

**YFM200N/DXS/DXT/U
SERVICE MANUAL**

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Switches

Switches may be checked for continuity with a pocket tester on the ohm $\times 1$ scale.

1. Main switch

Switch position	Wire color			
	B/W	B	R	Br
OFF	○ — ○			
ON			○ — ○	

2. Engine stop switch

Switch position	Wire color	
	B/W	B
RUN		
OFF	○ — ○	○ — ○

3. Starter switch

Switch position	Wire color	
	Br	R/W
OFF		
PUSH (ON)	○ — ○	○ — ○

4. Lights (dimmer) switch

Switch position	Wire color			
	Y/R	L	G	Y
OFF				
LO	○ — ○ — ○			
HI	○ — ○			○ — ○

Battery

If the battery shows the following defects, it should be replaced:

1. The battery voltage will not rise to a specific value nor will bubbles rise in any cell, even after many hours of charging.
2. Sulfation of one or more cells is indicated by the plates turning white or an accumulation of material is in the bottom of the cell.
3. Specific gravity readings after a long, slow charge indicate one cell to be lower than any of the others.
4. Warpage or buckling of plates or insulators is evident.

WARNING:

Battery fluid is poisonous and dangerous, causing severe burns, etc. It contains sulfuric acid. Avoid contact with the skin, eyes, or clothing.

Antidote: EXTERNAL — Flush with water. INTERNAL — Drink large quantities of water or milk. Follow with milk of magnesia, beaten eggs, or vegetable oil. Call physician immediately.

Eyes: Flush with water for 15 minutes, and get prompt medical attention. Batteries produce explosive gases. Keep sparks, flame, cigarettes, etc. away. Ventilate when charging or using in an enclosed space. Always shield your eyes when working near batteries.

KEEP OUT OF REACH OF CHILDREN.

The service life of a battery is usually two to three years. Lack of care, as described below, will shorten the life of the battery:

- Negligence in keeping battery topped off with distilled water
- Battery left discharged
- Over-charging with heavy charge
- Freezing
- Filling with tap water or sulfuric acid containing impurities
- Improper charging voltage or current on new battery

If the motorcycle is not to be used for a long time, remove the battery and have it stored. The following instructions should be observed:

1. Recharge the battery periodically.
2. Store the battery in a cool, dry place.
3. Recharge the battery before reinstallation.

Battery	GM14AZ-4A
Electrolyte	Specific gravity: 1.280
Initial charging current	1.4 amp for 10 hours (new battery)
Recharging current	10 hours (or until specific gravity reaches 1.280)
Refill fluid	Distilled water (to maximum level line)
Refill period	Check once per month (or more often, as required)

CHAPTER 7. APPENDICES

SPECIFICATIONS	7-1
GENERAL TORQUE SPECIFICATIONS	7-13
DEFINITION OF UNITS	7-13
CONVERSION TABLES	7-14
EXPLODED DIAGRAMS	7-15
Cylinder Head	7-15
Valve/Cam Chain	7-16
Crankshaft Assembly/Piston/Balancer Shaft	7-17
Transmission	7-18
Crankcase	7-19
Crankcase Spacer/Crankcase Covers	7-20
Clutch	7-21
Shift Shaft/Change Pedal	7-22
Middle Gear	7-23
Steering	7-24
Front Wheel	7-25
Rear Wheel	7-26
Final Gear	7-27
Electrical Components	7-28
LUBRICATION DIAGRAMS	7-29
CABLE ROUTING	7-32
YFM200N WIRING DIAGRAM	7-37

CHAPTER 7. APPENDICES

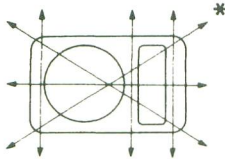
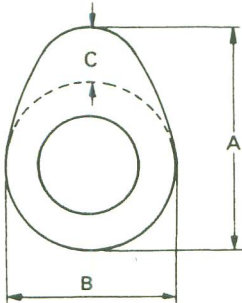
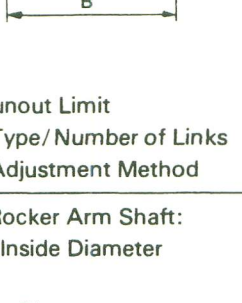
SPECIFICATIONS

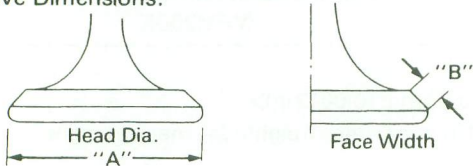
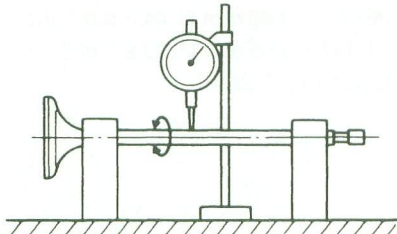
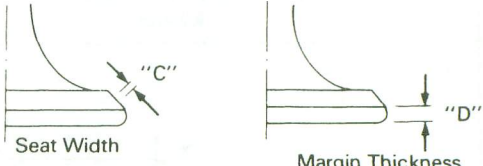
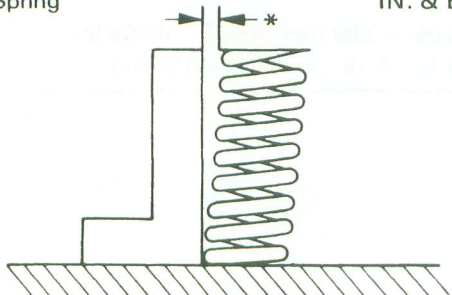
I. GENERAL SPECIFICATIONS

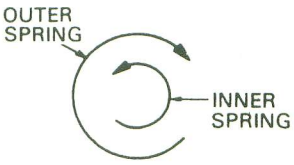
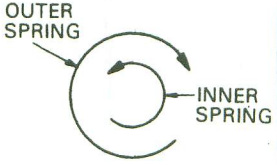
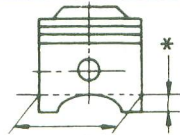
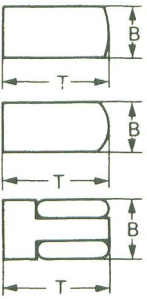
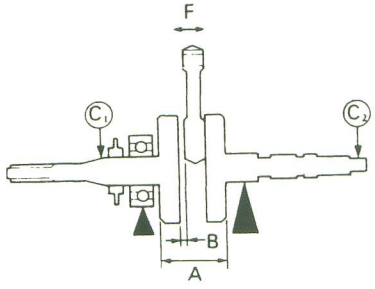
Model	YFM200N
Model Code Number	52H
Engine Starting Number	JY452H00 * FC000101
Engine Starting Number	52H-000101
Dimensions:	
Overall Length	1,850 mm (72.8 in)
Overall Width	995 mm (39.2 in)
Overall Height	985 mm (38.8 in)
Seat Height	695 mm (27.4 in)
Wheelbase	1,125 mm (44.3 in)
Minimum Ground Clearance	120 mm (4.7 in)
Basic Weight:	
With Oil and Full Fuel Tank	169 kg (373 lb)
Minimum Turning Radius:	2,300 mm (90.6 in)
Engine:	
Engine Type	4-stroke, gasoline, SOHC
Cylinder Arrangement	Single cylinder, Forward inclined
Displacement	196.3 cm ³
Bore × Stroke	67.0 × 55.7 mm (2.6 × 2.2 in)
Compression Ratio	8.5 : 1
Compression Pressure	883 kPa (9 kg/cm ² , 128 psi)
Starting System	Recoil starter and Electric starter
Lubrication System:	Wet sump
Oil Type or Grade:	
Engine oil	Yamalube 4-cycle oil or SAE 10W40 type SE motor oil
Final Gear Oil	SAE 80 API GL-4 Hypoid gear oil
Oil Capacity:	
Engine Oil	
Periodic Oil Change	1.5 L (1.3 Imp qt, 1.6 US qt)
Total Amount	1.8 L (1.6 Imp qt, 1.9 US qt)
Final Gear Case Oil	0.13 L (0.11 Imp qt, 0.14 US qt)
Air Filter	Wet type element
Fuel:	
Type	Regular gasoline
Tank Capacity	9.5 L (2.1 Imp gal, 2.5 US gal)
Reserve Amount	1.9 L (0.4 Imp gal, 0.5 US gal)
Carburetor:	
Type/Manufacturer	VM22SH/MIKUNI
Spark Plug:	
Type/Manufacturer	D7EA (NGK), X22ES-U (NIPPONDENSO)
Gap	0.6 ~ 0.7 mm (0.024 ~ 0.028 in)
Clutch Type:	Wet, multiple-disc, Centrifugal automatic

II. MAINTENANCE SPECIFICATIONS

A. Engine

Model	YFM200N
Cylinder Head: Warp Limit 	$<0.03 \text{ mm (0.0012 in)}>$ *Lines indicate straightedge measurement.
Cylinder: Bore Size Taper Limit Out-of-round Limit	$67^{+0.020}_{-0.030} \text{ mm (2.64}^{+0.0008}_{-0.0012} \text{ in)}$ $<0.05 \text{ mm (0.002 in)}>$ $<0.01 \text{ mm (0.0004 in)}>$
Camshaft: Drive Method Camshaft Bearing (Cylinder) Camshaft Outside Diameter Shaft-to-cap Clearance Cam Dimensions Intake  Exhaust  Camshaft Runout Limit Cam Chain Type/ Number of Links Cam Chain Adjustment Method	Chain Left $25^{+0.021}_{-0.020} \text{ mm (0.98}^{+0.0008}_{-0.0008} \text{ in)}$, $20^{+0.021}_{-0.020} \text{ mm (0.79}^{+0.0008}_{-0.0008} \text{ in)}$ $25^{+0.021}_{-0.020} \text{ mm (0.98}^{+0.0008}_{-0.0008} \text{ in)}$, $20^{+0.021}_{-0.020} \text{ mm (0.79}^{+0.0008}_{-0.0008} \text{ in)}$ $0.020 \sim 0.061 \text{ mm (0.0008} \sim 0.0024 \text{ in)}$ $36.587 \pm 0.05 \text{ mm (1.44} \pm 0.002 \text{ in)}$ $31.181 \pm 0.05 \text{ mm (1.23} \pm 0.002 \text{ in)}$ $6.587 \text{ mm (0.26 in)}$ $36.627 \pm 0.05 \text{ mm (1.44} \pm 0.002 \text{ in)}$ $30.264 \pm 0.05 \text{ mm (1.19} \pm 0.002 \text{ in)}$ $6.627 \text{ mm (0.26 in)}$ $<0.03 \text{ mm (0.0012 in)}>$ DID25SH/ 104 Links Manual
Rocker Arm/ Rocker Arm Shaft: Rocker Arm Inside Diameter $<\text{Limit}>$ Shaft Outside Diameter $<\text{Limit}>$ Arm-to-shaft Clearance	$12^{+0.018}_{-0.015} \text{ mm (0.47}^{+0.0007}_{-0.0006} \text{ in)}$ $<12.03 \text{ mm (0.474 in)}>$ $12^{+0.018}_{-0.015} \text{ mm (0.47}^{+0.0007}_{-0.0006} \text{ in)}$ $<11.94 \text{ mm (0.470 in)}>$ $0.009 \sim 0.037 \text{ mm (0.0004} \sim 0.0016 \text{ in)}$
Valve, Valve Seat, Valve Guide: Valve Clearance (Cold) IN. EX.	 $0.05 \sim 0.09 \text{ mm (0.002} \sim 0.004 \text{ in)}$ $0.11 \sim 0.15 \text{ mm (0.004} \sim 0.006 \text{ in)}$

Model	YFM200N
<p>Valve Dimensions:</p>  <p>"A" Head Dia. IN. EX.</p> <p>"B" Face Width IN. EX.</p> <p>"C" Seat Limit Width IN. EX.</p> <p>"D" Margin Thickness Limit IN. EX.</p> <p>Stem Outside Diameter IN. EX.</p> <p>Guide Inside Diameter IN. EX.</p> <p>Stem-to-guide Clearance IN. EX.</p> <p>Stem Runout Limit</p>  <p>Valve Seat Width Standard</p>	 <p>$34 \pm 0.1 \text{ mm (1.34} \pm 0.004 \text{ in)}$</p> <p>$28.5 \pm 0.1 \text{ mm (1.12} \pm 0.004 \text{ in)}$</p> <p>$2.26 \text{ mm (0.09 in)}$</p> <p>$2.26 \text{ mm (0.09 in)}$</p> <p>$1.0 \pm 0.1 \text{ mm (0.04} \pm 0.004 \text{ in)}$</p> <p>$1.0 \pm 0.1 \text{ mm (0.04} \pm 0.004 \text{ in)}$</p> <p>$1 \pm 0.2 \text{ mm (0.04} \pm 0.008 \text{ in)}$</p> <p>$1 \pm 0.2 \text{ mm (0.04} \pm 0.008 \text{ in)}$</p> <p>$6_{-0.025}^{-0.010} \text{ mm (0.24}_{-0.0010}^{-0.0004} \text{ in)}$</p> <p>$6_{-0.040}^{-0.025} \text{ mm (0.24}_{-0.0016}^{-0.0010} \text{ in)}$</p> <p>$6_{0}^{+0.012} \text{ mm (0.24}_{0}^{+0.0005} \text{ in)}$</p> <p>$6_{0}^{+0.012} \text{ mm (0.24}_{0}^{+0.0005} \text{ in)}$</p> <p>$0.010 \sim 0.037 \text{ mm (0.0004} \sim 0.0015 \text{ in)}$</p> <p>$0.025 \sim 0.052 \text{ mm (0.0010} \sim 0.0020 \text{ in)}$</p> <p>$1.0 \pm 0.1 \text{ mm (0.039} \pm 0.0039 \text{ in)}$</p>
<p>Valve Spring:</p> <p>Free Length</p> <p>Inner Spring IN. EX.</p> <p>Outer Spring IN. EX.</p> <p>Compressed Length (Valve Closed)</p> <p>Inner Spring IN. EX.</p> <p>Outer Spring IN. EX.</p>	<p>$35.5 \text{ mm (1.40 in)}$</p> <p>$35.5 \text{ mm (1.40 in)}$</p> <p>$37.2 \text{ mm (1.46 in)}$</p> <p>$37.2 \text{ mm (1.46 in)}$</p> <p>$30.5 \text{ mm (1.20 in)}$</p> <p>$30.5 \text{ mm (1.20 in)}$</p> <p>$32.0 \text{ mm (1.26 in)}$</p> <p>$32.0 \text{ mm (1.26 in)}$</p>
<p>Tilt Limit*:</p> <p>Inner Spring IN. & EX.</p> <p>Outer Spring IN. & EX.</p> 	<p>$2.5^\circ \text{ or } 1.6 \text{ mm (0.063 in)}$</p> <p>$2.5^\circ \text{ or } 1.6 \text{ mm (0.063 in)}$</p>

Model		YFM200N	
Direction of Winding (Top view)		IN	EX
			
Piston: Piston Size/ Measuring Point* Piston Clearance		 $67_{-0.065}^{+0.015}$ mm ($2.6_{-0.0026}^{+0.0006}$ in) / 7.5 mm (0.30 in) (From bottom line of piston skirt) 0.025 ~ 0.045 mm (0.0010 ~ 0.0018 in)	
Piston Ring: Sectional Sketch Top Ring 2nd Ring Oil Ring End Gap (Installed) Top Ring 2nd Ring Oil Ring <Limit> Top Ring 2nd Ring Side Clearance Top Ring 2nd Ring Oil Ring <Limit> Top Ring 2nd Ring Oil Ring		 Plain $B = 1.2_{-0.03}^{+0.01}$ mm ($0.05_{-0.0012}^{+0.0004}$ in) $T = 2.7 \pm 0.1$ mm (0.11 ± 0.004 in) Plain $B = 1.2_{-0.03}^{+0.01}$ mm ($0.05_{-0.0012}^{+0.0004}$ in) $T = 2.7 \pm 0.1$ mm (0.11 ± 0.004 in) $B = 2.5_{+0.01}^{+0.03}$ mm ($0.10_{+0.0004}^{+0.0012}$ in) $T = 2.8 \pm 0.1$ mm (0.11 ± 0.004 in) 0.15 ~ 0.35 mm (0.0059 ~ 0.0138 in) 0.15 ~ 0.35 mm (0.0059 ~ 0.0138 in) 0.3 ~ 0.9 mm (0.0118 ~ 0.0354 in) <0.75 mm (0.0295 in)> <0.75 mm (0.0295 in)> 0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in) 0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in) 0 mm (0 in) <0.1 mm (0.004 in)> <0.9 mm (0.035 in)> <— mm (— in)>	
Crankshaft:  Crank Width "A" Big End Side Clearance "B" Runout Limit "C1" "C2" Small End Free Play "F" <Limit>		$56_{-0.05}^{+0}$ mm ($2.20_{-0.002}^{+0}$ in) 0.35 ~ 0.65 mm (0.014 ~ 0.026 in) <0.02 mm (0.0008 in)> <0.06 mm (0.0024 in)> <2.0 mm (0.08 in)>	
Balancer Drive Method:		Gear	

Model	YFM200N
Primary Clutch: Shoe Thickness/ Quantity Wear Limit Secondary Clutch: Friction Plate Thickness/ Quantity Wear Limit Clutch Plate Thickness/ Quantiy Warp Limit Clutch Spring Free Length/ Quantity Clutch Release Method Clutch-In Revolution Clutch-Stall Revolution	2.0 mm (0.079 in)/3 1.5 mm (0.0591 in) 3.0 mm (0.12 in)/5 < 2.8 mm (0.11 in) > 1.6 mm (0.06 in)/4 < 0.2 mm (0.008 in) > 34.9 mm (1.37 in)/4 Outer push 1,850 ~ 2,150 r/min 2,900 ~ 3,300 r/min
Transmission: Main Axle Deflection Limit Drive Axe Deflection Limit	<0.08 mm (0.0031 in)> <0.08 mm (0.0031 in)>
Shifter: Shifter Type	Guide bar
Decompression Device Type	Manual
Air Filter Oil Grade (Oiled Filter)	Foam-air-filter oil or SAE 10W30 type SE motor oil
Carburetor: Type/ Manufacturer/ Quantity I.D. Mark Main Jet (M.J.) Main Air Jet (M.A.J.) Jet Needle-clip Position (J.N.) Needle Jet (N.J.) Cutaway (C.A.) Pilot Jet (P.J.) Pilot Air jet (P.A.J.) Pilot Screw (P.S.) Valve Seat (V.S.) Starter Jet (G.S.) Fuel Level (F.L.) Float Height (F.H.) Engine Idling Speed	VM22SH/MIKUNI/1 52H-00 # 115 ϕ 1.7 4DH1-3 N-6 # 4.0 # 27.5 # 130 1 ~ 2 (turns out) ϕ 1.8 # 85 3.0 ± 1.0 mm (0.12 ± 0.04 in) 21.5 ± 0.5 mm (0.85 ± 0.02 in) $1,400 \pm 50$ r/min
Lubrication System: Oil Filter Type Oil Pump Type Tip Clearance Side Clearance Bypass Valve Setting Pressure	Wire mesh Trochoid pump 0.15 mm (0.0059 in) 0.04 ~ 0.09 mm (0.0016 ~ 0.0035 in) 98 ± 19.6 kPa (1.0 ± 0.2 kg/cm ² , 14 ± 2.8 psi)
Middle Gear Lash: Middle driven gear & reverse gear (Actual Gear Lash on the Gear Teeth) (Forward) (Reverse) (When Using the Measurement Tool)	0.1 ~ 0.2 mm (0.004 ~ 0.008 in) 0.1 ~ 0.25 mm (0.004 ~ 0.010 in) 0.2 ~ 0.4 mm (0.008 ~ 0.016 in)
Middle driven shaft thrust clearance:	0.1 ~ 0.4 mm (0.004 ~ 0.016 in)
Final Gear Lash:	0.1 ~ 0.2 mm (0.004 ~ 0.008 in)

Tightening torque:		Size/Q'ty	Nm	m · kg	ft · lb	Remarks
Oil check bolt	Bolt	M6 × 1	7	0.7	5.1	Apply engine oil to the washers
Cylinder head	Bolt	M8 × 4	22	2.2	16.0	
Cylinder head	Bolt	M8 × 2	22	2.2	16.0	
Cam sprocket cover	Screw	M6 × 2	7	0.7	5.1	Use lock washer
Tappet cover	Bolt	M6 × 5	10	1.0	7.2	
Rocker arm shaft stopper	Bolt	M6 × 2	8	0.8	5.8	
Spark plug	—	M12 × 1	17.5	1.75	12.5	Use lock washer
Cylinder body	Bolt	M6 × 2	10	1.0	7.2	
Balancer shaft	Nut	M14 × 1	50	5.0	36.0	
Recoil starter pulley	Bolt	M10 × 1	50	5.0	36.0	Use lock washer
Valve adjuster lock	Nut	M6 × 2	14	1.4	10.0	
Sprocket cam	Bolt	M10 × 1	60	6.0	43.0	
Chain tensioner	Nut	M14 × 1	30	3.0	22.0	Use lock washer
Tensioner cap	Cap nut	M14 × 1	5	0.5	3.6	
Chain guide #2 stopper	Bolt	M6 × 2	8	0.8	5.8	
Oil pump assembly	Screw	M6 × 3	7	0.7	5.1	Use lock washer
Drain plug	Plug	M35 × 1	43	4.3	31.0	
Filter cover	Bolt	M6 × 2	10	1.0	7.2	
Filter cover drain	Bolt	M6 × 1	10	1.0	7.2	Use lock washer
Carburetor joint	Bolt	M6 × 2	12	1.2	8.7	
Carburetor	Nut	M6 × 2	8	0.8	5.8	
	Screw	M5 × 1	2	0.2	1.4	Use lock washer
Exhaust pipe flange	Bolt	M6 × 2	10	1.0	7.2	
Muffler assembly	Bolt	M8 × 2	27	2.7	19.0	
Exhaust pipe protector	Screw	M6 × 2	7	0.7	5.1	Apply LOCKTITE®
Exhaust outlet pipe	Screw	M6 × 1	10	1.0	7.2	
Crankcase	Screw	M6 × 12	7	0.7	5.1	
Crankcase spacer (L/H)	Screw	M6 × 8	7	0.7	5.1	Apply LOCTITE®
Bearing retainer (L/H)	Screw	M5 × 3	7	0.7	5.1	
Crankcase spacer (R/H)	Screw	M6 × 3	7	0.7	5.1	
Bearing retainer (R/H)	Screw	M6 × 3	10	1.0	7.2	Apply LOCTITE®
Clutch cover	Screw	M6 × 9	7	0.7	5.1	
Clutch cover protector	Screw	M6 × 3	7	0.7	5.1	
Recoil starter	Screw	M6 × 6	7	0.7	5.1	Use lock washer
Primary clutch	Nut	M22 × 1	78	7.8	56.0	
Clutch spring	Screw	M5 × 4	6	0.6	4.3	
Clutch boss	Nut	M14 × 1	50	5.0	36.0	Use lock washer
Cam shift segment	Screw	M6 × 1	12	1.2	8.7	
Clutch adjuster	Nut	M8 × 1	15	1.5	11.0	
Middle driven gear case cover	Bolt	M6 × 6	10	1.0	7.2	STAKE
Bearing retainer (Drive axle)	Screw	M8 × 3	25	2.5	18.0	
Bearing retainer (Housing)	—	M50 × 1.5	60	6.0	43.0	
	—	M55 × 1.5	60	6.0	43.0	Apply LOCTITE® Left-hand threads
Coupling gear	Nut	M28 × 1	60	6.0	43.0	
	Nut	M28 × 1	60	6.0	43.0	
Bearing housing	Bolt	M8 × 4	23	2.3	17.0	STAKE
	Nut	M8 × 4	23	2.3	17.0	
Starter clutch	Screw	M8 × 3	30	3.0	22.0	
Neutral switch	—	M10 × 1	20	2.0	14.0	Left-hand thread
Reverse switch	—	M12 × 1	4	0.4	2.9	
Starter motor bracket	Screw	M6 × 4	7	0.7	5.1	
Final gear housing & Frame	Bolt	M10 × 2	45	4.5	32.0	Left-hand thread
Bearing retainer (Final gear)	—	M63 × 1	100	10.0		

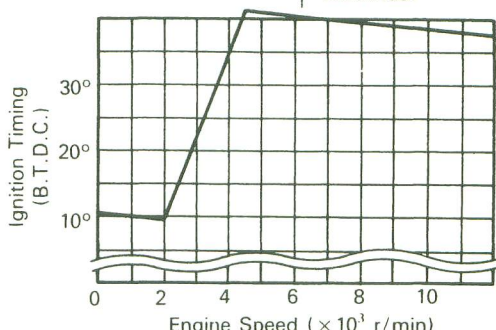
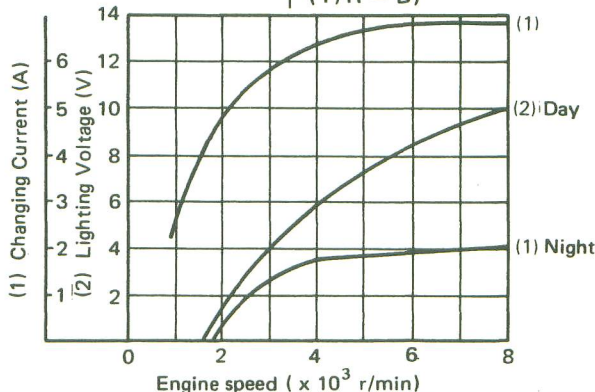
Tightening torque:		Size/Q'ty	Nm	m•kg	ft•lb	Remarks
Rear wheel hub & Final gear housing	Bolt	M8 x 6	23	2.3	17.0	APPLY YAMABOND #4
Rear wheel hub & Final gear housing	Bolt	M10 x 2	23	2.3	17.0	
Shift rod (Joint)	Bolt	M6 x 1	10	1.0	7.2	
CDI magneto base	Screw	M6 x 3	7	0.7	5.1	
Drive select lever	Bolt	M8 x 2	7	0.7	5.1	
	Bolt	M14 x 1	15	1.5	11.0	
Select lever rod	Nut	M8 x 2	15	1.5	11.0	

B. Chassis

Model		YFM200N
Wheel:		
Front Wheel Type		Disc Wheel
Rear Wheel Type		Disc Wheel
Front Rim Size/ Material		6 x 10/Steel
Rear Rim Size/ Material		8.25 x 8/Steel
Rim Runout Limit	Vertical	< 1.0 mm (0.04 in) >
	Lateral	< 1.0 mm (0.04 in) >
Drum Brake:		
Type	Front	Leading and trailing
Drum Inside Dia		110 mm (4.33 in) <111 mm (4.37 in)>
<Limit>		
Lining Thickness		4.0 mm (0.16 in) <2.0 mm (0.08 in)>
<Limit>		
Shoe Spring Free Length	Front	34.5 mm (1.36 in)
Disc Brake:		
Type	Rear	Single disc
Outside Dia x Thickness		224 x 4 mm (8.82 x 0.16 in)
Pad Thickness		
<Limit>	Inner	8.0 mm (0.31 in) <1.5 mm (0.06 in)>
	Outer	8.0 mm (0.31 in) <1.5 mm (0.06 in)>
Brake Lever & Brake Pedal:		
Brake Lever Free Play Limit		<10 mm (0.4 in)> at lever pivot
Brake Pedal Free Play Limit		<50 mm (2.0 in)>

Tightening torque:		Thread size	Q'ty	Nm	m·kg	ft·lb	Remarks
Front axle shaft	Nut	M14 x 1.5	2	85	8.5	61	Use lock washer
Front wheel	Nut	M8 x 1.25	8	28	2.8	20	
Rear wheel	Nut	M10 x 1.25	6	45	4.5	32	
Front brake cam lever	Bolt	M6 x 1.0	2	9	0.9	6.5	
Knuckle shaft	Bolt	M10 x 1.25	2	30	3.0	22	
Tie-rod end-Steering shaft	Nut	M10 x 1.25	2	45	4.5	32	
Tie-rod end-Knuckle	Nut	M10 x 1.25	2	40	4.0	29	
Tie-rod lock	Nut	M10 x 1.25	4	30	3.0	22	
Steering shaft	Nut	M10 x 1.25	1	30	3.0	22	
Steering shaft holder	Bolt	M8 x 1.25	2	23	2.3	17	
Handlebar lower holder	Nut	M10 x 1.25	2	30	3.0	22	
Handlebar upper holder	Bolt	M8 x 1.25	4	20	2.0	14	
Engine mounting (Upper)	Bolt	M8 x 1.25	3	33	3.3	24	
Engine mounting (Front)	Bolt	M8 x 1.25	1	33	3.3	24	
Engine mounting (Rear)	Bolt	M8 x 1.25	2	33	3.3	24	
Footrest	Bolt	M12 x 1.25	4	80	8.0	58	
Rear wheel hub	Bolt	M10 x 1.25	4	50	5.0	36	
Final gear-Housing stay	Bolt	M10 x 1.25	2	50	5.0	36	
Housing stay-Frame	Bolt	M10 x 1.25	2	50	5.0	36	
Rear axle	Nut	M14 x 1.5	2	100	10	72	
Brake caliper	Nut	M6 x 1.0	3	9	0.9	6.5	
Brake caliper-Wheel hub	Bolt	M10 x 1.25	2	50	5.0	36	
Caliper pad adjuster lock	Nut	M8 x 1.25	1	15	1.5	11	
Front bumper	Bolt	M8 x 1.25	4	23	2.3	17	
Rear bumper	Bolt	M8 x 1.25	2	23	2.3	17	
Fuel cock	Screw	M6 x 1.0	2	5	0.5	3.6	

C. Electrical

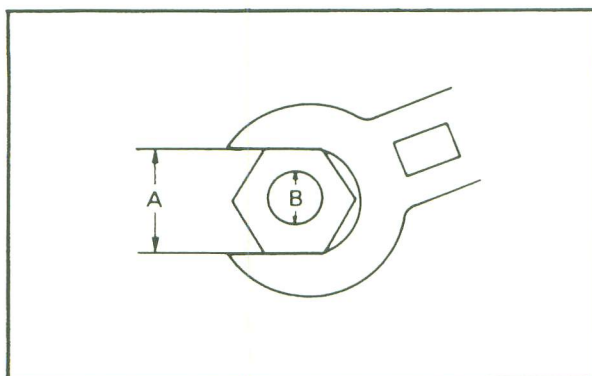
Model	YFM200N
Voltage	12V
Ignition System: Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.) Advancer Type	10° at 1,000 r/min 30° at 6,000 r/min Electrical 
C.D.I.: Magneto-Model/ Manufacturer Pickup Coil Resistance (Color) Charging Coil Resistance (Color) C.D.I. Unit-Model/ Manufacturer	F3T16471/MITSUBISHI 196Ω ± 10% at 20°C (68°F) (W/ R — W/ G) 381Ω ± 10% at 20°C (68°F) (Br — B) F8T07272/MITSUBISHI
Ignition Coil: Model/ Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance	F6T50972/MITSUBISHI 10 kV or more at 300 r/min 17 kV or less at 8,000 r/min 6 mm (0.24 in) 0.85Ω ± 15% at 20°C (68°F) 5.9KΩ ± 15% at 20°C (68°F)
Charging System/ Type	Flywheel magneto
F.W. Magneto Charging Current Charging Coil Resistance (Color) Lighting Voltage Lighting Coil Resistance (Color)	Day 1.8A or more at 3,000 r/min 4.5A or more at 8,000 r/min Night 0.7A or more at 3,000 r/min 1.7A or more at 8,000 r/min 0.4Ω ± 10% at 20°C (68°F) (W — B) 11.3V or more at 3,000 r/min 12.5 ~ 13.5V at 8,000 r/min 0.34Ω ± 10% at 20°C (68°F) (Y/R — B) 

Model	YFM200N
Voltage Regulator: -Type -Model/ Manufacture -No Load Regulated Voltage	Short circuit type SU230Y/ STANLEY 12 ~ 16.5V
Rectifier: -Model/ Manufacturer -Capacity -Withstand Voltage	SU230Y/ STANLEY 5A 120V
Battery: Capacity Specific Gravity	12V 14AH 1.280
Electric Starter System: Type Starter Motor-Model/ Manufacturer -Out put Armature Coil Resistance Brush-Overall Length <Limit> -Spring Pressure Commutator Dia. <Wear Limit> -Mica Undercut Starter switch Model/ Manufacturer Amperage Rating Coil Winding Resistance	Constant mesh type SM-7252/ MITSUBA 0.4kW 0.023 Ω at 20°C (68°F) 10.5 mm (0.41 in) <5.0 mm (0.20 in)> 400 ~ 660 g (14 ~ 23 oz) 23 mm (0.901 in) <22 mm (0.866 in)> 0.55 mm (0.022 in) I26/ HONDA LOCK 150A 3.43 Ω $\pm$ 5% at 20°C (68°F)
Starting Circuit Cut off Relay: Model/ Manufacturer Coil Winding Resistance Color Code Diode	G4MW-121T/ TATEISHI 75 Ω $\pm$ 10% at 20°C (68°F) No Yes
Circuit Breaker: Type Amperage for Individual Circuit/ Quantity Main Reserve	Fuse 10A $\times$ 1 10A $\times$ 1

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

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



A: Distance across flats
B: Outside thread diameter

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	millimeter	10^{-3} meter	Length
cm	centimeter	10^{-2} meter	Length
kg	kilogram	10^3 gram	Weight
N	Newton	$1 \text{ kg} \times \text{m/sec}^2$	Force
Nm	Newton meter	$\text{N} \times \text{m}$	Torque
m · kg	Meter kilogram	$\text{m} \times \text{kg}$	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per millimeter	N/mm	Spring rate
L	Liter	—	Volume
cm^3	Cubic centimeter	—	or Capacity
r/min	Rotation per minute	—	Engine Speed

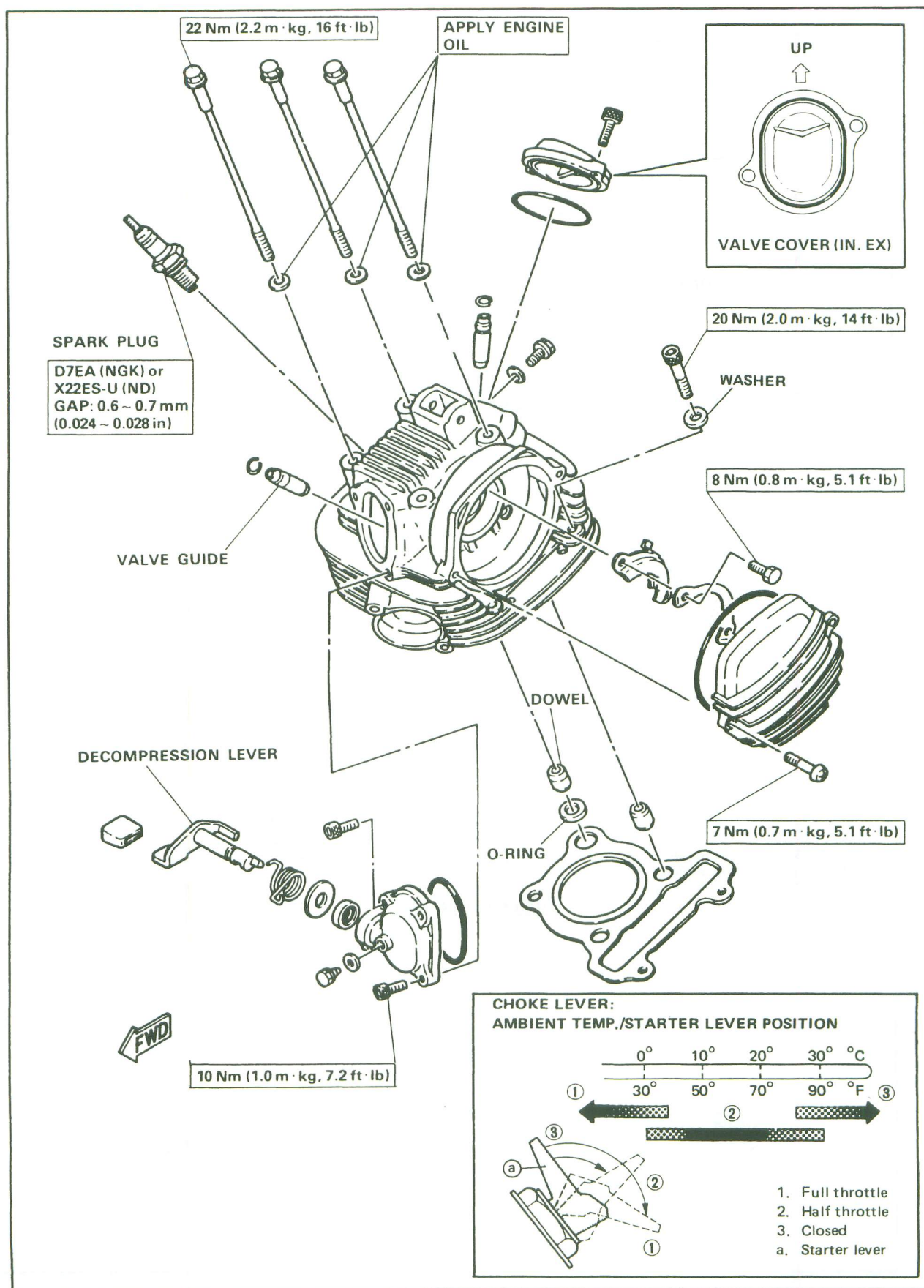
CONVERSION TABLES

Metric to inch system		
Known	Multiplier	Result
m · kg	7.233	ft · lb
m · kg	86.80	in · lb
cm · kg	0.0723	ft · lb
cm · kg	0.8680	in · lb
kg	2.205	lb
g	0.03527	oz
km/lit	2.352	mpg
km/hr	0.6214	mph
km	0.6214	mi
m	3.281	ft
m	1.094	yd
cm	0.3937	in
mm	0.03937	in
cc (cm ³)	0.03382	oz (US liq)
cc (cm ³)	0.06102	cu in
lit (liter)	2.1134	pt (US liq)
lit (liter)	1.057	qt (US liq)
lit (liter)	0.2642	gal (US liq)
kg/mm	56.007	lb/in
kg/cm ²	14.2234	psi (lb/in ²)
Centigrade (°C)	9/5 (°C) + 32	Fahrenheit (°F)

