



YAMAHA

FZR1000

'87

2GH-SE1

**SERVICE
INFORMATION**

Found in a skip - Stig



FOREWORD

This Service Information has been prepared to introduce new service and data for the FZR1000 ('87). For complete service information procedures it is necessary to use this publication together with the following microfiche service manual.

FZR1000 SERVICE MANUAL: 2GH-ME1

**FZR1000
SERVICE INFORMATION
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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 motorcycles have a basic understanding of the mechanical concepts and procedures inherent in motorcycle repair technology. Without such knowledge, attempted repairs or service to this model may render it unfit to use and/or unsafe.

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

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 motorcycle.

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

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.

① GEN INFO 	② SPEC 	
③ INSP ADJ 	④ ENG 	
⑤ COOL 	⑥ CARB 	
⑦ CHAS 	⑧ ELEC 	
⑨ TRBL SHTG ?	⑩ 	
⑪ 	⑫ 	
⑬ 	⑭ 	
⑮ 	⑯ 	
⑰ 	⑱ 	⑲ 
⑳ 	㉑ 	㉒ 
㉓ 		

ILLUSTRATED SYMBOLS (Refer to the illustration)

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

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

Illustrated symbols ⑩ to ⑯ are used to identify the specifications appearing.

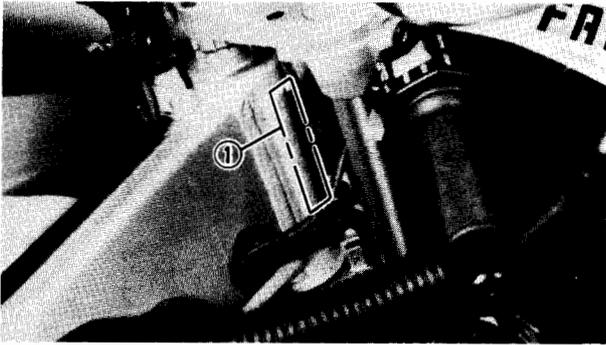
- ⑩ Filling fluid
- ⑪ Lubricant
- ⑫ Special tool
- ⑬ Tightening
- ⑭ Wear limit, clearance
- ⑮ Engine speed
- ⑯ Ω , V, A

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

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

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FZR1000 COLOR WIRING DIAGRAM	



GENERAL INFORMATION

MOTORCYCLE IDENTIFICATION

FRAME SERIAL NUMBER

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

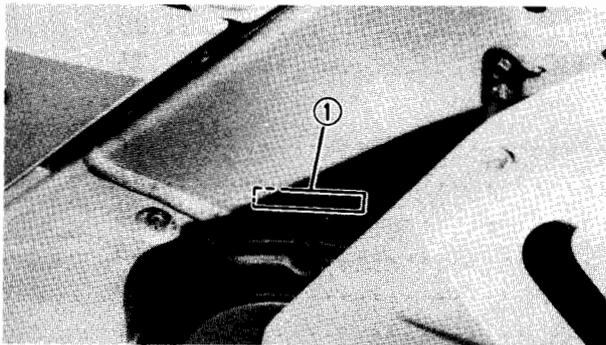
Starting Serial Number:	
FZR1000 . . .	.2GH-000101
FZR1000 . . .	.2LA-000101 (D, S)
FZR1000 . . .	.2LE-000101 (F)
FZR1000 . . .	.2LF-000101 (A, CH)
FZR1000 . . .	.2RG-000101 (GB)
FZR1000T . . .	.2LL-000101 (AUS, NZ, ZA)

NOTE: _____

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

ENGINE SERIAL NUMBER

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



Starting Serial Number:	
FZR1000 . . .	.2GH-000101
FZR1000 . . .	.2LA-000101 (D, S)
FZR1000 . . .	.2LE-000101 (F)
FZR1000 . . .	.2LF-000101 (A, CH)
FZR1000 . . .	.2RG-000101 (GB)
FZR1000T . . .	.2LL-000101 (AUS, NZ, ZA)

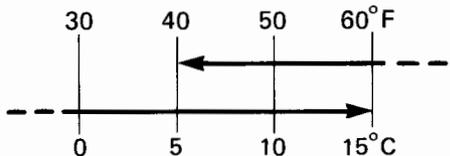
NOTE: _____

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



SPECIFICATIONS

GENERAL SPECIFICATIONS

Model	FZR1000
Model Code Number:	2GH 2LA (D, S) 2LE (F) 2LF (A, CH) 2RG (GB, IR) 2LL (AUS, NZ, ZA)
Frame Starting Number:	2GH-000101 2LA-000101 (D, S) 2LE-000101 (F) 2LF-000101 (A, CH) 2RG-000101 (GB) 2LL-000101 (AUS, NZ, ZA)
Engine Starting Number:	2GH-000101 2LA-000101 (D, S) 2LE-000101 (F) 2LF-000101 (A, CH) 2RG-000101 (GB, IR) 2LL-000101 (AUS, NZ, ZA)
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	2,205 mm (86.8 in) 730 mm (28.7 in) 1,215 mm (47.8 in) 775 mm (30.5 in) 1,470 mm (57.9 in) 140 mm (5.5 in)
Basic Weight: With Oil and Full Fuel Tank	229 kg (505 lb)
Minimum Turning Radius:	3,400 mm (134 in)
Engine: Engine Type Cylinder Arrangement Displacement Bore x Stroke Compression Ratio Compression Pressure Starting System	Liquid cooled 4-stroke, gasoline, DOHC 4-cylinder parallel 989 cm ³ (60.3 cu.in) 75.0 x 56.0 mm (2.9528 x 2.2047 in) 11.2 : 1 1,078.8 kPa (11 kg/cm ² , 156 psi) Electric starter
Lubrication System:	Wet sump
Engine Oil Type or Grade: 	Yamalube 4-cycle oil or SAE 20W40 type SE motor oil SAE 10W30 type SE motor oil

GENERAL SPECIFICATIONS



Model	FZR1000	
Engine Oil Capacity: Engine Oil: Periodic Oil Change: With Oil Filter Replacement Total Amount	2.7 L (2.4 Imp qt, 2.9 US qt) 3.0 L (2.6 Imp qt, 3.1 US qt) 3.6 L (3.2 Imp qt, 3.8 US qt)	
Coolant Total Amount: (Including All Routes)	2.3 L (2.0 Imp qt, 2.4 US qt)	
Air Filter:	Dry type element	
Fuel: Type Tank capacity Reserve Amount	Regular gasoline Unleaded Fuel only (AUS) 20.0 L (4.4 Imp gal, 5.3 US gal) 4.5 L (0.99 Imp gal, 1.19 US gal)	
Carburetor: Type x Quantity Manufacturer	BDS37 x 4 MIKUNI	
Spark Plug: Type (Manufacture) Gap	DR8ES-L (NGK), X24ESR-U (N.D.) 0.6 ~ 0.7 mm (0.024 ~ 0.028 in)	
Clutch Type:	Wet, multiple-disc	
Transmission: Primary Reduction System Primary Reduction Ratio Secondary Reduction System Secondary Reduction Ratio Transmission Type Operation Gear Ratio 1st 2nd 3rd 4th 5th	Spur gear 68/41 (1.659) Chain drive 46/16 (2.875) Constant-mesh, 5-speed Left foot operation 36/14 (2.571) 32/18 (1.778) 29/21 (1.381) 27/23 (1.174) 28/27 (1.037)	
Chassis: Frame Type Caster Angle Trail	Double cradle, aluminum deltabox 25.33° 100 mm (3.941 in)	
Tire:	Front	Rear
Type Size Manufacture (Type)	Tubeless 120/70VR17-V270 120/70 ZR17 DUNLOP (K445F) PIRELLI (MP7S)	Tubeless 160/60VR18-V270 160/60 ZR18 DUNLOP (K445) PIRELLI (MP7S)

GENERAL SPECIFICATIONS

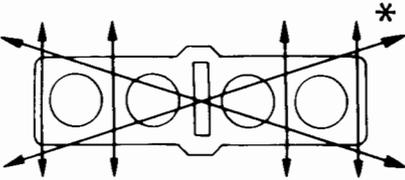
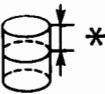
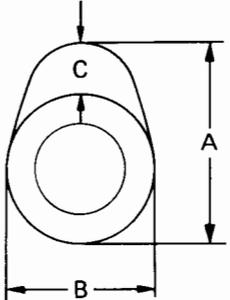
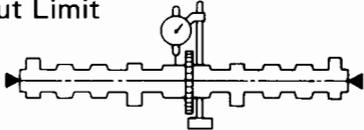
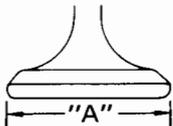
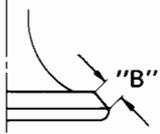
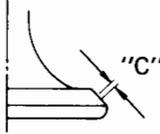
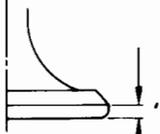


Model	FZR1000	
Tire Pressure (Cold tire): Up to 90 kg (198 lb) load* 90 kg (198 lb) ~ Maximum load* High speed riding	Front	Rear
	250 kPa (2.5 kg/cm ² , 36 psi)	250 kPa (2.5 kg/cm ² , 36 psi)
	250 kPa (2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)
	250 kPa (2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)
*Load is total weight of cargo, rider, passenger, and accessories.		
Brake: Front Brake Type Operation Rear Brake Type Operation	Dual disc brake Right hand operation Single disc brake Right foot operation	
Suspension: Front Suspension Rear Suspension	Telescopic fork Swingarm (Link suspension)	
Shock Absorber: Front Shock Absorber Rear Shock Absorber	Coil spring, oil damper Coil spring, gas-oil damper	
Wheel Travel: Front Wheel Travel Rear Wheel Travel	130 mm (5.12 in) 130 mm (5.12 in)	
Electrical: Ignition System Generator System Battery Type or Model Battery Capacity	T.C.I. (Digital ignition) A.C. generator YB14L 12V 14AH	
Headlight type:	Quartz bulb Bulb (A, DK, GR, I, NL, SF)	
Bulb Wattage x Quantity: Headlight Marker Light Tail/Brake Light Flasher Light License Light Meter Light	35W/35W x 2 55W x 1, 60W/55W x 1 (B, D, F, S) 45W/40W x 2 (A, DK, E, GR, N, NL, SF) 60W/55W x 1 (CH) 3.4W x 2 4W x 1 (A, B, CH, D, DK, E, F, GR, NL, S, SF) 4W x 2 (I) 5W/21W x 2 21W x 4 5W x 2 3.4W x 4	
Indicator Light: Wattage x Quantity	"NEUTRAL" "HIGH BEAM" "TURN" "OIL LEVEL"	3.4W x 1 3.4W x 1 3.4W x 1 3.4W x 1



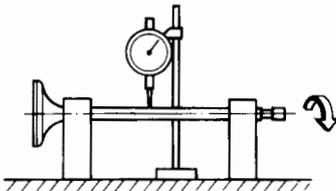
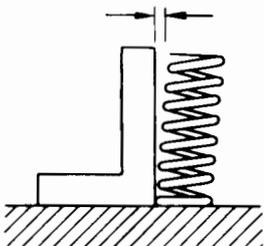
MAINTENANCE SPECIFICATIONS

Engine

Model	FZR1000
<p>Cylinder Head: Warp Limit*</p> 	<p>0.03 mm (0.0012 in) *Lines indicate straightedge measurement</p>
<p>Cylinder: Bore Size/Measuring Point* Taper Limit Out of Round Limit</p> 	<p>75.000 ~ 75.005 mm (2.9528 ~ 2.9529 in)/ 40 mm (1.57 in) 0.05 mm (0.002 in) 0.05 mm (0.002 in)</p>
<p>Camshaft: Drive Method Cam Cap Inside Dia. (I1, I4, E1, E4) (I2, I3, E2, E3) Camshaft Outside Dia. Shaft-to-Cap Clearance (I1, I4, E1, E4) (I2, I3, E2, E3) Cam Dimensions: Intake "A" < Limit > "B" < Limit > "C" < Limit > Exhaust "A" < Limit > "B" < Limit > "C" < Limit > Camshaft Runout Limit</p>  	<p>Chain drive (Center) 24.470 ~ 24.491 mm (0.9634 ~ 0.9642 in) 24.500 ~ 24.521 mm (0.9646 ~ 0.9654 in) 24.437 ~ 24.450 mm (0.9621 ~ 0.9626 in) 0.020 ~ 0.054 mm (0.0008 ~ 0.0021 in) 0.050 ~ 0.084 mm (0.0020 ~ 0.0033 in) 32.55 ~ 32.65 mm (1.2815 ~ 1.2854 in) 32.45 mm (1.278 in) 24.95 ~ 25.05 mm (0.9823 ~ 0.9862 in) 24.85 mm (0.9783 in) 7.70 mm (0.3031 in) 7.50 mm (0.2953 in) 32.4 ~ 32.5 mm (1.2756 ~ 1.2795 in) 32.3 mm (1.2717 in) 24.95 ~ 25.05 mm (0.9823 ~ 0.9862 in) 24.85 mm (0.978 in) 7.55 mm (0.2972 in) 7.35 mm (0.2894 in) 0.03 mm (0.0012 in)</p>
<p>Cam Chain: Cam Chain Type/No. of Links Cam Chain Adjustment Method Valve, Valve Seat, Valve Guide: Valve Clearance (Cold): IN. EX. Valve Dimensions:</p>    	<p>DID219 (BUSH CHAIN)/110 Links Automatic 0.11 ~ 0.20 mm (0.004 ~ 0.008 in) 0.21 ~ 0.30 mm (0.008 ~ 0.012 in)</p>

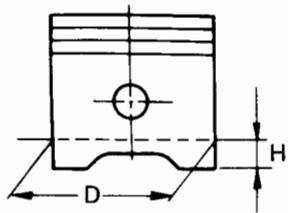
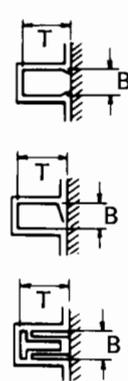
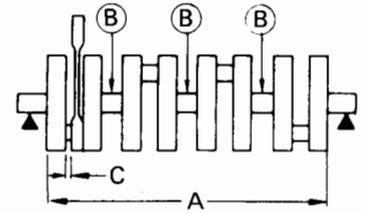
MAINTENANCE SPECIFICATIONS



Model		FZR1000
"A" Head Dia.	IN.	23.4 ~ 23.6 mm (0.9213 ~ 0.9291 in)
	EX.	24.9 ~ 25.1 mm (0.9803 ~ 0.9882 in)
"B" Face Width	IN.	1.63 ~ 2.90 mm (0.0642 ~ 0.1142 in)
	EX.	1.63 ~ 2.90 mm (0.0642 ~ 0.1142 in)
"C" Seat Limit Width	IN.	0.9 ~ 1.1 mm (0.0354 ~ 0.0433 in)
	EX.	0.9 ~ 1.1 mm (0.0354 ~ 0.0433 in)
"D" Margin Thickness Limit	IN.	0.45 ~ 0.95 mm (0.0177 ~ 0.0374 in)
	EX.	0.75 ~ 1.25 mm (0.0295 ~ 0.0492 in)
Stem Outside Diameter	IN.	4.975 ~ 4.990 mm (0.1959 ~ 0.1965 in)
	EX.	4.960 ~ 4.975 mm (0.1953 ~ 0.1959 in)
< Limit >	IN.	4.945 mm (0.1947 in)
	EX.	4.930 mm (0.1941 in)
Guide Inside Diameter	IN.	5.000 ~ 5.012 mm (0.1969 ~ 0.1973 in)
	EX.	5.000 ~ 5.012 mm (0.1969 ~ 0.1973 in)
< Limit >	IN.	5.05 mm (0.1988 in)
	EX.	5.05 mm (0.1988 in)
Stem-to-Guide Clearance	IN.	0.010 ~ 0.037 mm (0.0004 ~ 0.0015 in)
	EX.	0.025 ~ 0.052 mm (0.0010 ~ 0.0020 in)
< Limit >	IN.	0.08 mm (0.0031 in)
	EX.	0.1 mm (0.0039 in)
Stem Runout Limit		0.01 mm (0.0004 in)
		
Valve Seat Width	IN.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
	EX.	0.9 ~ 1.1 mm (0.035 ~ 0.043 in)
< Limit >	IN.	1.8 mm (0.071 in)
	EX.	1.8 mm (0.071 in)
Valve Spring:		
Free Length	IN.	39.76 mm (1.565 in)
	EX.	39.96 mm (1.573 in)
Installed Length (Valve Closed)	IN.	35.0 mm (1.378 in)
	EX.	35.0 mm (1.378 in)
Compressed Pressure (Valve closed)	IN.	7.3 ~ 8.7 kg (16.1 ~ 19.2 lb)
	EX.	11.0 ~ 13.0 kg (24.3 ~ 28.7 lb)
Tilt Limit	IN.	2.5°/1.7 mm (0.067 in)
	EX.	2.5°/1.7 mm (0.067 in)
		
Direction of Winding (Top view)	IN.	
	EX.	

