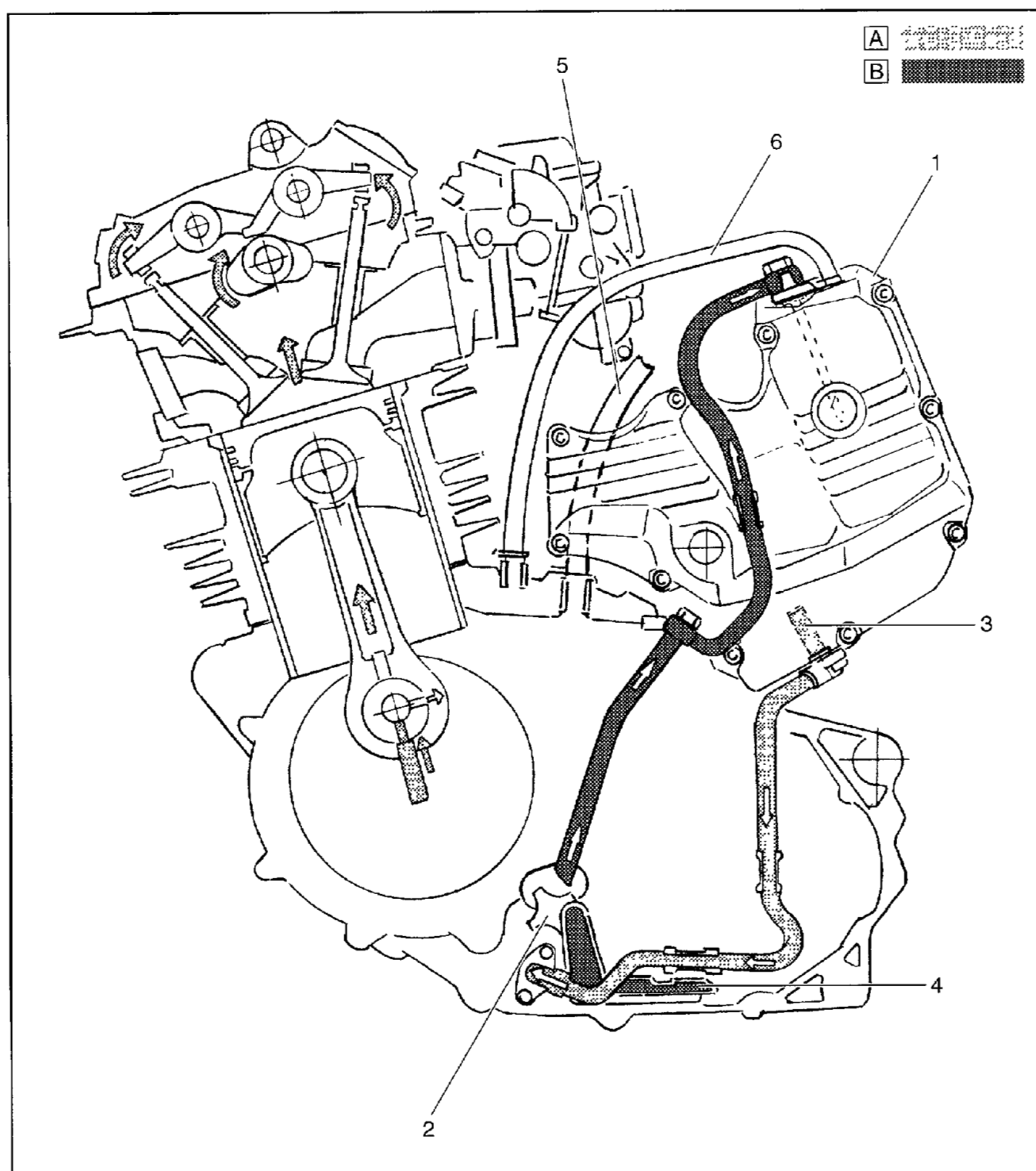
Item	Standard	Limit
Clutch spring:		
Clutch spring free length	34.9 mm	----
Quantity	5 parts	----
Clutch housing:		
Thrust backlash	0.070 ~ 0.071 mm	----
Clutch release system	Inner cam pushing	----
Transmission:		
Main axle		
off-centring limit	----	0.08 mm
Drive axle		
off-centring limit	----	0.08 mm
Shift cam:		
Type	Drum with cam and guide bar	
Carburetor:		
I.D. mark	5CH, 00	
Main jet (M.J.)		
Primary carburetor	# 150	
Secondary carburetor	# 130	
Main air jet (M.A.J.)		
Primary carburetor	ø 1.0	
Secondary carburetor	ø 0.9	
Jet needle (J.N.)		
Primary carburetor	5C5A - 3/5	
Secondary carburetor	5Y18 - 3/5	
Needle jet (M.N.)		
Primary carburetor	ø 2.60	
Secondary carburetor	ø 2.60	
Cutaway (C.A.)	4.0	
Pilot air jet (P.A.J.)	ø 0.8	
Pilot jet (P.J.)	# 54	
Pilot outlet (P.O.)	ø 0.8	
Bypass 1 (B.P.)	ø 1 x 2	
Bypass (B.P.P.)	3.0/5.0	
Pilot screw (P.S.)	3 1/2 ± 1/2 revs approx., open	
Valve seat size (V.S.)	ø 2.5	
Starter jet (G.S.)	# 74	
Fuel level (F.L.)	6 ~ 8 mm	
Float height (F.H.)	27 ~ 29 mm	
Idle speed:		
Engine idle speed	1,150 ~ 1,450 r/min	----
Lubrication system:		
Oil filter type	Paper	
Oil pump type:	Trochoid	
"A" or "B" tip clearance	0.12 mm	0.2 mm
Side clearance	0.03 ~ 0.08 mm	0.15 mm
Shunt valve calibration pressure	80 ~ 120 kPa (0.82 ~ 122 kgf/cm ²)	----
Safety valve calibration pressure	80 ~ 120 kPa (0.82 ~ 122 kgf/cm ²)	----
Oil pressure (hot)	13 kPa/1,300 r/min (0.13 kgf/cm ² /1,300 r/min)	----
Pressure check point	Oil filter chamber	



LUBRICATION LAYOUT

- (1) Oil tank
- (2) Oil pump
- (3) Oil filter (oil tank)
- (4) Oil strainer (engine)
- (5) Oil vapour retrieval hose
- (6) Oil blow-by retrieval hose

