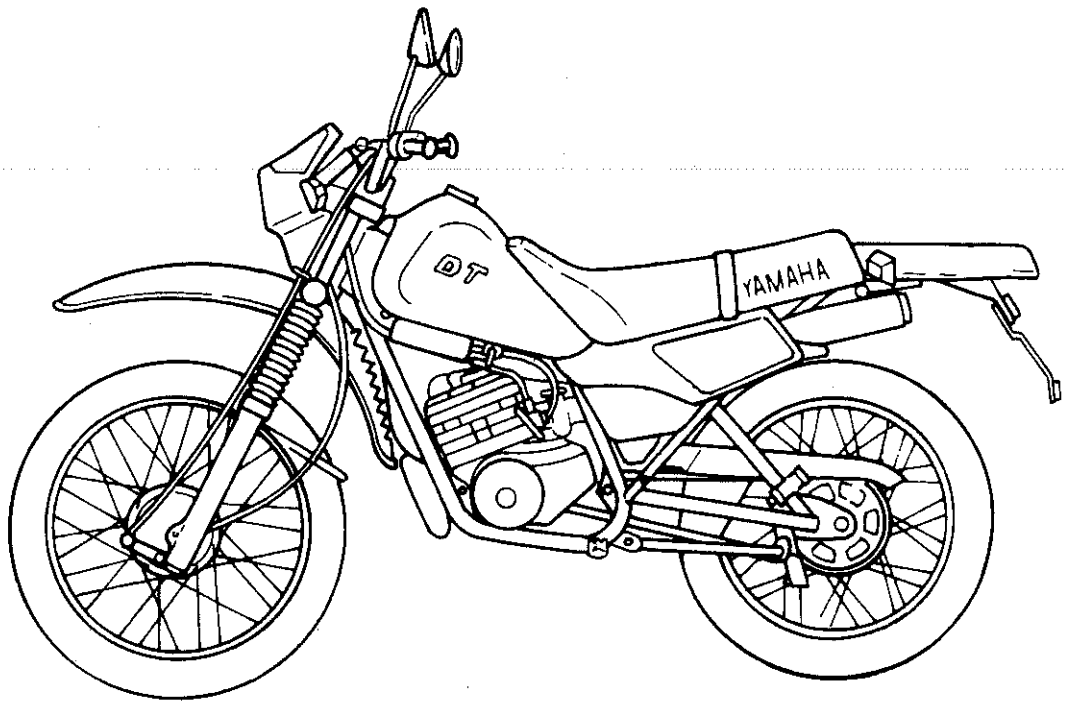
YAMAHA

DT125/DT175



SERVICE MANUAL

3TT-28197-20

DT125/DT175
SERVICE MANUAL

1st Edition, February 1994

Printed in Japan

NOTICE

This manual was written by the Yamaha Motor Company primarily for use by Yamaha dealers and their qualified mechanics. It is not possible to put an entire mechanic's education into one manual, so it is assumed that persons using this book to perform maintenance and repairs on Yamaha motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

Yamaha Motor Company, Ltd. is continually striving to improve all models manufactured by Yamaha. Modifications and significant changes in specifications or procedures will be forwarded to all Authorized Yamaha dealers and will, where applicable, appear in future editions of this manual.

HOW TO USE THIS MANUAL

PARTICULARY IMPORTANT INFORMATION

This material is distinguished by the following notation.

⚠	The Safety Alert Symbol means ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!
⚠ WARNING	Failure to follow WARNING instructions could result in severe injury or death to the motorcycle operator, a bystander, or a person inspecting or repairing the motorcycle.
CAUTION:	A CAUTION indicates special precautions that must be taken to avoid damage to the motorcycle.
NOTE:	A NOTE provides key information to make procedures easier or clearer.

MANUAL FORMAT

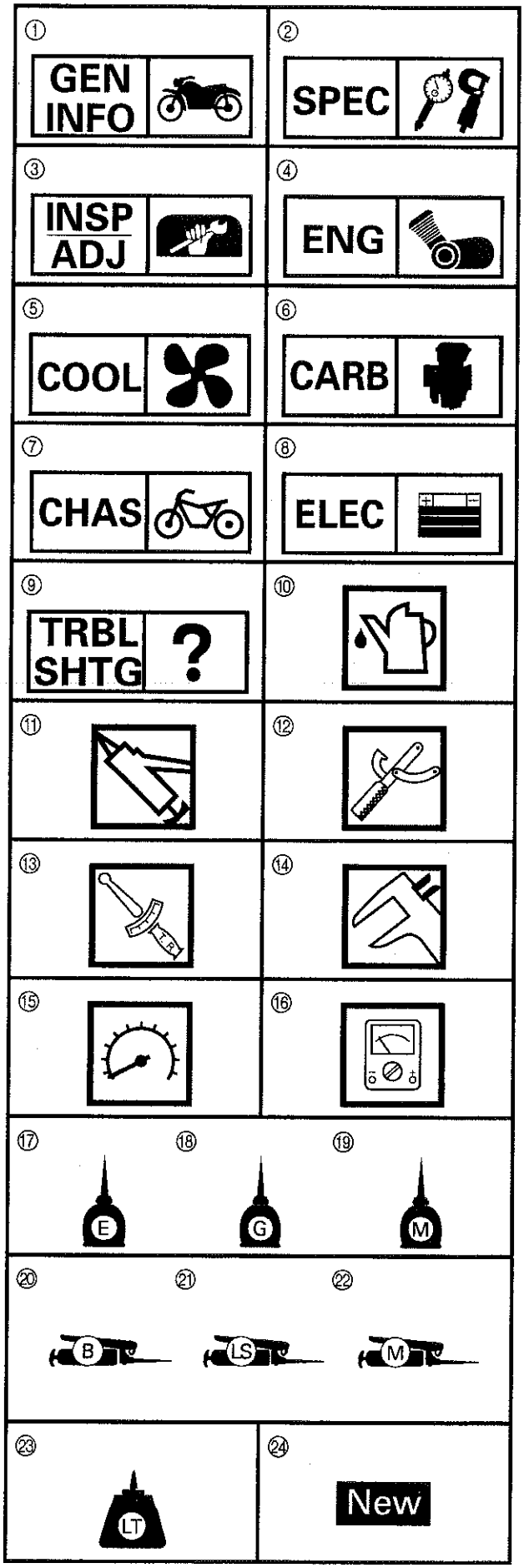
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, and assembly, inspection operations.

In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/Damage → Replace.

EXPLODED DIAGRAM

Each chapter provides exploded diagrams before each disassembly section for ease in identifying correct disassembly and assembly procedures.



ILLUSTRATED SYMBOLS
(Refer to the illustration)

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 ⑯ are used to identify the specifications appearing in the text.

⑩ Filling fluid
⑪ Lubricant
⑫ Special tool
⑬ Tightening
⑭ Wear limit, clearance
⑮ Engine speed
⑯ Ω, V, A

Illustrated symbols ⑰ to ㉓ in the exploded diagram indicate grade of lubricant and location of lubrication point.

⑰ Apply engine oil
⑱ Apply gear oil
⑲ Apply molybdenum disulfide oil
⑳ Apply wheel bearing grease
㉑ Apply lightweight lithium-soap base grease
㉒ Apply molybdenum disulfide grease
㉓ Apply locking agent (LOCTITE®)
㉔ Use new one

INDEX

GENERAL INFORMATION	GEN INFO 1
SPECIFICATIONS	SPEC 2
PERIODIC INSPECTION AND ADJUSTMENT	INSP ADJ 3
ENGINE OVERHAUL	ENG 4
CARBURETION	CARB 5
CHASSIS	CHAS 6
ELECTRICAL	ELEC 7
TROUBLESHOOTING	TRBL SHTG 8

CONTENTS

CHAPTER 1
GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION 1-1
FRAME SERIAL NUMBER 1-1
ENGINE SERIAL NUMBER 1-1

IMPORTANT INFORMATION 1-2
ALL REPLACEMENT PARTS 1-2
GASKETS, OIL SEALS, AND O-RINGS 1-2
LOCK WASHERS/PLATES AND COTTER PINS 1-2
BEARINGS AND OIL SEALS 1-2
CIRCLIPS 1-3

SPECIAL TOOLS 1-3
FOR ENGINE SERVICE 1-3
FOR CHASSIS SERVICE 1-4
FOR TUNE-UP 1-5
FOR ELECTRICAL COMPONENTS 1-5

CHAPTER 2
SPECIFICATIONS

GENERAL SPECIFICATIONS 2-1

MAINTENANCE SPECIFICATIONS 2-4
ENGINE 2-4
CHASSIS 2-8
ELECTRICAL 2-11

CABLE ROUTING 2-13

CHAPTER 3
PERIODIC INSPECTION AND ADJUSTMENT

IMPORTANT INFORMATION 3-1
PREPARATION FOR REMOVAL 3-1

PERIODIC MAINTENANCE/LUBRICATION 3-3

ENGINE 3-7
SPARK PLUG 3-7
AIR CLEANER ELEMENT 3-7
TRANSMISSION OIL LEVEL INSPECTION 3-8
TRANSMISSION OIL REPLACEMENT 3-8
CLUTCH LEVER ADJUSTMENT 3-8
PUSH LEVER ADJUSTMENT 3-9
THROTTLE CABLE FREE PLAY ADJUSTMENT 3-9
IDLING SPEED ADJUSTMENT 3-10
OIL PUMP ADJUSTMENT 3-10
OIL PUMP AIR BLEEDING 3-10

CHASSIS 3-11
FRONT BRAKE ADJUSTMENT 3-11
REAR BRAKE ADJUSTMENT 3-11
REAR BRAKE LIGHT SWITCH ADJUSTMENT 3-11
FUEL COCK CLEANING 3-12
TIRE INSPECTION 3-12
SPOKE INSPECTION 3-13
DRIVE CHAIN INSPECTION 3-13
DRIVE CHAIN FREE PLAY ADJUSTMENT 3-13
STEERING HEAD INSPECTION 3-13
STEERING HEAD ADJUSTMENT 3-14

ELECTRICAL 3-15
BATTERY FLUID LEVEL 3-15
BATTERY CHARGING 3-15
IGNITION TIMING INSPECTION 3-16
IGNITION TIMING ADJUSTMENT 3-16

CHAPTER 4
ENGINE OVERHAUL

ENGINE DISASSEMBLY 4-1
CYLINDER HEAD AND CYLINDER 4-1
PISTON 4-1
CLUTCH 4-1
FLYWHEEL MAGNETO 4-2
KICK STARTER 4-2
SHIFT SHAFT 4-3
CRANKCASE 4-3
TRANSMISSION AND SHIFTER 4-3
CRANKSHAFT 4-4

INSPECTION AND REPAIR 4-5
CYLINDER HEAD 4-5
CYLINDER 4-5
PISTON 4-6
PISTON RING 4-7
PISTON PIN AND SMALL END BEARING 4-7
CLUTCH 4-8
KICK STARTER 4-9
CRANKSHAFT 4-9
TRANSMISSION 4-10
BEARINGS AND OIL SEALS 4-12

ENGINE ASSEMBLY AND ADJUSTMENT 4-13
CRANKSHAFT 4-13
TRANSMISSION AND SHIFTER 4-14
CRANKCASE ASSEMBLY 4-15
SHIFT SHAFT 4-16
KICK STARTER 4-17
FLYWHEEL MAGNETO 4-18
PRIMARY DRIVE GEAR 4-18
CLUTCH 4-19
PISTON 4-20
CYLINDER 4-21
CYLINDER HEAD 4-21
ENGINE MOUNTING 4-21

CHAPTER 5
CARBURETION

CARBURETOR 5-1
REMOVE 5-2
INSPECTION 5-2
YAMAHA ENERGY INDUCTION SYSTEM (YEIS) 5-3
REED VALVE 5-3

CHAPTER 6
CHASSIS

WHEELS, BRAKES, SPROCKETS AND CHAIN 6-1
FRONT WHEEL REMOVAL 6-1
REAR WHEEL REMOVAL 6-2
INSPECTION 6-3
INSTALLATION 6-4

FRONT FORK 6-5
REMOVAL 6-5
DISASSEMBLY 6-6
INSPECTION 6-7
ASSEMBLY 6-8
INSTALLATION 6-9

STEERING HEAD 6-10
REMOVAL 6-10
INSPECTION 6-11
INSTALLATION 6-12

REAR SHOCK ABSORBER AND SWINGARM 6-13
REMOVAL 6-13
INSPECTION 6-14
INSTALLATION 6-14

CHAPTER 7
ELECTRICAL

CIRCUIT DIAGRAM 7-1

IGNITION SYSTEM 7-3
TROUBLESHOOTING CHART 7-3

CHARGING SYSTEM 7-5

LIGHTING SYSTEM 7-7

SIGNAL SYSTEM 7-8
SWITCH INSPECTION 7-8

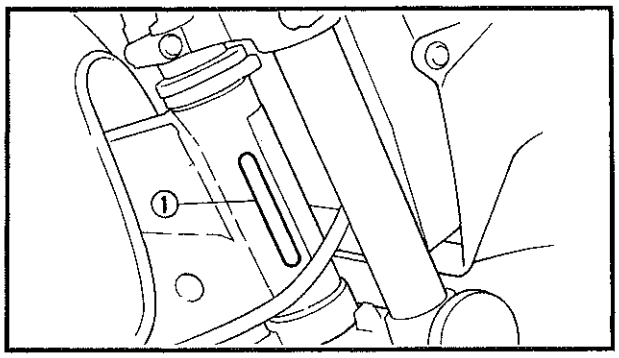
CHAPTER 8
TROUBLESHOOTING

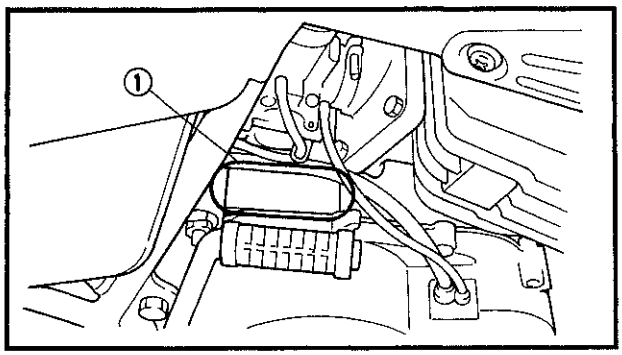
ELECTRICAL SYSTEM 8-1

COMPRESSION SYSTEM 8-2

INTAKE AND EXHAUST SYSTEMS 8-3

WIRING DIAGRAM 8-4





GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION

FRAME SERIAL NUMBER

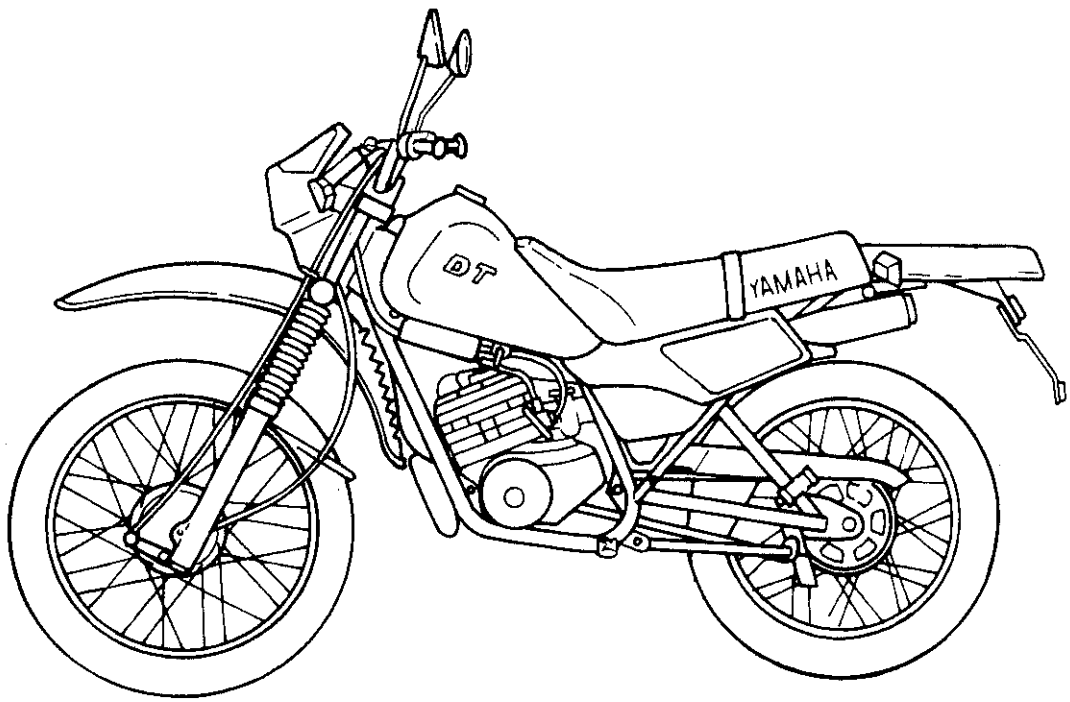
The frame serial number ① is stamped into the right side of the steering head pipe.

ENGINE SERIAL NUMBER

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

NOTE:

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



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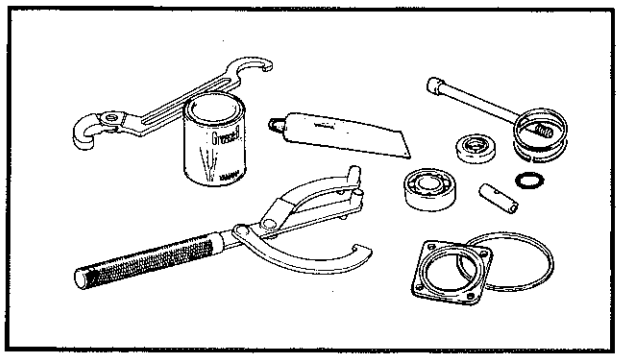
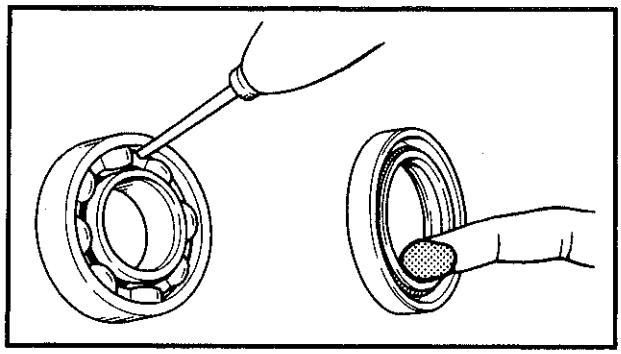


IMPORTANT INFORMATION

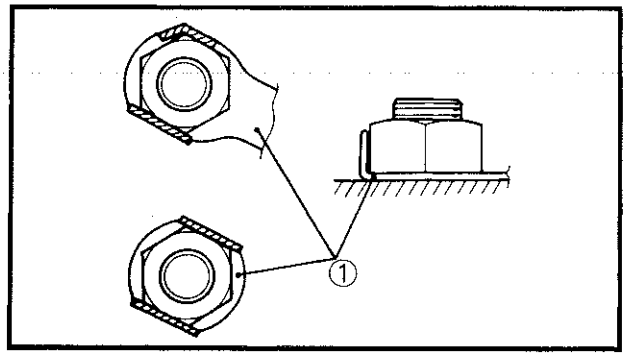
ALL REPLACEMENT PARTS

1. We recommend to use Yamaha genuine parts for all replacements. Use oil and/of grease recommended by Yamaha for assembly and adjustment.



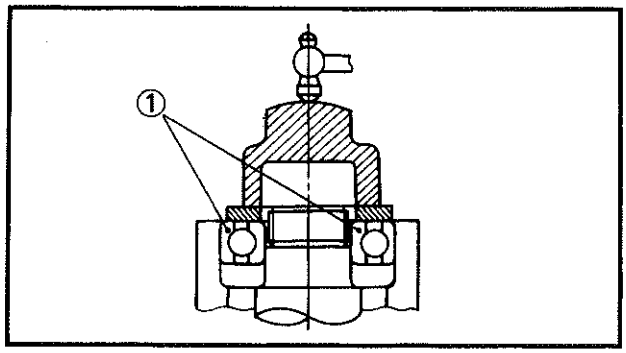
GASKETS, OIL SEALS, AND O-RINGS

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



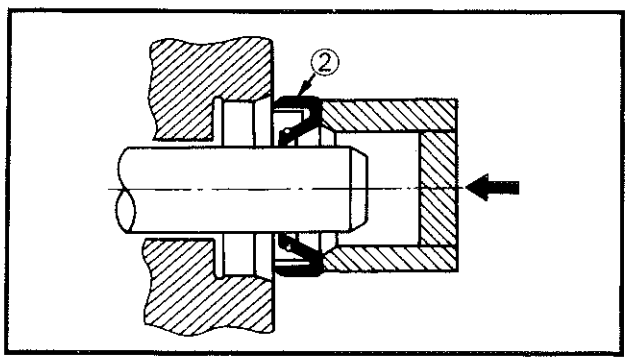
LOCK WASHERS/PLATES AND COTTER PINS

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



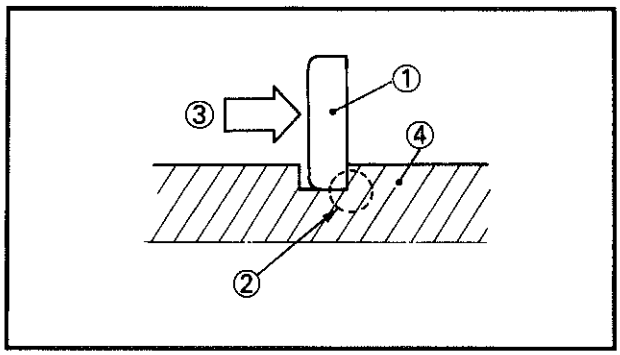
BEARINGS AND OIL SEALS

1. Install the bearing(s) ① and oil seal(s) ② with their manufacturer's marks or numbers facing outward. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of light-weight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.



CAUTION:

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



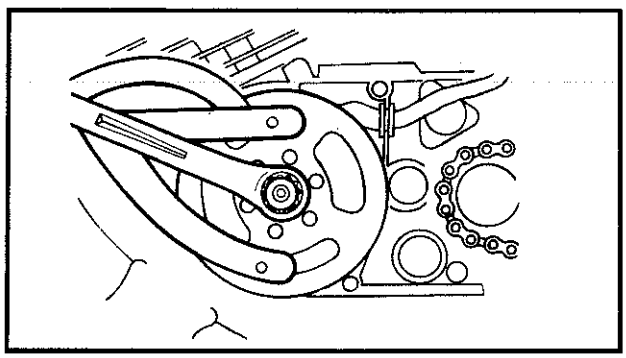
CIRCLIPS

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

④ Shaft

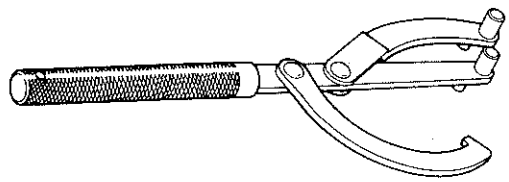
SPECIAL TOOLS

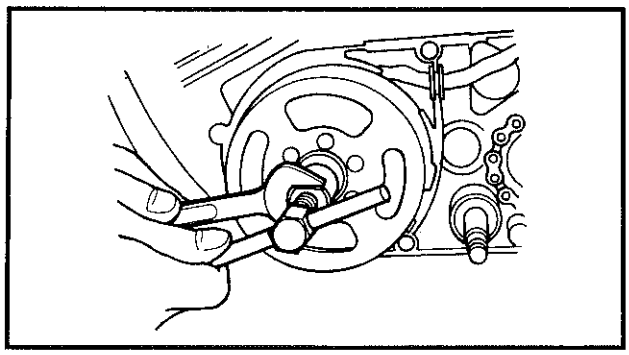
The proper special tools are necessary for complete and accurate tune-up and assembly. Using the correct special tool will help prevent damage caused by the use of improper tools or improvised techniques.



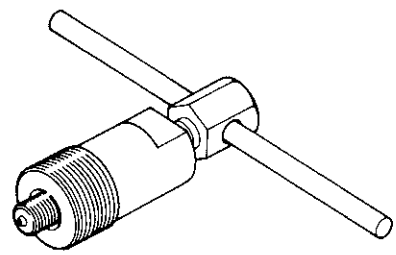
FOR ENGINE SERVICE

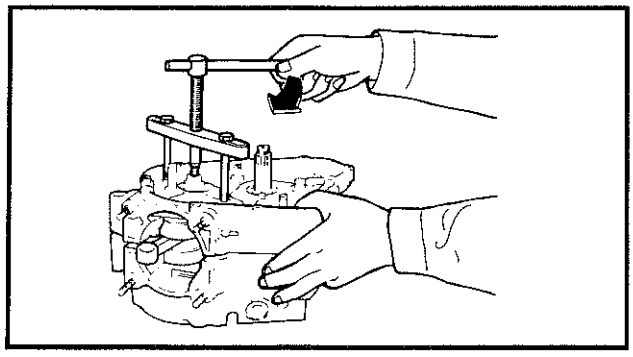
1.Flywheel holding tool
(90890-01235)



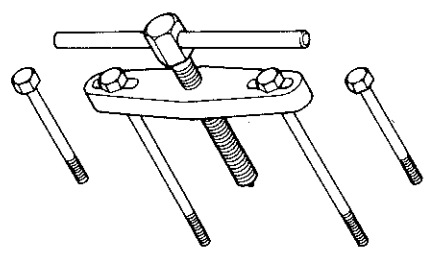


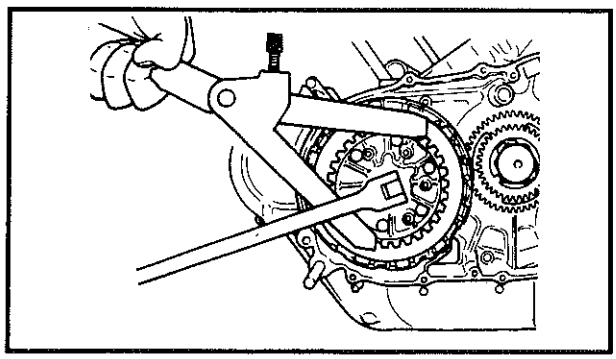
2.Flywheel puller
(90890-01189)



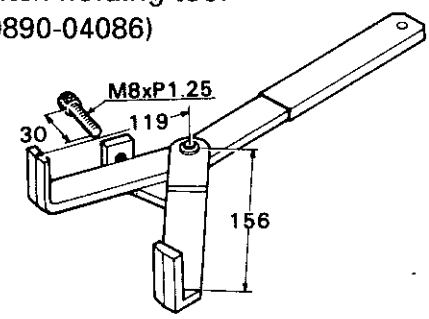


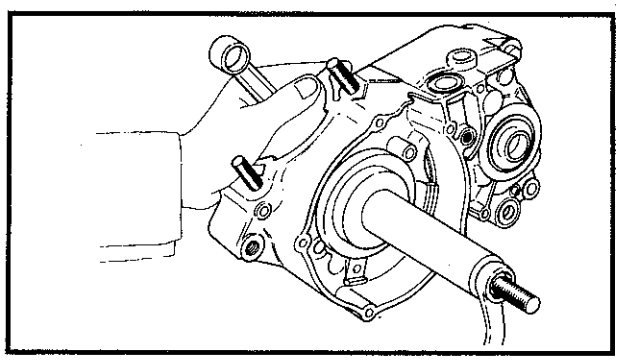
3.Crankcase separating tool
(90890-01135)



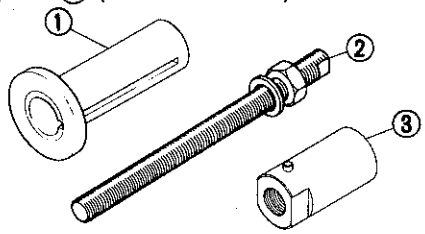


4.Clutch holding tool
(90890-04086)

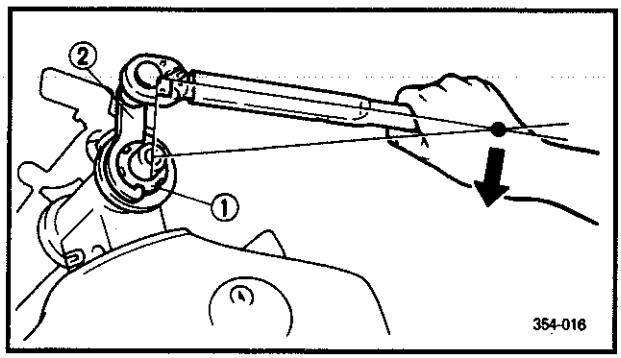




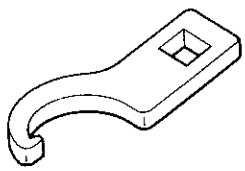
5.Crank installing tool
- Pot ① (90890-01274)
- Bolt ② (90890-01275)
- Adapter ③ (90890-01278)

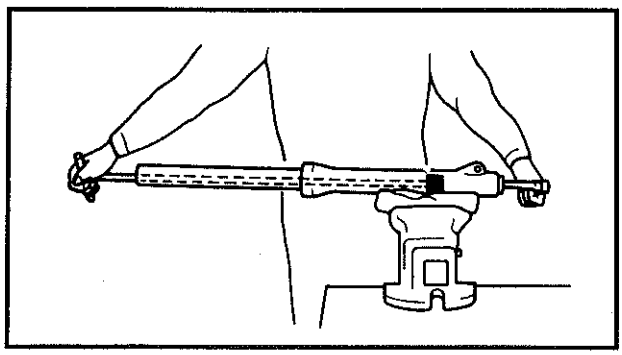


FOR CHASSIS SERVICE

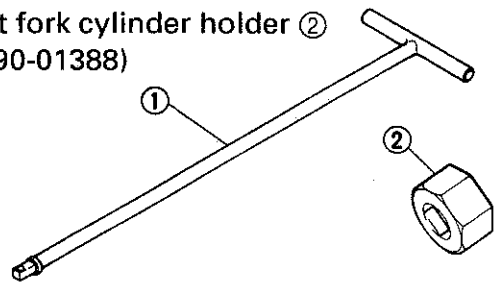


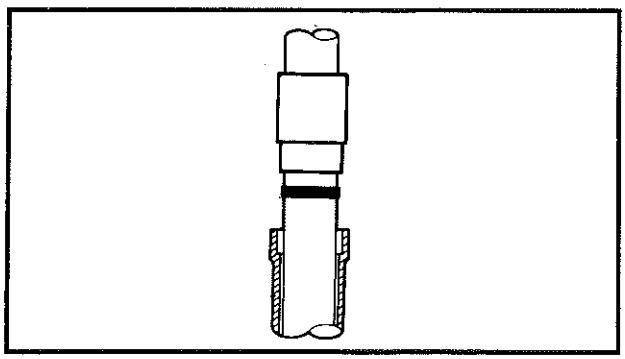
1.Ring nut wrench
(90890-01403)



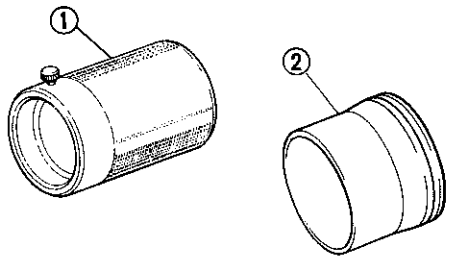


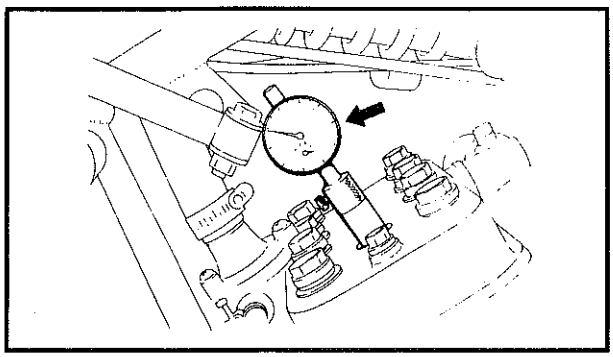
2.T-handle ①
(90890-01326)
Front fork cylinder holder ②
(90890-01388)





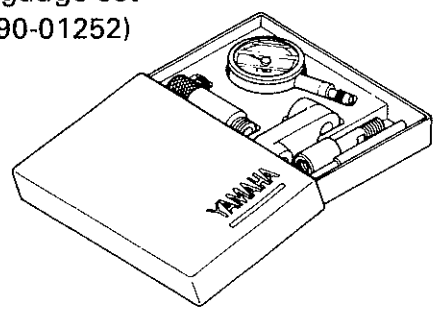
3.Front fork seal driver (weight) ①
(90890-01367)
Adapter ②
(90890-01381)

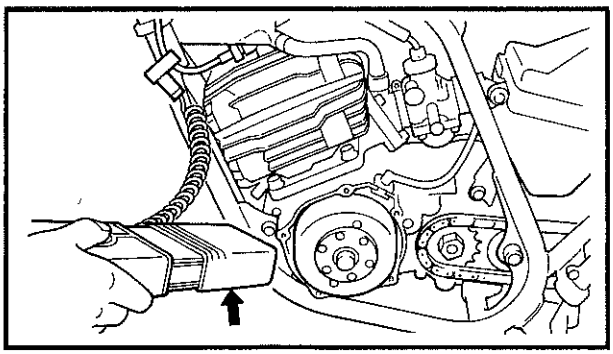




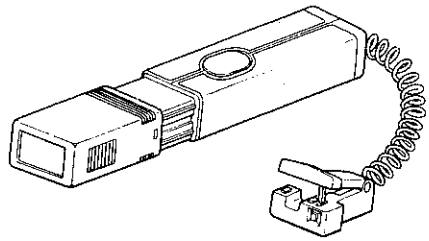
FOR TUNE-UP

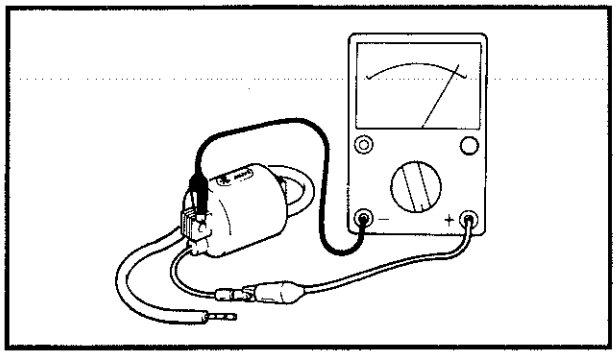
1.Dial gauge set
(90890-01252)





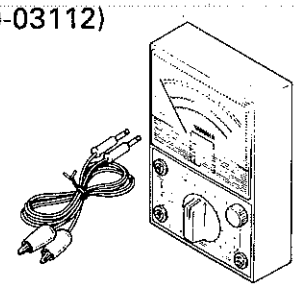
2.Timing light
(90890-03141)

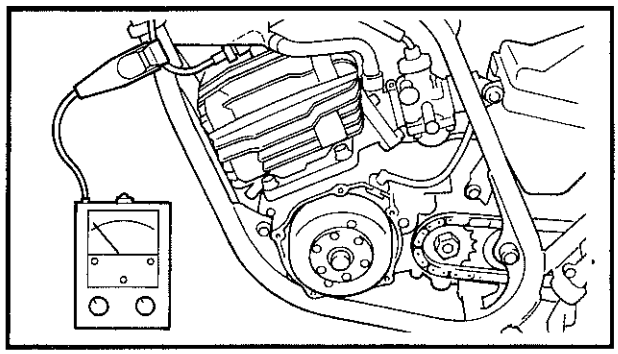




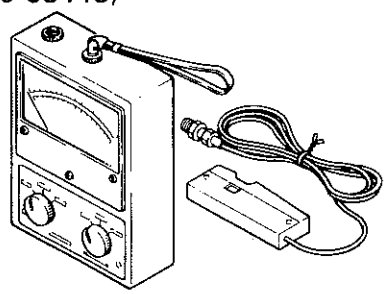
FOR ELECTRICAL COMPONENTS

1.Pocket tester
(90890-03112)





2.Engine speed tester
(90890-03113)



SPECIFICATIONS

GENERAL SPECIFICATIONS

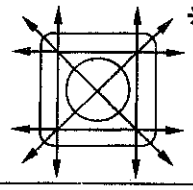
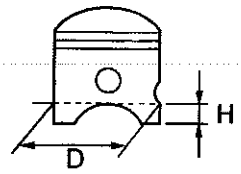
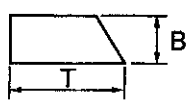
Model	DT125	DT175
Model code number:	3TT	3TS
Engine starting number:	3TT-000101	3TS-000101
Dimensions:		
Overall length	2,110 mm (83.1 in)	2,110 mm (83.1 in)
Overall width	865 mm (34.1 in)	865 mm (34.1 in)
Overall height	1,165 mm (45.9 in)	1,165 mm (45.9 in)
Seat height	830 mm (32.7 in)	830 mm (32.7 in)
Wheelbase	1,340 mm (52.7 in)	1,340 mm (52.7 in)
Minimum ground clearance	260 mm (10.2 in)	260 mm (10.2 in)
Basic weight:		
With oil and full fuel tank	107 kg (236 lb)	107 kg (236 lb)
Minimum turning radius:	2,100 mm (82.7 in)	2,100 mm (82.7 in)
Engine:		
Engine type	Air cooled, 2-stroke, gasoline	Air cooled, 2-stroke, gasoline
Induction system	Reed valve	Reed valve
Cylinder arrangement	Forward-inclined, single cylinder	Forward-inclined, single cylinder
Displacement	123 cm^3	171 cm^3
Bore × stroke	56 × 50 mm (2.20 × 1.97 in)	66 × 50 mm (2.60 × 1.97 in)
Compression ratio	7.2 : 1	6.7 : 1
Starting system	Kick starter	Kick starter
Lubrication system:	Separate lubrication (Yamaha autolube)	Separate lubrication (Yamaha autolube)
Oil type or grade:		
Engine oil	Air cooled 2-stroke engine oil	Air cooled 2-stroke engine oil
Transmission oil	SAE 10W30 type SE motor oil	SAE 10W30 type SE motor oil
Oil capacity:		
Oil tank (engine oil)	0.9 L (0.79 Imp qt, 0.95 US qt)	0.9 L (0.79 Imp qt, 0.95 US qt)
Transmission oil:		
Periodic oil change	0.60 L (0.53 Imp qt, 0.63 US qt)	0.60 L (0.53 Imp qt, 0.63 US qt)
Total amount	0.65 L (0.57 Imp qt, 0.69 US qt)	0.65 L (0.57 Imp qt, 0.69 US qt)
Air filter:	Wet type element	Wet type element
Fuel:		
Type	Regular gasoline	Regular gasoline
Tank capacity	9.5 L (2.09 Imp gal, 2.51 US gal)	9.5 L (2.09 Imp gal, 2.51 US gal)
Reserve amount	1.0 L (0.22 Imp gal, 0.26 US gal)	1.0 L (0.22 Imp gal, 0.26 US gal)
Carburetor:		
Type × quantity	VM24SS × 1	VM24SS × 1
Manufacturer	MIKUNI	MIKUNI
Spark plug:		
Type / Manufacturer	B8ES / NGK	B8ES / NGK
Gap	0.7 ~ 0.8 mm (0.028 ~ 0.031 in)	0.7 ~ 0.8 mm (0.028 ~ 0.031 in)
Clutch type:	Wet, multiple-disc	Wet, multiple-disc

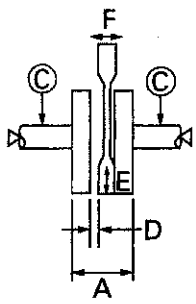
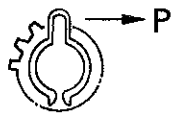
Model		DT125		DT175	
Transmission:					
Primary reduction system		Helical gear		Helical gear	
Primary reduction ratio		71/22 (3.227)		71/22 (3.227)	
Secondary reduction system		Chain drive		Chain drive	
Secondary reduction ratio		47/15 (3.133)		49/16 (3.062)	
Transmission type		Constant mesh 6-speed		Constant mesh 6-speed	
Operation		Left foot operation		Left foot operation	
Gear ratio:	1st	35/11 (3.181)		35/11 (3.181)	
	2nd	29/15 (1.933)		29/15 (1.933)	
	3rd	26/19 (1.368)		26/19 (1.368)	
	4th	24/22 (1.090)		24/22 (1.090)	
	5th	22/23 (0.956)		22/23 (0.956)	
	6th	21/25 (0.840)		21/25 (0.840)	
Chassis:					
Frame type		Semi double cradle		Semi double cradle	
Caster angle		29.66°		29.66°	
Trail		123 mm (4.84 in)		123 mm (4.84 in)	
Tire:					
Type		With tube		With tube	
Size	front	2.75-21 4PR		2.75-21 4PR	
	rear	4.10-18 4PR		4.10-18 4PR	
Manufacturer	front	BRIDGESTONE/YOKOHAMA		BRIDGESTONE/YOKOHAMA	
	rear	BRIDGESTONE/YOKOHAMA		BRIDGESTONE/YOKOHAMA	
Type	front	TW15/Y-968		TW15/Y-968	
	rear	TW12/Y-968		TW12/Y-968	
Tire pressure (cold tire):					
Basic weight:					
With oil and full fuel tank					
Maximum load*		213 kg (470 lb)		213 kg (470 lb)	
Cold tire pressure:		Front	Rear	Front	Rear
Up to 90 kg (198 lb) load*		125 kPa (1.25 kg/cm², 18 psi)	150 kPa (1.50 kg/cm², 21 psi)	150 kPa (1.50 kg/cm², 21 psi)	200 kPa (2.00 kg/cm², 28 psi)
90 kg (198 lb) ~ Maximum load*		150 kPa (1.50 kg/cm², 21 psi)	175 kPa (1.75 kg/cm², 25 psi)	150 kPa (1.50 kg/cm², 21 psi)	230 kPa (2.30 kg/cm², 33 psi)
Off-road riding		125 kPa (1.25 kg/cm², 18 psi)	150 kPa (1.50 kg/cm², 21 psi)	150 kPa (1.50 kg/cm², 21 psi)	200 kPa (2.00 kg/cm², 28 psi)
		*Load is the total weight of cargo, rider, passenger, and accessories.			
Brake:					
Front		Drum brake		Drum brake	
Operation		Right hand operation		Right hand operation	
Rear		Drum brake		Drum brake	
Operation		Right foot operation		Right foot operation	
Suspension:					
Front suspension		Telescopic fork		Telescopic fork	
Rear suspension		Swingarm (monocross)		Swingarm (monocross)	
Shock absorber:					
Front shock absorber		Coil spring / oil damper		Coil spring / oil damper	
Rear shock absorber		Coil-gas spring / oil damper		Coil-gas spring / oil damper	

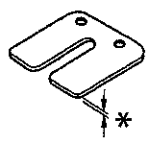
Model	DT125	DT175
Wheel travel:		
Front wheel travel	200 mm (7.87 in)	200 mm (7.87 in)
Rear wheel travel	155 mm (6.10 in)	155 mm (6.10 in)
Electrical:		
Ignition system	C.D.I.	C.D.I.
Generator system	Flywheel magneto	Flywheel magneto
Battery type or model	6N6-3B-1	6N6-3B-1
Battery capacity	6V 6AH	6V 6AH
Headlight type:	Bulb type	Bulb type
Bulb wattage × quantity:		
Headlight	6V 35/35W	6V 35/35W
Tail / brake light	6V 5.3/17W	6V 5.3/17W
Flasher light	6V 17W × 4	6V 17W × 4
Meter light	6V 3W × 2	6V 3W × 2
Indicator light:		
Wattage × quantity		
"NEUTRAL"	6V 3W × 1	6V 3W × 1
"HIGHT BEAM"	6V 3W × 1	6V 3W × 1
"OIL LEVEL"	6V 3W × 1	6V 3W × 1
"TURN"	6V 3W × 1	6V 3W × 1