MAINTENANCE SPECIFICATIONS



Model	FZR1000
<p>Piston: Piston Size "D" Measuring Point "H"</p>  <p>Piston-to-Cylinder Clearance Oversize: 2nd</p>	<p>74.93 ~ 74.94 mm (2.949 ~ 2.950 in) 3 mm (0.12 in) (From bottom line of piston skirt)</p> <p>0.06 ~ 0.08 mm (0.0024 ~ 0.0031 in) 75.50 mm (2.97 in)</p>
<p>Piston Ring: Sectional Sketch</p>  <p>End Gap (Installed):</p> <p>Side Clearance:</p>	<p>Top Ring Barrel B = 0.8 mm (0.0315 in) T = 3.1 mm (0.1220 in)</p> <p>2nd Ring Taper B = 1.0 mm (0.0394 in) T = 3.1 mm (0.1220 in)</p> <p>Oil Ring Expander B = 2.0 mm (0.0787 in) T = 2.5 mm (0.0984 in)</p> <p>Top Ring < Limit > 0.3 ~ 0.5 mm (0.0118 ~ 0.0197 in) 0.7 mm (0.0276 in)</p> <p>2nd Ring < Limit > 0.3 ~ 0.5 mm (0.0118 ~ 0.0197 in) 0.7 mm (0.0276 in)</p> <p>Oil Ring 0.2 ~ 0.8 mm (0.0078 ~ 0.0315 in)</p> <p>Top Ring < Limit > 0.03 ~ 0.07 mm (0.0012 ~ 0.0028 in) 0.15 mm (0.0059 in)</p> <p>2nd Ring < Limit > 0.02 ~ 0.06 mm (0.0008 ~ 0.0024 in) 0.15 mm (0.0059 in)</p> <p>Oil Ring -</p>
<p>Connecting Rod: Crank Pin Oil Clearance Bearing Size No. Color Code</p>	<p>0.032 ~ 0.056 mm (0.0013 ~ 0.0022 in) 1. Blue 2. Black 3. Brown 4. Green</p>
<p>Crankshaft:</p>  <p>Assembly Width "A" Runout Limit "B" Big End Side Clearance "C"</p>	<p>339.8 ~ 340.2 mm (13.38 ~ 13.39 in) 0.03 mm (0.0012 in) 0.16 ~ 0.262 mm (0.006 ~ 0.010 in)</p>

MAINTENANCE SPECIFICATIONS

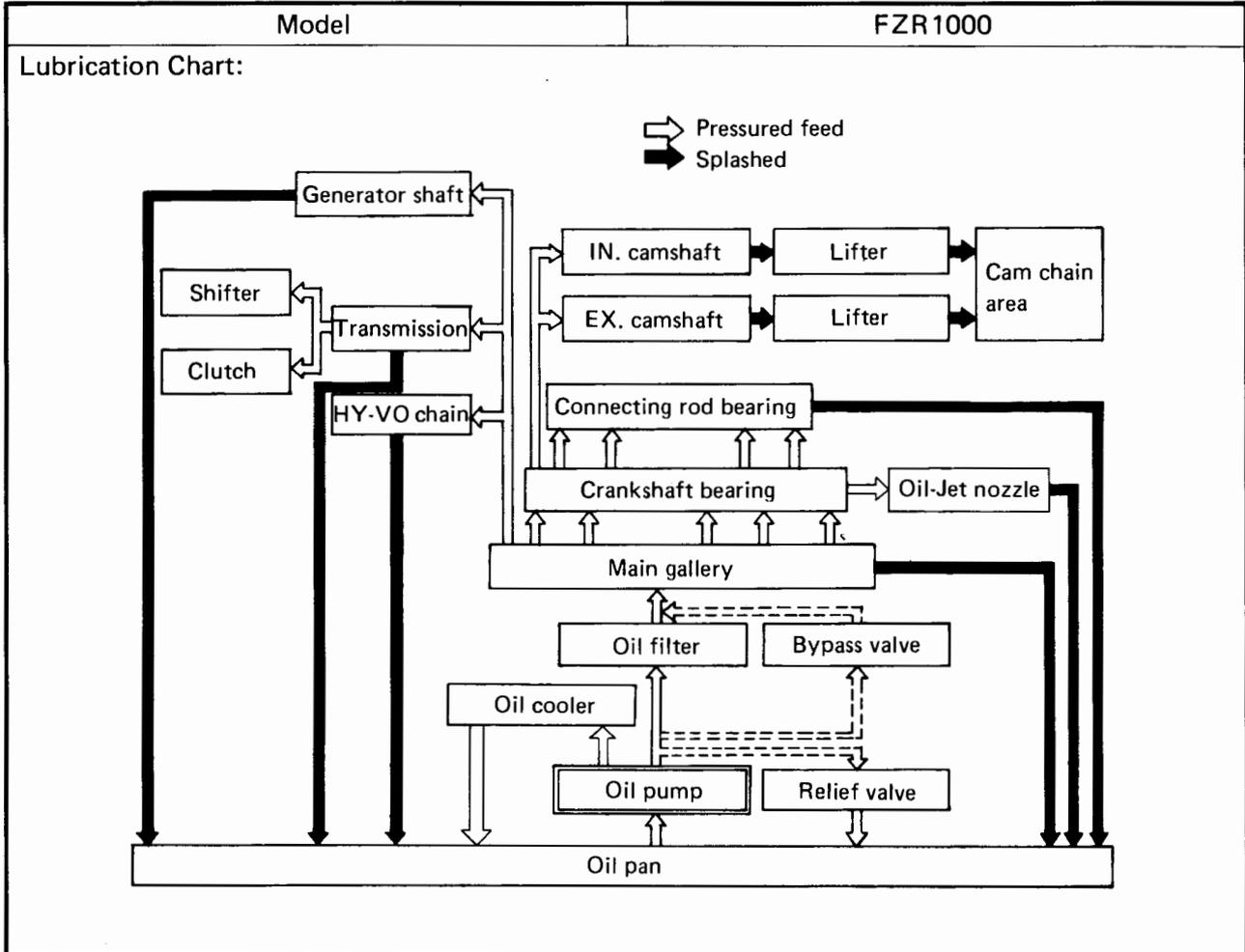


Model	FZR1000		
Main Journal Oil Clearance Bearing Size No. Color Code	0.020 ~ 0.044 mm (0.0008 ~ 0.0017 in) 1. Blue 2. Black 3. Brown 4. Green 5. Yellow		
Clutch: Friction Plate Thickness x Quantity Location x Quantity/Identification Wear Limit Clutch Plate Thickness x Quantity Warp Limit Clutch Spring Free Length x Quantity Clutch Spring Minimum Length Clutch Release Method	2.9 ~ 3.1 mm (0.114 ~ 0.122 in) x 9 Outer x 1/Single semi-circular slot Center x 1/Blue painted mark Others x 7/Red painted mark 2.8 mm (0.110 in) 1.9 ~ 2.1 mm (0.075 ~ 0.083 in) x 7 0.1 mm (0.0039 in) 55.5 mm (2.185 in) x 6 54.0 mm (2.126 in) Hydraulic inner push		
Transmission: Main Axle Deflection Limit Drive Axle Deflection Limit	0.08 mm (0.0031 in) 0.08 mm (0.0031 in)		
Shifter: Shifter Type	Guide bar		
Carburetor: Type/Manufacture x Quantity	BDS37/MIKUNI x 4		
	2GH, 2RG, 2LL	2LA, 2LE	2LF
I.D. Mark	2GH00	2LE00	2LF00
Main Jet (M.J.) (#1, 4 Cylinder)	#110	#112.5	#92.5
(#2, 3 Cylinder)	#107.5	#110	#90
Main Air Jet (M.A.J.)	#65	#65	#65
Jet Needle-Clip Position (J.N.)	5CZ2-4	5CZ2-3	5CZ2-3
Needle Jet (N.J.)	Y-0	Y-0	Y-0
Pilot Jet (P.J.)	#20	#20	#20
Pilot Outlet Size (P.O.)	0.8	0.8	0.8
Pilot Air Jet (P.A.J.)	#115	#115	#117.5
Pilot Screw (P.S.)	2-1/2	2-1/2	2-1/2
Valve Seat Size (V.S.)	1.5	1.5	1.5
Starter Jet (G.S ₁)	#30	#30	#30
(G.S ₂)	0.5	0.5	0.5
Bypass Size (B.P ₁)	0.8	0.8	0.8
Throttle Valve Size (Th.V)	#130	#130	#130
Fuel Level (F.L.)	7.3 ~ 9.3 mm (0.287 ~ 0.366 in) Below from the float chamber line		

MAINTENANCE SPECIFICATIONS



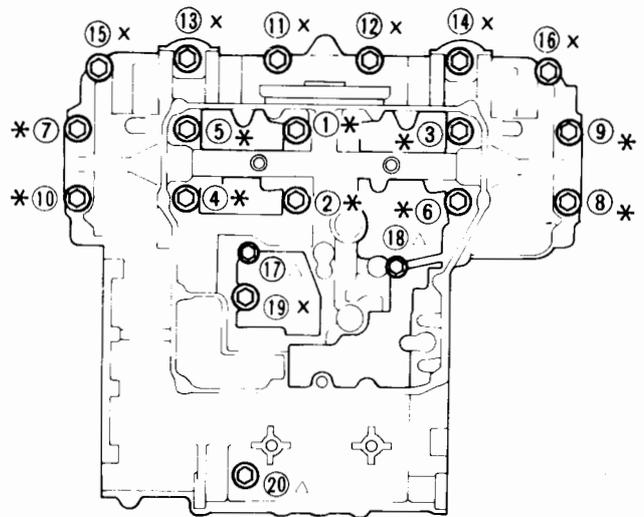
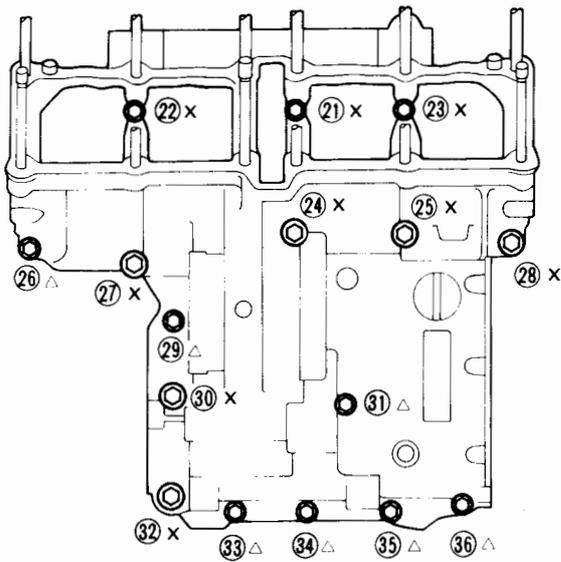
Model	FZR1000
Lubrication System: Oil Filter Type Oil Pump Type Tip Clearance < Limit > Side Clearance < Limit > Bypass Valve Setting Pressure Relief Valve Operating Pressure	Paper Trochoid pump 0.09 ~ 0.15 mm (0.0035 ~ 0.0060 in) < 0.2 mm (0.008 in) > 0.03 ~ 0.08 mm (0.0012 ~ 0.0031 in) < 0.15 mm (0.006 in) > 176.5 ~ 215.8 kPa (1.8 ~ 2.2 kg/cm ² , 25.6 ~ 31.3 psi) 382.5 ~ 460.9 kPa (3.9 ~ 4.7 kg/cm ² , 55.5 ~ 66.8 psi)
Cooling System: Radiator Core Size Width Height Thickness Radiator Cap Opening Pressure Reservoir Tank Capacity < From Low to Full Level > Water Pump Type Reduction Ratio	375 mm (14.76 in) 185 mm (7.28 in) 32 mm (1.26 in) 74 ~ 103 kPa (0.75 ~ 1.05 kg/cm ² , 10.7 ~ 14.9 psi) 0.4 L (0.35 Imp qt, 0.42 US qt) 0.15 L (0.13 Imp qt, 0.16 US qt) Single-suction centrifugal pump 68/41 x 41/43 (1.581)



Crankcase Tightening Sequence:

Crankcase (Upper)

Crankcase (Lower)



- * : 9 mm Bolt: 32 Nm (3.2 m·kg, 23 ft·lb)
- x : 8 mm Bolt: 24 Nm (2.4 m·kg, 17 ft·lb)
- Δ : 6 mm Bolt: 12 Nm (1.2 m·kg, 8.7 ft·lb)