- [A] DELIVERY
- [B] RETRIEVAL



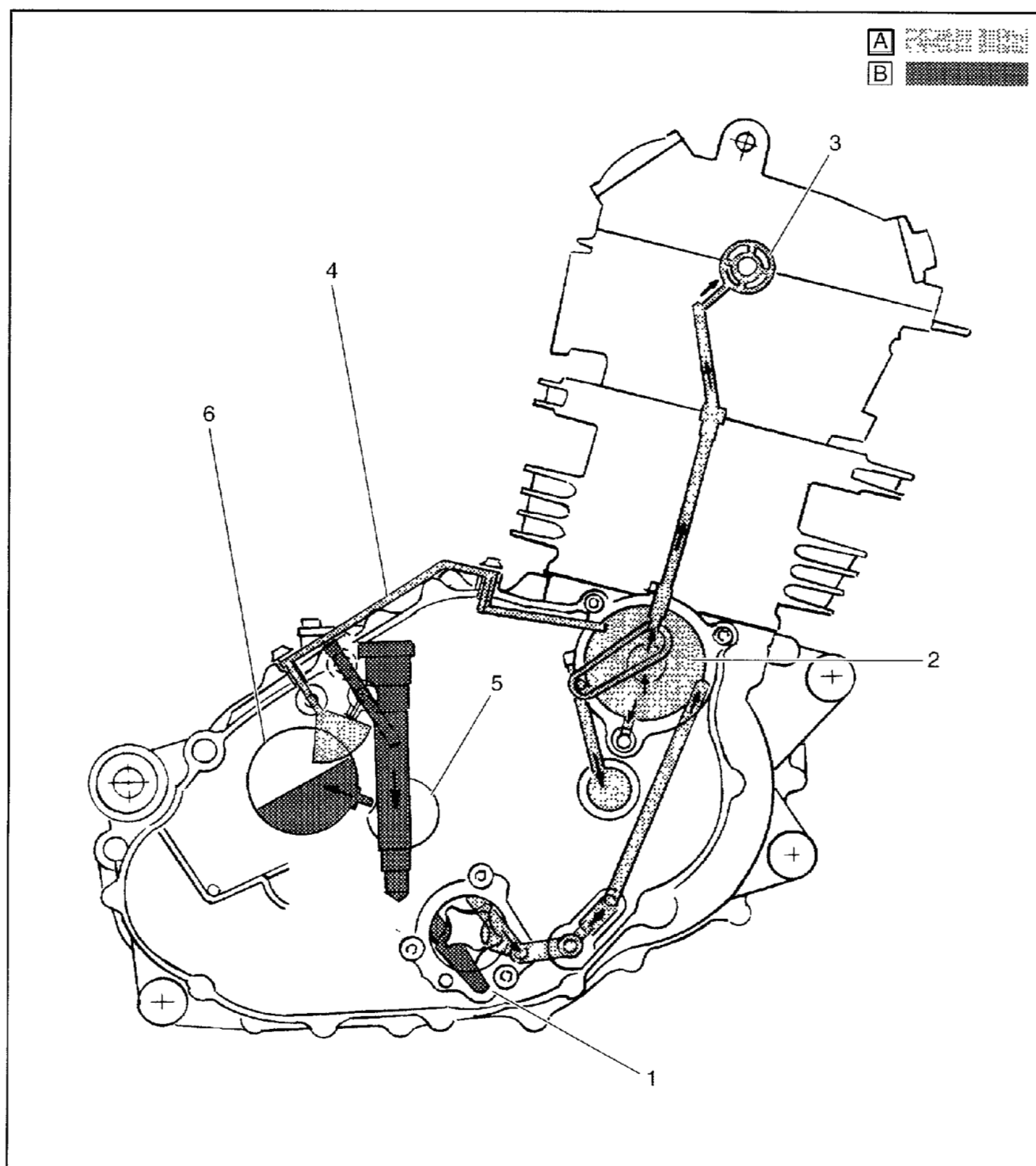
LUBRICATION LAYOUT

SPEC



- (1) Oil pump
- (2) Oil filter
- (3) Camshaft
- (4) Oil delivery hose
- (5) Main driving shaft
- (6) Drive shaft

- [A] DELIVERY
- [B] RETRIEVAL



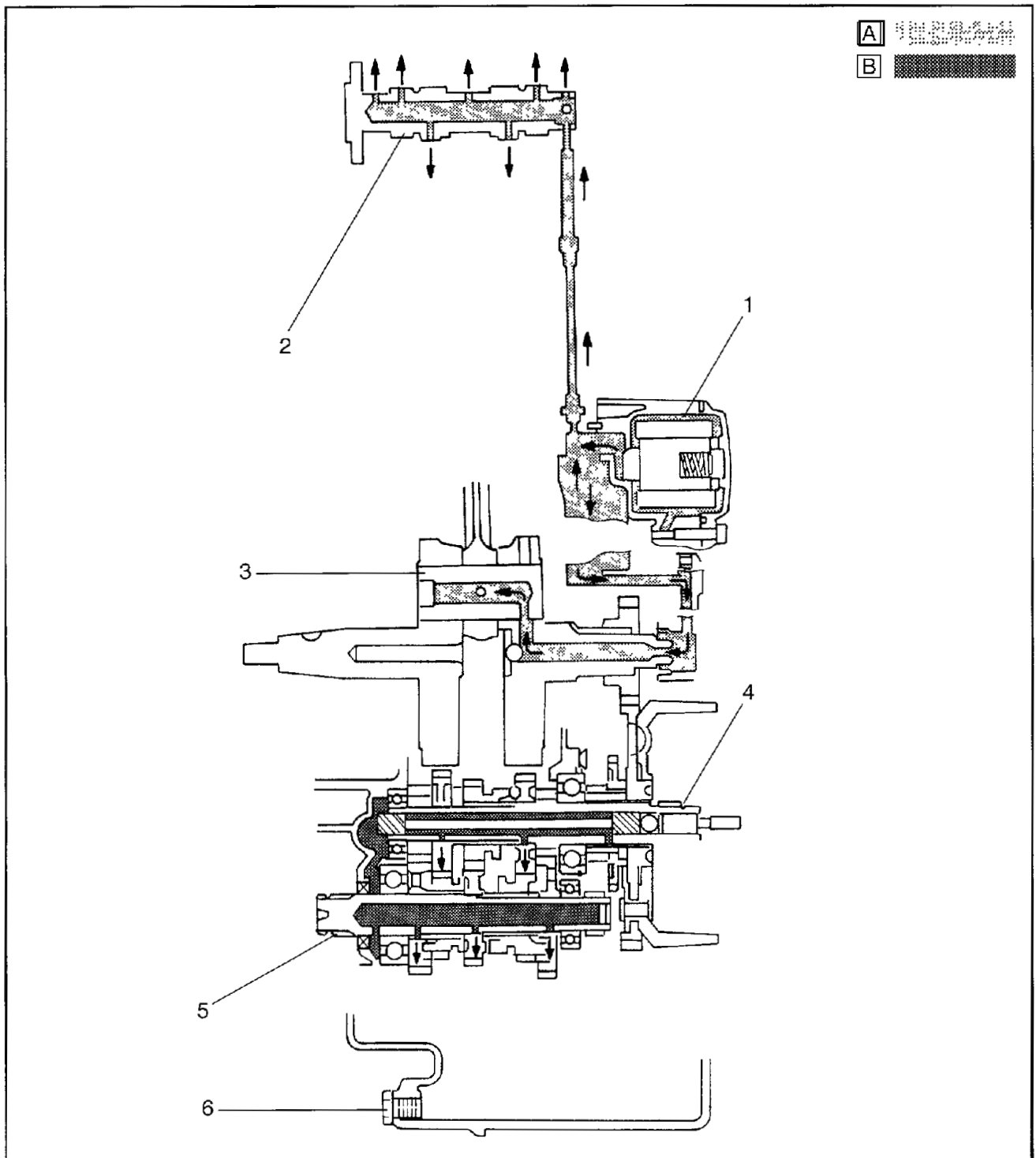
LUBRICATION LAYOUT

SPEC



- (1) Oil filter
- (2) Camshaft
- (3) Connecting rod pin
- (4) Main driving shaft
- (5) Secondary drive shaft
- (6) Drain plug

- [A] DELIVERY
- [B] RETRIEVAL



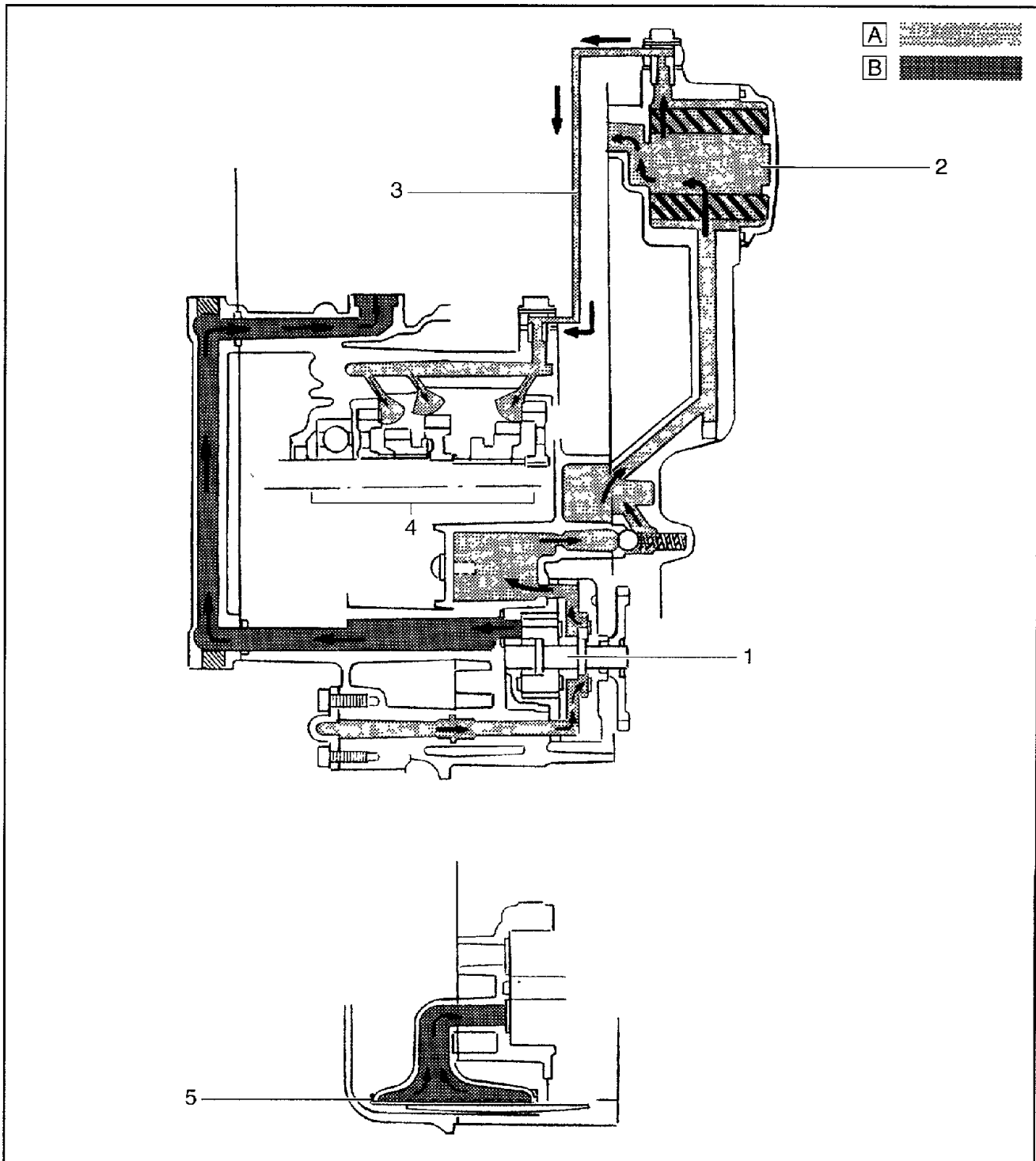
LUBRICATION LAYOUT

SPEC



- (1) Oil pump
- (2) Oil filter
- (3) Oil delivery hose
- (4) Transmission
- (5) Oil strainer