MAINTENANCE SPECIFICATIONS

ENGINE

Model	DT125	DT175
Cylinder head:		
Warp limit* 	0.05 mm (0.0020 in) *Lines indicate straightedge measurement	0.05 mm (0.0020 in) *Lines indicate straightedge measurement
Cylinder:		
Bore size	56.00 ~ 56.02 mm (2.205 ~ 2.206 in)	66.00 ~ 66.02 mm (2.598 ~ 2.599 in)
<Limit>	<56.1 mm (2.209 in)>	<66.1 mm (2.602 in)>
Taper limit	0.05 mm (0.0020 in)	0.05 mm (0.0020 in)
Out of round limit	0.01 mm (0.0004 in)	0.01 mm (0.0004 in)
Piston:		
Piston size "D"	55.6 ~ 55.8 mm (2.189 ~ 2.197 in)	65.94 ~ 66.00 mm (2.596 ~ 2.598 in)
Measuring point "H" 	10 mm (0.4 in)	10 mm (0.4 in)
Over size 1st	56.25 mm (2.215 in)	66.25 mm (2.608 in)
2nd	56.50 mm (2.224 in)	66.50 mm (2.618 in)
3rd	56.75 mm (2.234 in)	—
4th	57 mm (2.244 in)	—
Piston-to-cylinder clearance	0.030 ~ 0.035 mm (0.0012 ~ 0.0014 in)	0.040 ~ 0.045 mm (0.0016 ~ 0.0018 in)
Piston off-set	0 mm (0 in)	0 mm (0 in)
Piston pin bore inside diameter	16.004 ~ 16.015 mm (0.6301 ~ 0.6305 in)	16.004 ~ 16.015 mm (0.6301 ~ 0.6305 in)
Piston pin outside diameter	15.995 ~ 16.000 mm (0.6297 ~ 0.6299 in)	15.995 ~ 16.000 mm (0.6297 ~ 0.6299 in)
Piston ring:		
Sectional sketch Top/2nd ring 	Keystone B = 1.2 mm (0.05 in) T = 2.3 mm (0.09 in)	Keystone B = 1.2 mm (0.05 in) T = 2.4 mm (0.09 in)
End gap (installed)	0.15 ~ 0.35 mm (0.006 ~ 0.014 in)	0.30 ~ 0.50 mm (0.012 ~ 0.020 in)
Side clearance	0.03 ~ 0.05 mm (0.0012 ~ 0.0020 in)	0.03 ~ 0.05 mm (0.0012 ~ 0.0020 in)

Model	DT125	DT175
Crankshaft: 		
Crank width "A"	55.90 ~ 55.95 mm (2.201 ~ 2.203 in)	55.90 ~ 55.95 mm (2.201 ~ 2.203 in)
Runout limit "C"	0.02 mm (0.0008 in)	0.02 mm (0.0008 in)
Big end side clearance "D"	0.2 ~ 0.7 mm (0.008 ~ 0.028 in)	0.2 ~ 0.7 mm (0.008 ~ 0.028 in)
Big end radial clearance "E"	0.005 ~ 0.031 mm (0.0002 ~ 0.0012 in)	0.005 ~ 0.031 mm (0.0002 ~ 0.0012 in)
Small end free play "F"	0.24 ~ 0.48 mm (0.0094 ~ 0.0189 in)	0.24 ~ 0.48 mm (0.0094 ~ 0.0189 in)
Clutch:		
Friction plate:		
Thickness × quantity	2.9 ~ 3.1 mm (0.114 ~ 0.112 in) × 6	2.9 ~ 3.1 mm (0.114 ~ 0.112 in) × 7
<Wear limit>	<2.7 mm (0.106 in)>	<2.7 mm (0.106 in)>
Clutch plate:		
Thickness × quantity	1.2 mm (0.047 in) × 5	1.2 mm (0.04[illegible] in) × 6
<Warp limit>	<0.05 mm (0.0020 in)>	<0.05 mm (0.0020 in)>
Clutch spring:		
Free length × quantity	34.5 mm (1.36 in) × 4	34.5 mm (1.36 in) × 4
Minimum length	33.5 mm (1.32 in)	33.5 mm (1.32 in)
Clutch housing:		
Thrust clearance	0.022 ~ 0.054 mm (0.0009 ~ 0.0021 in)	0.022 ~ 0.054 mm (0.0009 ~ 0.0021 in)
Radial clearance	0.015 ~ 0.049 mm (0.0006 ~ 0.0019 in)	0.015 ~ 0.049 mm (0.0006 ~ 0.0019 in)
Clutch release method	Inner push, cam push	Inner push, cam push
Push rod bearing limit	0.15 mm (0.006 in)	0.15 mm (0.006 in)
Transmission:		
Main axle deflection limit	0.08 mm (0.003 in)	0.08 mm (0.003 in)
Drive axle deflection limit	0.08 mm (0.003 in)	0.08 mm (0.003 in)
Shifter:		
Shifter type	Guide bar	Guide bar
Guide bar bending limit	0.05 mm (0.002 in)	
Kick starter:		
Kick starter type	Kick & mesh type	Kick & mesh type
Kick clip friction force 	0.8 ~ 1.2 kg (1.8 ~ 2.6 lb)	0.8 ~ 1.2 kg (1.8 ~ 2.6 lb)
Air filter oil grade:	Foam-air filter oil or 2-stroke engine oil	Foam-air filter oil or 2-stroke engine oil

Model		DT125	DT175
Carburetor:			
I.D. mark		18G00	18L00
Main jet	(M.J.)	#165	#170
Air Jet	(A.J.)	2.5	0.5
Jet needle	(J.N.)	4O6-4	4L6-3
Needle jet	(N.J.)	O-6	O-8
Cutaway	(C.A.)	2.5	1.5
Pilot outlet	(P.O.)	0.6	0.6
Pilot jet	(P.J.)	#22.5	#20
Bypass 1	(B.P.1)	1.4	1.4
Air screw	(A.S.)	1-1/2	1-1/2
Valve seat size	(V.S.)	2.0	2.5
Starter jet	(G.S.1)	2.0	2.0
Engine idle speed		1,300 ~ 1,400 r/min	1,300 ~ 1,500 r/min
Reed valve:			
Thickness* 		0.2 mm (0.008 in)	0.2 mm (0.008 in)
Valve stopper height		10.3 mm (0.41 in)	10.3 mm (0.41 in)
Valve bending limit		0.5 mm (0.020 in)	0.5 mm (0.020 in)
Lubrication system:			
Autolube pump:			
Plunger diameter		4.0 mm (0.16 in)	4.0 mm (0.16 in)
Color code		Sky Blue	Black
Minimum stroke		0.30 ~ 0.35 mm (0.0118 ~ 0.0138 in)	0.30 ~ 0.35 mm (0.0118 ~ 0.0138 in)
Maximum stroke		1.85 ~ 2.05 mm (0.0728 ~ 0.0807 in)	1.85 ~ 2.05 mm (0.0728 ~ 0.0807 in)
Pully adjusting mark		Auto adjuster	Auto adjuster

Tightening torque

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Spark plug	–	M14	1	25	2.5	18	
Cylinder head	Nut	M8	4	25	2.5	18	
Cylinder head	Stud bolt	M8	4	12	1.2	8.7	
Cylinder	Nut	M10	4	35	3.5	25	
Cylinder	Stud bolt	M10	4	15	1.5	11	
Oil pump	Screw	M5	2	5	0.5	3.6	
Reed valve		M6	4	8	0.8	5.8	
Ring nut	Flange nut	M6	2	11	1.1	8.0	
Ring nut	Stud bolt	M6	2	10	1.0	7.2	
Drain plug	–	M12	1	20	2.0	14	
Crankcase	Screw	M6	12	8	0.8	5.8	
Crankcase cover	Screw	M6	6	8	0.8	5.8	
Crankcase cover	Screw	M6	9	8	0.8	5.8	
Holder	Screw	M8	1	16	1.6	11	
Oil pump cover	Screw	M6	3	8	0.8	5.8	
Kick crank	Bolt	M8	1	23	2.3	17	
Primary drive gear	Nut	M12	1	55	5.5	40	
Clutch boss	Nut	M14	1	55	5.5	40	
Clutch spring	Bolt	M5	4	6	0.6	4.3	
Drive sprocket	Nut	M16	1	55	5.5	40	
Bearing cover plate	Bolt	M6	2	8	0.8	5.8	
Bearing cover plate	Screw	M6	2	8	0.8	5.8	
Shaft arm	Bolt	M6	1	11	1.1	8.0	
Shaft adjusting screw	Nut	M8	1	30	3.0	22	
Stopper lever assembly	Bolt	M6	1	14	1.4	10	
Magneto base	Screw	M6	2	8	0.8	5.8	
Rotor assembly	Nut	M12	1	70	7.0	5.1	
Neutral switch	Screw	M12	1	4	0.4	2.9	

CHASSIS

Model		DT125	DT175
Steering system:			
Steering bearing type		Ball bearing	Ball bearing
No. / Size of steel balls:	Upper	22 pcs / 0.1875 in	22 pcs / 0.1875 in
	Lower	19 pcs / 0.25 in	19 pcs / 0.25 in
Front suspension:			
Front fork travel		200 mm (7.87 in)	200 mm (7.87 in)
Front spring free length		428.5 mm (16.87 in)	428.5 mm (16.87 in)
Spring rate	K1	30.0 N/mm (0.30 kg/mm, 16.8 lb/in)	30.0 N/mm (0.30 kg/mm, 16.8 lb/in)
Stroke	K1	0 ~ 200 mm (0 ~ 7.87 in)	0 ~ 200 mm (0 ~ 7.87 in)
Optional spring		No.	No.
Oil capacity		254 cm^3 (8.94 Imp oz, 8.59 US oz)	254 cm^3 (8.94 Imp oz, 8.59 US oz)
Oil level		467 mm (18.39 in) Below the top of inner fork tube without fork spring	467 mm (18.39 in) Below the top of inner fork tube without fork spring
Oil grade		Fork oil 10W or equivalent	Fork oil 10W or equivalent
Rear suspension:			
Shock absorber travel		84 mm (3.31 in)	84 mm (3.31 in)
Spring free length		258 mm (10.16 in)	258 mm (10.16 in)
Spring rate	K1	365 N/mm (3.65 kg/mm, 204 lb/in)	365 N/mm (3.65 kg/mm, 204 lb/in)
	K2	584 N/mm (5.84 kg/mm, 327 lb/in)	584 N/mm (5.84 kg/mm, 327 lb/in)
Stroke	K1	0 ~ 58 mm (0 ~ 2.28 in)	0 ~ 58 mm (0 ~ 2.28 in)
	K2	58 ~ 84 mm (2.28 ~ 3.31 in)	58 ~ 84 mm (2.28 ~ 3.31 in)
Optional spring		No.	No.
Enclosed gas / Air pressure (STD) <Min. ~ Max.>		1,200 kPa (12 kg/cm^2, 171 psi) 1,100 ~ 1,300 kPa (11 ~ 13 kg/cm^2, 156 ~ 185psi)	1,200 kPa (12 kg/cm^2, 171 psi) 1,100 ~ 1,300 kPa (11 ~ 13 kg/cm^2, 156 ~ 185psi)
Swingarm:			
Free play limit:	End	1.0 mm (0.04 in)	1.0 mm (0.04 in)
	Side	1.0 mm (0.04 in)	1.0 mm (0.04 in)
Front wheel:			
Type		Spoke wheel	Spoke wheel
Rim size		1.60 × 21	1.60 × 21
Rim material		Steel	Steel
Rim runout limit:	Radial	2.0 mm (0.08 in)	2.0 mm (0.08 in)
	Lateral	2.0 mm (0.08 in)	2.0 mm (0.08 in)
Rear wheel:			
Type		Spoke wheel	Spoke wheel
Rim size		1.85 × 18	1.85 × 18
Rim material		Steel	Steel
Rim runout limit:	Radial	2.0 mm (0.08 in)	2.0 mm (0.08 in)
	Lateral	2.0 mm (0.08 in)	2.0 mm (0.08 in)

Model	DT125	DT175
Drive chain:		
Type / Manufacturer	DID428HG / DAIDO	DID428HG / DAIDO
No. of links	116	118
Chain free play	35 ~ 40 mm (1.4 ~ 1.6 in)	35 ~ 40 mm (1.4 ~ 1.6 in)
Front drum brake:		
Type	Leading, trailing	Leading, trailing
Brake drum inside diameter	130 mm (5.12 in)	130 mm (5.12 in)
<Limit>	<131 mm (5.16 in)>	<131 mm (5.16 in)>
Lining thickness	4.0 mm (0.16 in)	4.0 mm (0.16 in)
<Limit>	<2.0 mm (0.08 in)>	<2.0 mm (0.08 in)>
Shoe spring free length	36.5 mm (1.4 in)	36.5 mm (1.4 in)
Rear drum brake:		
Type	Leading, trailing	Leading, trailing
Brake drum inside diameter	130 mm (5.12 in)	130 mm (5.12 in)
<Limit>	<131 mm (5.16 in)>	<131 mm (5.16 in)>
Lining thickness	4.0 mm (0.16 in)	4.0 mm (0.16 in)
<Limit>	<2.0 mm (0.08 in)>	<2.0 mm (0.08 in)>
Shoe spring free length	36.5 mm (1.4 in)	36.5 mm (1.4 in)
Brake lever and brake pedal:		
Brake lever free play	5 ~ 8 mm (0.20 ~ 0.31 in) at lever pivot	5 ~ 8 mm (0.20 ~ 0.31 in) at lever pivot
Brake pedal position	10 mm (0.39 in)	10 mm (0.39 in)
Brake pedal free play	20 ~ 30 mm (0.8 ~ 1.2 in) at pedal end	20 ~ 30 mm (0.8 ~ 1.2 in) at pedal end
Clutch lever free play	2 ~ 3 mm (0.08 ~ 0.12 in) at lever pivot	2 ~ 3 mm (0.08 ~ 0.12 in) at lever pivot

Tightening torque

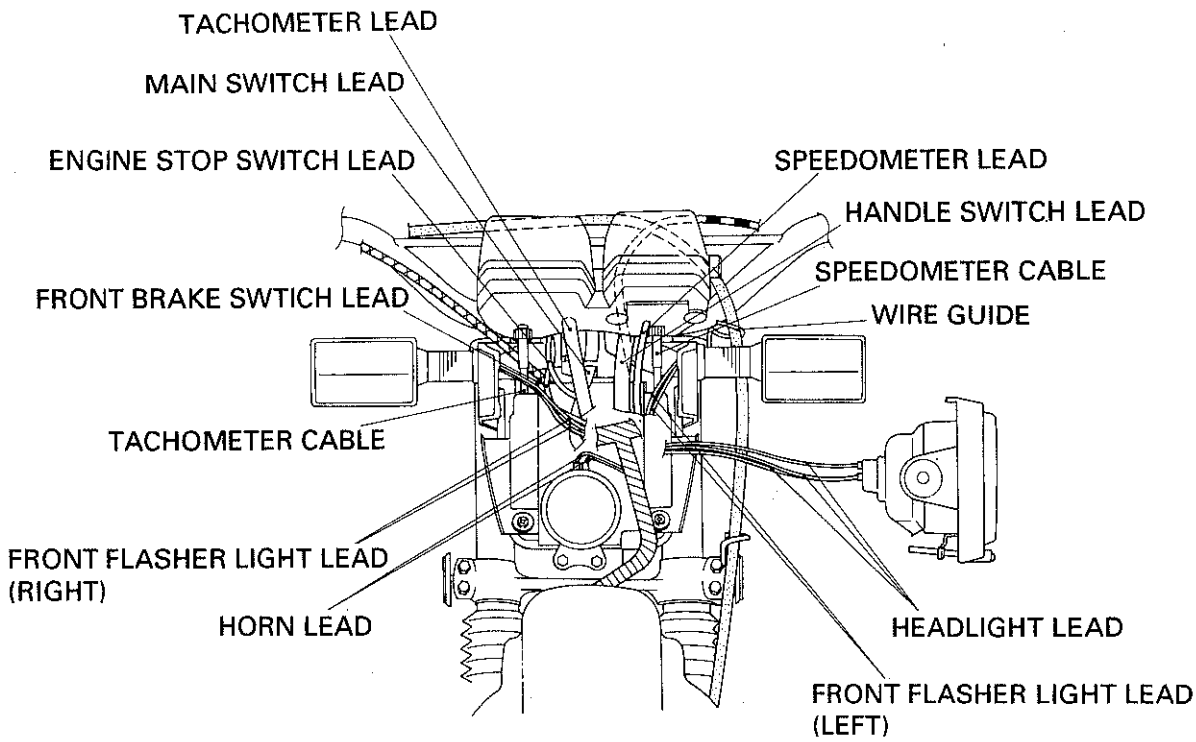
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m•kg	ft•lb	
Front axle nut	M10	39	3.9	28	
Rear axle nut	M14	85	8.5	61	
Engine mounting:					
Front	M8	32	3.2	23	
Rear, upper	M8	32	3.2	23	
Rear, lower	M10	39	3.9	28	
Pivot shaft nut	M12	53	5.3	38	
Handle crown and inner tube	M10	34	3.4	24	
Handle crown and steering shaft (side)	M8	23	2.3	17	
Handle crown and steering shaft (upper)	M14	54	5.4	39	
Steering shaft and locknut	M25	38	3.8	27	
Handle crown and handle holder	M8	15	1.5	11	
Rear shock absorber and frame	M10	32	3.2	23	
Driven sprocket and hub	M10	39	3.9	28	
Stud bolt for hub	M10	39	3.9	28	LT

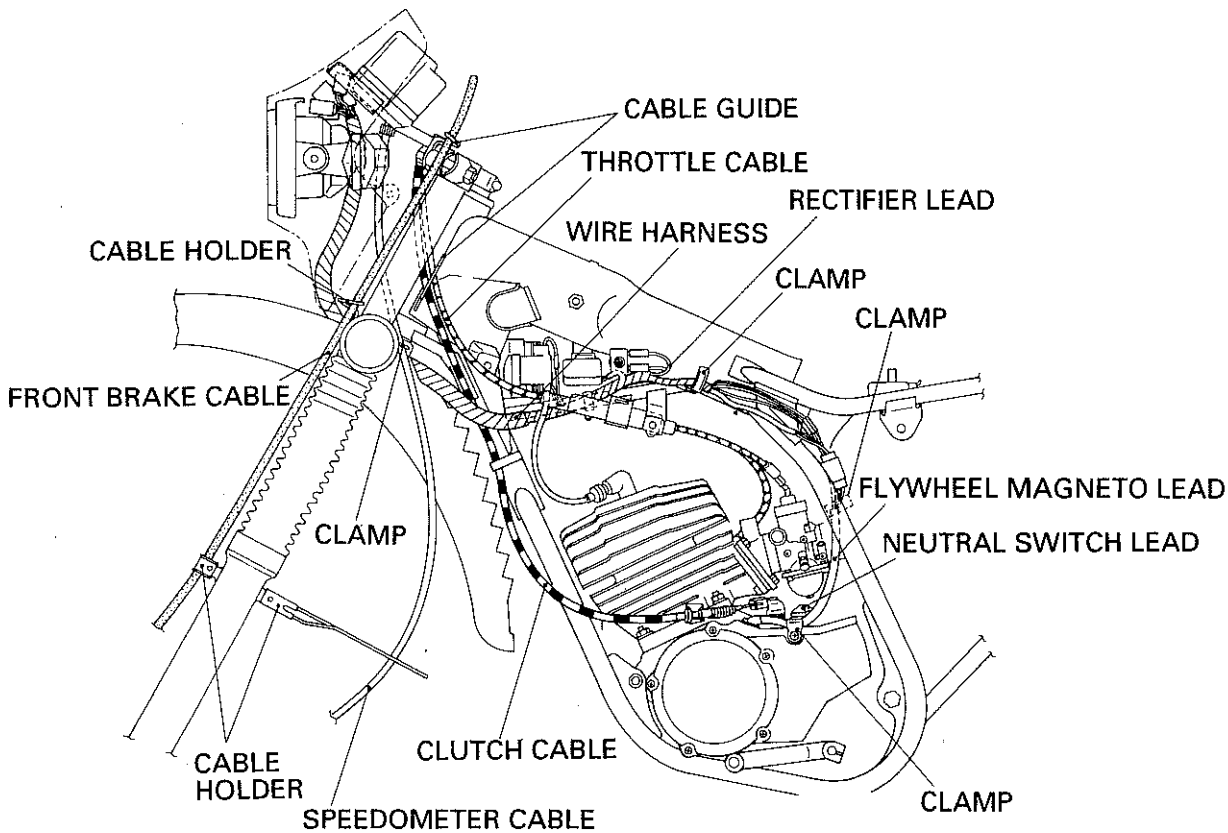
ELECTRICAL

Model	DT125	DT175
Voltage:	6V	6V
Ignition system:		
Ignition timing (B.T.D.C.)	16° at 6,000 r/min	18° at 6,000 r/min
Advancer type	Electrical	Electrical
C.D.I.:		
Magneto model / Manufacturer	F003T25371 / MITSUBISHI	F004T20272 / MITSUBISHI
Pickup coil resistance	9 ~ 11 Ω at 20°C	10 ~ 13 Ω at 20°C
(color)	(White/Red - White/Green)	(White/Red - Black)
Source coil resistance	153 ~ 187 Ω at 20°C	570 ~ 697 Ω at 20°C
(color)	(Brown – Black)	(Brown – Black)
C.D.I. unit model / Manufacturer	F008T06071 / MITSUBISHI	F008T02471 / MITSUBISHI
Ignition coil:		
Model / Manufacturer	F6T411 / MITSUBISHI	F6T538 / MITSUBISHI
Minimum spark gap	6 mm (0.24 in)	6 mm (0.24 in)
Primary winding resistance	0.74 ~ 1.0 Ω at 20°C	0.74 ~ 1.0 Ω at 20°C
Secondary winding resistance	5.4 ~ 7.4 kΩ at 20°C	5.4 ~ 7.4 kΩ at 20°C
Spark plug cap:		
Type	Resin type	Resin type
Charging system:		
Type	Flywheel magneto	Flywheel magneto
Flywheel magneto:		
Model / Manufacturer	F003T25317 / MITSUBISHI	F004T20272 / MITSUBISHI
Charging current — Day Min.	1.3A at 2,500 r/min	1.1A at 2,500 r/min
Max.	1.5A at 8,000 r/min	2.5A at 8,000 r/min
Charging current — Night Min.	0.9A at 3,000 r/min	1.1A at 3,000 r/min
Max.	2.0A at 8,000 r/min	2.5A at 8,000 r/min
Charging coil resistance	0.23 ~ 0.29 Ω at 20°C	0.22 ~ 0.26 Ω at 20°C
(color)	(Green/White - Black)	(Green/White - Black)
Lighting voltage Min.	6.4V at 3,000 r/min	6.0V at 3,000 r/min
Max.	8.0V at 8,000 r/min	8.0V at 8,000 r/min
Lighting coil resistance	0.15 ~ 0.19 Ω at 20°C	0.11 ~ 0.13 Ω at 20°C
(color)	(Yellow - Black)	(Yellow - Black)
Voltage regulator:		
Type	Semi conductor - short circuit	Semi conductor - short circuit
Mode / Manufacturer	TS6HRY-L / MITSUBISHI	TS6HRY-L / MITSUBISHI
No load regulated voltage	7V	7V
Rectifier:		
Mode / Manufacturer	DE4504 / STANLEY	DE4504 / STANLEY
Capacity	4A	4A
Withstand voltage	400V	400V
Battery:		
Specific gravity	1.280	1.280
Horn:		
Type / Quantity	Plane type / 1 pcs.	Plane type / 1 pcs.
Model / Manufacturer	MF-6 / NIKKO	MF-6 / NIKKO
Maximum amperage	1.5A	1.5A

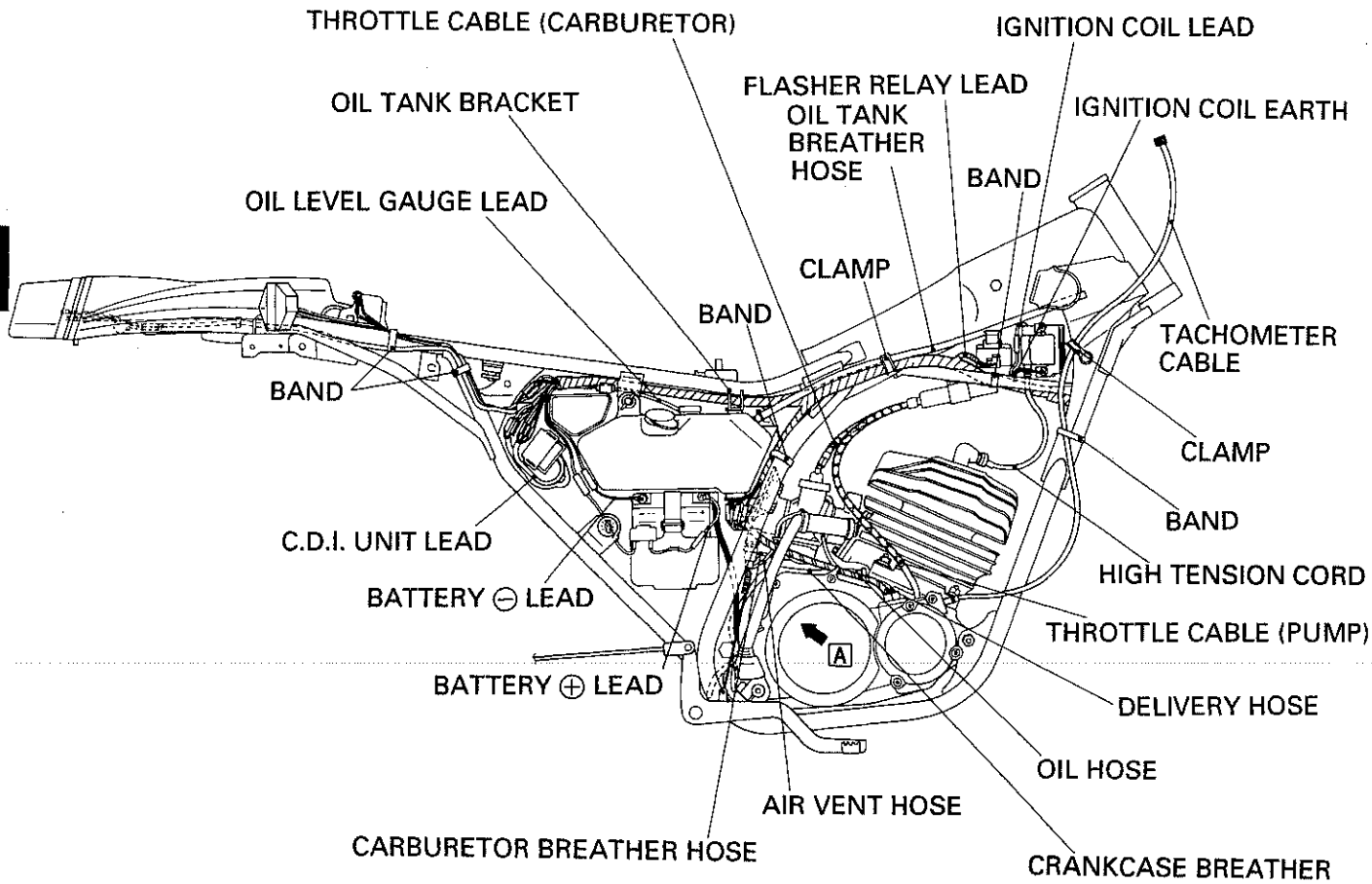
Model	DT125	DT175
Flasher relay (relay assembly):		
Type	Condenser type	Condenser type
Mode / Manufacturer	FZ636SD / NIPPONDENSO	FZ636SD / NIPPONDENSO
Self cancelling device	No.	No.
Flasher frequency	75 ~ 95 cycle/min	75 ~ 95 cycle/min
Wattage	17W × 2 + 3W	17W × 2 + 3W
Circuit breaker:		
Type	Non fuse breaker	Non fuse breaker

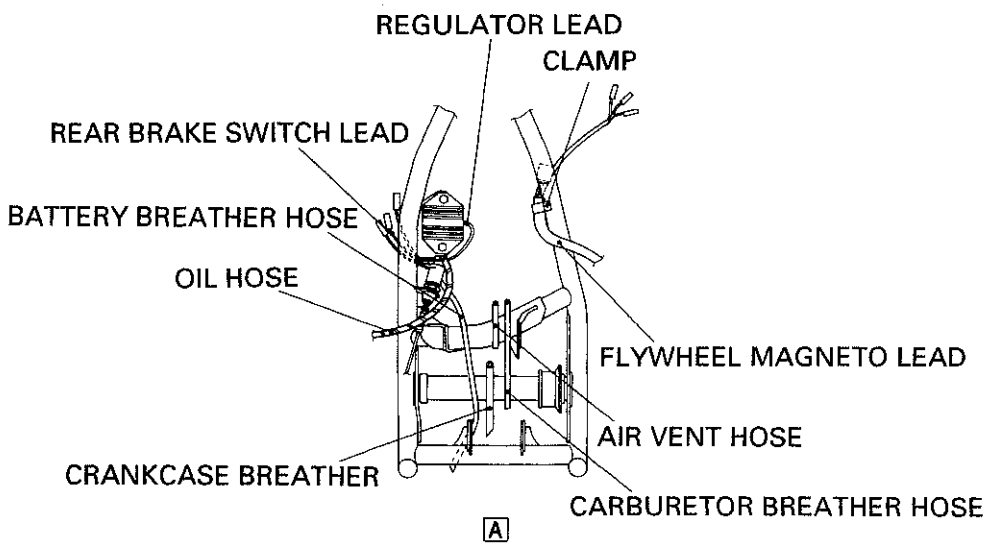
CABLE ROUTING

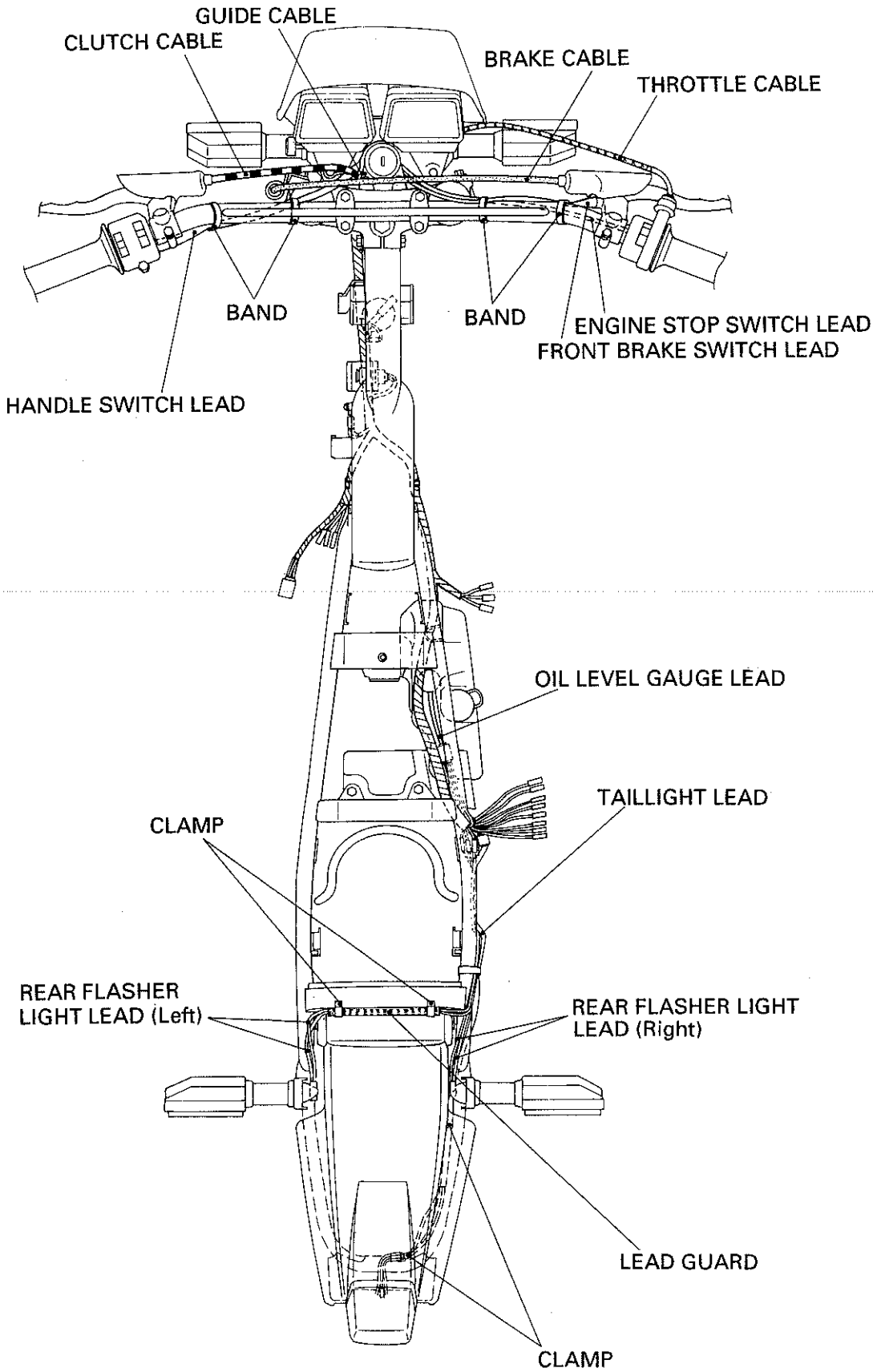


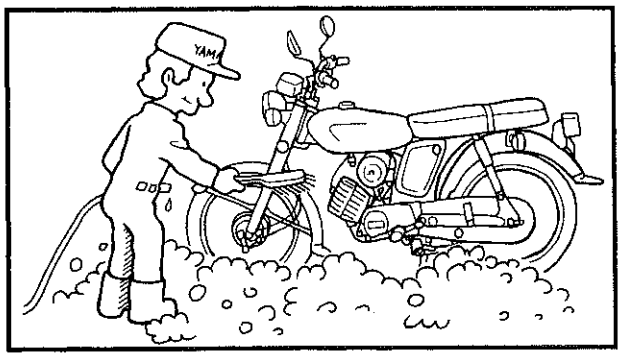


2


THROTTLE CABLE (CARBURETOR)
IGNITION COIL LEAD
OIL TANK BRACKET
FLASHER RELAY LEAD
OIL TANK BREATHER HOSE
IGNITION COIL EARTH
BAND
OIL LEVEL GAUGE LEAD
CLAMP
BAND
TACHOMETER CABLE
BAND
CLAMP
BAND
C.D.I. UNIT LEAD
HIGH TENSION CORD
BATTERY ⊖ LEAD
THROTTLE CABLE (PUMP)
A
BATTERY ⊕ LEAD
DELIVERY HOSE
OIL HOSE
AIR VENT HOSE
CARBURETOR BREATHER HOSE
CRANKCASE BREATHER


REGULATOR LEAD
CLAMP
REAR BRAKE SWITCH LEAD
BATTERY BREATHER HOSE
OIL HOSE
FLYWHEEL MAGNETO LEAD
AIR VENT HOSE
CRANKCASE BREATHER
CARBURETOR BREATHER HOSE
A


GUIDE CABLE
CLUTCH CABLE
BRAKE CABLE
THROTTLE CABLE
BAND
BAND
ENGINE STOP SWITCH LEAD
FRONT BRAKE SWITCH LEAD
HANDLE SWITCH LEAD
OIL LEVEL GAUGE LEAD
TAILLIGHT LEAD
CLAMP
REAR FLASHER LIGHT LEAD (Left)
REAR FLASHER LIGHT LEAD (Right)
LEAD GUARD
CLAMP

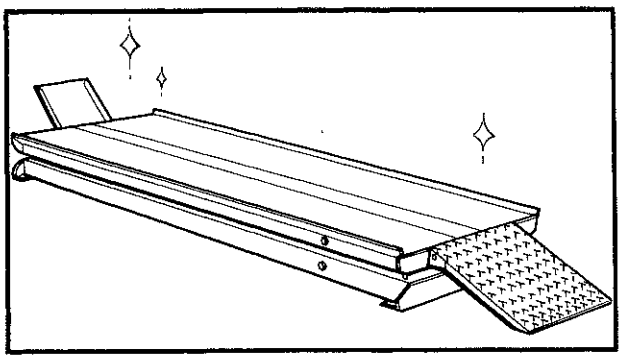


PERIODIC INSPECTION AND ADJUSTMENT

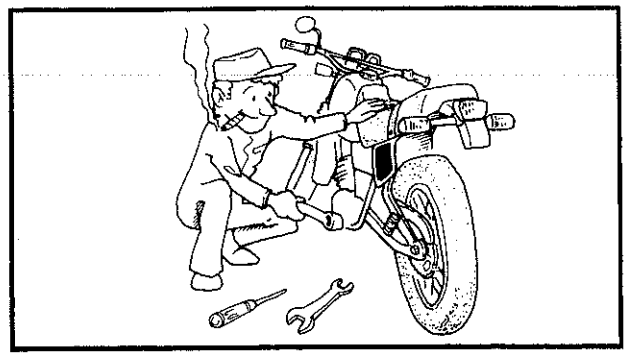
IMPORTANT INFORMATION

PREPARATION FOR REMOVAL

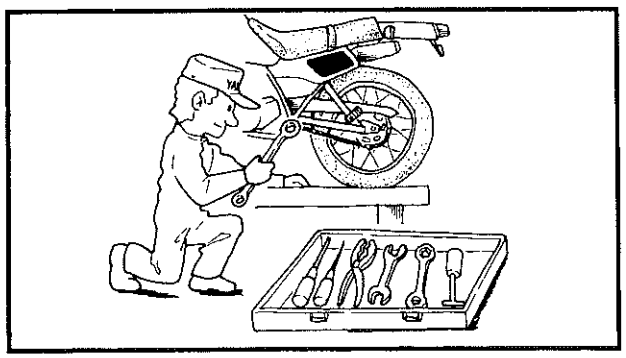
1. Thoroughly clean the frame and engine of dirt and dust in order to prevent them from entering the inside of the engine.



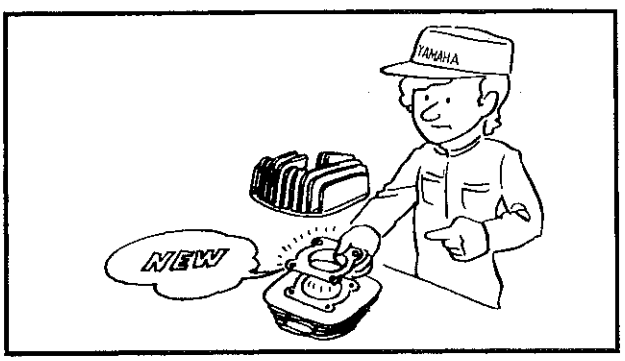
2. Cleaning the work area before and after performing repairs will help you detect oil leaks and find any missing parts.



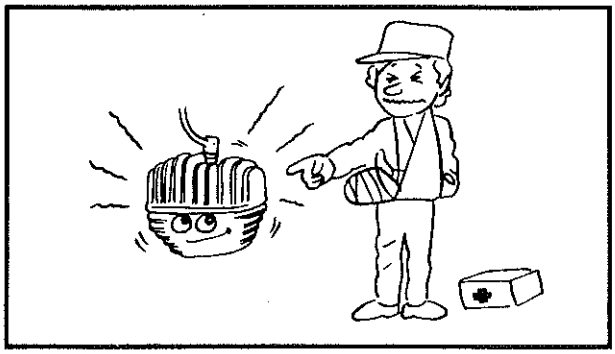
3. Keep away from fire.



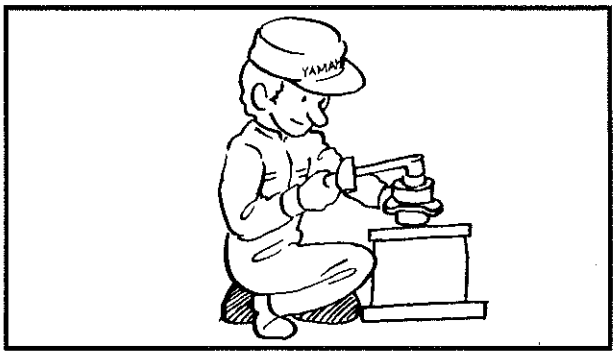
4. When the special tools are required, be sure to use them so that damage to machine parts can be avoided.
   Always use the right tools and instruments for the right purposes. (avoid using an open-end wrench as much as possible, in place of a box or socket wrench.)



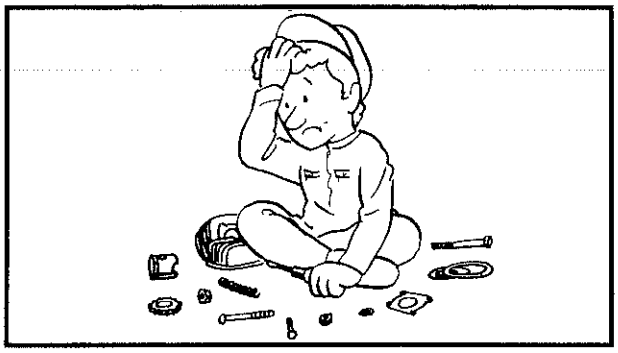
5. Always use a new gasket (packing), O-ring, cotter pin, circlip, lock washer, etc. for repairs.
   Also use genuine Yamaha parts, oil and grease, or those recommended by Yamaha. Avoid using other brands.

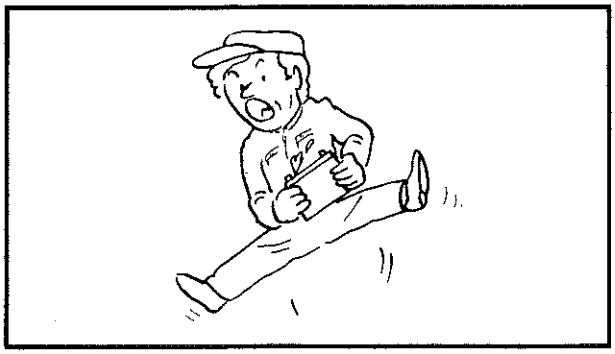


6.During service, take special care so that you don't get injured or burnt from the engine, exhaust pipe or muffler.



7.Notes on disassembly and reassembly
a.Place all removed parts neatly and separately in groups so that they will not be confused or lost.
b.Wash the engine and transmission parts in a detergent oil and blow them out dry with compressed air.
c.While checking the smooth movement of parts, install them.
d.Oil the contact surfaces of the moving parts.
e.Tighten parts to specification.





8.Take care so that the battery fluid does not spill on your clothes or the machine.