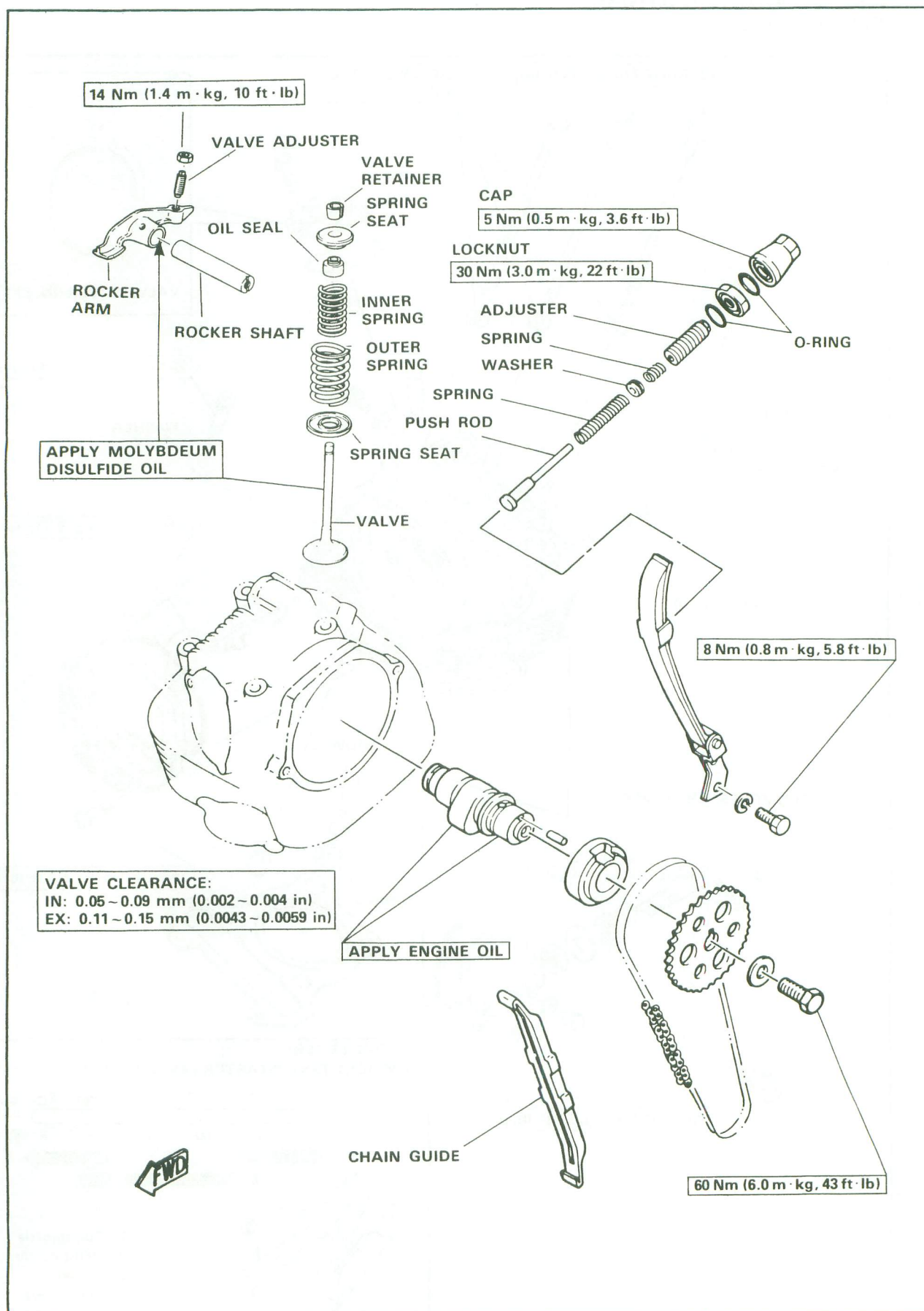
Inch to metric system		
Known	Multiplier	Result
ft · lb	0.13826	m · kg
in · lb	0.01152	m · kg
ft · lb	13.831	cm · kg
in · lb	1.1521	cm · kg
lb	0.4535	kg
oz	28.352	g
mpg	0.4252	km/lit
mph	1.609	km/hr
mi	1.609	km
ft	0.3048	m
yd	0.9141	m
in	2.54	cm
in	25.4	mm
oz (US liq)	29.57	cc (cm ³)
cu in	16.387	cc (cm ³)
pt (US liq)	0.4732	lit (liter)
qt (US liq)	0.9461	lit (liter)
gal (US liq)	3.785	lit (liter)
lb/in	0.017855	kg/mm
psi (lb/in ²)	0.07031	kg/cm ²
Fahrenheit (°C)	5/9 (°F - 32)	Centigrade (°F)

EXPLODED DIAGRAMS

Cylinder Head



Valve/Cam Chain



50 Nm (5.0 m · kg, 36 ft · lb)

LOCK WASHER

BALANCER DRIVEN GEAR (36T)

BEARING

KEY

BALANCER SHAFT

BEARING

CIRCLIP

OIL PUMP DRIVE GEAR (22T)

PLATE WASHER

SPRING (6 pcs)

PIN (3 pcs)

BUFFER BOSS

PLATE WASHER

BEARING (B6306)

WOODRUFF KEY

PISTON RING

END GAP:
TOP: 0.15 ~ 0.35 mm (0.006 ~ 0.014 in)
2ND: 0.15 ~ 0.35 mm (0.006 ~ 0.014 in)
OIL: 0.3 ~ 0.9 mm (0.012 ~ 0.035 in)

BALANCER DRIVE GEAR (38T)

APPLY ENGINE OIL

PISTON CLEARANCE:
0.025 ~ 0.045 mm
(0.0010 ~ 0.0018 in)

CRANKSHAFT

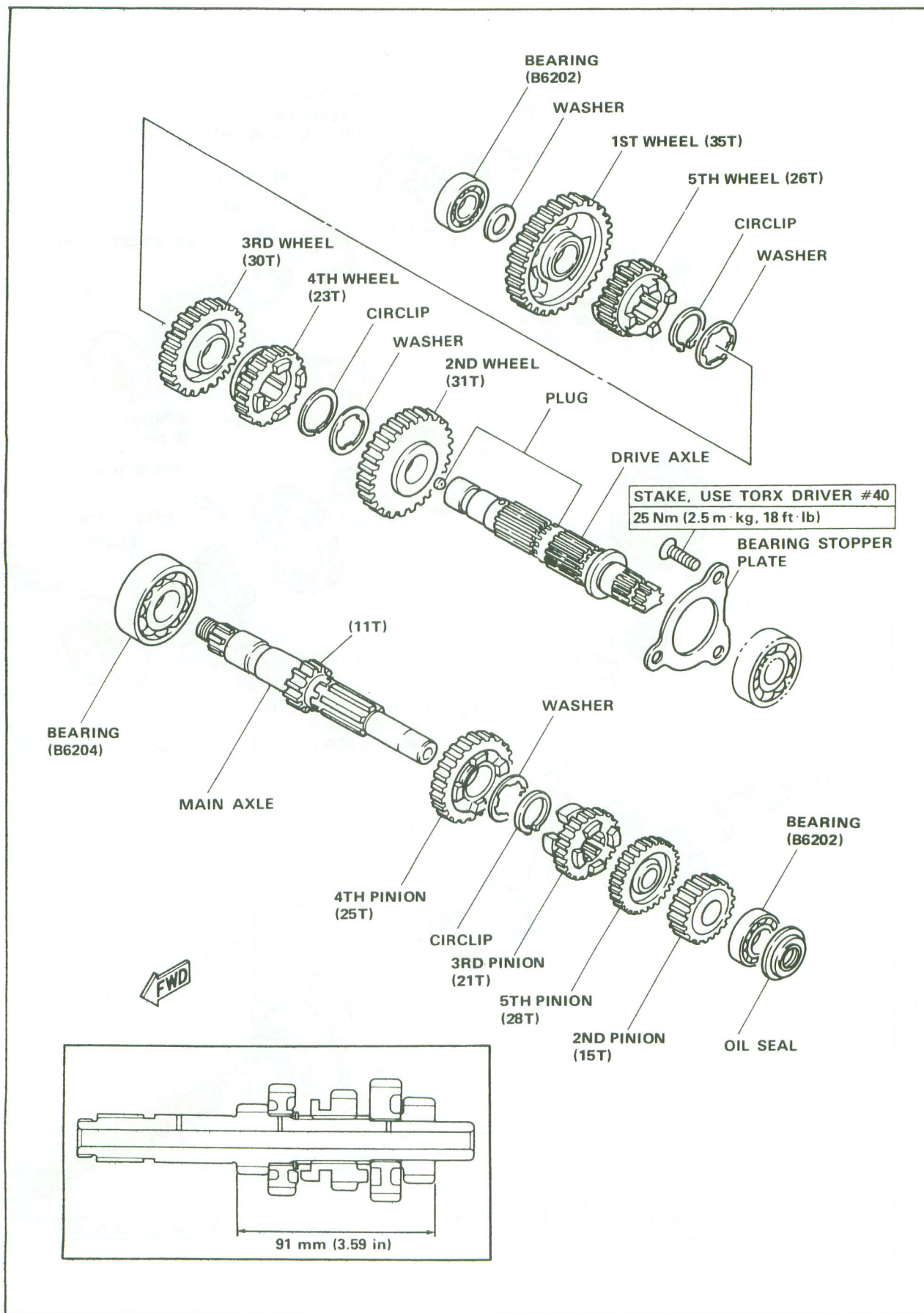
WIDTH: 56 $\begin{smallmatrix} 0 \\ 0.05 \end{smallmatrix}$ mm
(2.20 $\begin{smallmatrix} 0 \\ -0.002 \end{smallmatrix}$ in)
SMALL END FREE PLAY LIMIT:
2 mm (0.08 in)

O-RING

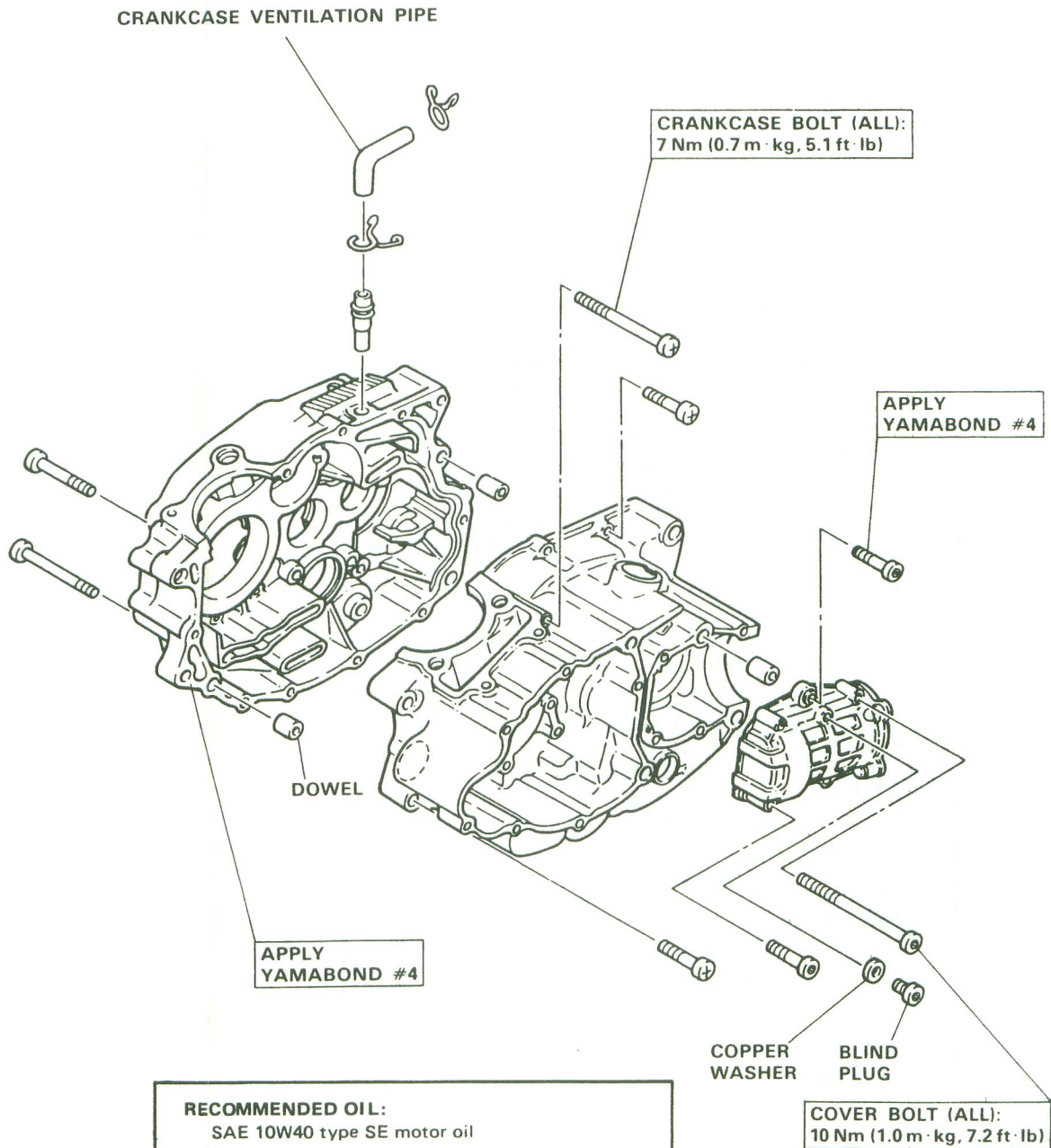
50 Nm (5.0 m · kg, 36 ft · lb)

FWD

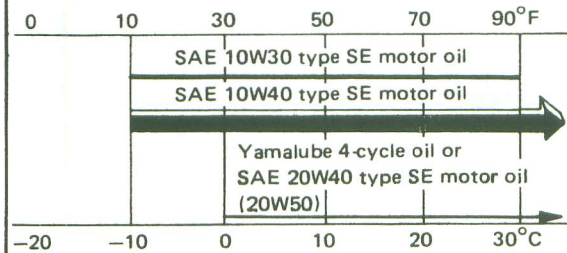
Transmission



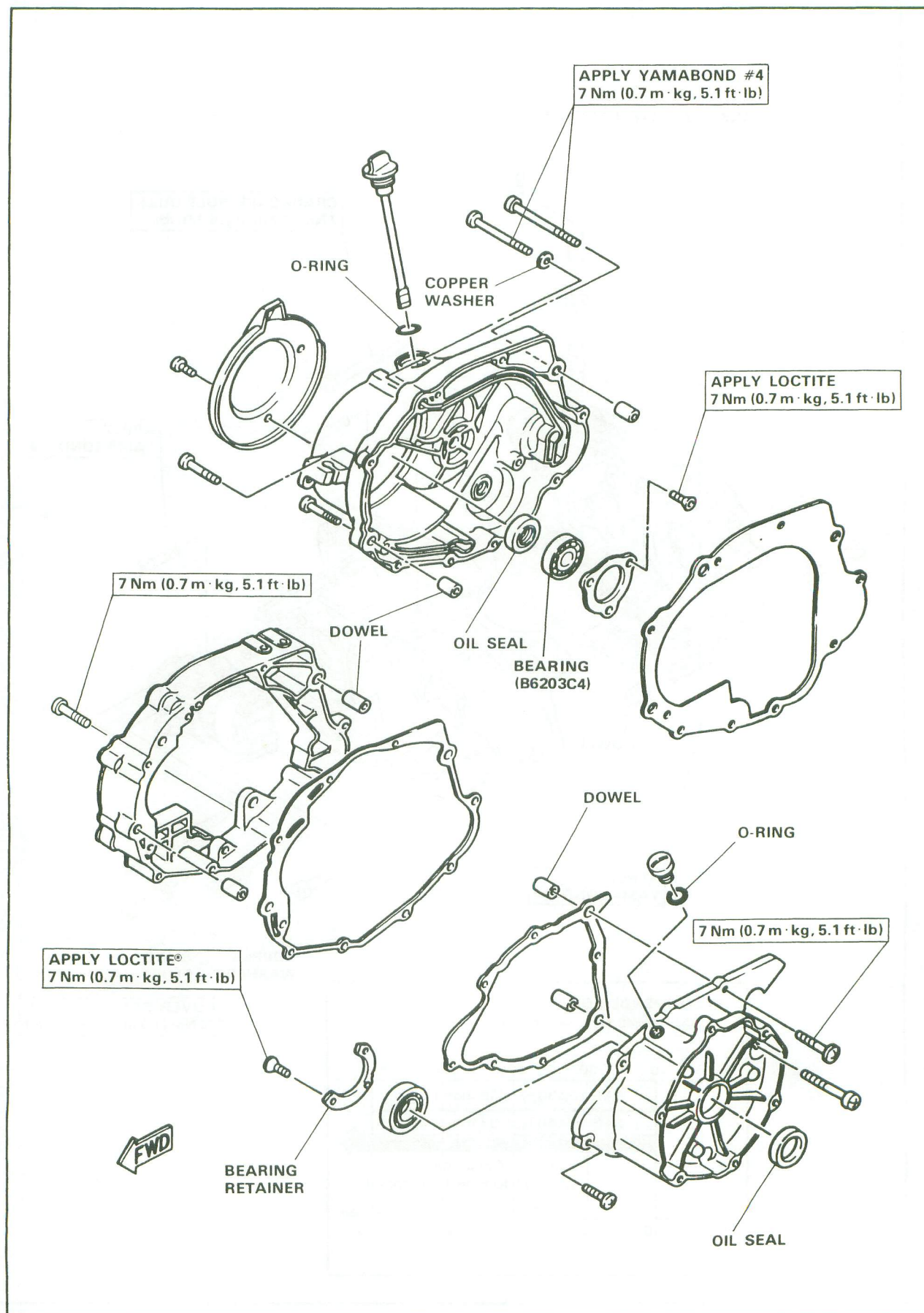
Crankcase



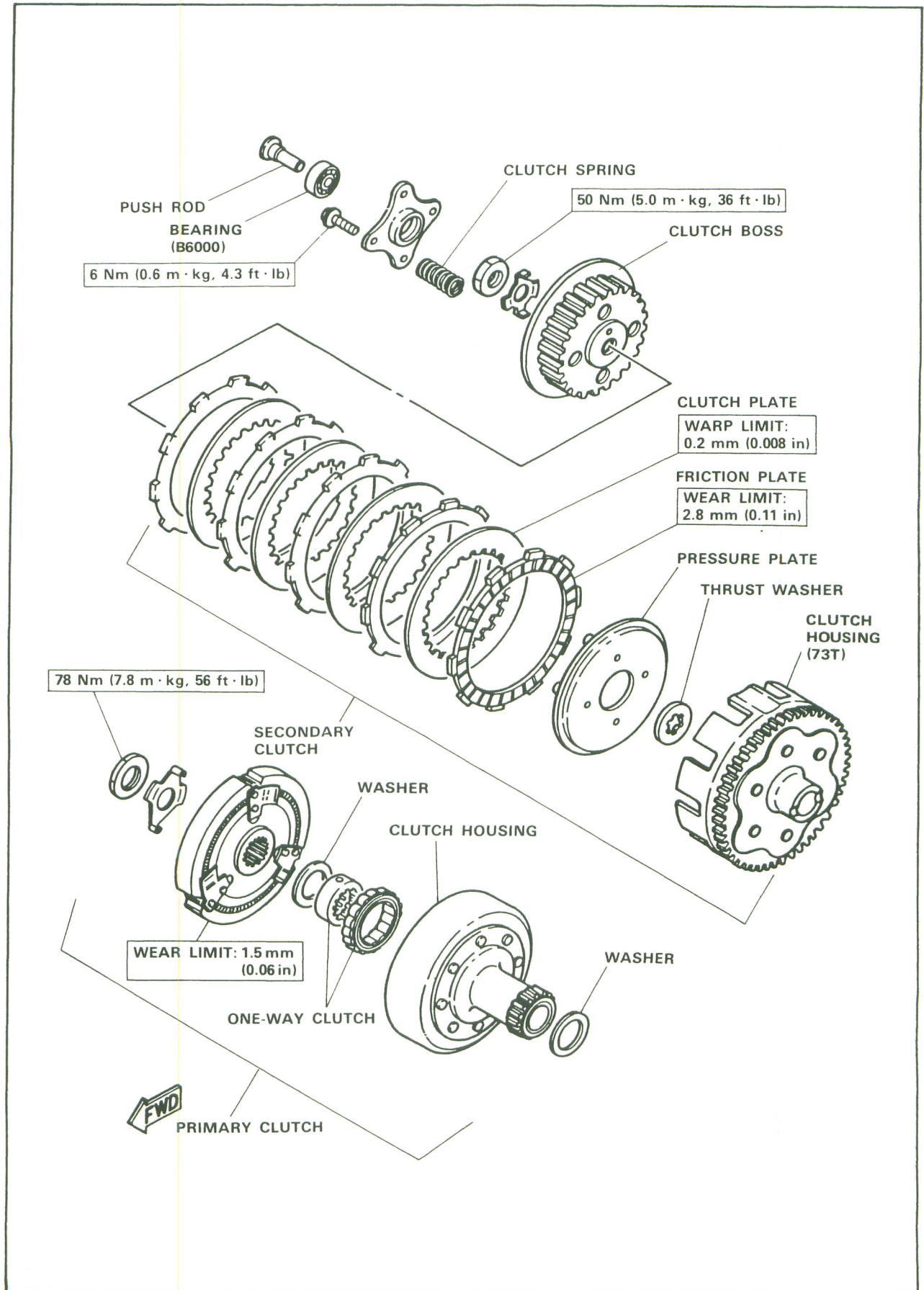
RECOMMENDED OIL:
SAE 10W40 type SE motor oil



Crankcase Spacer/ Crankcase Covers



Clutch



Shift Shaft/Change Pedal

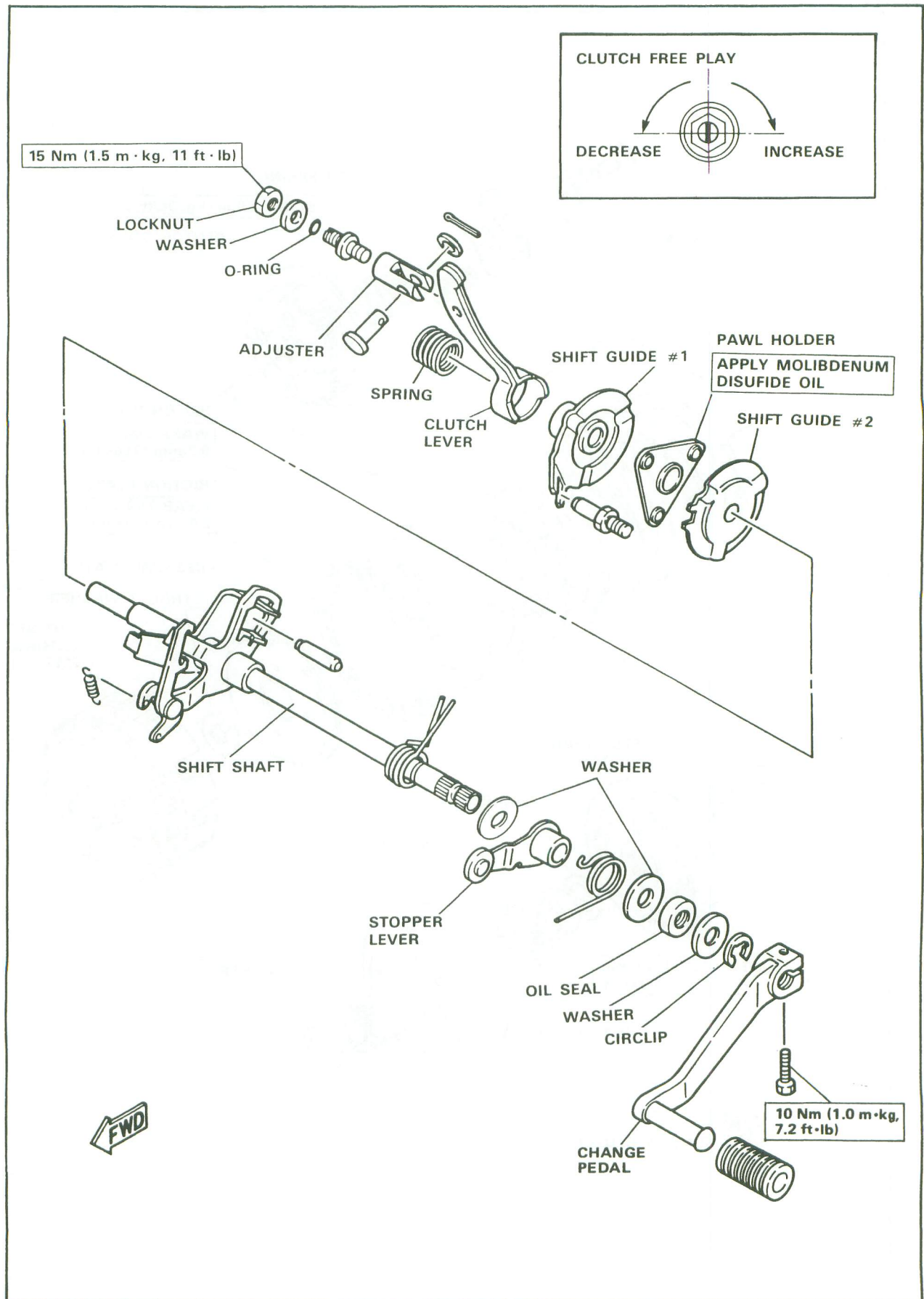


Diagram illustrating the assembly of a manual transmission component, showing various parts and their corresponding torque specifications.

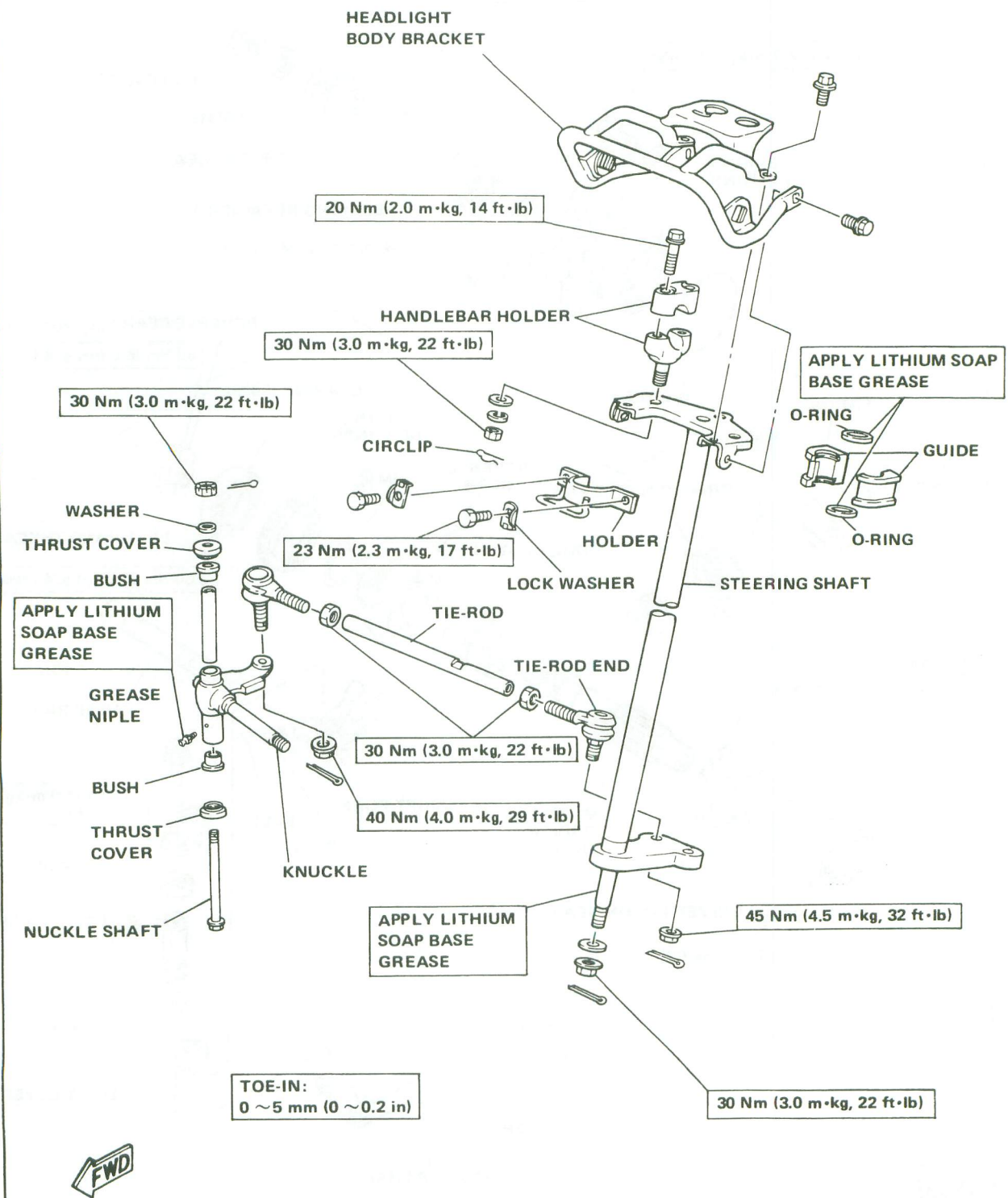
Assembly Components and Torque Specifications:

- STAKE**: 60 Nm (6.0 m·kg, 43 ft·lb)
- 60 Nm (6.0 m·kg, 43 ft·lb)**
- 23 Nm (2.3 m·kg, 17 ft·lb)**
- BEARING HOUSING**
- SHIM D**
- BEARING (DG174717C2)**
- BEARING RETAINER 1**
- COUPLING GEAR**
- WASHER**
- NUT (STAKE)**
- O-RING**
- BEARING**
- SHIM A**
- DRIVE PINION GEAR**
- DOG CLUTCH**
- REVERSE GEAR**
- SHIM C**
- BEARING (6028)**
- BEARING RETAINER 2**
- REVERSE GEAR SECURING NUT**: 60 Nm (6.0 m·kg, 43 ft·lb)
- LEFT-HAND-THREADS**: 60 Nm (6.0 m·kg, 43 ft·lb)
- STAKE**: 60 Nm (6.0 m·kg, 43 ft·lb)
- SHIM B**
- DRIVEN PINION GEAR**
- BEARING (6006C3)**
- MIDDLE DRIVEN SHAFT**
- SHIFT FORK**
- SPRING**
- BALL**
- O-RING**
- GUIDE BAR**
- LEVER**: 10 Nm (1.0 m·kg, 7.2 ft·lb)
- CIRCLIP**
- SHIFT LEVER SHAFT**
- SHIFT LEVER**
- STOPPER SHAFT**
- WASHER**
- SPRING**

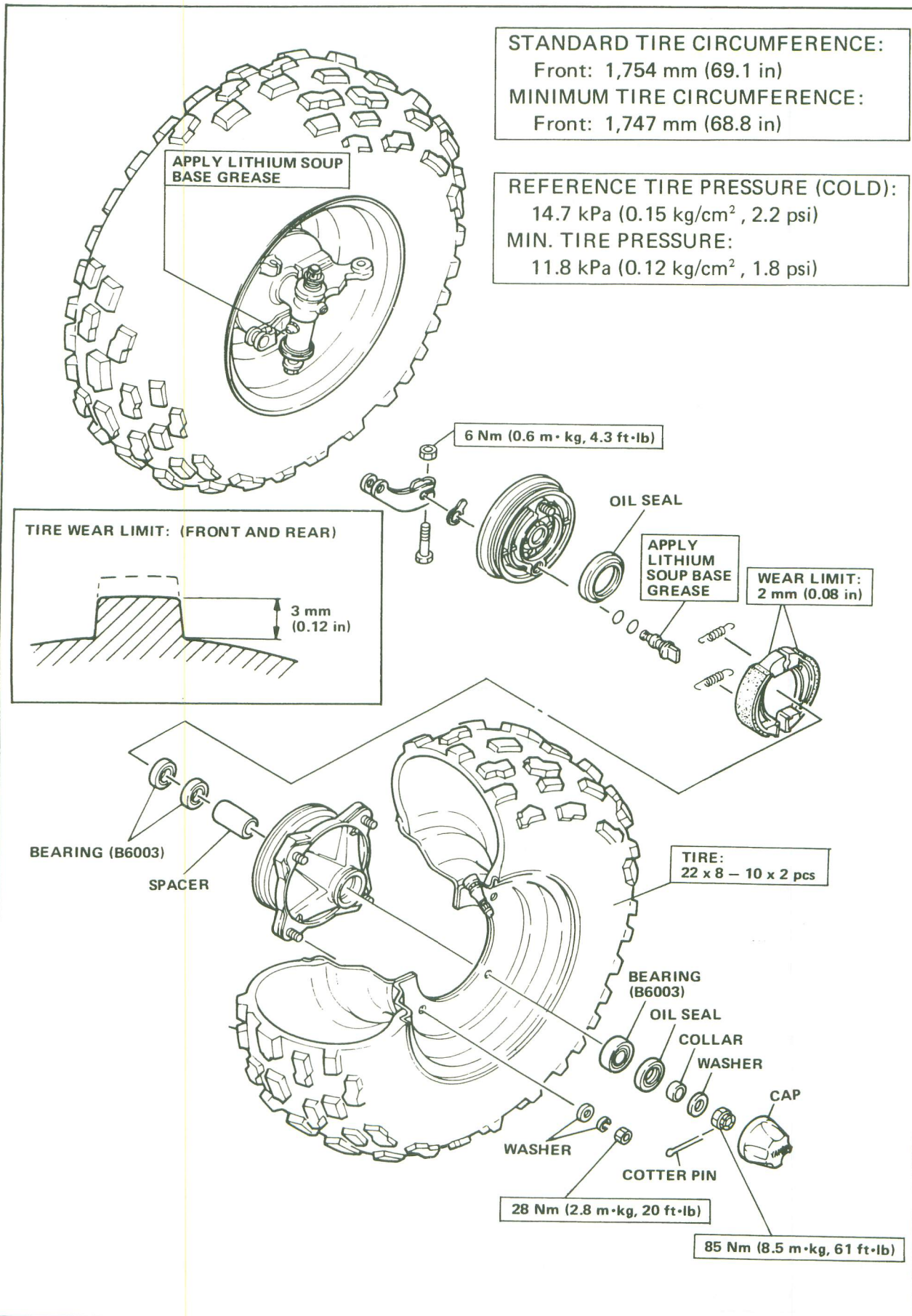
Assembly Sequence:

- Install the **BEARING HOUSING** and **SHIM D** onto the **BEARING (DG174717C2)**.
- Install the **BEARING RETAINER 1** and **COUPLING GEAR** onto the **BEARING HOUSING**.
- Install the **WASHER** and **NUT (STAKE)** onto the **COUPLING GEAR**.
- Install the **O-RING** onto the **BEARING HOUSING**.
- Install the **BEARING** and **SHIM A** onto the **DRIVE PINION GEAR**.
- Install the **DOG CLUTCH** onto the **DRIVE PINION GEAR**.
- Install the **REVERSE GEAR** and **SHIM C** onto the **DRIVE PINION GEAR**.
- Install the **BEARING (6028)** and **BEARING RETAINER 2** onto the **DRIVE PINION GEAR**.
- Install the **REVERSE GEAR SECURING NUT** and **LEFT-HAND-THREADS** onto the **DRIVE PINION GEAR**.
- Install the **STAKE** onto the **DRIVE PINION GEAR**.
- Install the **SHIM B** onto the **DRIVEN PINION GEAR**.
- Install the **BEARING (6006C3)** onto the **DRIVEN PINION GEAR**.
- Install the **MIDDLE DRIVEN SHAFT** onto the **DRIVEN PINION GEAR**.
- Install the **SHIFT FORK** and **SPRING** onto the **MIDDLE DRIVEN SHAFT**.
- Install the **BALL** onto the **SHIFT FORK**.
- Install the **O-RING** onto the **SHIFT FORK**.
- Install the **GUIDE BAR** onto the **SHIFT FORK**.
- Install the **LEVER** onto the **GUIDE BAR**.
- Install the **CIRCLIP** onto the **LEVER**.
- Install the **SHIFT LEVER SHAFT** onto the **LEVER**.
- Install the **SHIFT LEVER** onto the **SHIFT LEVER SHAFT**.
- Install the **STOPPER SHAFT** onto the **SHIFT LEVER**.
- Install the **WASHER** and **SPRING** onto the **STOPPER SHAFT**.