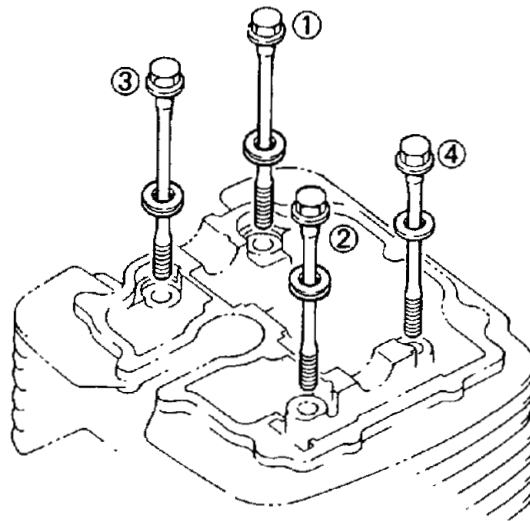
- [A] DELIVERY
- [B] RETRIEVAL



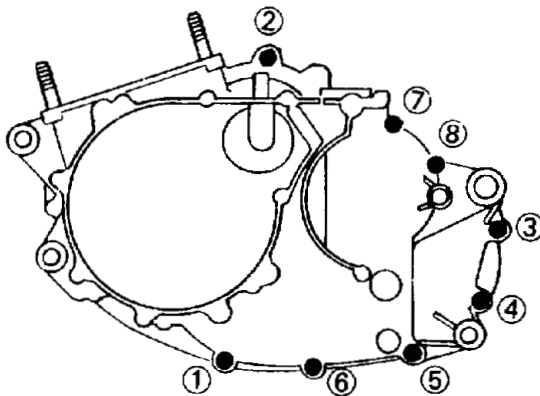


ENGINE

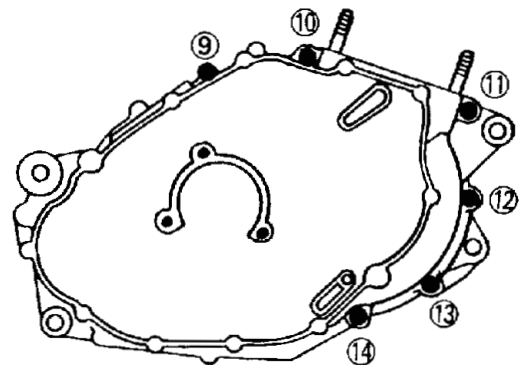
Cylinder head tightening steps:



Crankcase tightening steps:



Left crankcase



Right crankcase



Tightening torques

Part to be tightened	Part name	Thread size	Tightening torque		Remarks
			Nm	mkg	
Cylinder head	Washer based bolt	M8 x 1.25	29	2.9	
Cylinder head	Stud bolt	M10 x 1.25	20	2.0	
Cylinder head	Hexagon socket head screw	M6 x 1.0	10	1.0	
Cylinder head	Stud bolt	M6 x 1.0	7	0.7	
Cylinder head:					
Cap (oil check)	Union bolt	M6 x 1.0	7	0.7	
Spark plug	—	M12 x 1.25	18	1.8	
Cylinder head cover	Hexagon socket head screw	M6 x 1.0	10	1.0	
Tappet cover (intake)	Hexagon socket head screw	M6 x 1.0	10	1.0	
Tappet cover (exhaust)	—	M32 x 1.5	12	1.2	
Cylinder	Crown nut	M8 x 1.25	22	2.2	
Cylinder	Nut	M10 x 1.25	42	4.2	
Cylinder	Hexagon socket head screw	M6 x 1.0	10	1.0	
Weight drive gear	Hexagon nut	M16 x 1.0	60	6.0	
Rotor (A.C. magneto)	Hexagon nut	M14 x 1.5	120	12.0	
Lock nut (valve adjusting screw)	Hexagon nut	M6 x 1.0	14	1.4	
Cam chain sprocket	Washer based bolt	M7 x 1.0	20	2.0	
Cam chain stopper guide	Hexagon socket head screw	M6 x 1.0	10	1.0	
Cam chain stopper guide	Washer based screw	M16 x 1.0	20	2.0	
Rocker shaft	Hexagon socket head screw	M6 x 1.0	10	1.0	
Oil pump	Hexagon socket head screw	M6 x 1.0	10	1.0	
Oil delivery/retrieval pipe	Pan screw	M6 x 1.0	7	0.7	
Oil draining pipe	Washer based screw	M14 x 1.5	30	3.0	
Oil filter cover	Hexagon socket head screw	M6 x 1.0	10	1.0	
Bleed screw (oil filter cover)	Hexagon screw	M5 x 0.8	5	0.5	
Push lever (clutch)	Pan screw	M8 x 1.0	12	1.2	
Push rod (clutch)	Hexagon nut	M6 x 1.0	8	0.8	
Sprocket	Hexagon nut	M18 x 1.0	110	11.0	
Lock washer (oil seal)	Hexagon screw	M6 x 1.0	10	1.0	
Stop lever	Bolt	M6 x 1.0	10	1.0	
Shift cam	Hexagon screw	M6 x 1.0	10	1.0	
Stator	Pan head (+) screw	M5 x 0.8	5	0.5	

MAINTENANCE SPECIFICATIONS

SPEC



Part to be tightened	Part name	Thread size	Tightening torque		Remarks
			Nm	mkg	
Stator (pick-up coil)	Hexagon socket head screw	M6 x 1.0	7	0.7	
Engine oil pipe 1	Hexagon socket head screw	M6 x 1.0	10	1.0	
Engine oil pipe 2	Union screw	M12 x 1.25	35	3.5	
Oil delivery pipe	Union bolt	M8 x 1.25	18	1.8	
Carburetor joints	Hexagon socket head screw	M6 x 1.0	10	1.0	
Air filter case (frame)	Hexagon screw	M6 x 1.0	10	1.0	
Air filter case (frame)	Washer based screw	M6 x 1.0	10	1.0	
Exhaust pipe	Washer based nut	M6 x 1.0	10	1.0	
Exhaust pipe protector	Pan head (+) screw	M6 x 1.0	7	0.7	
Muffler	Hexagon socket head screw	M8 x 1.25	23	2.3	
Muffler (band)	Nut, nylon	M8 x 1.25	23	2.3	
Muffler	Washer based screw	M8 x 1.25	23	2.3	
Crankcase	Hexagon socket head screw	M6 x 1.0	10	1.0	
Crankcase	Stud bolt	M10 x 1.25	20	2.0	
Crankcase cover (right)	Hexagon socket head screw	M6 x 1.0	10	1.0	
Crankcase cover (left)	Hexagon socket head screw	M6 x 1.0	10	1.0	
Sprocket cover	Hexagon socket head screw	M6 x 1.0	10	1.0	
Stop washer (bearing)	Flat headscrew	M6 x 1.0	7	0.7	
Pressure plate	Washer based screw	M6 x 1.0	8	0.8	
Clutch housing	Hexagon nut	M20 x 1.0	90	9.0	
Primary drive gear	Hexagon nut	M20 x 1.0	120	12.0	



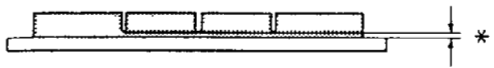
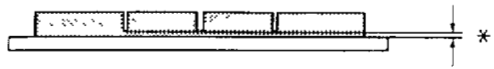
CHASSIS