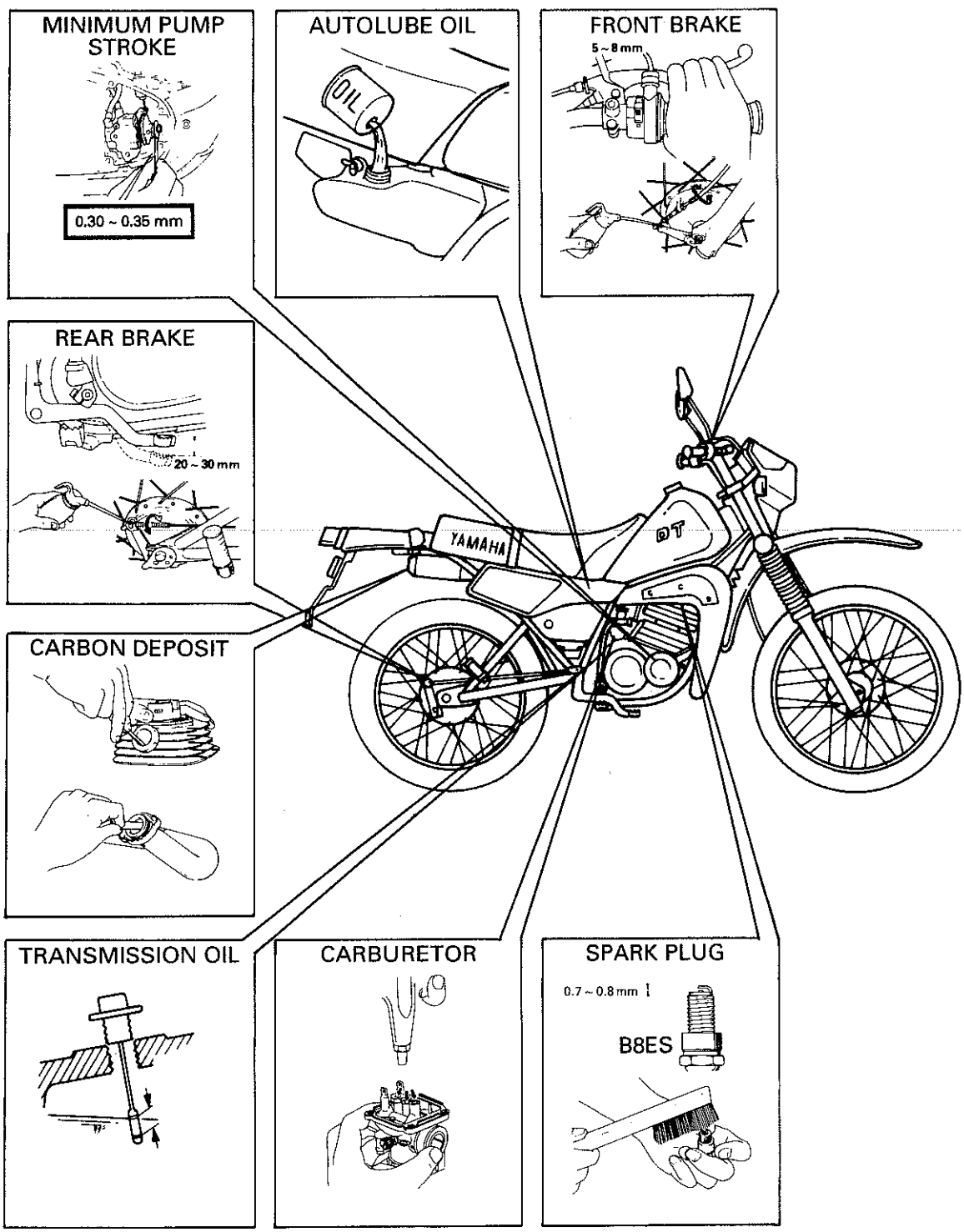
PERIODIC MAINTENANCE/LUBRICATION

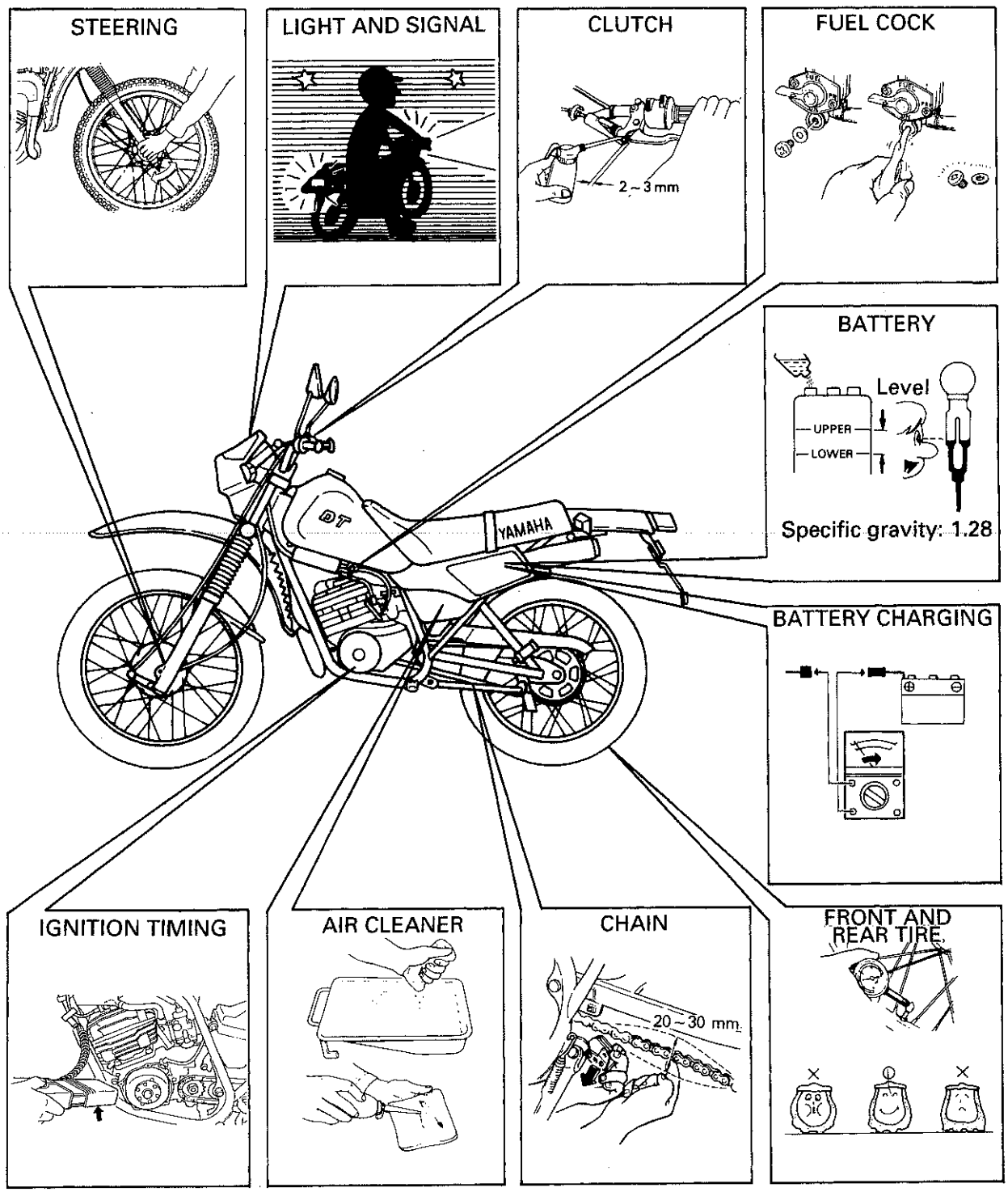
Unit: km (mi)

Item	Remarks	Initial			Thereafter every	
		500 (300)	1,500 (1,000)	3,000 (2,000)	3,000 (2,000)	6,000 (4,000)
Spark plug	Inspect/Clean or replace.	○		○	○	Replace
Air filter	Clean. Replace as required.		○	○	1,500 (1,000)	
Transmission oil	Replace. (warm engine before draining)*	○	Check	○	○	
Autolube pump***	Check/Adjust/Air bleeding.	○		○		○
Carburetor	Check/Adjust/Idle speed.		○	○	○	
Clutch***	Check operation. Adjust as required.	○	○	○	○	
Fuel cock***	Clean/Flush tank as required.		○	○	○	
Brakes***	Check operation. Adjust free play.	○	○	○	○	
Wheels and tires***	Check/Pressure, runout, wear.	○	○	○	○	
Drive chain***	Check slack/Clean/Lube.*	Every 500 (300)				
Steering	Check bearings for looseness/ Moderately repack.**			○		○
Battery***	Check fluid level, gravity.	○	○	○	○	
Ignition timing	Check. Adjust as required.					○
Decarbonize	Check carbon deposit. Decarbonize as required.		○	○		○
Front forks	Check operation/Oil leakage.	○		○		○
Rear shock absorber	Check operation/Oil leakage.	○		○		○
Rear arm pivot shaft	Repack.**			○		○
Wheel bearings	Check looseness damage. Replace as required.**			○		○

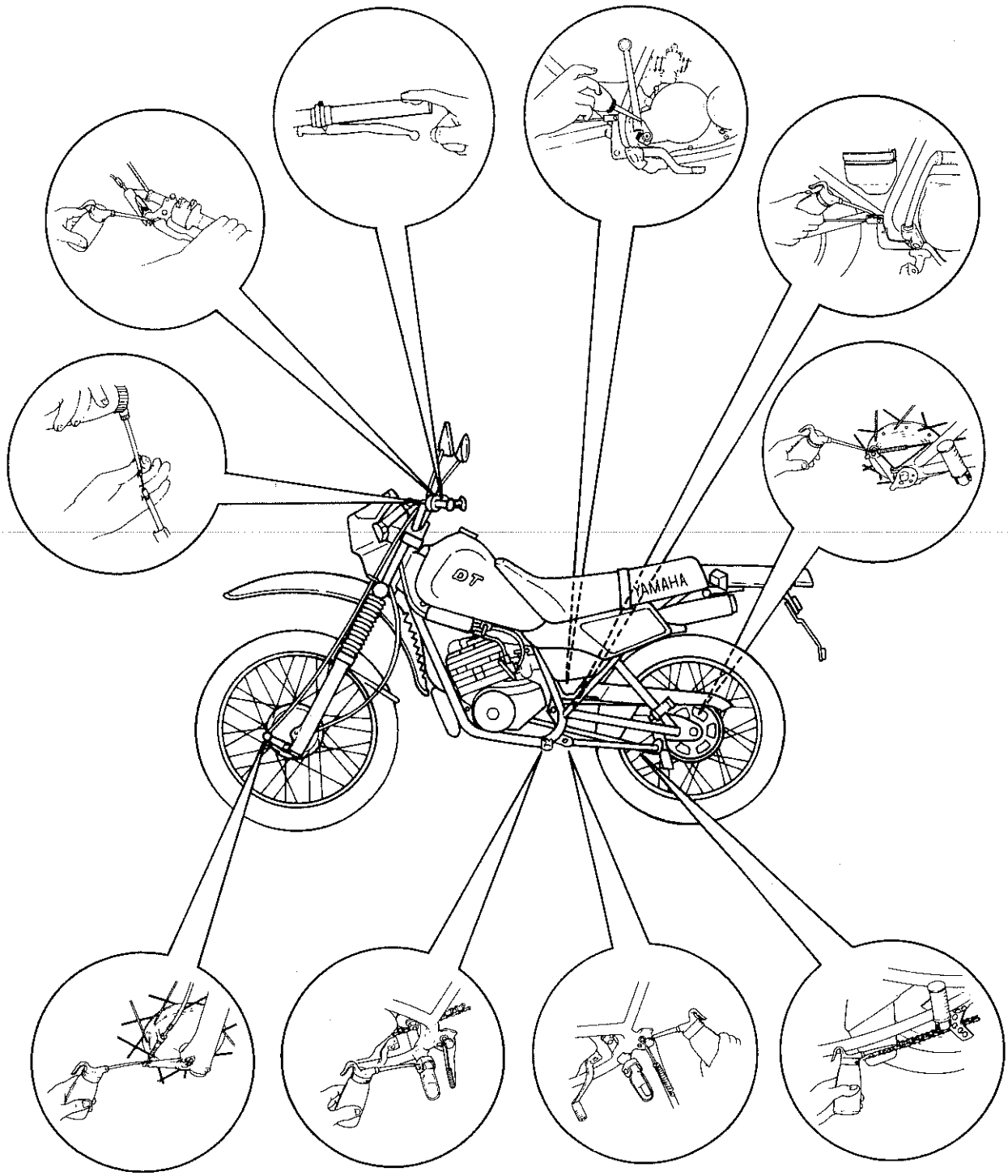
* SAE 10W30 motor oil.
** Lightweight lithium-soap base grease.
*** Delivery service item.

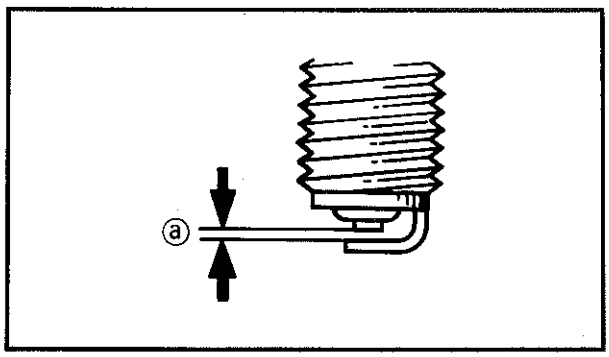
3


MINIMUM PUMP STROKE
0.30 ~ 0.35 mm
AUTOLUBE OIL
OIL
FRONT BRAKE
5 ~ 8 mm
REAR BRAKE
20 ~ 30 mm
YAMAHA
DT
CARBON DEPOSIT
TRANSMISSION OIL
CARBURETOR
SPARK PLUG
0.7 ~ 0.8 mm
B8ES


STEERING
LIGHT AND SIGNAL
CLUTCH
2 ~ 3 mm
FUEL COCK
BATTERY
Level
UPPER
LOWER
Specific gravity: 1.28
BATTERY CHARGING
IGNITION TIMING
AIR CLEANER
CHAIN
20 ~ 30 mm
FRONT AND REAR TIRE
DT
YAMAHA

3





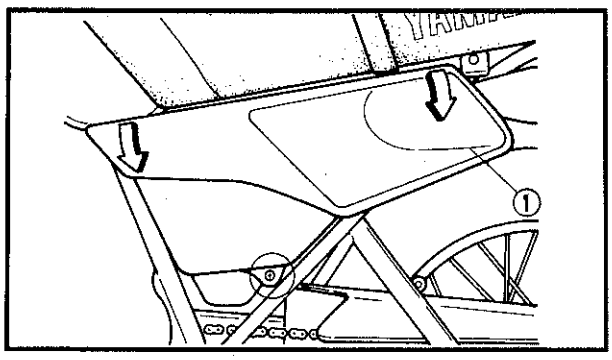
ENGINE

SPARK PLUG

1.Clean:
- Spark plug

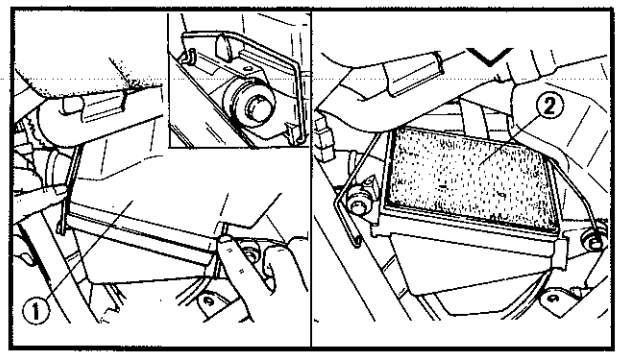
2.Check:
- Spark plug gap ⓐ

Spark plug gap:
0.7 ~ 0.8 mm (0.028 ~ 0.031 in)

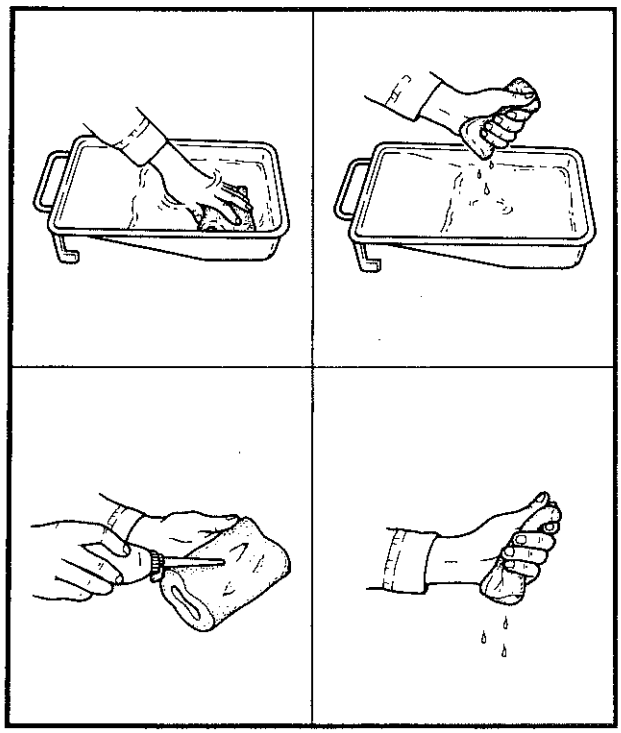


AIR CLEANER ELEMENT

1.Remove:
- Side cover (left) ①

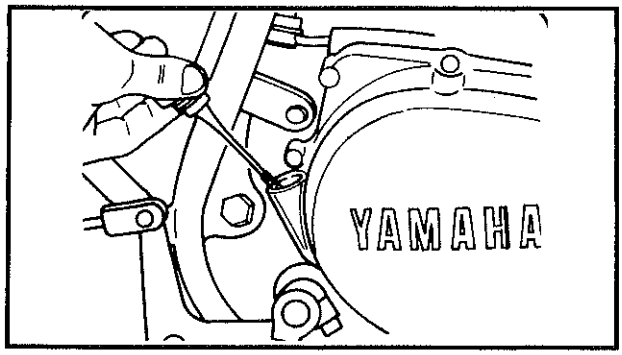


2.Remove:
- Cleaner element case cover ①
- Air cleaner element ②



3.Clean:
- Air cleaner element
  Wash the element in solvent.
  Squeeze excess solvent out of the element and dry.

4.Apply:
- A small quantity of 2-stroke engine oil.
  Sqeeze excess oil.



TRANSMISSION OIL LEVEL INSPECTION

1.Inspect:
- Oil level

  Using the dip stick ①.

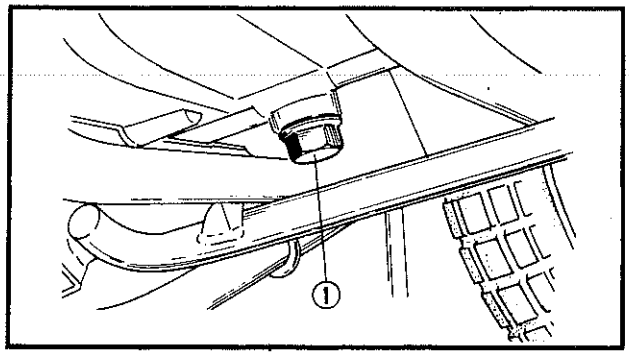
  Maintain transmission oil level always between MAX and MIN lines.

	Recommended oil: **SAE 10W30 type SE motor oil**

TRANSMISSION OIL REPLACEMENT

1.Start the engine and let it warm up for several minutes.

2.Stop the engine and place an oil pan under the drain bolt.

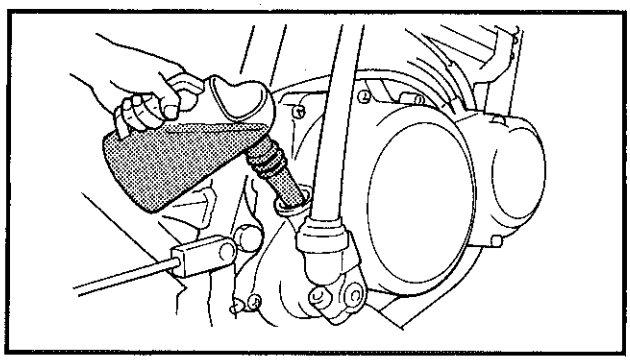


3.Remove:
- Oil filler plug
- Drain plug ①

  Drain the transmission oil.

4.Install:
- Drain plug ①

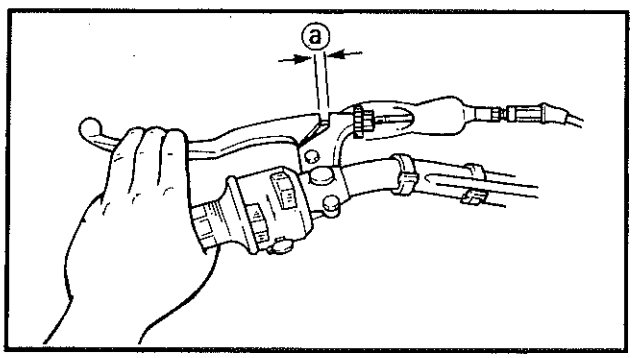
	Drain plug: **20 Nm (2.0 m • kg, 14 ft • lb)**



5.Fill:
- Transmission oil

	Oil quantity: **Total amount:** **0.65 L (0.57 Imp • qt, 0.69 US • qt)** **Periodic oil change:** **0.60 L (0.53 Imp • qt, 0.63 US • qt)**

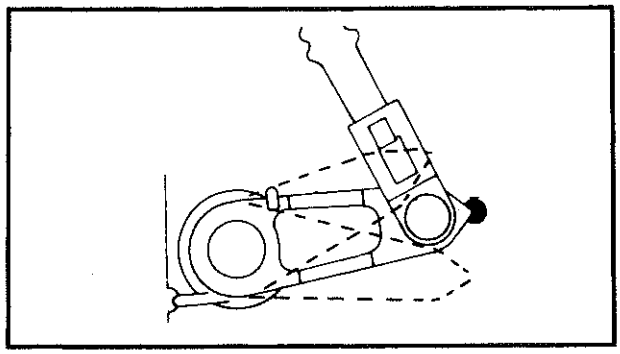
6.Check:
- Oil level



CLUTCH LEVER ADJUSTMENT

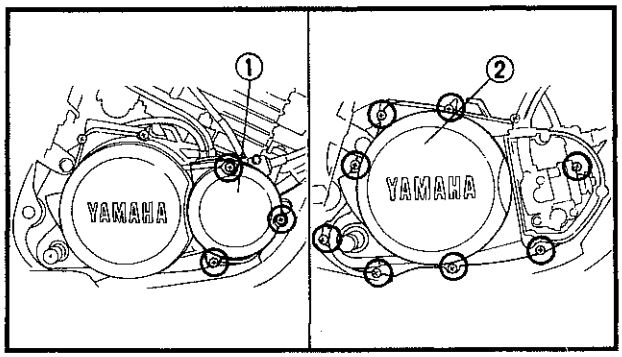
1.Adjust:
- Clutch lever

	Clutch lever free play ⓐ: **2 ~ 3 mm (0.08 ~ 0.12 in)** **(at lever pivot)**

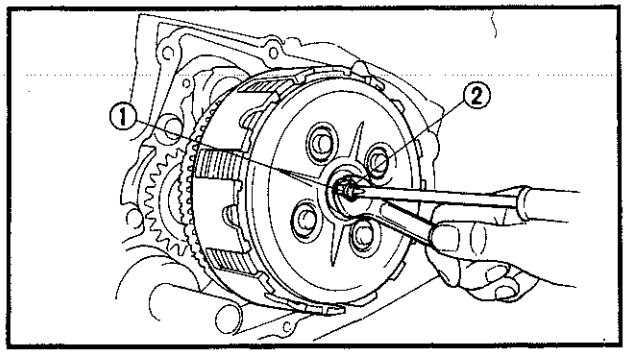


PUSH LEVER ADJUSTMENT

1.Check:
- Push lever position



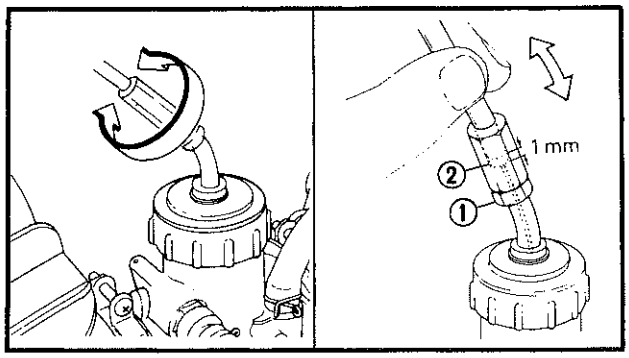
2.Remove:
- Oil pump cover ①
- Crankcase cover ②



3.Loosen:
- Locknut ①

4.Adjust:
- Push lever
  Screw in the adjuster ② until tight and back it out 1/4 turn.

5.Tighten:
- Locknut ①

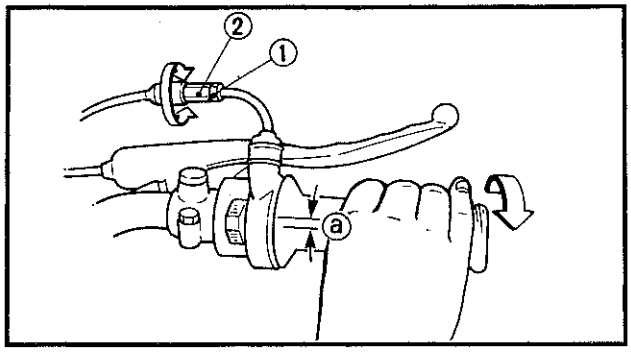


THROTTLE CABLE FREE PLAY ADJUSTMENT

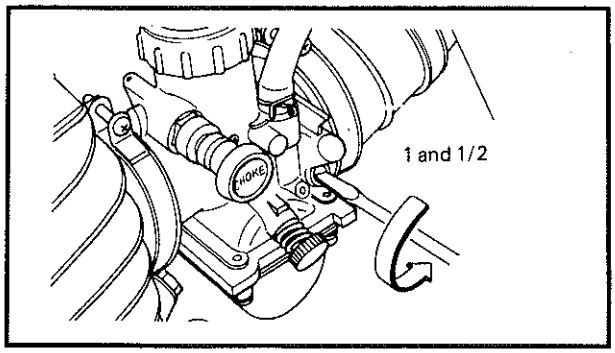
1.Loosen:
- Locknut ①

2.Adjust:
- Throttle cable free play ⓐ
  Turn cable adjuster ② in or out.

Throttle cable free play:
5 ~ 8 mm (0.20 ~ 0.31 in)



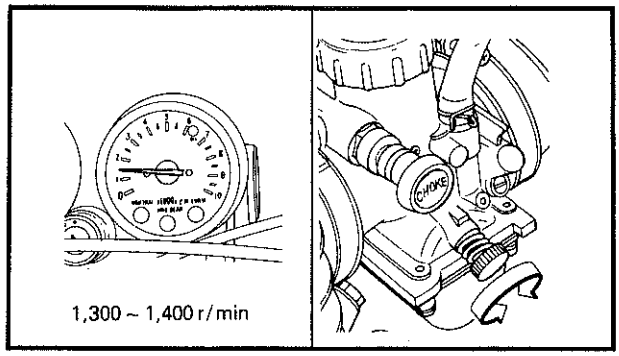
3.Tighten:
- Locknut ①



IDLING SPEED ADJUSTMENT

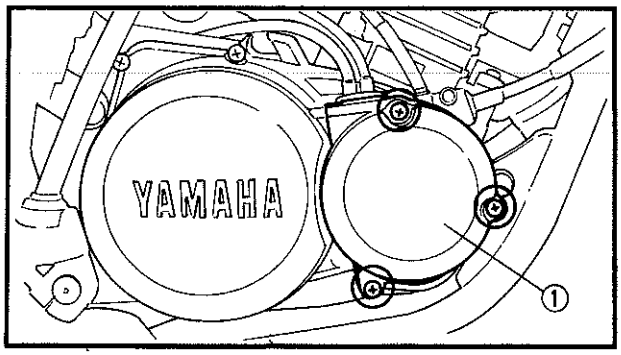
1. Turn the pilot air screw in until lightly seated.
2. Back out by specified number of turns.
3. Start the engine and let it warm up.

Pilot air screw
1-1/2 turns out



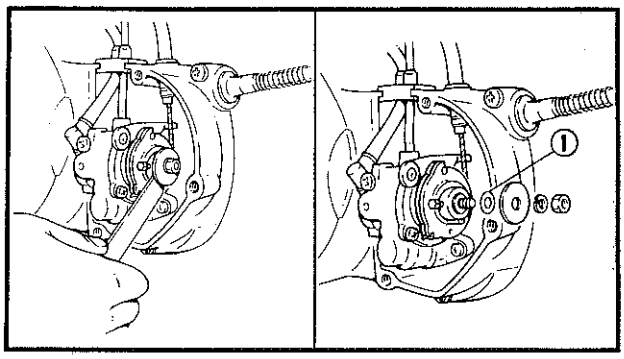
4. Turn the throttle stop screw in or out until idle speed is at specification rpm.

Idling speed:
1,300 ~ 1,400 r/min



OIL PUMP ADJUSTMENT

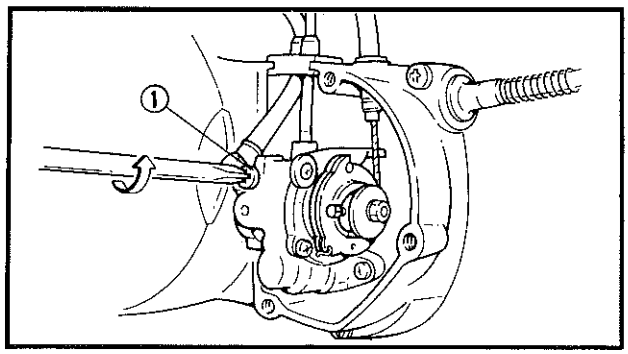
1. Remove:
- Oil pump cover ①



2. Start the engine so the adjusting plate moves out to the limit.
3. Measure:
- Minimum pump stroke

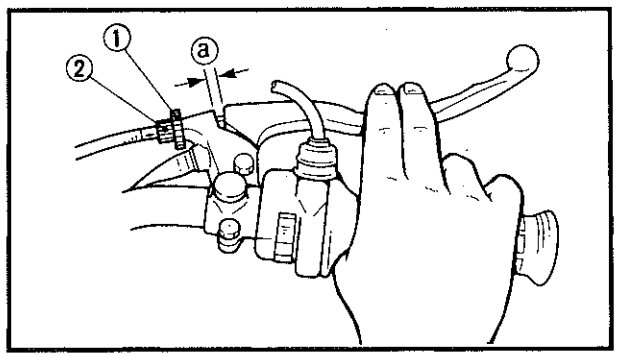
Minimum pump stroke:
0.30 ~ 0.35 mm (0.0118 ~ 0.00138 in)

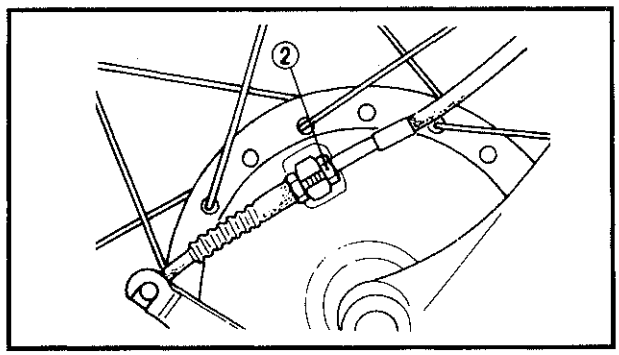
4. If the clearance is not correct, remove or add an adjusting shim ①.

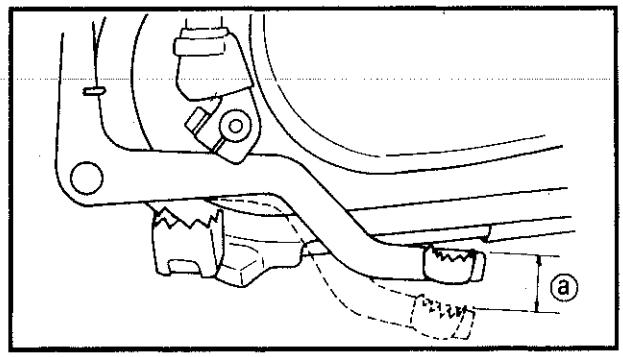


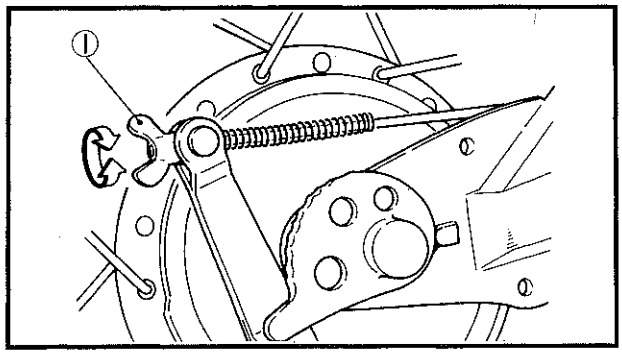
OIL PUMP AIR BLEEDING

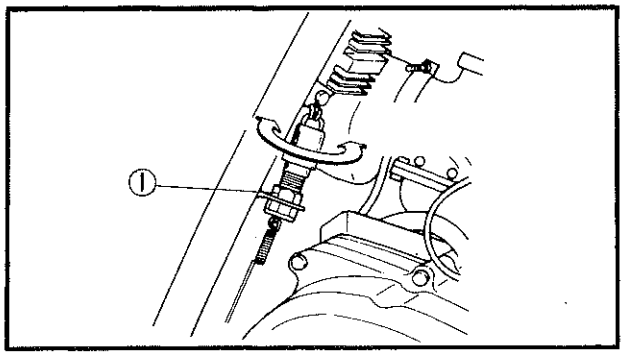
1. Remove:
- Pump bleed screw ①
- Keep the oil running out until air bubbles disappear.











CHASSIS

FRONT BRAKE ADJUSTMENT

1.Loose:
- Locknut ①

2.Adjust:
- Brake lever free play ⓐ
  Turn the adjuster ② in or out.

	Brake lever free play: 5 ~ 8 mm (0.20 ~ 0.31 in)

REAR BRAKE ADJUSTMENT

1.Adjust:
- Brake pedal free play ⓐ
  Turn the adjuster ① in or out.

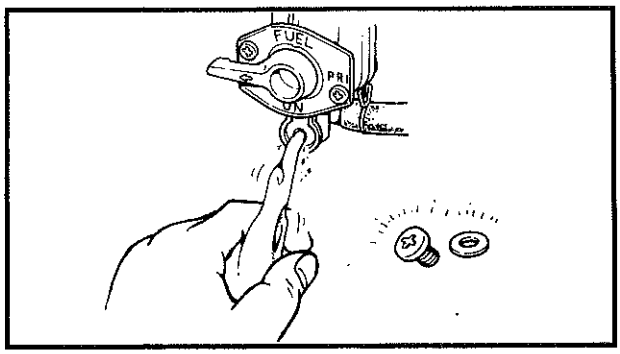
	Brake pedal free play: 20 ~ 30 mm (0.8 ~ 1.2 in)

REAR BRAKE LIGHT SWITCH ADJUSTMENT

1.Check:
- Rear brake light switch operation

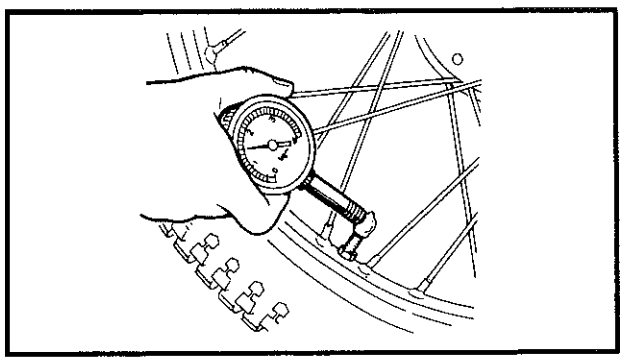
2.Adjust:
- Brake light operating timing
  Turn the adjuster ① in or out.

Turning in → Lights up earlier
Turning out → Lights up later



FUEL COCK CLEANING

1.Clean:
- Fuel cock

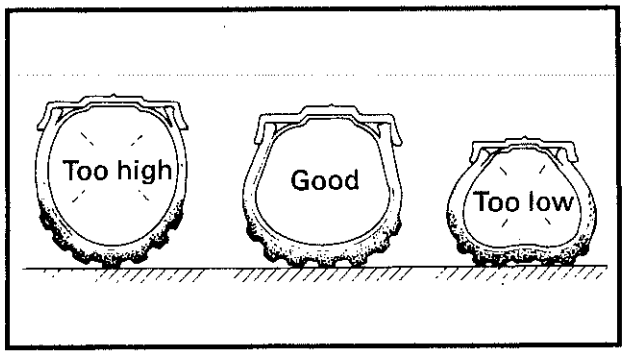


TIRE INSPECTION

1.Check:
- Tire pressure

DT125

Cold tire pressure:	Front	Rear
Up to 90 kg (198 lbs) load*	125 kPa (1.25 kg/cm², 18 psi)	150 kPa (1.50 kg/cm², 21 psi)
90 kg (198 lbs) ~ Maximum load*	150 kPa (1.50 kg/cm², 21 psi)	175 kPa (1.75 kg/cm², 25 psi)
Off road riding	125 kPa (1.25 kg/cm², 18 psi)	150 kPa (1.50 kg/cm², 21 psi)



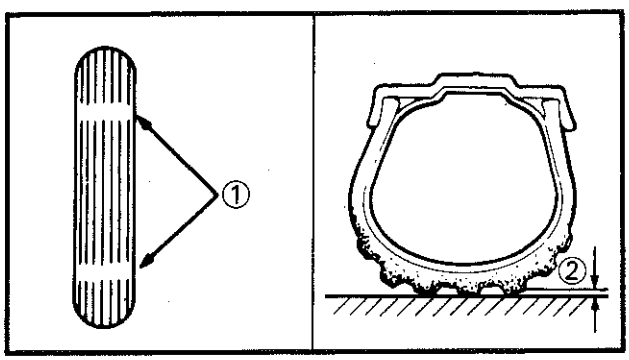
DT175

Cold tire pressure:	Front	Rear
Up to 90 kg (198 lbs) load*	150 kPa (1.50 kg/cm², 21 psi)	200 kPa (2.00 kg/cm², 28 psi)
90 kg (198 lbs) ~ Maximum load*	150 kPa (1.50 kg/cm², 21 psi)	230 kPa (2.30 kg/cm², 33 psi)
Off road riding	150 kPa (1.50 kg/cm², 21 psi)	200 kPa (2.00 kg/cm², 28 psi)

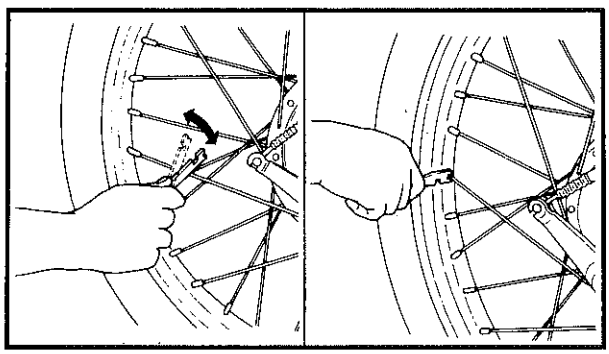
* Load is the total weight of cargo, rider, passenger, and accessories.

2.Inspect:
- Tire surfaces

Minimum tire tread depth: 1.0 mm (0.04 in)

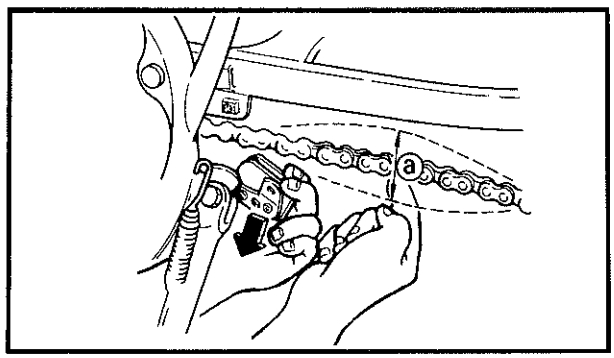


① Wear indicator
② Tread depth



SPOKE INSPECTION

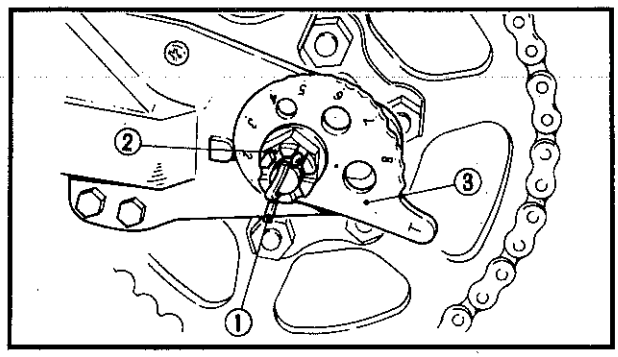
1.Tap each spoke with an iron rod for sound. If one spoke makes a dull flat sound, then check it for looseness. And tighten it.



DRIVE CHAIN INSPECTION

1.Check:
- Drive chain free play ⓐ

Drive chain free play:
35 ~ 40 mm (1.4 ~ 1.6 in)



DRIVE CHAIN FREE PLAY ADJUSTMENT

1.Remove:
- Cotter pin ①

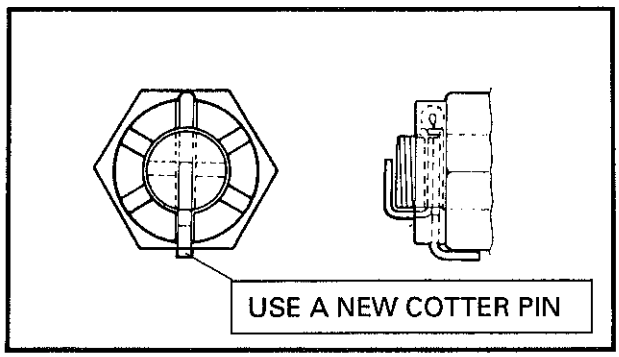
2.Loosen:
- Axle nut ②

3.Adjust:
- Chain puller ③

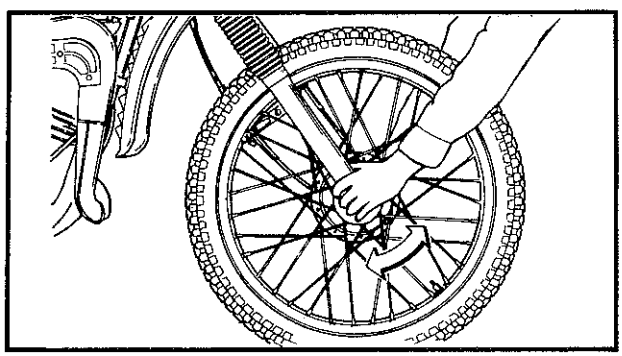
NOTE:
Be sure that both right and left chain pullers are in the corresponding positions.

4.Tighten:
- Axle nut ②

Axle nut:
85 Nm (8.5 kg • m, 61 ft • lb)

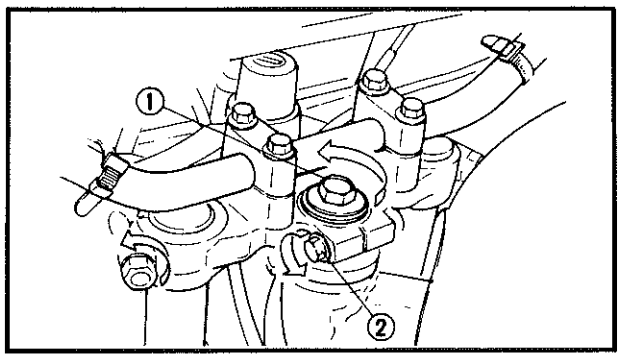


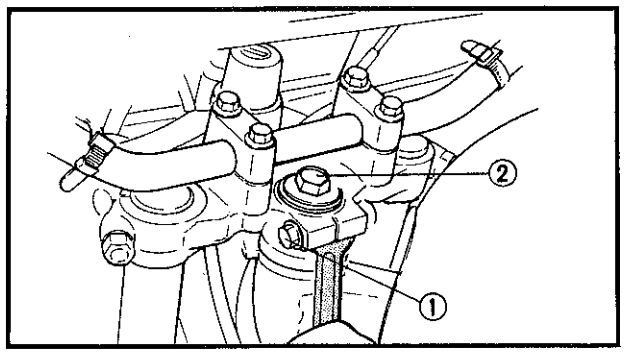
5.Install:
- Cotter pin (new)



STEERING HEAD INSPECTION

1.Raise front wheel off the ground.
2.Check:
- Steering head bearing for looseness
  Gently rock fork assembly backward and forward.





STEERING HEAD ADJUSTMENT

1.Loosen:
- Flange bolt ①
- Pinch bolt ②

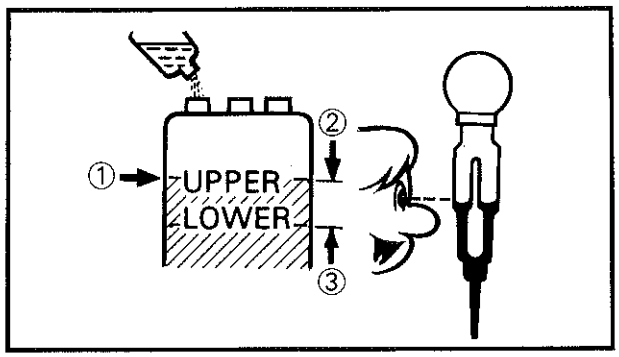
2.Tighten:
- Ring nut
  Using ring nut wrench.

	Ring nut: **38 Nm (3.8 m • kg, 27 ft • lb)**

3.Tighten:
- Pinch bolt ①
- Flange bolt ②

	Pinch bolt: **23 Nm (2.3 m • kg, 17 ft • lb)** **Flange bolt:** **53 Nm (5.3 m • kg, 39 ft • lb)**

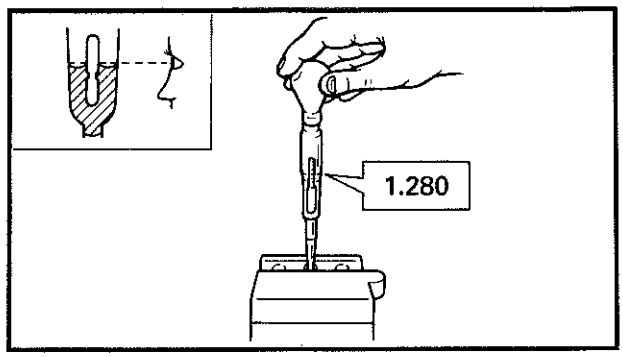
NOTE:
After adjustment, make certain forks pivot from stop to stop without binding or catching.