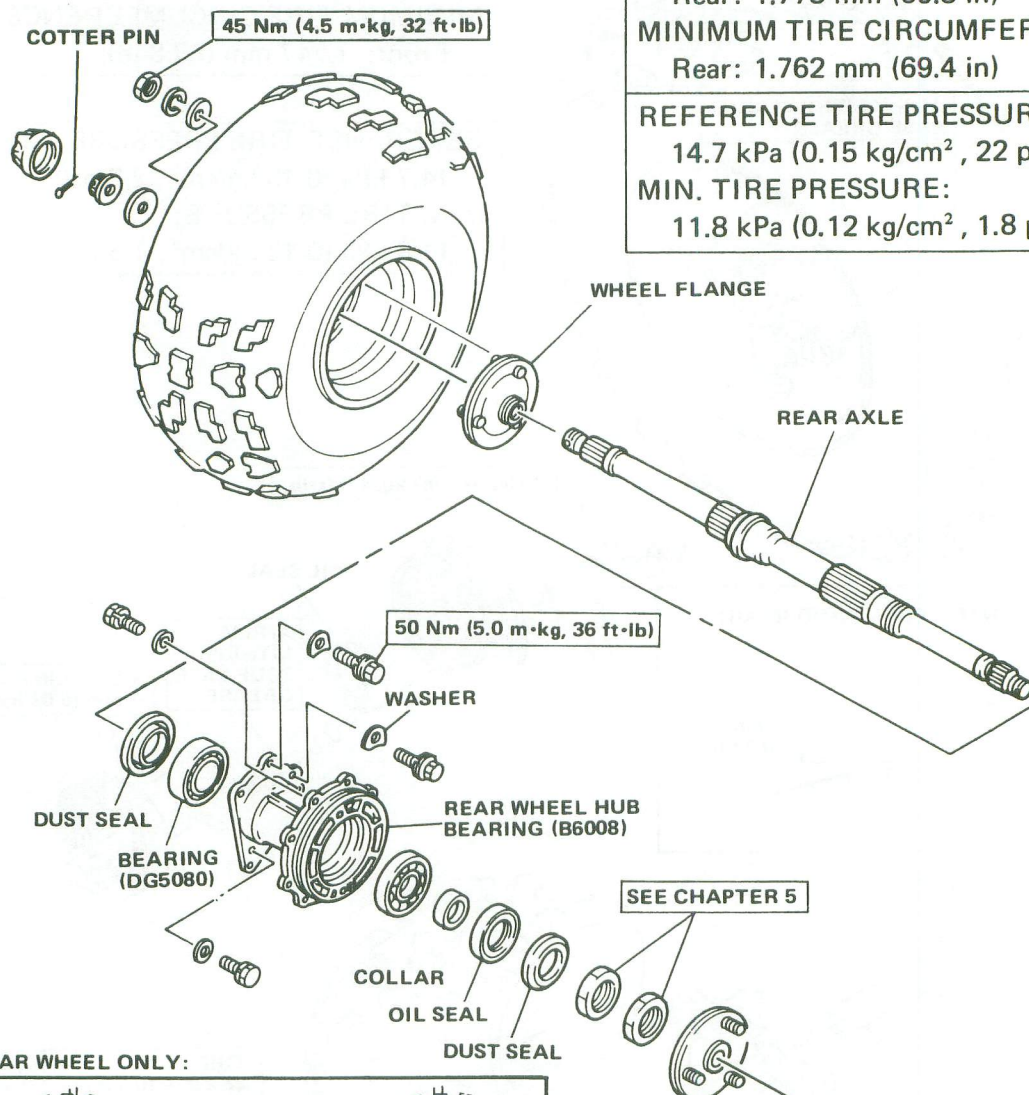
Steering



Front Wheel



Rear Wheel



STANDARD TIRE CIRCUMFERENCE:

Rear: 1.773 mm (69.8 in)

MINIMUM TIRE CIRCUMFERENCE:

Rear: 1.762 mm (69.4 in)

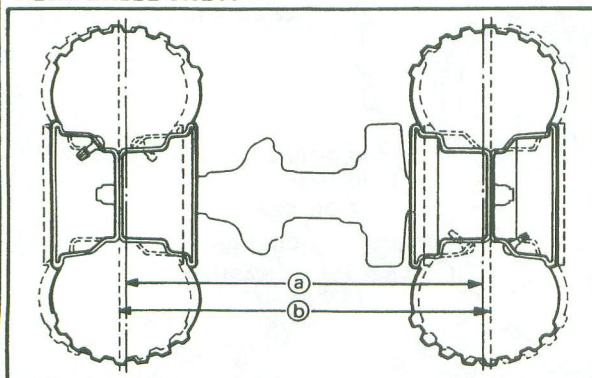
REFERENCE TIRE PRESSURE (COLD):

14.7 kPa (0.15 kg/cm², 22 psi)

MIN. TIRE PRESSURE:

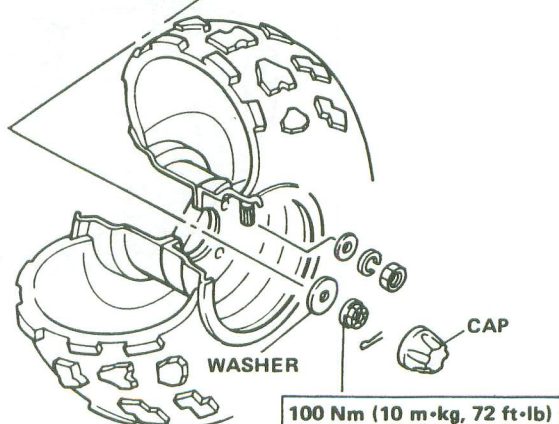
11.8 kPa (0.12 kg/cm², 1.8 psi)

REAR WHEEL ONLY:



NOTE:

Cornering performance is less good on the reversely mounted rear wheels than on the standard mounting. Thus, the standard mounting is recommended for normal riding.



23 Nm (2.3 m · kg, 17 ft · lb)

O-RING

OIL SEAL

BEARING

SHIM

0.25 mm (0.0098 in)
0.30 mm (0.012 in)
0.35 mm (0.014 in)
0.40 mm (0.016 in)
0.45 mm (0.018 in)
0.50 mm (0.020 in)

RING GEAR

BREATHER PIPE

BEARING

OIL SEAL

GASKET

THRUST WASHER

9 Nm (0.9 m · kg, 6.5 ft · lb)

23 Nm (2.3 m · kg, 17 ft · lb)

FINAL GEAR OIL CAPACITY:
0.13 L (0.11 Imp qt, 0.14 US qt)
RECOMMENDED OIL:
SAE80API GL-4 Hypoid gear oil

WASHER

100 Nm (10 m · kg, 6.5 ft · lb)

45 Nm (4.5 m · kg, 32 ft · lb)

GASKET

23 Nm (2.3 m · kg, 17 ft · lb)

LEFT-HAND-THREADS

BEARING

DRIVE SHAFT (PINION GEAR)

SHIM

BEARING RETAINER

DANGER CAM

DAMPER SPRING SEAT

WASHER RETAINER

DAMPER CAM

O-RING

BEARING

OIL-SEAL

23 Nm (2.3 m · kg, 17 ft · lb)

HOUSING

SPRING

DRIVE SHAFT

O-RING

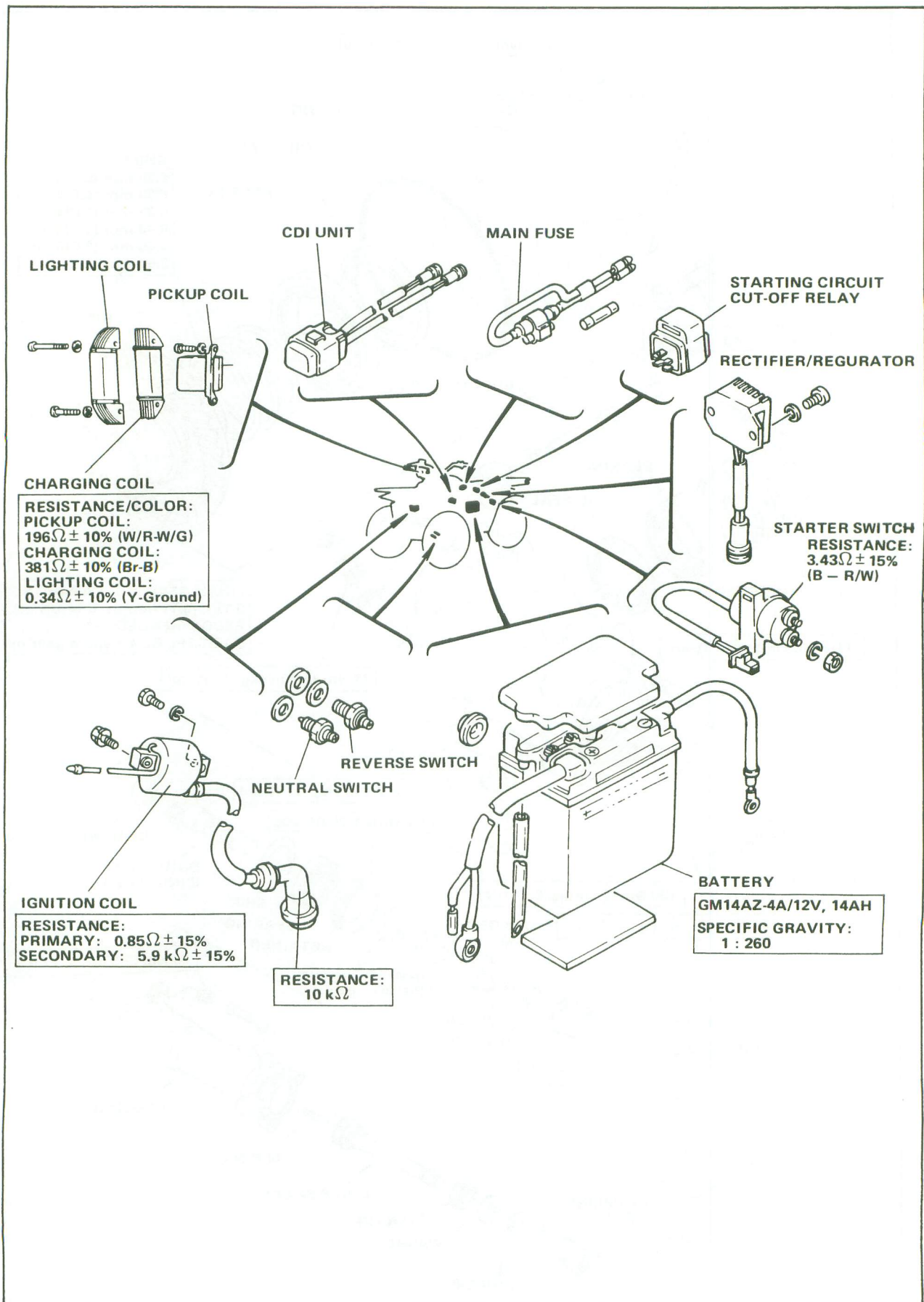
WASHER

CIRCLIP

COUPLING GEAR

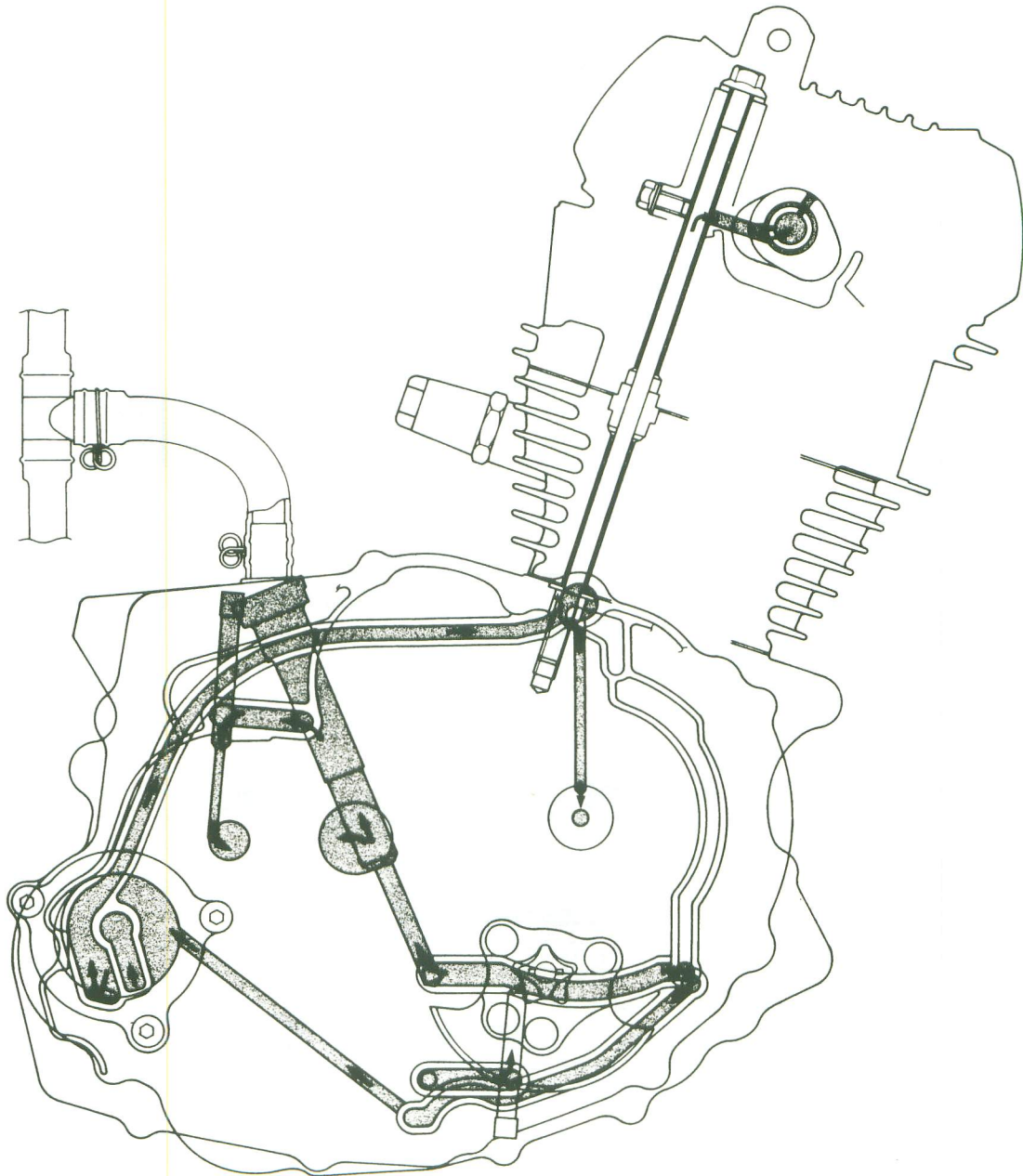
O-RING

FWD

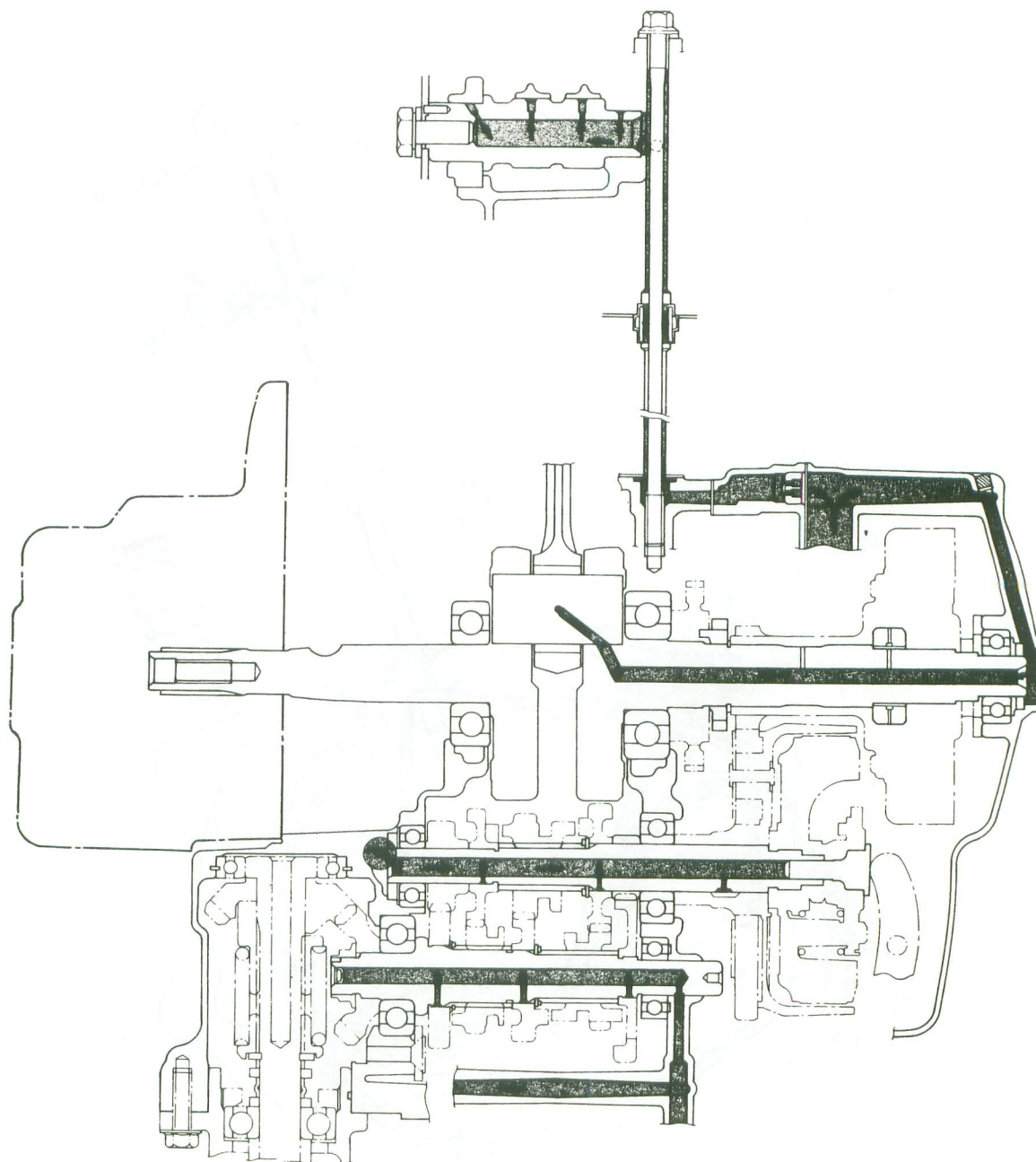


LUBRICATION DIAGRAMS

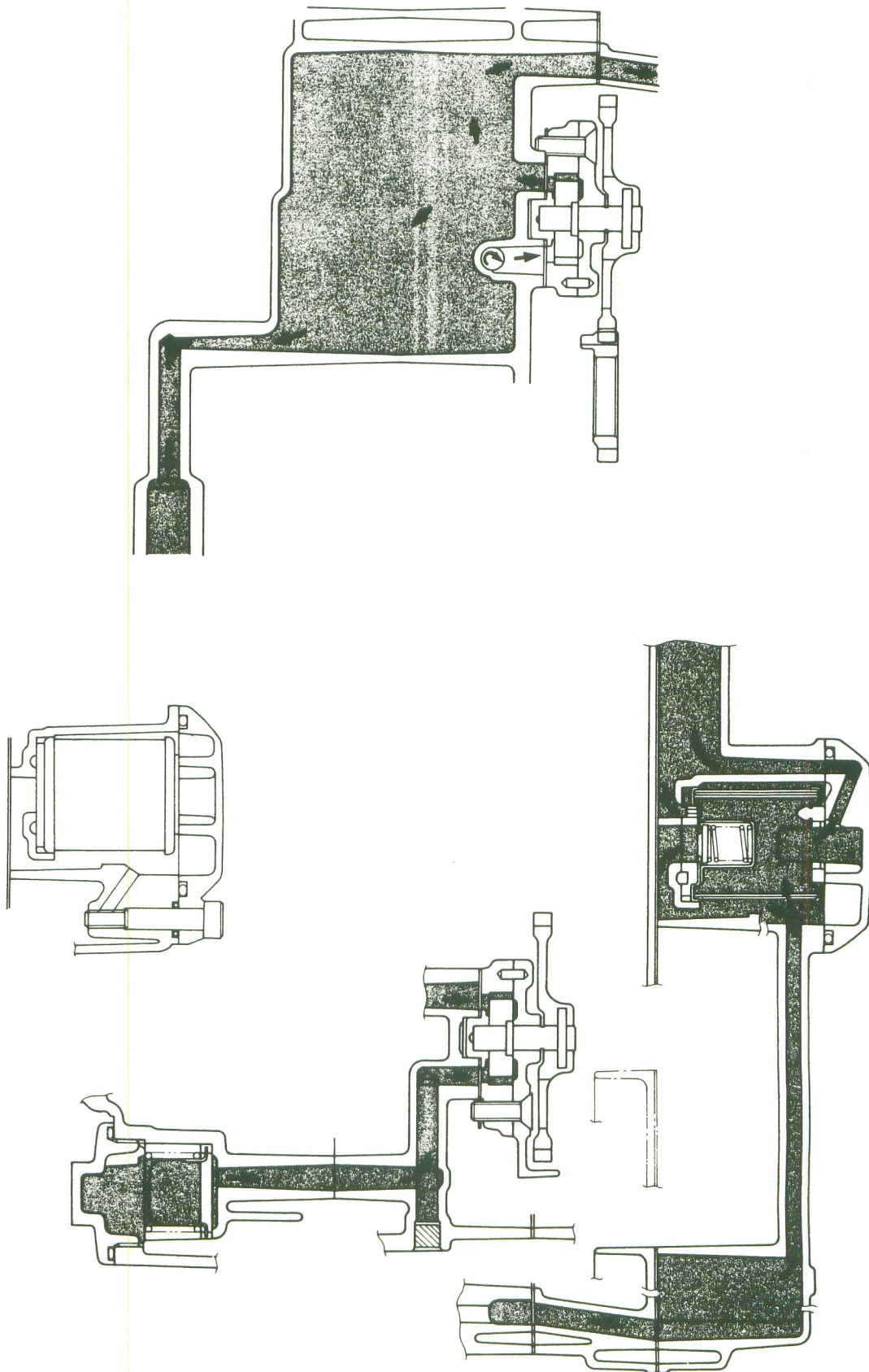
Lubrication Diagram (1)



Lubrication Diagram (2)



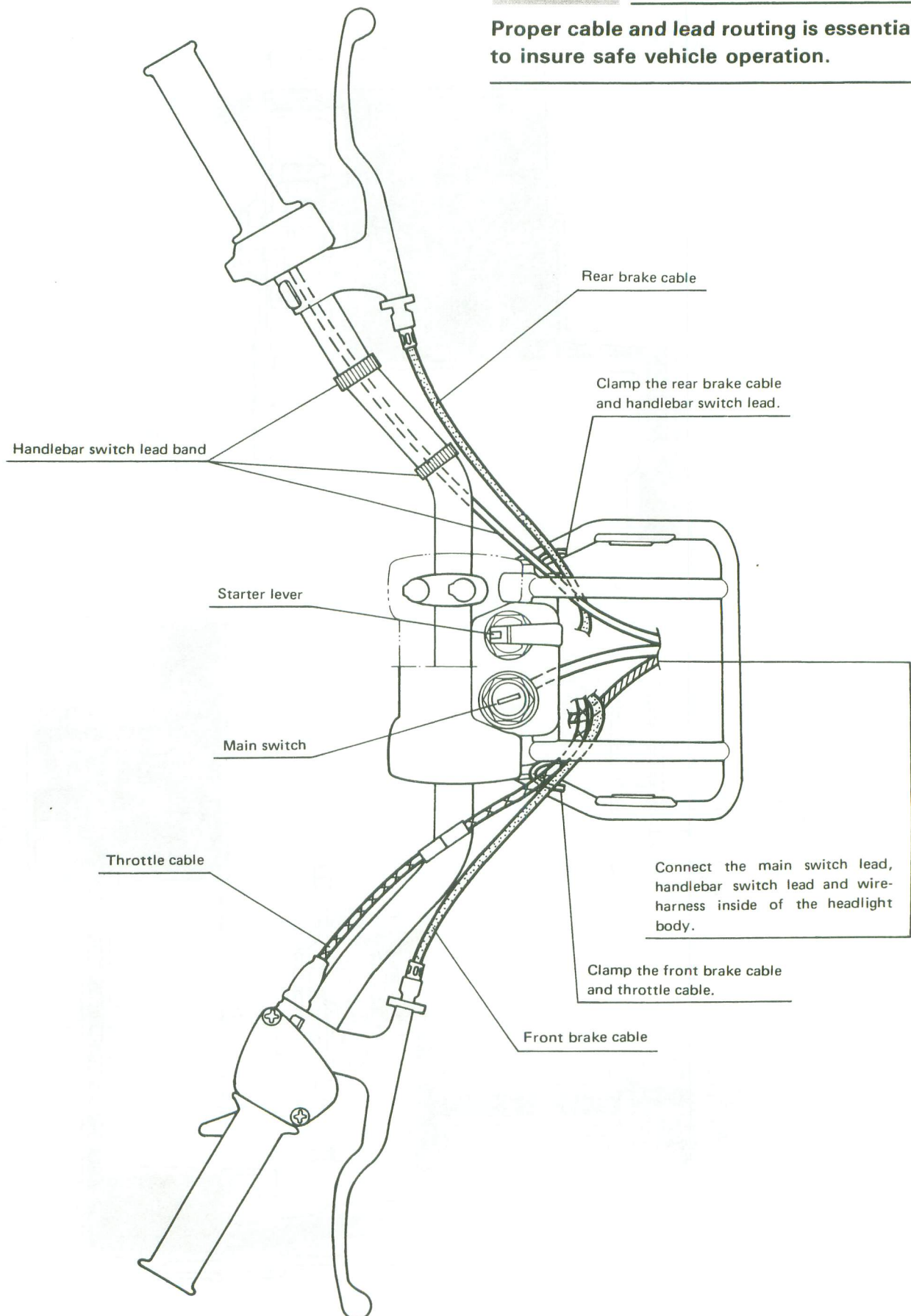
Lubrication Diagram (3)

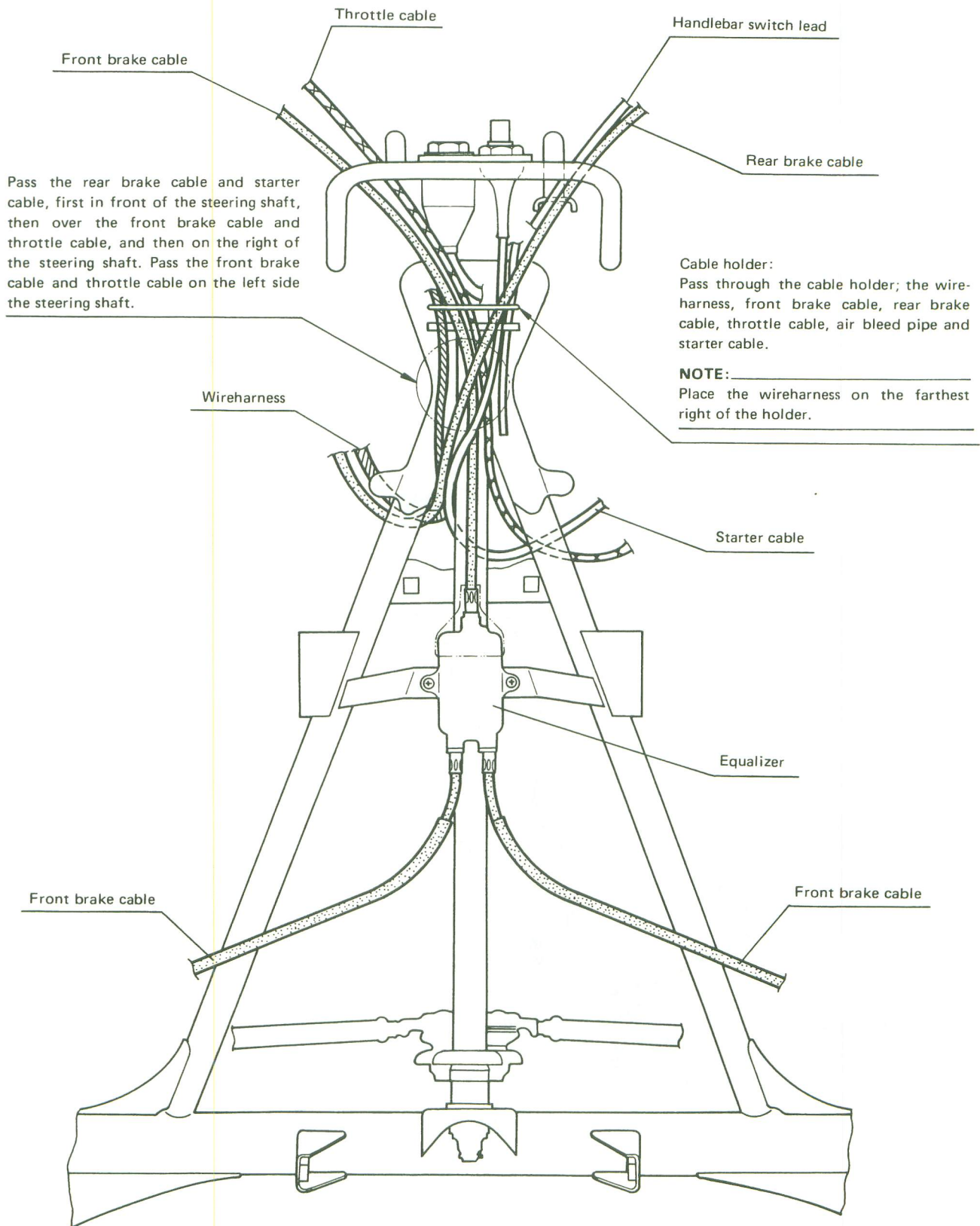


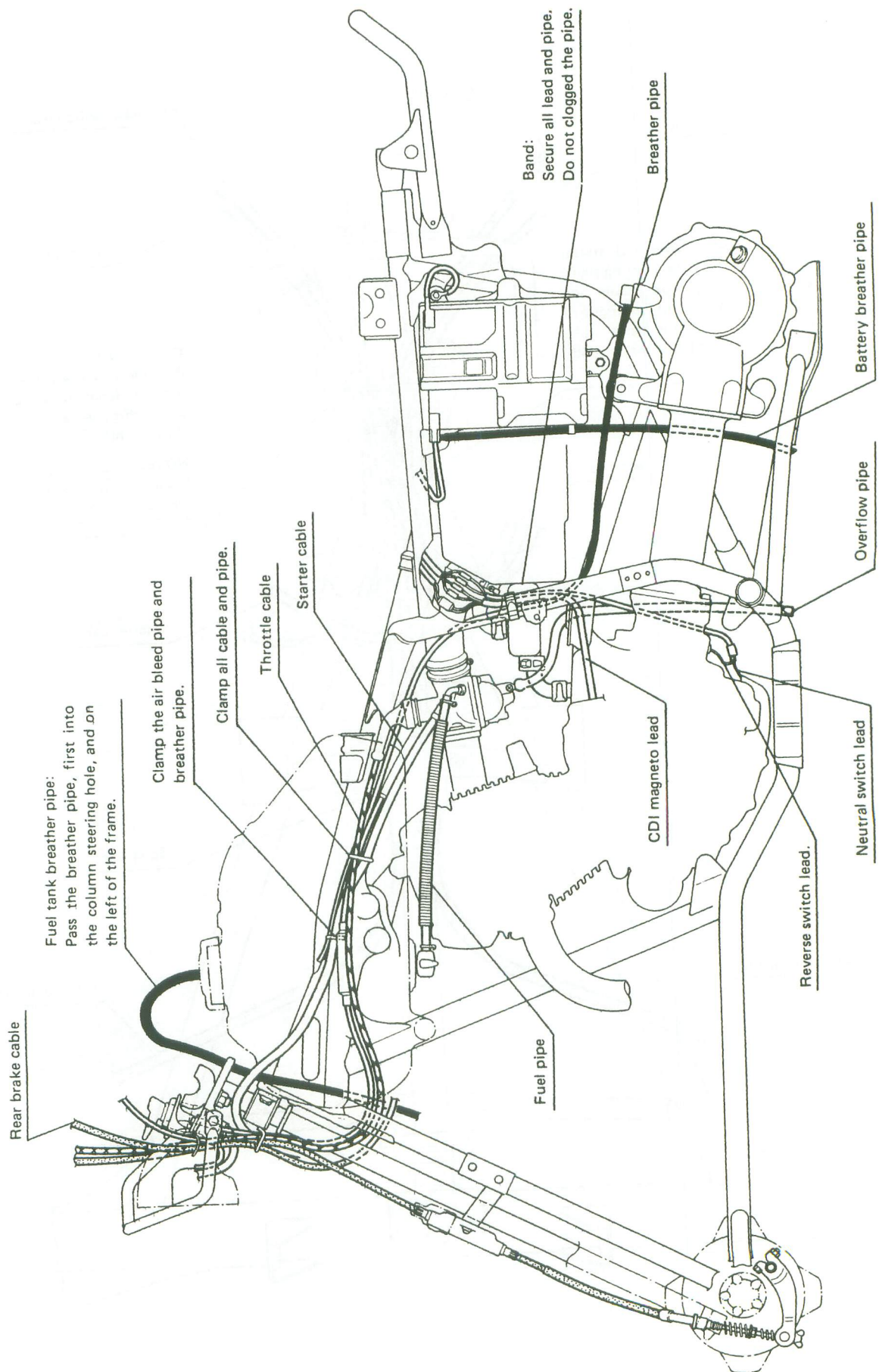
CABLE ROUTING

CAUTION:

Proper cable and lead routing is essential to insure safe vehicle operation.