Item	Standard	Limit
Steering:		
Bearing type	Taper rolling bearing	----
Front suspension:		
Front fork travel	277 ~ 283 mm	----
Fork spring free length	530 mm	----
Spring rate (K)	4.6 N/mm (0.46 kg/mm)	----
Stroke	330 mm	----
Oil amount x inner tube	615 cc	----
Oil level	160 mm	----
< min ~ max >	150 ~ 170 mm (from upper edge of inner tube, fully compressed without spring)	----
Oil type	"01" SUSPENSION OIL	----
Rear suspension:		
Shock absorber stroke	105 mm	107 mm
Spring free length	250 mm	----
Fitting-length	231.5 mm	----
Spring rate (K)	65 N/mm (6.5 kg/mm)	----
Optional spring	None	----
Gas pressure	1.400 kPa (14.0 kg/cm ² , 14.0 bar)	----
Rear arm.		
Clearance limit rear arm end side to side	---- 0.4 ~ 0.7 mm	1 mm ----
Front wheel:		
Type	Spoke wheel	----
Rim size	1.85 x 21"	----
Rim material	Aluminium	----
Rim runout limit radial	1.0 mm	2 mm
lateral	0.5 mm	2 mm
Rear wheel:		
Type	Spoke wheel	----
Rim size	2 50 x 18"	----
Rim material	Aluminium	----
Rim runout limit radial	1.0 mm	2 mm
lateral	0.5 mm	2 mm
Drive chain:		
Type/manufacturer	520/135 ORH/XRING-REGINA CHAIN	----
Number of links	112	----
Chain slack	30 ~ 40 mm	----

MAINTENANCE SPECIFICATIONS


SPEC



Item	Standard	Limit
Front brake: Type Disc outside diameter x thickness Pad thickness Wear limit 	Single disc 267 x 4 mm 7.5 mm ----	---- ---- ---- * = 1 mm
Master cylinder inside diameter Caliper cylinder outside diameter Brake fluid type Rear brake: Type Disc outside diameter x thickness Pad thickness Wear limit 	13 mm 28 mm x 2 (elastic fastener) DOT 4 Single disc 220 x 5 mm 9 mm ----	---- ---- ---- * = 1.2 mm ---- ---- ----
Master cylinder inside diameter	12.7 mm	----
Caliper cylinder outside diameter	34 mm	----
Brake fluid type	DOT 4	----
Front brake lever	Adjustable	----
Brake pedal lever		
Brake pedal position	10 mm (below the footrest plane)	----
Clutch lever:		
Clutch lever free play	2.0 ~ 3.0 mm	----
Throttle grip:		
Throttle cable free play	3.0 ~ 5.0 mm (at the grip flange)	----



Tightening torques

Part to be tightened	Part name	Thread size	Tightening torque		Remarks
			Nm	mkg	
Front fork/handlebar:					
Handle crown and inner tube	Washer based screw	M8 x 1.25	28	2.8	
Handle crown and handle lower holder	Nut, nylon	M10 x 1.5	40	4.0	
Under bracket and inner tube	Washer based screw	M8 x 1.25	22	2.2	
Handle lower holder	Washer based screw	M8 x 1.25	20	2.0	
Upper steering ring nut and handle upper holder	Nut	M36 x 1.0	115	11.5	
Upper steering ring nut and steering axle	—	M28 x 1.5			See "NOTE"
Lower steering ring nut and steering axle	—	M28 x 1.5			See "NOTE"
Front fork:					
Cap bolt (inner tube)	Nut	M43 x 1.0	20	2.0	
Lower compression valve (cap)	Screw	M24 x 1.0	32	3.2	
Wheel axle protector	Hexagon socket head screw	M6 x 1.0	9	0.9	
Front brake master cylinder:					
Master cylinder bracket	Hexagon socket head screw	M6 x 1.0	9	0.9	
Reservoir cap	Pan screw	M4 x 0.7	1.5	0.15	
Front master cylinder/brake hose	Union bolt	M10 x 1.0	20	2.0	
Front brake caliper:					
Caliper holder	Hexagon socket head screw	M8 x 1.25	25	2.5	
Oil bleed screw	Screw	M10 x 1.0	14	1.4	
Brake caliper and front fork	Washer based screw	M8 x 1.25	25	2.5	
Front brake caliper/brake hose	Union bolt	M10 x 1.0	20	2.0	
Front & rear brake disc/hub	Hexagon socket head pan screw	M6 x 1.0	12	1.2	
Front wheel axle	—	M16 x 1.5	59	5.9	
Rear brake pedal	Washer based screw	M10 x 1.25	45	4.5	
Footrest bracket/frame	Washer based screw	M10 x 1.25	45	4.5	
Rear master cylinder/frame	Hexagon socket head screw (barrel)	M6 x 1.0	10	1.0	
Rear master cylinder/brake hose	Screw	M10 x 1.0	20	2.0	
Rear caliper (oil bleed)	Screw	M10 x 1.0	14	1.4	
Rear brake caliper/brake hose	Screw	M10 x 1.0	20	2.0	

MAINTENANCE SPECIFICATIONS

SPEC



Part to be tightened	Part name	Thread size	Tightening torque		Remarks
			Nm	mkg	
Driven sprocket/rear hub	Hexagon socket head pan screw	M8 x 1.25	30	3.0	
Rear wheel axle	Nut	M18 x 1.5	115	11.5	
Rear shock absorber.					
Shock absorber (upper)/frame	Hexagon socket head screw	M12 x 1.75	65	6.5	
Shock absorber (lower)	Bolt	M10 x 1.25	50	5.0	
Rear arm:					
Pivot shaft	Nut	M16 x 1.5	85	8.5	
Articulation:					
Connecting rod/rear arm	Bolt	M12 x 1.25	65	6.5	
Relay arm/frame	Bolt	M10 x 1.25	50	5.0	
Connecting rod/relay arm	Bolt	M10 x 1.25	50	5.0	
Chain seal guard/rear arm	Screw	M6 x 1.0	5	0.5	
Chain support:					
Chain support/rear arm	Washer based screw	M6 x 1.0	9	0.9	
Chain protector/chain support	Pan screw	M6 x 1.0	3	0.3	
Chain case/rear arm	Screw	M6 x 1.0	9	0.9	
Engine stay:					
Front stay and frame	Washer based screw	M10 x 1.25	64	6.4	
Front stay and engine	Washer based screw	M10 x 1.25	64	6.4	
Upper stay and frame	Washer based screw	M10 x 1.25	64	6.4	
Upper stay and engine	Washer based screw	M10 x 1.25	64	6.4	
Rear lower stay/frame	Washer based screw	M10 x 1.25	64	6.4	
Engine protector/frame	Screw	M6 x 1.0	10	1.0	
Frame/rear frame	Nut, nylon	M8 x 1.25	23	2.3	
Rear footrest/frame	Screw	M8 x 1.25	20	2.0	
Fuel tank:					
Fuel tank/frame	Screw	M6 x 1.0	7	0.7	
Fuel cock	Pan head (+) screw	M6 x 1.0	7	0.7	
Seat.					
Seat and frame	Washer based screw	M6 x 1.0	10	1.0	
Clutch cable/crankcase cover	Hexagon socket head screw	M6 x 1.0	10	1.0	
Voltage regulator	Button head screw	M6 x 1.0	7	0.7	
Meter:					
Upper stay/handle crown	Hexagon screw	M6 x 1.0	10	1.0	
Horn	Hexagon screw	M6 x 1.0	7	0.7	

NOTE:

1. First tighten the ring nut approximately 38 Nm (3.8 mkg) by using the torque wrench, then loosen the ring nut one turn.
2. Final tighten the ring nut at the torque of 4 Nm (0.4 mkg).



ELECTRICAL

Item	Standard	Limit
Ignition system:		
Ignition timing (B.T.D.C.)	11° at 1,300 r/min	----
Advanced timing (B.T.D.C.)	34° at 4,750 r/min	----
Advanced type	Electrical type	----
<p>Ignition timing (degrees)</p> <p>Engine speed (r/min)</p> <p>31° ~ 37° at 4,750 r/min</p> <p>28 ~ 34° at 6,500 r/min</p> <p>9.5° ~ 12.5° at 1,250 r/min</p> <p>-2° ~ +1° at 450 r/min</p> <p>Cut off</p>		
Ignition unit:		
Magneto model / Manufacturer	TLMZ89 / NIPPONDENSO	----
Pickup coil resistance /	192 ~ 288 Ω at 20°C (68°F)	----
Colour	Green/White - Blue/Black	----
CDI unit:		
Model/Manufacturer	QCB21/NIPPONDENSO	
Ignition coil:		
Model / Manufacturer	J0144 (TJ0371) / NIPPONDENSO	----
Primary winding resistance	1.04 ~ 1.495 Ω at 20°C (68°F)	----
Secondary winding resistance	14.88 ~ 22.32 kΩ at 20°C (68°F)	----
Spark plug cap:		
Type / Manufacturer	T-137 / TOKAI DENSO	----
Resistance	10 kΩ at 20°C (68°F)	----
Charging system:		
Type	A.C. magneto	----