MAINTENANCE SPECIFICATIONS



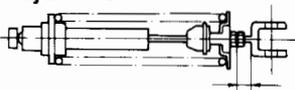
TIGHTENING TORQUE

Part to be tightened	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m·kg	ft·lb	
Camshaft Cap	Bolt	M6	40	10	1.0	7.2	
Cylinder Head (Exhaust pipe)	Stud bolt	M8	8	15	1.5	11	
Cylinder Head	Nut	M9	12	37	3.7	27	
Spark Plug	-	M12	4	17.5	1.75	12.5	
Cylinder Head Cover	Bolt	M6	8	10	1.0	7.2	
Connecting Rod	Nut	M8	8	36	3.6	25	
Cam Chain Sprocket	Flange bolt	M7	4	24	2.4	17	
Cam Chain Tensioner	Bolt	M6	2	10	1.0	7.2	
Cam Chain Tensioner End	Cap bolt	M11	1	20	2.0	14	
Chain Guide (Intake side)	Bolt	M6	2	10	1.0	7.2	
Oil Pump Housing	Screw	M6	1	10	1.0	7.2	
Oil Pump Mount	Bolt	M6	3	10	1.0	7.2	
Oil Filter Case	-	M20	1	15	1.5	11	
Oil Pan	Bolt	M6	12	10	1.0	7.2	
Drain Plug	-	M14	1	43	4.3	31	
Oil Pipe 1	Bolt	M6	3	7	0.7	5.1	
Oil Baffle Plate (Lower)	Frang bolt	M6	14	10	1.0	7.2	
Oil Level Switch	Bolt	M6	2	10	1.0	7.2	
Exhaust Pipe	Nut	M6	8	10	1.0	7.2	
Muffler Stay	Bolt	M10	1	25	2.5	18	
Muffler Bracket	Bolt	M8	1	20	2.0	14	
Exhaust Pipe Blind Plug (CO test)	Bolt	M6	4	10	1.0	7.2	
Crankcase (Cylinder head)	Stud bolt	M9	12	10	1.0	7.2	
Main Axle Bearing Stopper	Torx	M6	3	10	1.0	7.2	
Crankshaft End Cover	Screw	M6	6	7	0.7	5.1	
Crankcase Cover (Right)	Bolt	M6	11	10	1.0	7.2	
Crankcase	Bolt	M6	10	12	1.2	8.7	
Crankcase	Bolt	M8	16	24	2.4	17	
Crankcase	Bolt	M9	10	32	3.2	23	
Starter Clutch	Bolt	M8	3	25	2.5	18	Stake
Starter Chain Guide	Bolt	M6	2	10	1.0	7.2	
Clutch Boss	Nut	M20	1	70	7.0	50	Use lock washer
Clutch Spring	Bolt	M6	6	8	0.8	5.8	
Drive Sprocket	Nut	M18	1	70	7.0	50	Use lock washer
Shift Cam Stopper Lever	Bolt	M6	2	10	1.0	7.2	
Shift Cam (Neutral)	Screw	M5	1	4	0.4	2.9	
Other Engine Part	Bolt	M8	-	20	2.0	14	
	Bolt	M6	-	10	1.0	7.2	
	Screw	M6	-	7	0.7	5	

MAINTENANCE SPECIFICATIONS



Chassis

Model	FZR1000						
Steering System: Steering Bearing Type	Taper Roller Bearing						
Front Suspension: Front Fork Travel Front Spring Free Length < Limit > Spring Rate: K1 K2 Stroke K1 K2 Optional Spring Oil Capacity Oil Level (Fully Compression) Oil Grade Adjustment	130 mm (5.12 in) 533 mm (20.98 in) 528 mm (20.79 in) 5.88 N/mm (0.6 kg/mm, 33.59 lb/in) 8.34 N/mm (0.85 kg/mm, 47.58 lb/in) 0.0 ~ 95 mm (0.0 ~ 3.74 in) 95 ~ 130 mm (3.74 ~ 5.12 in) No 425 cm ³ (15.0 Imp oz, 14.4 US oz) 143 mm (5.63 in) Below the top of inner fork tube without fork spring Yamaha Fork Oil 10WT or equivalent						
			← Stiffer	Std.	Softer →		
	Adjusting groove	1	2	3	4	5	6 7
Rear Suspension: Shock Absorber Travel Spring Free Length Fitting Length Spring Rate K1 Stroke K1 Optional Spring Adjustment  Minimum Standard Maximum	50 mm (1.97 in) 202 mm (7.95 in) 190 mm (7.48 in) 152 N/mm (15.5 kg/mm, 868 lb/in) 0 ~ 50 mm (0.0 ~ 1.97 in) No 12.5 mm (0.49 in) 14.5 mm (0.57 in) 20.5 mm (0.81 in)						
Swingarm: Free Play Limit End Side	1.0 mm (0.04 in) 1.0 mm (0.04 in)						
Front Wheel: Type Rim Size Rim Material Rim Runout Limit Radial Lateral	Cast Wheel MT3.50 x 17 Aluminum 1 mm (0.04 in) 0.5 mm (0.02 in)						
Rear Wheel: Type Rim Size Rim Material Rim Runout Limit Radial Lateral	Cast wheel MT4.50 x 18 Aluminum 1 mm (0.04 in) 0.5 mm (0.02 in)						
Drive Chain: Type/Manufacturer No. of Links Chain Free Play	532ZL/D.I.D, RK532GSV/RK 110 15 ~ 20 mm (0.6 ~ 0.8 in)						

MAINTENANCE SPECIFICATIONS



Part to be tightened	Thread size	Tightening torque		
		Nm	m·kg	ft·lb
Front Axle	M14	58	5.8	42
Front Axle Pinch	M8	20	2.0	14
Front Fender	M6	107	10.7	77.4
Handle Crown and Inner Tube	M6	20	2.0	14
Handle Crown and Steering Stem Assy'	M22	110	11.0	80
Steering Stem Assy' and Lower Ring Nut:	M22	52	5.2	37
(Refer to NOTE)			Loosen	
		3	0.3	2.2
Brake Caliper (Front/Rear)	M10	35	3.5	25
Brake Disc and Wheel	M10	20	2.0	14
Master Cylinder and Master Cylinder Holder	M6	9	0.9	6.5
Master Cylinder and Master Cylinder Cap	M5	2	0.2	1.4
Bleed Screw and Brake Caliper	M8	6	0.6	4.3
Brake Hose	M10	25	2.5	18
Handlebar and Inner Tube	M8	20	2.0	14
Handlebar and Handle Crown	M6	9	0.9	6.5
Grip End (Handlebar)	M16	26	2.6	19
Engine Mounting: Front upper	M10	55	5.5	40
Rear upper slit	M8	15	1.5	11
Rear upper	M10	55	5.5	40
Rear lower	M10	42	4.2	30
Down Tube and Frame: Front	M10	63	6.3	46
Rear	M8	28	2.8	20
Footrest Bracket and Frame (Front)	M8	28	2.8	20
Footrest and Footrest Bracket (Front)	M10	55	5.5	40
Pivot Axle and Locknut	M14	90	9.0	65
Relay Arm and Frame	M10	48	4.8	35
Arm and Swingarm	M12	74	7.4	54
Arm and Relay Arm	M12	74	7.4	54
Rear Shock Absorber and Frame	M10	42	4.2	30
Rear Shock Absorber and Relay Arm	M10	40	4.0	28
Footrest and Footrest Bracket (Rear)	M10	55	5.5	40
Master Cylinder and Frame (Rear)	M8	20	2.0	14
Rear Frame and Frame	M10	55	5.5	40
Tension Bar and Swingarm	M8	28	2.8	20
Brake Caliper and Tension Bar (Rear)	M8	28	2.8	20
Brake Disc and Clutch Hub	M8	20	2.0	14
Sprocket and Clutch Hub	M10	55	5.5	40
Rear Axle and Nut	M15	110	11.0	80

NOTE:

After torquing the steering shaft and ring nut, adjust them for smooth movement of the handlebar.

MAINTENANCE SPECIFICATIONS



Electrical

Model	FZR1000																																
Voltage Ignition System: Ignition Timing (B.T.D.C.) Advanced Timing (B.T.D.C.) Advancer Type	12V $5^{\circ} \pm 1^{\circ}$ at 1,000 r/min 50° at 6,000 r/min Electrical																																
<table border="1"> <caption>Ignition Timing (B.T.D.C.) vs Engine Speed</caption> <thead> <tr> <th>Engine Speed (x 10³ r/min)</th> <th>Ignition Timing (B.T.D.C.)</th> </tr> </thead> <tbody> <tr><td>0</td><td>5</td></tr> <tr><td>1</td><td>5</td></tr> <tr><td>2</td><td>25</td></tr> <tr><td>3</td><td>35</td></tr> <tr><td>4</td><td>38</td></tr> <tr><td>5</td><td>45</td></tr> <tr><td>6</td><td>50</td></tr> <tr><td>7</td><td>48</td></tr> <tr><td>8</td><td>40</td></tr> <tr><td>9</td><td>40</td></tr> <tr><td>10</td><td>40</td></tr> <tr><td>11</td><td>40</td></tr> <tr><td>12</td><td>21</td></tr> <tr><td>13</td><td>21</td></tr> <tr><td>14</td><td>21</td></tr> </tbody> </table>		Engine Speed (x 10 ³ r/min)	Ignition Timing (B.T.D.C.)	0	5	1	5	2	25	3	35	4	38	5	45	6	50	7	48	8	40	9	40	10	40	11	40	12	21	13	21	14	21
Engine Speed (x 10 ³ r/min)	Ignition Timing (B.T.D.C.)																																
0	5																																
1	5																																
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4	38																																
5	45																																
6	50																																
7	48																																
8	40																																
9	40																																
10	40																																
11	40																																
12	21																																
13	21																																
14	21																																
T.C.I.: Pickup Coil Resistance (Color) T.C.I. Unit/Manufacturer	135 ~ 165 Ω at 20°C (68°F) (Gray – Orange) TID14-57/HITACHI																																
Ignition Coil: Model/Manufacturer Minimum Spark Gap Primary Winding Resistance Secondary Winding Resistance Spark Plug Cap Resistance	CM12-32/HITACHI 6 mm (0.24 in) or more at 500 r/min 1.8 ~ 2.2 Ω at 20°C (68°F) 10.8 ~ 13.2 k Ω at 20°C (68°F) 10 k Ω																																
Charging System: Type	A.C. Generator																																
A.C. Generator: Model/Manufacturer Nominal Output Field Coil Resistance Starter Coil Resistance Brush – Overall Length < Limit > – Spring Force Voltage Regulator: Type No load Regulated Voltage	B3G/NIPPONDENSO 12V, 28A at 5,000 r/min 3.8 ~ 4.2 Ω at 20°C (68°F) (Brown – Green) 0.15 ~ 0.18 Ω at 20°C (68°F) (White – White) 13.7 mm (0.54 in) 4.7 mm (0.19 in) 230 ~ 330 gr (8.1 ~ 11.6 oz) Field control 14.2 ~ 14.8V																																
Battery: Capacity Specific Gravity	12V, 14AH 1.280																																

MAINTENANCE SPECIFICATIONS



Model	FZR1000
Electrical Starter System: Type Starter Motor: Model/Manufacturer Output Armature Coil Resistance Brush – Overall Length < Limit > – Spring Force Commutator Dia. Wear Limit Mica Undercut Starter Switch: Model/Manufacturer Amperage Rating Coil Resistance	Constant mesh type SM-8/MITSUBA 0.6 kw 0.012Ω ± 10% at 20°C (68°F) 12 mm (0.47 in) 5 mm (0.20 in) 680 ~ 920 g (24.0 ~ 32.4 oz) 28 mm (1.10 in) 27 mm (1.06 in) 0.8 mm (0.03 in) A104-128/HITACHI 100A 4.0 ~ 4.7Ω at 20°C (68°F)
Horn: Type/Quantity Model/Manufacturer Maximum Amperage	Plane Type/1 pcs. CF-12/NIKKO 2.5A
Flasher Relay (Relay Assembly): Type Model/Manufacturer Self Cancelling Device Flasher Frequency Wattage	Semi transistor type FX257N/NIPPON DENSO Yes (Except D) 75 ~ 95 cycle/min 21W x 2 pcs + 3.4W
Sidestand Relay: Model/Manufacturer Coil Winding Resistance Diode	Except AUS, NZ, ZA G4MW-112IT-010-Y17/OMRON 75Ω ± 10% at 20°C (68°F) No
Oil Level Switch: Model/Manufacturer	4H7/NIPPON DENSO
Fuel Pump Relay: Model/Manufacturer	25G-00/OMRON
Thermostat Switch: Model/Manufacturer	47X/NIPPON THERMOSTAT
Thermo Unit: Model/Manufacturer	11H/NIPPON SEIKI
Circuit Breaker: Type Amperage for Individual Circuit x Quantity: MAIN HEADLIGHT SIGNAL IGNITION RESERVE	Fuse 30A x 1 15A x 1 10A x 1 10A x 1 10A x 1, 15A x 1, 30A x 1

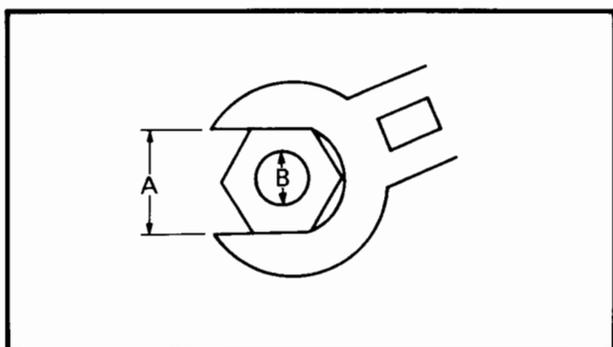
GENERAL TORQUE SPECIFICATIONS



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

LUBRICATION POINT AND GRADE OF LUBRICANT



LUBRICATION POINT AND GRADE OF LUBRICANT

ENGINE

Lubrication Point	Symbol	Grade of Lubricant
Oil seal lip		Wheel bearing grease
O-Ring		Wheel bearing grease
Bearing		Engine oil
Piston surface		Engine oil
Piston pin		Engine oil
Crankshaft pin		Engine oil
Crankshaft journal		Engine oil
Connecting rod bolt/Nut		Molybdeum disulfide oil
Camshaft cam lobe/Journal		Molybdeum disulfide oil
Valve stem (IN, EX)		Molybdeum disulfide oil
Valve stem end (IN, EX)		Molybdeum disulfide oil
Water pump impeller shaft		Engine oil
Oil pump rotor (Inner/Outer), housing		Engine oil
Oil strainer assembly		Engine oil
Outer starter clutch surface		Engine oil
Idle gear surface/Bearing		Engine oil
Starter clutch ball		Engine oil
Primary driven gear		Engine oil
Transmission gear (Wheel/Pinion)		Molybdeum disulfide oil
Axle (Main/Drive)		Molybdeum disulfide oil
Shift cam		Molybdeum disulfide oil
Shift fork/Guide bar		Engine oil
Shift shaft assembly		Engine oil

LUBRICATION POINT AND GRADE OF LUBRICANT



CHASSIS

Lubrication Point	Symbol	Grade of Lubricant
Steering bearing (Upper/Lower)		Molybdenum disulfide grease
Wheel bearing/Axle		Wheel bearing grease
Front wheel oil seal (Right/Left)		Wheel bearing grease
Rear wheel oil seal		Wheel bearing grease
Clutch hub oil seal		Wheel bearing grease
Clutch hub fitting area		Wheel bearing grease
Rear brake pedal shaft		Wheel bearing grease
Change pedal		Wheel bearing grease
Side stand sliding surface		Wheel bearing grease
Tube guide (Throttle grip) inner surface		Wheel bearing grease
Brake lever bolt, sliding surface		Wheel bearing grease
Clutch lever bolt, sliding surface		Wheel bearing grease
Rear shock absorber (Upper/Lower)		Molybdenum disulfide grease
Swingarm pivot bearing		Lithium-soap base grease
Pivot shaft		Lithium-soap base grease
Arm 1, 2 bearing		Lithium-soap base grease
Thrust cover (Inner)		Lithium-soap base grease
Rellay arm bearing (Inner)		Lithium-soap base grease
Rear footrest ball		Wheel bearing grease
Rear footrest pin		Wheel bearing grease