ELECTRICAL

BATTERY FLUID LEVEL

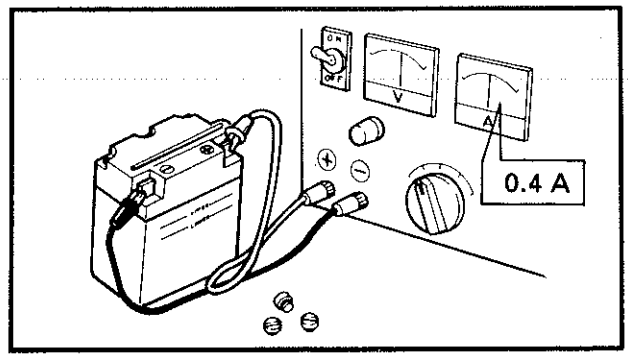
1.Check:
- Fluid level ①
  Fluid level should between upper ② and lower level line ③.
  Use only distilled water for refilling.



BATTERY CHARGING

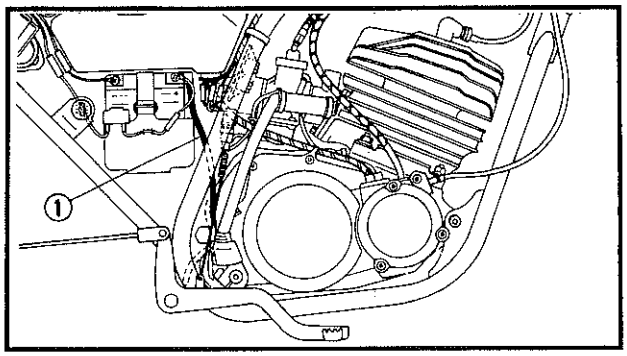
1.Check:
- Battery fluid gravity

Specific gravity:
1.280 at 20°C



2.If the specific gravity is below 1.280, recharge the battery.

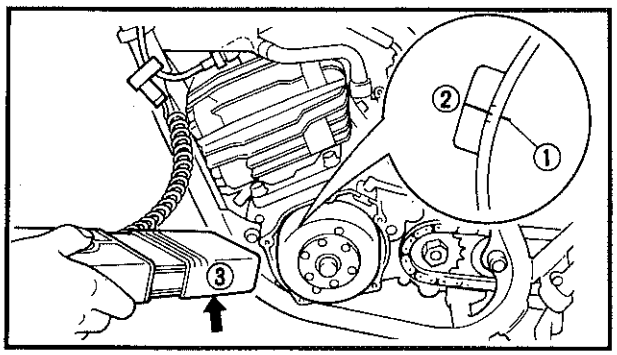
Charging current: 0.6A
Charging time: 10 hours



3.Connect:
- Breather hose

CAUTION:

When inspecting the battery, be sure the breather hose ① is routed correctly. If the breather hose touches the frame or exits in such a way as to cause battery electrolyte or gas to exit onto the frame, structural and cosmetic damage to the motorcycle can occur.

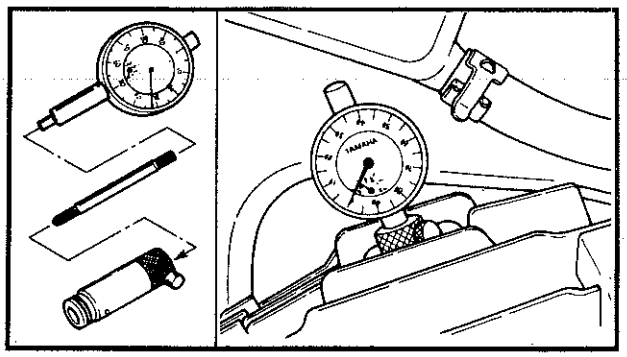


IGNITION TIMING INSPECTION

1.Check:
- Ignition timing
  Using the timing light.

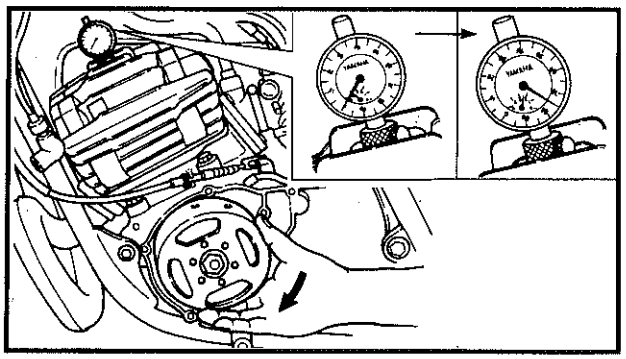
① Rotor mark
② Pickup coil
③ Timing light

	Engine speed: **1,300 ~ 1,400 r/min**

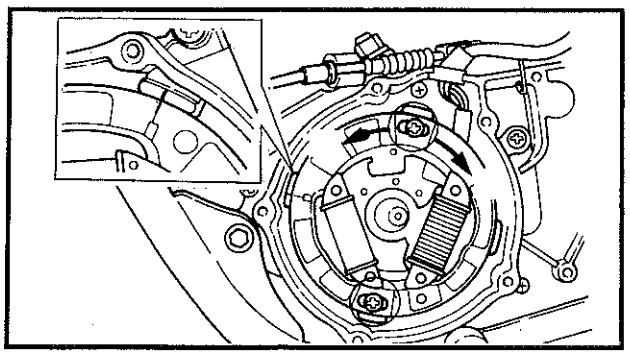


IGNITION TIMING ADJUSTMENT

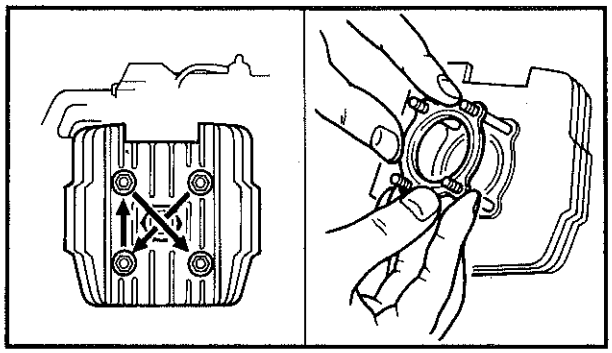
1.Adjust:
- Ignition timing
  Using the dial gauge.



2.Turn the flywheel clockwise and stop it at 1.5 mm (DT175)/1.2 mm (DT125) BTDC.



3.Put a mark on the crankcase which aligns with the mark on the flywheel.
4.Adjust so that the mark on the crankcase aligns with the mark on the magneto base.

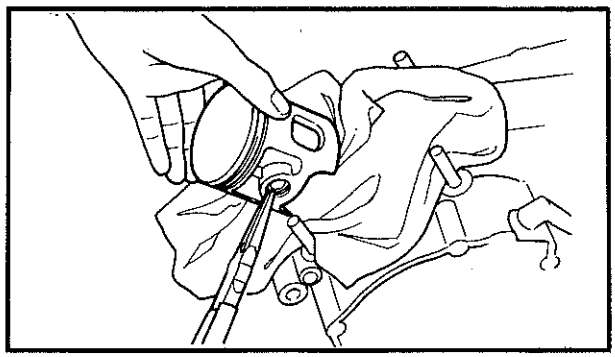


ENGINE OVERHAUL

ENGINE DISASSEMBLY

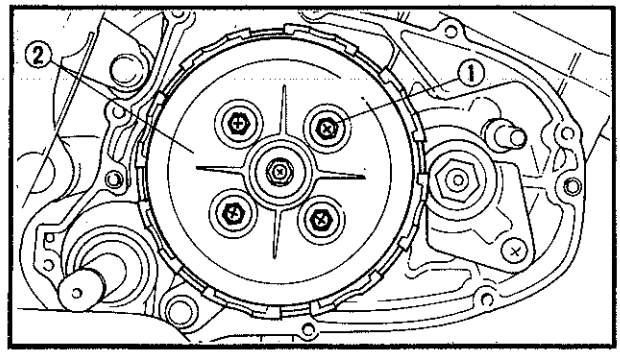
CYLINDER HEAD AND CYLINDER

1.Remove:
- Cylinder head nut
- Cylinder head
- Cylinder head gasket
- Cylinder



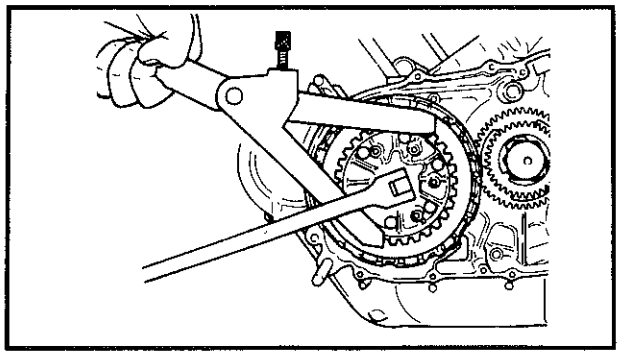
PISTON

1.Remove:
- Piston pin clip
- Piston pin
- Piston
- Piston rings



CLUTCH

1.Remove:
- Crankcase cover (right)
- Clutch spring bolts ①
- Clutch springs
- Pressure plate ②
- Friction plates
- Clutch plates



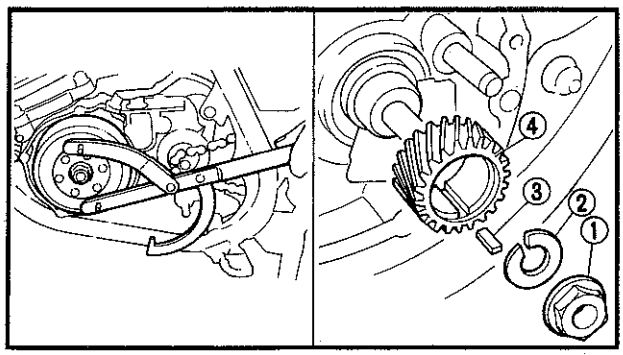
2.Attach:
- Clutch holding tool (90890-04086)

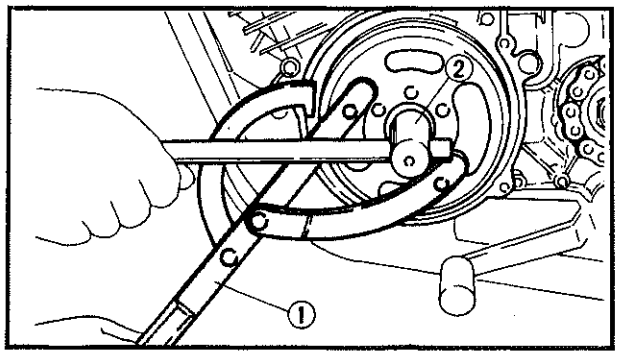
3.Remove:
- Clutch boss nut
- Clutch boss
- Primary driven gear

4.Remove:
- Crankcase cover (left)

5.Attach:
- Rotor holding tool (90890-01235)

6.Remove:
- Primary drive gear nut ①
- Spring washer ②
- Straight key ③
- Primary drive gear ④

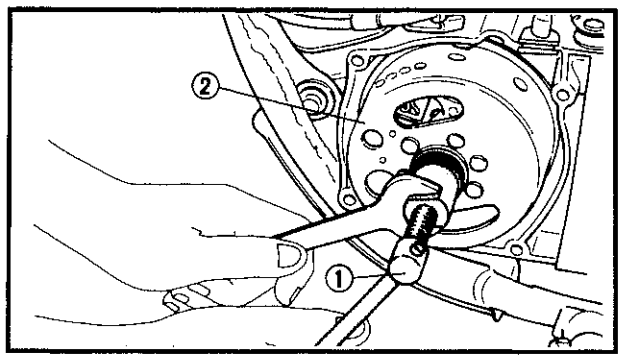




FLYWHEEL MAGNETO

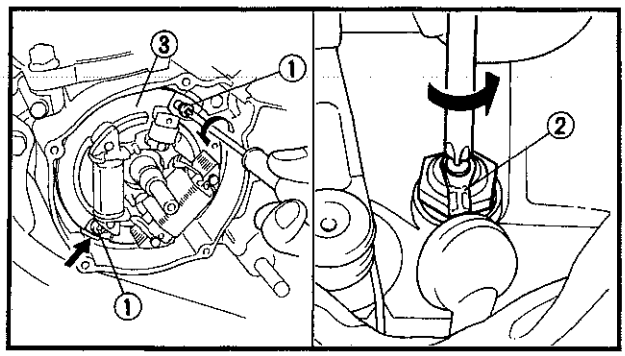
1.Attach:
- Rotor holding tool ① (90890-01235)

2.Remove:
- Flywheel holding nut ②
- Lock washer
- Washer

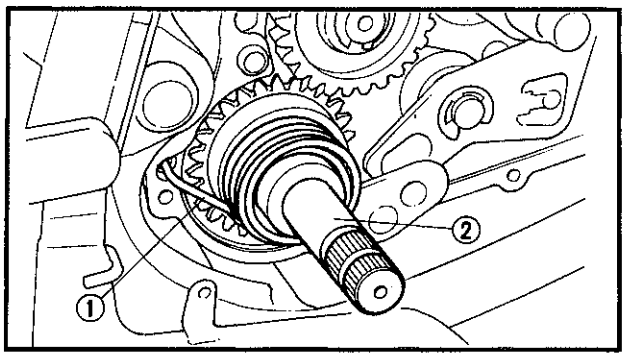


3.Attach:
- Flywheel puller ① (90890-01189) (left-hand-threads)

4.Remove:
- Flywheel ②
- Woodruff key



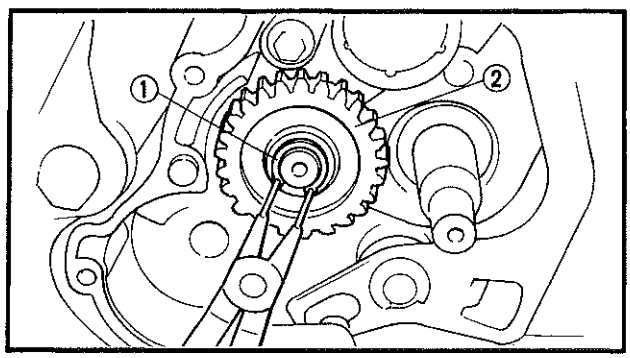
5.Remove:
- Stator holding screws ①
- Neutral switch lead ②
- Stator assembly ③



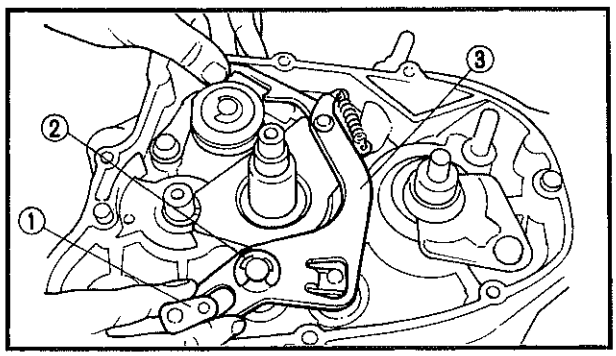
KICK STARTER

1.Unhook:
- Kick return spring ①

2.Remove:
- Kick starter assembly ②

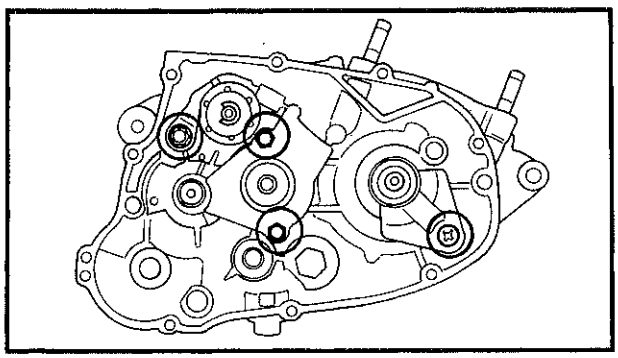


3.Remove:
- Circlip ①
- Kick idle gear ②

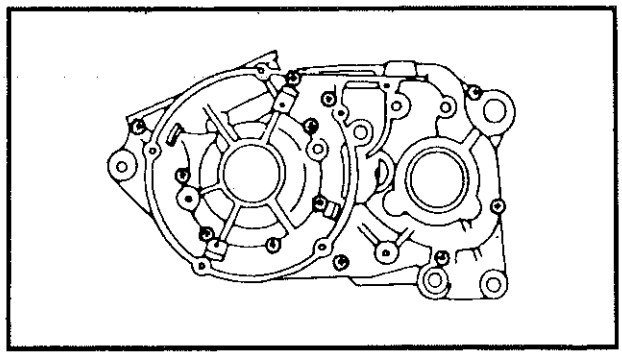


SHIFT SHAFT

1.Remove:
- Shift shaft assembly ①
- Circlip ②
- Stopper lever assembly ③

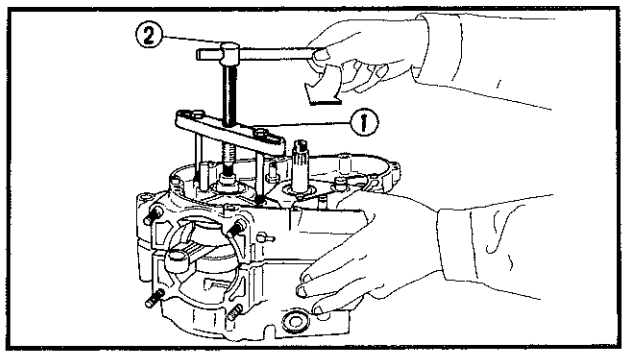


2.Remove:
- Bearing cover plate



CRANKCASE

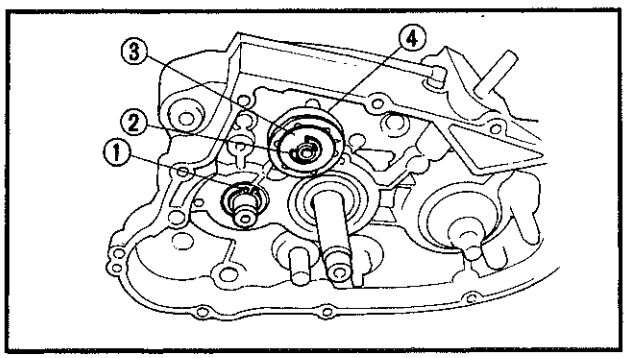
1.Remove:
- Crankcase tightening screws



2.Attach:
- Crankcase separating tool ① (90890-01135) (to the right side crankcase)

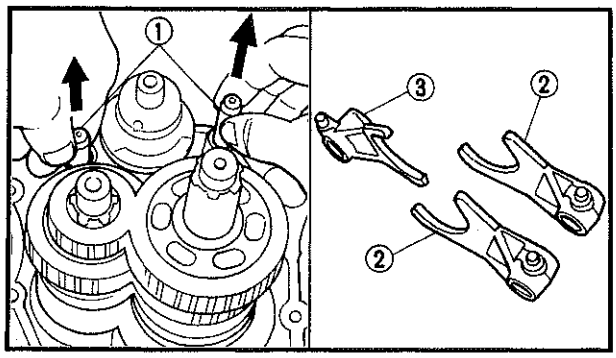
NOTE:
Make sure the tool body is parallel with the case.

3.Tighten:
- Securing bolt ②

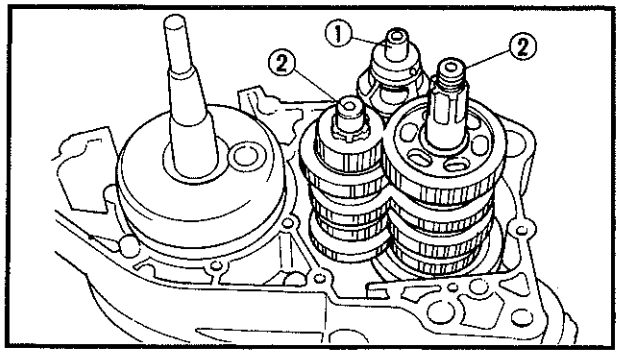


TRANSMISSION AND SHIFTER

1.Remove:
- Circlip (drive shaft) ①
- Circlip (shift cam) ②
- Plate ③
- Segment ④
- Guide pin

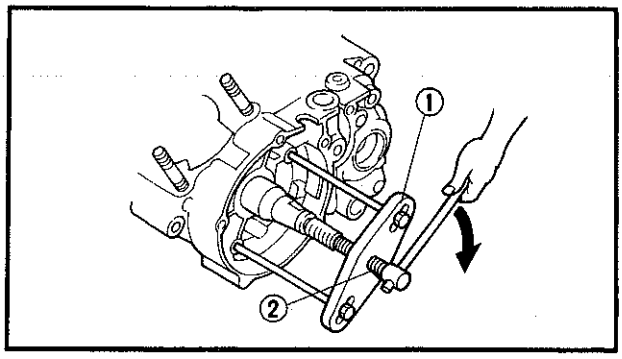


2.Remove:
- Guide bar ①
- Shift fork (1) ②
- Shift fork (2) ③



3.Remove:
- Shift cam ①
- Transmission assembly ②

4

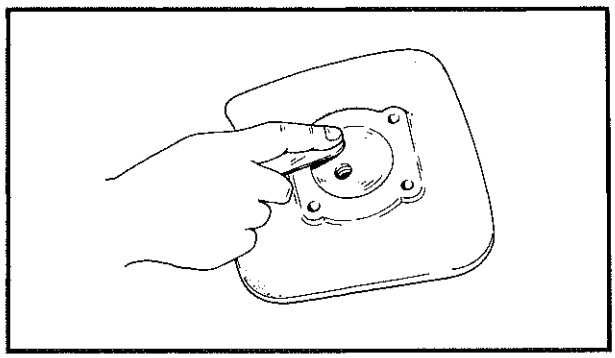


CRANKSHAFT

1.Attach:
- Crankcase separating tool ①
  (90890-01135)

NOTE:
Make sure the tool body is parallel with the case.

2.Tighten:
- Securing bolt ②

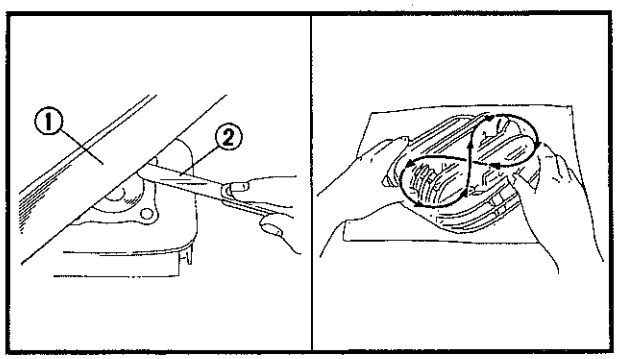


INSPECTION AND REPAIR

CYLINDER HEAD

1.Eliminate:
- Carbon deposit
  Use rounded scraper.

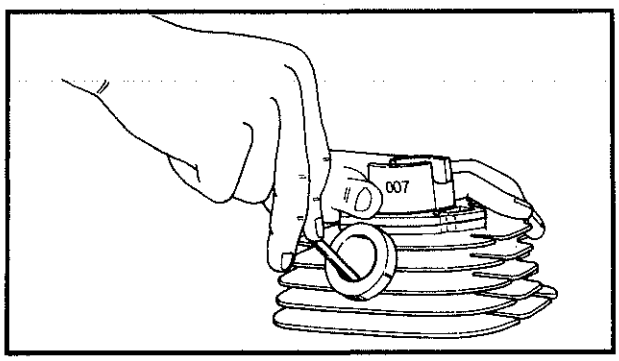
NOTE:
Do not use a sharp instrument and avoid damaging or scratching.



2.Measure:
- Cylinder head warpage
  Out of specification → Resurface or replace.

Warp limit:
0.05 mm (0.002 in)

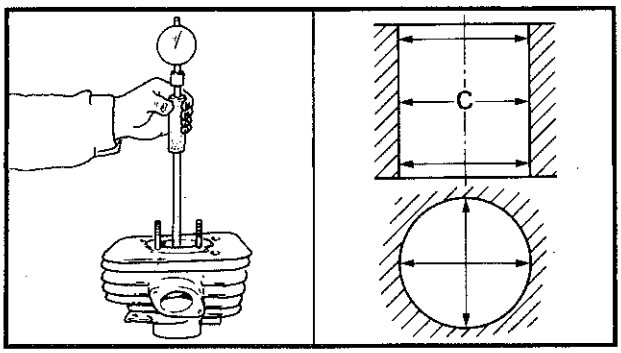
① Straight edge
② Thickness gauge



CYLINDER

1.Eliminate:
- Carbon deposit
  Use rounded scraper.

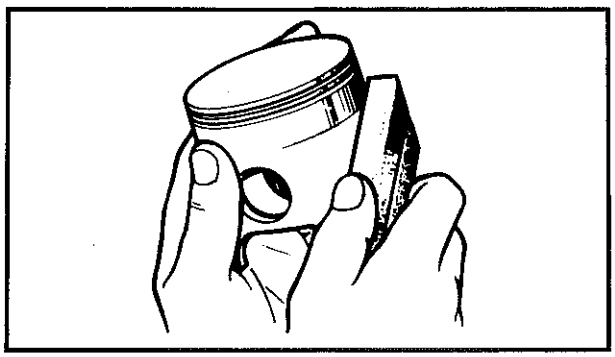
NOTE:
Do not use a sharp instrument and avoid damage or scratching.



2.Inspect:
- Cylinder wall
  Wear/Scratches → Rebore or replace.

3.Measure:
- Cylinder bore "C"
  Use cylinder bore gauge.
  Out of specification → Rebore.

Cylinder bore "C":
DT125: 56.1 mm (2.209 in)
DT175: 66.1 mm (2.602 in)
Taper limit:
0.05 mm (0.0020 in)



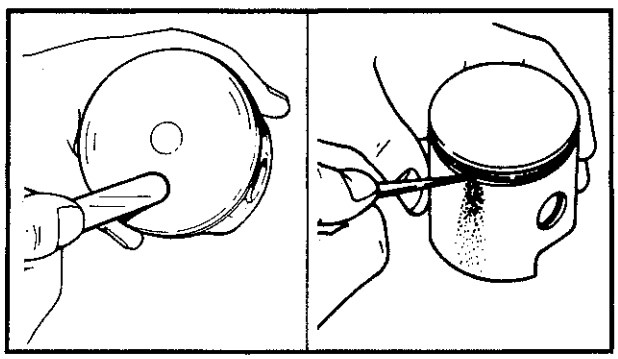
PISTON

1.Inspect:

- Piston wall
  Wear/Scratches/Damages → Repair or replace.

2.Eliminate:

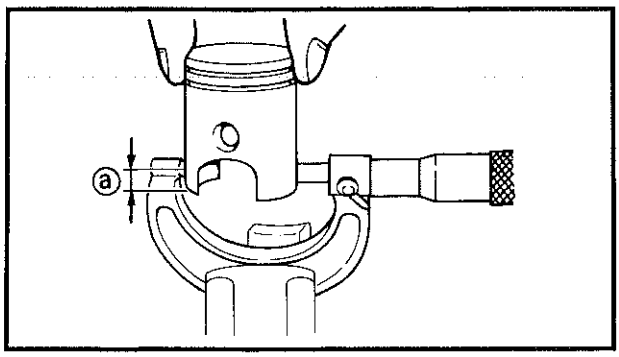
- Carbon deposit
  Use rounded scraper.



NOTE:
Do not use a sharp instrument and avoid damaging or scratching.

3.Measure:

- Piston outside diameter "P"
  Out of specification → Replace.



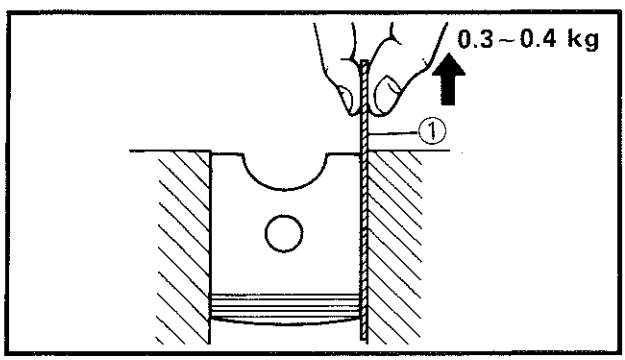
NOTE:
Measurement should be made at a point 10 mm (0.4 in) above the bottom edge of the piston skirt.

	Size "P"	
	DT125	DT175
Standard	56.00 mm (2.205 in)	66.00 mm (2.598 in)
Oversize 1st	56.25 mm (2.215 in)	66.25 mm (2.608 in)
Oversize 2nd	56.50 mm (2.224 in)	66.50 mm (2.618 in)

Measuring point ⓐ:
10 mm (0.4 in)

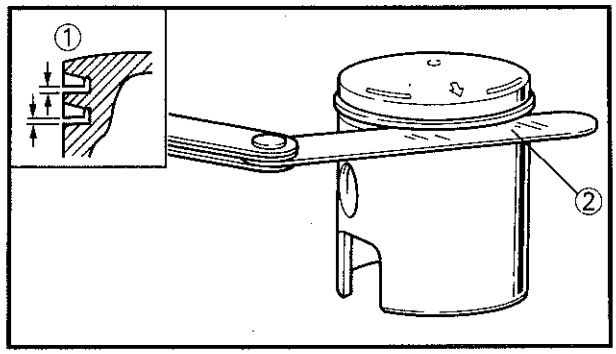
4.Measure:

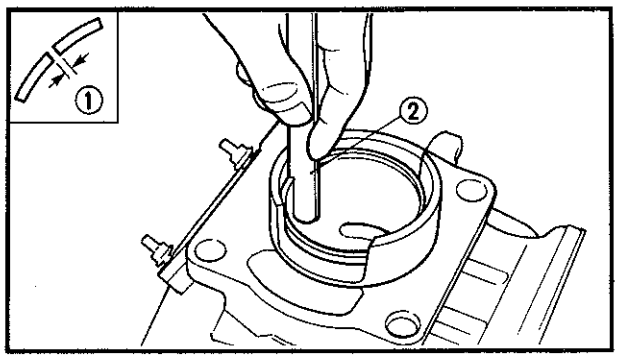
- Piston clearance
  Calculate or use feeler gauge ①
  Out of specification → Rebore cylinder or replace piston.

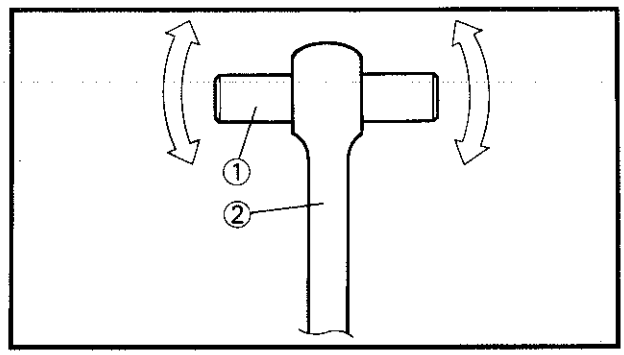


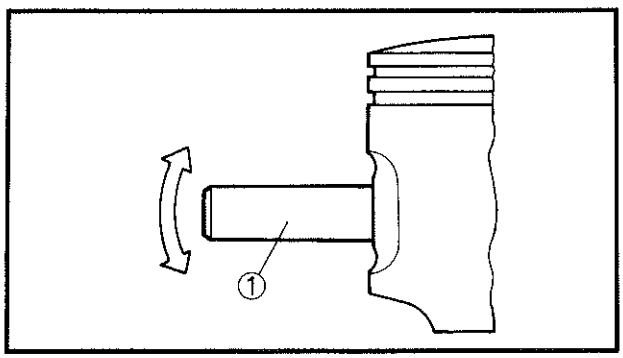
Piston clearance = C – P:
DT125: 0.030 ~ 0.035 mm (0.0012 ~ 0.0014 in)
DT175: 0.040 ~ 0.045 mm (0.0016 ~ 0.0018 in)

C = Maximum cylinder bore
P = Piston outside diameter









PISTON RING

1.Measure:
- Side clearance ①
  Use a feeler gauge ②.
  Out of specification → Replace piston and/or rings.

	Side clearance: **<Limit>: 0.1 mm (0.004 in)**

2.Measure:
- End gap ①
  Use feeler gauge ②.
  Out of specification → Replace rings as a set.

	End gap: **<Limit>: 0.8 mm (0.03 in)**

PISTON PIN AND SMALL END BEARING

1.Lubricate:
- Piston pin ① and bearing

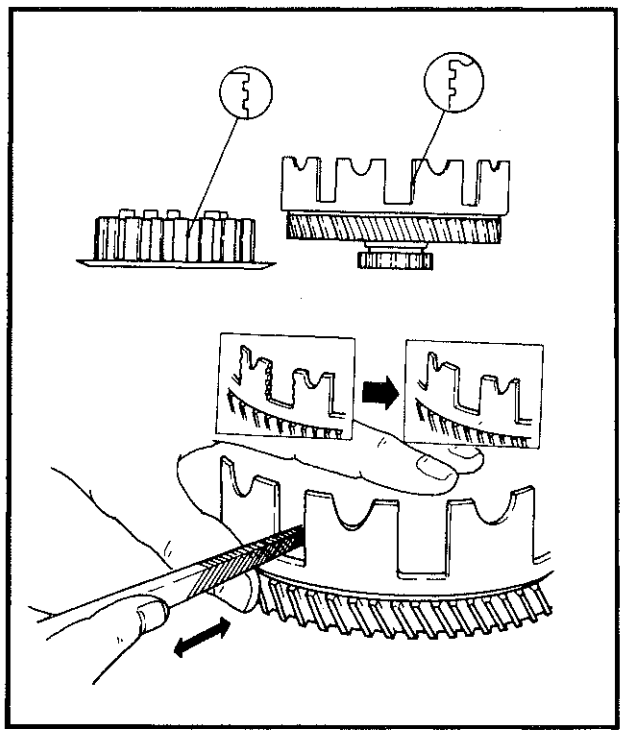
2.Install:
- Piston pin and bearing
  (into small end of connecting rod ②)

3.Check:
- Free play
  Free Play → Inspect connecting rod for wear.
  Wear → Inspect connecting rod and piston pin.

4.Install:
- Piston pin ①
  (into piston)

5.Check:
- Free play
  Free play → Replace piston pin and/or piston.

4



CLUTCH

Clutch housing

1.Inspect:
- Dogs on housing
  Cracks/Wear/Damage → Deburr or replace.

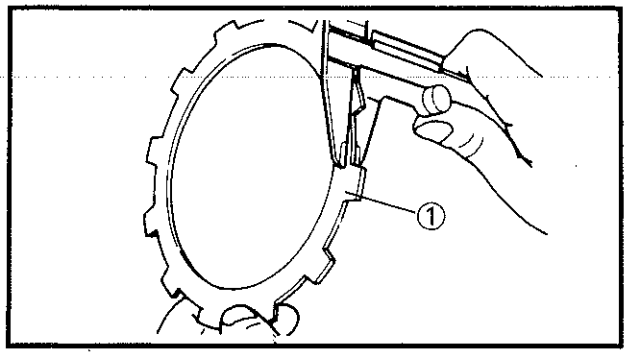
2.Check:
- Circumferential play
  Play → Replace.

Clutch boss

1.Inspect:
- Clutch boss splines
  Scoring/Wear/Damage → Deburr or replace.

NOTE:
Scoring on clutch plate splines will cause erratic operation.

4

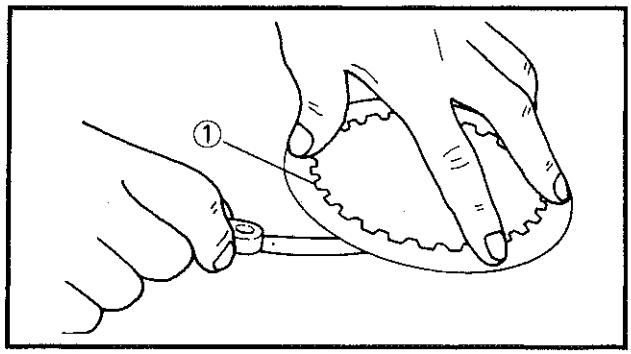


Friction plate

1.Inspect:
- Friction plates ①
  Damage/Wear → Replace as a set.

2.Measure:
- Friction plate thickness
  Measure all at four points.
  Out of specification → Replace as a set.

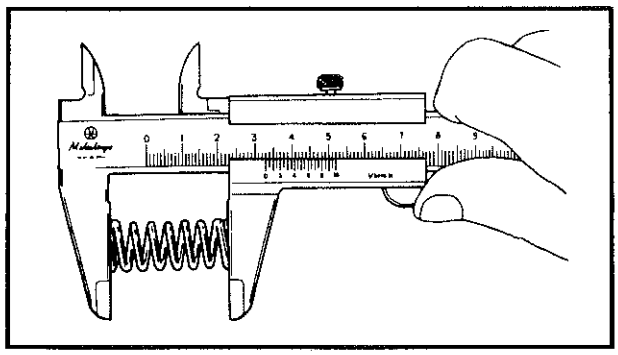
Wear limit:
2.7 mm (0.106 in)



Clutch plate

1.Measure:
- Clutch plate ① warpage
  Use surface plate and feeler gauge.
  Out of specification → Replace.

Warp limit:
0.05 mm (0.002 in)



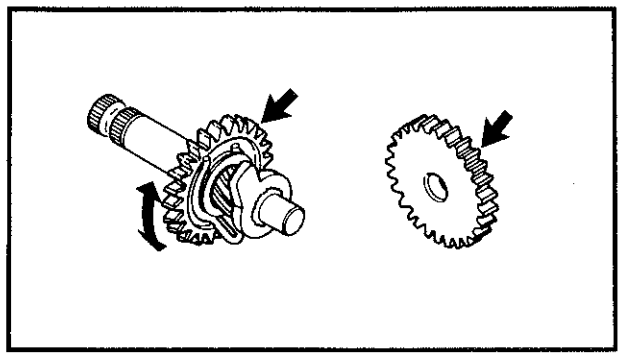
Clutch spring

1.Measure:

- Free length

  Out of specification → Replace as a set.

Minimum length:
33.5 mm (1.32 in)



KICK STARTER

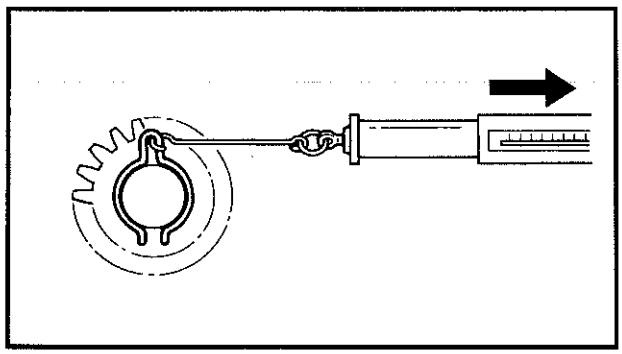
1.Inspect:

- Kick gear teeth
- Kick idle gear teeth

  Wear/Damage → Replace.

2.Check:

- Kick gear movement

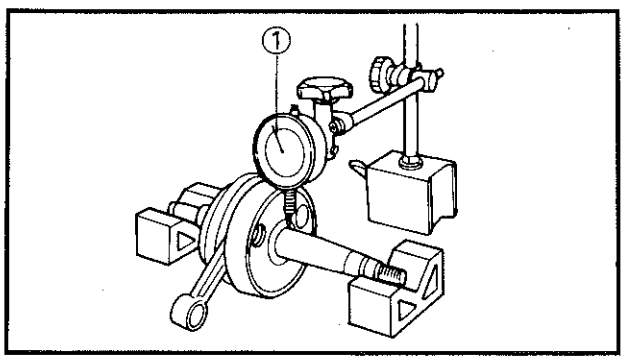


3.Measure:

- Kick clip friction force

  Out of specification → Replace kick clip.

Kick clip friction force:
0.8 ~ 1.2 kg (1.8 ~ 2.6 lb)



CRANKSHAFT

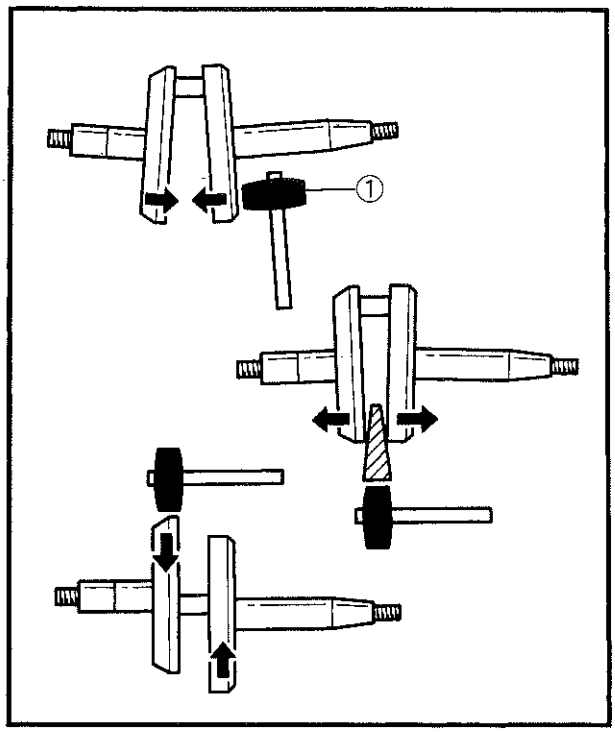
1.Measure:

- Runout

  Use V-blocks and dial gauge ①

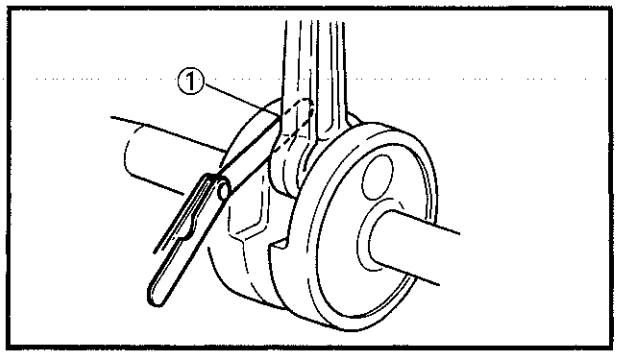
  Out of specification → Repair or replace.

Runout limit:
0.02 mm (0.0008 in)



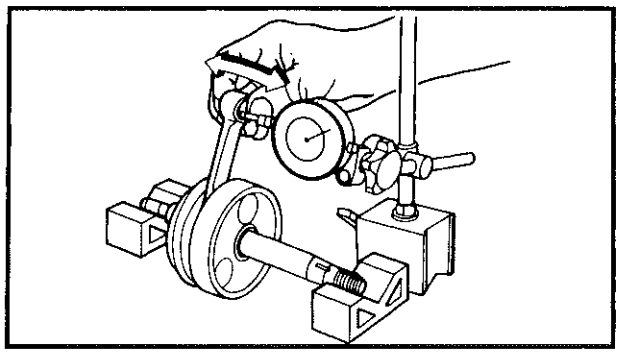
2.Repair:
- Crankshaft
  Using copper hammer ①.

4



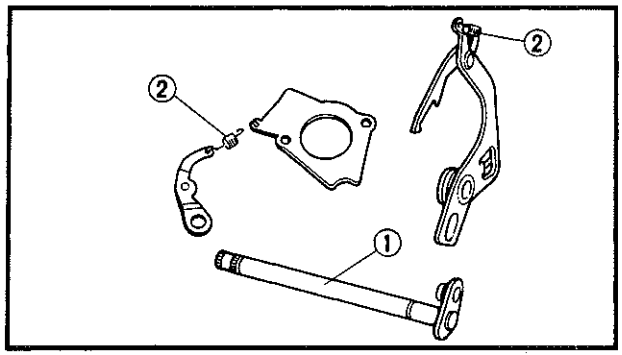
3.Measure:
- Big end side clearance
  Use feeler gauge ①.
  Out of specification → Repair or replace.

	Big end side clearance: **0.2 ~ 0.7 mm (0.008 ~ 0.028 in)**



4.Measure:
- Small end free play
  Out of specification → Replace.