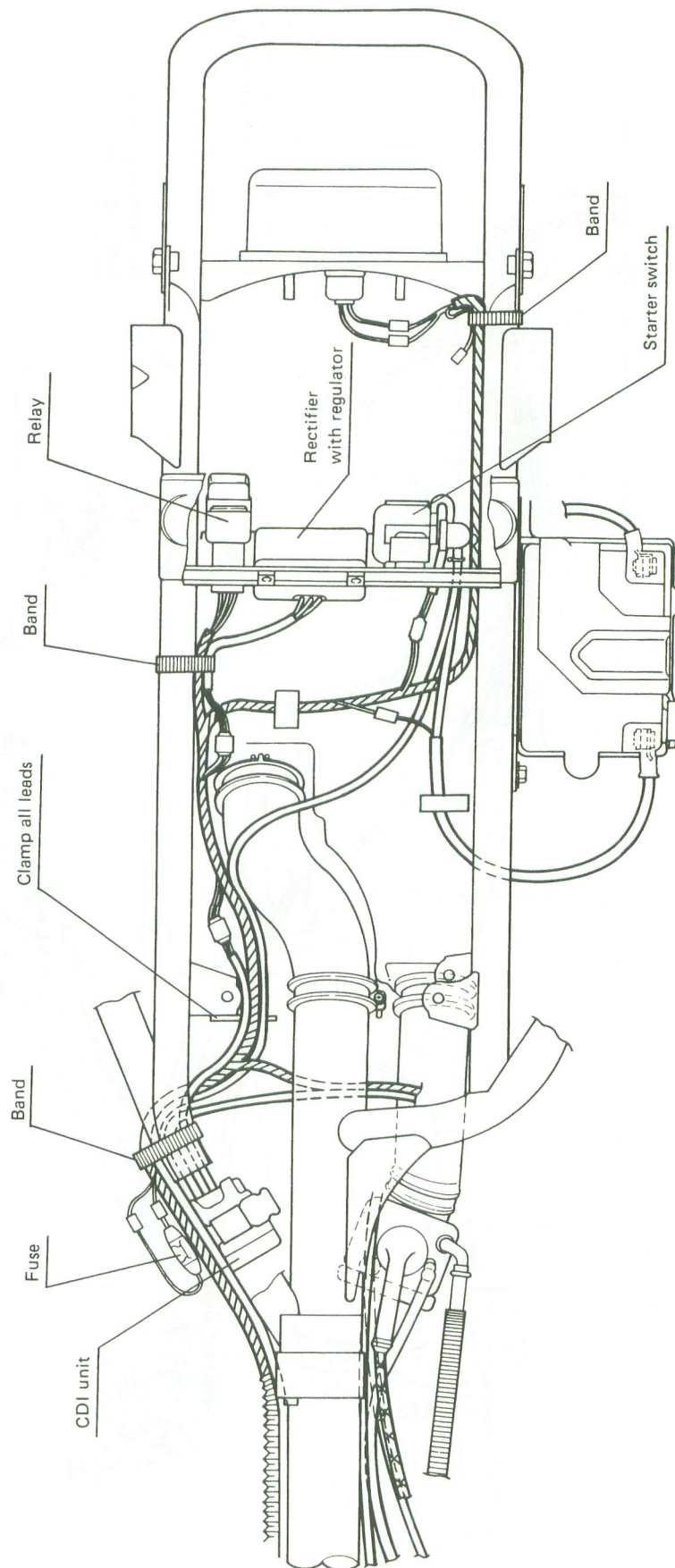
Clamp the wireharness.

Clamp the rear brake cable.

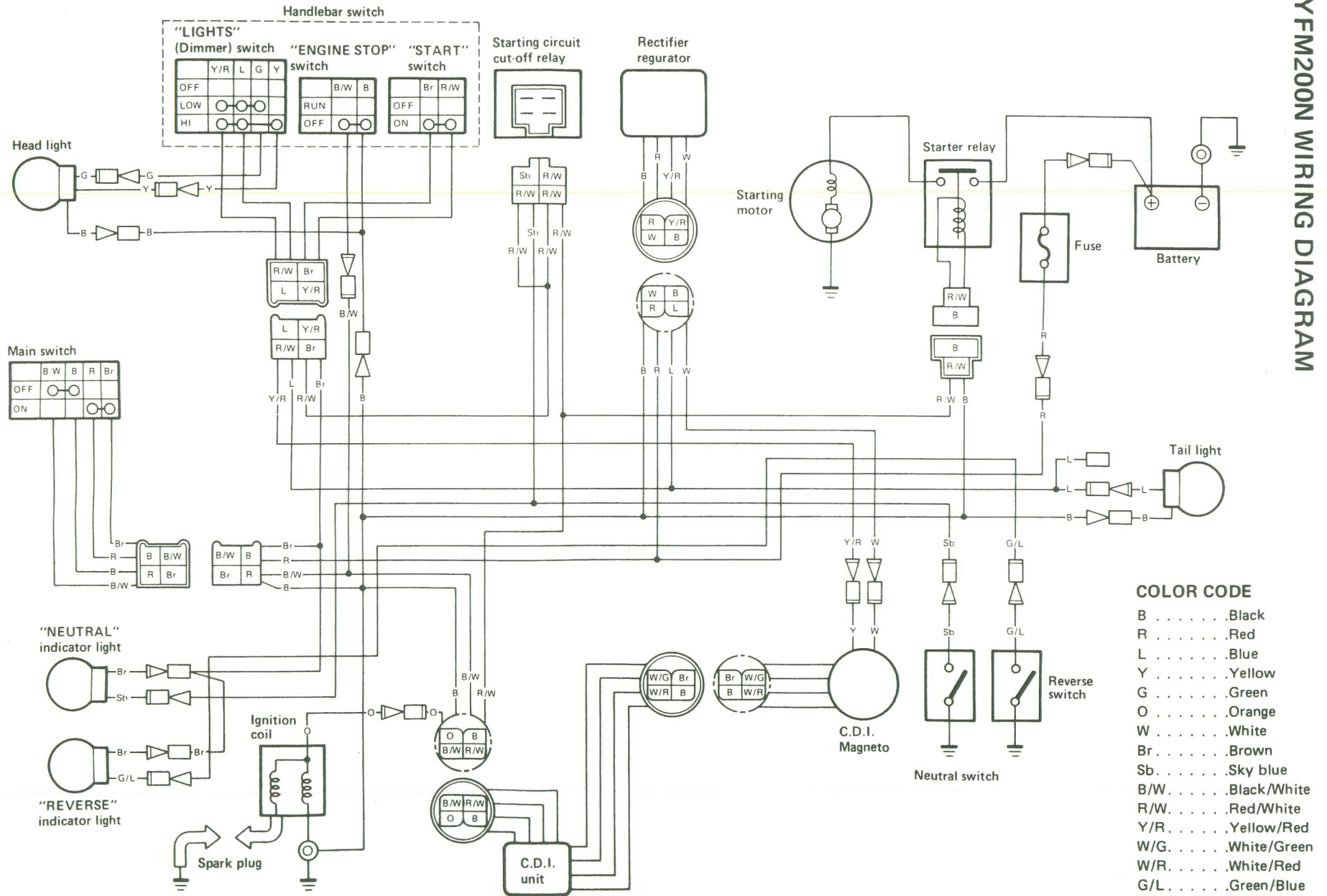
Rear brake cable

Starter motor lead:
Pass the starter motor lead, first
on the left of the down tube, and
behind the down tube, and then
on the right of the down tube.

Pass starter motor lead
through the clamp.



YFM200N WIRING DIAGRAM



FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the YFM200N. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manual:

YFM200N Service Manual: LIT-11616-04-29
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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 machines have a basic understanding of the mechanical concepts and procedures inherent in machine 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.

TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE OPERATIONS
YAMAHA MOTOR CO., LTD.

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

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

CAUTION: A **CAUTION** indicates special procedures that must be followed to avoid damage to the machine.

WARNING: A **WARNING** indicates special procedures that must be followed to avoid injury to a machine operator or person inspecting or repairing the machine.

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, assembly, and 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.

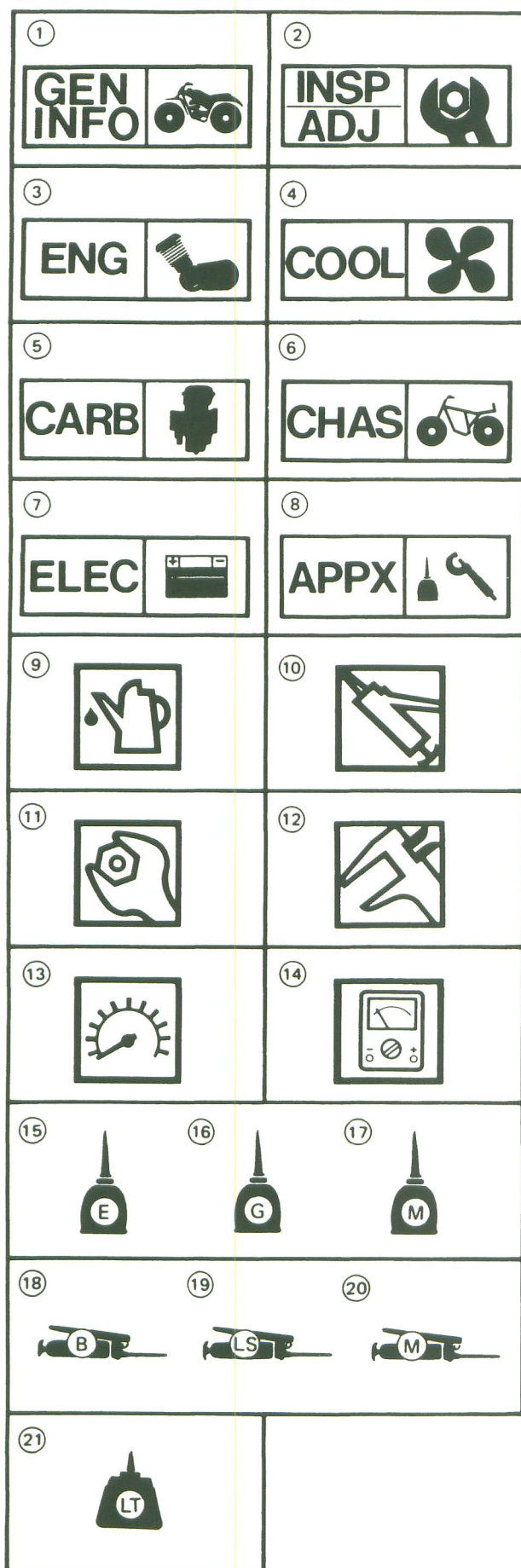
EXPLODED DIAGRAM

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

CONTENTS

GENERAL INFORMATION	1
MACHINE IDENTIFICATION	1
VEHICLE IDENTIFICATION NUMBER	1
ENGINE SERIAL NUMBER	1
PERIODIC INSPECTIONS AND ADJUSTMENTS	2
INTRODUCTION	2
PERIODIC MAINTENANCE/LUBRICATION	2
ENGINE	3
CAM CHAIN TENSION ADJUSTMENT	3
SPEED LIMITER ADJUSTMENT	3
FRAME	4
REAR BRAKE LEVER AND PEDAL ADJUSTMENT	4
FRONT SHOCK ABSORBER ADJUSTMENT	6
REAR SHOCK ABSORBER ADJUSTMENT	7
KNUCKLE SHAFTS, LOWER ARMS AND STEERING SHAFT LUBRICATION	8
ENGINE OVERHAUL	9
CAM CHAIN TENSIONER	9
INSPECTION	9
INSTALLATION	9
CHASSIS	10
REAR WHEEL	10
INSTALLATION	10
STEERING KNUCKLES AND TIE-ROD ENDS	10
REMOVAL	10
INSPECTION	11
INSTALLATION	11
ADJUSTMENT	12
FRONT SHOCK ABSORBER AND LOWER ARM	14
REMOVAL	15
FREE PLAY INSPECTION	15
INSPECTION	16
INSTALLATION	17
REAR SHOCK ABSORBER AND SWINGARM	19
HANDLING NOTES	20
NOTES ON DISPOSAL	20
REMOVAL	21
FREE PLAY INSPECTION	22
INSPECTION	22
INSTALLATION	23

APPENDICES	26
SPECIFICATIONS	26
GENERAL SPECIFICATIONS	26
MAINTENANCE SPECIFICATIONS	28
GENERAL TORQUE SPECIFICATION	39
DEFINITION OF UNIT	39
CONVERSION TABLES	40
CABLE ROUTING	41
YFM200DXS WIRING DIAGRAM	



ILLUSTRATED SYMBOLS (Refer to the illustration)

Illustrated symbols ① to ⑧ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Periodic inspection and adjustment
- ③ Engine
- ④ Cooling system
- ⑤ Carburetion
- ⑥ Chassis
- ⑦ Electrical
- ⑧ Appendices

Illustrated symbols ⑨ to ⑭ are used to identify the specifications appearing in the text.

- ⑨ Filling fluid
- ⑩ Lubricant
- ⑪ Tightening
- ⑫ Wear limit, clearance
- ⑬ Engine speed
- ⑭ Ω , V, A

Illustrated symbols ⑮ to ㉑ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑮ Apply engine oil
- ⑯ Apply gear oil
- ⑰ Apply molybdenum disulfide oil
- ⑱ Apply wheel bearing grease
- ⑲ Apply lightweight lithium-soap base grease
- ⑳ Apply molybdenum disulfide grease
- ㉑ Apply locking agent (LOCTITE®)



GENERAL INFORMATION

MACHINE IDENTIFICATION

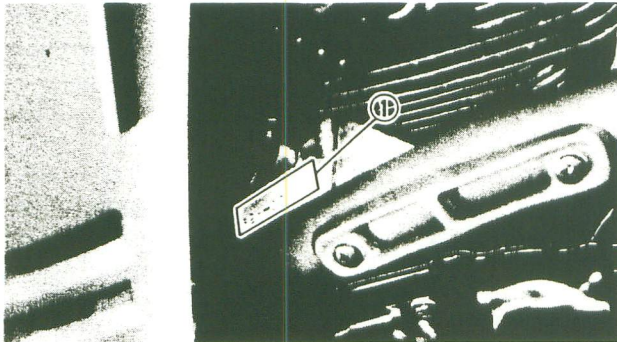
VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped into the left side of the frame.

NOTE:

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

Starting Serial Number:
JY41NU00 * GC000101



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.

Starting Serial Number:
1NU-000101

NOTE:

Designs and specifications are subject to change without notice.





PERIODIC INSPECTIONS AND ADJUSTMENTS

INTRODUCTION

This chapter includes all information necessary to perform recommended inspections and adjustments. These preventive maintenance procedures, if followed, will ensure more reliable vehicle operation and a longer service life. The need for costly overhaul work will be greatly reduced. This information applies to vehicles already in service as well as new vehicles that are being prepared for sale. All service technicians should be familiar with this entire chapter.

PERIODIC MAINTENANCE/LUBRICATION

Item	Remarks	Initial			Every	
		1 month	3 months	6 months	6 months	1 year
Valve(s) *	Check valve clearance. Adjust if necessary.	○		○	○	○
Spark plug(s)	Check condition. Clean or replace if necessary.	○	○	○	○	○
Air filter	Clean. Replace if necessary.		○	○	○	○
Carburetor *	Check idle speed/starter operation. Adjust if necessary.		○	○	○	○
Fuel line *	Check fuel hose for cracks or damage. Replace if necessary.			○	○	○
Engine oil	Replace (Warm engine before draining).	○		○	○	○
Engine oil filter	Clean	○		○		○
Engine oil strainer	Clean	○		○		○
Final gear oil	Check oil level/oil leakage. Replace every 12 months.	○				○
Brake *	Check operation. Adjust if necessary.	○	○	○	○	○
Clutch *	Check operation. Adjust if necessary.	○		○	○	○
Decompression system *	Check operation. Adjust if necessary.			○	○	○
Wheels *	Check balance/damage/runout. Repair if necessary.	○		○	○	○
Wheel bearings *	Check bearings assembly for looseness/damage. Replace if damaged.	○		○	○	○
Steering system *	Check operation/replace if damaged. Check toe-in/adjust if necessary.	○	○	○	○	○
Knuckle shaft * / Lower arms * / Steering shaft *	Lubricate every 6 months. **			○	○	○
Fittings/Fasteners *	Check all chassis fittings and fasteners. Correct if necessary.	○	○	○	○	○
Battery *	Check specific gravity. Check breather pipe for proper operation. Correct if necessary.	○	○	○	○	○

* : It is recommended that these items be serviced by a Yamaha dealer.

** : Lithium soap base grease.



ENGINE

CAM CHAIN TENSION ADJUSTMENT

This model is equipped with the automatic cam chain tensioner. No adjustment is necessary.

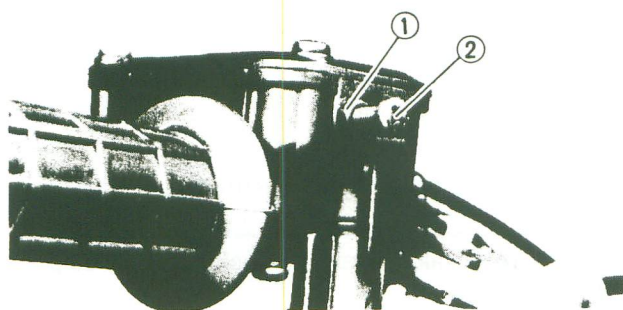
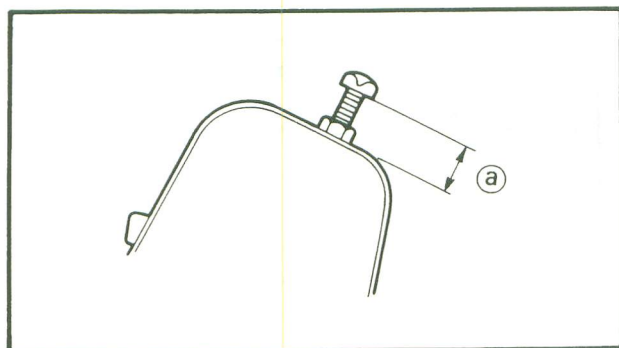
SPEED LIMITER ADJUSTMENT

The speed limiter keeps the carburetor throttle from becoming full-open even when the throttle grip is turned to a maximum. Screwing in the adjuster stops the engine speed from increasing.

1. Adjust:

- Speed limiter length

By the following adjustment steps.



Speed limiter length adjustment steps:

- Loosen the locknut ①.
- Turn the adjuster ② clockwise or counter-clockwise until proper length is attained.



Speed Limiter Length (a) :

Maximum:
12 mm (0.47 in)

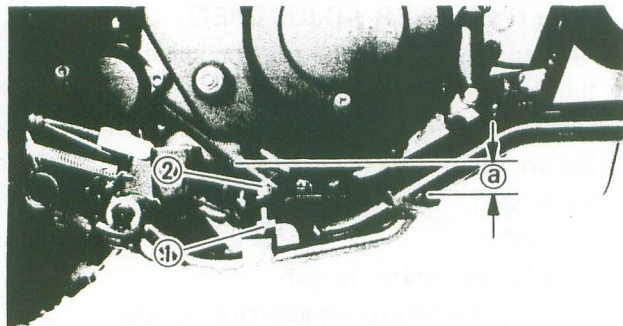
- Tighten the locknut.

WARNING:

- Particularly for a beginner rider, the speed limiter should be screwed in completely. Screw it out little by little as his riding technique improves. Never remove the speed limiter from the outset.
- For proper throttle lever operation, do not turn out the adjuster more than 12 mm (0.47 in). Also adjust the throttle lever free play always to 3 ~ 5 mm (0.12 ~ 0.20 in).


FRAME
REAR BRAKE LEVER AND PEDAL ADJUSTMENT
WARNING:

Always adjust both the brake pedal and the brake lever whenever adjusting the rear brake.


1. Adjust:

- Pedal height (a)
- By the following adjustment steps.

Brake pedal height adjustment steps:

- Loosen the locknut (1).
- Turn the adjuster (2) until the pedal height (a) is within the specified limits.



Pedal Height (a) :
5 mm (0.2 in)
Below the Footrest Top End

- Tighten the locknut.

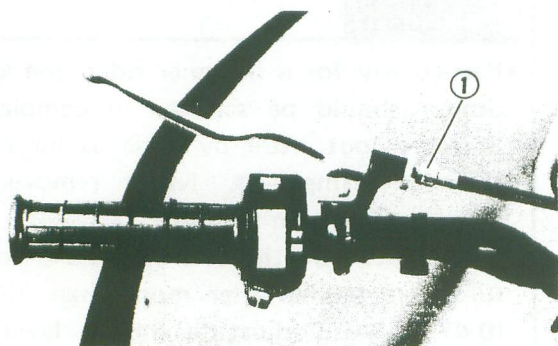
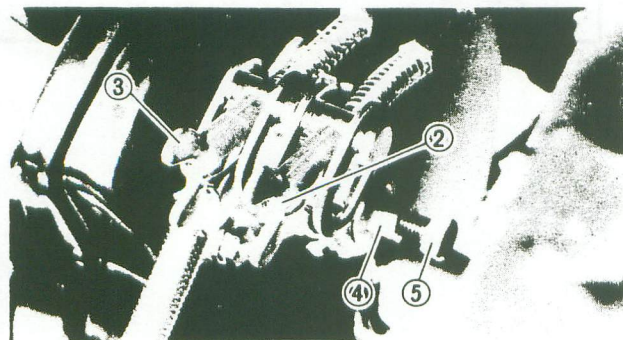
2. Adjust:

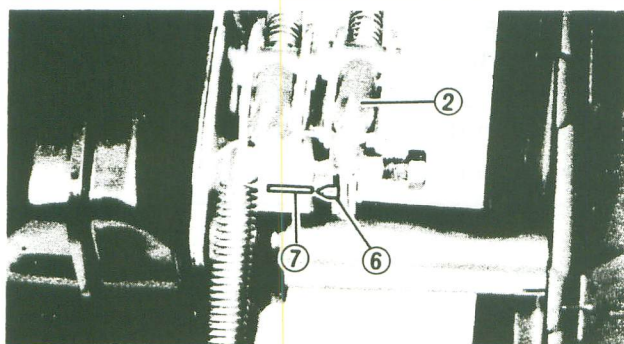
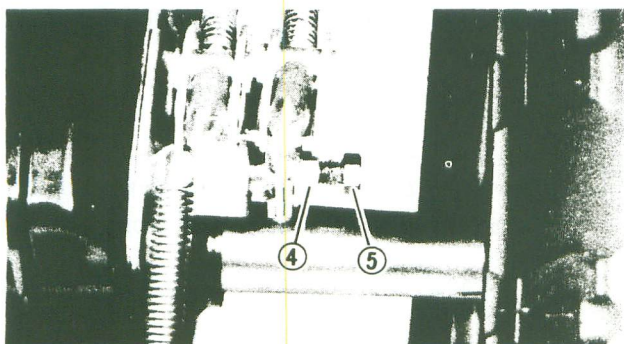
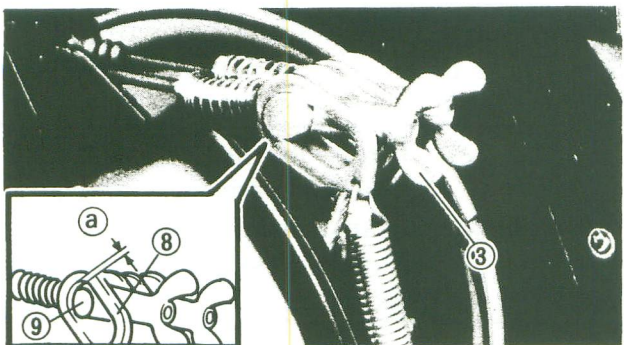
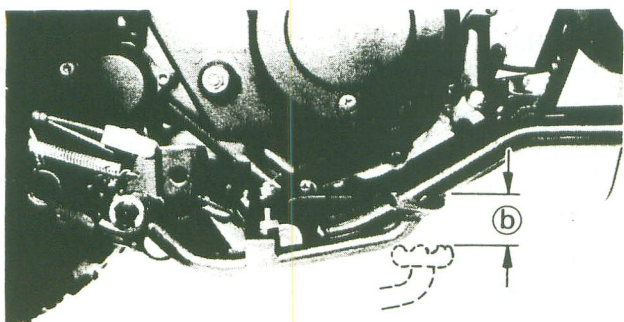
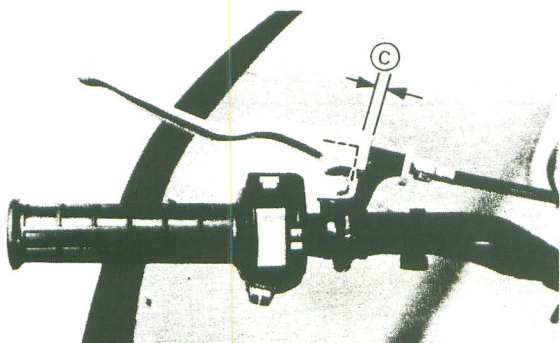
- Free play (brake lever)
 - Free play (brake pedal)
- By the following adjustment steps.

Step for brake lever and brake pedal free play adjustment:
NOTE:

Before adjusting the free plays, pump the brake pedal 2 to 3 times.

- Fully loosen the brake lever cable adjuster (handlebar) (1).
- Fully loosen both brake lever cable adjuster (caliper) (2) and brake pedal cable adjuster (caliper) (3).
- Loosen the locknut (caliper) (4) and the adjusting bolt (caliper) (5).





- Screw in the brake lever cable adjuster (2) to align the caliper lever match mark (6) with the caliper projection (7).
- Slowly turn the adjusting bolt (5) clockwise by hand until resistance is felt.
- Turn it 1/4 counterclockwise.
- Tighten the locknut (4).

CAUTION:

When tightening the locknut (4), hold the adjusting bolt (5) with a spanner so that the adjusting bolt is not turned together with the locknut.

- Turn the brake pedal cable adjuster (3) clockwise until the gap (a) is within the specified limits.



Gap (a) :
0 ~ 1 mm (0 ~ 0.04 in)

(8) Brake caliper lever (9) Pin

WARNING:

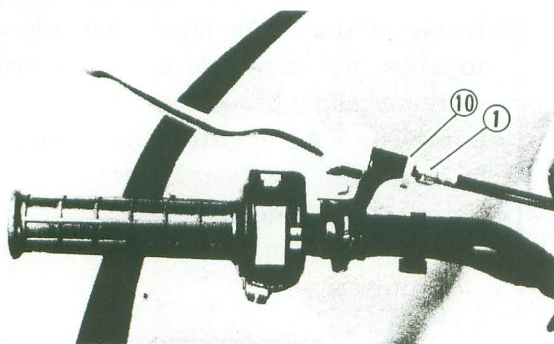
After this adjustment is performed, block the rear of the machine off the ground, and spin the rear wheels to ensure there is no brake drag. If any brake drag is noticed, perform the above steps again.

- Inspect the free play (brake pedal) (b) and then the free play (brake lever) (c) whether they are within specification. If the free play (brake pedal) (b) is not, perform the aforementioned steps again. If the free play (brake pedal) (b) is within specification and the free play (brake lever) (c) is not, go to the next steps.



Free Play (Brake Pedal) (b) :
20 ~ 30 mm (0.8 ~ 1.2 in)

Free Play (Brake Lever) (c) :
5 ~ 8 mm (0.2 ~ 0.3)



- Loosen the locknut (handlebar) ⑩ , and turn the brake lever cable adjuster (handlebar) ① until the free play (brake lever) is within the specification.
- Tighten the locknut (handlebar).

FRONT SHOCK ABSORBER ADJUSTMENT

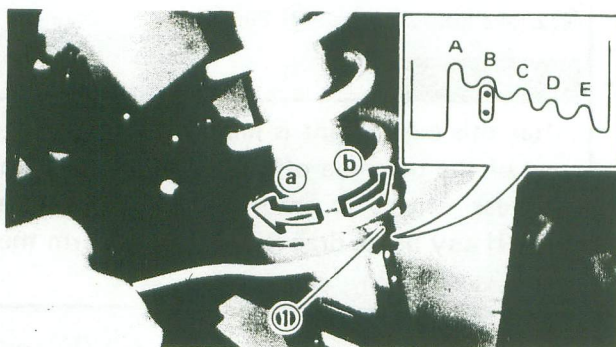
1. Adjust:

- Spring preload

NOTE:

The spring preload of the front shock absorber can be adjusted to suit rider's preference, weight, and the course conditions.

By the following adjustment steps.



Spring preload adjustment steps:

- Adjust the spring preload with the spring seat ⑪ .

Stiffer (a) → Increase the spring preload.
(Turn the spring seat clockwise.)

Softer (b) → Decrease the spring preload.
(Turn the spring seat counter-clockwise.)

Standard Position: B

Softest Position: A

Stiffest Position: E

NOTE:

When adjusting, use the special wrench which is included in the owner's tool kit.

WARNING:

Always adjust each (left and right) shock absorber to the same setting. Uneven adjustment can cause poor handling and loss of stability.



REAR SHOCK ABSORBER ADJUSTMENT

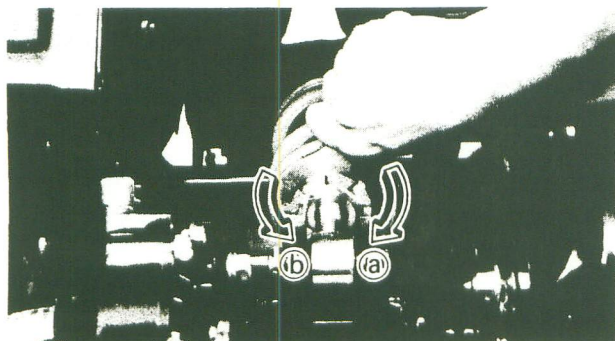
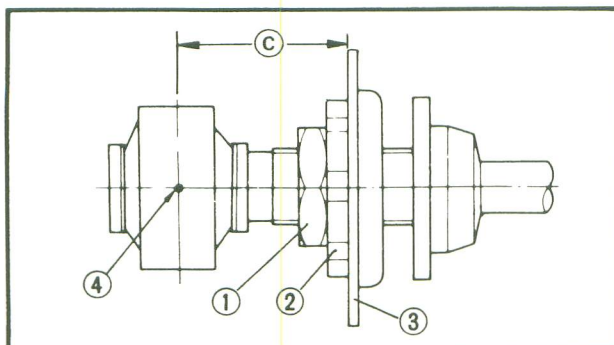
1. Adjust:

- Spring preload

NOTE:

The spring preload of the rear shock absorber can be adjusted to suit rider's preference, weight, and the course conditions.

By the following adjustment steps.



Spring preload adjustment steps:

- Loosen the locknut ① .
- Adjust the spring preload with the adjuster ② .

Stiffer ① → Increase the spring preload.
(Turn the adjuster clockwise.)

Softer ② → Decrease the spring preload.
(Turn the adjuster counter-clockwise.)

NOTE:

- The spring preload is adjusted by changing the set length ③ of the spring seat ③ . When adjusting, use the special wrench which is included in the owner's tool kit.
- One complete turn of the adjuster will change the set length 1 mm (0.04 in). Make changes in increments of 10 mm (0.4 in) at a time.



Standard Set Length:
70 mm (2.76 in)

Minimum Set Length:
65 mm (2.56 in)

Maximum Set Length:
75 mm (2.95 in)

CAUTION:

Never attempt to turn the adjuster beyond the maximum or minimum setting.

- Tighten the locknut.



Locknut:
42 Nm (4.2 m·kg, 30 ft·lb)

CAUTION:

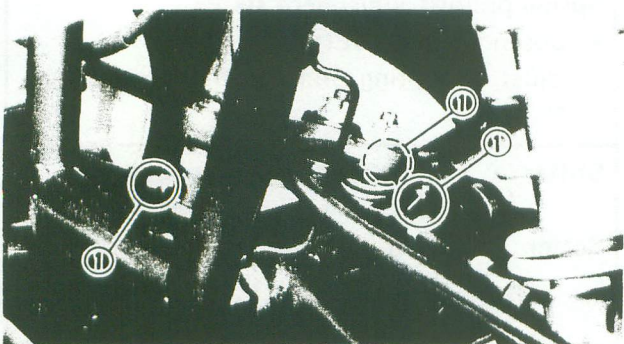
Always tighten the locknut against the spring adjuster and torque the locknut to specification.



1. Lubricate:

- Pivot points (knuckle shafts, lower arms and steering shaft) ①

Use a grease gun.





ENGINE OVERHAUL

CAM CHAIN TENSIONER
INSPECTION

1. Inspect:

- Chain tensioner rod ①
 - Gasket ②
- Damage/Wear → Replace.

INSTALLATION

1. Install:

- Cam chain tensioner
- By the following steps.

Cam chain tensioner installing steps:

- Remove the chain tensioner cap ① from the chain tensioner assembly ②.
- Insert a small screwdriver ③ into the tensioner body slit. While pressing the tensioner rod, rotate the screwdriver counterclockwise until it stops turning.
- While still pressing the tensioner rod, remove the screwdriver.
- Insert a suitable plate (steel) ④ into the tensioner body slit.

NOTE:

Cut a suitable plate out of a steel sheet 1 mm (0.04 in) thick, to the dimensions as shown.

- Install the cam chain tensioner body (with a suitable plate) onto the cylinder.

NOTE:

Always use a new gasket.

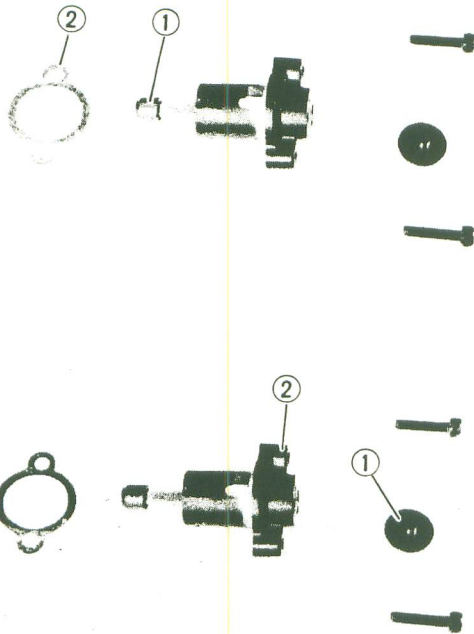
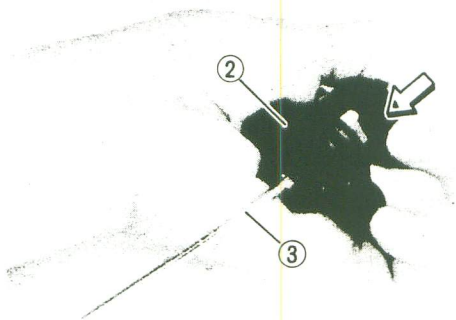
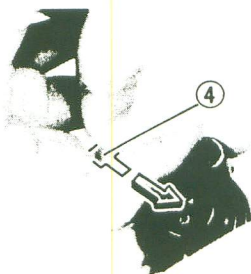
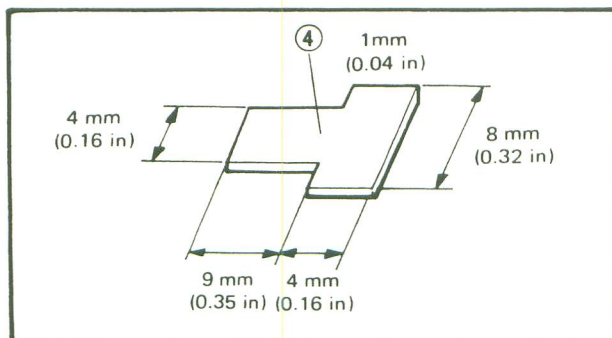


Cam Chain Tensioner Body:
12 Nm (1.2 m·kg, 8.7 ft·lb)

- Remove a suitable plate.
- Install the tensioner cap.



Cam Chain Tensioner Cap:
7 Nm (0.7 m·kg, 5.1 ft·lb)



**CHAS**

REAR WHEEL/STEERING KNUCKLES AND TIE-ROD ENDS

CHASSIS

REAR WHEEL

INSTALLATION

Rear Wheel Installation

1. Install:

- Rear wheels

NOTE:

The arrow mark ① on the tire must point toward the rotating direction [A] of the wheel.