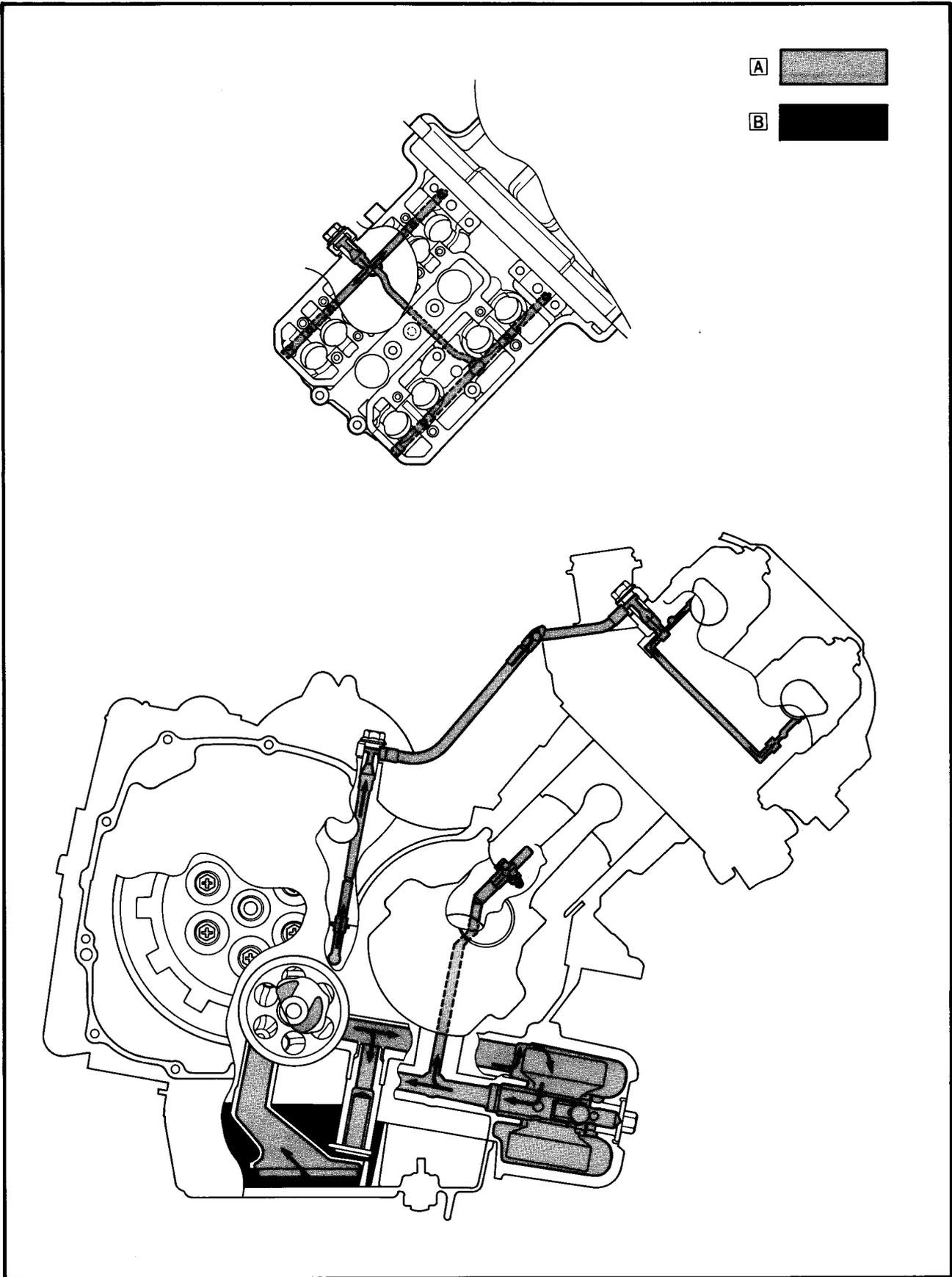


DEFINITION OF UNITS

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

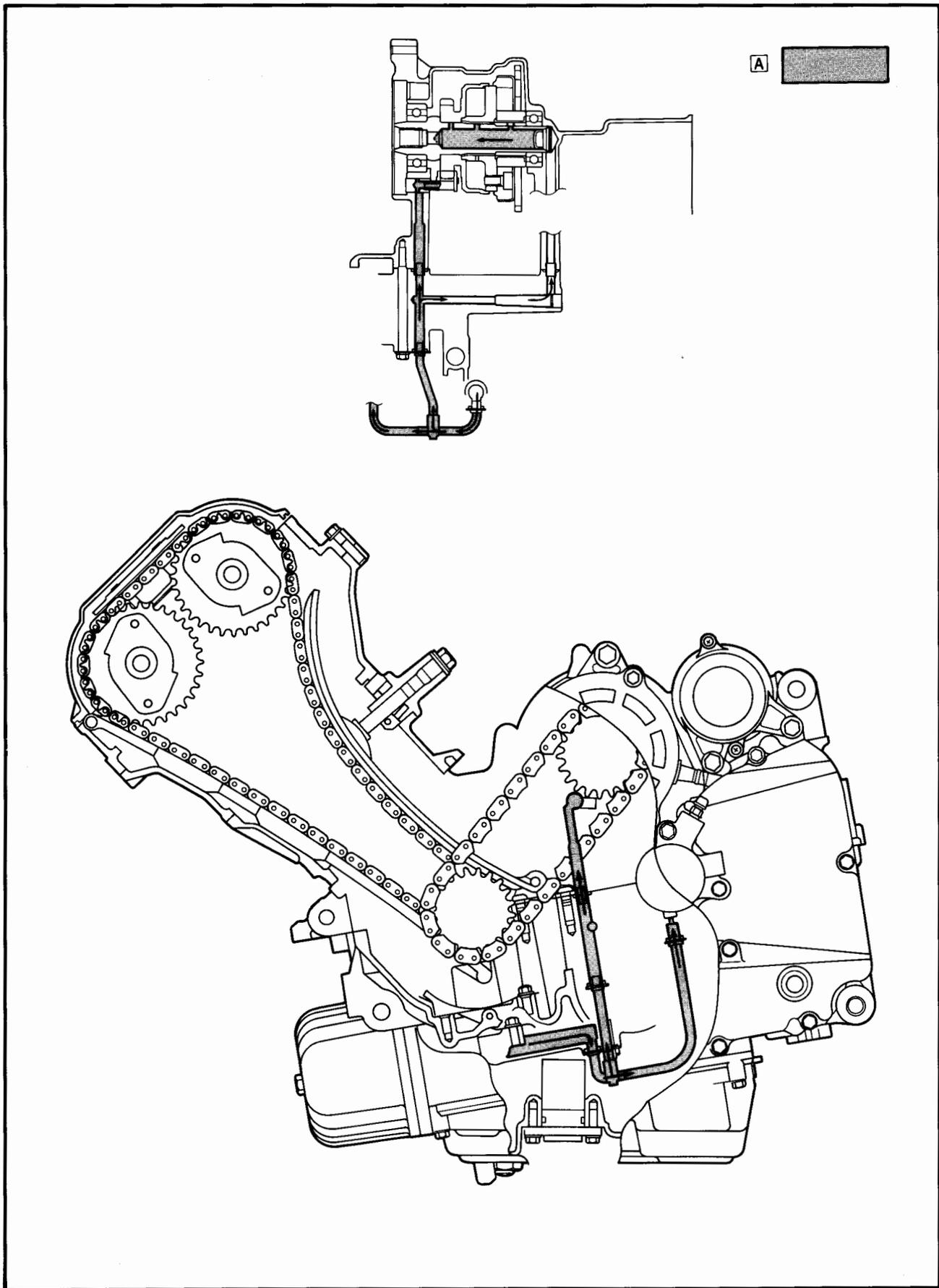
LUBRICATION DIAGRAM (1)

- A** Feed
- B** Scavenge



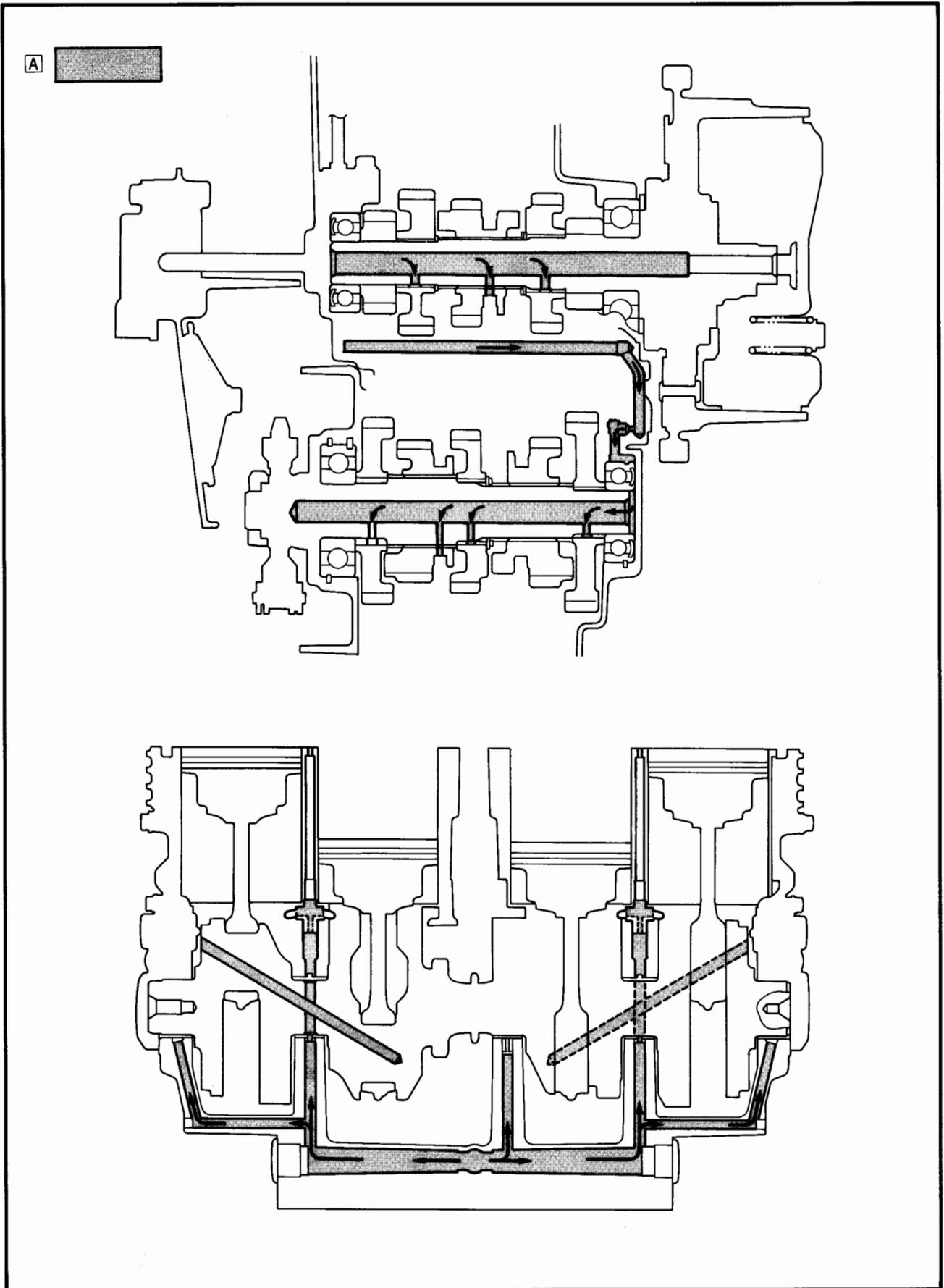
LUBRICATION DIAGRAM (2)

A Feed



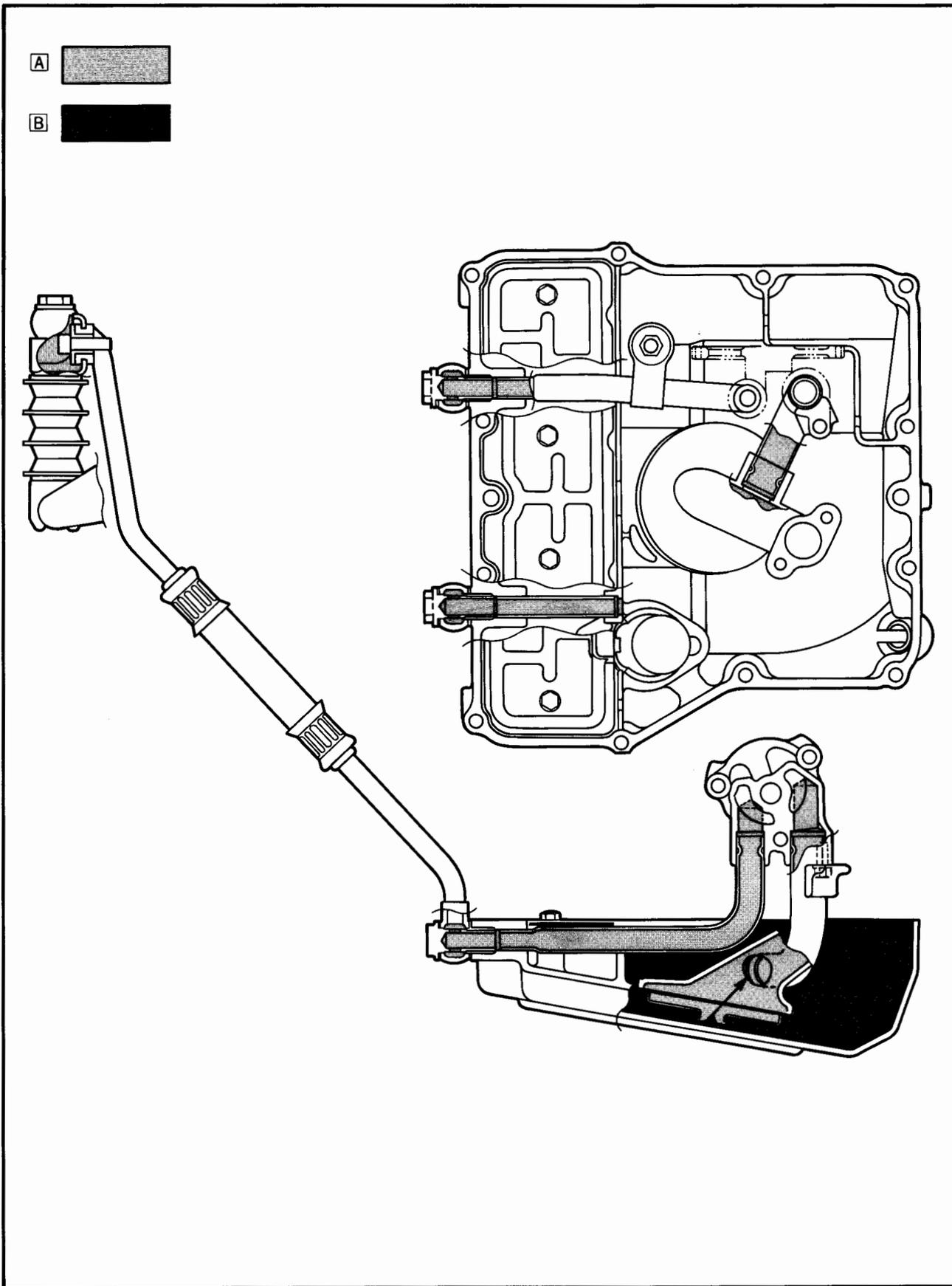
LUBRICATION DIAGRAM (3)

A Feed



LUBRICATION DIAGRAM (4)