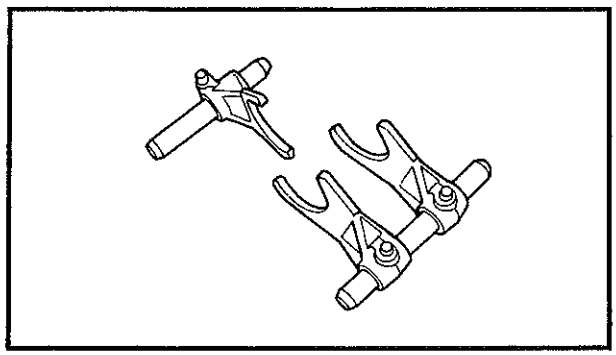
	Small end free play: **DT125: 0.24 ~ 0.48 mm** **(0.0094 ~ 0.0189 in)** **DT175: 0.80 ~ 1.20 mm** **(0.0315 ~ 0.0472 in)**



TRANSMISSION

Shift shaft

1.Inspect:
- Shift shaft ①
- Springs ②
  Wear/Bend → Replace.



Shift fork

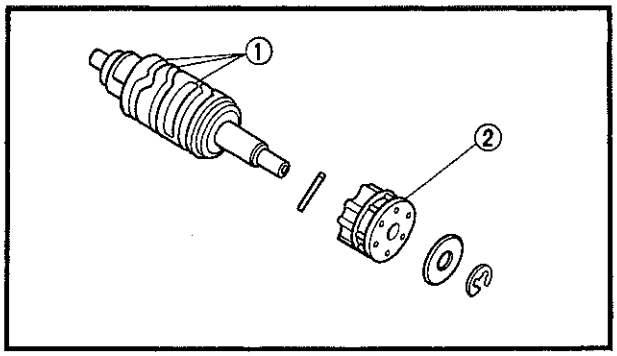
1.Inspect:

- Shift forks
  (on the gear and shift cam contact surface)
  Wear/Chafing/Beds/Damage → Replace.

2.Check:

- Shift fork movement
  (on shift cam)

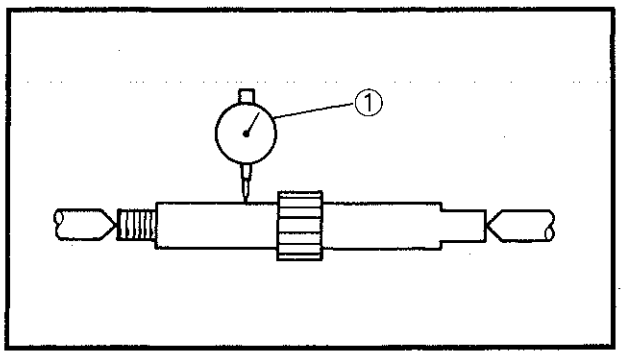
  Unsmooth operation → Replace fork and/or guide bar.



Shift cam

1.Inspect:

- Shift cam surface ①
  Wear/Damage/Scratches → Replace.
- Shift cam segment ②
  Wear/Damage → Replace.

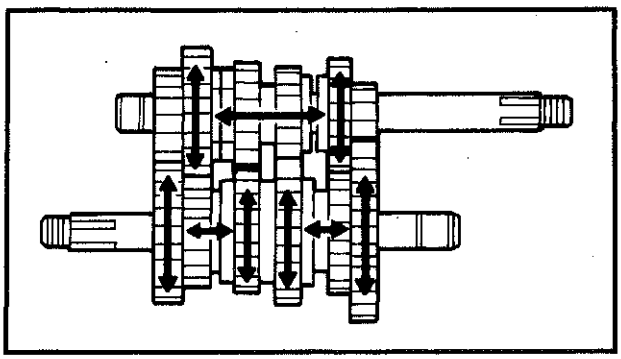


Main axle and drive axle

1.Measure:

- Axle runout
  Use centering device and dial gauge ①.
  Out of specification → Replace.

	Runout limit: **0.08 mm (0.003 in)**



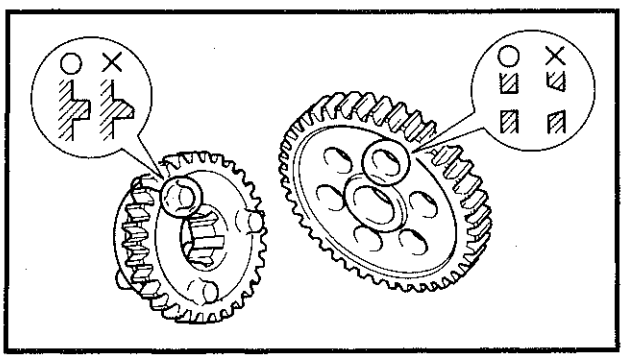
Gears

1.Inspect:

- Gears
  Damage/Wear → Replace.

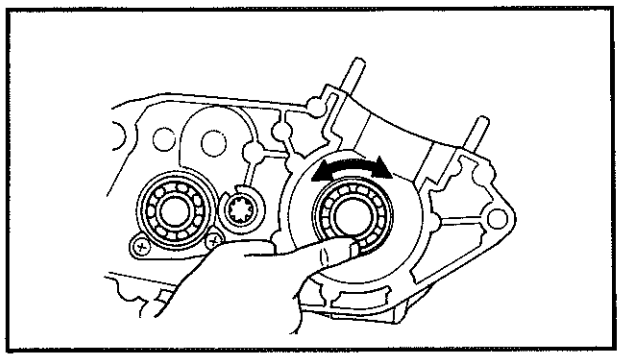
2.Check:

- Gear movement
  Unsmooth operation → Replace.



3.Inspect:

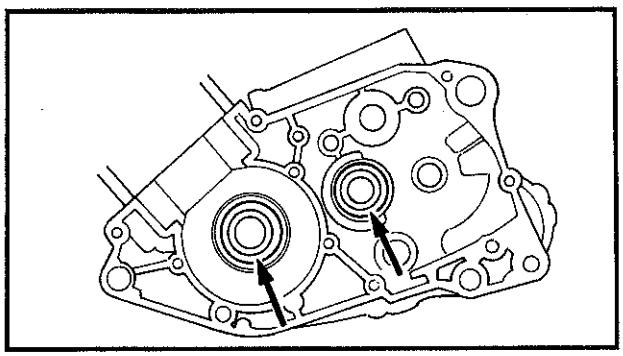
- Matching dogs
  Cracks/Wear/Damage → Replace.



BEARINGS AND OIL SEALS

1.Check:

- All bearings
  (with finger)
  Rough spot/Play → Replace.



2.Inspect:

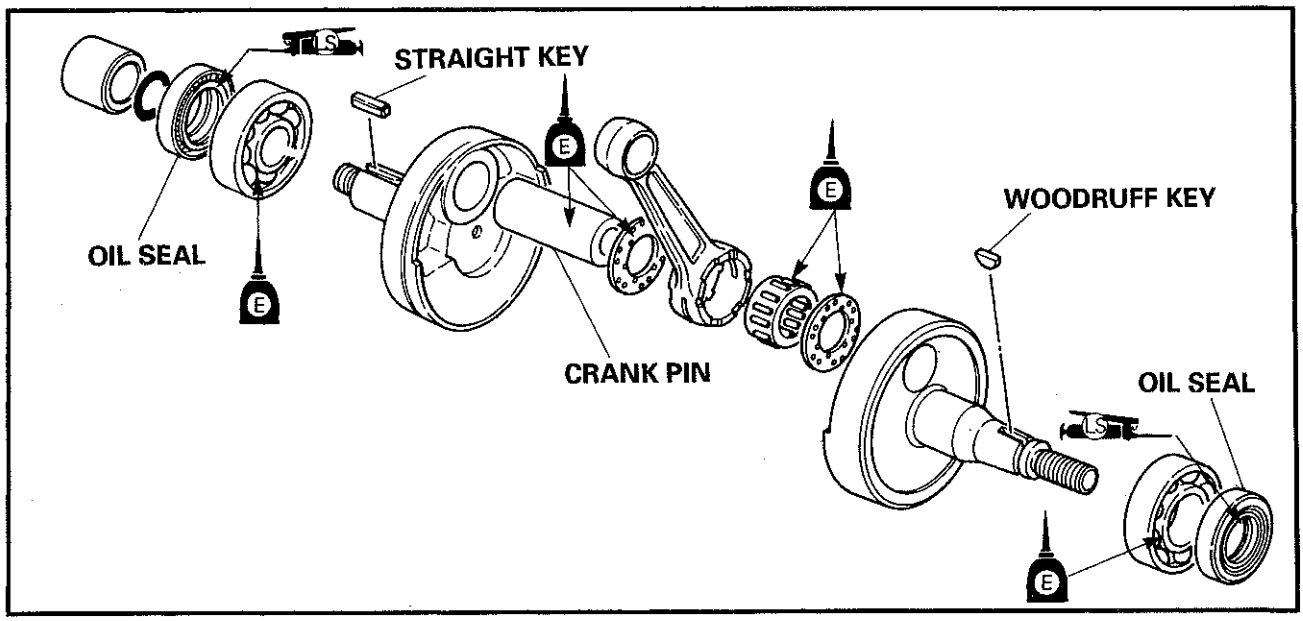
- All oil seal lips
  Damage/Wear → Replace.

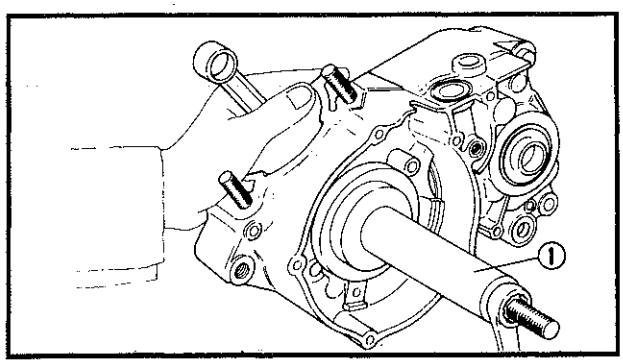
NOTE:
Always replace crankshaft oil seals.

4

ENGINE ASSEMBLY AND ADJUSTMENT

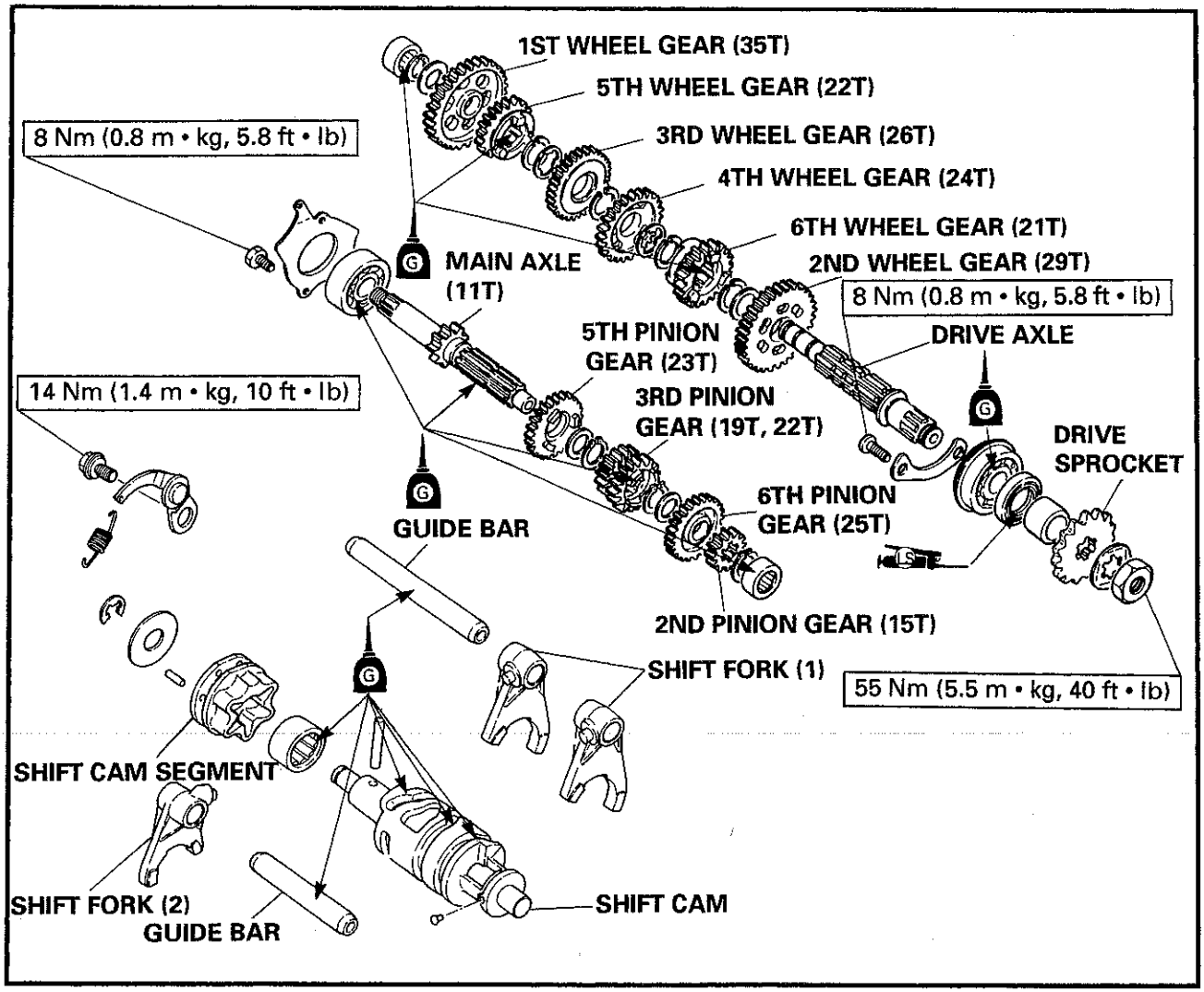
CRANKSHAFT

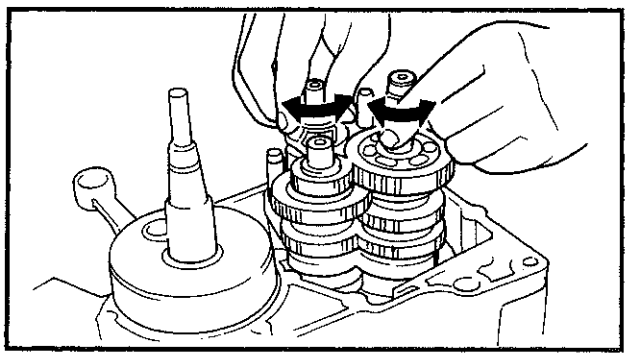




1. Attach:
   - Crankshaft installing tool ①
     (to the left side crankcase)
2. Tighten:
   - Nut of the installing tool
     Hold the connecting rod at top dead center.

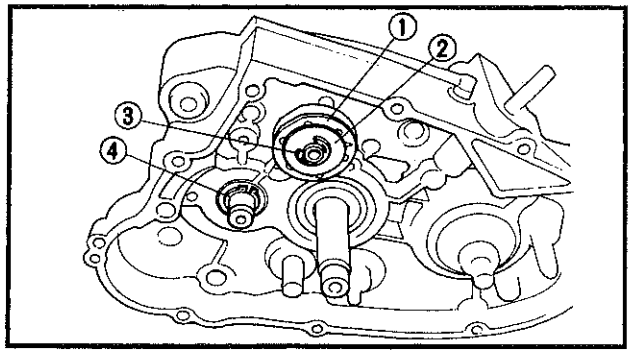
TRANSMISSION AND SHIFTER





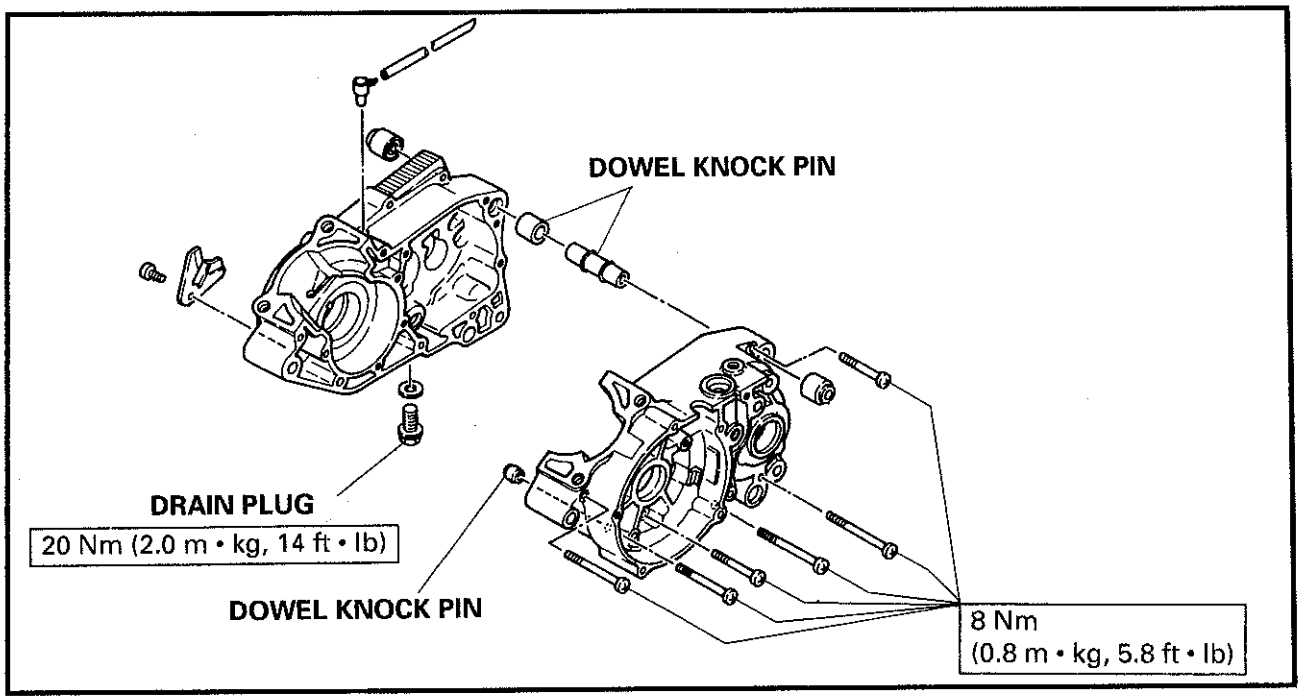
1.Install:
- Transmission assembly
- Shift cam
- Shift fork
- Guide bar

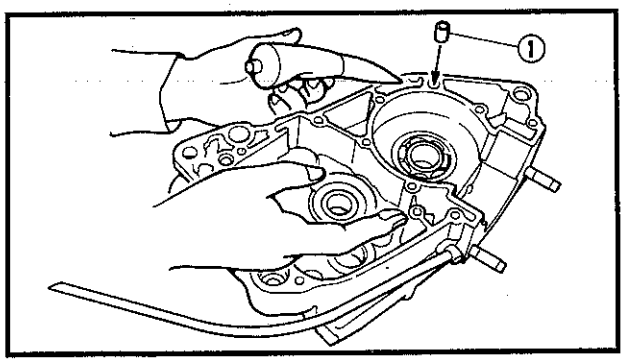
2.Check:
- Transmission operation



3.Install:
- Guide pin
- Segment ①
- Plate ②
- Circlip (shift cam) ③
- Circlip (drive shaft) ④

CRANKCASE ASSEMBLY

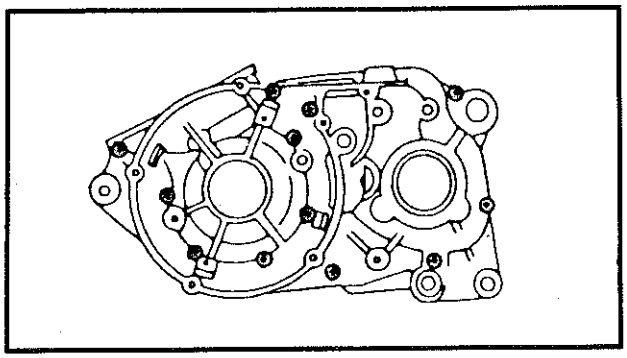




1.Apply:
- Yamaha bond No. 1215
  (to both crankcase mating surfaces)

2.Install:
- Dowel knock pins ①

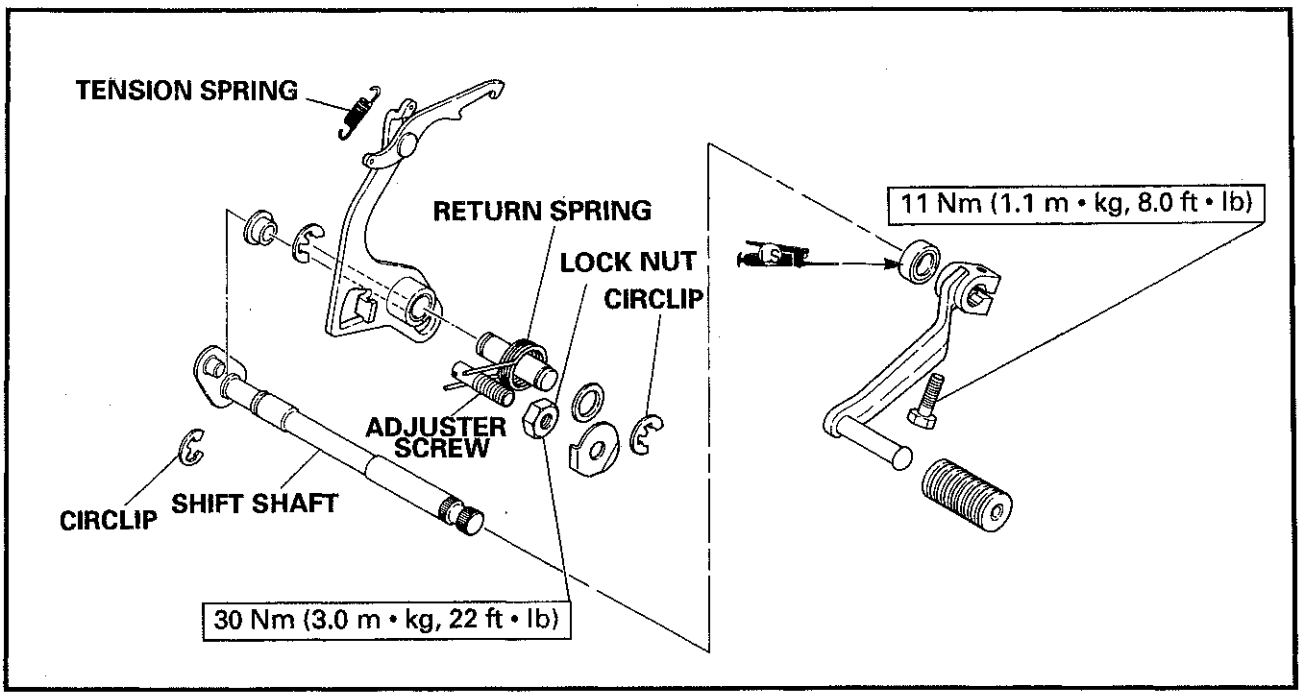
3.Install:
- Right crankcase half

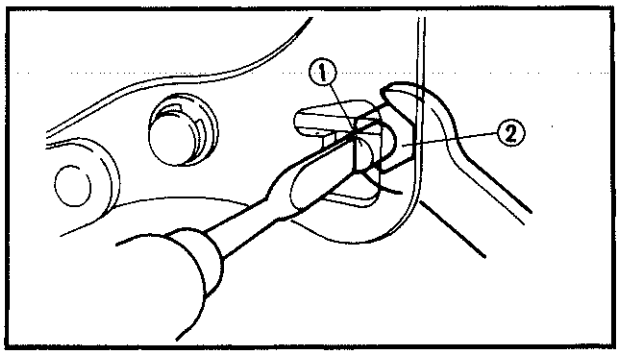


4.Tighten:
- Crankcase tightening screws
  Tighten the screws in showing sequence and in two steps.

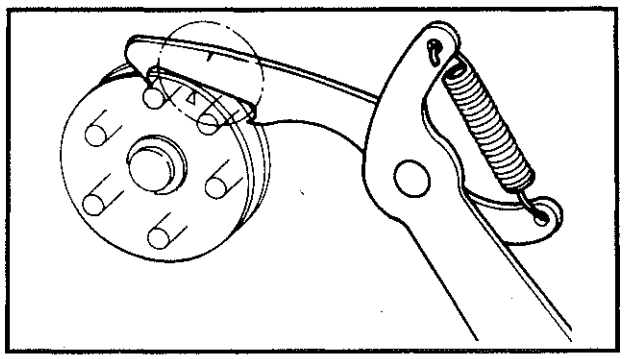
	Crankcase tightening screws: 8 Nm (0.8 m • kg, 5.8 ft • lb)

SHIFT SHAFT

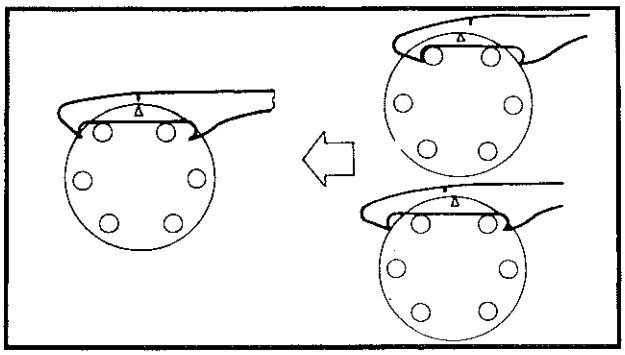




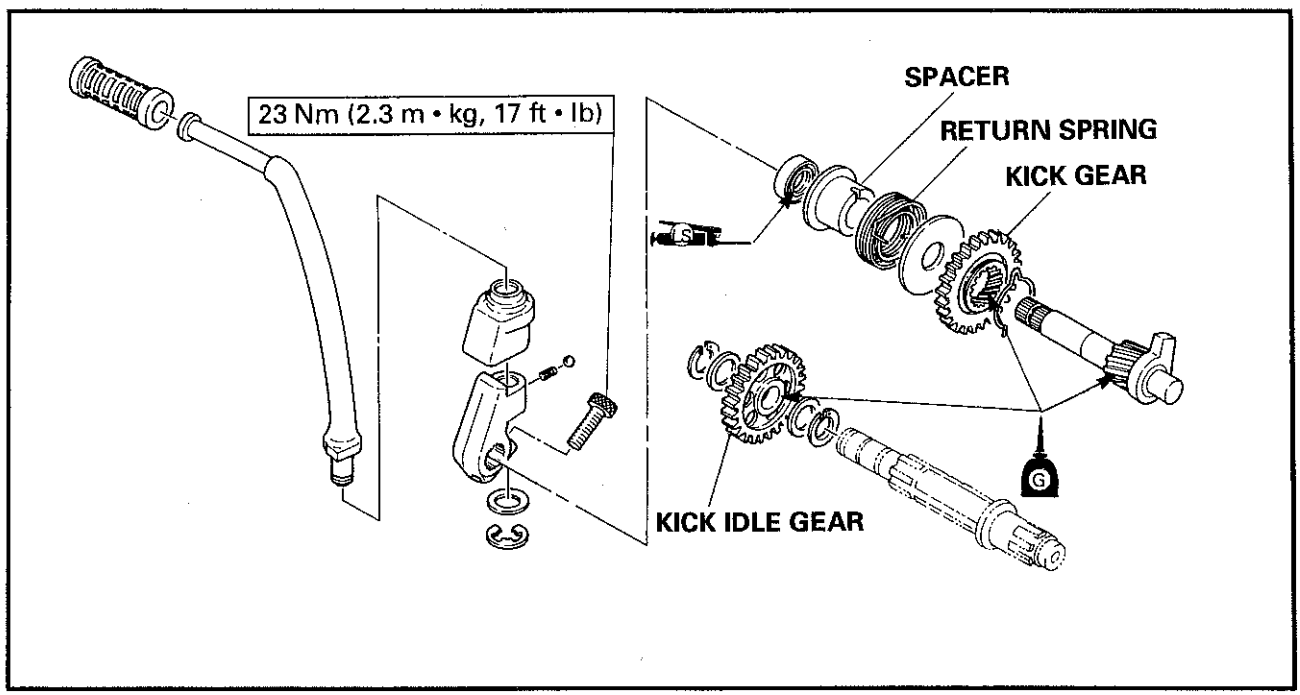
1.Install:
- Stopper lever assembly
- Shift shaft assembly
- Washer
- Circlip

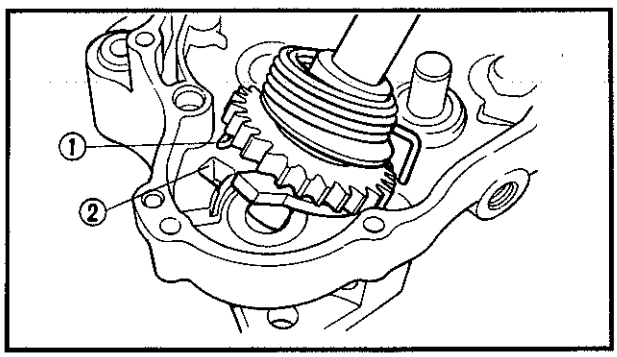


2.Adjust:
- Shift lever position
  (by adjuster screw ① and locknut ②)



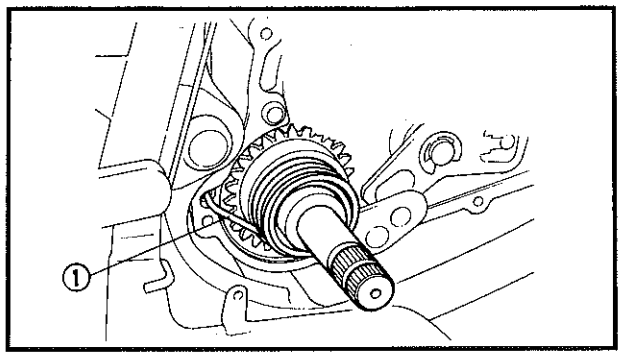
KICK STARTER



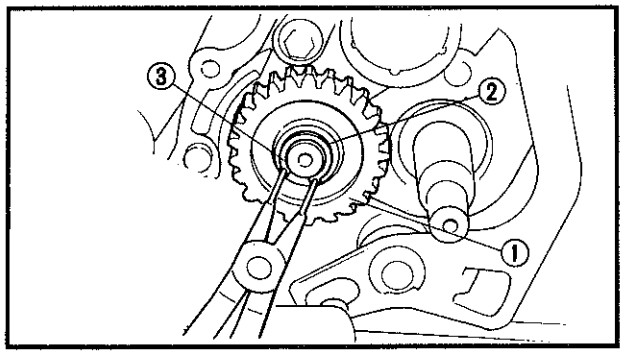


1.Install:
- Kick starter assembly

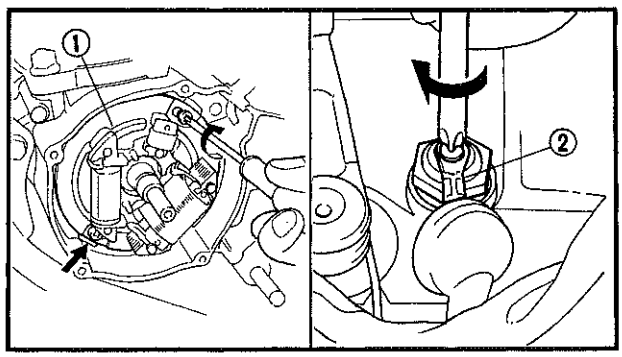
2.Position the kick clip ① in groove ② of the crankcase as shown.



3.Hook:
- Return spring ①



4.Install:
- Washer
- Kick idle gear ①
- Washer ②
- Circlip ③

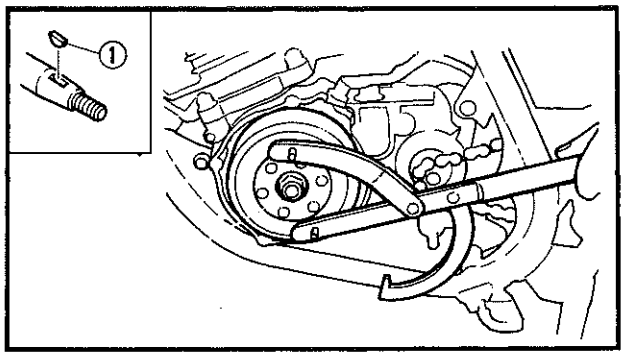


FLYWHEEL MAGNETO

1.Install:
- Stator assembly ①

	Stator: **8 Nm (0.8 m • kg, 5.8 ft • lb)**

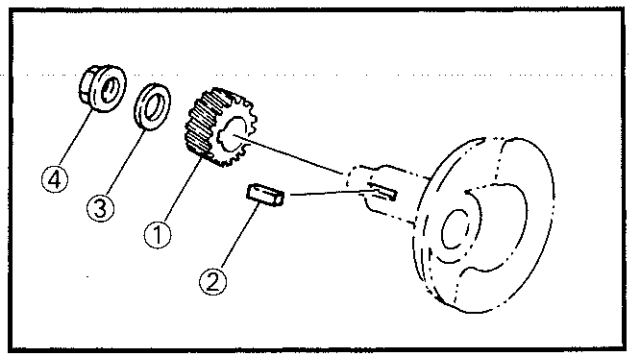
2.Connect:
- Neutral switch lead wire ②



3.Install:
- Woodruff key ①
- Flywheel

	Flywheel magneto: **70 Nm (7.0 m • kg, 5.1 ft • lb)**

4

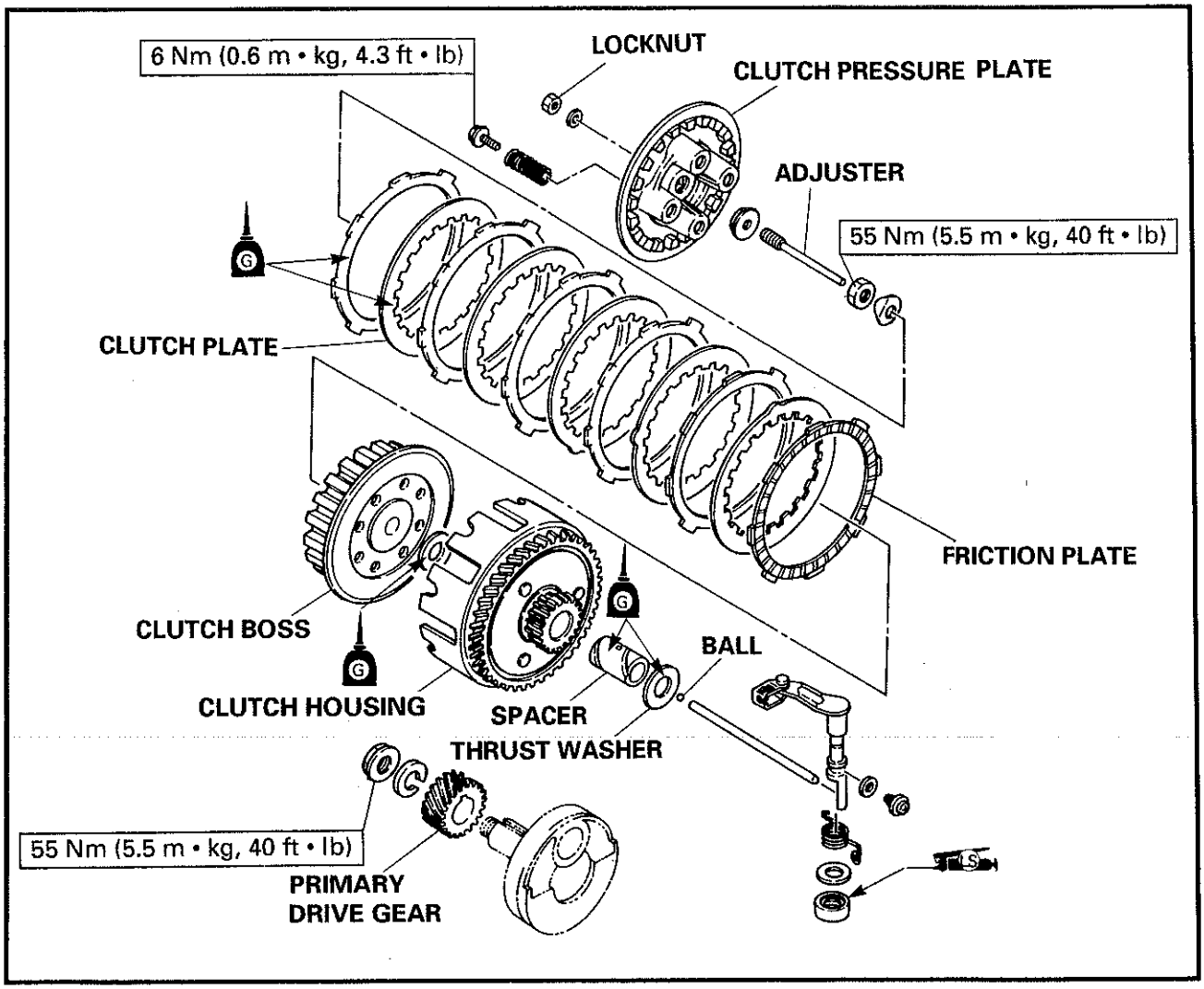


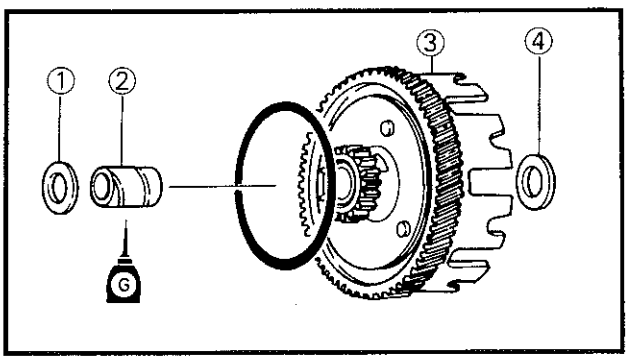
PRIMARY DRIVE GEAR

1.Install:
- Primary drive gear ①
- Straight key ②
- Washer ③
- Nut ④

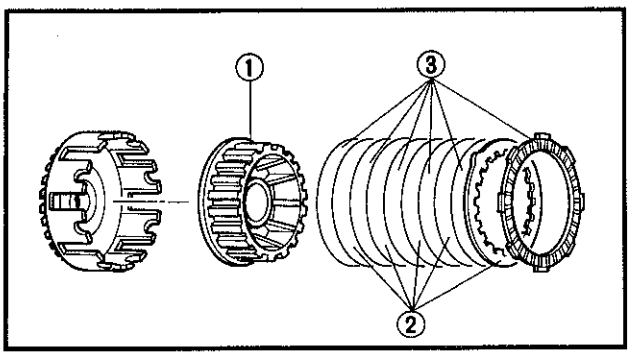
	Primary drive gear: **55 Nm (5.5 m • kg, 40 ft • lb)**

CLUTCH

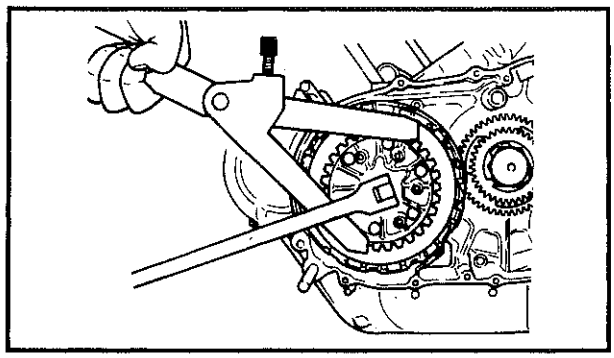




1.Install:
- Thrust washer ①
- Spacer ②
- Clutch housing ③
- Thrust washer ④



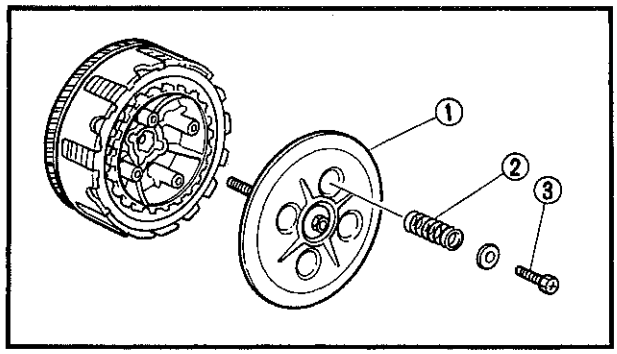
2.Install:
- Clutch boss ①
- Clutch plates ②
- Friction plates ③



3.Install:
- Lock washer (new)
- Nut

	Nut: **55 Nm (5.5 m • kg, 40 ft • lb)**

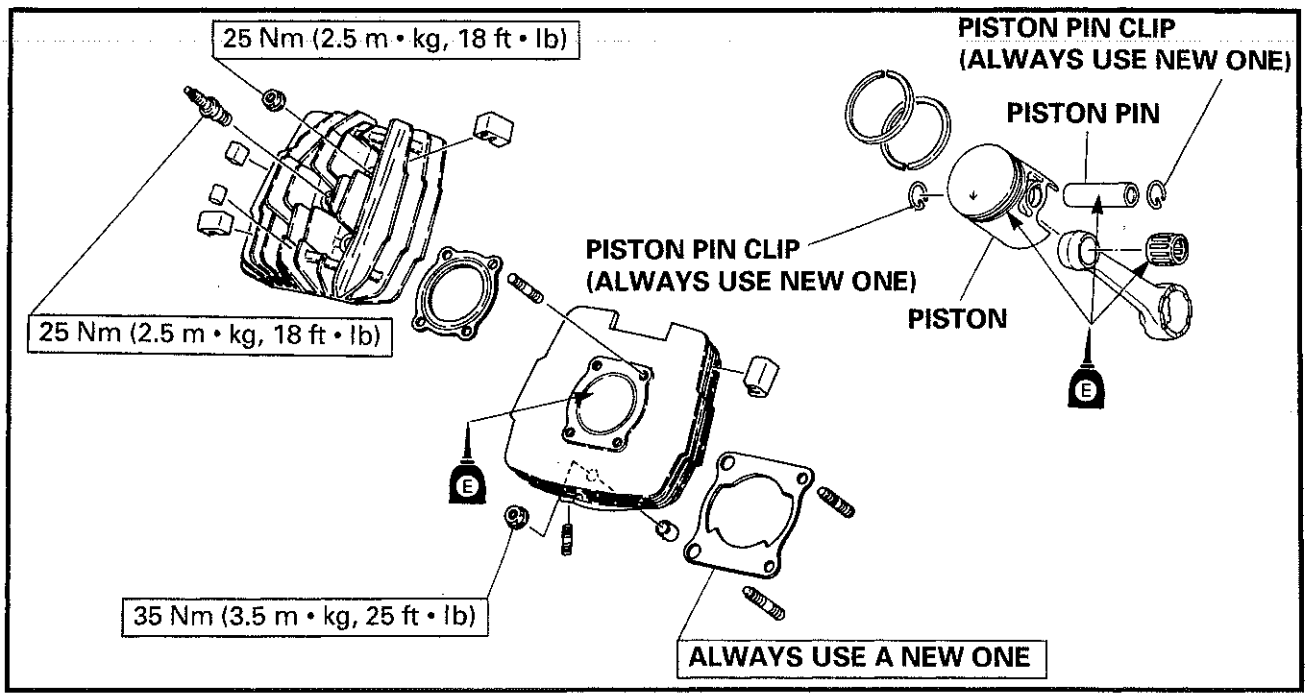
4.Bend:
- Lock washer

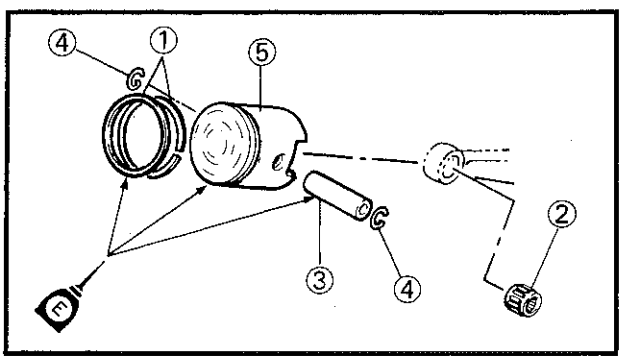


5.Install:
- Pressure plate ①
- Springs ②
- Bolts ③

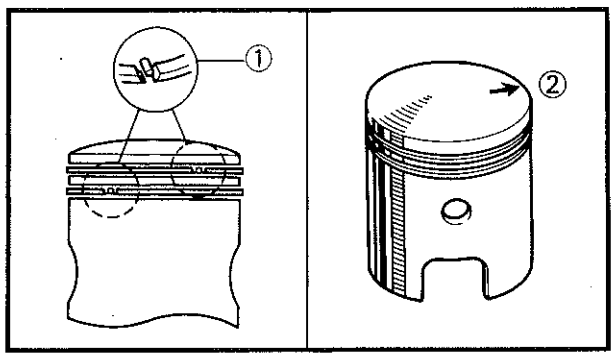
4

PISTON





1.Install:
- Piston rings ①
- Small end bearing ②
- Piston pin ③
- Piston pin clips (new) ④
- Piston ⑤

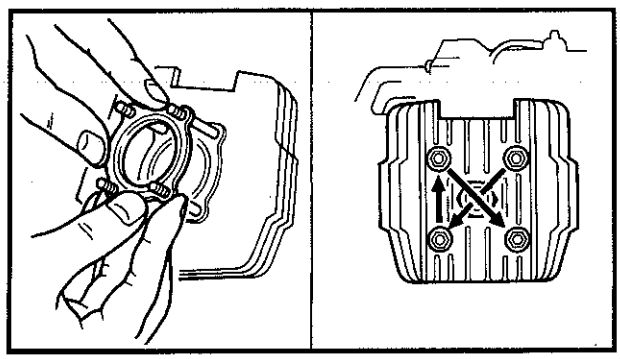


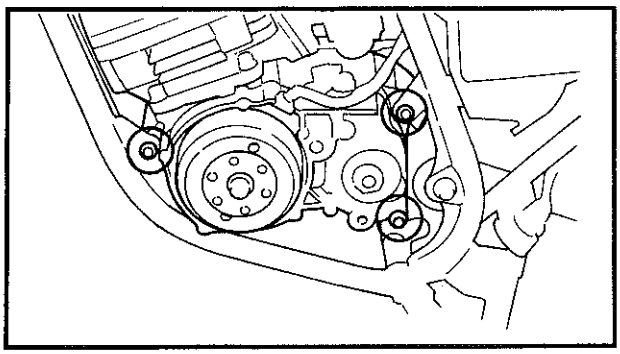
CYLINDER

1.Install:
- Gasket (new)
- Cylinder

NOTE:
- Make sure ring ends ① are properly fitted around ring locating pins in piston grooves.
- The arrow ② on piston dome must face exhaust side.