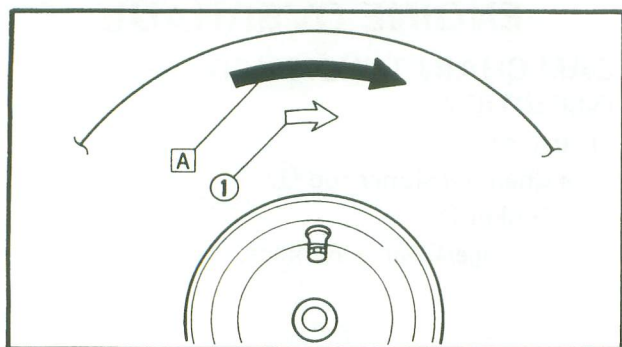
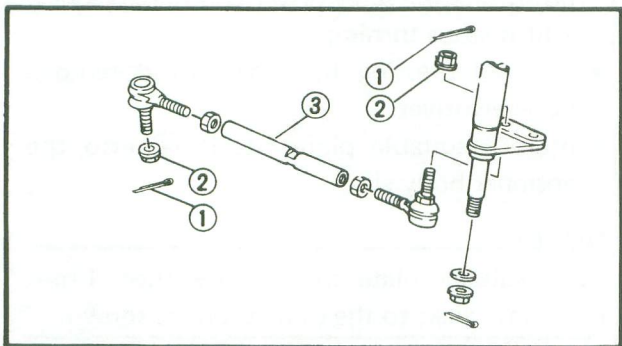
2. Tighten:

- Nuts (Rear wheel)



Nuts (Rear wheel):

45 Nm (4.5 m·kg, 32 ft·lb)



STEERING KNUCKLES AND TIE-ROD ENDS

REMOVAL

1. Remove:

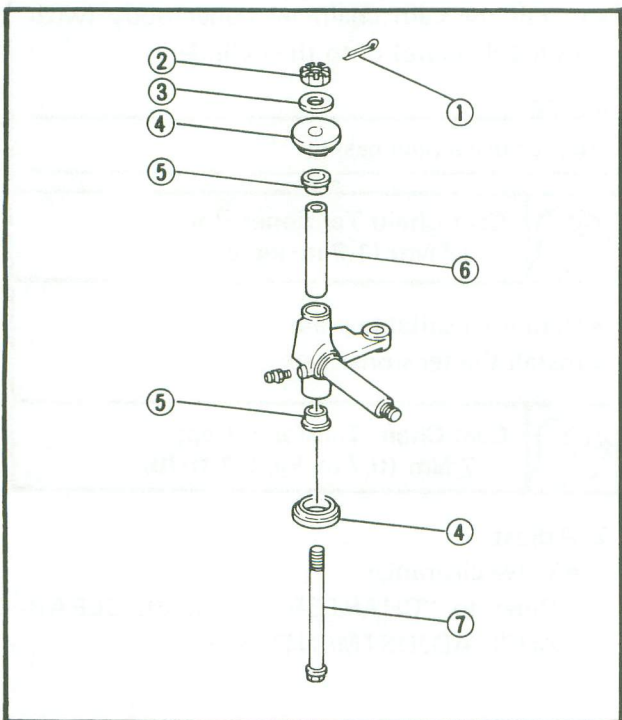
- Front wheels
- Front hubs

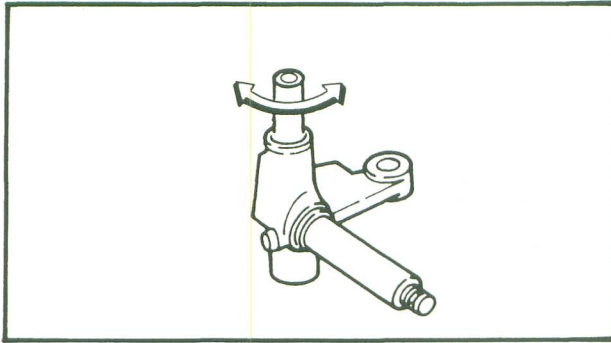
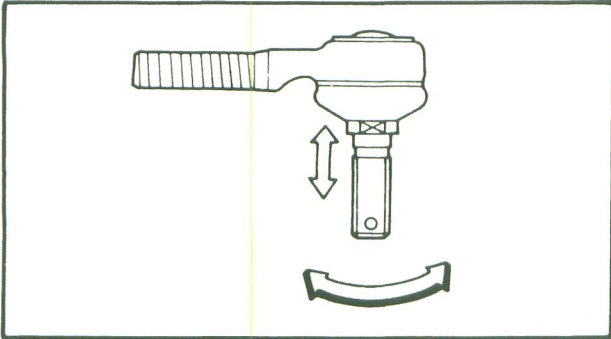
2. Remove:

- Cotter pins ①
- Nuts (tie-rod end) ②
- Tie-rod ③

3. Remove:

- Cotter pin ①
- Nut (steering knuckle) ②
- Plain washer ③
- Thrust covers ④
- Bushings ⑤
- Spacer ⑥
- Knuckle shaft ⑦



**INSPECTION**

1. Check:

- Spacer free play

Spacer is loose → Replace spacer and bushings as a set.

Insert the spacer into the knuckle, and check for free play.

2. Check:

- Tie-rod free play and movement

Tie-rod free play exists → Replace tie-rod end.

Tie-rod turns roughly → Replace tie-rod end.

3. Inspect:

- Thrust cover

Wear/Damage → Replace.

INSTALLATION

When installing the tie-rod, reverse the removal procedure. Note the following points.

1. Apply:

- Lithium base grease

Lightly grease to the knuckle shaft, bushings and thrust covers.

2. Tighten:

- Nuts (steering knuckles)



Nuts (Steering Knuckles):
35 Nm (3.5 m·kg, 25 ft·lb)

CAUTION:

Avoid over-tightening.

3. Install:

- Cotter pin

WARNING:

Always use a new cotter pin.

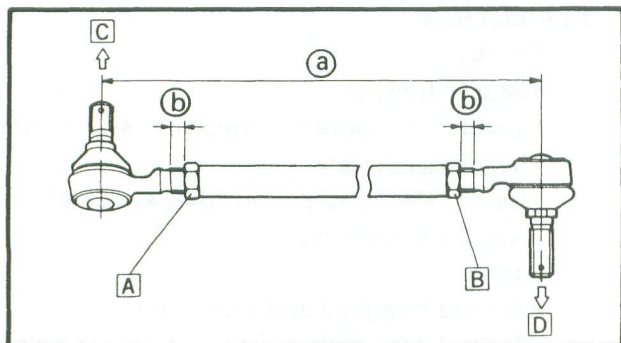
4. Adjust:

- Tie-rod assembly length

By the following adjustment steps.

**CHAS**

STEERING KNUCKLES AND TIE-ROD ENDS



Tie-rod assembly length adjustment steps:

- Loosen the locknuts.
- Adjust the tie-rod assembly length (a) by turning both tie-rod ends.



Tie-rod Assembly Length (a) :
300 mm (11.8 in)

- | | |
|-----------------------------|----------------------------|
| A Right-hand-threads | C To steering shaft |
| B Left-hand-threads | D To knuckle |

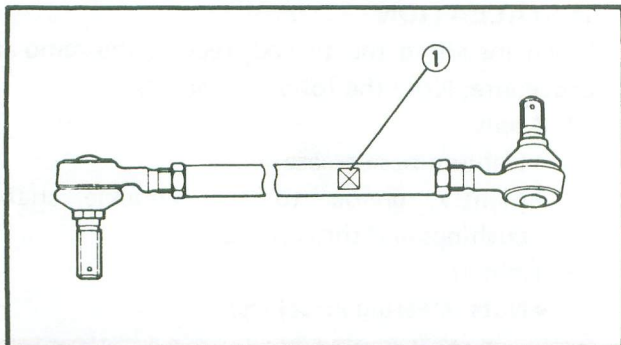
NOTE:

The threads (b) on both tie-rod ends must be of the same length.

- Tighten the locknuts.



Locknut (Tie-rod):
35 Nm (3.5 m·kg, 25 ft·lb)



5. Install:

- Tie-rods (Left and right)

NOTE:

Be sure to position the tie-rod so that its white painted mark (1) is on the right-hand rod.

6. Tighten:

- Nuts (Tie-rod end)



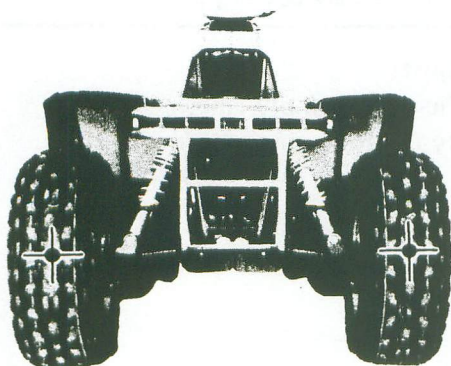
Nuts (Tie-rod end):
40 Nm (4.0 m·kg, 29 ft·lb)

7. Install:

- Cotter pins

WARNING:

Always use a new cotter pin.



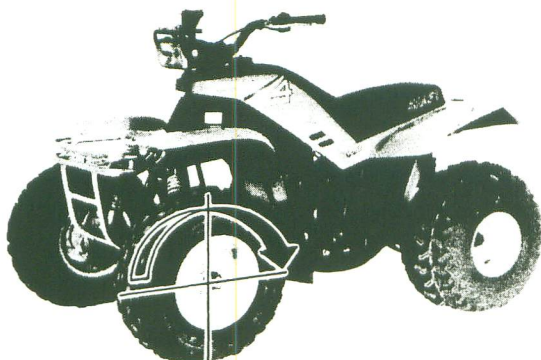
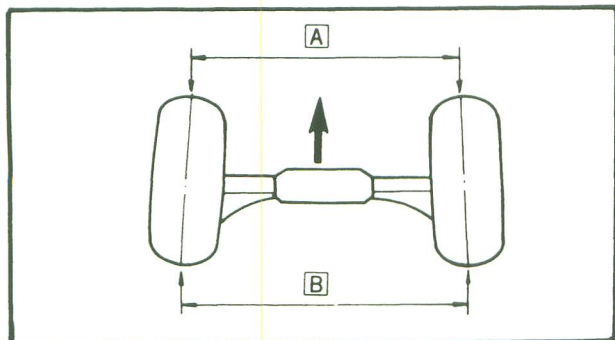
ADJUSTMENT

Toe-in Adjustment

1. Place the machine on a level place.
2. Measure:
 - Toe-inBy the following measurement steps.

Toe-in measurement steps:

- Mark both front tire tread centers.



- Measure the width [A] between the marks.
- Move the front tires 180 degrees either forward or backward until the marks come exactly opposite.
- Measure the width [B] between the marks.
- Calculate the toe-in using the formula given below.

$$\text{Toe-in} = [B] - [A]$$



Toe-in:
0 ~ 10 mm (0 ~ 0.39 in)

- If the toe-in is incorrect, adjust the toe-in.

3. Adjust:

- Toe-in

Refer to "Tie-rod assembly length adjustment steps" section.

WARNING:

- Be sure that both tie-rod are turned by the same amount. If not, the machine will go right or left even though the handlebar is positioned straight and it may lead to mis-handling and accident.
- After setting the toe-in to specification, run the machine slowly for some distance with the hands lightly on the handlebar and check that the handlebar responds correctly. If not, turn either the right or left tie-rod within the toe-in specification.

4. Measure:

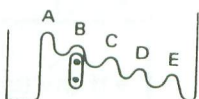
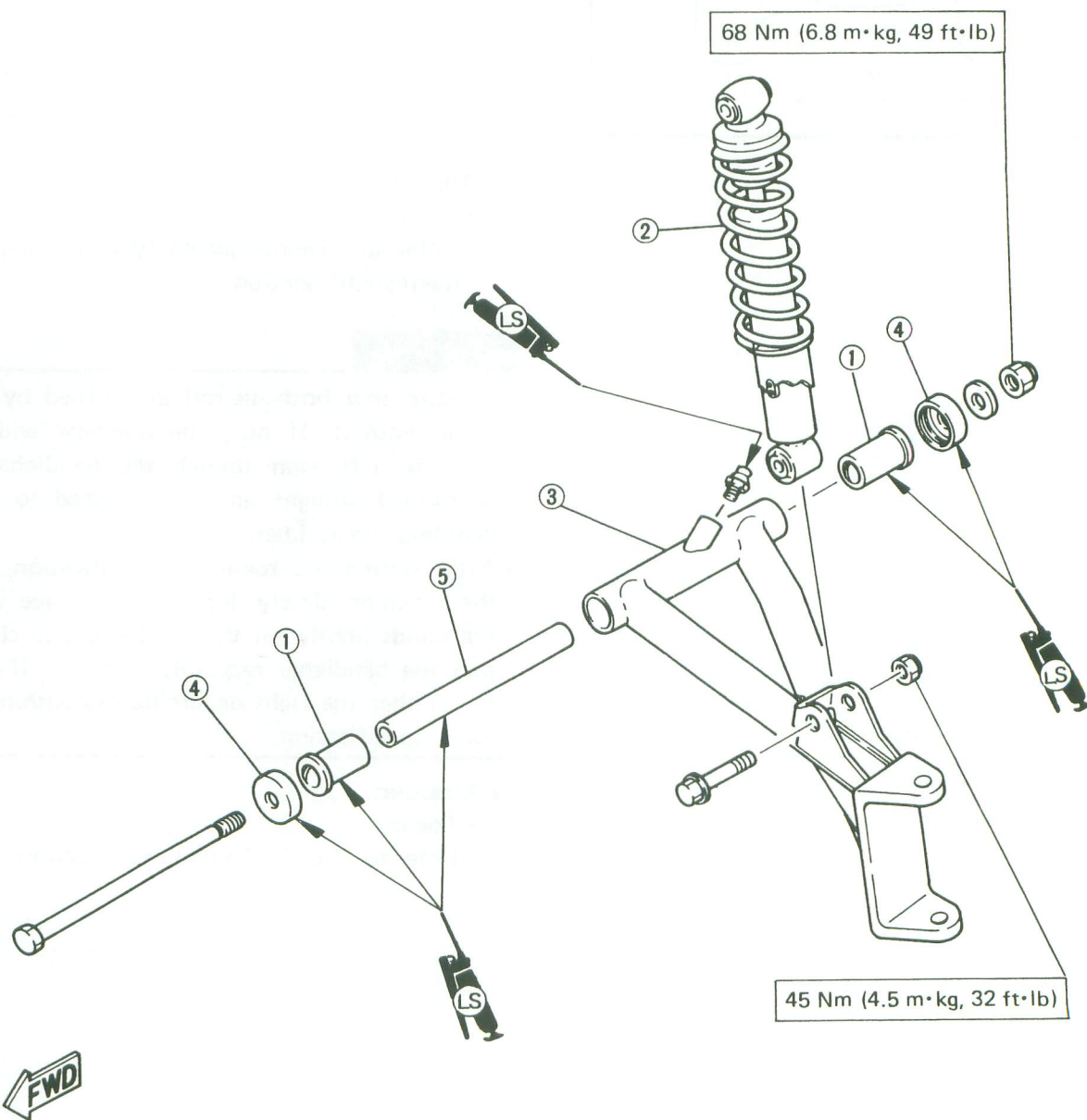
- Toe-in

Refer to "Toe-in Adjustment" section.

**CHAS****FRONT SHOCK ABSORBER AND LOWER ARM****FRONT SHOCK ABSORBER AND LOWER ARM**

- ① Bushing
- ② Front shock absorber
- ③ Lower arm
- ④ Thrust cover
- ⑤ Spacer

A	FRONT SHOCK ABSORBER
B	STANDARD POSITION: B
C	SOFTTEST POSITION: A
D	STIFFEST POSITION: E





REMOVAL

1. Remove:

- Front wheels
- Front hubs
- Front brake shoe plates

Refer to "FRONT WHEEL-REMOVAL" section.

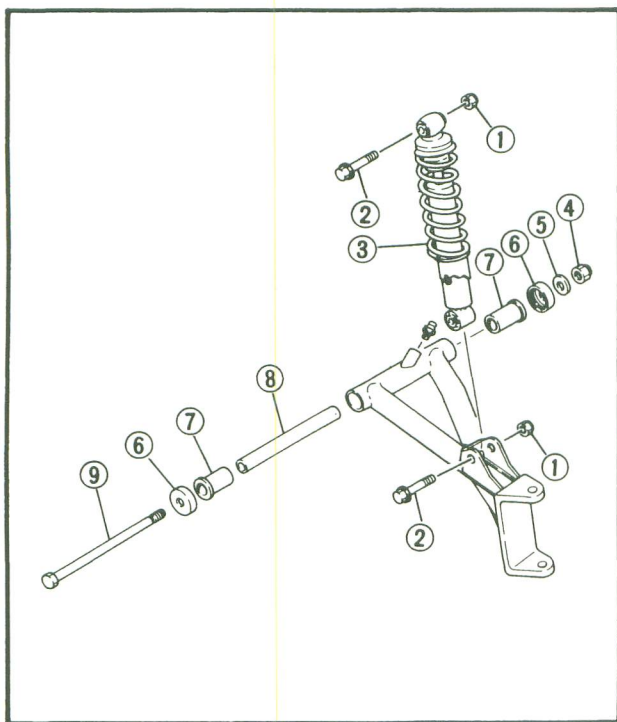
2. Remove:

- Tie-rods
- Knuckle shafts

Refer to "STEERING KNUCKLES AND TIE-ROD ENDS – REMOVAL" section.

3. Remove:

- Nuts (front shock absorber) ①
- Bolts (front shock absorber) ②
- Front shock absorber ③
- Nuts (lower arm) ④
- Plain washer ⑤
- Bolts (lower arm) ⑥
- Thrust covers ⑦
- Bushings ⑧
- Spacer ⑨



FREE PLAY INSPECTION

1. Remove:

- Front wheels
- Front hubs
- Front brake shoe plates
- Tie-rods
- Knuckle shafts
- Front shock absorber

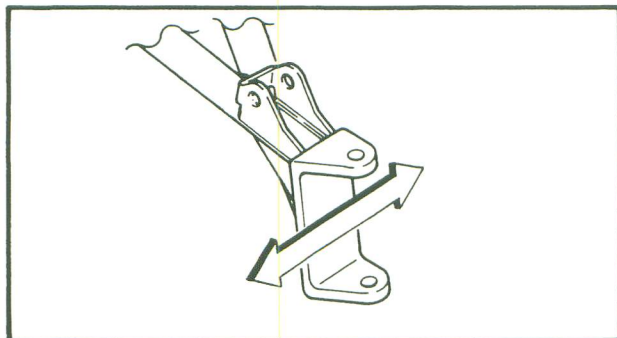
2. Check:

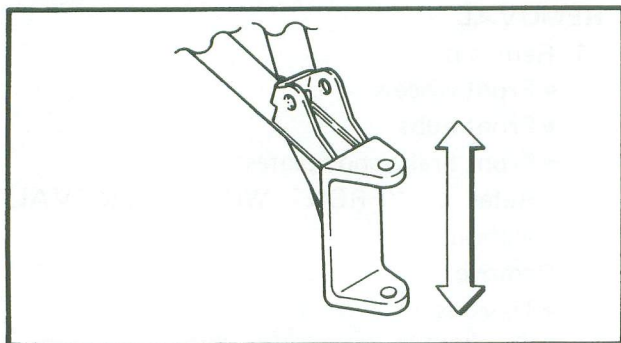
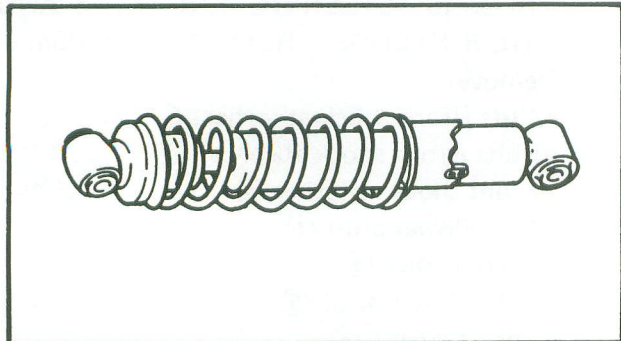
- Lower arm (side play)

Side play → Replace spacer and bushings as a set.

Move the lower arm from side to side.

There should be no noticeable side play.

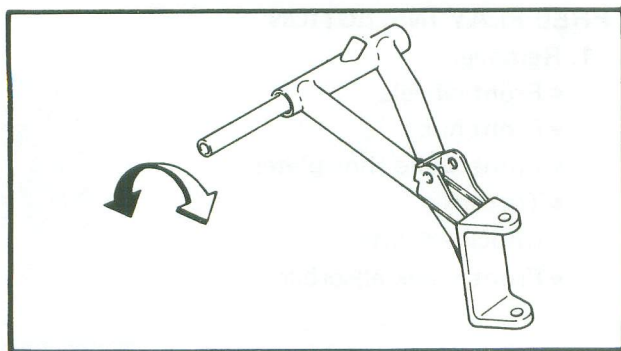


**3. Check:**

- Lower arm (vertical movement)
Tightness/Binding/Rough spots → Replace spacer and bushings as a set.
Move the lower arm up and down.

INSPECTION**Front Shock Absorber Inspection****1. Inspect:**

- Shock absorber rod
Bends/Damage → Replace the shock absorber assembly.
- Shock absorber assembly
Oil leaks → Replace the shock absorber assembly.
- Spring
Fatigue → Replace the shock absorber assembly.
Move the spring up and down.

**Lower Arm Inspection****1. Check:**

- Spacer free play
Spacer is loose → Replace spacer and bushings as a set.
Insert the spacer into the lower arm, and check for free play.

2. Inspect:

- Thrust cover
- Bushings
Wear/Damage → Replace as a set.

INSTALLATION

When installing the front wheels, reverse the removal procedure. Note the following points.

1. Apply:

- Lithium base grease

Lightly grease the lower arms, spacers, bushings and thrust covers.

2. Install:

- Lower arms

NOTE:

Be sure to position the bolt ① so that the bolt head face forward.

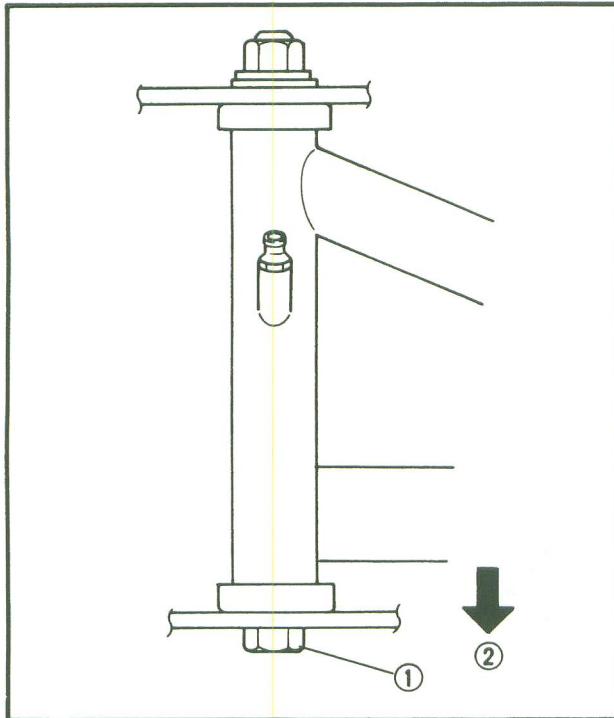
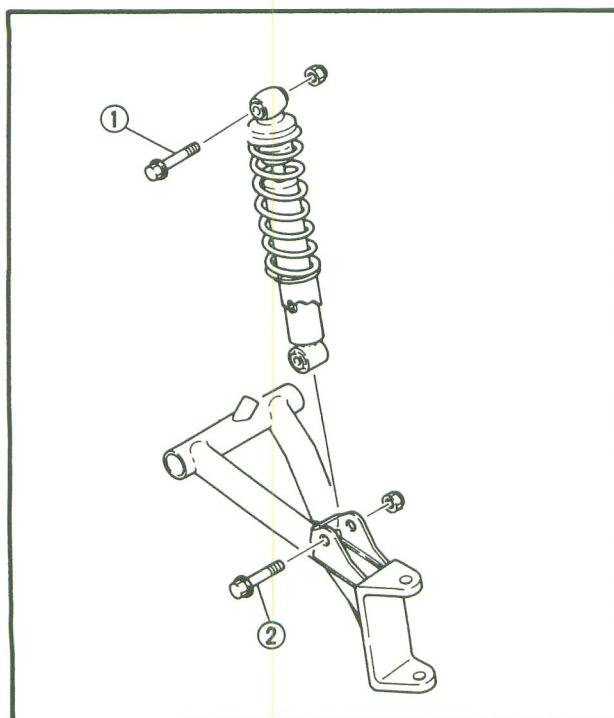
② Forward

3. Tighten:

- Nuts (Lower arm)



Nuts (Lower arm):
68 Nm (6.8 m·kg, 49 ft·lb)



4. Install:

- Front shock absorber

NOTE:

Be sure to position the bolts (upper and lower) ①, ② so that the bolt head face forward.

5. Adjust:

- Front shock absorber

Refer to "CHAPTER 2. FRONT SHOCK ABSORBER ADJUSTMENT" section.

6. Install:

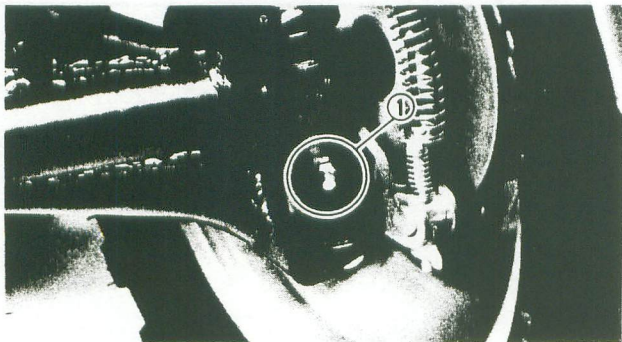
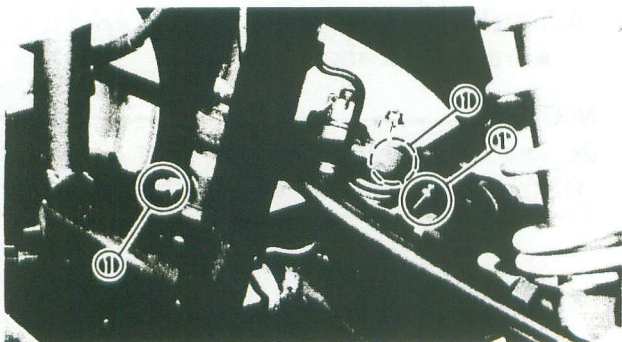
- Knuckle shafts
- Tie-rods

Refer to "STEERING KNUCKLE AND TIE-ROD ENDS – INSTALLATION" section.

7. Install:

- Front brake shoe plates
- Front hubs
- Front wheels

Refer to "FRONT WHEEL – INSTALLATION" section.



8. Lubricate:

- Pivot points (lower arms and knuckle shafts) ⑪

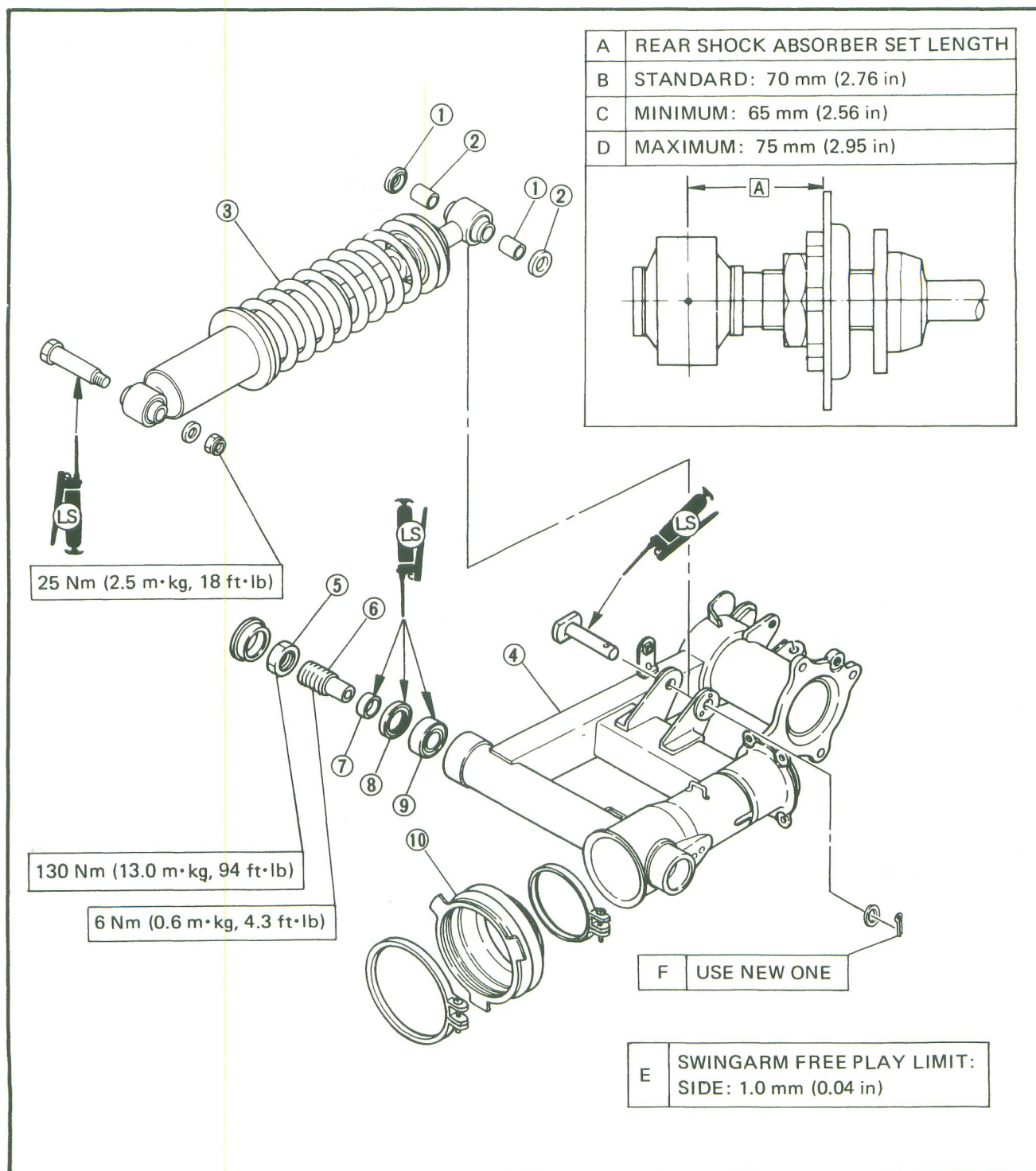
Use a grease gun.



Lithium Base Grease

REAR SHOCK ABSORBER AND SWINGARM

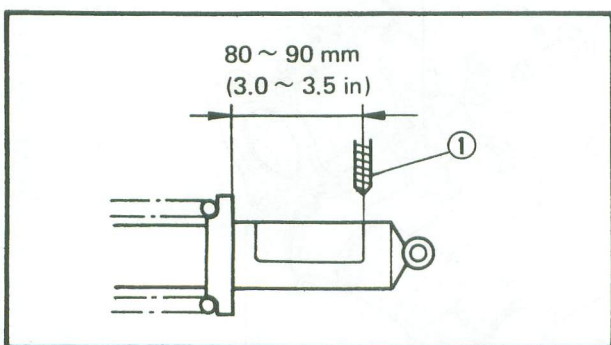
- ① Dust cover
- ② Bushing
- ③ Rear shock absorber
- ④ Swingarm
- ⑤ Locknut
- ⑥ Pivot shaft
- ⑦ Collar
- ⑧ Oil seal
- ⑨ Taper roller bearing
- ⑩ Rubber boot



HANDLING NOTES
WARNING:

This shock absorber contains highly compressed nitrogen gas. Read and understand the following information before handling the shock absorber. The manufacturer cannot be held responsible for property damage or personal injury that may result from improper handling.

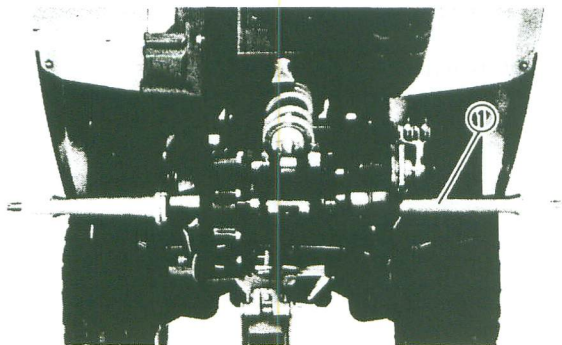
- Do not tamper or attempt to open the cylinder assembly.
- Do not subject shock absorber to an open flame or other high heat. This may cause the unit to explode due to excessive gas pressure.
- Do not deform or damage the cylinder in any way. Cylinder damage will result in poor damping performance.


NOTES ON DISPOSAL
Shock absorber disposal steps:

Gas pressure must be released before disposing shock absorber. To do so, drill ① a 2 ~ 3 mm (0.08 ~ 0.12 in) hole through the cylinder wall at a point 80 ~ 90 mm (3.0 ~ 3.5 in) under the spring seat.

CAUTION:

Wear eye protection to prevent eye damage from escaping gas and/or metal chips.



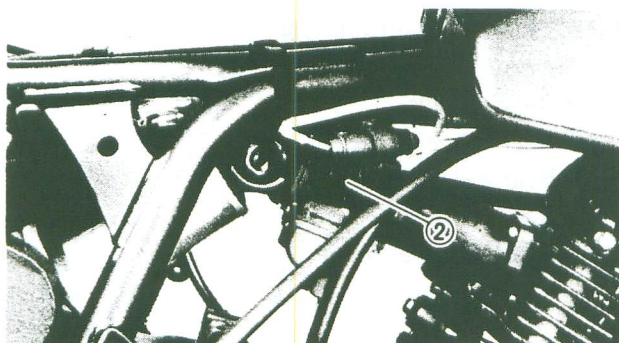
REMOVAL

1. Remove:

- Rear wheels
- Rear wheel hubs
- Rear axle ①

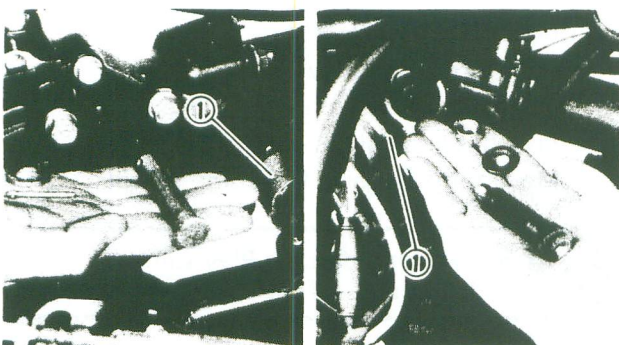
Refer to "REAR WHEEL AND REAR AXLE – REMOVAL" section.