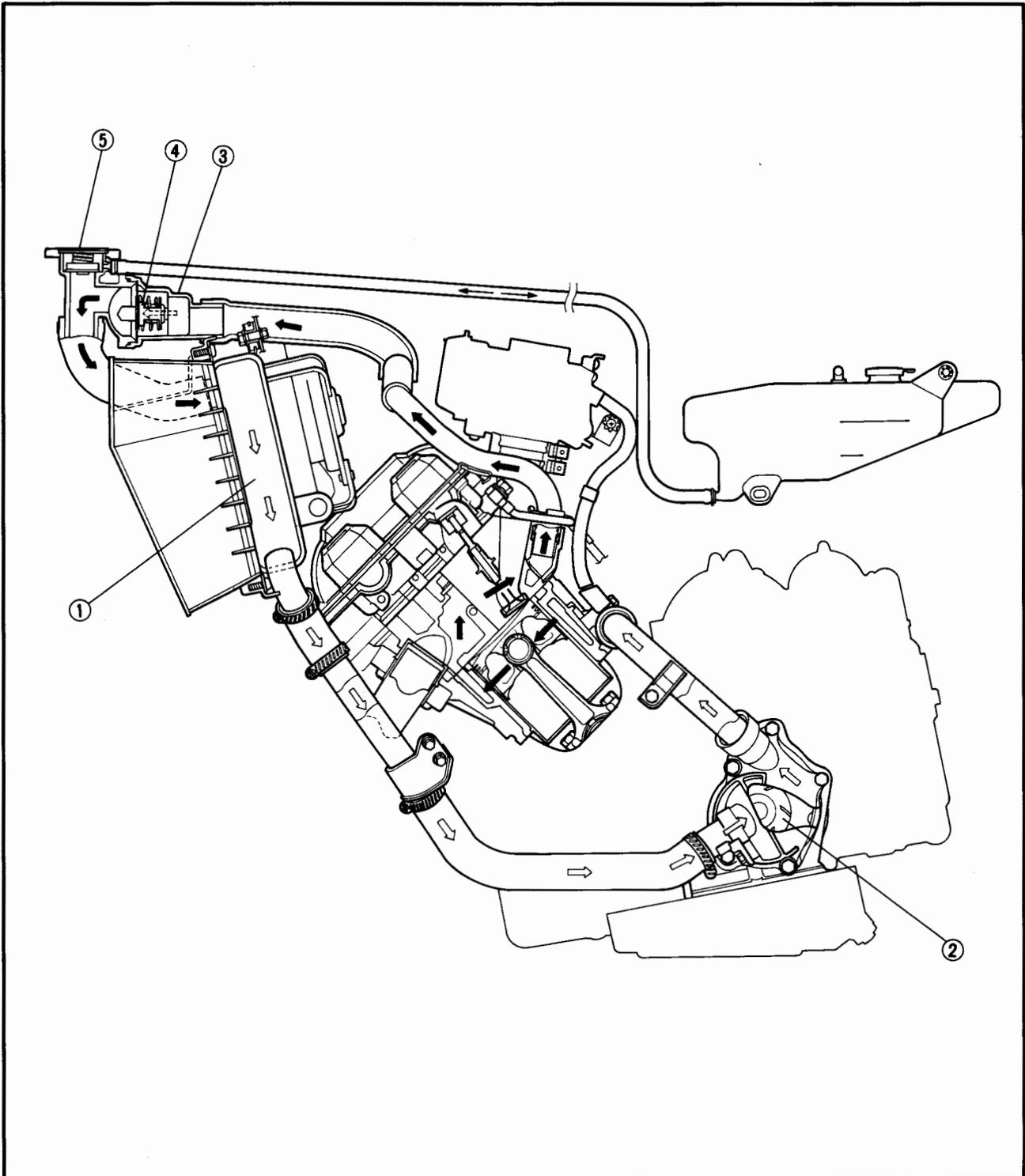
- A** Feed
- B** Scavenge





COOLANT DIAGRAM

- ① Radiator
- ② Water pump
- ③ Thermostat housing
- ④ Thermostatic valve
- ⑤ Radiator cap

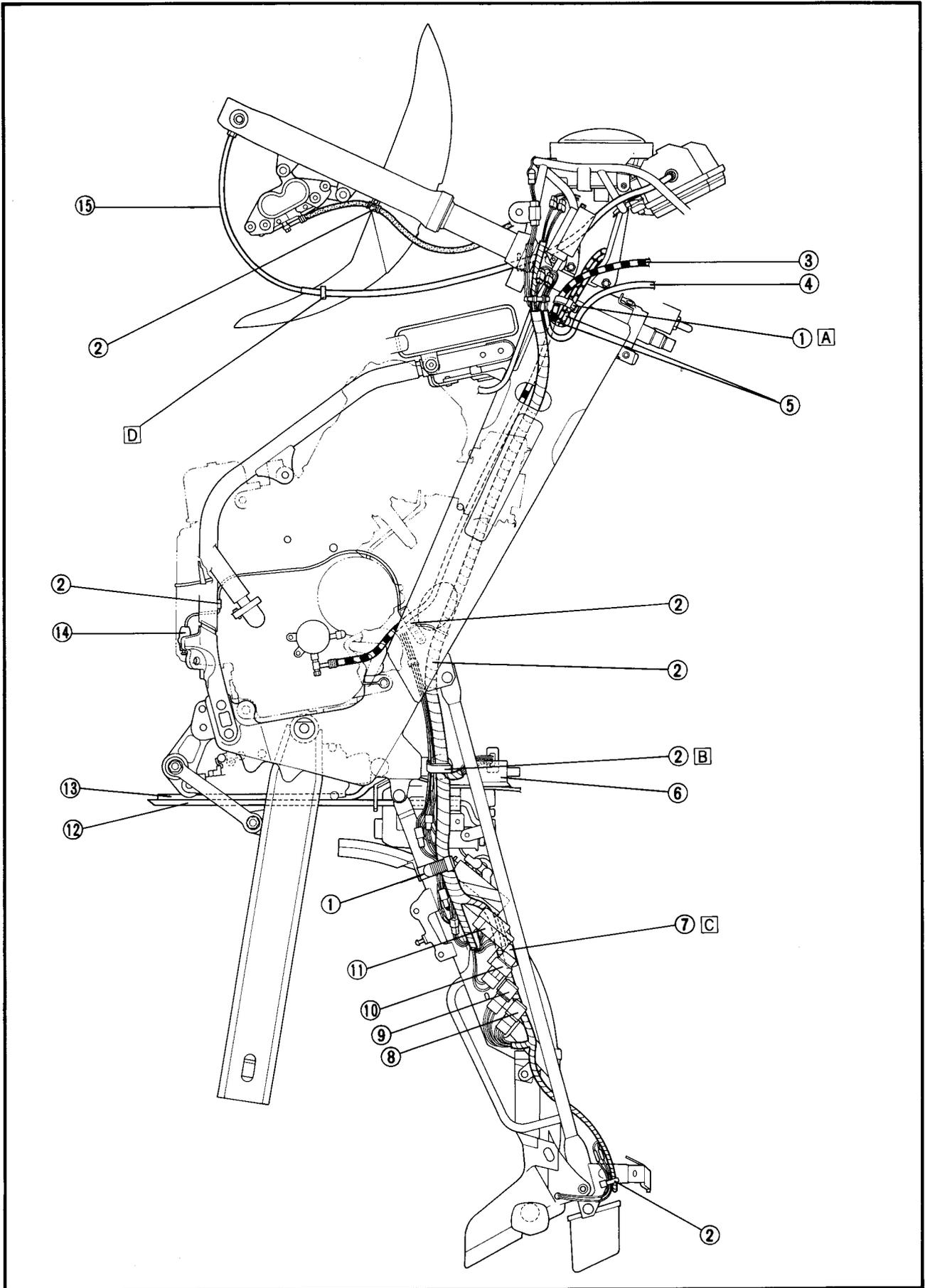




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CABLE ROUTING



CABLE ROUTING



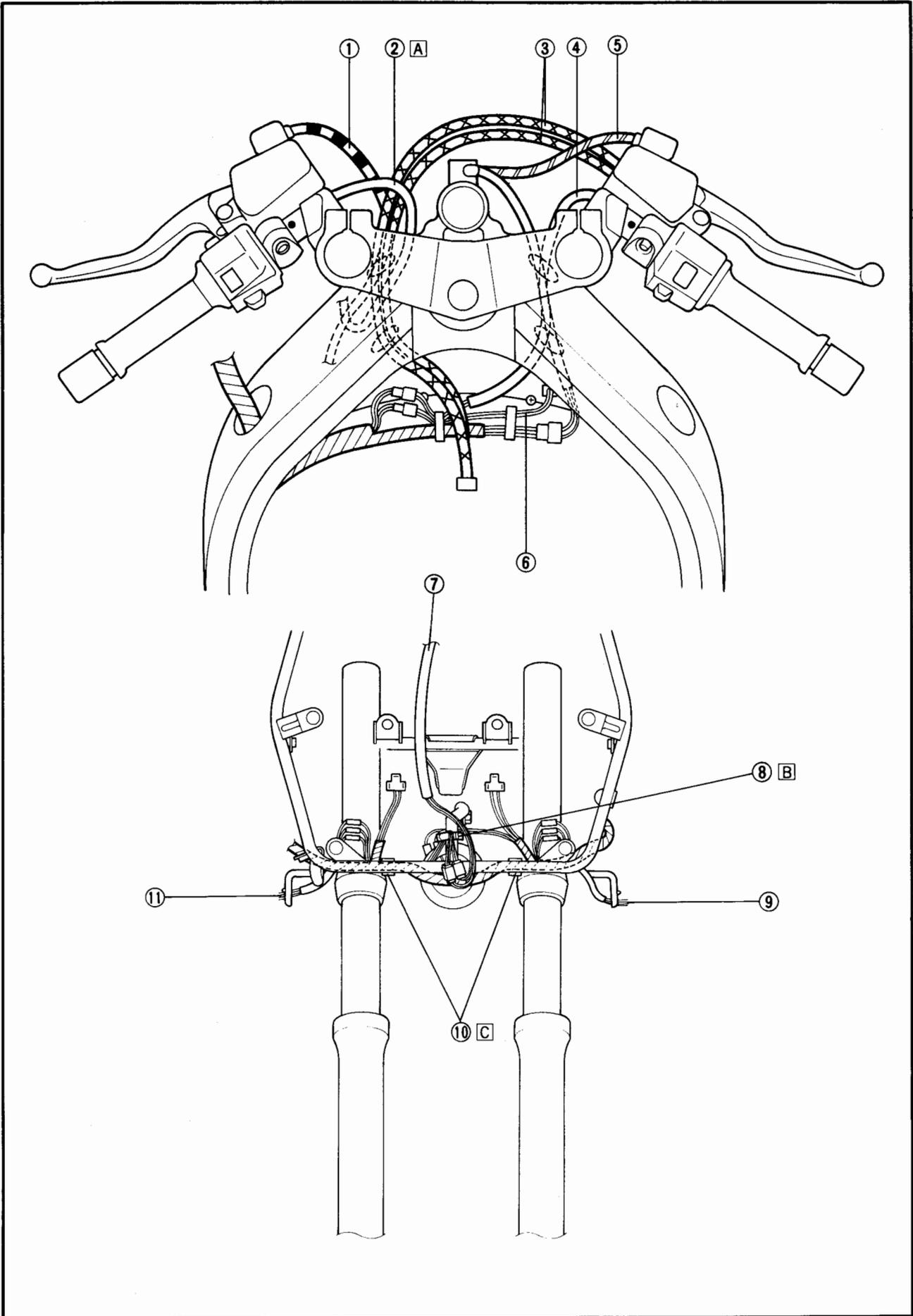
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|------------------------------|--|---|
| ① Band | ⑨ Fuel pump control relay | Ⓐ Clamp the throttle cables and clutch hose. |
| ② Clamp | ⑩ Fuse (MAIN) | Ⓑ Clamp the leads from the engine and wire harness at the white tape would around it. |
| ③ Clutch hose | ⑪ Fuse box | Ⓒ Route the diode block lead inside of the rear frame. |
| ④ Handle switch lead (Right) | ⑫ Breather hose (Battery) | Ⓓ Pass the speedometer cable through the guide. |
| ⑤ Throttle cables | ⑬ Breather hose (Coolant reservoir tank) | |
| ⑥ Flasher relay | ⑭ Sidestand switch | |
| ⑦ Diode block | ⑮ Speedometer cable | |
| ⑧ Sidestand relay | | |

CABLE ROUTING

SPEC



- | | | |
|-------------------------|--------------------|---|
| ① Clamp | ⑨ Fuel hose | Ⓐ Clamp the main switch lead and fan motor lead. |
| ② Band | ⑩ Ignition coil | Ⓑ Push in the air vent hose end into the hole on the crankcase rear end. |
| ③ Pick-up coil leads | (# 1, #4 cylinder) | Ⓒ Clamp the fuel hose and the coolant reservoir tank hose. |
| ④ Reservoir tank hose | ⑪ Ignition coil | Ⓓ Pass the neutral switch coupler (Green) and sidestand switch connectors between the wire harness and frame. |
| ⑤ Air vent hose | (# 2, #3 cylinder) | Ⓔ Pass the A.C. generator coupler and the fuel pump coupler between the wire harness and battery box. |
| ⑥ A.C. generator lead | ⑫ Battery | Ⓕ Clamp the spark plug leads at 50 mm (1.97 in) from the ignition coils. |
| ⑦ Neutral switch lead | ⑬ Starter relay | |
| ⑧ Sidestand switch lead | | |