	Cylinder nut: **35 Nm (3.5 m • kg, 25 ft • lb)**





CYLINDER HEAD

1.Install:
- Head gasket
- Cylinder head
- Washer
- Nuts

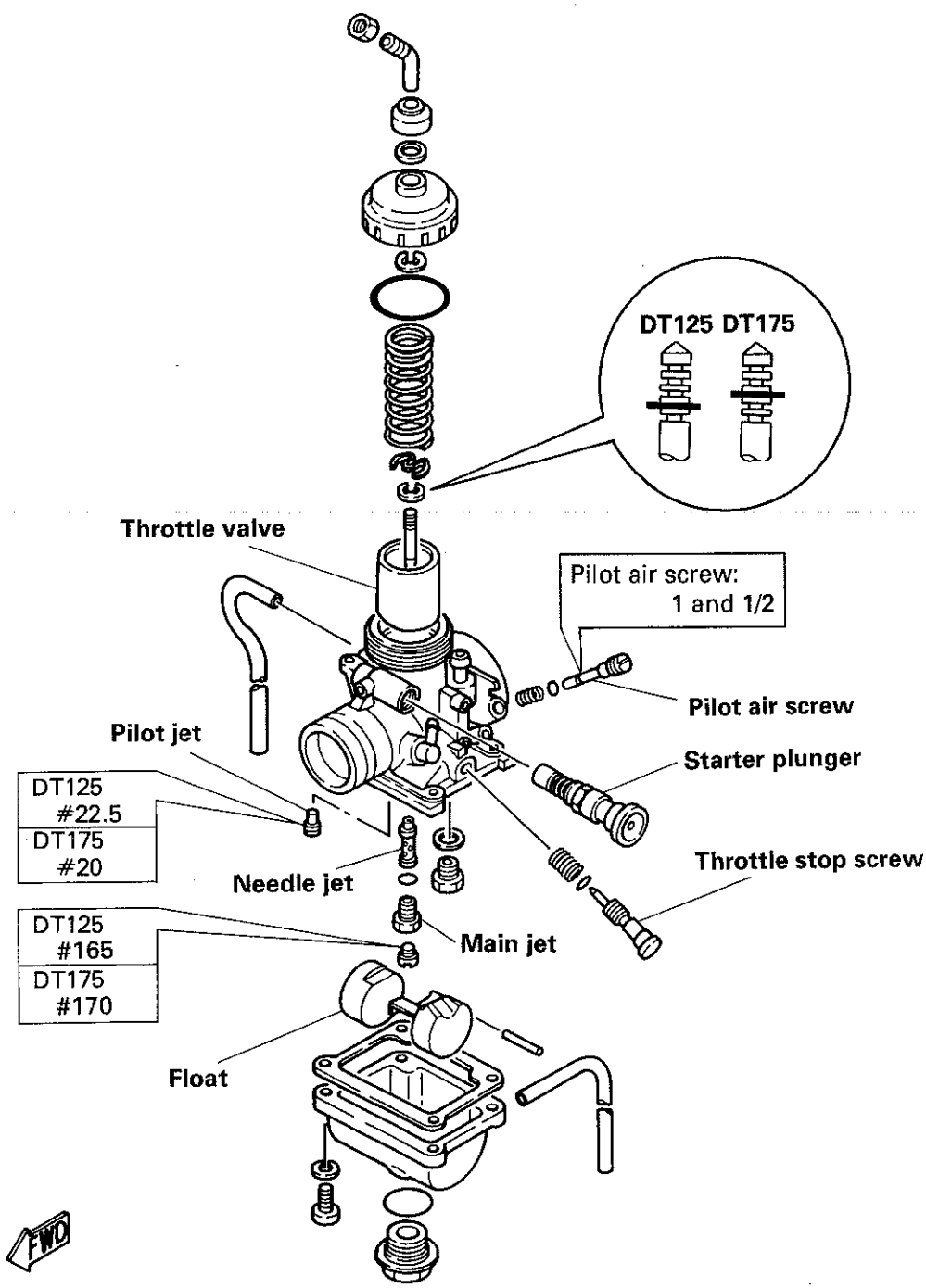
	Cylinder head: **20 Nm (2.0 m • kg, 14 ft • lb)**

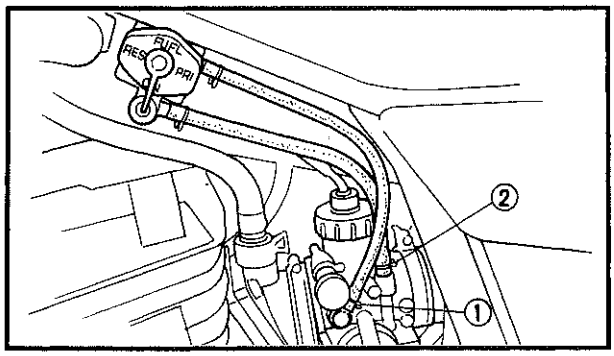
ENGINE MOUNTING

	Engine mounting: **Front:** **32 Nm (3.2 m • kg, 23 ft • lb)** **Rear, upper:** **32 Nm (3.2 m • kg, 23 ft • lb)** **Rear lower:** **39 Nm (3.9 m • kg, 28 ft • lb)**

CARBURETION

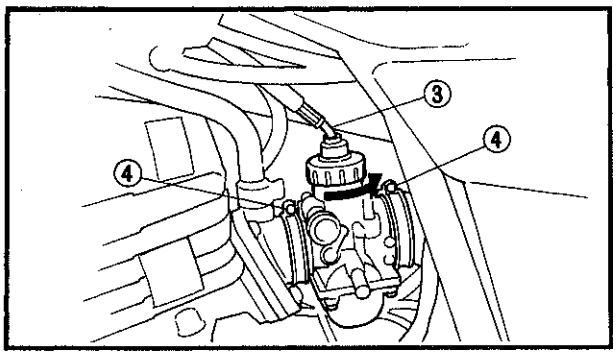
CARBURETOR





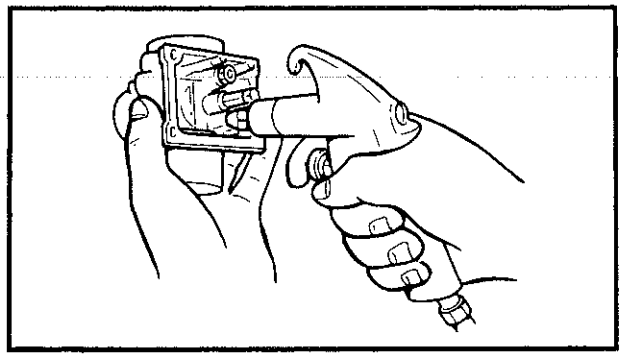
REMOVE

1.Disconnect:
- Vacuum hose ①
- Fuel hose ②
- Throttle cable ③ (with carburetor top)



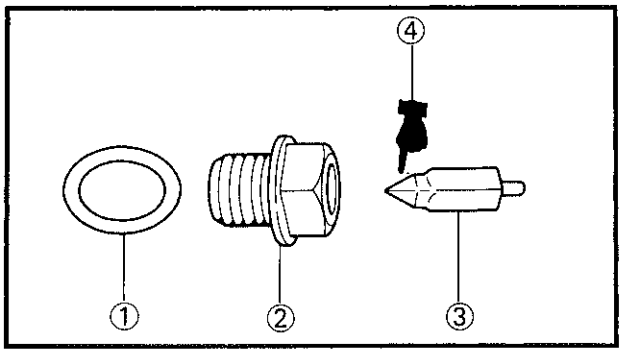
2.Loosen:
- Screw ④

3.Remove:
- Carburetor body



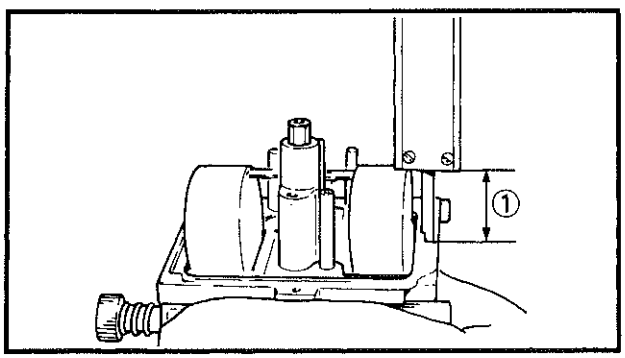
INSPECTION

1.Using high pressure air, blow out all passages and jets.



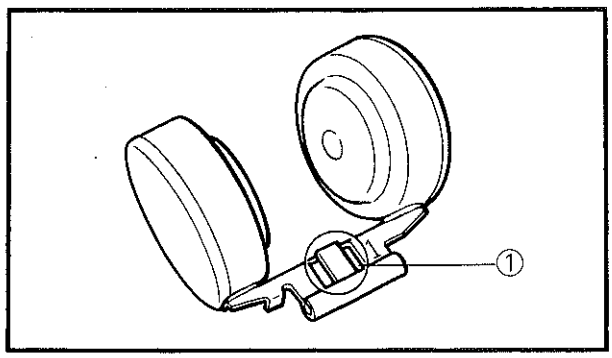
2.Inspect:
- Needle valve ③
  Damaged or worn → Replace as a set.

① Gasket
② Valve seat
③ Needle valve
④ Wear

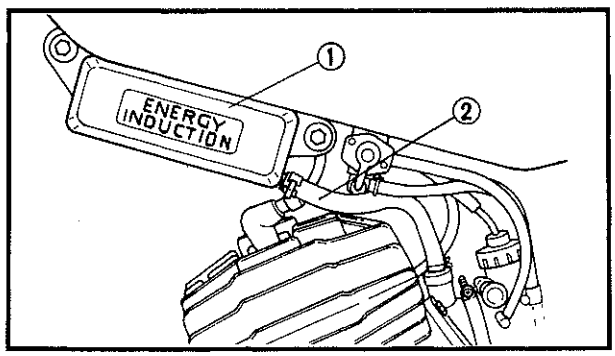


3.Measure:
- Float height ①
  Incorrect → Adjust.

Float height:
20 ± 1.0 mm (0.79 ± 0.04 in)



4.Adjust:
- Float height
  by bending the tang ①.

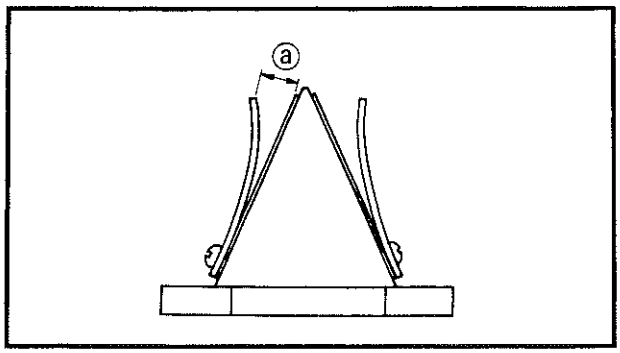


YAMAHA ENERGY INDUCTION SYSTEM (YEIS)

1.Check:
- Air chamber ①
- Hose ②
- Damage → Replace.

NOTE:
Handle the air chamber and hose with special care. Improper installation or damaged parts will result in poor performance.

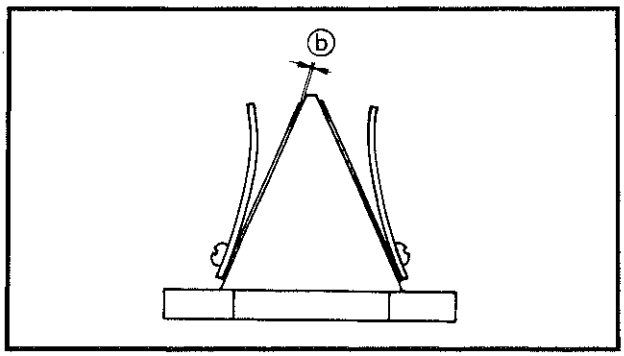
5



REED VALVE

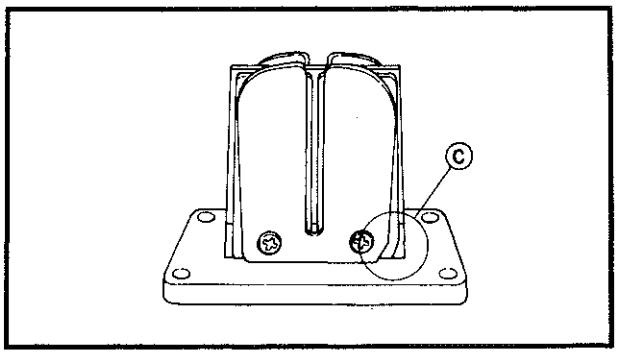
1.Measure:
- Reed valve stopper height ⓐ

Reed valve stopper height ⓐ:
10.3 mm (0.41 in)



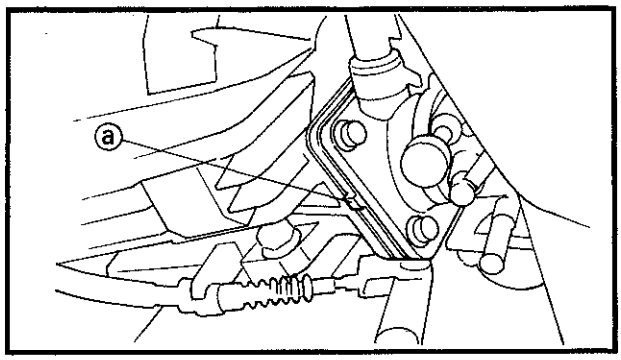
2.Measure:
- Reed valve bending ⓑ

Reed valve bending limit ⓑ:
0.5 mm (0.020 in)



3.Install:
- Reed valve
- Stopper

NOTE:
Note the cut ⓒ in the lower corner of the reed and stopper plate.



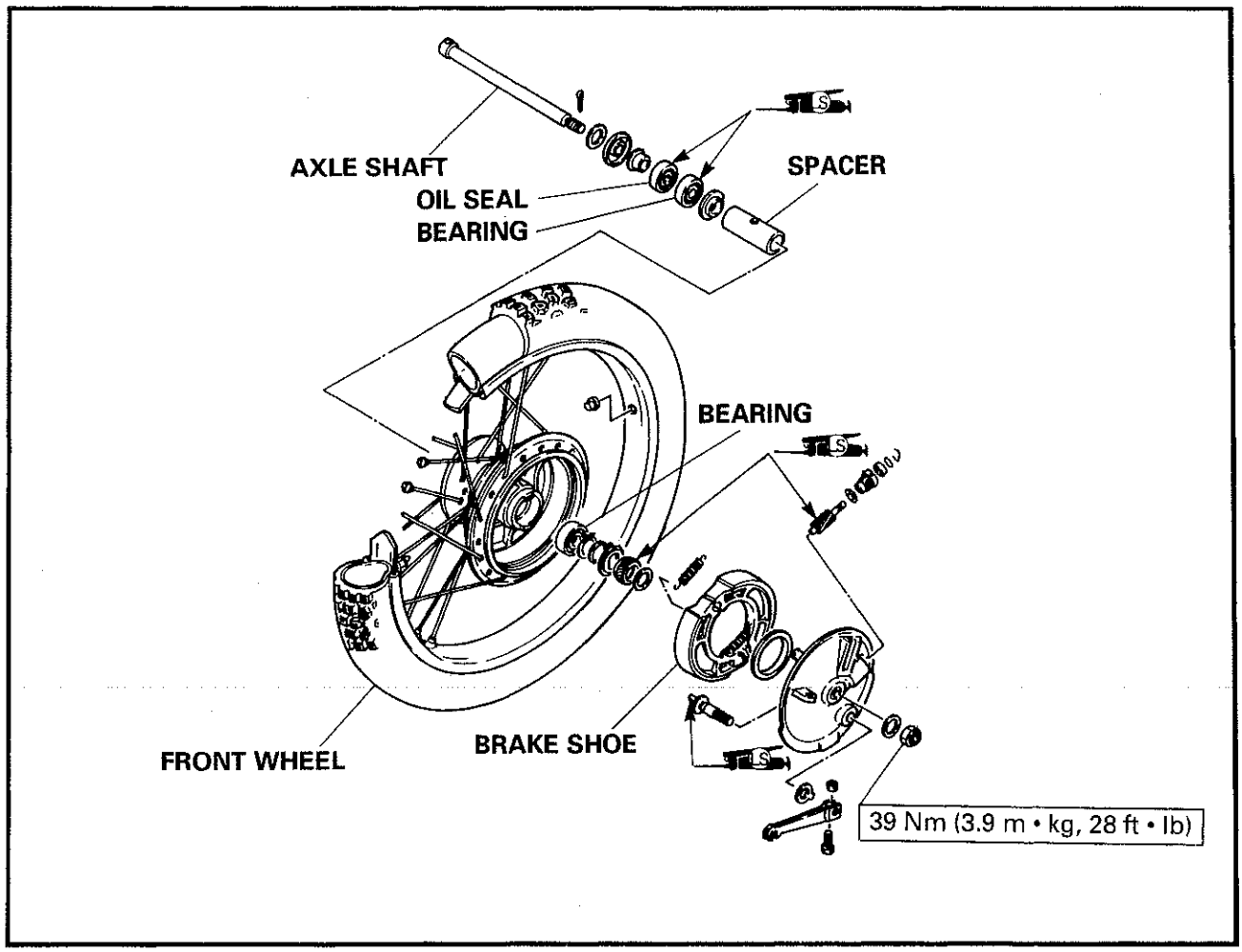
4.Install:
- Reed valve assembly

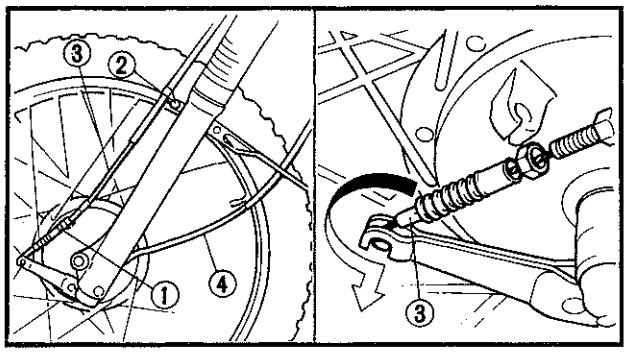
NOTE:
Be sure the projection ⓐ of the reed valve assembly fits on left side.

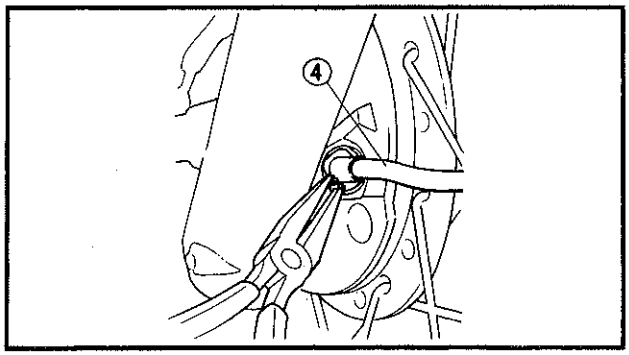
5

CHASSIS

WHEELS, BRAKES, SPROCKETS AND CHAIN



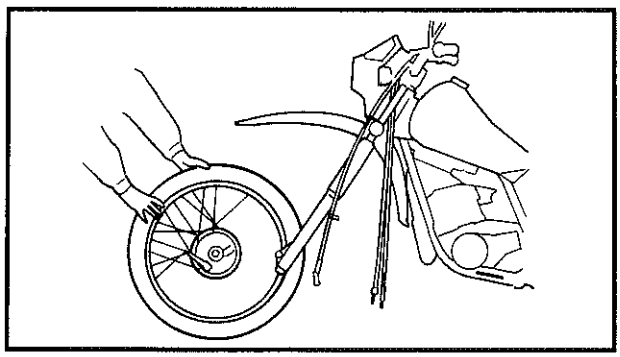




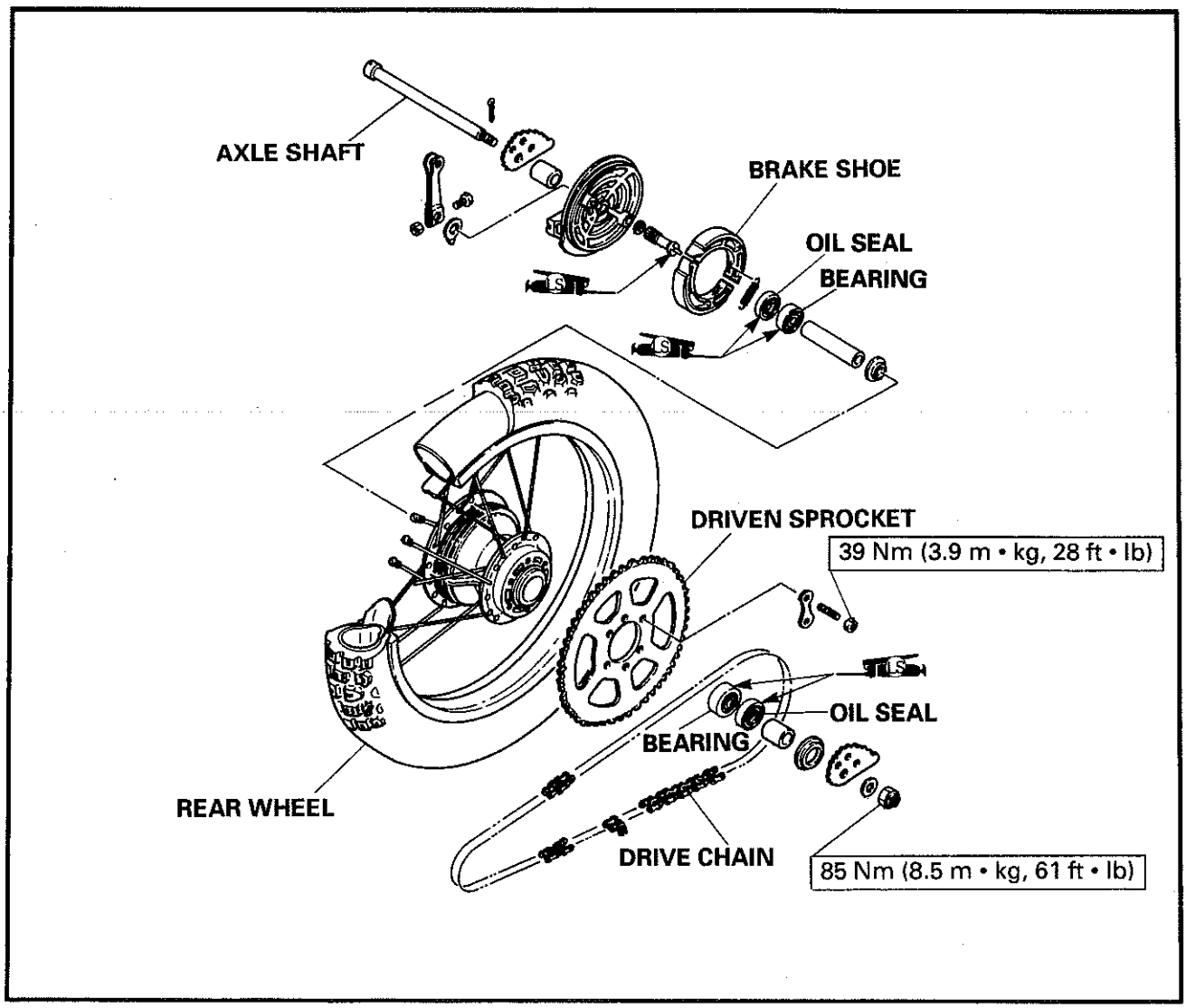
FRONT WHEEL REMOVAL

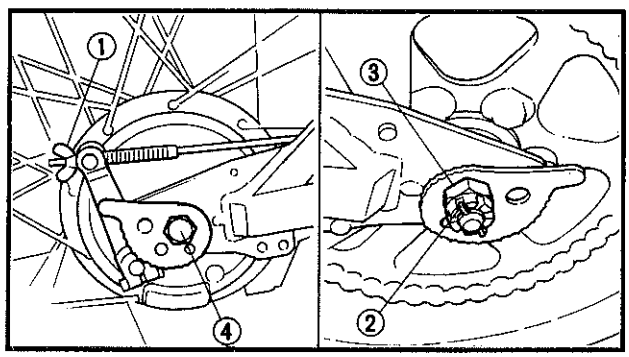
1. Place a suitable stand under the engine.
2. Loosen:
   - Nut ①
3. Remove:
   - Bolt ②
4. Disconnect:
   - Front brake cable ③
5. Disconnect:
   - Speedometer cable ④

6



6.Remove:
- Axle nut
- Axle shaft
- Front wheel

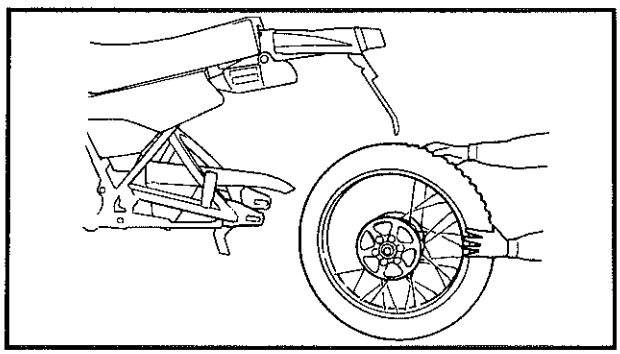




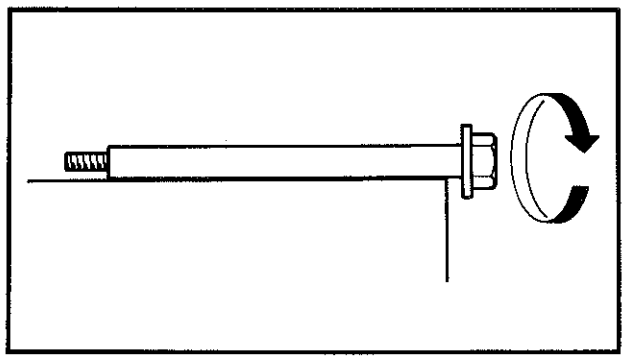
REAR WHEEL REMOVAL

1.Place a suitable stand under the engine.

2.Remove:
- Rear brake adjuster ①
- Cotter pin ②
- Axle nut ③
- Axle shaft ④

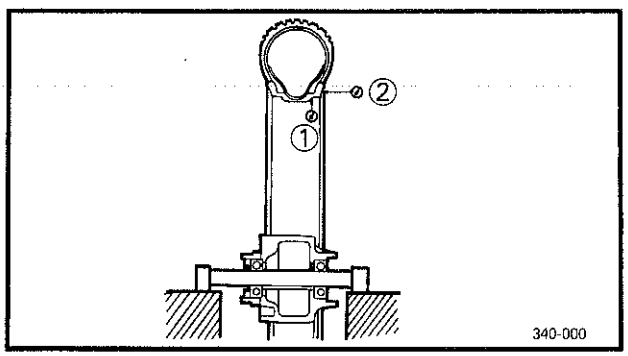


3.Remove:
- Rear wheel



INSPECTION

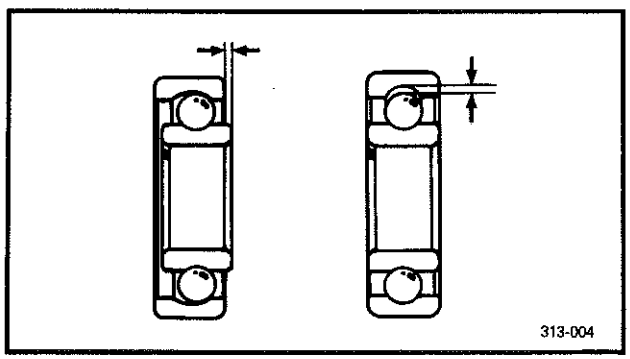
1.Inspect:
- Axle shaft
  Roll the axle shaft on a flat surface.
  Bends → Replace.



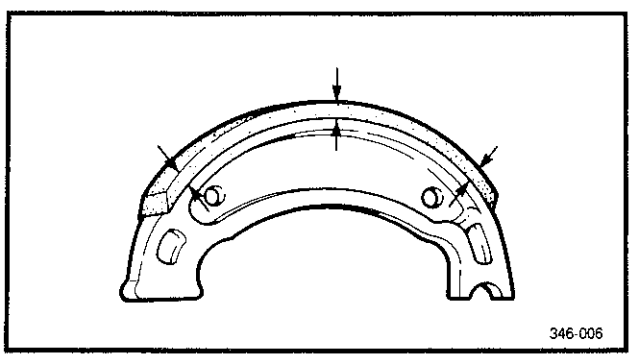
2.Inspect:
- Wheel
  Cracks/Heavily bends → Replace.

3.Measure:
- Wheel runout
  Out of specification → Retighten or replace.

Rim runout limits (front and rear):
Radial ①: 2.0 mm (0.08 in)
Lateral ②: 2.0 mm (0.08 in)



4.Inspect:
- Wheel bearings
  Bearings allow play in the wheel hub or wheel turns roughly → Replace.

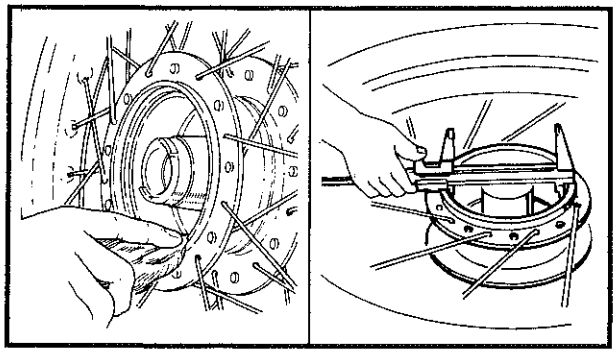


5.Measure:
- Brake shoe thickness
  Out of specification → Replace.

Brake shoe wear limit:
2.0 mm (0.08 in)

NOTE:
When replacing the brake shoes, the tension springs should also be replaced.

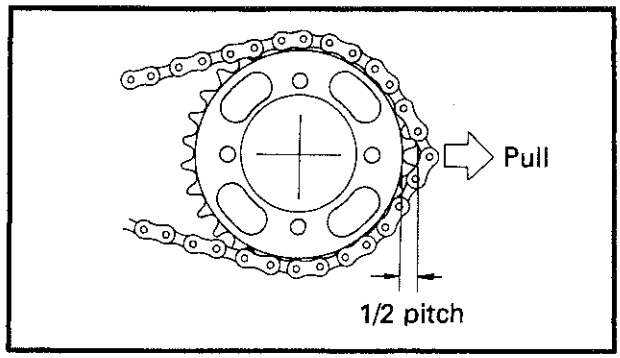
6



6.Inspect:
- Brake drum inner surface

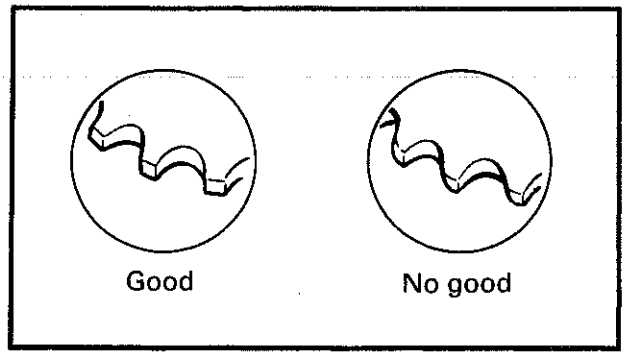
7.Measure:
- Brake drum inside diameter

Brake drum wear limit:
131 mm (5.16 in)



8.Inspect:
- Drive chain

Using a new sprocket, check stretch of the drive chain.
Stretched → Replace with the drive and driven sprocket as a set.



9.Inspect:
- Drive sprocket
- Driven sprocket

Wear → Replace with the chain as a set.

6

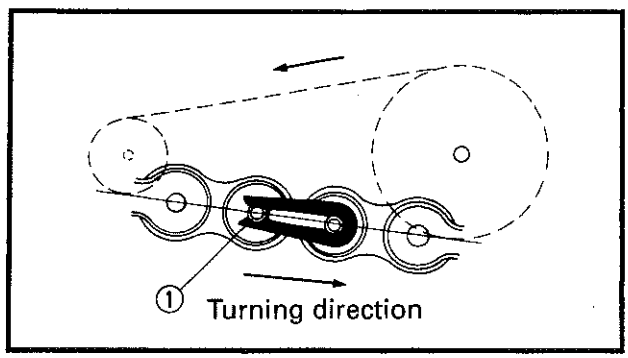
INSTALLATION

1.Install:
- Wheels

Reverse removal steps.

⚠ WARNING

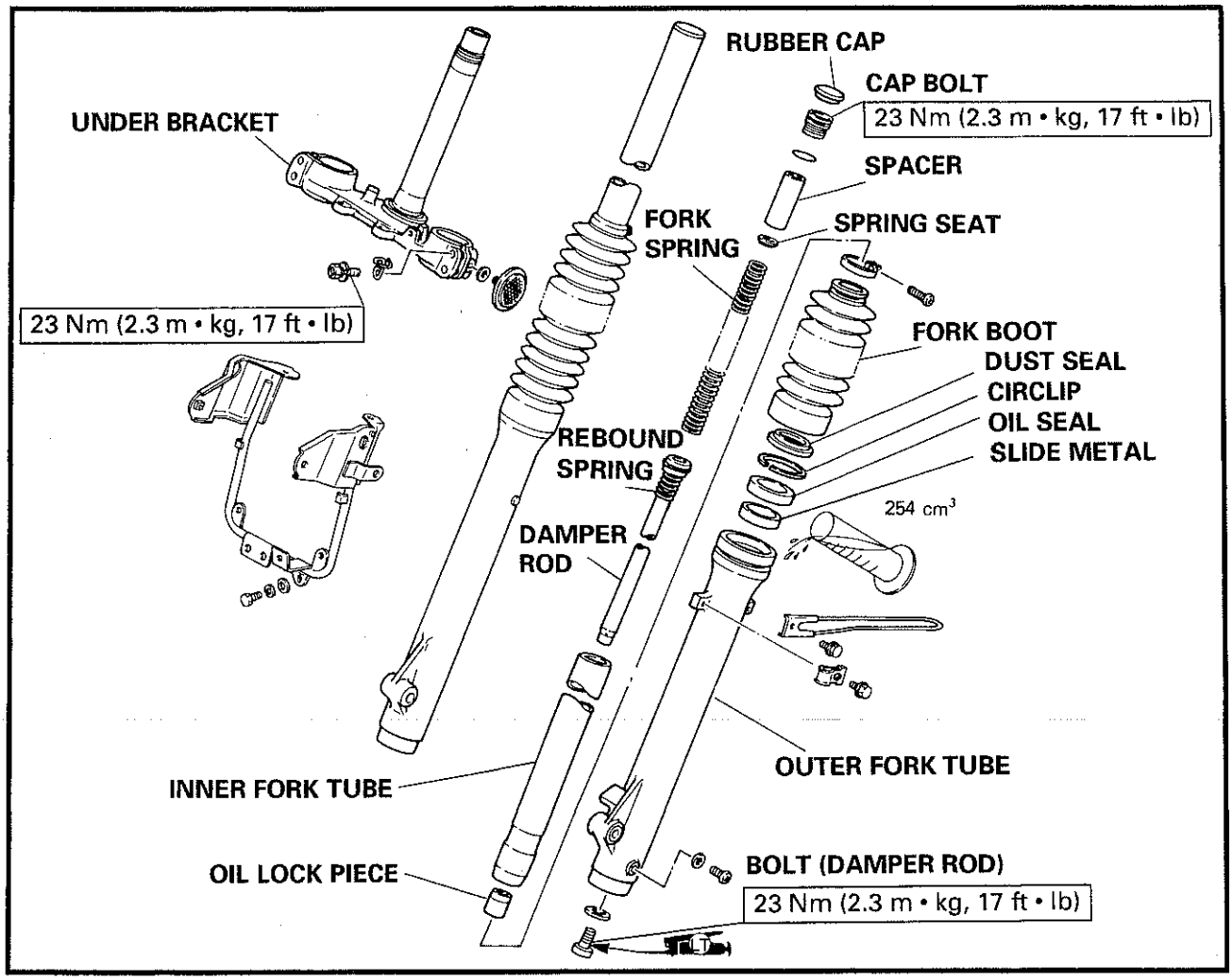
Always use a new cotter pin.



Note the following installation points:
- Lightly grease the wheel oil seal lips and gear teeth of the speedometer drive and driven gears.
  (use lightweight, lithium base grease.)
- Be sure that the torque stopper is positioned correctly.
- Install the chain with rounded end facing the direction of travel.

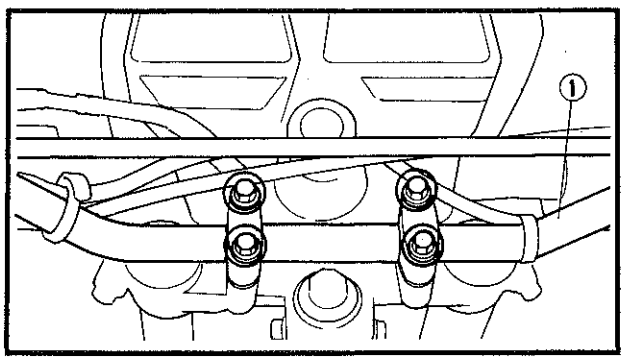
① Drive direction

FRONT FORK

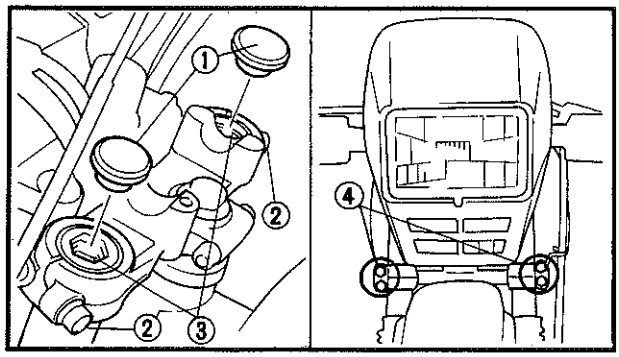


REMOVAL

1. Place a suitable stand under the engine.
2. Remove:
   - Front wheel

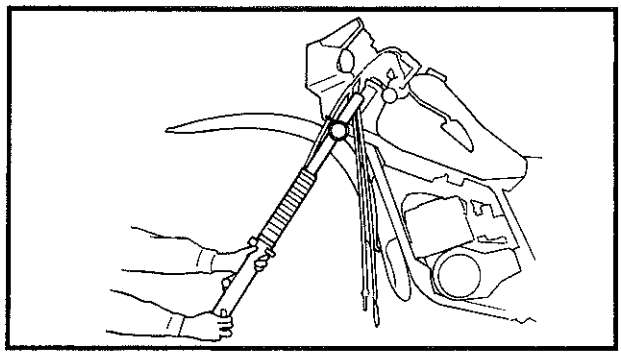


3. Remove:
   - Handlebar ①

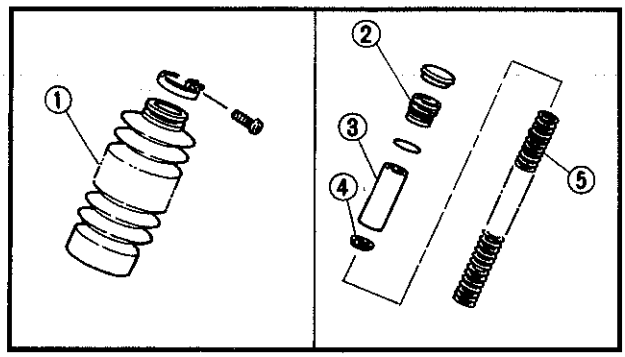


4.Remove:
- Rubber cap ①

5.Loosen:
- Pinch bolt (upper bracket) ②
- Cap bolt ③
- Pinch bolt (under bracket) ④



6.Remove:
- Front fork



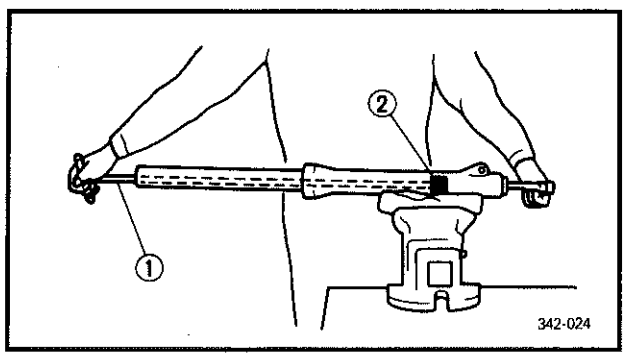
DISASSEMBLY

1.Remove:
- Fork boot ①

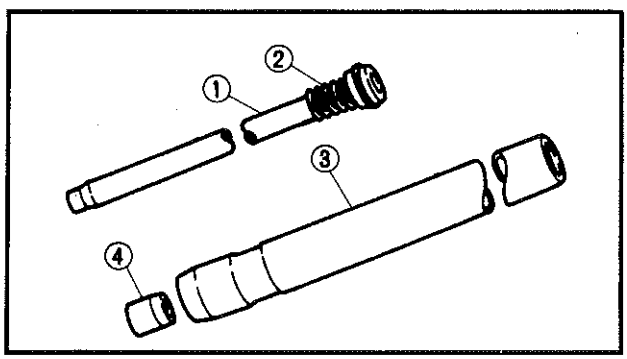
2.Remove:
- Cap bolt ②
- Spacer ③
- Spring seat ④
- Fork spring ⑤

3.Drain:
- Fork oil

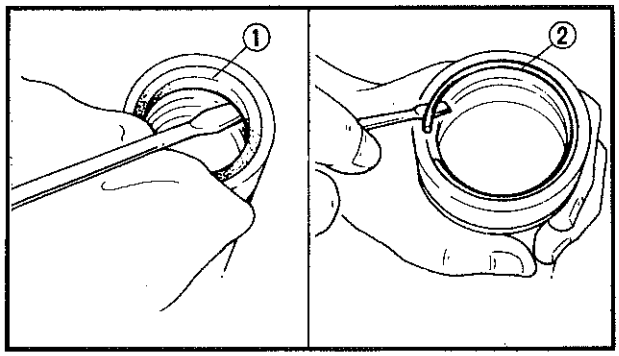
4.Remove:
- Bolt (damper rod)
- Copper washer



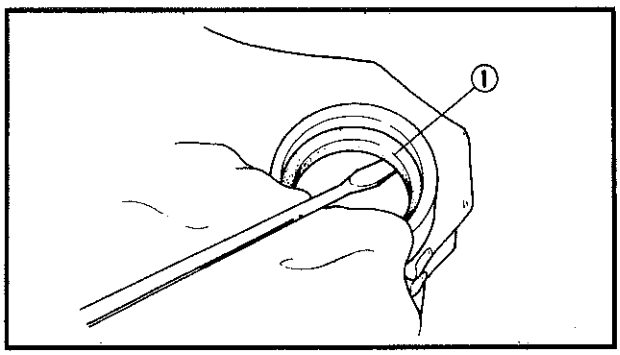
NOTE:
Hold the damper rod to loosen the bolt (damper rod) by the T-handle ① and holder ②.