MAINTENANCE SPECIFICATIONS

SPEC



Item	Standard	Limit
A.C. generator:		
Model / Manufacturer	LMZ89 / NIPPONDENSO	----
Normal output	14 V, 13 A at 5.000 r/min	----
Stator coil resistance /	0.608 ~ 0.912 Ω at 20°C (68°F)	----
Colour	(White - White)	----
Regulator / Rectifier:		
Model / Manufacturer	SH629/A-12 / SHINDENGEN	----
Regulator:		
Type	Short-circuit semiconductors	----
No load regulated voltage	14.1 ~ 14.9 V	----
Rectifier:		
Capacity	25 A	----
Withstand voltage	240 V	----
Smooth condenser:		
Model / Manufacturer	ADP-26 / SHINDENGEN	----
Capacity / Voltage	5,440 ~ 8,160 μ F / 50 V	----
Horn:		
Type / Manufacturer	Plat / LEONELLI	----
Voltage	10 ~ 14 V C.C.	----
Maximum amperage	1.5 A	----
Flasher relay:		
Type	Semi-transistors	
Model / Manufacturer	FB222M / NIPPONDENSO	----
Automatic stop device	None	----
Flasher frequency	75 ~ 95 cycle/min	----
Power	10 W x 2 + 3.4 W	----

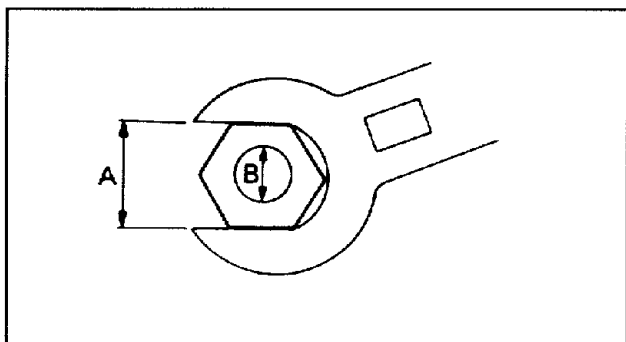


GENERAL SPECIFICATIONS ABOUT TIGHTENING TORQUES

This table indicates the tightening torques for standard attachments with ISO-pitch thread.

Torque specifications for special components or units are indicated in the related sections of this manual. In order to avoid any damage, tighten those units with many fastenings by following a progressive cross sequence, until the final tightening torque is obtained. Unless otherwise specified, the tightening torques given are meant for clean and dry threads. All components must be at ambient temperature.

A (Nut)	B (Bolt)	General specification about tightening torques	
		Nm	mkg
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



A: Distance between flat parts

B: External thread diameter

LUBRICATION POINTS AND LUBRICANT TYPE

SPEC



LUBRICATION POINTS AND LUBRICANT TYPE ENGINE

Lubrication points (part name)	Lubricant type
Oil seal edges (completely)	LS
Bearing retainer	E
Rod pins	E
Rod (big end)	E
Piston and piston rings	E
Hub (weight drive sprocket)	E
Piston pin	E
Valve stem and guide	M
Oil seal (valve stem end)	M
Rocker shaft and rocker arm	E
Cam and bearing (camshaft)	E
Rotor and rotor housing (oil pump)	E
Push rod (clutch)	LS
Primary driven gear and main shaft	E
Sliding gear (transmission)	M
Idle gear (transmission)	M
Shift forks and bar	E
Shift cam and bearing (gearshift cam)	E
Shift shaft	E
Rod housing coupled surfaces	Bonding agent (rapid seal adhesive) [®] Yamaha bond No. 1215 [®]
Coupled surfaces (cylinder head and cylinder head cover)	Bonding agent (rapid seal adhesive) [®] Yamaha bond No. 1215 [®]

LUBRICATION POINTS AND LUBRICANT TYPE

SPEC



CHASSIS

Lubrication points (part name)	Lubricant type
Gear unit (tachometer)	
Oil seal edges (completely)	
Wheel axle (front and rear wheels)	
Rear wheel hub and clutch	
Bearings brasses (rear arm) and bearing push cover	
Front footrest	
Pivot points (brake pedal and shift pedal)	
Bearings (steering head)	
Pivot points (brake lever and clutch lever)	
Clutch cable end	
Pivot points (sidestand)	
Grease nipples (rear arm-front axle)	

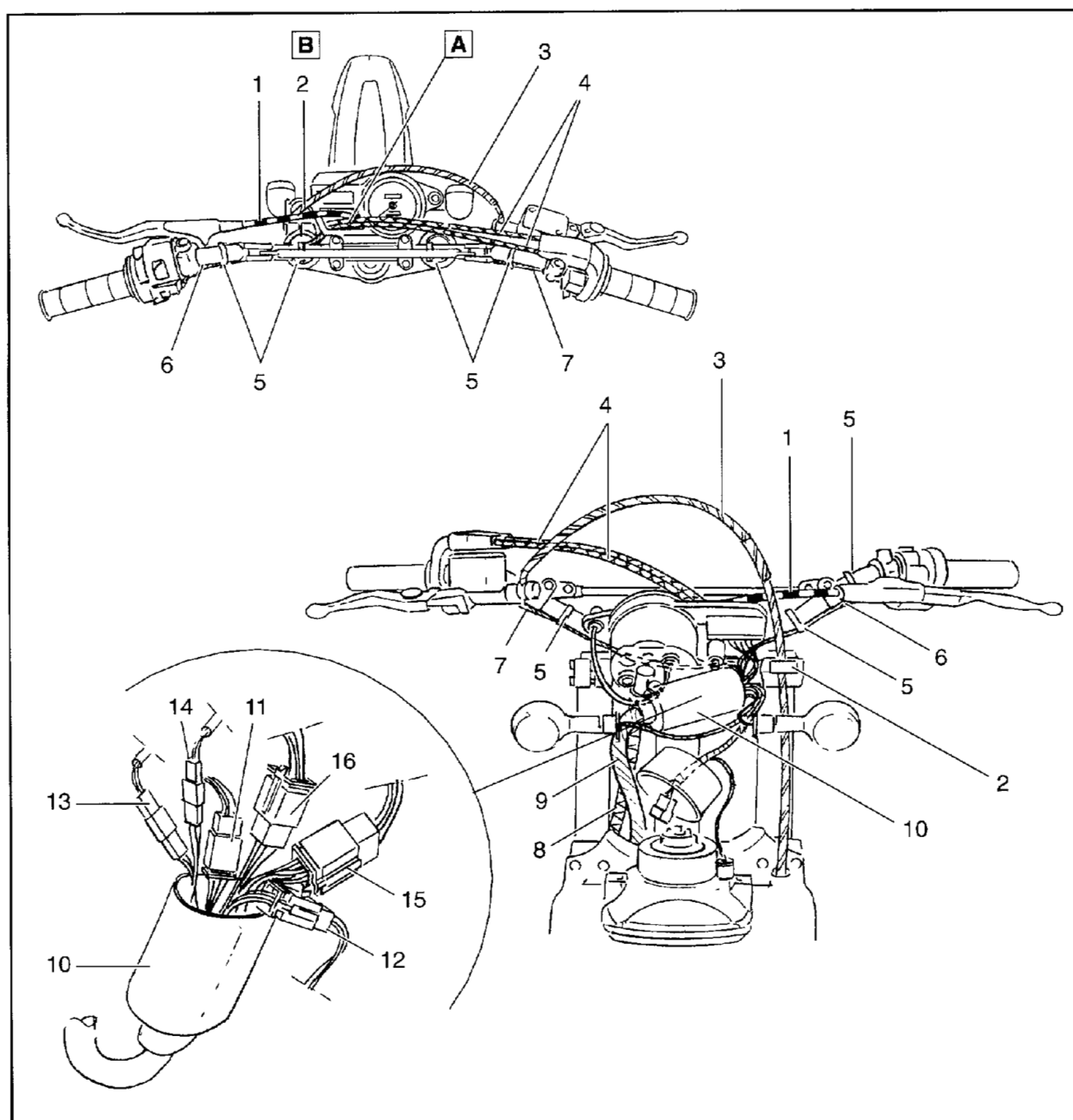


CABLE ROUTING

- | | | |
|---|---------------------------------------|---|
| (1) Clutch cable | (8) Tachometer/odometer cable | (14) Right turn light connector |
| (2) Brake hose holder | (9) Complete wire harness | (15) Meter wire harness connector |
| (3) Brake hose | (10) Socket cover | (16) Main switch wire harness connector |
| (4) Throttle cables | (11) Engine stop switch connector | |
| (5) Bands | (12) Headlight wire harness connector | |
| (6) Lighting wire harness | (13) Left turn light connector | |
| (7) Brake and engine stop switch wire harness | | |

[A] Lay the clutch cable in front of the throttle cables.

[B] Lay the brake hose through the holder on the handle crown.