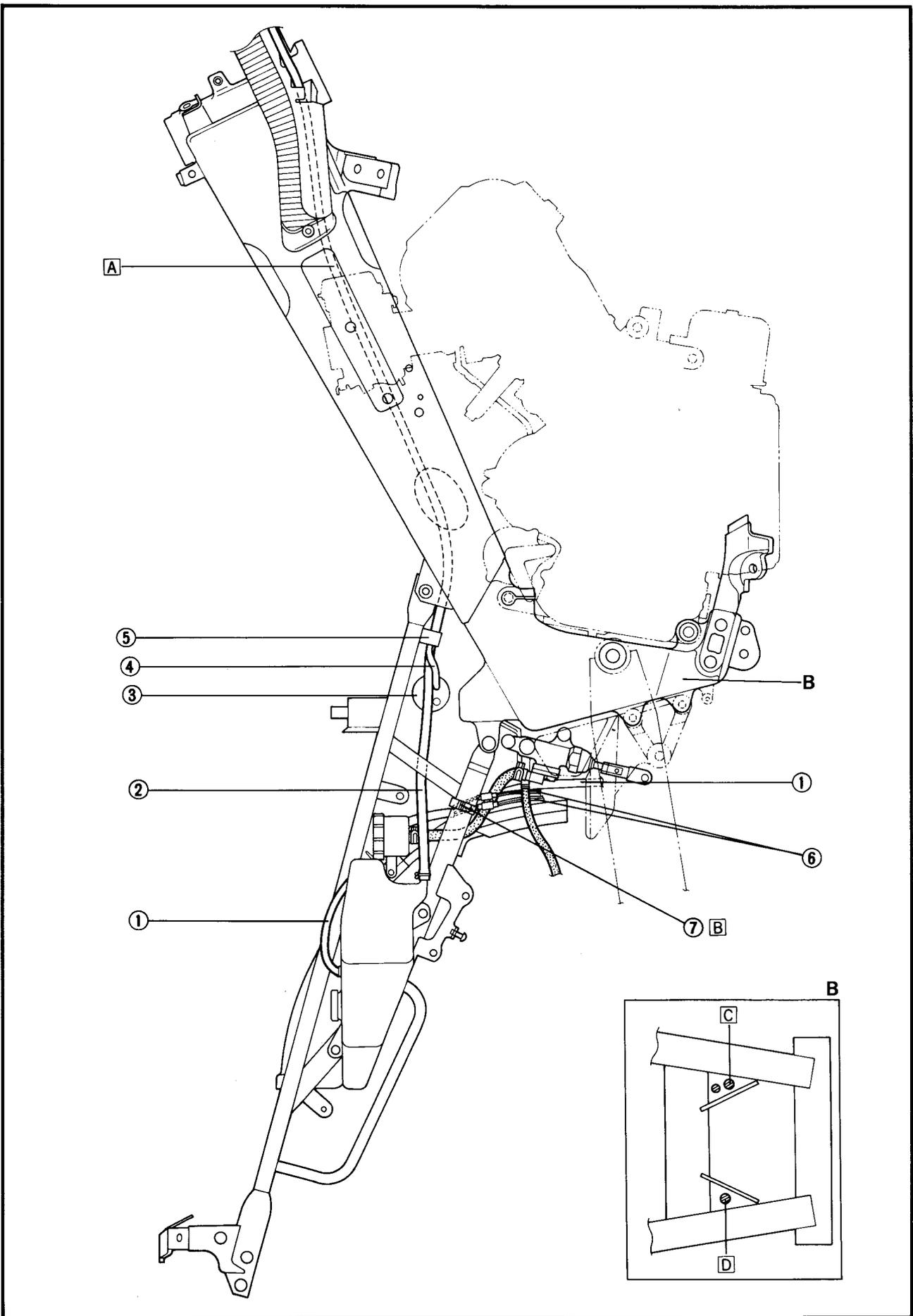


CABLE ROUTING



- ① Clutch hose
- ② Handle switch leads (Left)
- ③ Throttle cables
- ④ Handle switch leads (Right)
- ⑤ Brake hose
- ⑥ Fan motor lead
- ⑦ Meter ass'y lead
- ⑧ Band
- ⑨ Front flasher lead (Left)
- ⑩ Cramp
- ⑪ Front flasher light (Right)

- A Route the handle switch lead (Right) above the clutch hose and throttle cables.
- B Clamp only the meter ass'y leads after connection of couplers.
- C Route the headlight leads outside of the cramps at both sides.





- ① Breather hose (Coolant reservoir tank)
- ② Hose (Coolant reservoir tank)
- ③ Fuel pump
- ④ Fuel hose
- ⑤ Clamp
- ⑥ Stop switch leads
- ⑦ Band

- A Route the coolant reservoir tank hose inside of the frame (Right).
- B Clamp the stop switch leads inside of the frame.
- C Pass the fuel tank breather hose and battery breather hose.
- D Pass the coolant reservoir tank breather hose.

INTRODUCTION/PERIODIC MAINTENANCE/LUBRICATION



PERIODIC INSPECTION AND ADJUSTMENT

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

Unit: km (miles)

Item	Remarks	Break-in 1,000 (600)	EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Valve(s) *	Check valve clearance. Adjust if necessary.	EVERY 42,000 (28,000)		
Spark plug(s)	Check condition. Clean or replace if necessary.	○	○	○
Air filter	Clean. Replace if necessary.		○	○
Carburetor *	Check idle speed/synchronization/starter operation. Adjust if necessary.	○	○	○
Fuel line *	Check fuel hose and vacuum pipe for cracks or damage. Replace if necessary.		○	○
Fuel filter *	Check condition. Replace every 30,000 (20,000).			○
Engine oil	Replace (Warm engine before draining).	○	○	○
Engine oil filter *	Replace.	○		○
Brake *	Check operation/fluid leakage/See NOTE. Correct if necessary.		○	○
Clutch *	Check operation/fluid leakage/See NOTE. Correct if necessary.		○	○
Rear arm pivot *	Check rear arm assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months. ***			○
Rear suspension link pivots *	Check operation. Apply grease lightly every 24,000 (16,000) or 24 months. ***			○
Wheels *	Check balance/damage/runout. Repair if necessary.		○	○
Wheel bearings *	Check bearings assembly for looseness/damage. Replace if damaged.		○	○
Steering bearing *	Check bearings assembly for looseness. Correct if necessary. Moderately repack every 24,000 (16,000) or 24 months. **	○		○
Front forks *	Check operation/oil leakage. Repair if necessary.		○	○
Rear shock absorber *	Check operation/oil leakage. Repair if necessary.		○	○
Cooling system	Check coolant leakage. Repair if necessary. Replace coolant every 24,000 (16,000) or 24 months.		○	○
Drive chain	Check chain slack/alignment. Adjust if necessary. Clean and lube.	EVERY 500 (300)		

PERIODIC MAINTENANCE/LUBRICATION



Unit: km (miles)

Item	Remarks	Break-in 1,000 (600)	EVERY	
			6,000 (4,000) or 6 months	12,000 (8,000) or 12 months
Fittings/Fasteners*	Check all chassis fittings and fasteners. Correct if necessary.	○	○	○
Center and sidestand*	Check operation. Repair if necessary.	○	○	○
Battery*	Check specific gravity. Check breather pipe for proper operation. Correct if necessary.		○	○
A.C. Generator*	Replace generator brushes every 100,000 (62,000).			

- *: It is recommended that these items be serviced by a Yamaha dealer.
- ** : Medium weight wheel bearing grease.
- *** : Molybdenum disulfide grease.

NOTE: _____

Brake fluid replacement:

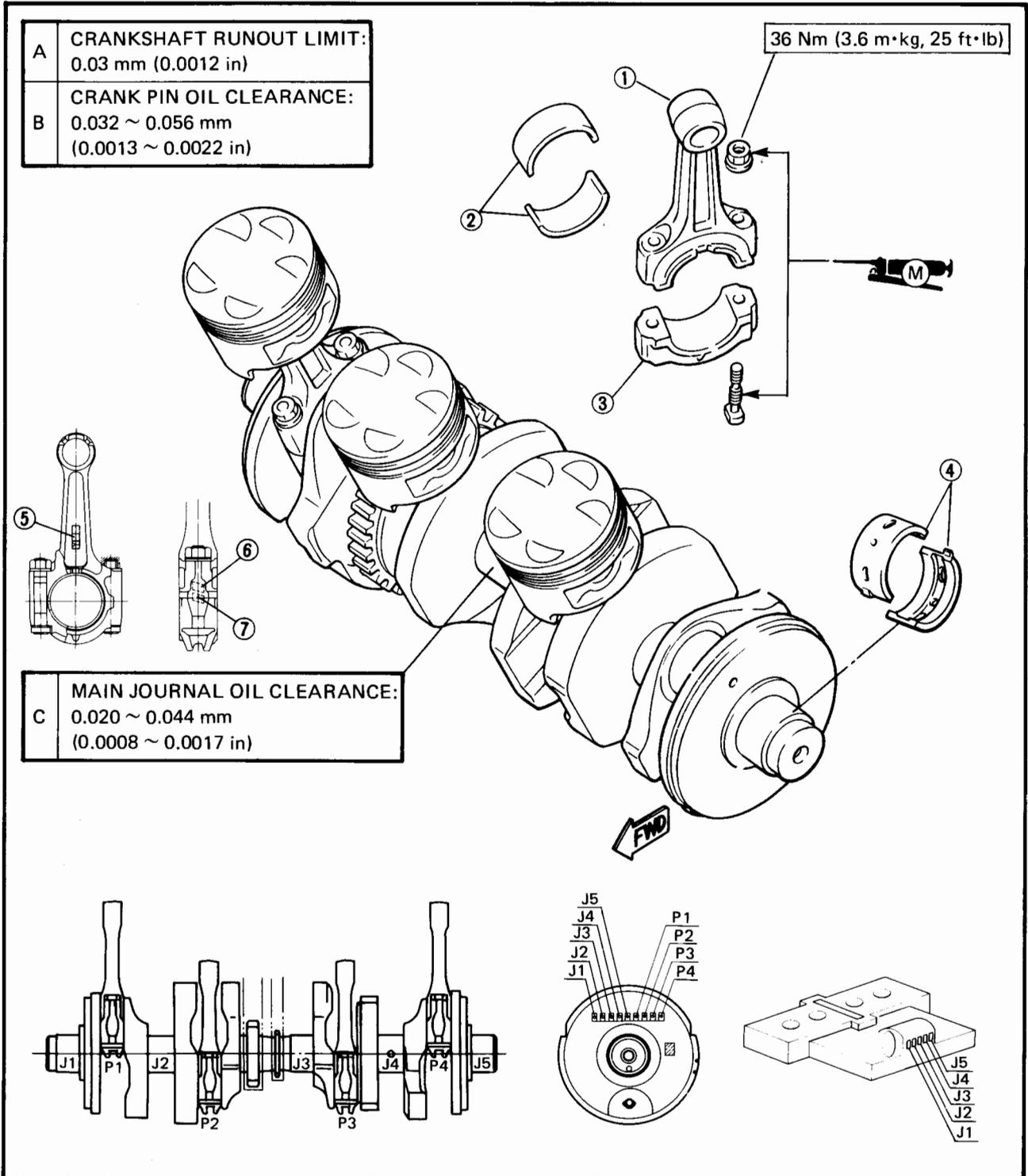
1. When disassembling the master cylinder or caliper cylinder (clutch release cylinder), replace the brake fluid. Normally check the brake fluid level and add the fluid as required.
2. On the inner parts of the master cylinder and caliper cylinder (clutch release cylinder), replace the oil seals every two years.
3. Replace the brake (clutch) hoses every four years, or if cracked or damaged.



EXPLODED DIAGRAMS

CRANKSHAFT

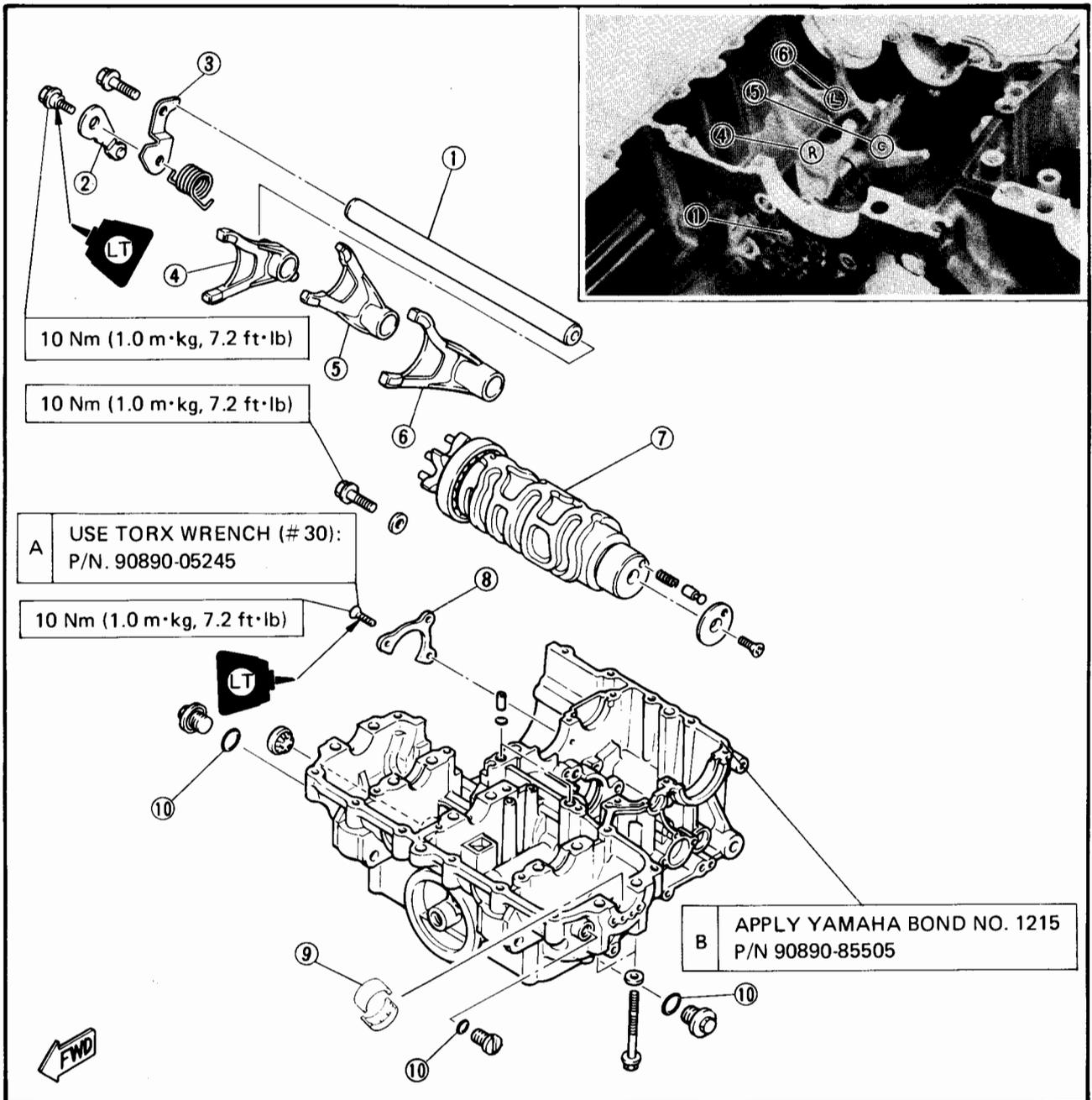
- ① Connecting rod
- ② Connecting rod bearing
- ③ Connecting rod cap
- ④ Main journal bearing
- ⑤ "Y" mark
- ⑥ Matching mark
- ⑦ Crank pin bearing size





LOWER CRANKCASE

- ① Guide bar
- ② Stopper lever
- ③ Shift fork guide bar stopper
- ④ Shift fork (R)
- ⑤ Shift fork (C)
- ⑥ Shift fork (L)
- ⑦ Shift cam
- ⑧ Main axle bearing stopper
- ⑨ Crankshaft main bearing
- ⑩ O-ring