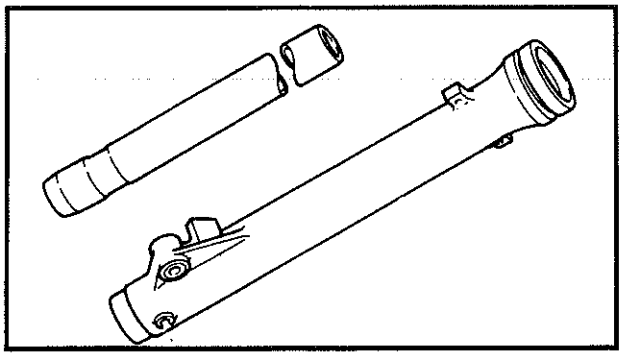
5.Remove:
- Damper rod ①
- Rebound spring ②
- Inner fork tube ③
- Oil lock piece ④



6.Remove:
- Dust seal ①
- Circlip ②



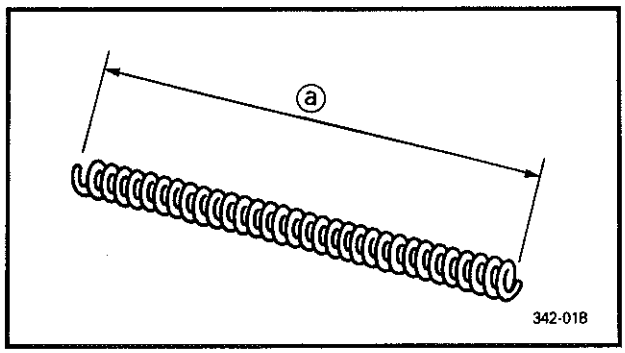
7.Remove:
- Oil seal ①



INSPECTION

1.Inspect:
- Inner fork tube
- Outer fork tube

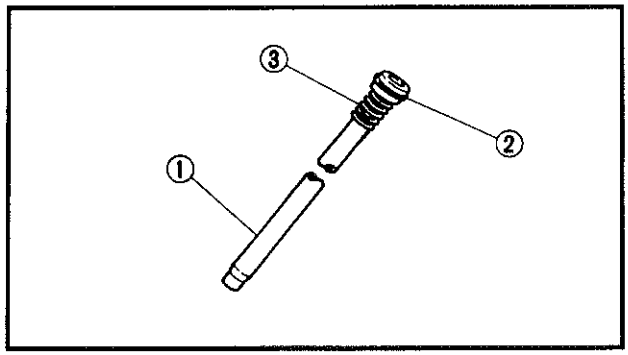
Scratches/Bends/Damage → Replace.



2.Measure:
- Fork spring free length ⓐ

Out of specification → Replace.

Minimum free length:
423 mm (16.7 in)

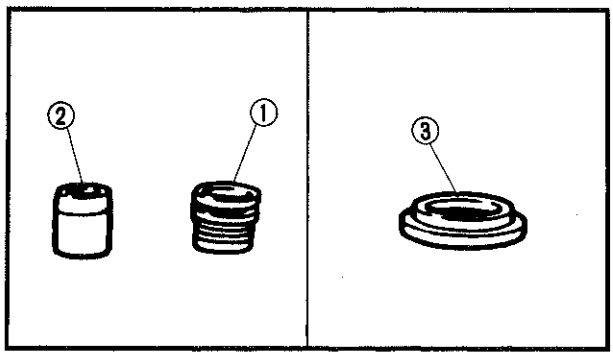


3.Inspect:
- Damper rod ①

Wear/Damage → Replace.
Contamination → Blow out all oil passages with compressed air.
- Piston ring ②
- Rebound spring ③

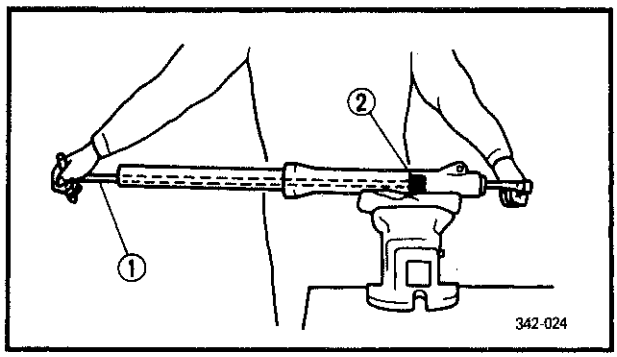
Wear/Damage → Replace.

6



4.Inspect:
- O-ring (cap bolt) ①
- Oil lock piece ②
  Damage → Replace.

5.Inspect:
- Dust seal ③
  Damage → Replace.



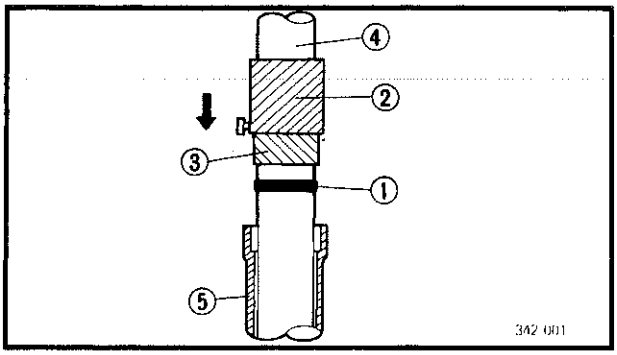
ASSEMBLY

1.Reverse disassembly steps.

2.Tighten:
- Bolt (damper rod)

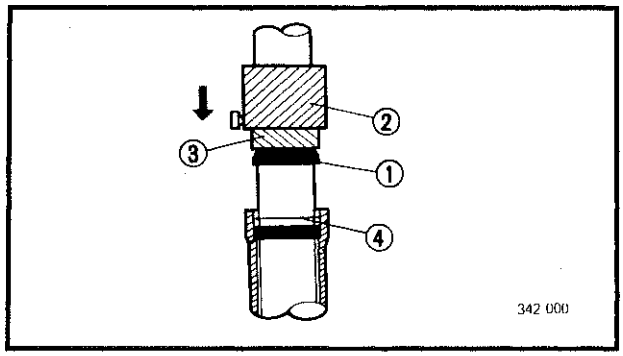
Bolt (damper rod):
23 Nm (2.3 m • kg, 17 ft • lb)
Apply LOCTITE®

NOTE:
Hold the damper rod to tighten the bolt (damper rod) by T-handle ① and holder ②.



3.Install:
- Oil seal ① (new)
  Use the fork seal driver weight ② and adapter ③.

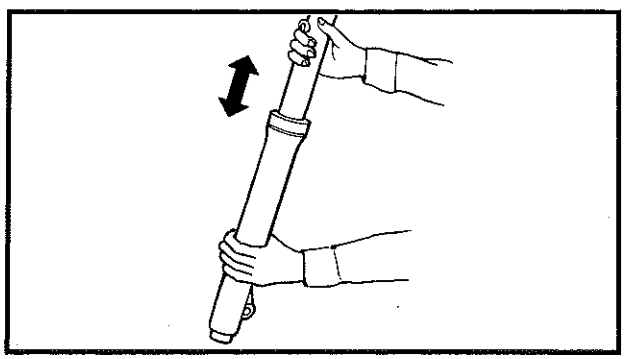
CAUTION:
Be sure oil seal numbered side face upward.



④ Inner fork tube
⑤ Outlet fork tube

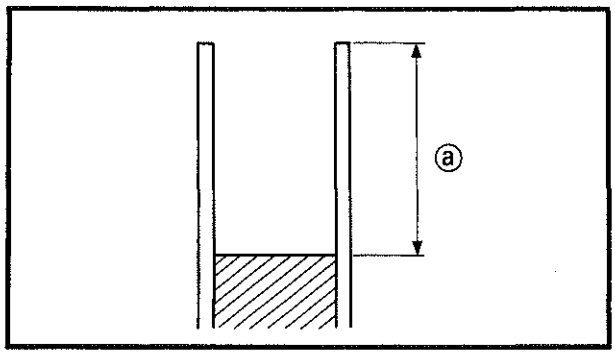
4.Install:
- Dust seal ①
  Use the fork seal driver weight ② and adapter ③.

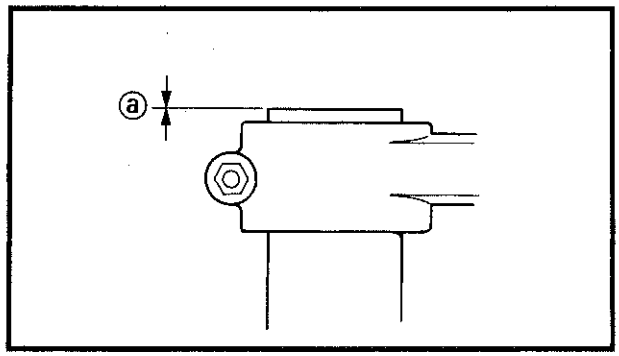
④ Circlip

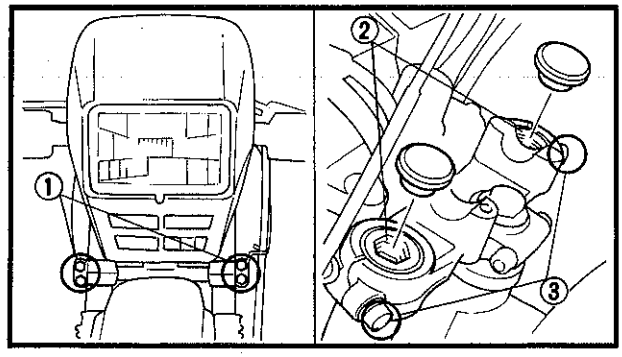


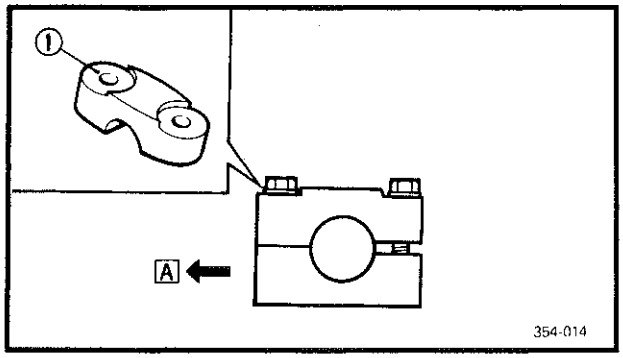
5.Fill:
- Fork oil

Oil capacity:
254 cm³ (8.94 Imp oz, 8.59 US oz)
Fork oil 10W or equivalent









6.Measure:
- Oil level ⓐ
  Out of specification → Add or reduce oil.

Fork oil level:
467 mm (18.39 in)
Below the top of inner tube fully rebounded without fork spring.

NOTE:
Place the front fork on upright position.

INSTALLATION

1.Reverse removal steps.
2.Install:
- Front fork

NOTE:
Position the inner fork tube end in such a way that it is flush ⓐ with the top of the upper bracket.

3.Tighten:
- Pinch bolt (under bracket) ①
- Cap bolt ②
- Pinch bolt ③

Pinch bolt (under bracket):
23 Nm (2.3 m • kg, 17 ft • lb)
Cap bolt:
23 Nm (2.3 m • kg, 17 ft • lb)
Pinch bolt (upper bracket):
34 Nm (3.4 m • kg, 24 ft • lb)

4.Install:
- Handlebar

Bolt (handlebar):
15 Nm (1.5 m • kg, 11 ft • lb)

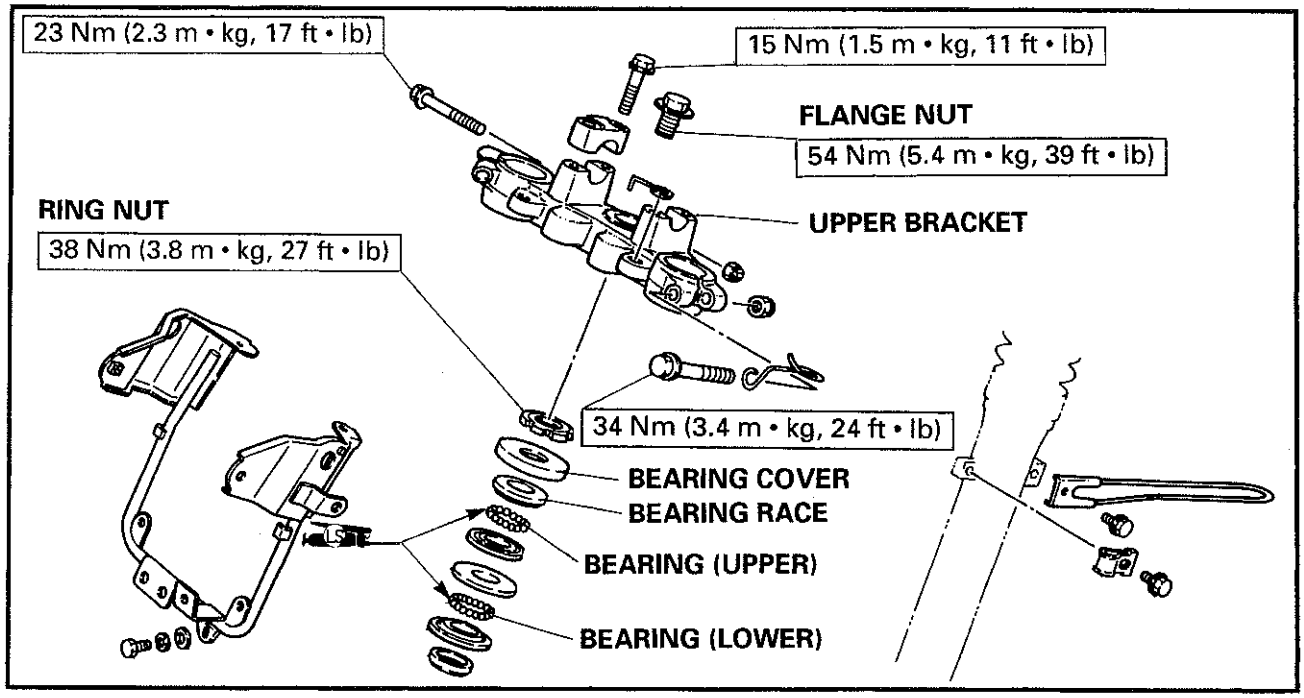
- The upper handlebar holder should be installed with the punched mark ① forward.

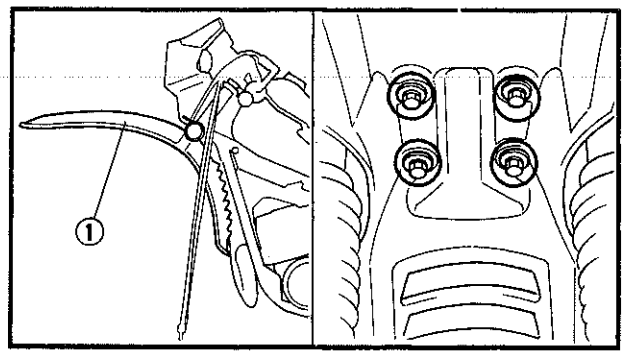
A Forward

NOTE:
First tighten the bolts on the front side of the handlebar holder, and then tighten the bolts on the rear side.

6

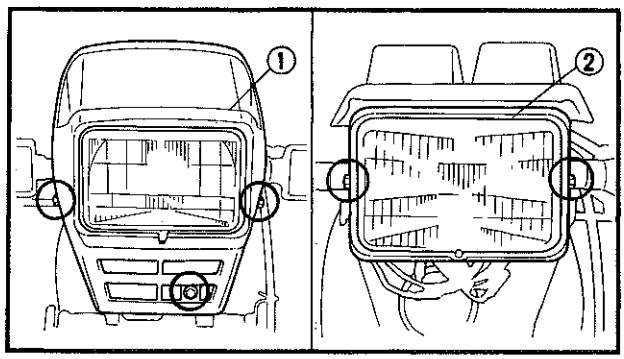
STEERING HEAD



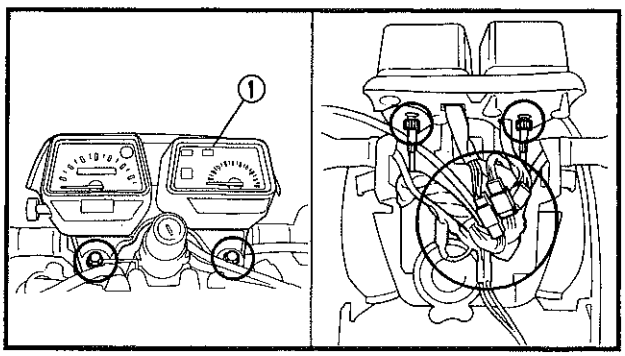


REMOVAL

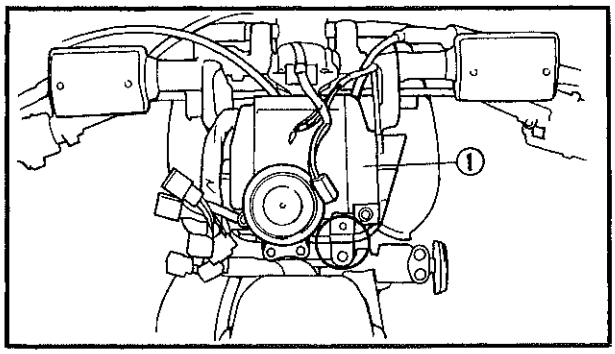
1.Place a suitable stand under the engine.
2.Remove:
- Front wheel
- Front forks
- Front fender ①



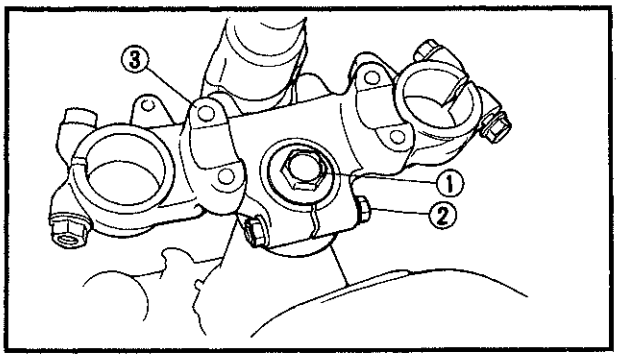
3.Remove:
- Headlight cover ①
- Headlight ②



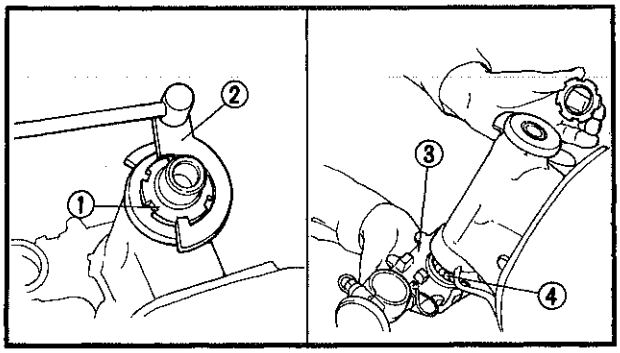
4.Remove:
- Meter assembly ①



5.Remove:
- Headlight stay ①

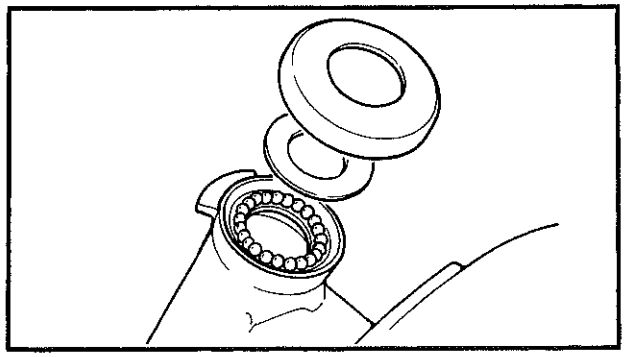


6.Remove:
- Flange nut ①
- Pinch bolt ②
- Upper bracket ③

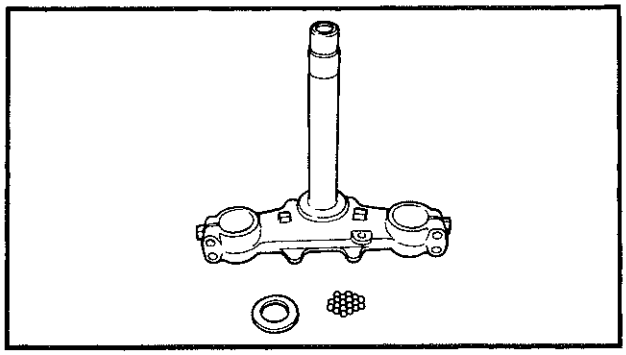


7.Remove:
- Ring nut ①
  Using the ring nut wrench ②.
- Under bracket ③
- Bearings (lower) ④

NOTE:
Support the under bracket so that it may not fall down.



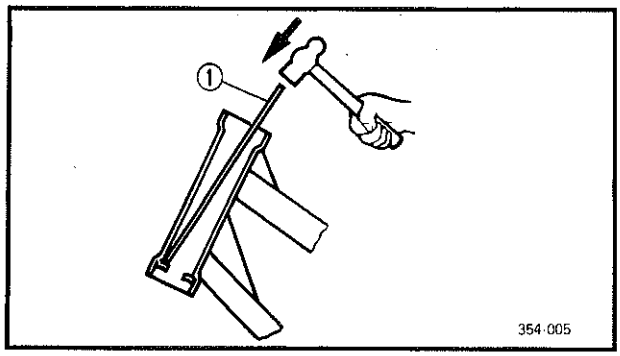
8.Remove:
- Bearing cover
- Bearing race
- Bearing (upper)

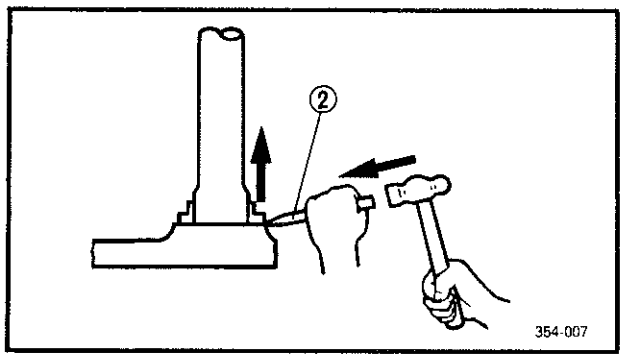


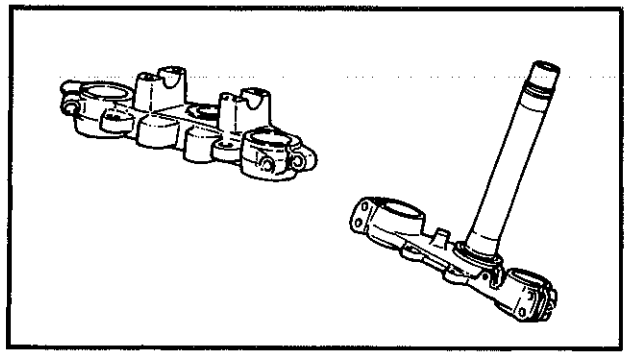
INSPECTION

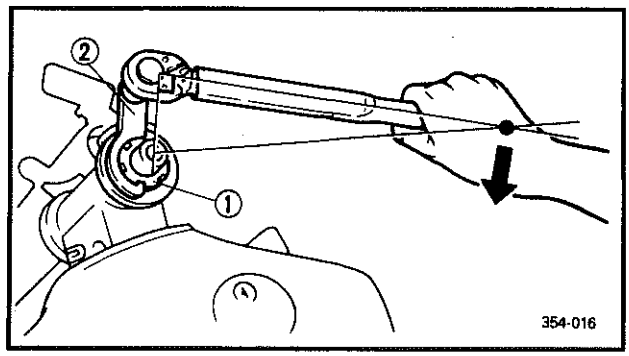
1.Wash the bearings and bearing races with a solvent.

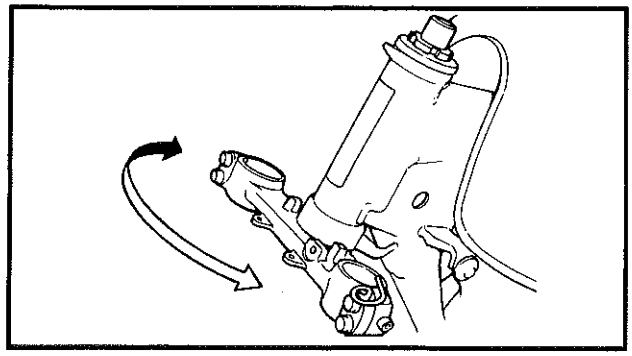
2.Inspect:
- Bearings
- Bearing race
  Pitting/Damage → Replace.











****

Bearing race replacement steps:

- Remove the bearing races on the head pipe using long rod ① and the hammer as shown.
- Remove the bearing race on the under bracket using the floor chisel ② and the hammer as shown.
- Install the new dust seal and race.

****

NOTE:

- Always replace bearings and races as a set.
- Replace the dust seal whenever a steering head disassembled.

CAUTION:

If the bearing race is fitted not squarely, the head pipe could be damaged.

3.Inspect:

- Upper bracket
- Under bracket (with steering stem)
  Cracks/Bends/Damage → Replace.

INSTALLATION

Reverse removal steps.

1.Grease the bearings and bearing races.

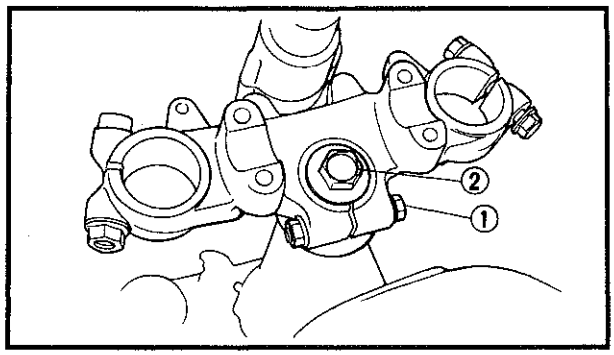
2.Tighten:

- Ring nut ①
  Using ring nut wrench ②.

	Ring nut: **38 Nm (3.8 m • kg, 27 ft • lb)**

NOTE:

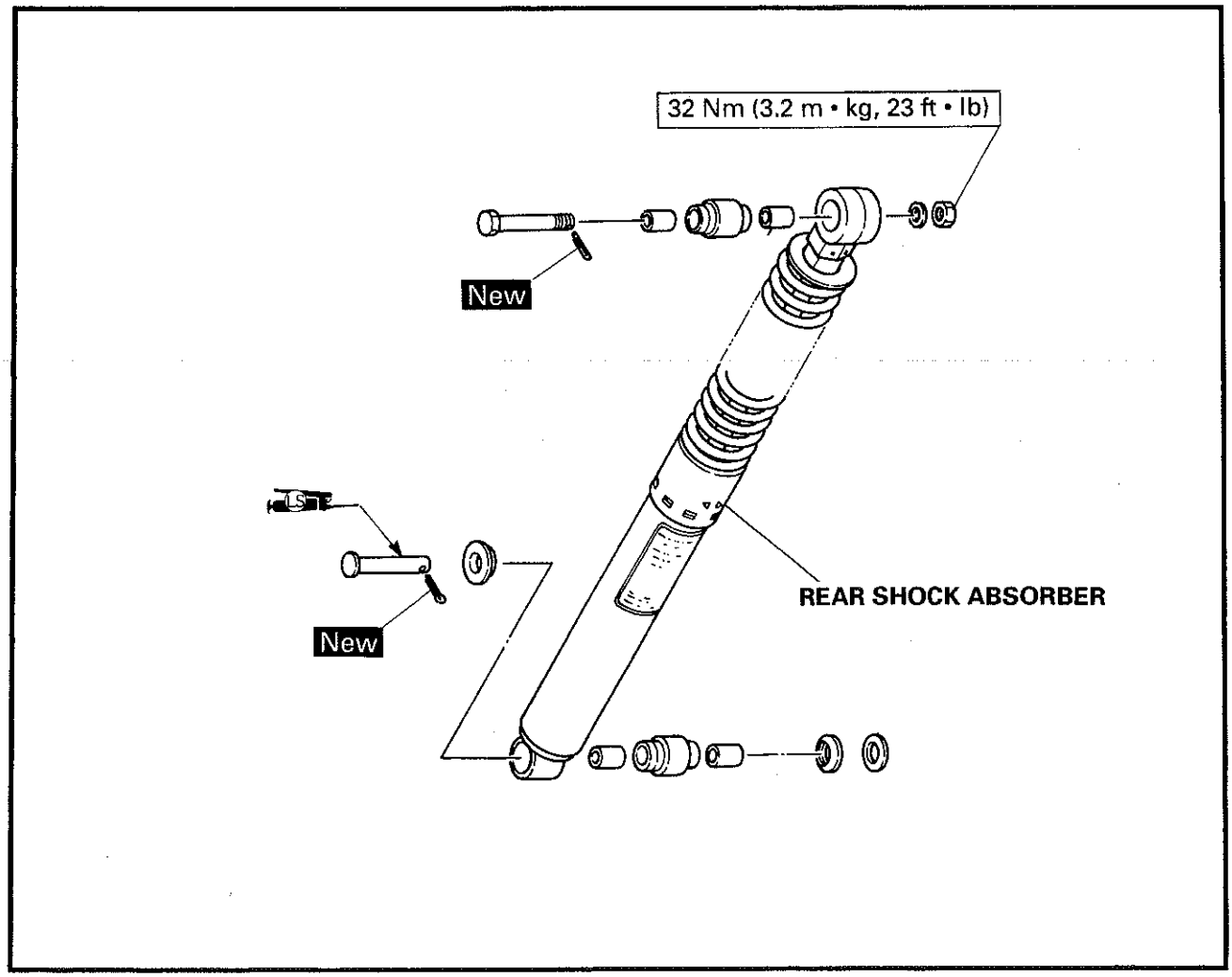
After installation make certain forks pivot from stop to stop with out binding or catching.

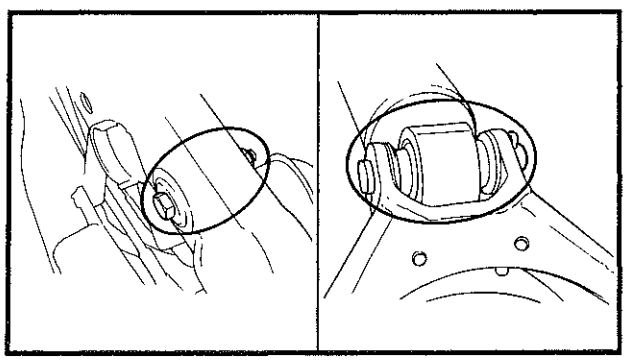


3.Tighten:
- Pinch bolt ①
- Flange bolt ②

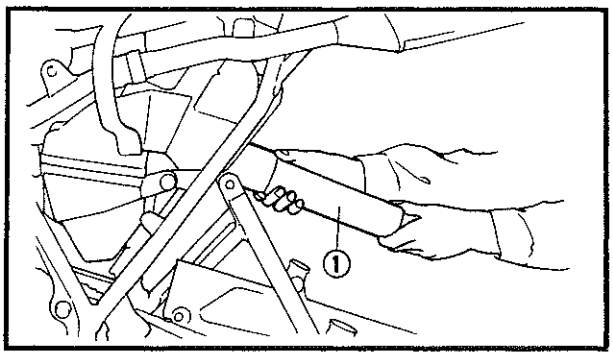
Pinch bolt:
23 Nm (2.3 m • kg, 17 ft • lb)
Flange bolt:
54 Nm (5.4 m • kg, 39 ft • lb)

REAR SHOCK ABSORBER AND SWINGARM

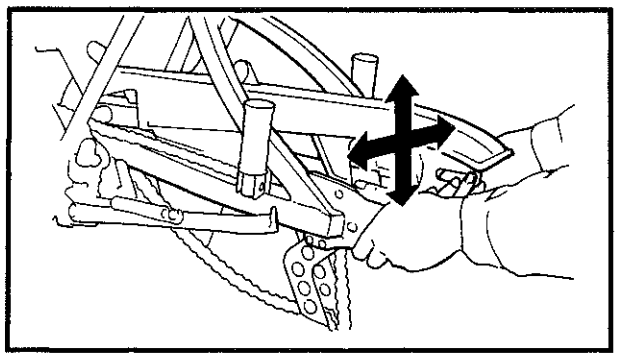




REMOVAL
1.Place a suitable stand under the engine.
2.Remove:
- Rear wheel
- Fuel tank



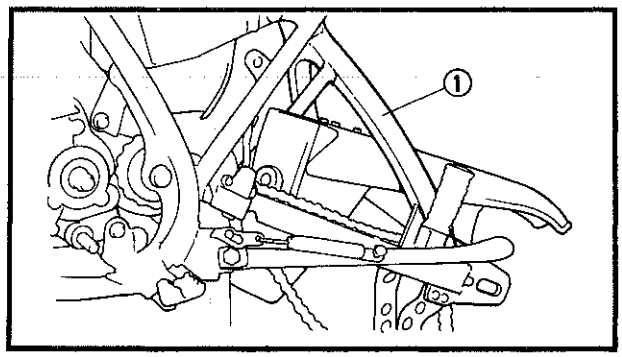
3.Remove:
- Rear shock absorber①



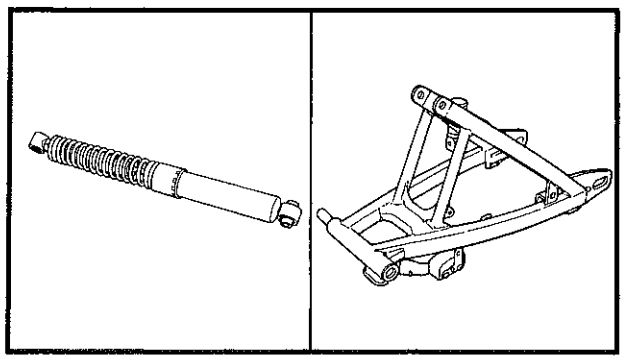
4.Check:
- Swingarm

With the swingarm installed grasp the swingarm end to check for free play.

Free play limit:
End: 1.0 mm (0.04 in)
Side: 1.0 mm (0.04 in)



5.Remove:
- Swingarm ①

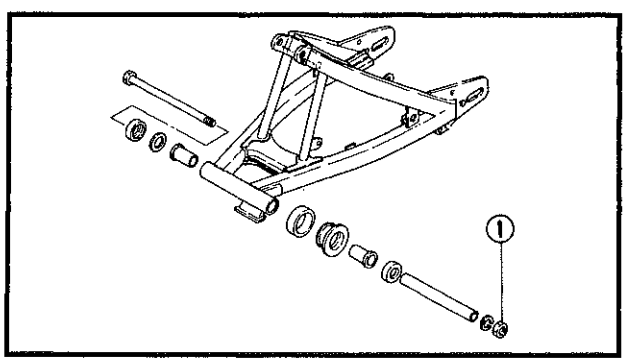


INSPECTION

1.Inspect:
- Rear shock absorber
  Oil leaks/Damage → Replace.

2.Inspect:
- Swingarm
  Crack/Bents/Damage → Replace.

NOTE:
When replacing the swingarm, remove the drive chain by cutting it.



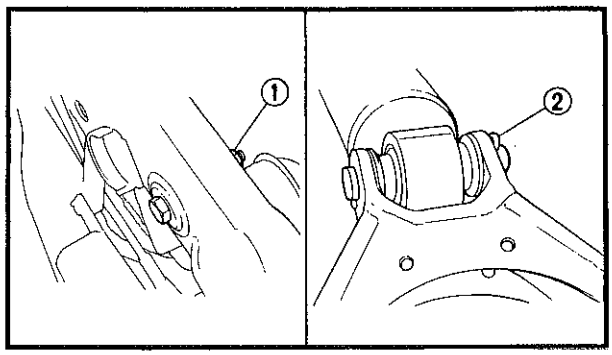
INSTALLATION

Reverse removal steps.

1.Grease the bushes and pivot shaft.

2.Install:
- Swingarm

Pivot shaft nut ①:
53 Nm (5.3 m • kg, 38 ft • lb)



3.Install:
- Rear shock absorber

	Nut ①: **32 Nm (3.2 m • kg, 23 ft • lb)**

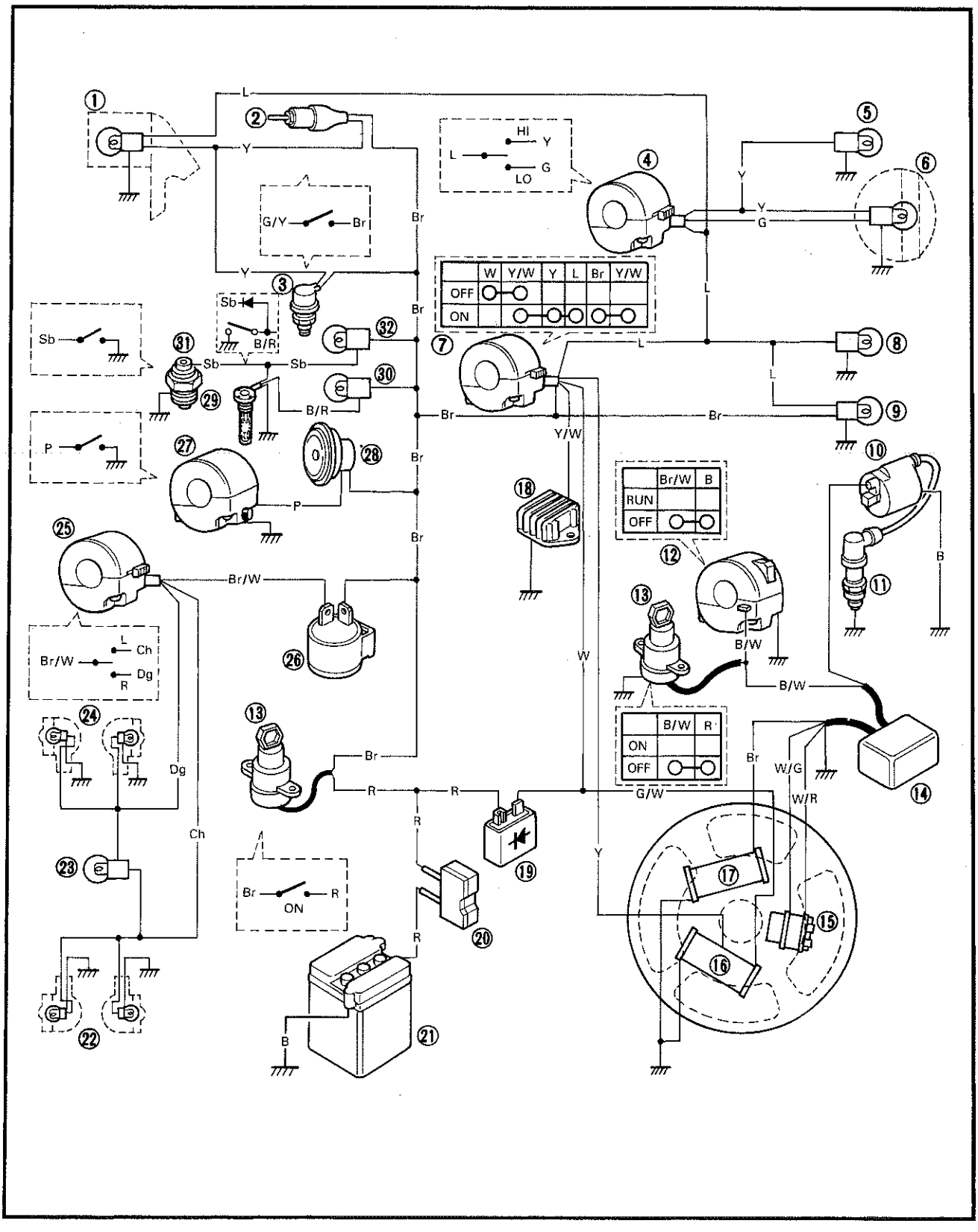
⚠ WARNING

Always use a new cotter pin ②.

ELECTRICAL

CIRCUIT DIAGRAM

Additional electrical accessories may overload the existing electrical system. Severe overloads may damage the wiring harness or create a dangerous situation due to the loss of electrical power during the operation of the motorcycle.

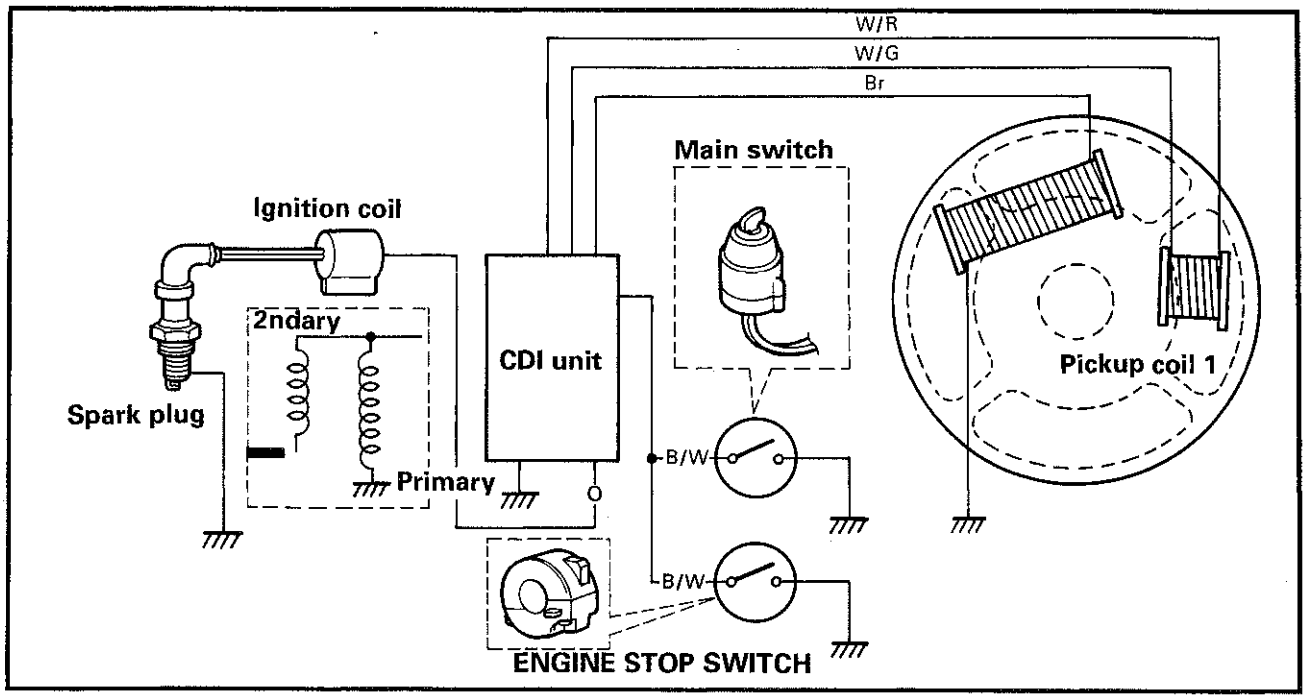


① Tail/brake light
② Front brake switch
③ Rear brake switch
④ "LIGHTS" (dimmer) switch
⑤ "HIGH BEAM" indicator light
⑥ Head light
⑦ "LIGHTS" switch
⑧ Tachometer light
⑨ Speedometer light
⑩ Ignition coil
⑪ Spark plug
⑫ "ENGINE STOP" switch
⑬ Main switch
⑭ C.D.I. unit
⑮ Pick up coil
⑯ Charging coil
⑰ Source coil
⑱ Regulator
⑲ Rectifier
⑳ Circuit breaker
㉑ Battery
㉒ Flasher light (left)
㉓ "TURN" indicator light
㉔ Flasher light (right)
㉕ "TURN" switch
㉖ Flasher relay
㉗ "HORN" switch
㉘ HORN
㉙ Oil level switch
㉚ "OIL LEVEL" indicator light
㉛ Neutral switch
㉜ "NEUTRAL" indicator light

COLOR CODE

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

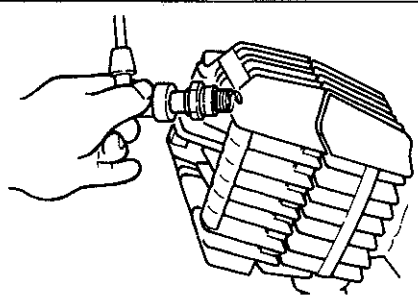
IGNITION SYSTEM



TROUBLESHOOTING CHART

All wires connection must be checked in advance.