- Rear fender
- Side covers (Left and right)
- CDI unit ②



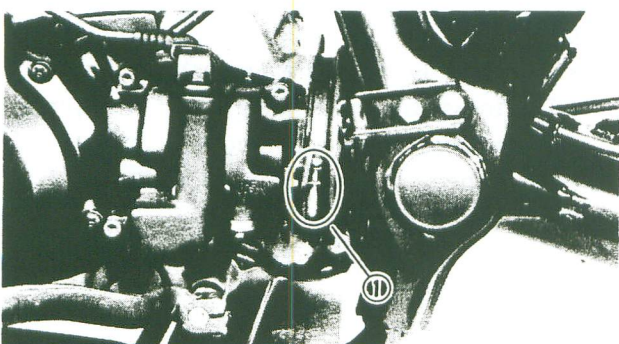
2. Remove:

- Rear shock absorber ①



3. Remove:

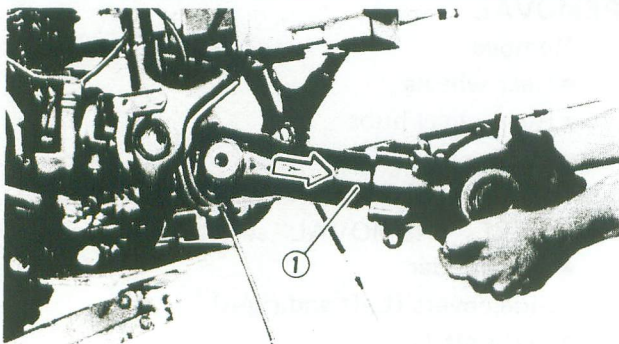
- Rubber boot ①



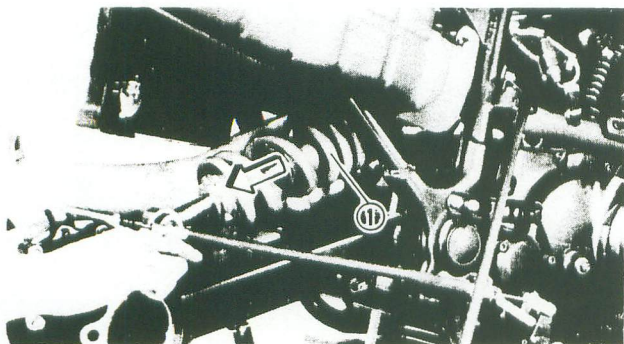
4. Remove:

- Pivot shaft caps
- Locknuts (swingarm) ①
- Pivot shafts (swingarm) ②
- Breather pipe (Final gear) ③



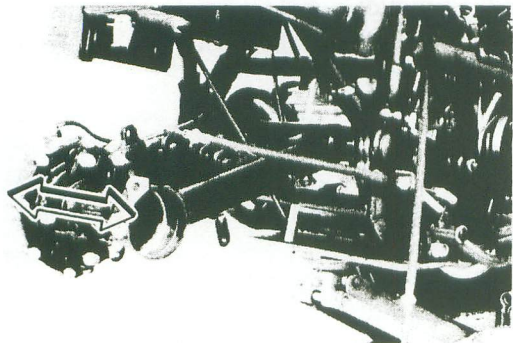


5. Remove:
- Swingarm ①

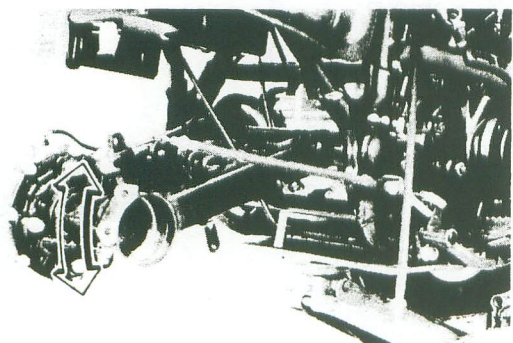


FREE PLAY INSPECTION

1. Remove:
- Rear wheels
 - Rear wheel hubs
 - Rear axle
 - Rear fender
 - Rear shock absorber ①
2. Check:
- Swingarm (side play)
Out of specification → Replace taper roller bearings and collars.
Move the swingarm from side to side.



Swingarm Side Free Play Limit:
1.0 mm (0.04 in)



3. Check:
- Swingarm (vertical movement)
Tightness/Binding/Rough spots → Replace taper roller bearings and collars.
Move the swingarm up and down.

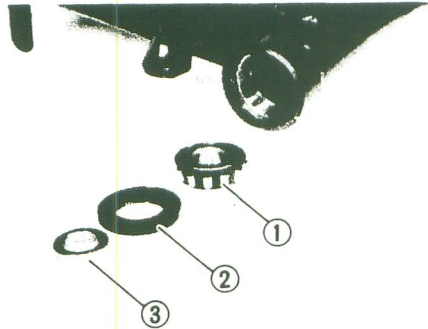
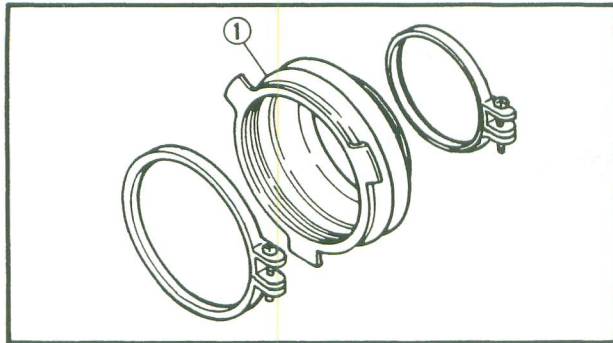


INSPECTION

Rear Shock Absorber Inspection

1. Inspect:
- Shock absorber rod
Bends/Damage → Replace the shock absorber assembly.

- Shock absorber
Oil leaks/Gas leaks → Replace the shock absorber assembly.
- Spring
Fatigue → Replace the shock absorber assembly.
Move the spring up and down.



Swingarm Inspection

1. Wash the bearings in a solvent.
2. Inspect:
 - Bearings (race/rollers) ①
Pitting/Damage → Replace.
 - Oil seals ②
 - Collars ③
Damage → Replace.
3. Inspect:
 - Rubber boot ①
Damage → Replace.

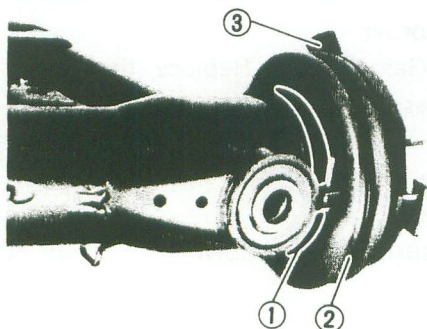
INSTALLATION

When installing the rear wheels, reverse the removal procedures. Note the following points.

1. Lubricate:
 - Bearing
 - Oil seals
 - Collars
 - Pivot shafts



**Lithium Base Waterproof Wheel
Bearing Grease**



2. Apply:
 - Adhesive (for rubber)
 - To the swingarm end ①.
3. Install:
 - Rubber boot ②

NOTE:

Be sure to position the rubber boot so that the tang ③ faces downward.

4. Install:
 - Swingarm
 - Pivot shafts

5. Tighten:
 - Pivot shafts

By the following tightening steps.

Pivot shaft tightening steps:

- Tighten the pivot shaft (left) ① to specification.



Pivot Shaft (Left):
6 Nm (0.6 m·kg, 4.3 ft·lb)

- Tighten the locknut (left) ② to specification.



Locknut (Left):
130 Nm (13.0 m·kg, 94 ft·lb)

- Tighten the pivot shaft (right) ③ until it contacts the collar ④.

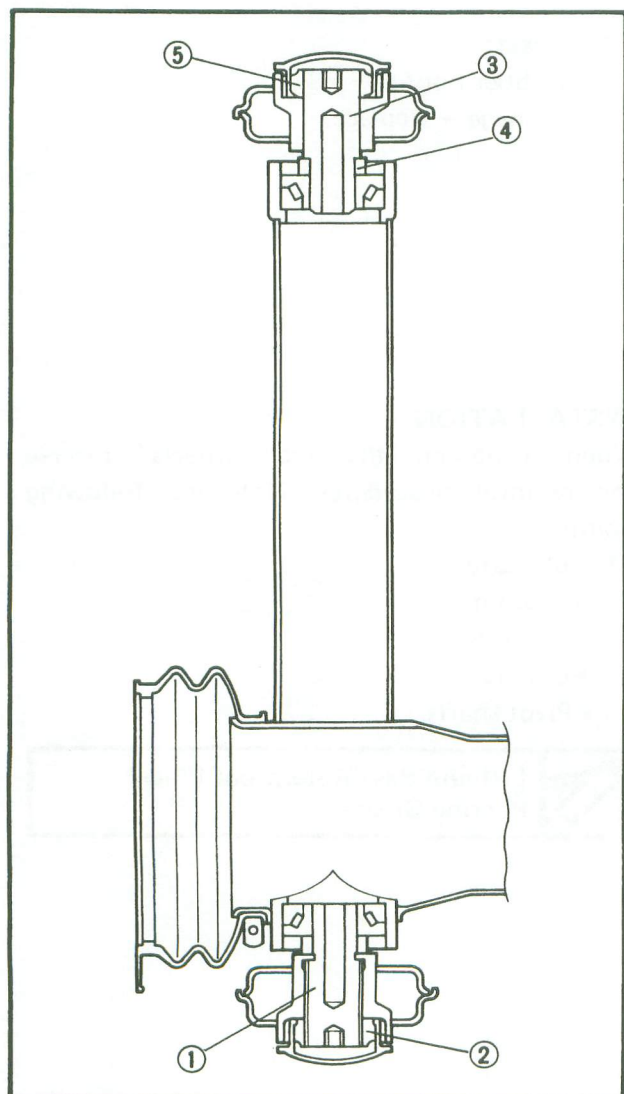


Pivot Shaft (Right):
6 Nm (0.6 m·kg, 4.3 ft·lb)

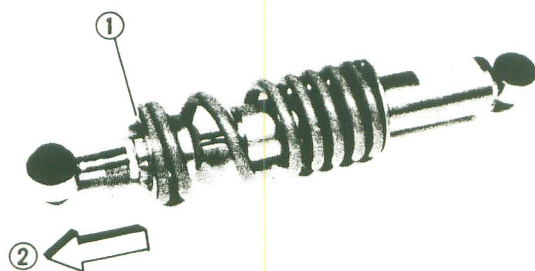
- Tighten the locknut (right) ⑤ to specification.



Locknut (Right):
130 Nm (13.0 m·kg, 94 ft·lb)



6. Check:
 - Swingarm (side play)
 - Swingarm (vertical movement)
 - Refer to "FREE PLAY INSPECTION" section.
7. Apply:
 - Lithium base grease
 - To the bolt (rear shock absorber) and pin (rear shock absorber).



8. Install:

- Rear shock absorber

NOTE:

The rear shock absorber should be installed so that the spring seat ① on the shock absorber faces downward ②.

9. Tighten:

- Bolts (rear shock absorbers)



Rear Shock Absorbers:
25 Nm (2.5 m·kg, 18 ft·lb)

10. Install:

- CDI unit
- Side covers (Left and right)
- Rear fender
- Rear axle
- Rear wheel hubs
- Rear wheels

Refer to "REAR WHEEL AND REAR AXLE – INSTALLATION" section.



APPENDICES

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YFM200DXS
Model Code Number	1NU
Vehicle Identification Number	JY41NU00 * GC000101
Engine Starting Number	1NU-000101
Dimensions:	
Overall Length	1,750 mm (68.9 in)
Overall Width	1,045 mm (41.1 in)
Overall Height	1,015 mm (40.0 in)
Seat Height	725 mm (28.5 in)
Wheelbase	1,120 mm (44.1 in)
Minimum Ground Clearance	210 mm (8.3 in)
Basic Weight:	
With Oil and Full Fuel Tank	184 kg (406 lb)
Minimum Turning Radius:	2,300 mm (90.6 in)
Engine:	
Engine Type	4-stroke, Air-cooled, SOHC
Cylinder Arrangement	Single cylinder, Forward inclined
Displacement	196 cm ³
Bore x Stroke	67.0 x 55.7 mm (2.638 x 2.193 in)
Compression Ratio	8.5 : 1
Compression Pressure	883 kPa (9.0 kg/cm ² , 128 psi)
Starting System	Electric starter and recoil starter
Lubrication System:	Wet sump
Oil Type or Grade:	
Engine Oil	SAE 10W40 type SE motor oil
<p>The chart shows temperature ranges in both Fahrenheit (0 to 90°F) and Celsius (-20 to 30°C). SAE 10W30 is recommended for 0°F to 30°F (-18°C to -1°C). SAE 10W40 is recommended for -10°F to 40°F (-23°C to 4°C). Yamaha 4-cycle oil or SAE 20W40 (20W50) is recommended for -10°F to 90°F (-23°C to 32°C).</p>	
Final Gear Case Oil	SAE 80 API GL-4 Hypoid gear oil
Oil Capacity:	
Engine Oil:	
Periodic Oil Change	1.5 L (1.3 Imp qt, 1.6 US qt)
Total Amount	1.8 L (1.6 Imp qt, 1.9 US qt)
Final Gear Case :	
Total Amount	0.13 L (0.11 Imp qt, 0.14 US qt)
Air Filter	Wet type element

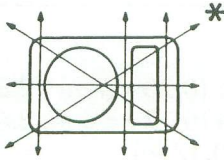


Model	YFM200DXS
Fuel: Type Tank Capacity Reserve Amount	Regular gasoline 9.5 L (2.1 Imp gal, 2.5 US gal) 1.9 L (0.4 Imp gal, 0.5 US gal)
Carburetor: Type/Manufacturer	VM22SH/MIKUNI
Spark Plug: Type/Manufacturer Gap	D7EA (N.G.K.) or X22ES-U (N.D.) 0.6 ~ 0.7 mm (0.024 ~ 0.028 in)
Clutch Type:	Wet, Centrifugal automatic
Transmission : Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio: 1st 2nd 3rd 4th 5th Reverse	Gear 73/22 (3.318) Shaft drive 19/18 x 46/11 (4.114) Constant mesh, 5-speed forward, 1-speed reverse Left foot operation, Left hand operation 34/12 (2.833) 34/19 (1.780) 29/22 (1.318) 26/25 (1.040) 23/28 (0.821) 34/12 (2.833)
Chassis: Frame Type Caster Angle Trail Toe-in Tread (F) Tread (R)	Steel tube frame 2.5° 11.2 mm (0.44 in) 0 ~ 10 mm (0 ~ 0.39 in) 770 mm (30.3 in) 775 mm (30.5 in)
Tire: Type Size (F) Size (R)	Tubeless 22 x 8 – 10 DUNLOP KT486A 22 x 11 – 8 DUNLOP KT529
Tire Pressure (Cold Tire): Front and Rear: Standard Minimum Wear Limit	19.6 kPa (0.20 kg/cm ² , 2.8 psi) 16.7 kPa (0.17 kg/cm ² , 2.4 psi) 3 mm (0.12 in)

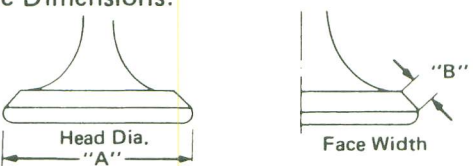


Model	YFM200DXS
Brake: Front Brake: Type Operation Rear Brake: Type Operation	Drum brake Right hand operation Single, disc brake Left hand operation and Right foot operation
Suspension: Front Rear	Swing axle Swing arm (Monocross)
Shock Absorber: Front Rear	Coil spring, Oil damper Gas/Coil spring, Oil damper
Wheel Travel: Front Rear	70 mm (2.76 in) 110 mm (4.33 in)
Electrical: Ignition System Generator System Battery Type/Capacity	CDI Magneto Flywheel Magneto GM14AZ-4A/12V, 14AH
Headlight Type	Bulb
Bulb Wattage x Quantity: Headlight Taillight	12V, 45W/45W x 1 12V, 7.5W x 1
Indicator Light Wattage x Quantity: "NEUTRAL" "REVERSE"	12V, 3.4W x 1 12V, 3.4W x 1

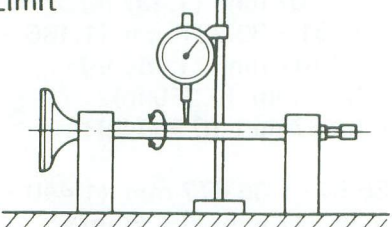
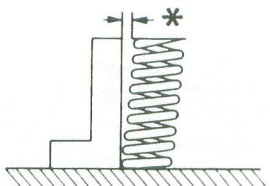
MAINTENANCE SPECIFICATIONS
Engine

Model	YFM200DXS
Cylinder Head: Warp Limit 	<0.03 mm (0.0012 in)> *Lines indicate straightedge measurement.
Cylinder: Bore Size Taper Limit Out-of-round Limit	66.97 ~ 67.02 mm (2.637 ~ 2.639 in) <0.05 mm (0.002 in) > <0.01 mm (0.0004 in) >



Model	YFM200DXS
<p>Camshaft:</p> <p>Drive Method</p> <p>Camshaft Bearing Inside Diameter</p> <p>Camshaft Outside Diameter</p> <p>Shaft-to cap Clearance</p> <p>Cam Dimensions:</p> <p>Intake:</p> <p>"A"</p> <p>< Limit ></p> <p>"B"</p> <p>< Limit ></p> <p>"C"</p> <p>< Limit ></p> <p>Exhaust:</p> <p>"A"</p> <p>< Limit ></p> <p>"B"</p> <p>< Limit ></p> <p>"C"</p> <p>< Limit ></p> <p>Camshaft Runout Limit</p> <p>Cam Chain Type/Number of Links</p> <p>Cam Chain Adjustment Method</p>	<p>Chain (Left)</p> <p>25.000 ~ 25.021 mm (0.984 ~ 0.985 in)</p> <p>24.96 ~ 24.98 mm (0.983 ~ 0.984 in)</p> <p>0.020 ~ 0.061 mm (0.0008 ~ 0.0024 in)</p> <p>36.537 ~ 36.637 mm (1.439 ~ 1.442 in)</p> <p>< 36.507 mm (1.437 in) ></p> <p>30.131 ~ 30.231 mm (1.186 ~ 1.190 in)</p> <p>< 30.101 mm (1.185 in) ></p> <p>6.587 mm (0.259 in)</p> <p>< 6.567 mm (0.258 in) ></p> <p>36.577 ~ 36.677 mm (1.440 ~ 1.444 in)</p> <p>< 36.547 mm (1.439 in) ></p> <p>30.214 ~ 30.314 mm (1.189 ~ 1.193 in)</p> <p>< 30.184 mm (1.188 in) ></p> <p>6.627 mm (0.261 in)</p> <p>< 0.607 mm (0.260 in) ></p> <p>< 0.03 mm (0.0012 in) ></p> <p>DID25SH/104 Links</p> <p>Automatic</p>
<p>Rocker Arm/Rocker Arm Shaft:</p> <p>Rocker Arm Inside Diameter</p> <p>< Limit ></p> <p>Shaft Outside Diameter</p> <p>< Limit ></p> <p>Arm-to-shaft Clearance</p> <p>< Limit ></p>	<p>12.000 ~ 12.018 mm (0.4724 ~ 0.4731 in)</p> <p>< 12.078 mm (0.4755 in) ></p> <p>11.985 ~ 11.991 mm (0.4718 ~ 0.4721 in)</p> <p>< 11.955 mm (0.4707 in) ></p> <p>0.009 ~ 0.037 mm (0.0004 ~ 0.0015 in)</p> <p>< 0.08 mm (0.0032 in) ></p>
<p>Valve, Valve Seat, Valve Guide:</p> <p>Valve Clearance (Cold):</p> <p>IN.</p> <p>EX.</p> <p>Valve Dimensions:</p>  <p>"A" Head Dia.</p> <p>IN.</p> <p>EX.</p> <p>"B" Face Width</p> <p>IN.</p> <p>EX.</p> <p>"C" Seat Width</p> <p>IN.</p> <p>< Limit ></p> <p>EX.</p> <p>< Limit ></p> <p>"D" Margin Thickness Limit</p> <p>IN.</p> <p>EX.</p> <p>Stem Outside Diameter</p> <p>IN.</p> <p>< Limit ></p> <p>EX.</p> <p>< Limit ></p>	<p>0.05 ~ 0.09 mm (0.002 ~ 0.004 in)</p> <p>0.11 ~ 0.15 mm (0.004 ~ 0.006 in)</p>  <p>33.9 ~ 34.1 mm (1.335 ~ 1.343 in)</p> <p>28.4 ~ 28.6 mm (1.118 ~ 1.126 in)</p> <p>2.26 mm (0.089 in)</p> <p>2.26 mm (0.089 in)</p> <p>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</p> <p>< 1.6 mm (0.063 in) ></p> <p>0.9 ~ 1.1 mm (0.035 ~ 0.043 in)</p> <p>< 1.6 mm (0.063 in) ></p> <p>0.8 ~ 1.2 mm (0.031 ~ 0.047 in)</p> <p>0.8 ~ 1.2 mm (0.031 ~ 0.047 in)</p> <p>5.975 ~ 5.990 mm (0.2352 ~ 0.2358 in)</p> <p>< 5.95 mm (0.2343 in) ></p> <p>5.960 ~ 5.975 mm (0.2346 ~ 0.2352 in)</p> <p>< 5.95 mm (0.2343 in) ></p>



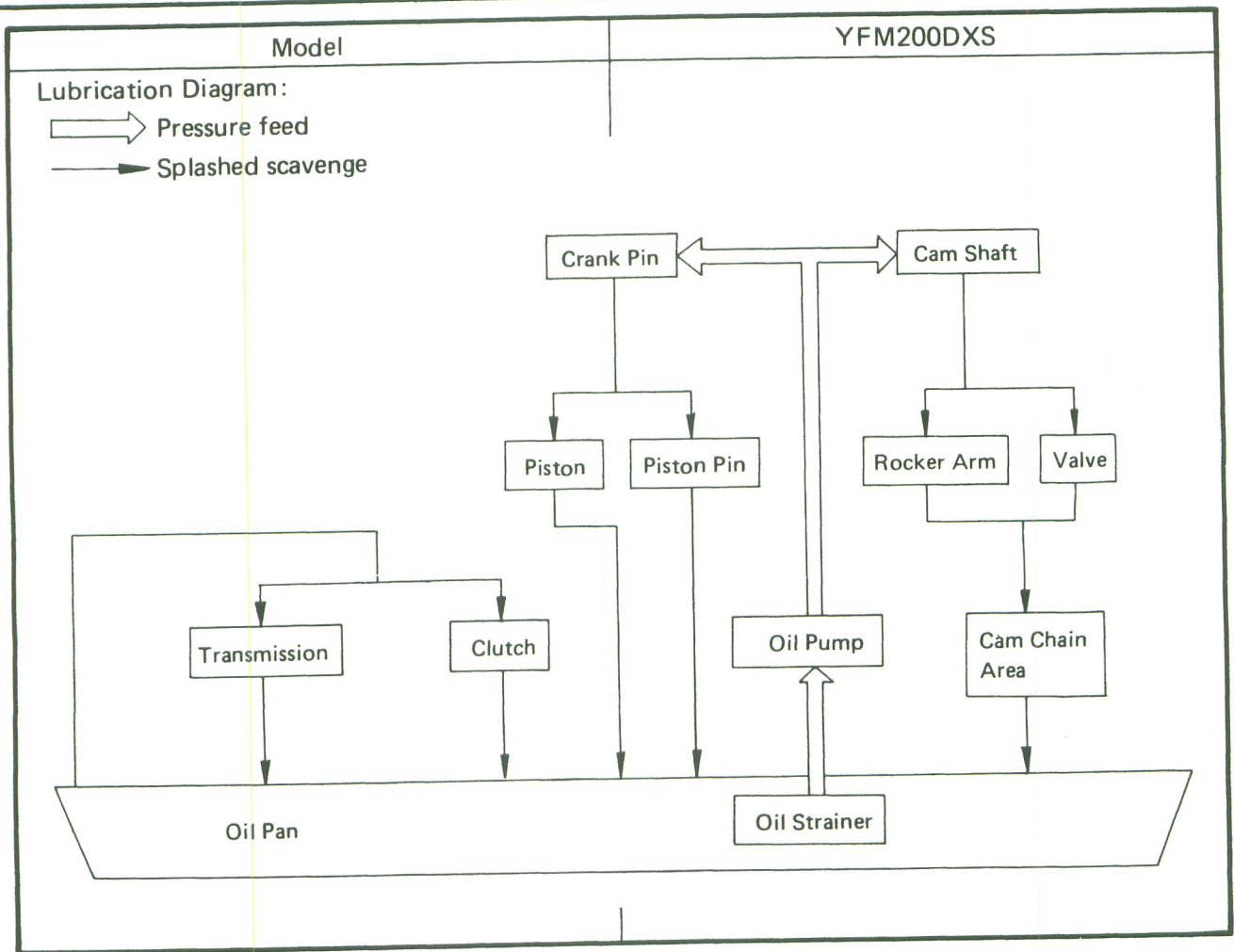
Model		YFM200DXS
Guide Inside Diameter	IN. < Limit > EX.	6.000 ~ 6.012 mm (0.2362 ~ 0.2367 in) < 6.03 mm (0.2374 in) > 6.000 ~ 6.012 mm (0.2362 ~ 0.2367 in)
Stem-to-guide Clearance	< Limit > IN. < Limit > EX.	< 6.03 mm (0.2374 in) > 0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in) < 0.08 mm (0.0031 in) > 0.025 ~ 0.052 mm (0.0010 ~ 0.0021 in)
Stem Runout Limit	< Limit >	< 0.1 mm (0.0039 in) > 0.02 mm (0.0008 in)
		
Valve Seat Width		0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
< Limit >		< 1.6 mm (0.063 in) >
Valve Spring:		
Free Length:		
Inner Spring	IN. < Limit > EX.	35.5 mm (1.40 in) < 33.5 mm (1.32 in) > 35.5 mm (1.40 in)
Outer Spring	< Limit > IN. < Limit > EX.	< 33.5 mm (1.32 in) > 37.2 mm (1.46 in) < 35.2 mm (1.39 in) > 37.2 mm (1.46 in)
Compressed Length (Valve Closed):	< Limit >	< 35.2 mm (1.39 in) >
Inner Spring	IN. EX.	30.5 mm (1.201 in) 30.5 mm (1.201 in)
Outer Spring	IN. EX.	32.0 mm (1.260 in) 32.0 mm (1.260 in)
Tilt Limit * :	IN. & EX.	2.5° or 1.6 mm (0.006 in)
		
Direction of Winding (Top view)		
		IN
		EX
		OUTER SPRING
		INNER SPRING
		OUTER SPRING
		INNER SPRING



Model		YFM200DXS
Piston: Piston Size "D" / Measuring Point "H" Piston Over Size: 2nd 4th Piston Clearance		 66.935 ~ 66.985 mm (2.6352 ~ 2.6372 in)/ 7.5 mm (0.30 in) (From bottom line of piston skirt) 67.50 mm (2.6575 in) 68.00 mm (2.6772 in) 0.025 ~ 0.045 mm (0.0010 ~ 0.0018 in)
Piston Ring: Sectional Sketch: Top Ring 2nd Ring Oil Ring End Gap (Installed): < Limit > : Side Clearance: < Limit > :		 Plain B = 1.2 mm (0.05 in) T = 2.7 mm (0.11 in) Plain B = 1.2 mm (0.05 in) T = 2.7 mm (0.11 in) Expander B = 2.5 mm (0.10 in) T = 2.8 mm (0.11 in) Top Ring 0.15 ~ 0.30 mm (0.006 ~ 0.012 in) 2nd Ring 0.15 ~ 0.30 mm (0.006 ~ 0.012 in) Oil Ring 0.3 ~ 0.9 mm (0.012 ~ 0.036 in) Top Ring < 0.4 mm (0.016 in) > 2nd Ring < 0.4 mm (0.016 in) > Oil Ring — Top Ring 0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in) 2nd Ring 0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in) Top Ring < 0.12 mm (0.0047 in) > 2nd Ring < 0.12 mm (0.0047 in) >
Crankshaft: Crank Width "A" Big End Side Clearance "B" < Limit > Runout Limit: "C1" "C2" Small End Free Play "F" < Limit >		55.95 ~ 56.00 mm (2.203 ~ 2.205 in) 0.35 ~ 0.65 mm (0.014 ~ 0.026 in) < 0.7 mm (0.028 in) > < 0.02 mm (0.0008 in) > < 0.06 mm (0.0024 in) > 0.8 ~ 1.0 mm (0.03 ~ 0.04 in) < 2.0 mm (0.08 in) >
Balancer Drive Method:		Gear
Clutch: Clutch Shoe: Thickness Quantity Wear Limit		2.0 mm (0.08 in) 3 < 1.5 mm (0.06 in) >



Model	YFM200DXS
Friction Plate:	
Thickness	2.92 ~ 3.08 mm (0.115 ~ 0.121 in)
Quantity	5
Wear Limit	< 2.8 mm (0.110 in) >
Clutch Plate:	
Thickness	1.45 ~ 1.75 mm (0.057 ~ 0.069 in)
Quantity	4
Warp Limit	< 0.2 mm (0.008 in) >
Clutch Spring:	
Free Length	34.9 mm (1.37 in)
Quantity	4
Wear Limit	< 32.9 mm (1.30 in) >
Clutch Release Method	Outer push
Clutch-In Revolution	1,850 ~ 2,150 r/min
Clutch-Stall Revolution	2,900 ~ 3,300 r/min
Transmission:	
Main Axle Deflection Limit	< 0.08 mm (0.0031 in) >
Drive Axle Deflection Limit	< 0.08 mm (0.0031 in) >
Shifter:	
Shifter Type	Guide bar
Decompression Device:	
Type	Manual
Air Filter Oil Grade (Oiled Filter):	Foam-air-filter oil or SAE 10W30 type SE motor oil
Carburetor:	
Type/Manufacturer/Quantity	VM22SH/MIKUNI/1
I.D. Mark	1NU00
Main Jet (M.J.)	# 117.5
Main Air Jet (M.A.J.)	φ 1.7
Jet Needle-clip Position (J.N.)	4D11-3
Needle Jet (N.J.)	N-6
Cutaway (C.A.)	4.0
Pilot Jet (P.J.)	# 20
Pilot Outlet (P.O.)	φ 0.7
Pilot Screw (P.S.)	2.0
Valve Seat (V.S.)	φ 1.8
Fuel Level (F.L.)	2.5 ~ 3.5 mm (0.10 ~ 0.14 in)
Float Height (F.H.)	21.0 ~ 22.0 mm (0.83 ~ 0.87 in)
Engine Idling Speed	1,350 ~ 1,450 r/min
Lubrication System:	
Oil Filter Type	Wire mesh
Oil Pump Type	Trochoid pump
Tip Clearance	0.15 mm (0.0059 in)
< Limit >	< 0.20 mm (0.0079 in) >
Side Clearance	0.04 ~ 0.09 mm (0.0016 ~ 0.0035 in)
Bypass Valve Setting Pressure	78 ~ 118 kPa (0.8 ~ 1.2 kg/cm ² , 11.4 ~ 17.1 psi)
Middle Gear Lash:	0.1 ~ 0.2 mm (0.004 ~ 0.008 in)
Final Gear Lash:	
Actual Gear Lash on the Gear Teeth	0.1 ~ 0.2 mm (0.004 ~ 0.008 in)
Gear Lash when using the Measurement Tool	0.2 ~ 0.4 mm (0.008 ~ 0.016 in)




TIGHTENING TORQUE:

Parts to be tightened	Parts name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m·kg	ft·lb	
Cylinder Head	Bolt	M6	1	7	0.7	5.1	
Cylinder Head	Flange bolt	M8	4	22	2.2	16	
	Bolt	M8	2	22	2.2	16	
Cam Sprocket Cover	Screw	M6	2	7	0.7	5.1	Use lock washer
Tappet Cover	Bolt	M6	5	10	1.0	7.2	
Rocker Arm Shaft Stopper	Bolt	M6	2	8	0.8	5.8	
Spark Plug	—	M12	1	17.5	1.75	12.5	
Cylinder	Bolt	M6	2	10	1.0	7.2	Use lock washer
Balancer Shaft	Nut	M14 x 1.0	1	50	5.0	36	
Rotor	Bolt	M10 x 1.25	1	50	5.0	36	
Valve Adjusting Nut	Nut	M6	2	14	1.4	10	
Cam Sprocket	Bolt	M10	1	60	6.0	43	
Chain Tensioner	Bolt	M6	2	12	1.2	8.7	
Chain Tensioner Cap	Cap Nut	M14	1	5	0.5	3.6	
Chain Guide #2	Bolt	M6	2	8	0.8	5.8	
Oil Pump	Screw	M6	3	7	0.7	5.1	
Drain Plug	Plug	M35	1	43	4.3	31	
Oil Filter Cover (Drain)	Bolt	M6	1	10	1.0	7.2	
Oil Filter Cover	Bolt	M6	2	10	1.0	7.2	
Carburetor Joint	Bolt	M6	2	12	1.2	8.7	
Carburetor	Nut	M6	2	8	0.8	5.8	
	Screw	M5	1	2	0.2	1.4	
Air Filter	Screw	M5	3	2	0.2	1.4	
Muffler	Bolt	M8	2	27	2.7	19	
Muffler and Exhaust Pipe	Bolt	M8	1	20	2.0	14	
Exhaust Pipe	Bolt	M6	2	10	1.0	7.2	
Crankcase	Screw	M6	11	7	0.7	5.1	
Recoil Starter	Screw	M6	6	7	0.7	5.1	
Crankcase Spacer (Right)	Screw	M6	8	7	0.7	5.1	
Bearing Retainer (Right)	Screw	M6	3	10	1.0	7.2	
(Left)	Screw	M5	3	7	0.7	5.1	
Crankcase Spacer (Left)	Screw	M6	8	7	0.7	5.1	
Clutch Cover Protector	Screw	M6	3	7	0.7	5.1	
Clutch Cover	Screw	M6	9	7	0.7	5.1	
Primary Clutch	Nut	M22	1	78	7.8	56	Use lock washer
Clutch Spring	Screw	M5	4	6	0.6	4.3	Use lock washer
Clutch Boss	Nut	M14	1	50	5.0	36	
Shift Cam Segment	Screw	M6	1	12	1.2	8.7	
Clutch Adjuster	Nut	M8	1	15	1.5	11	
Bearing Retainer (Drive Axle)	Screw	M8	3	25	2.5	18	
(Housing)	Bolt	M8	4	25	2.5	18	
Middle Drive Axle	Nut	M20 x 1.0	1	120	12.0	85	Stake
Middle Driven Axle (U-Joint)	Nut	M14 x 1.5	1	90	9.0	65	
Change Pedal	Bolt	M6	1	10	1.0	7.2	
Magneto Base	Screw	M6	3	7	0.7	5.1	
Neutral Switch	—	M10	1	20	2.0	14	
Final Gear Case	Nut	M10	4	23	2.3	17	
Bearing Housing	Bolt	M10	2	40	4.0	29	
	Bolt	M8	6	23	2.3	17	Left-hand thread
Bearing Retainer (Final Gear)	—	—	1	100	10.0	72	



Chassis

Model	YFM200DXS
Steering System: Lock to Lock Angle: Inside Outside	 40° 40°
Front Suspension: Cushion Stroke Suspension Spring Free Length < Limit > Fitting Length Spring Rate/Stroke	 38.5 mm (1.52 in) 161 mm (6.34 in) < 160 mm (6.30 in) > 147 mm (5.79 in) K1 29.4 N/mm (3.00 kg/mm, 168 lb/in)/0 ~ 46.0 mm (0 ~ 1.81 in) K2 49.0 N/mm (5.00 kg/mm, 280 lb/in)/46.0 ~ 66.5 mm (1.81 ~ 2.62 in)
Rear Suspension: Cushion Stroke Suspension Spring Free Length < Limit > Fitting Length Spring Rate/Stroke: K1 K2 Enclosed Gas Pressure	 47 mm (1.85 in) 201 mm (7.91 in) 199 mm (7.83 in) 189 mm (7.44 in) 98.1 N/mm (10.0 kg/mm, 560 lb/in)/ 0 ~ 39 mm (0 ~ 1.54 in) 191.2 N/mm (19.5 kg/mm, 1,092 lb/in)/ 39 ~ 62 mm (1.54 ~ 2.44 in) 1,177 ~ 1,765 kPa (12 ~ 18 kg/cm ² , 171 ~ 256 psi)
Swingarm: Free Play Limit: Side	 < 1.0 mm (0.04 in) >
Wheel: Front Wheel Type Rear Wheel Type Front Rim Size/Material Rear Rim Size/Material Rin Runout Limit: Vertical Lateral	 Panel Wheel Panel Wheel 6 x 10/Steel 8.25 x 8/Steel < 2.0 mm (0.08 in) > < 2.0 mm (0.08 in) >
Front Drum Brake: Type Drum Inside Diameter < Limit > Lining Thickness < Limit > Shoe Spring Free Length	 Leading and trailing 110 mm (4.33 in) < 111 mm (4.37 in) > 4 mm (0.16 in) < 2 mm (0.08 in) > 34.5 mm (1.36 in)
Rear Disc Brake: Type Disc Outside Diameter x Thickness < Limit > Pad Thickness < Limit >	 Single disc 224 x 4.0 mm (8.82 x 0.16 in) < 3.0 mm (0.12 in) > 8.0 mm (0.31 in) 1.5 mm (0.06 in)
Brake Lever & Brake Pedal: Brake Lever Free Play Brake Pedal Position Brake Pedal Free Play	 5 ~ 8 mm (0.2 ~ 0.3 in) at lever end 5 mm (0.2 in) 20 ~ 30 mm (0.8 ~ 1.2 in)



TIGHTENING TORQUE:

Parts to be tightened	Parts name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m·kg	ft·lb	
Steering Knuckle and Nut	Nut	M14 x 1.5	2	85	8.5	61	Use lock washer
Front Panel Wheel and Wheel Hub	Nut	M8 x 1.25	8	28	2.8	20	
Front Brake Cam Lever	Bolt	M6 x 1.0	2	9	0.9	6.5	
Steering Knuckle and Lower Arm	Bolt	M10 x 1.25	2	35	3.5	25	
Tie-rod End and Steering Knuckle	Nut	M10 x 1.25	2	40	4.0	29	
Tie-rod End and Steering Shaft	Nut	M10 x 1.25	2	40	4.0	29	
Tie-rod and Locknut	Nut	M10 x 1.25	4	30	3.0	22	
Steering Shaft and Frame	Nut	M10 x 1.25	1	30	3.0	22	
Steering Shaft Holder and Frame	Bolt	M8 x 1.25	2	23	2.3	17	
Steering Shaft and Lower Handlebar Holder	Nut	M10 x 1.25	2	30	3.0	22	
Lower Handlebar Holder and Upper Handlebar Holder	Bolt	M8 x 1.25	4	20	2.0	14	
Lower Arm and Frame	Nut	M12 x 1.25	2	68	6.8	49	
Front Suspension and Frame	Nut	M10 x 1.25	2	45	4.5	32	
Front Suspension and Lower Arm	Nut	M10 x 1.25	2	45	4.5	32	
Engine Mounting (Top)	Nut	M8 x 1.25	3	33	3.3	24	
Engine Mounting (Front)	Nut	M8 x 1.25	1	33	3.3	24	See NOTE
Engine Mounting (Rear)	Nut	M8 x 1.25	2	33	3.3	24	
Footrest and Frame	Bolt	M12 x 1.25	4	85	8.5	61	
Front Bumper (Bottom)	Bolt	M8 x 1.25	2	23	2.3	17	
Front Bumper (Top)	Bolt	M10 x 1.25	2	45	4.5	32	
Rear Bumper	Bolt	M8 x 1.25	4	23	2.3	17	
Rear Axle and Nut	Nut	M14 x 1.5	2	120	12.0	85	
Rear Axle and Ring Nut	Ring nut	M40 x 1.5	2	—	—	—	
Rear Panel Wheel and Wheel Collar	Bolt	M10 x 1.25	6	43	4.3	31	
Caliper and Rear Arm	Nut	M10 x 1.25	2	50	5.0	36	
Pad Adjuster and Locknut	Nut	M8 x 1.25	1	16	1.6	11	
Brake Caliper	Nut	M6 x 1.0	3	9	0.9	6.5	
Bearing Housing and Rear Arm	Bolt	M10 x 1.25	4	45	4.5	32	
Rear Gear Housing and Rear Arm	Bolt	M10 x 1.25	4	23	2.3	17	
Rear Suspension and Frame	Bolt	M10 x 1.25	1	25	2.5	18	
Fuel Tank and Fuel Cock	Screw	M6 x 1.0	2	5	0.5	3.6	
Pivot Shaft	—	—	2	6	0.6	4.3	
Pivot Shaft Nut	—	—	2	130	13.0	94	

NOTE:

1. Finger tighten the inside-ring nut.
2. Hold the inside-ring nut, and tighten the outside-ring nut to 190 Nm (19 m·kg, 140 ft·lb).
3. Hold the outside-ring nut, and tighten the inside-ring nut to 240 Nm (24 m·kg, 170 ft·lb).