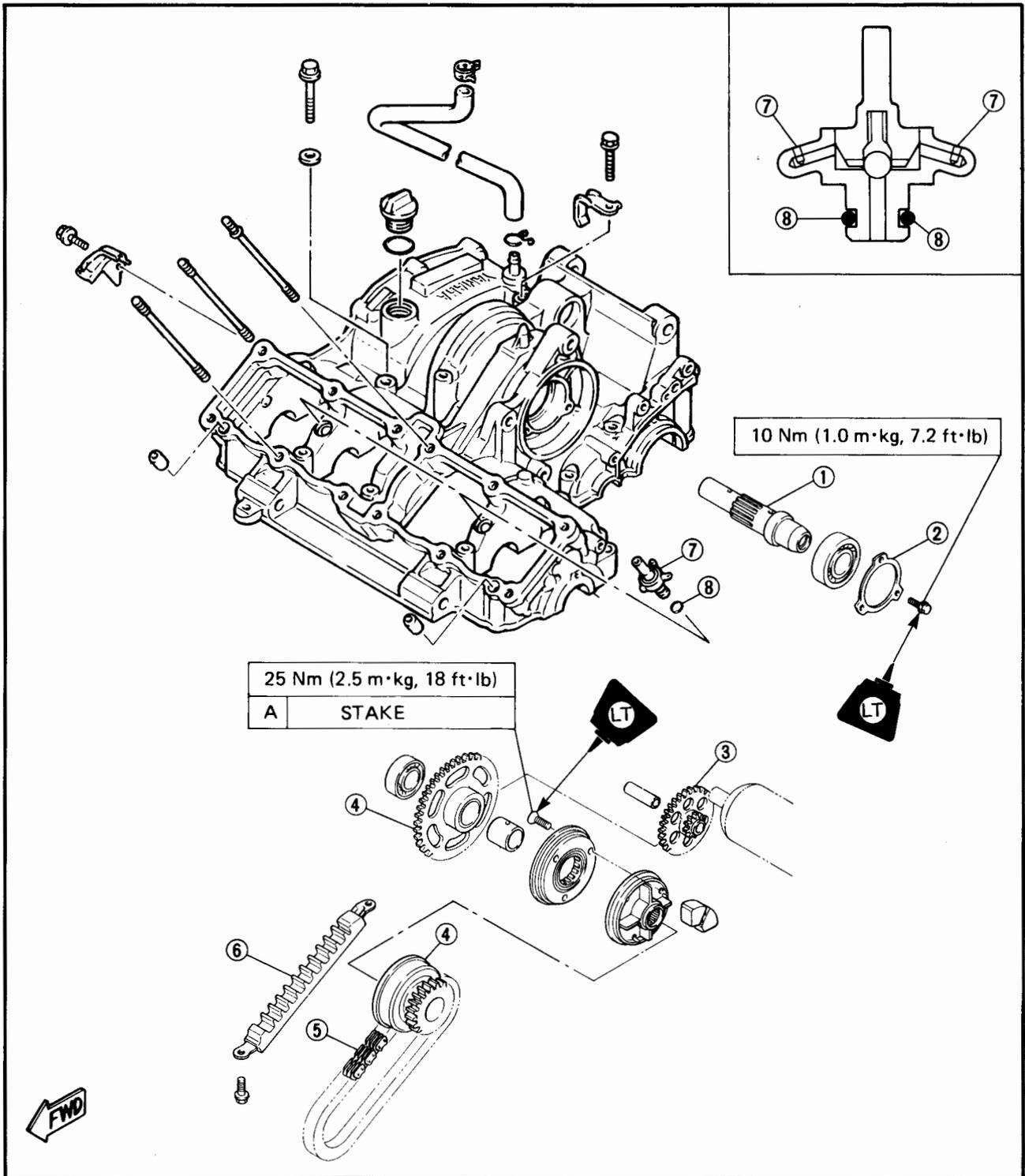


ENGINE ASSEMBLY AND ADJUSTMENT



UPPER CRANKCASE

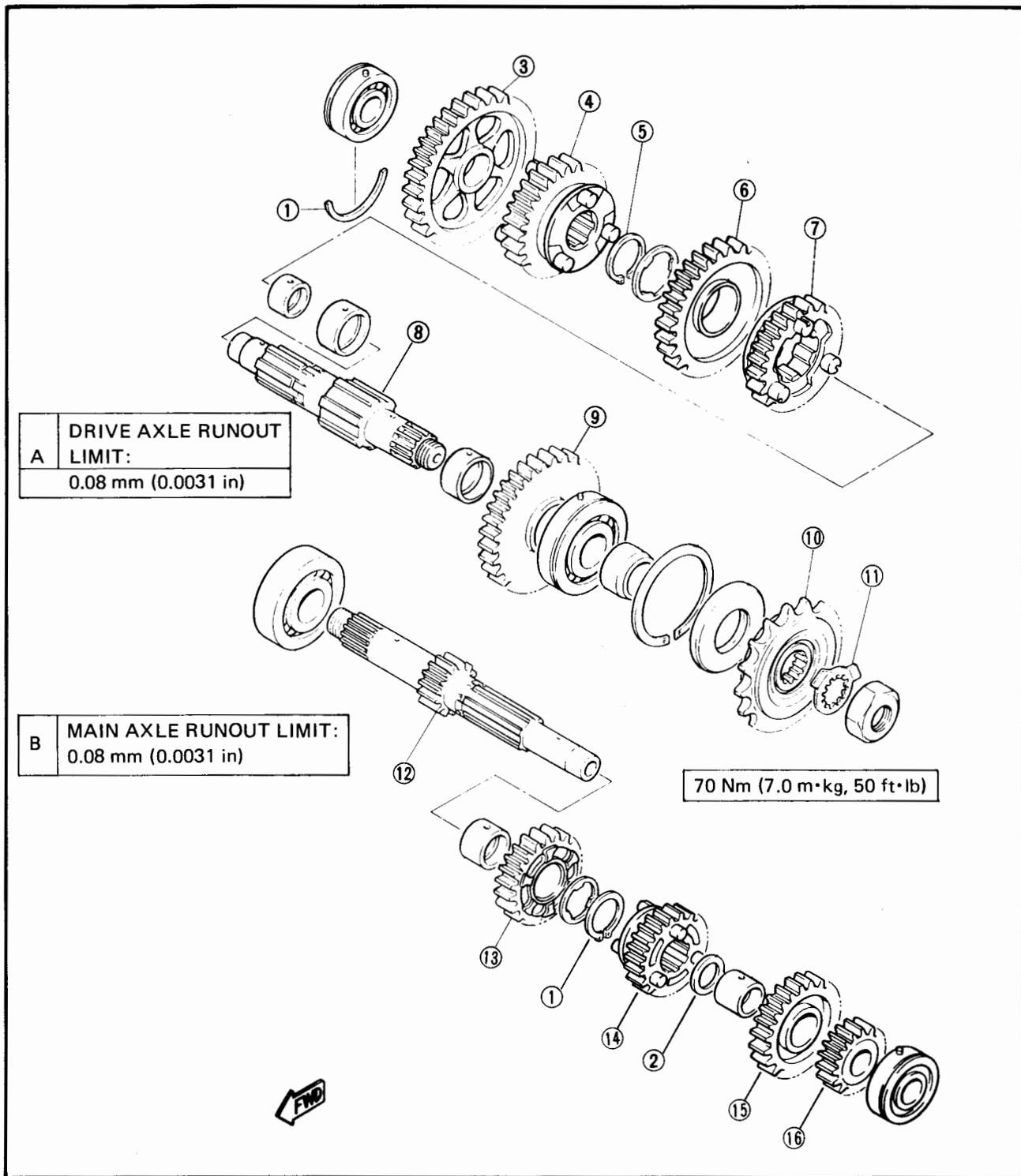
- ① AC generator shaft
- ② Cover plate
- ③ Starter idle gear
- ④ Starter clutch damper assembly
- ⑤ HY-VO chain
- ⑥ HY-VO chain guide
- ⑦ Oil-Jet nozzle
- ⑧ O-ring





Transmission

- ① Circlip
- ② Plain washer
- ③ 1st wheel gear (36T)
- ④ 4th wheel gear (27T)
- ⑤ Circlip
- ⑥ 3rd wheel gear (29T)
- ⑦ 5th wheel gear (28T)
- ⑧ Drive axle
- ⑨ 2nd wheel gear (32T)
- ⑩ Drive sprocket
- ⑪ Lock washer
- ⑫ Main axle
- ⑬ 4th pinion gear (27T)
- ⑭ 3rd pinion gear (21T)
- ⑮ 5th pinion gear (27T)
- ⑯ 2nd pinion gear (18T)



A DRIVE AXLE RUNOUT
LIMIT:
0.08 mm (0.0031 in)

B MAIN AXLE RUNOUT LIMIT:
0.08 mm (0.0031 in)

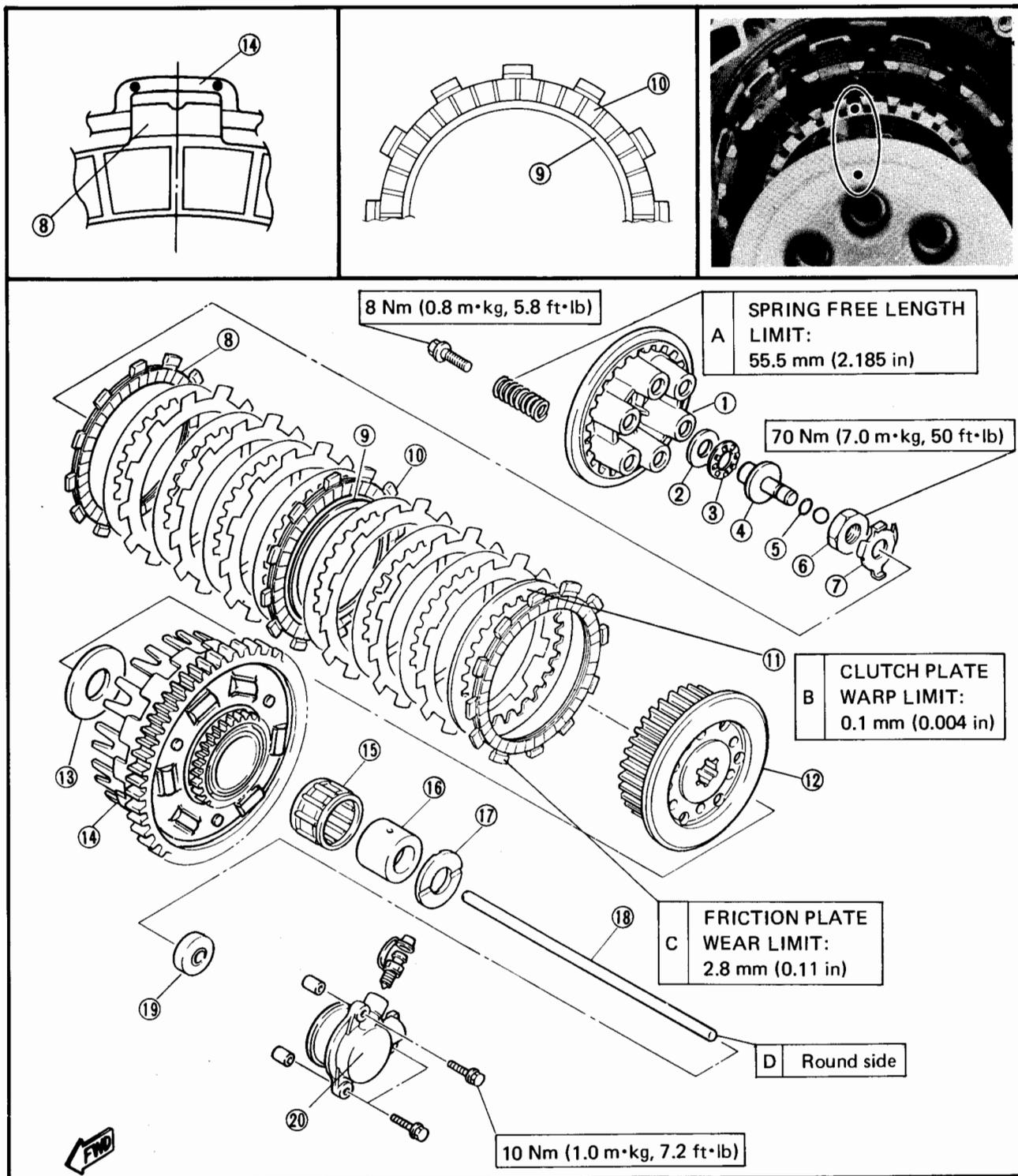
70 Nm (7.0 m·kg, 50 ft·lb)





CLUTCH

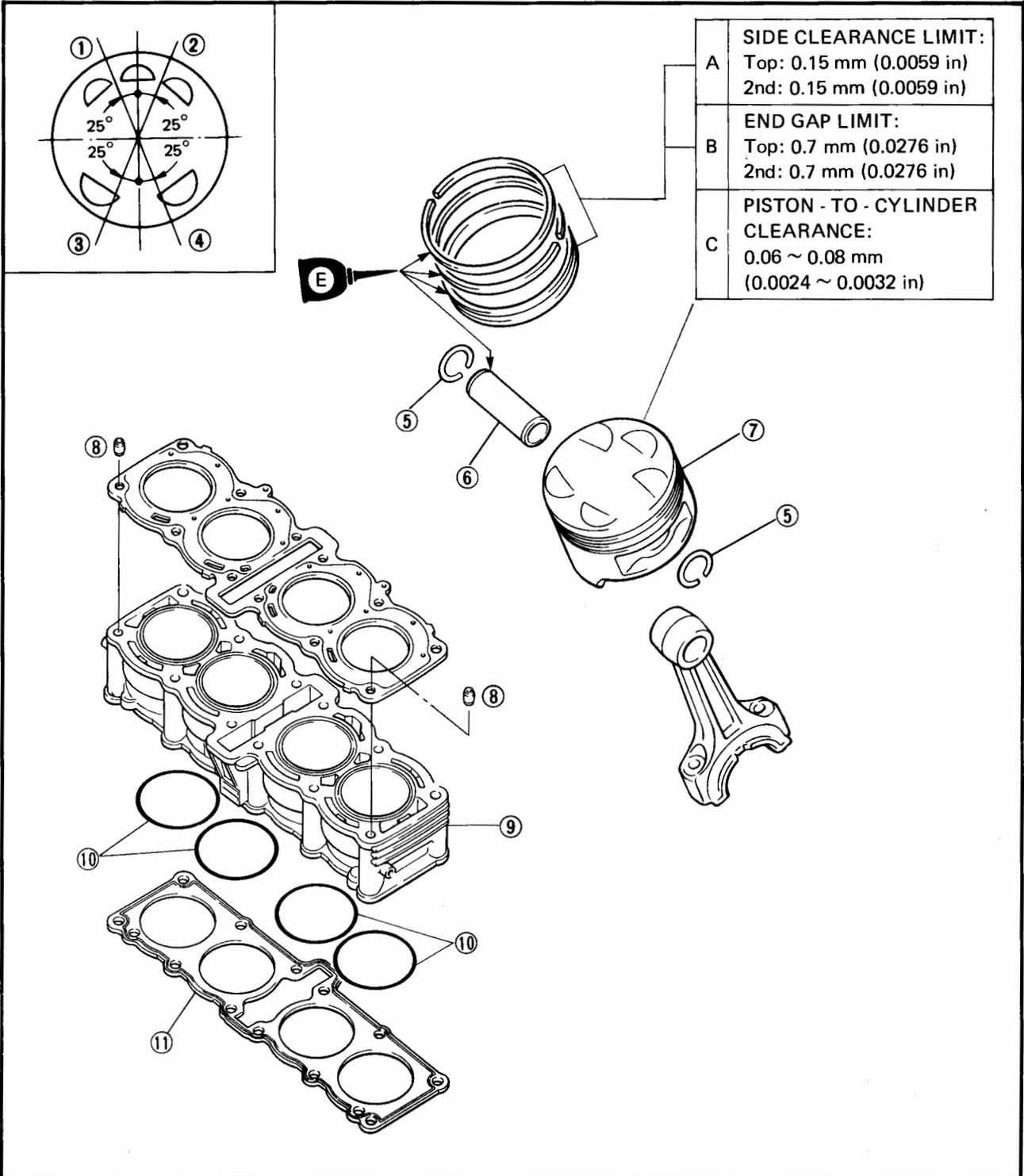
- | | | |
|------------------|---------------------------|---------------------------|
| ① Pressure plate | ⑧ Friction plate (Outer) | ⑮ Bearing |
| ② Plate washer | ⑨ Cushion spring | ⑯ Spacer |
| ③ Bearing | ⑩ Friction plate (Center) | ⑰ Thrust washer |
| ④ Push rod # 1 | ⑪ Clutch plate | ⑱ Push rod # 2 |
| ⑤ O-ring | ⑫ Clutch boss | ⑲ Oil seal |
| ⑥ Ball | ⑬ Washer | ⑳ Clutch release cylinder |
| ⑦ Lock washer | ⑭ Primary driven gear | |