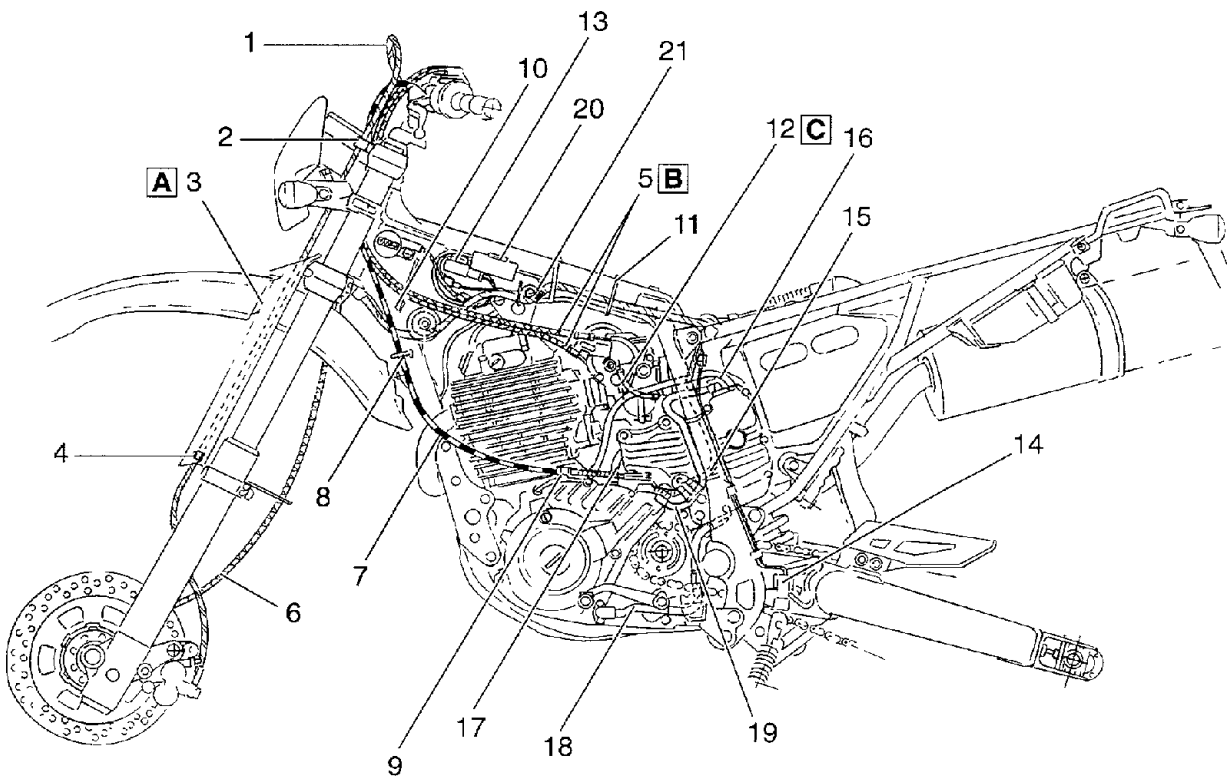


CABLE ROUTING

SPEC



- | | | | |
|-------------------------------------|--|---|---|
| (1) Front brake hose | (10) Throttle cables holder | (17) Engine oil breather pipe (to air cleaner case) | [A] Lay the brake hose behind the left tube guard and fasten it down by means of the plate 4. |
| (2) Brake hose holder | (11) Wire harness band | (18) Oil hose (oil tank to engine) | [B] Attach throttle cables 5. |
| (3) Left tube guard | (12) Fuel pipe from fuel cock | (19) Oil hose (engine to oil tank) | [C] Fasten the fuel pipe 12 to the tank. |
| (4) Plastic plate | (13) Flasher relay | (20) Condenser | |
| (5) Throttle cables | (14) Sidestand switch | (21) Diode | |
| (6) Tachometer/odometer cable | (15) A.C. generator wire harness (engine) | | |
| (7) Clutch cable | (16) Engine oil breather pipe (to engine oil tank) | | |
| (8) Clutch cable holder | | | |
| (9) Clutch cable holder (on engine) | | | |

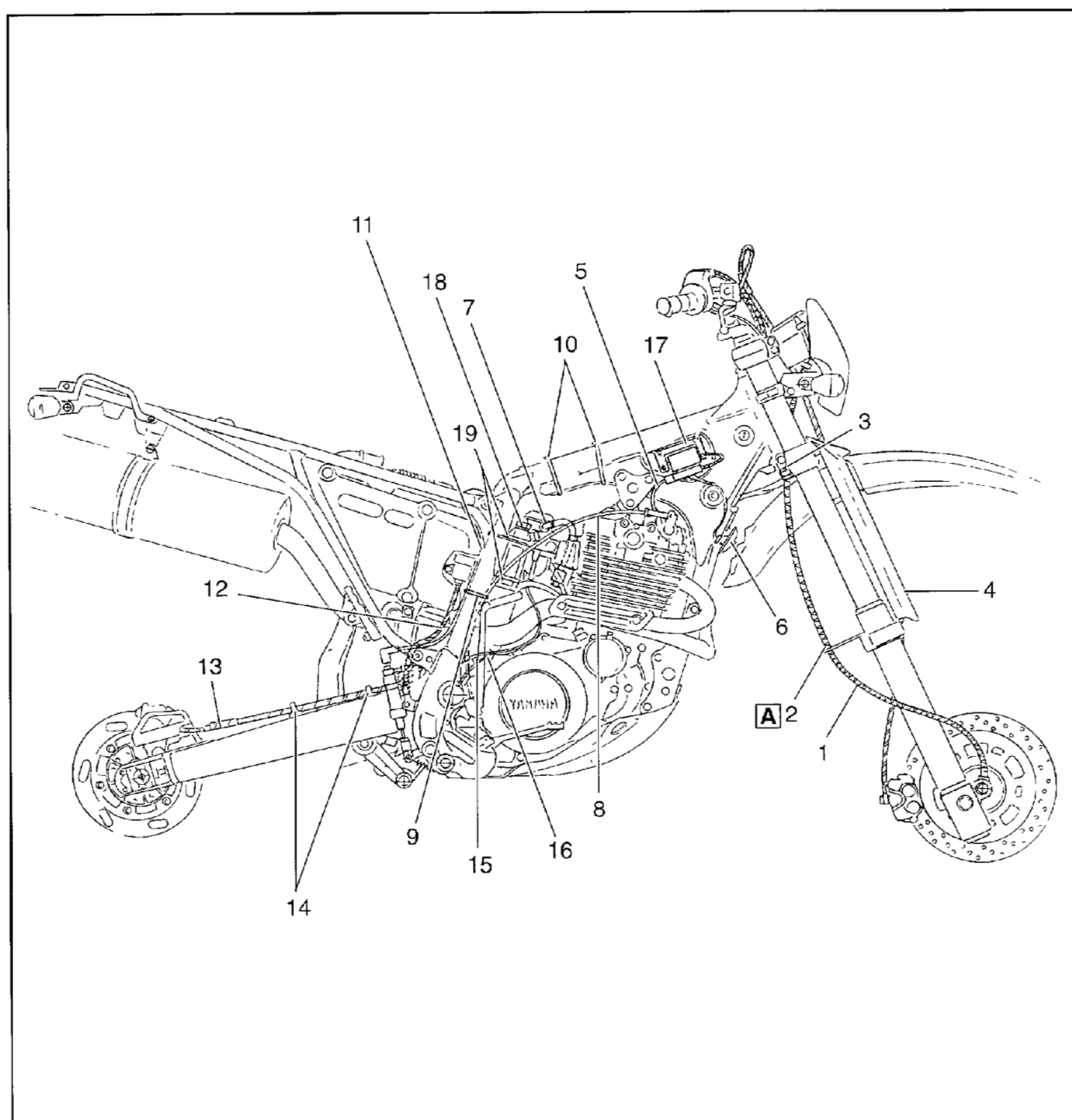


CABLE ROUTING

SPEC



- | | | | |
|--------------------------------------|--|-----------------------------------|---|
| (1) Tachometer/odometer cable | (8) Decompressor cable | (14) Rear brake hose holders | [A] Insert the tachometer/odometer cable into the band 3 and the holder 2 |
| (2) Tachometer/odometer cable holder | (9) Decompressor cable band | (15) Pipe | |
| (3) Tachometer/odometer cable band | (10) Main wire harness band | (16) Air breather pipe | |
| (4) Right tube guard | (11) Rear brake switch wire harness | (17) Spark plug ignition coil | |
| (5) Spark plug cable | (12) Rear brake fluid tank hose | (18) Rear shock absorber oil tank | |
| (6) Horn | (13) Hose from rear master cylinder to caliper | (19) Shock absorber tank bands | |
| (7) Carburetor suction pipe | | | |