Electrical

Model		YFM200DXS
Voltage:		12V
Ignition System:		
Ignition Timing (B.T.D.C.)		10° at 1,000 r/min
Advanced Timing (B.T.D.C.)		30° at 6,000 r/min
Advancer Type		Electrical
CDI:		
Magnet-Model/Manufacturer		F3T16471/MITSUBISHI
Pickup Coil Resistance (Color)		176.4 ~ 215.6Ω at 20°C (68°F) (W/G – W/R)
Source Coil Resistance (Color)		342.9 ~ 352Ω at 20°C (68°F) (Br – B)
CDI Unit-Model/Manufacturer		F8T07274/MITSUBISHI
Ignition Coil:		
Model/Manufacturer		F6T50972/MITSUBISHI
Minimum Spark Gap		6 mm (0.24 in)
Primary Winding Resistance		0.72 ~ 0.98Ω at 20°C (68°F)
Secondary Winding Resistance		5.02 ~ 6.79Ω at 20°C (68°F)
Charging System/Type		Flywheel magneto
F.W. Magneto:		
Charging Current		Day: 1.8A or more at 3,000 r/min 4.5A or less at 8,000 r/min Night: 0.7A or more at 3,000 r/min 1.7A or less at 8,000 r/min
Charging Coil Resistance (Color)		0.36 ~ 0.50Ω at 20°C (68°F) (W – B)
Lighting Voltage		11.3V or more at 3,000 r/min 13.5V or less at 8,000 r/min
Lighting Voltage (Color)		0.31 ~ 0.37Ω at 20°C (68°F) (Y – B)

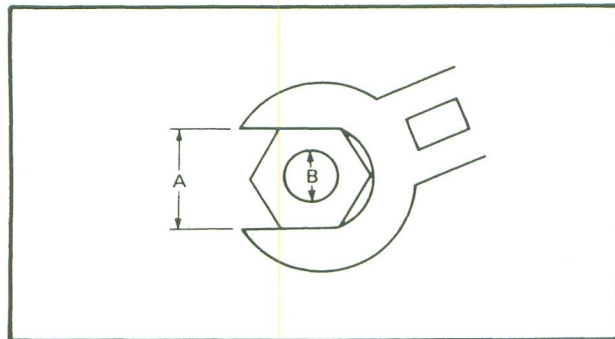


Model	YFM200DXS
Voltage Regulator: Type Model/Manufacturer No Load Regulated Voltage	Short circuit type SU230Y/STANLEY 12.0 ~ 16.5V
Rectifier: Model/Manufacturer Capacity Withstand Voltage	EHU-01TR12/MATSUSHITA 5.5A 240V
Battery: Capacity Specific Gravity	12V, 14AH 1.280
Electrical Starter System: Amperage Rating Starter Motor: Model/Manufacturer Output Armature Coil Resistance Brush: Overall Length < Limit > Spring Pressure Commutator: Diameter < Wear Limit > Mica Undercut Starter Relay: Model/Manufacturer Amperage Rating Coil Winding Resistance/Color	Constant mesh type SM-7252/MITSUBA 0.4kW 0.023Ω at 20°C (68°F) 10.5 mm (0.41 in) < 5.0 mm (0.20 in) > 400 ~ 660 g (14.1 ~ 23.2 oz) 23 mm (0.91 in) < 22 mm (0.87 in) > 0.55 mm (0.022 in) 126/HONDA LOCK 150A 3.26 ~ 3.60Ω (68°F)/(R/W – B)
Starting Circuit Cut-off Relay: Model/Manufacturer Coil Winding Resistance Diode	G4MW-121T/TATEISHI 68 ~ 83Ω at 20°C (68°F) Yes
Circuit Breaker: Type Amperage for Individual Circuit/Quantity: Main (MAIN) Reserve (MAIN)	Fuse 10A x 1 10A x 1

GENERAL TORQUE SPECIFICATIONS

This chart specifies torque for standard fasteners with standard I.S.O. pitch threads. Torque specifications for special components or assemblies are included in the applicable sections of this book. To avoid warpage, tighten multi-fastener assemblies in a crisscross fashion, in progressive stages, until full torque is reached. Unless otherwise specified, torque specifications call for clean, dry threads. Components should be at room temperature.

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



- A** Distance across flats
B Outside thread diameter

DEFINITION OF UNITS

Unit	Read	Definition	Measure
mm	Millimeter	10^{-3} meter	Length
cm	Centimeter	10^{-2} meter	Length
kg	Kilogram	10^3 gram	Weight
N	Newton	1 kg x m/sec	Force
Nm	Newton Meter	N x m	Torque
m·kg	Meter Kilogram	m x kg	Torque
Pa	Pascal	N/m^2	Pressure
N/mm	Newton per Millimeter	N/mm	Spring Rate
L	Liter	—	Volume or Capacity
cm ³	Cubic Centimeter	—	Volume or Capacity
r/min	Rotation per Minute	—	Engine Speed


CONVERSION TABLES

Metric to inch system		
Known	Multiplier	Result
m•kg	7.233	ft•lb
m•kg	86.80	in•lb
cm•kg	0.0723	ft•lb
cm•kg	0.8680	in•lb
kg	2.205	lb
g	0.03527	oz
km/lit	2.352	mpg
km/hr	0.6214	mph
km	0.6214	mi
m	3.281	ft
m	1.094	yd
cm	0.3937	in
mm	0.03937	in
cc (cm ³)	0.03382	oz (US liq)
cc (cm ³)	0.06102	cu•in
lit (liter)	2.1134	pt (US liq)
lit (liter)	1.057	qt (US liq)
lit (liter)	0.2642	gal (US liq)
kg/mm	56.007	lb/in
kg/cm ²	14.2234	psi (lb/in ²)
Centigrade (°C)	9/5 (°C) + 32	Fahrenheit (°F)

Inch to metric system		
Known	Multiplier	Result
ft•lb	0.13826	m•kg
in•lb	0.01152	m•kg
ft•lb	13.831	cm•kg
in•lb	1.1521	cm•kg
lb	0.4535	kg
oz	28.352	g
mpg	0.4252	km/lit
mph	1.609	km/hr
mi	1.609	km
ft	0.3048	m
yd	0.9141	m
in	2.54	cm
in	25.4	mm
oz (US liq)	29.57	cc (cm ³)
cu•in	16.387	cc (cm ³)
pt (US liq)	0.4732	lit (liter)
qt (US liq)	0.9461	lit (liter)
gal (US liq)	3.785	lit (liter)
lb/in	0.017855	kg/mm
psi (lb/in ²)	0.07031	kg/cm ²
Fahrenheit (°C)	5/9 (°F - 32)	Centigrade (°F)

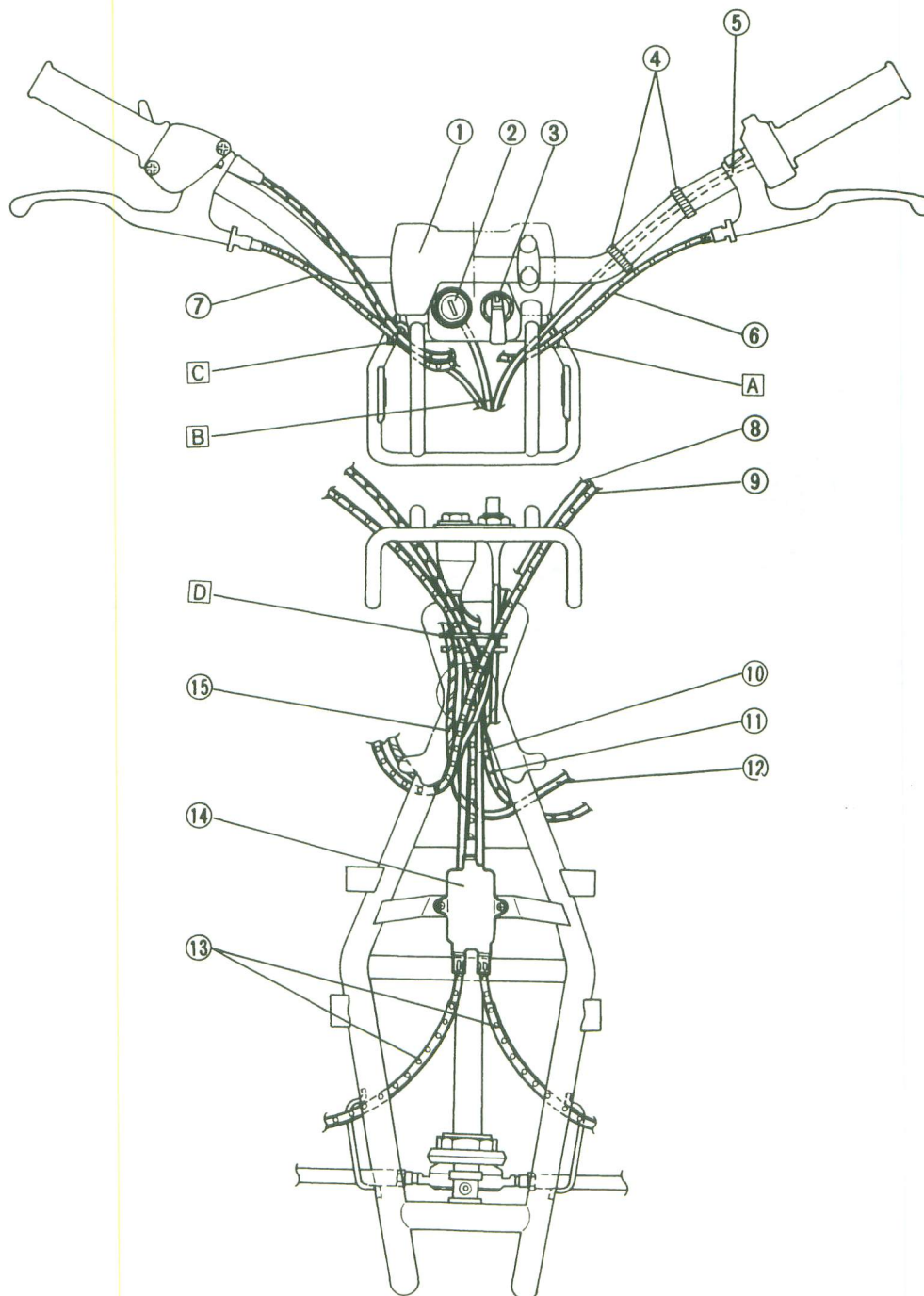


CABLE ROUTING

- ① Handlebar protector
- ② Main switch
- ③ Starter lever
- ④ Band
- ⑤ Handlebar switch lead
- ⑥ Rear brake cable
- ⑦ Front brake cable

- ⑧ Handlebar switch lead
- ⑨ Rear brake cable
- ⑩ Front brake cable
- ⑪ Throttle cable
- ⑫ Starter cable
- ⑬ Brake cable
- ⑭ Equalizer
- ⑮ Wire harness

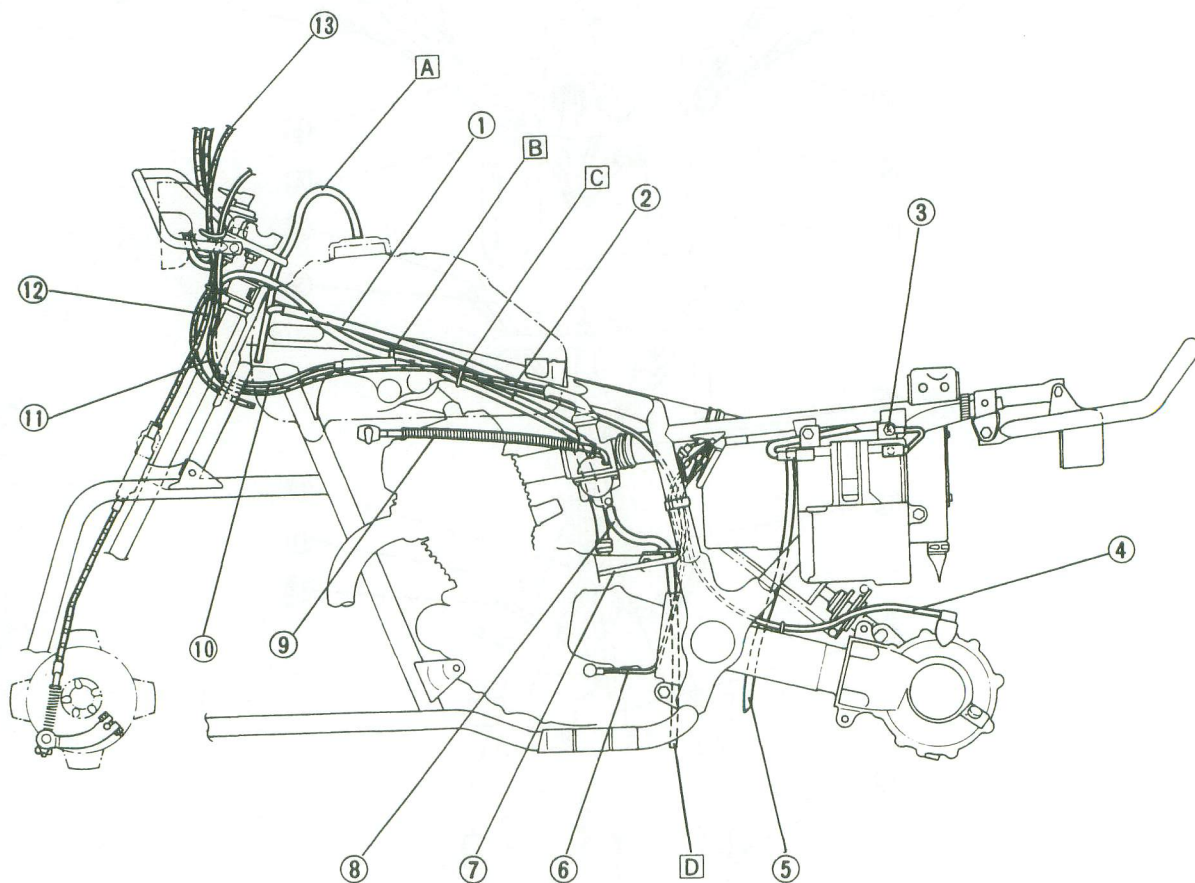
- A Clamp the rear brake cable and handlebar switch lead.
- B Connect the main switch leads, handlebar switch lead and wire harness in the headlight body.
- C Clamp the throttle cable and front brake cable.
- D Pass the wire harness, rear brake cable, front brake cable, throttle cable and air bleed pipe into the cable holder.





- | | |
|---------------------------------|---------------------|
| ① Crankcase bleeder hose | ⑧ Overflow pipe |
| ② Throttle cable | ⑨ Fuel pipe |
| ③ Ground lead | ⑩ Starter cable |
| ④ Final gear case breather hose | ⑪ Throttle cable |
| ⑤ Battery breather hose | ⑫ Front brake cable |
| ⑥ Neutral switch lead | ⑬ Rear brake cable |
| ⑦ CDI magneto lead | |

- A** Pass the fuel tank breather hose through the handlebar protector hole and left side the frame.
- B** Clamp the air bleeder pipe and final gear case breather hose.
- C** Clamp the all cables and pipes.

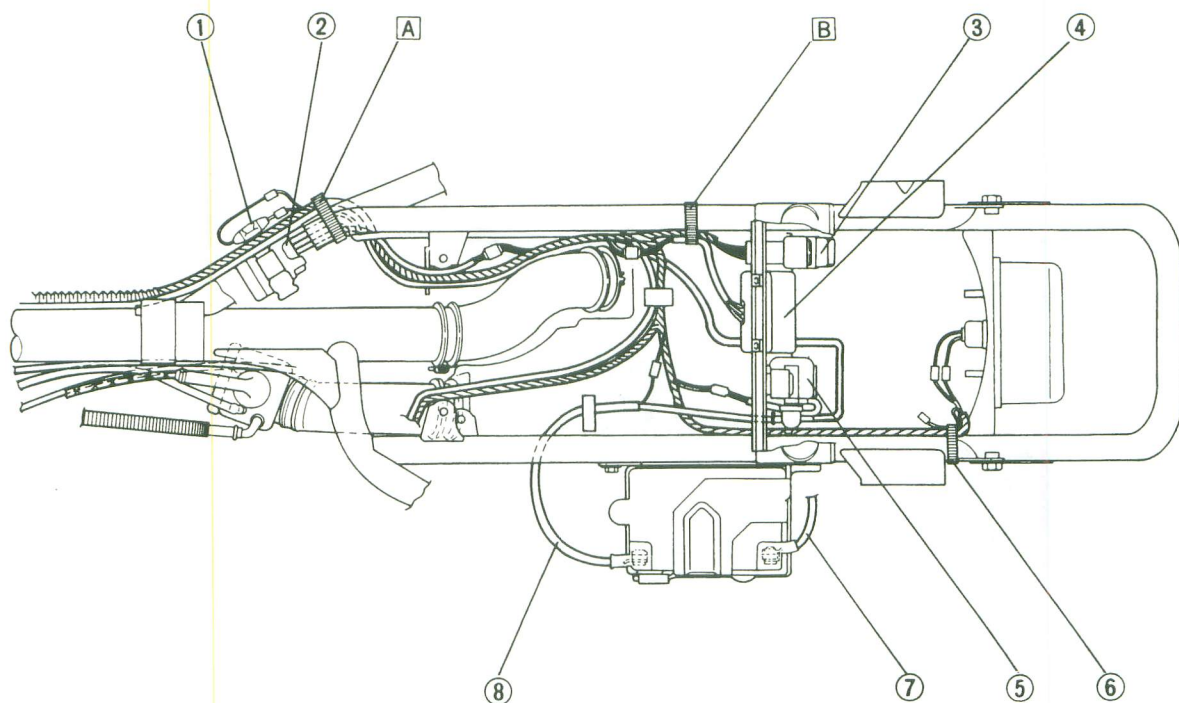




- ① Fuse
- ② CDI unit
- ③ Starting circuit cut-off relay
- ④ Rectifier with regulator

- ⑤ Starter relay
- ⑥ Band
- ⑦ Battery negative (—) lead
- ⑧ Battery positive (+) lead

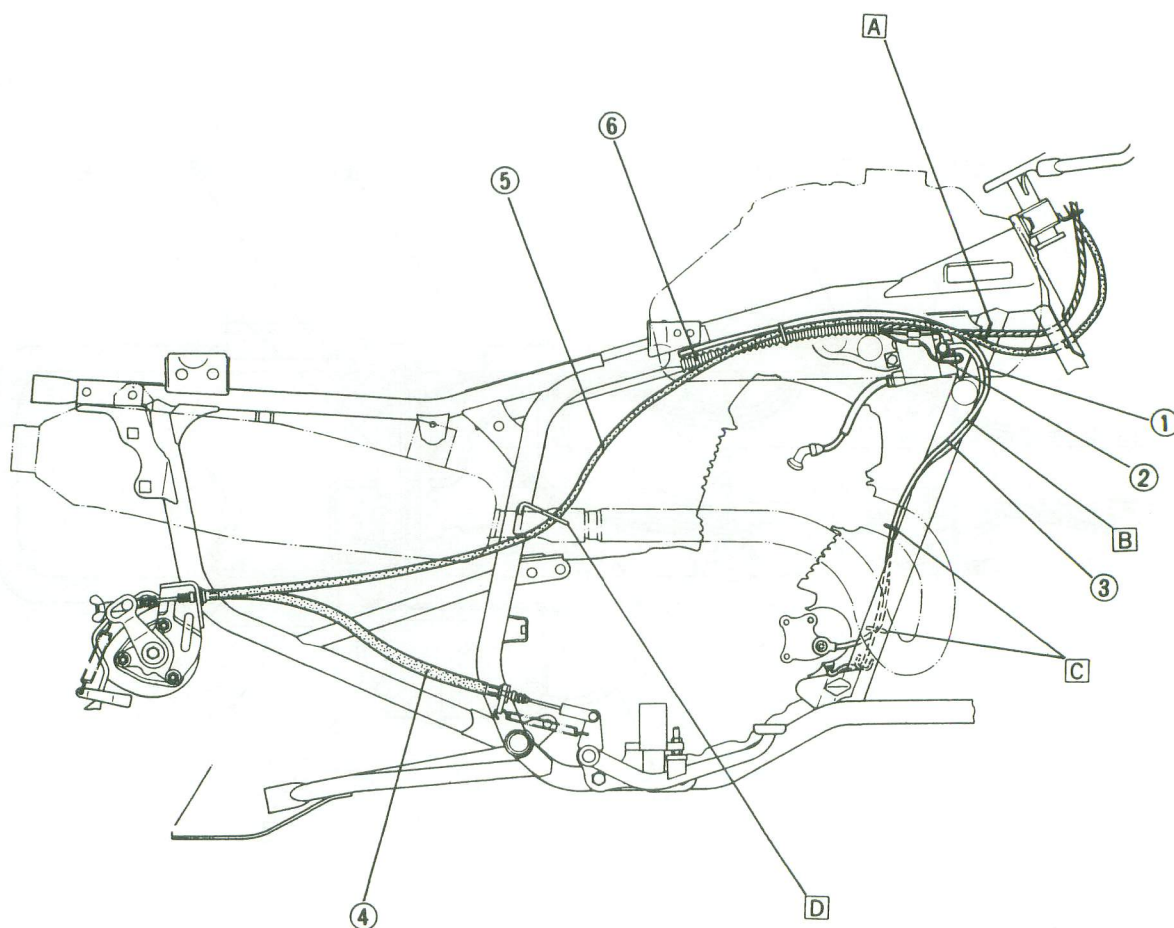
- A Clamp the wire harness.
- B Clamp the all leads and cables.





- ① Negative lead
- ② Ignition coil lead
- ③ Starter motor cable
- ④ Rear brake cable (Brake pedal)
- ⑤ Rear brake cable (Handlebar)
- ⑥ Wire harness

- A Clamp the wire harness only.
- B Pass the starter motor lead upper side ignition coil.
- C Pass the starter motor cable into the cable guides.
- D Clamp the brake cable.



FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and new data for the YFM200DXT. For complete information on service procedures, it is necessary to use this Supplementary Service Manual together with following manuals:

YFM200N Service Manual: LIT-11616-04-29

YFM200DXT Supplementary Service Manual: LIT-11616-05-40

**TECHNICAL PUBLICATIONS
SERVICE DIVISION
MOTORCYCLE OPERATIONS
YAMAHA MOTOR CO., LTD.**

**YFM200DXT
SUPPLEMENTARY SERVICE MANUAL
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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 machines have a basic understanding of the mechanical concepts and procedures inherent in machine 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

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

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

CAUTION:

A **CAUTION** indicates special procedures that must be followed to avoid damage to the machine.

WARNING:

A **WARNING** indicates special procedures that must be followed to avoid injury to a machine operator or person inspecting or repairing the machine.

MANUAL FORMAT

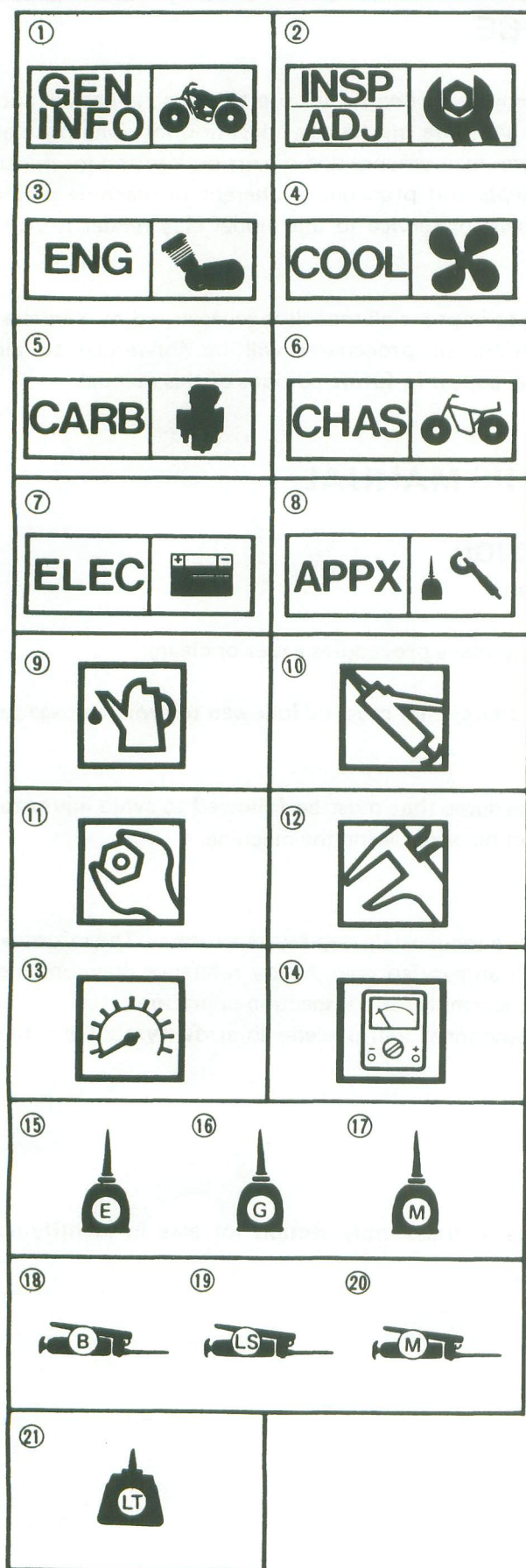
All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.

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 ⑧ are designed as thumb tabs to indicate the chapter's number and content.

- ① General information
- ② Periodic inspection and adjustment
- ③ Engine
- ④ Cooling system
- ⑤ Carburetion
- ⑥ Chassis
- ⑦ Electrical
- ⑧ Appendices

Illustrated symbols ⑨ to ⑭ are used to identify the specifications appearing in the text.

- ⑨ Filling fluid
- ⑩ Lubricant
- ⑪ Tightening
- ⑫ Wear limit, clearance
- ⑬ Engine speed
- ⑭ Ω , V, A

Illustrated symbols ⑮ to ㉑ in the exploded diagram indicate grade of lubricant and location of lubrication point.

- ⑮ Apply engine oil
- ⑯ Apply gear oil
- ⑰ Apply molybdenum disulfide oil
- ⑱ Apply wheel bearing grease
- ⑲ Apply lightweight lithium-soap base grease
- ⑳ Apply molybdenum disulfide grease
- ㉑ Apply locking agent (LOCTITE®)

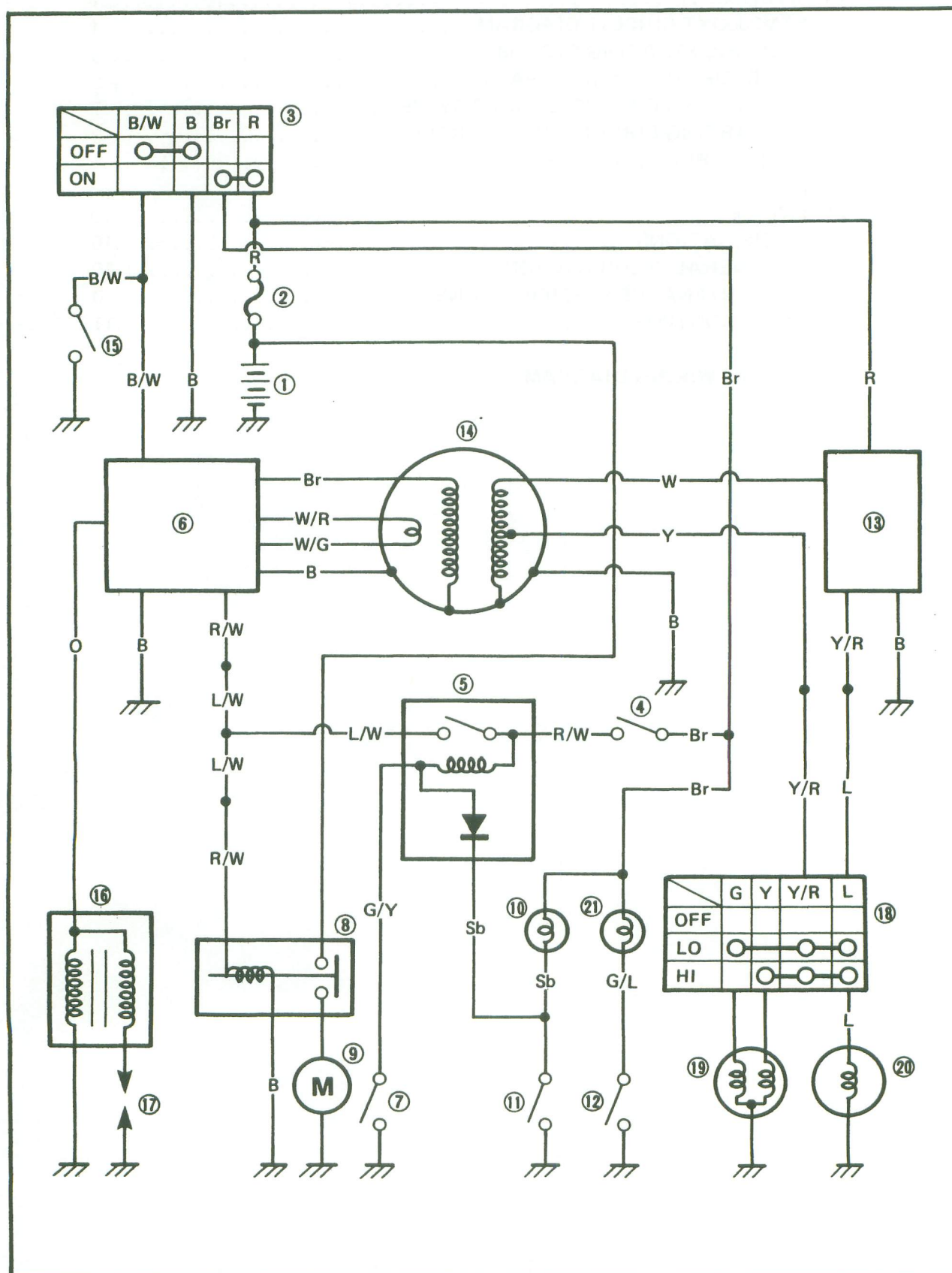
CONTENTS

ELECTRICAL	1
YFM200DXT CIRCUIT DIAGRAM	1
ELECTRIC STARTING SYSTEM	3
TROUBLESHOOTING CHART	5
STARTING CIRCUIT CUT-OFF SYSTEM	7
STARTING CIRCUIT CUT-OFF RELAY	8
REAR BRAKE SWITCH	9
APPENDICES	10
SPECIFICATIONS	10
GENERAL SPECIFICATIONS	10
MAINTENANCE SPECIFICATIONS	10
CABLE ROUTING	11
YFM200DXT WIRING DIAGRAM	



ELECTRICAL

YFM200DXT CIRCUIT DIAGRAM

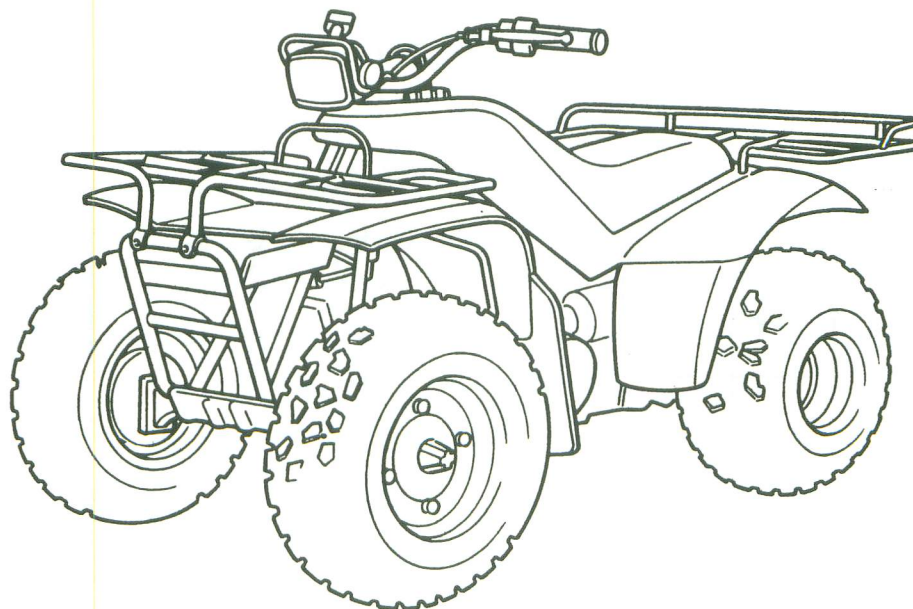




- ① Battery
- ② Main fuse
- ③ Main switch
- ④ Starter switch
- ⑤ Starting circuit cut-off relay
- ⑥ CDI unit
- ⑦ Brake switch
- ⑧ Starter relay
- ⑨ Starter motor
- ⑩ Neutral indicator
- ⑪ Neutral switch
- ⑫ Reverse switch
- ⑬ Rectifier/Regulator
- ⑭ CDI Magneto
- ⑮ "ENGINE STOP" switch
- ⑯ Ignition coil
- ⑰ Spark plug
- ⑱ "LIGHTS" (Dimmer) switch
- ⑲ Headlight
- ⑳ Taillight
- ㉑ Reverse indicator