1	Spark plug

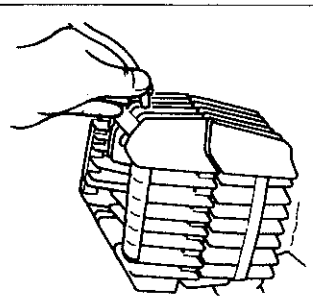


Ground the spark plug to the cylinder head and kick the starter.

No spark ⇓ ⇩ Spark

Check ignition timing.

2	Spark gap test

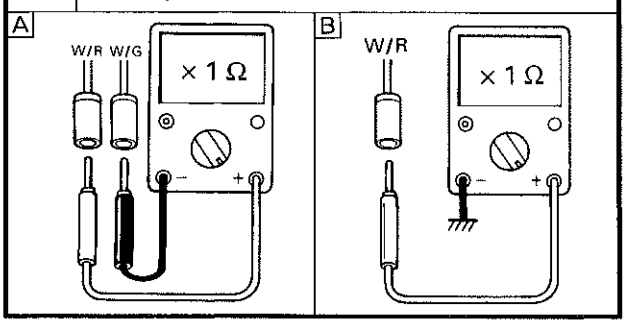


Hold the ignition lead 1 mm from the cylinder head and kick the starter.

No spark ⇓ ⇩ Spark

Check the plug cap.

3	Pickup coil check



Pickup coil resistance:
A 9 ~ 11 Ω at 20°C (White/Red – White/Green)
B 10 ~ 13 Ω at 20°C (White/Red – Ground)

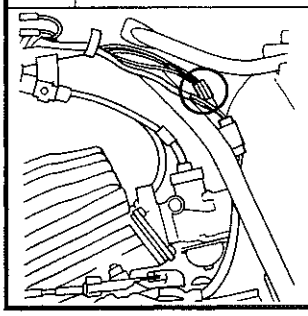
A DT125 B DT175

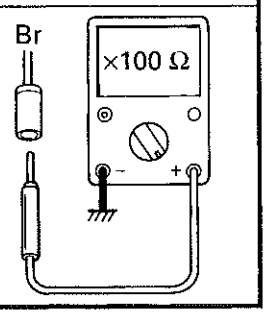
Check the pickup coil resistance.

OK ⇩ ⇓ NG

Replace the pickup coil.

4	Source coil check





Source coil resistance:
DT125: 153 ~ 187 Ω at 20°C
(Brown – Ground)
DT175: 570 ~ 697 Ω at 20°C
(Brown – Ground)

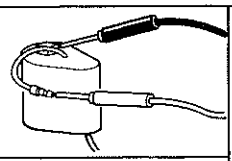
Check the source coil resistance.

OK ⇩ ⬇ NG

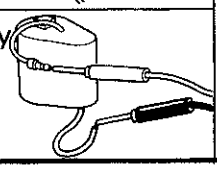
Replace the source coil.

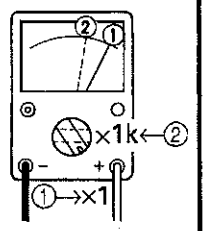
5	Ignition coil test

① Primary



② Secondary





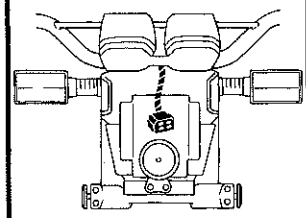
Primary winding resistance:
0.74 ~ 1.0 Ω at 20°C
Secondary wiring resistance:
5.4 ~ 7.4 kΩ at 20°C

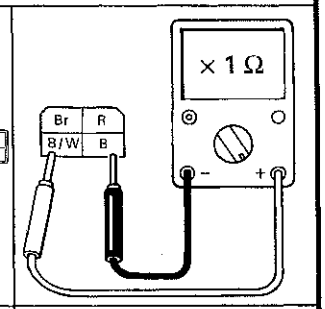
Check the resistance of the primary and secondary coil windings.

OK ⇩ ⬇ NG

Replace the ignition coil.

6	Main switch test



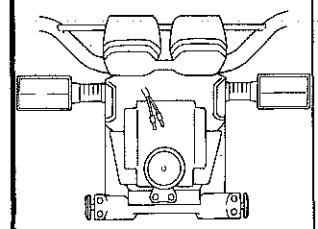


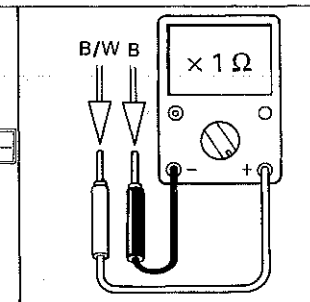
ON	∞
OFF	0 Ω

OK ⇩ ⬇ NG

Replace or repair the main switch.

7	Engine stop switch test





ON	∞
OFF	0 Ω

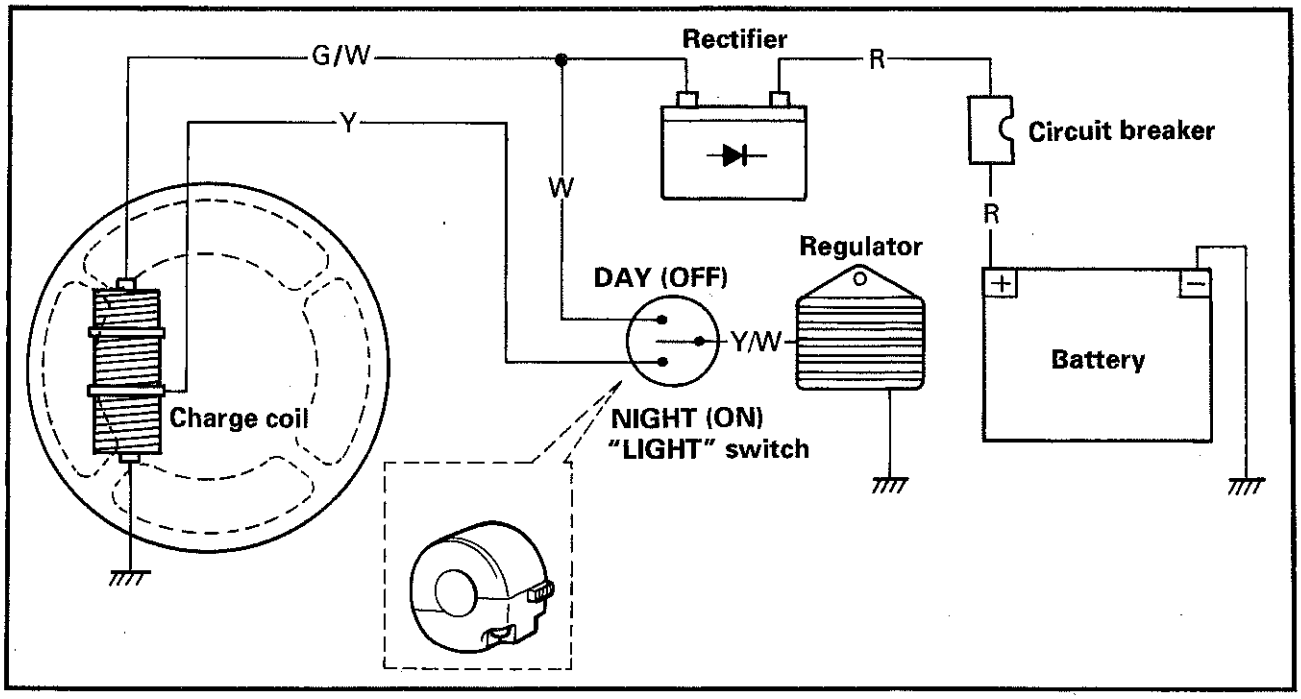
OK ⇩ ⬇ NG

Replace the C.D.I. unit.

Replace or repair the handlebar switch (right).

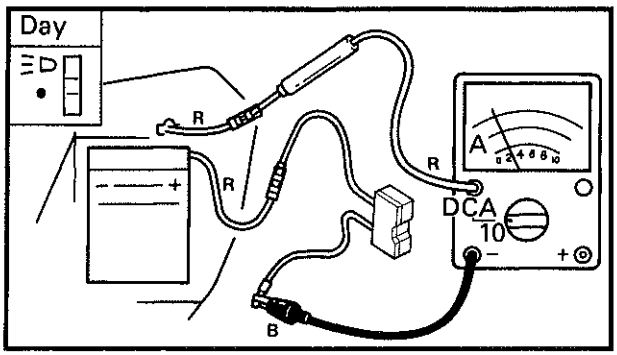
7

CHARGING SYSTEM



1.Charging amperage test

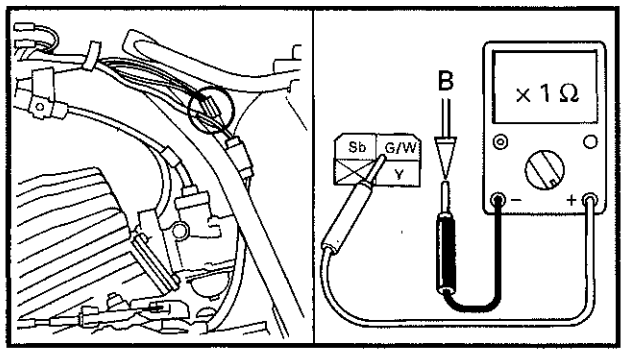
Disconnect the fuse lead and connect the tester leads as shown. Start the engine, and check amperage.



Charging amperage:	
DT125:	
DAY	**1.3A at 2,500 r/min**
	1.5A at 8,000 r/min
NIGHT	**0.9A at 3,000 r/min**
	2.0A at 8,000 r/min
DT175:	
DAY	**1.1A at 2,500 r/min**
	2.5A at 8,000 r/min
NIGHT	**1.1A at 3,000 r/min**
	2.5A at 8,000 r/min

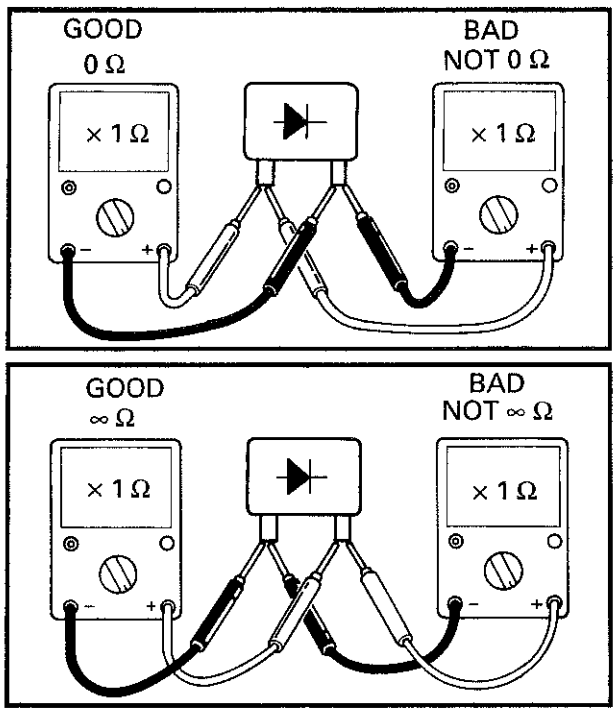
If out of specifications, check charging/ lighting coil windings resistance and/or rectifier.

2.Charging coil resistance



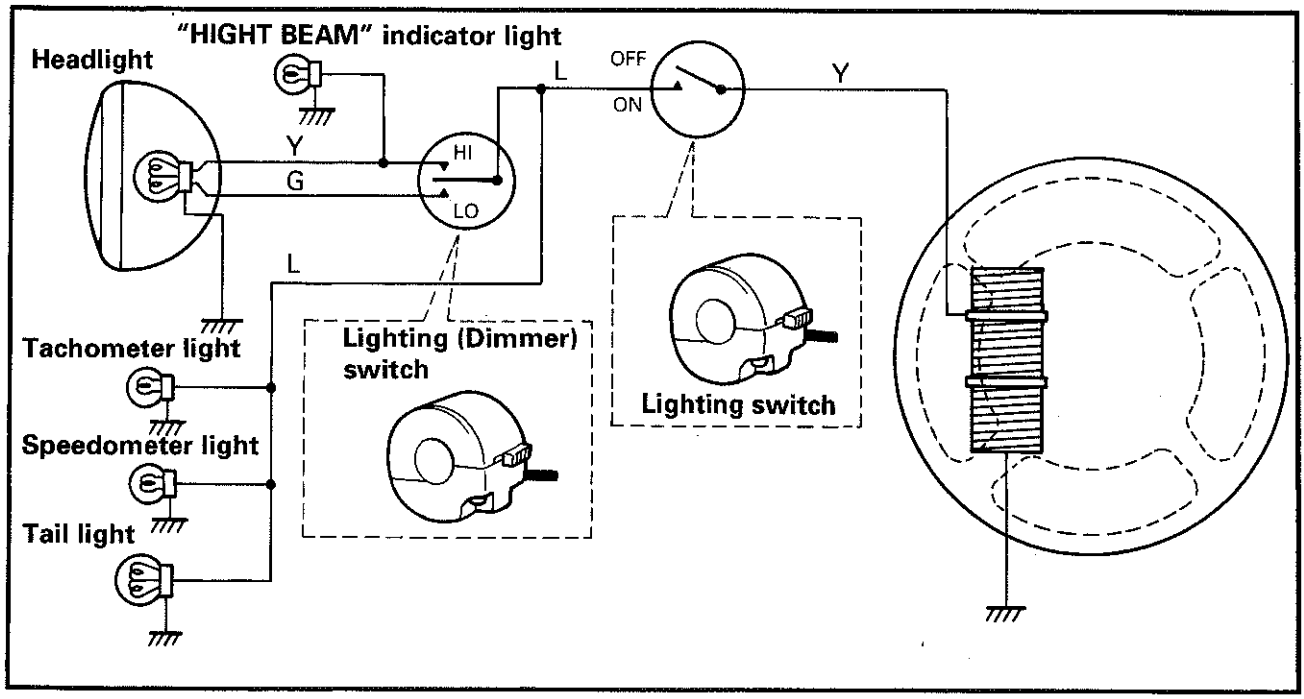
Charging coil resistance:
(Green/White – Black)
DT125: 0.23 ~ 0.29 Ω at 20°C
DT175: 0.22 ~ 0.26 Ω at 20°C

3.Rectifier test



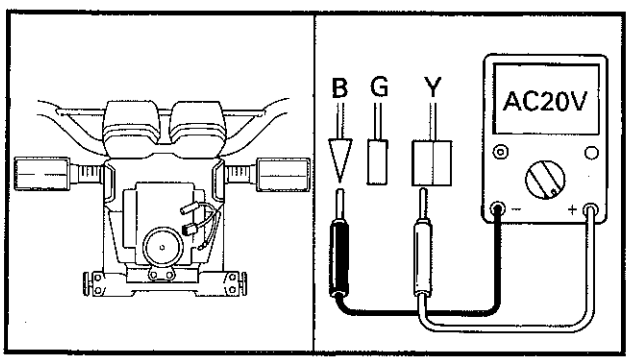
If defective, replace rectifier.

LIGHTING SYSTEM



1.Lighting voltage test

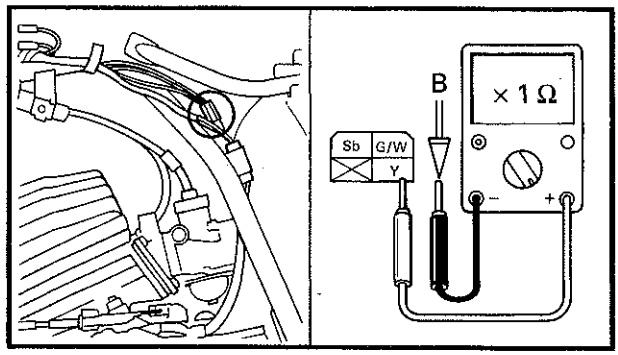
Remove the headlight leads and connect the tester leads as shown. Start the engine. Turn the "LIGHTS" switch to "ON" and "LIGHT" (Dimmer) switch to "HI" position. Check the voltage.



Lighting voltage:
(Yellow – Black)
6V

If out of specifications, check lighting coil resistance.

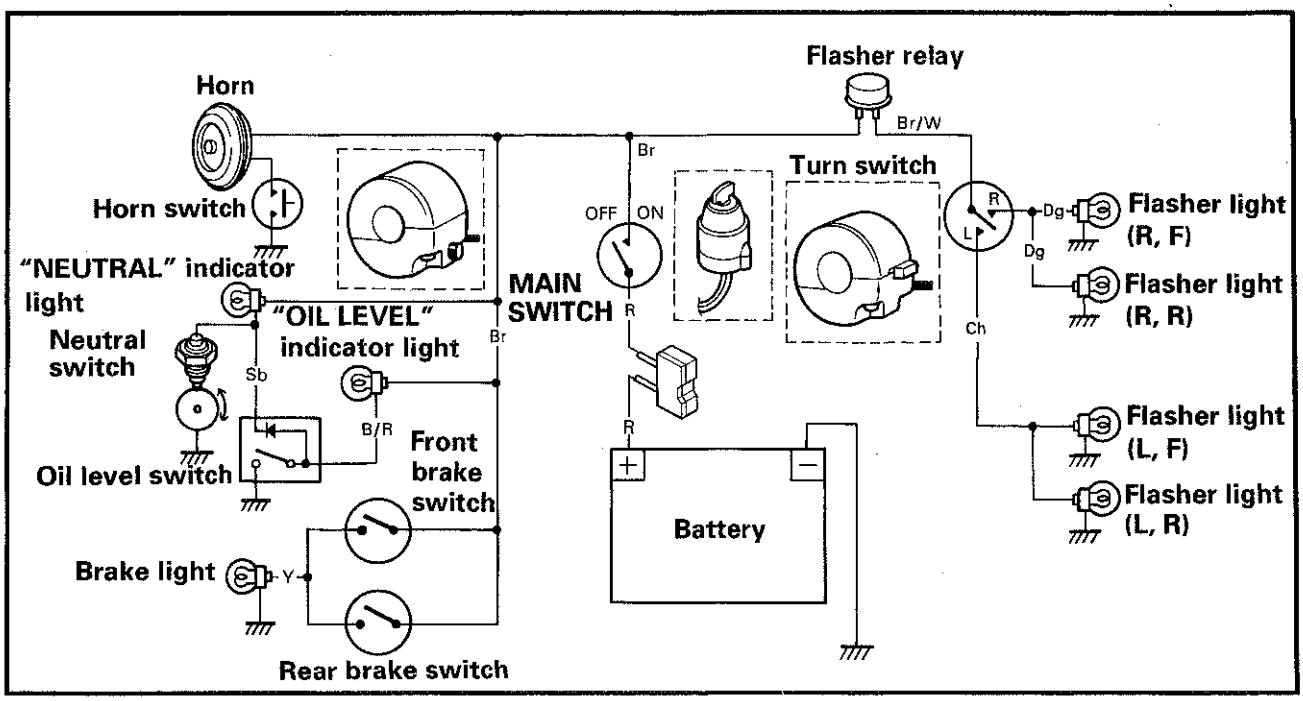
2.Lighting coil resistance



Lighting coil resistance:
(Yellow – Black)
DT125: 0.15 ~ 0.19 Ω at 20°
DT175: 0.11 ~ 0.13 Ω at 20°

7

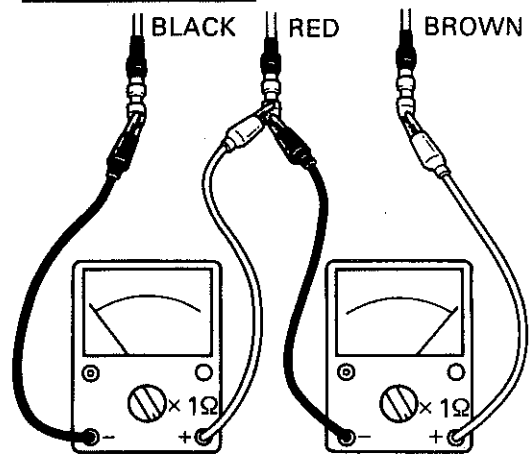
SIGNAL SYSTEM



SWITCH INSPECTION

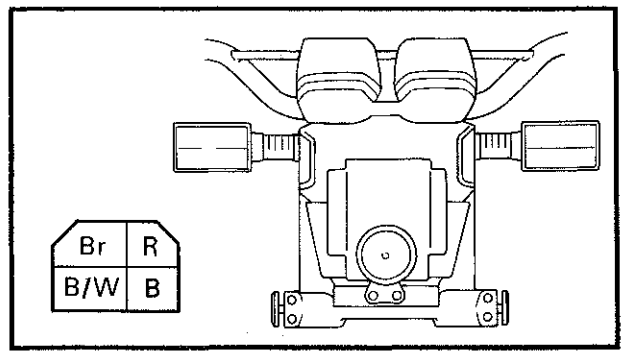
<Examples for leads continuity test>

B	R	Br
	○	○



Main switch

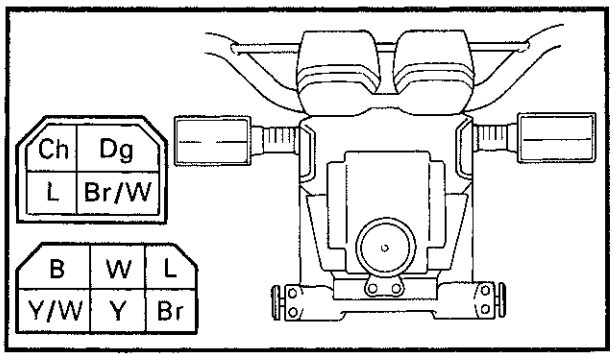
	B	B/W	R	Br
LOCK ⊘	○	○		
OFF ⊗	○	○		
ON ⊕			○	○



7

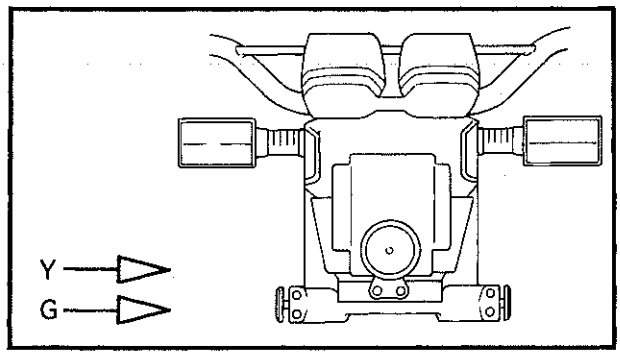
"LIGHTS" switch

	W	Y/W	Y	L	Br	Y/W
OFF	○	○				
ON ≡D		○	○	○	○	○



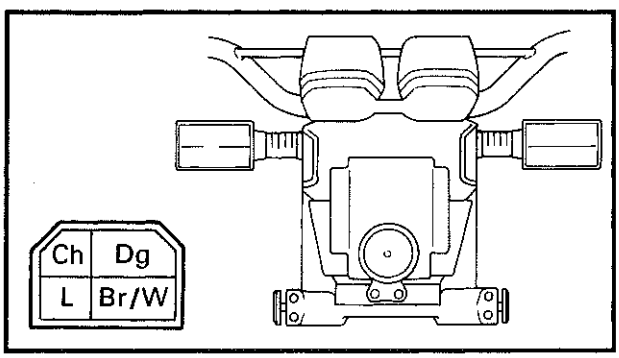
"LIGHTS" (Dimmer) switch

	Y	L	G
HI	○	○	
LO		○	○



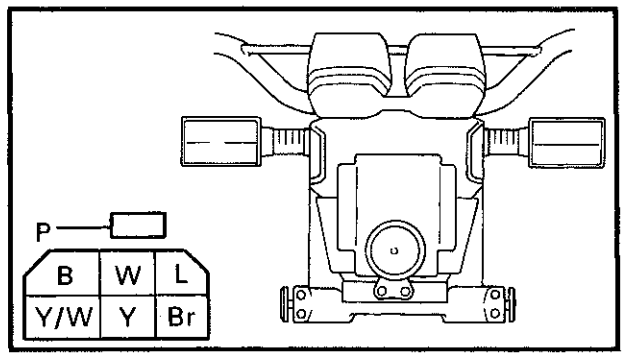
"TURN" switch

	Dg	Br/W	Ch
R	○	○	
N			
L		○	○



"HORN" switch

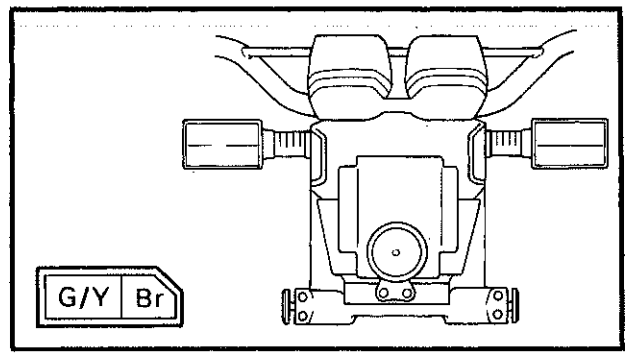
	P	B
■		
▯	○	○



Brake switch

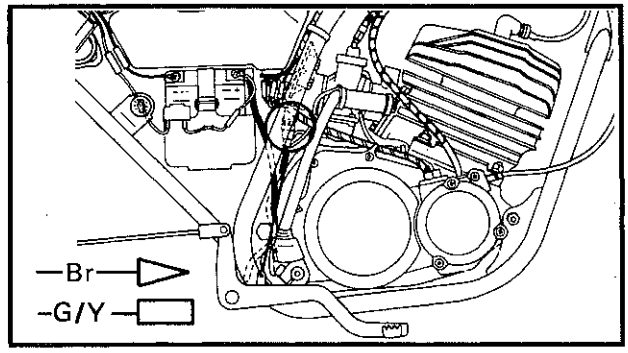
Front

	G/Y	Br
	○	○



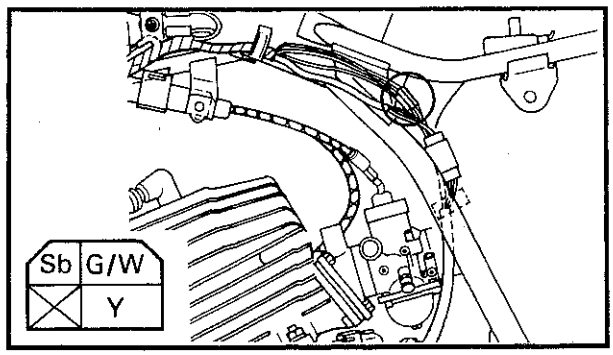
Rear

	Br	G/Y
	○	○



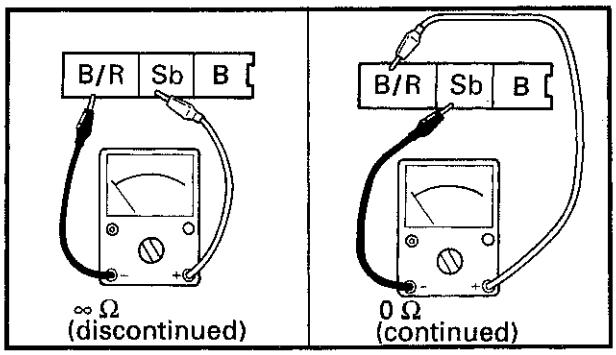
Neutral switch

	Sb	B
OFF		
ON	○	○



Oil level switch

	B/R	B
	○	○
		



If not correct, replace the oil level switch.

7

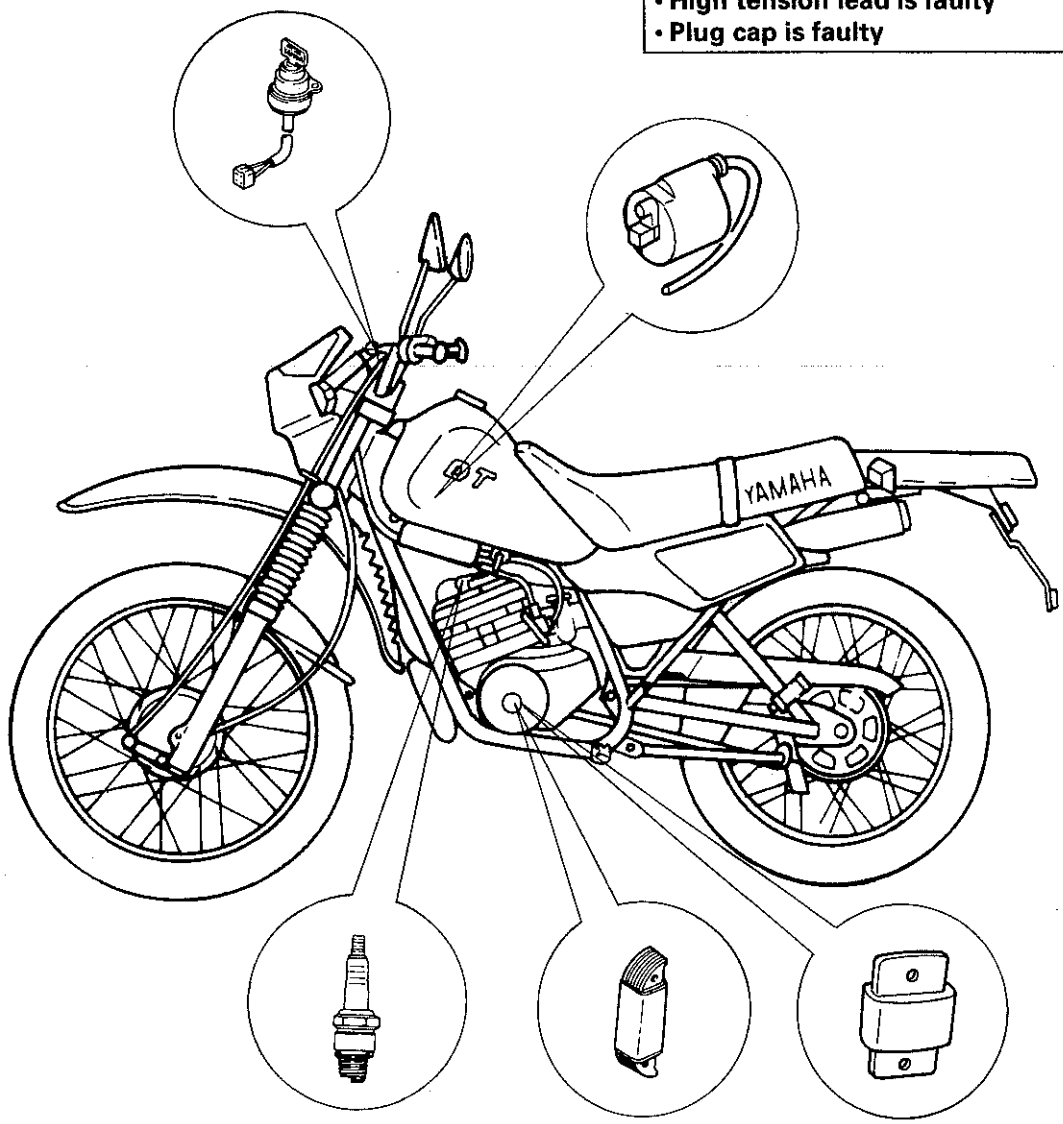
TROUBLESHOOTING

ELECTRICAL SYSTEM

*CHECK ALL WIRES CONNECTIONS

MAIN SWITCH (see page 7-8)
- Main switch is shorted

IGNITION COIL (see page 7-4)
- Primary or secondary windings are broken or faulty
- High tension lead is faulty
- Plug cap is faulty



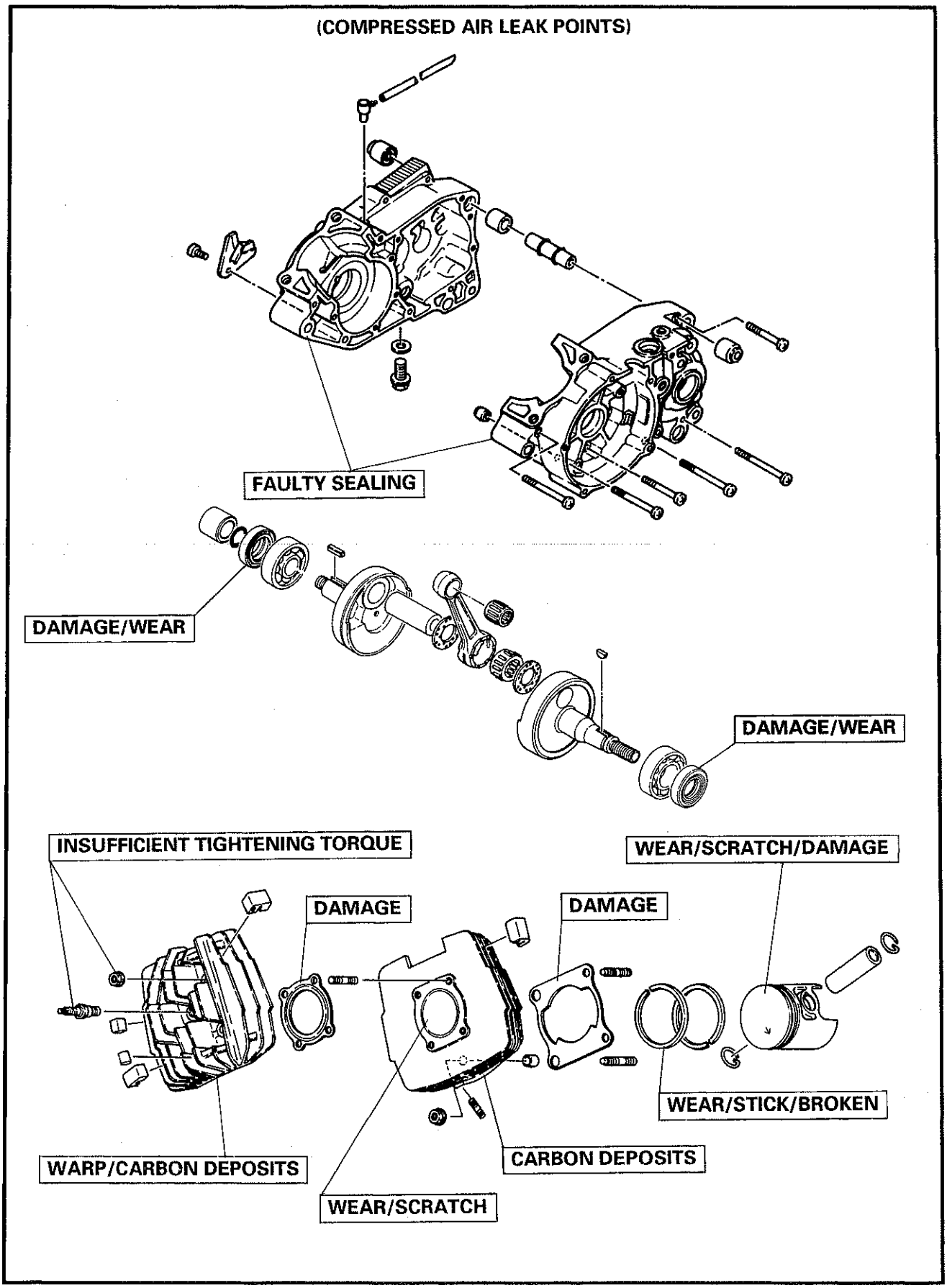
SPARK PLUG
- Many carbon deposits
- Electrodes are wet
- Improper gap
- Broken

SOURCE COIL (see page 7-4)
- Windings are broken

PICKUP COIL (see page 7-3)
- Windings are broken

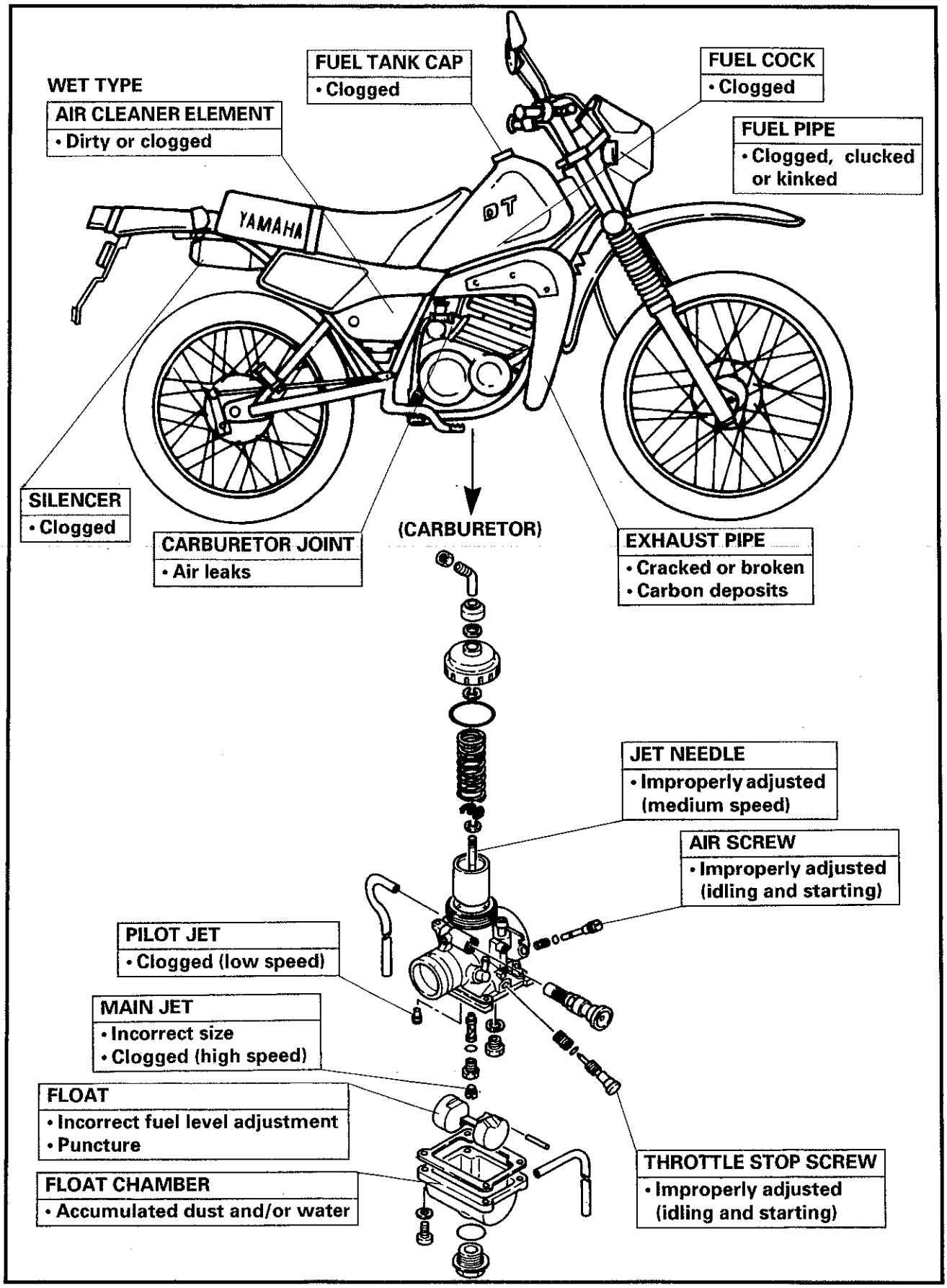
8

COMPRESSION SYSTEM



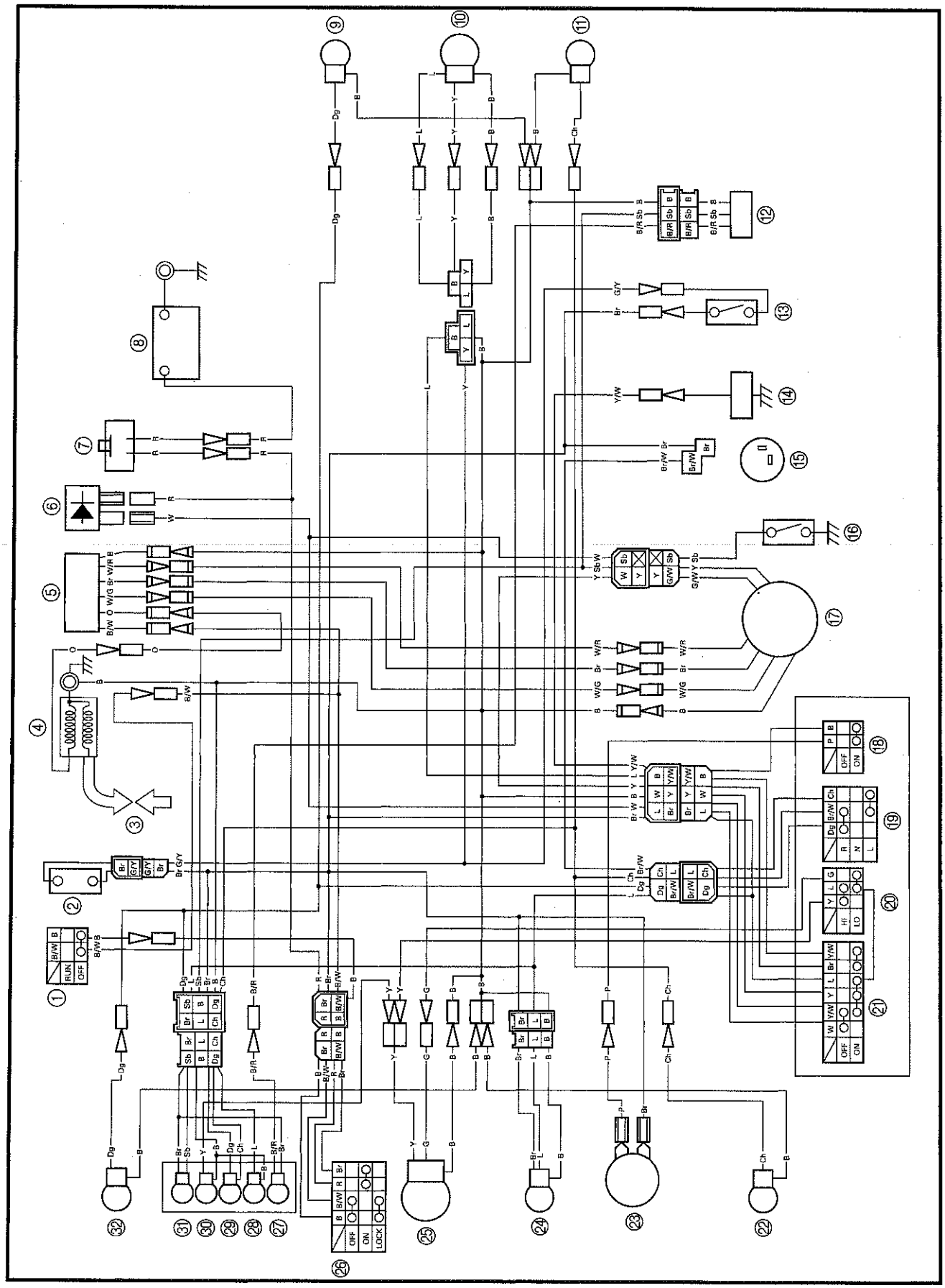
8

INTAKE AND EXHAUST SYSTEMS



8

WIRING DIAGRAM



① "ENGINE STOP" switch
② Front brake switch
③ Spark plug
④ Ignition coil
⑤ C.D.I. unit
⑥ Rectifier
⑦ Circuit breaker
⑧ Battery
⑨ Rear flasher light (R)
⑩ Tail/brake light
⑪ Rear flasher light (L)
⑫ Oil level switch
⑬ Rear brake switch
⑭ Regulator
⑮ Flasher relay
⑯ Neutral switch
⑰ C.D.I. magneto
⑱ "HORN" switch
⑲ "TURN" switch
⑳ "LIGHT" (dimmer) switch
㉑ "LIGHT" switch
㉒ Front flasher light (L)
㉓ Horn
㉔ Speedometer light
㉕ Head light
㉖ Main switch
㉗ "OIL LEVEL" indicator light
㉘ Tachometer light
㉙ "TURN" indicator light
㉚ "HIGH BEAM" indicator light
㉛ "NEUTRAL" indicator light
㉜ Front flasher light (R)

COLOR CODE

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

8

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PRINTED IN JAPAN
94 • 3 - 0.5 × 1 CR
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