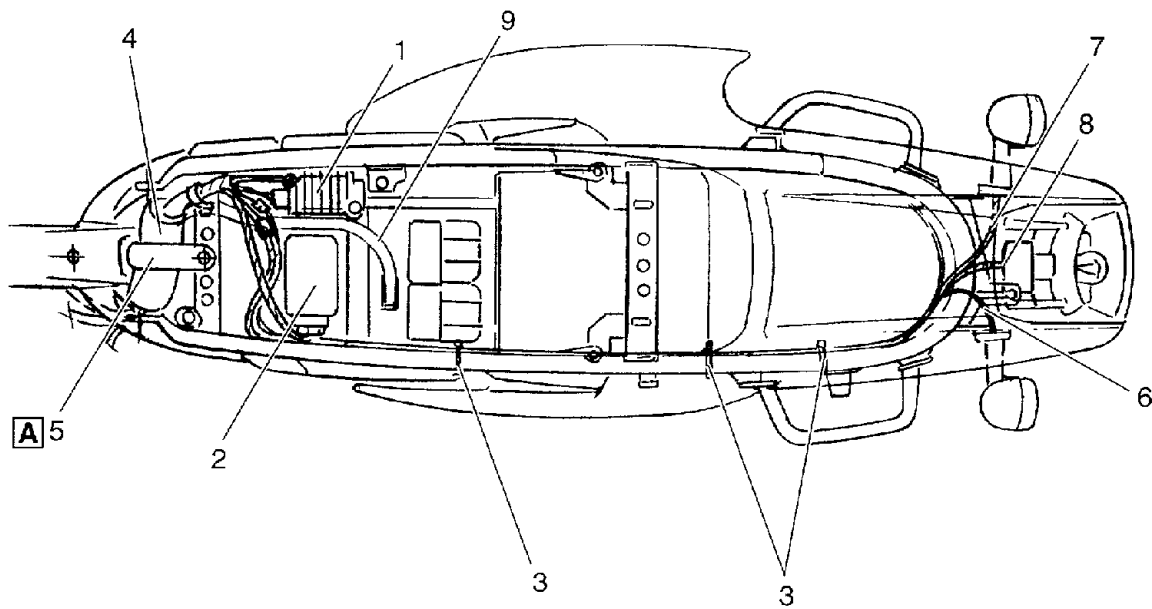


CABLE ROUTING

SPEC



- | | | | |
|-----------------------------------|-----------------------------|------------------------------------|--|
| (1) Rectifier | (5) Bracket | (8) Tail light wire harness | [A] Insert the tail damper 4 into the frame then fasten the bracket 5. |
| (2) CDI unit | (6) Left turn wire harness | (9) Air breather pipe (carburetor) | |
| (3) Tail light wire harness bands | (7) Right turn wire harness | | |
| (4) Tail damper | | | |





PERIODIC INSPECTIONS AND ADJUSTMENTS

PERIODIC MAINTENANCE/LUBRICATION INTERVALS

ITEM	ROUTINE	BREAK-IN 1,000 km	EVERY	
			6,000 km or 6 months	12,000 km or 12 months
* Fuel line	<ul style="list-style-type: none"> Check fuel hose for cracks or damage. Replace if necessary. 		○	○
Spark plug	<ul style="list-style-type: none"> Check condition. Clean or replace if necessary. 	○	○	○
* Valve clearance	<ul style="list-style-type: none"> Check valve clearance. Adjust if necessary. 	○	○	○
Air filter	<ul style="list-style-type: none"> Wash with water and biodegradable liquid soap, smear with SAE 20W/50 engine oil or special filter oil. Replace if necessary. 		○	○
Air filter case	<ul style="list-style-type: none"> Check condition. Clean. 		○	○
Clutch	<ul style="list-style-type: none"> Check for proper operation. Adjust or replace the cable. 		○	○
* Decompression device	<ul style="list-style-type: none"> Check for proper operation. Adjust if necessary. 		○	○
* Front brake system	<ul style="list-style-type: none"> Adjust lever free play. Check and replace pads if necessary. Replace brake fluid every 24,000 km or 24 months. 		○	○
* Rear brake system	<ul style="list-style-type: none"> Adjust pedal free play. Check and replace pads if necessary. Replace brake fluid every 24,000 km or 24 months. 		○	○
Drive chain	<ul style="list-style-type: none"> Check and adjust chain slack and alignment. Clean and grease with SAE 80W/90 engine oil or special lubricant for O-ring chains. 	Every 500 km.		
* Wheels	<ul style="list-style-type: none"> Check damage, balancing, run-out, spoke tightness. Tight spokes and balance/replace if necessary. 		○	○
* Tires	<ul style="list-style-type: none"> Check damage and minimum tire tread depth. Replace if necessary. 		○	○
* Wheel bearings	<ul style="list-style-type: none"> Check bearing assembly clearance/damage. Replace if damaged. 		○	○

PERIODIC MAINTENANCE/ LUBRICATION INTERVALS

INSP
ADJ



ITEM	ROUTINE	BREAK-IN 1,000 km	EVERY	
			6,000 km or 6 months	12,000 km or 12 months
* Grease nipple bushes (rear arm pivot shaft)	<ul style="list-style-type: none"> • Check rear arm system for looseness. • Grease moderately (lithium soap-based grease). 	○	○	○
* Arm relay/ connecting rod pivots (rear arm)	<ul style="list-style-type: none"> • Check for proper operation. • Adjust if necessary. 	○	○	○
* Steering bearings	<ul style="list-style-type: none"> • Check bearing for smooth rotation/looseness. • Repair if necessary. • Grease every 24,000 km or 24 months (lithium soap-based grease). 	○		○
* Frame fasteners/ fittings	<ul style="list-style-type: none"> • Check all nuts, bolts and screws for tightening. • Tight if necessary. 	○	○	○
* Front fork	<ul style="list-style-type: none"> • Check operation and for oil leakage. • Repair if necessary. 		○	○
* Rear shock absorber	<ul style="list-style-type: none"> • Check operation and for oil leakage. • Replace if necessary. 		○	○
Sidestand	<ul style="list-style-type: none"> • Check for proper operation. • Repair if necessary. 	○	○	○
* Sidestand switch	<ul style="list-style-type: none"> • Check for proper operation. • Replace if necessary. 	○	○	○
* Lights and switches	<ul style="list-style-type: none"> • Check for proper operation. • Repair or replace if necessary. 		○	○
* Carburetor	<ul style="list-style-type: none"> • Check engine idle speed, synchronization and starter operation. • Adjust if necessary. 	○	○	○
Engine oil	<ul style="list-style-type: none"> • Replace (warm engine before draining). 	○	○	○
* Engine oil filter	<ul style="list-style-type: none"> • Replace. 	○	○	○
* Engine oil tank filter	<ul style="list-style-type: none"> • Clean with solvent. 	○	○	○

PERIODIC MAINTENANCE/ LUBRICATION INTERVALS

INSP
ADJ



Items marked with an asterisk (*) require special tools, data and technical skills for servicing. Take the motorcycle to a Yamaha dealer or refer to Service Manual for the servicing of these parts.

NOTES:

- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Should the motorcycle be frequently used off-track, it is advised to replace engine oil every 3,000 km.

NOTE:

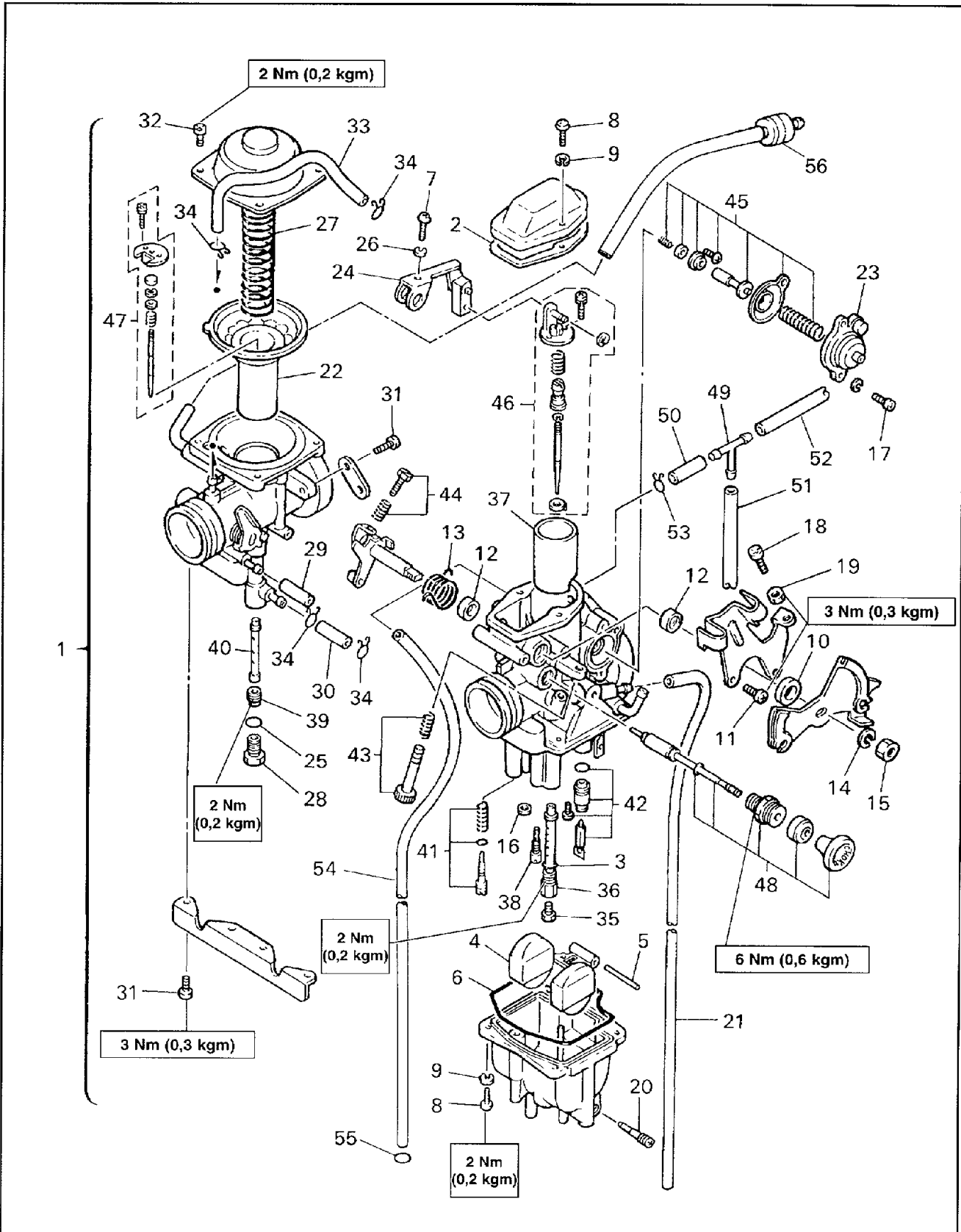
Brake fluid replacement:

1. Replace the brake fluid after disassembling the master cylinder or caliper cylinder. Check the brake fluid level and add fluid as required.
2. Replace the master cylinder and caliper cylinder oil seals every two years.
3. Replace the brake hoses every four years, or if cracked or damaged.

**CARBURETOR**

TYPE: Y30PV-2ATK

MANUFACTURER: TEIKEI





(1) Carburetor assembly	(13) Throttle valve spring	(28) Drain valve	(43) Stop screw set
(2) Cover gasket	(14) Spring washer	(29) Pipe	(44) Throttle screw set
(3) Gasket, nozzle	(15) Nut	(30) Pipe	(45) Diaphragm
(4) Float	(16) Gasket	(31) Screw	(46) Needle set 1
(5) Float pin	(17) Screw	(32) Screw	(47) Needle set 2
(6) Float chamber gasket	(18) Stop screw	(33) Pipe	(48) Starter set
(7) Screw	(19) Nut	(34) Clip	(49) Way 3
(8) Float chamber fastening screw	(20) Screw	(35) Main jet 1	(50) Hose
(9) Spring washer	(21) Hose	(36) Main nozzle 1	(51) Hose
(10) Collar	(22) Diaphragm	(37) Throttle valve	(52) Hose
(11) Screw	(23) Cover	(38) Pilot jet	(53) Clip
(12) Gasket	(24) Bracket	(39) Main jet 2	(54) Breather pipe
	(25) O-ring	(40) Main nozzle 2	(55) O-ring
	(26) Spring washer	(41) Pilot screw set	(56) Pipe
	(27) Spring	(42) Needle valve set	

SPECIFICATIONS

Main jet	#150 FIRST #130 SEC
Starter jet	#74
Needle jet	5C5A-3/5 (FIRST) 5Y18-3/5 (SEC)
Main nozzle	ø 2.6
Pilot jet	#54
Pilot air screw	3.5 ± 0.5 revs approx., open
Float height	27~29 mm
Fuel level	6~8 mm
Engine idle speed	1,150~1,450 r/min
Throttle valve housing	ø 2.5 mm



ELECTRICAL

WIRING DIAGRAM

1. CDI unit
2. Main switch
3. Front brake switch
4. Emergency stop engine switch
5. Ignition coil
6. Earth
7. Rear brake switch
8. Sidestand switch
9. AC generator
10. Adjuster/Rectifier
11. Smooth condenser
12. Rear stop tail/light
13. Rear direction indicator lights
14. Diode
15. Neutral switch
16. Horn switch
17. Direction indicator light switch
18. Driving beam/dimmer light switch
19. Lights switch
20. Horn
21. Direction indicator lamp relay
22. Front direction indicator lights
23. Control light
24. Parking indicator light
25. High beam light
26. Direction indicator light
27. "N" neutral light
28. Running light
29. Driving beam/dimmer light
30. Resistor

COLOURS

B	-	Black
Br	-	Brown
Ch	-	Chocolate
Dg	-	Deep green
G	-	Green
Gy	-	Grey
L	-	Blue
Or	-	Orange
P	-	Pink
R	-	Red
Sb	-	Sky-blue
W	-	White
Y	-	Yellow
B/R	-	Black/Red
B/W	-	Black/White
B/Y	-	Black/Yellow
Br/B	-	Brown/Black
Br/W	-	Brown/White
G/B	-	Green/Black
G/R	-	Green/Red
G/W	-	Green/White
G/Y	-	Green/Yellow
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/L	-	White/Blue
Y/R	-	Yellow/Red

YAMAHA TT600R '97

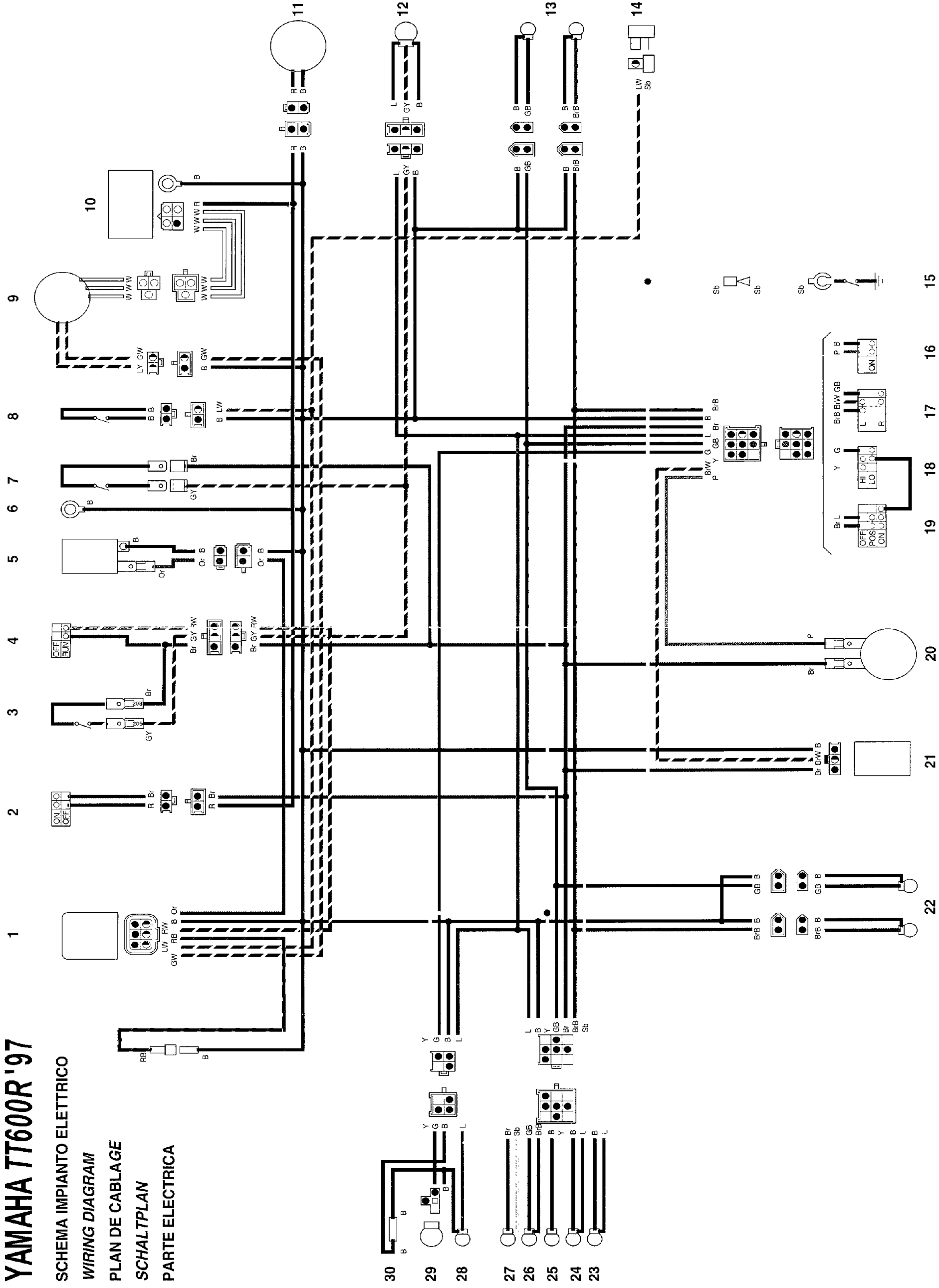
SCHEMA IMPIANTO ELETTRICO

WIRING DIAGRAM

PLAN DE CABLEAGE

SCHALTPLAN

PARTE ELECTRICA





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