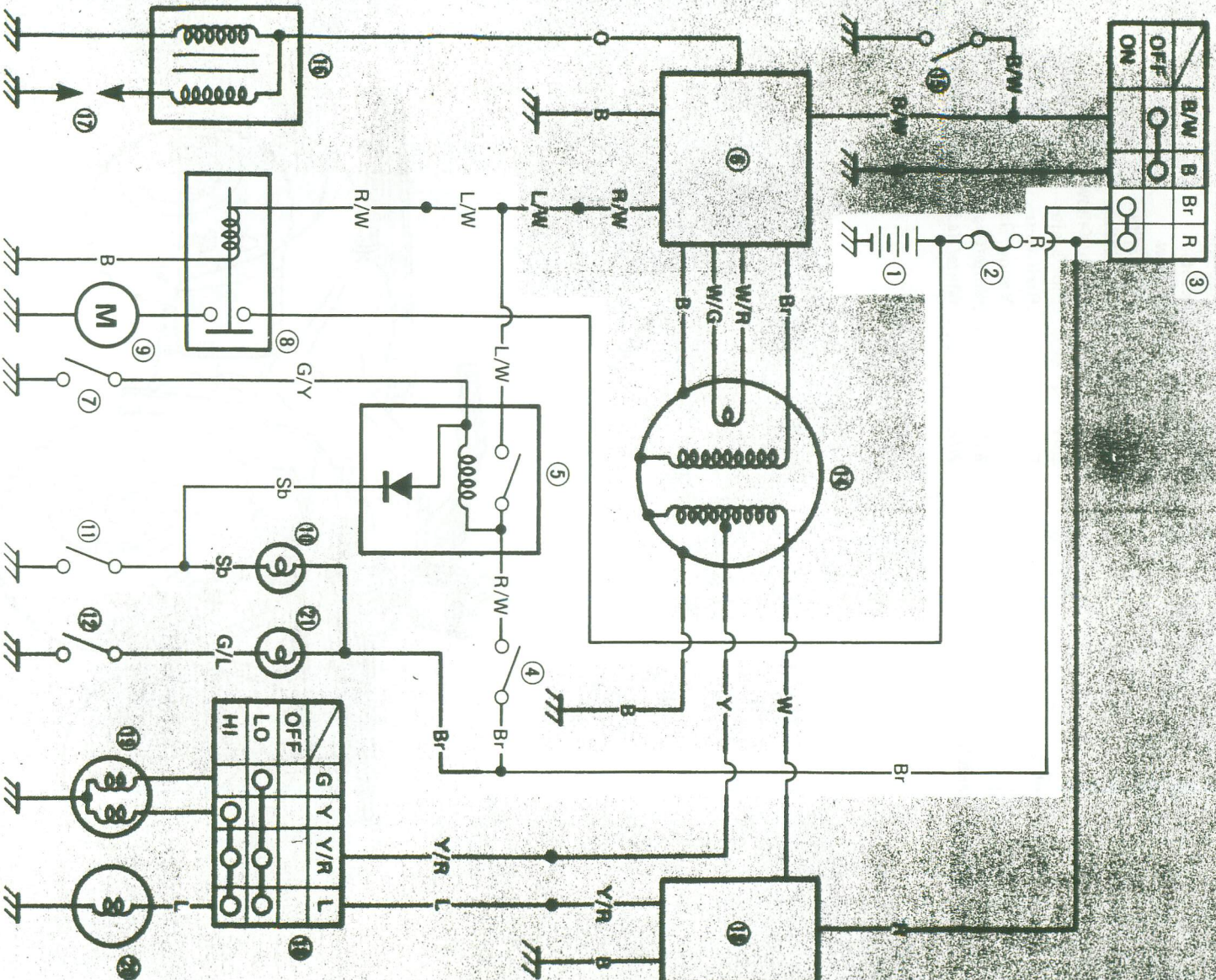
COLOR CODE

B	.Black
Br.	.Brown
G	.Green
L	.Blue
O	.Orange
R	.Red
Sb	.Skyblue
W	.White
Y	.Yellow
B/W	.Black/White
G/L	.Green/Blue
G/Y	.Green/Yellow
L/W	.Blue/White
R/W	.Red/White
Y/R	.Yellow/Red
W/G	.White/Green
W/R	.White/Red



ELECTRIC STARTING SYSTEM

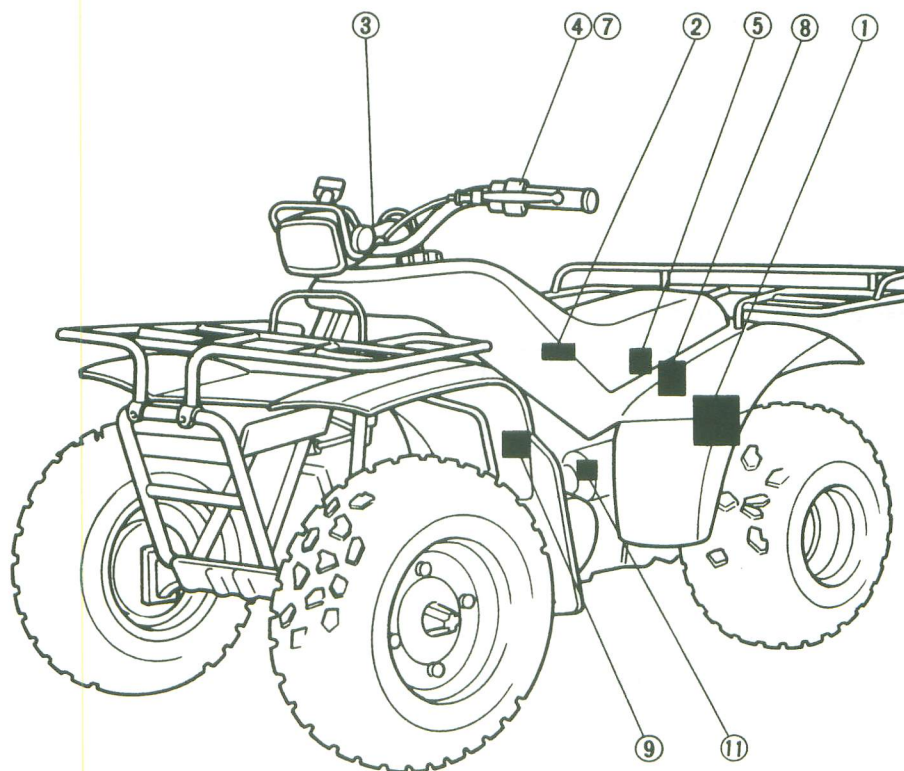
CIRCUIT DIAGRAM





Aforementioned circuit diagram shows electric starting circuit in wiring diagram.

- ① Battery
- ② Main fuse
- ③ Main switch
- ④ Starter switch
- ⑤ Starting circuit cut-off relay
- ⑦ Brake switch
- ⑧ Starter relay
- ⑨ Starter motor
- ⑪ Neutral switch





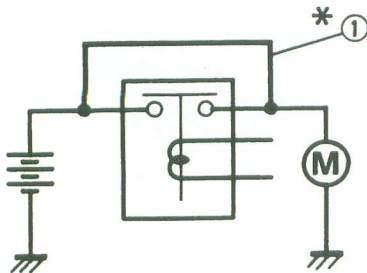
TROUBLESHOOTING CHART

THE STARTER MOTOR DOES NOT OPERATE

A

1. Connect:

- Starter relay terminals
(Battery side and starter motor side)



① Jumper lead

2. Check:

- Starter motor operation

OK

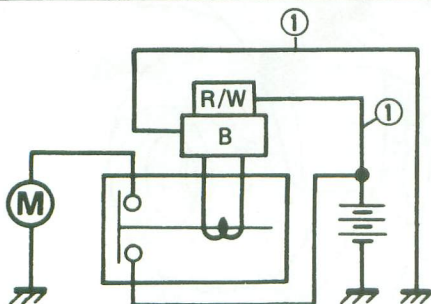
B

1. Disconnect:

- Starter relay coupler

2. Connect:

- Starter relay coupler terminals



① Jumper lead

3. Check:

- Starter motor operation

OK

No

Check battery.

OK

No

Replace and/or charge battery.

Repair and/or replace starter motor.

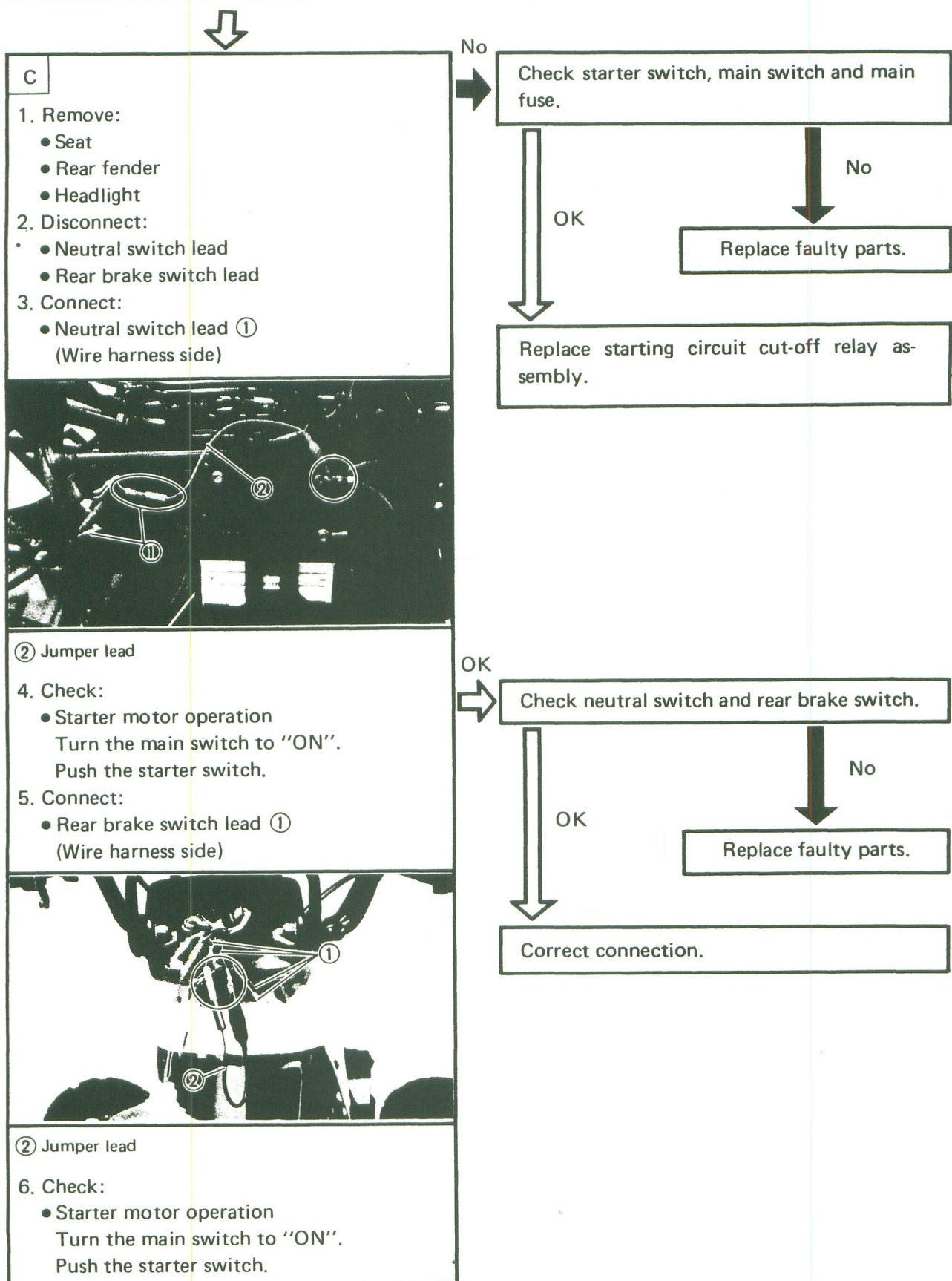
*

WARNING:

1. A wire for the jumper lead ① must have the equivalent capacity as that of the battery lead or more, otherwise it may cause the jumper lead to be burned.
2. This check is likely to produce sparks, so be sure that no flammable gas or fluid is in the vicinity.

No

Replace starter relay.

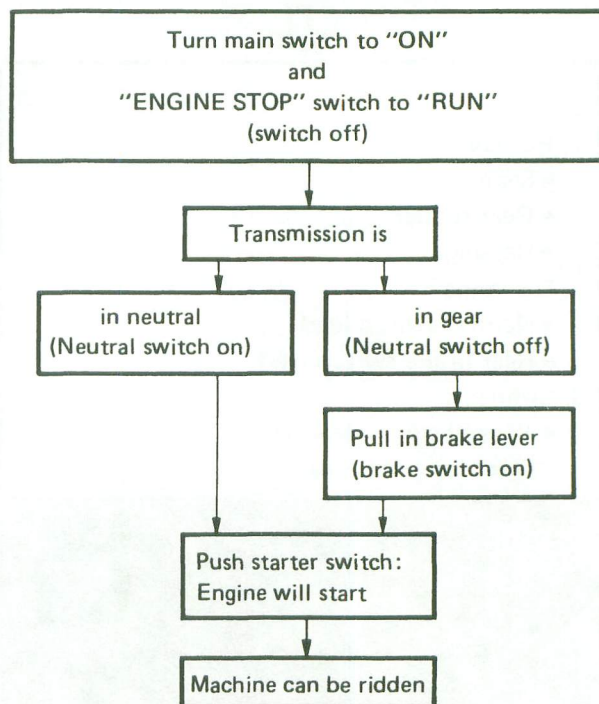
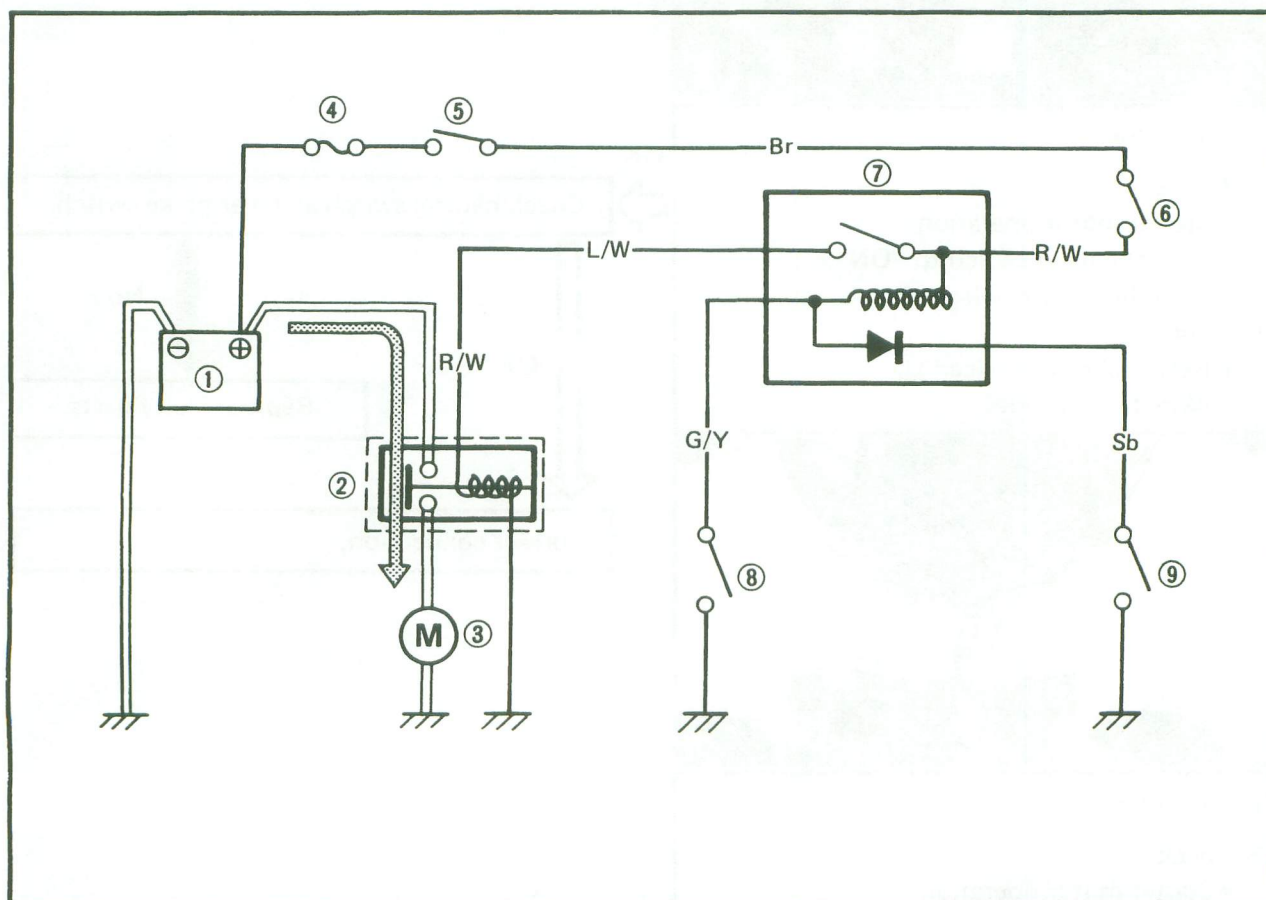




STARTING CIRCUIT CUT-OFF SYSTEM

The starting circuit on this model consists of the starter motor, starter relay, starting circuit cut-off relay, brake switch, and neutral switch. If the main switch is at "ON", the starter motor can operate only if:

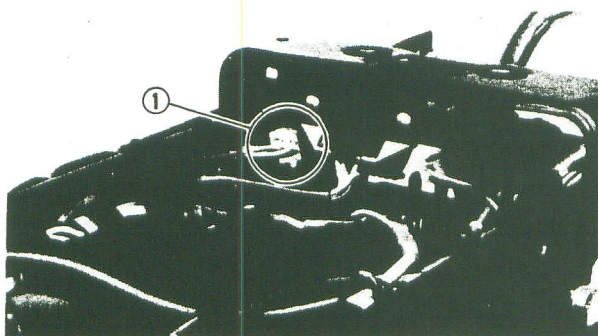
- The transmission is in neutral (the neutral switch is on).
- and/or
- Pull in brake lever (the brake switch is on).



- ① Battery
- ② Starter relay
- ③ Starter motor

- ④ Main fuse
- ⑤ Main switch
- ⑥ Starter switch

- ⑦ Starting circuit cut-off relay
- ⑧ Rear brake switch
- ⑨ Neutral switch

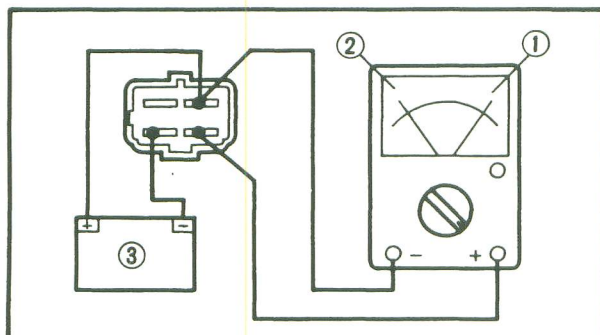


STARTING CIRCUIT CUT-OFF RELAY

Inspection

1. Remove:

- Seat
- Rear fender
- Starting circuit cut-off relay ①

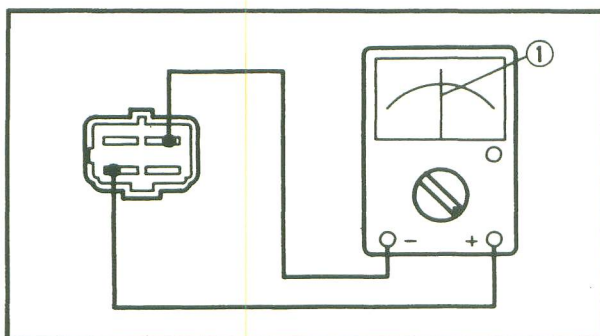


2. Check:

- Relay contacts
- Use 12V battery ③ and Pocket Tester (YU-03112)
- Out of specification → Replace relay.



Battery Connected ① : 0Ω
Battery Disconnected ② : ∞

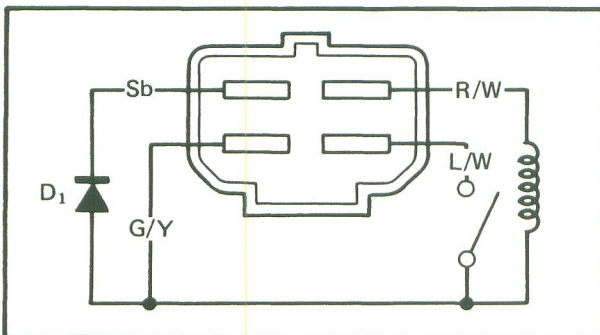


3. Check:

- Relay coil resistance ①
- Use the Pocket Tester (YU-03112).
- Out of specification → Replace.



Relay Coil Resistance:
80Ω ± 10% at 20°C (68°F)
(R/W – G/Y)



4. Check:

- Diode continuity/discontinuity
- Defective element(s) → Replace the relay.

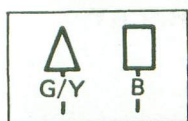
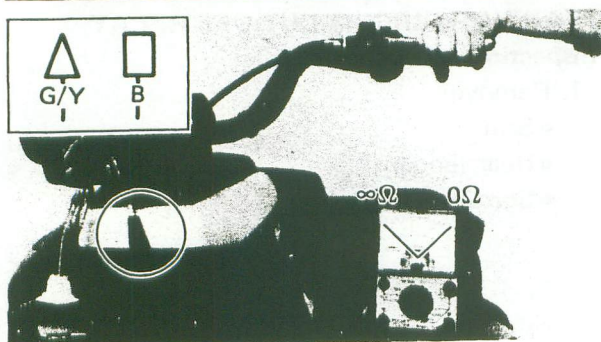
Checking Element	Pocket Tester Connecting Point		Good
	(+) (red)	(-) (black)	
D ₁	Sb	R/W	○
	R/W	Sb	x

○: Continuity (0Ω) (Scale Ω × 1000)

x: Discontinuity (∞) (Scale Ω × 1)

NOTE:

The results "○" or "x" should be reversed according to the pocket tester polarity.



REAR BRAKE SWITCH

1. Remove:
 - Headlight
2. Check:
 - Rear brake switch contact

Out of specification → Replace switch.

Brake lever	Pull in	Not Pull in
Tester	0Ω	∞



APPENDICES

SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	YFM200DXT
Model Code Number	2FH
Vehicle Identification Number	JY42FH00 * HC000101
Engine Starting Number	2FH-000101
Dimensions:	
Overall Length	1,850 mm (72.8 in)
Overall Width	1,045 mm (41.1 in)
Overall Height	1,015 mm (40.0 in)
Seat Height	725 mm (28.5 in)
Wheelbase	1,120 mm (44.1 in)
Minimum Ground Clearance	210 mm (8.3 in)
Basic Weight:	
With Oil and Full Fuel Tank	192 kg (423 lb)

MAINTENANCE SPECIFICATIONS

Electrical

Model	YFM200DXT
Electrical Starter System:	
Amperage Rating	Constant mesh type
Starter Motor:	
Model/Manufacturer	SM-7252/MITSUBA
Output	0.4kW
Armature Coil Resistance	0.023Ω at 20°C (68° F)
Brush:	
Overall Length	10.5 mm (0.41 in)
<Limit>	<5.0 mm (0.20 in)>
Spring Pressure	400 ~ 660 g (14.1 ~ 23.2 oz)
Commutator:	
Diameter	23 mm (0.91 in)
<Wear Limit>	<22 mm (0.87 in)>
Mica Undercut	1.8 mm (0.071 in)
Starter Relay:	
Model/Manufacturer	126/HONDA LOCK
Amperage Rating	150A
Coil Winding Resistance/Color	3.26 ~ 3.60Ω (68° F)/(R/W – B)
Starting Circuit Cut-off Relay:	
Model/Manufacturer	ACA1212-1/MATSUSHITA
Coil Winding Resistance	80Ω ± 10% at 20°C (68° F)
Diode	Yes

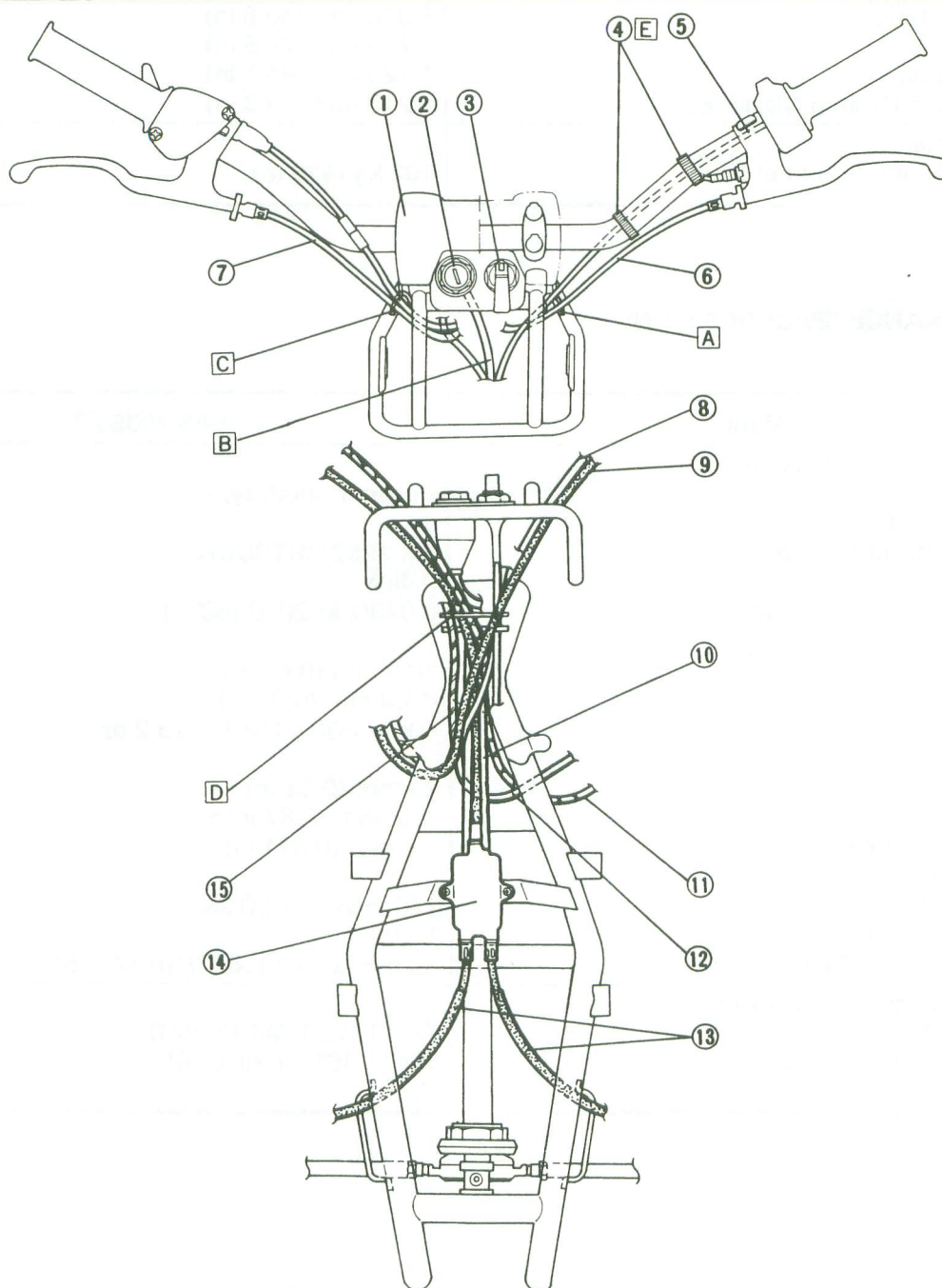


CABLE ROUTING

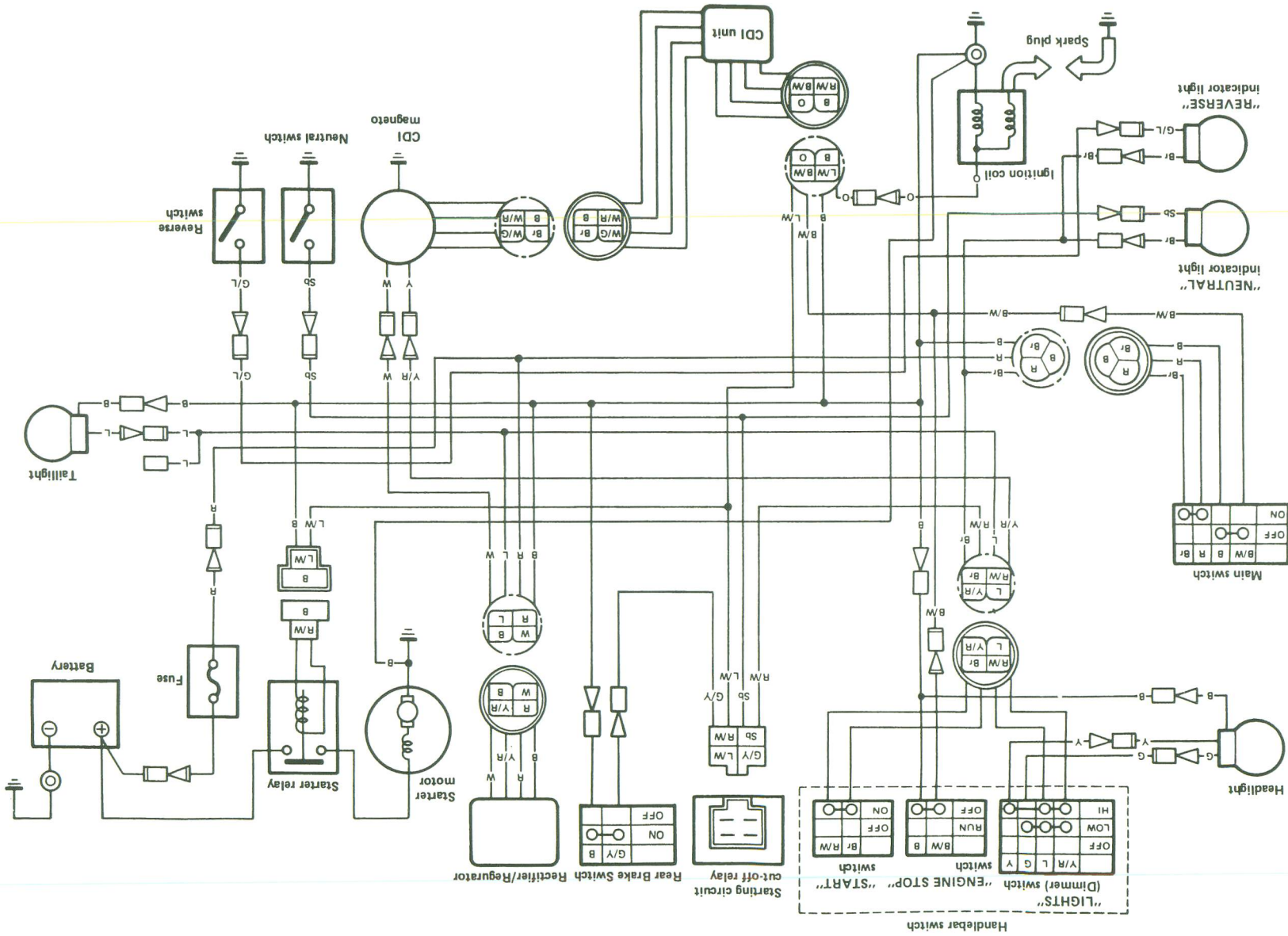
- ① Handlebar protector
- ② Main switch
- ③ Starter lever
- ④ Band
- ⑤ Handlebar switch lead
- ⑥ Rear brake cable
- ⑦ Front brake cable

- ⑧ Handlebar switch lead
- ⑨ Rear brake cable
- ⑩ Front brake cable
- ⑪ Throttle cable
- ⑫ Starter cable
- ⑬ Brake cable
- ⑭ Equalizer
- ⑮ Wire harness

- A Clamp the rear brake cable and handlebar switch lead.
- B Connect the main switch leads, handlebar switch lead and wire harness in the headlight body.
- C Clamp the throttle cable and front brake cable.
- D Pass the wire harness, rear brake cable, front brake cable, throttle cable and air bleed pipe into the cable holder.
- E Clamp the handlebar switch lead and brake switch lead.



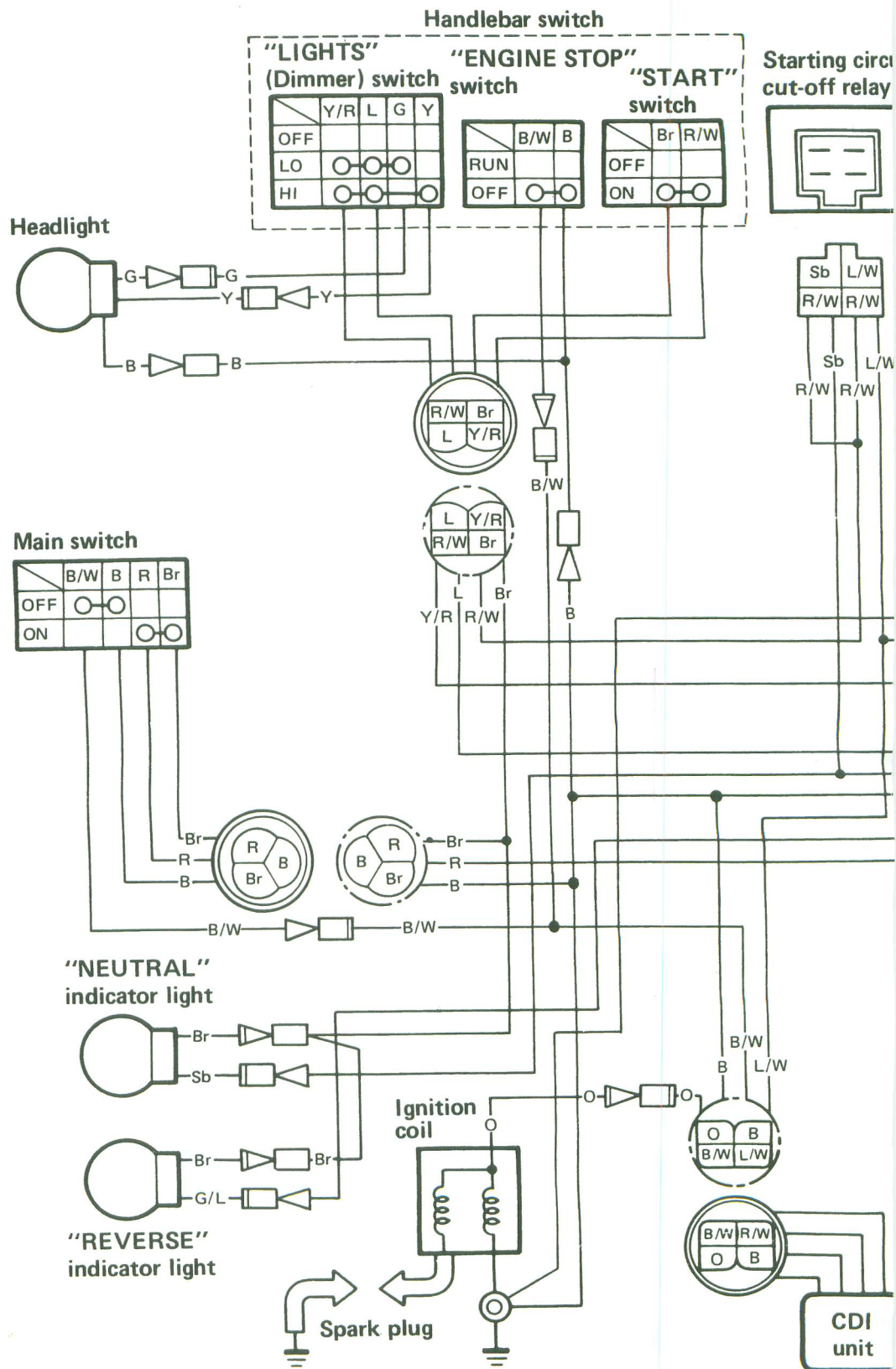
YFM200DXT WIRING DIAGRAM



COLOR CODE

B	Black
R	Red
L	Blue
Y	Yellow
G	Green
O	Orange
W	White
Br	Brown
Sb	Sky blue
B/W	Black/White
R/W	Red/White
Y/R	Yellow/Red
W/G	White/Green
W/R	White/Red
G/L	Green/Blue
L/W	Blue/White
G/Y	Green/Yellow

Y FM200DXS WIRING DIAGRAM



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