PISTON AND CYLINDER

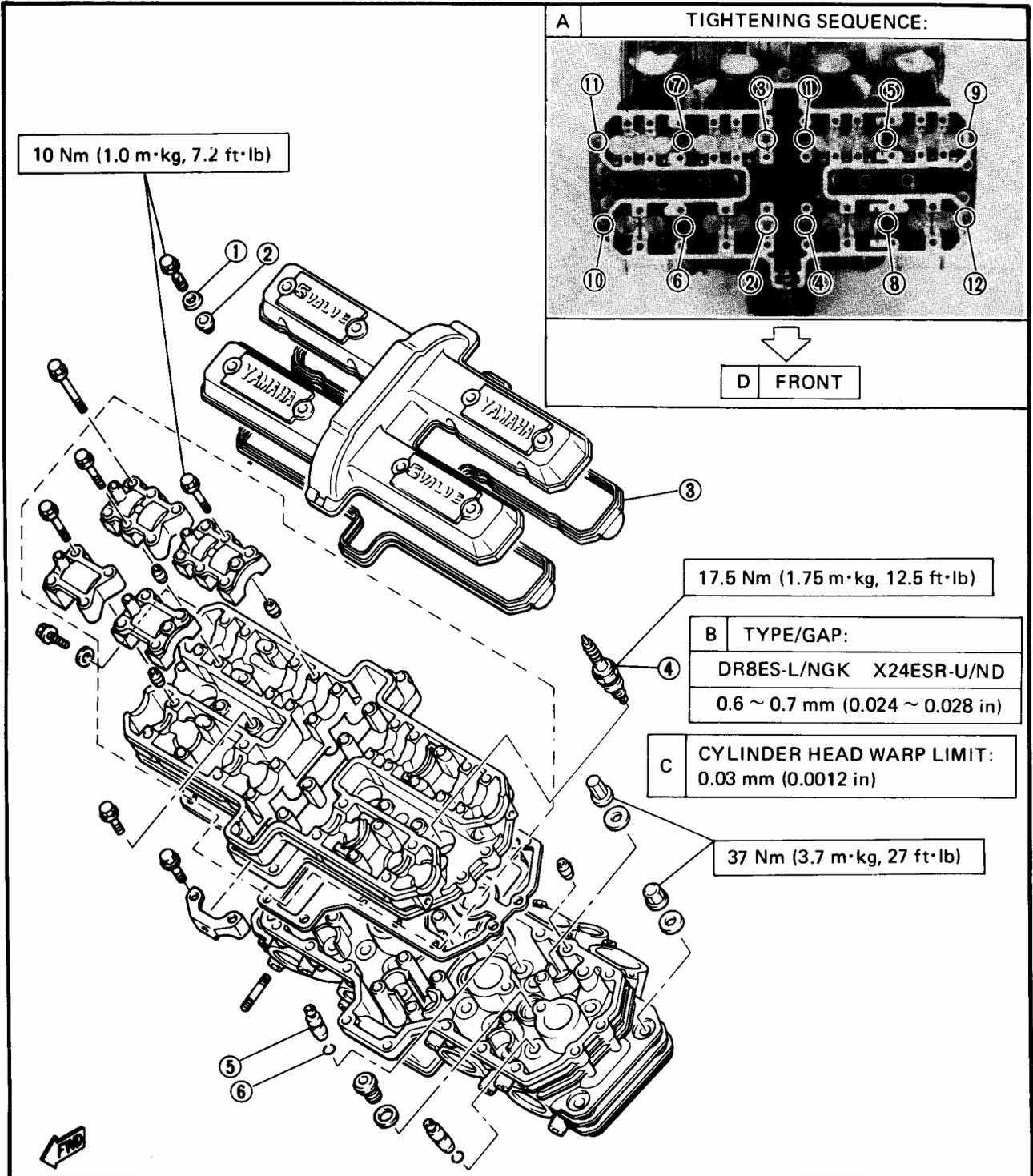
- ① Top ring
- ② Oil ring (Lower)
- ③ Oil ring (Upper)
- ④ Second ring
- ⑤ Circlip
- ⑥ Piston pin
- ⑦ Piston
- ⑧ Dowel pin
- ⑨ Cylinder
- ⑩ O-ring
- ⑪ Gasket





CYLINDER HEAD

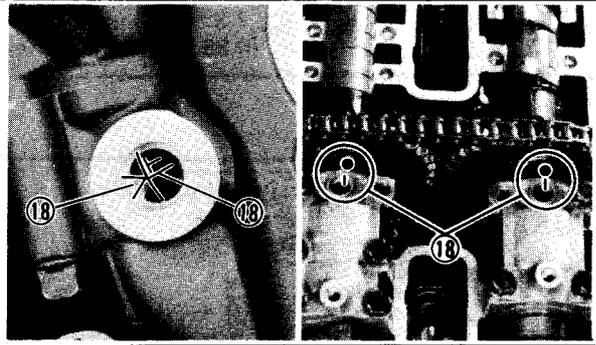
- ① Washer
- ② Rubber washer
- ③ Gasket
- ④ Spark plug
- ⑤ Valve guide
- ⑥ Circlip



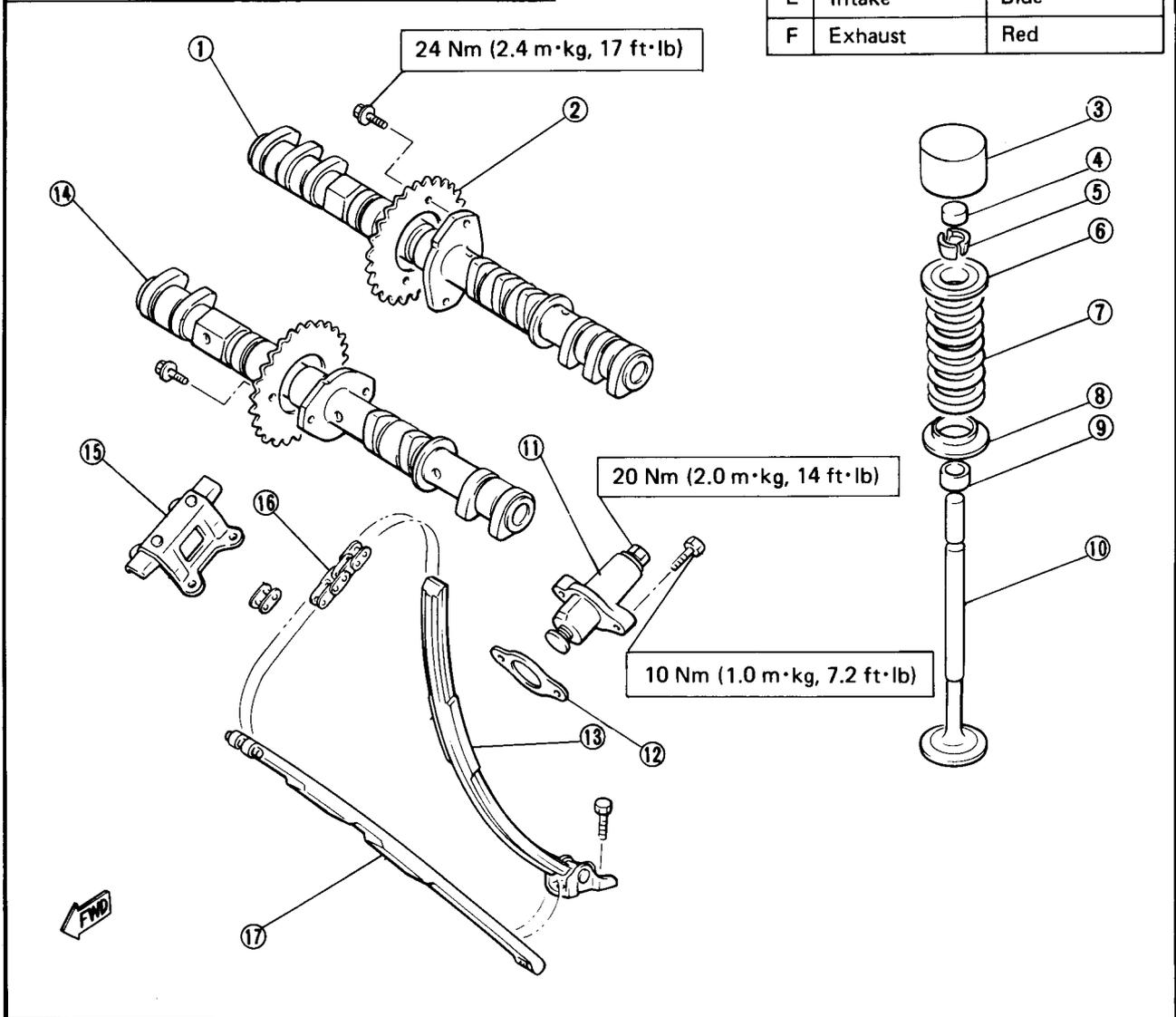


CAMSHAFT

- ① Camshaft (Intake)
- ② Cam chain sprocket
- ③ Valve lifter
- ④ Valve pad
- ⑤ Valve retainer
- ⑥ Spring seat
- ⑦ Valve spring
- ⑧ Spring seat
- ⑨ Oil seal
- ⑩ Valve
- ⑪ Cam chain tensioner
- ⑫ Gasket
- ⑬ Cam chain guide (Intake side)
- ⑭ Camshaft (Exhaust)
- ⑮ Chain guide (Upper)
- ⑯ Cam chain
- ⑰ Cam chain guide (Exhaust side)
- ⑱ Match mark



A	VALVE CLEARANCE (COLD):	
B	INTAKE: 0.11 ~ 0.20 mm (0.004 ~ 0.008 in)	
C	EXHAUST: 0.21 ~ 0.30 mm (0.008 ~ 0.012 in)	
D	VALVE SPRING COLOR:	
E	Intake	Blue
F	Exhaust	Red

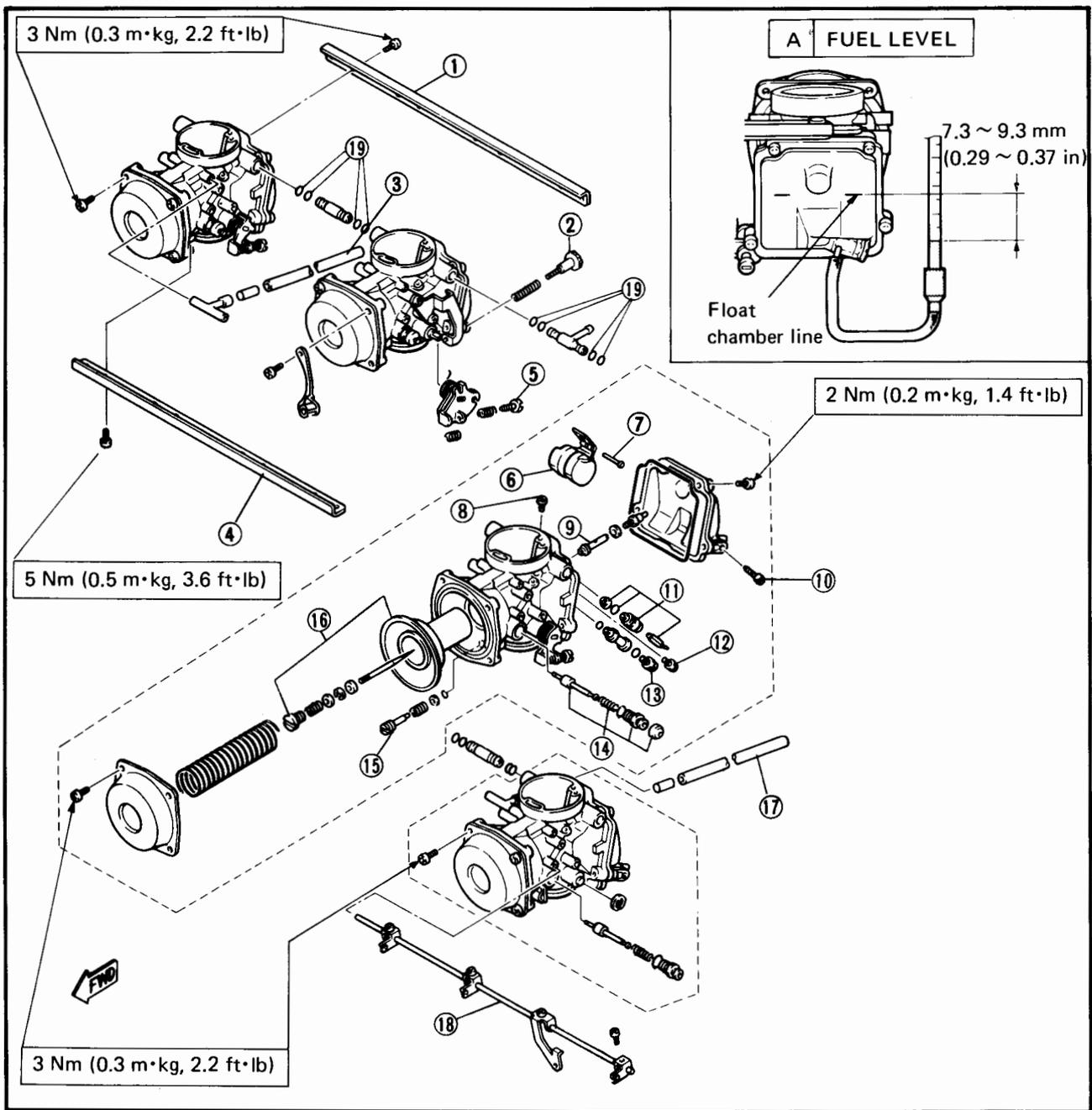




CARBURETOR

- ① Upper bracket
- ② Throttle stop screw
- ③ Fuel overflow hose
- ④ Lower bracket
- ⑤ Synchronizing screw
- ⑥ Float
- ⑦ Float pin
- ⑧ Pilot air screw
- ⑨ Needle jet
- ⑩ Fuel drain screw
- ⑪ Valve seat assembly
- ⑫ Pilot jet
- ⑬ Main jet
- ⑭ Starter plunger assembly
- ⑮ Pilot screw
- ⑯ Piston valve assembly
- ⑰ Fuel feed hose
- ⑱ Starter lever shaft
- ⑲ O-ring

SPECIFICATIONS			
ID Mark	2GH00	2LE00	2LF00
MAIN JET			
(#1, 4 cylinder)	#110	#112.5	#92.5
(#2, 3 cylinder)	#107.5	#110	#90
MAIN AIR JET	#65	#65	#65
PILOT JET	#20	#20	#20
PILOT AIR JET	#115	#115	#117.5
JET NEEDLE	5CZ2-4	5CZ2-3	5CZ2-3
PILOT SCREW	2-1/2	2-1/2	2-1/2
THROTTLE VALVE	#130	#130	#130
ENGINE IDLE SPEED	950 ~ 1.050 r/min		
FUEL LEVEL	7.3 ~ 9.3 mm (0.29 ~ 0.37 in)		



FRONT WHEEL

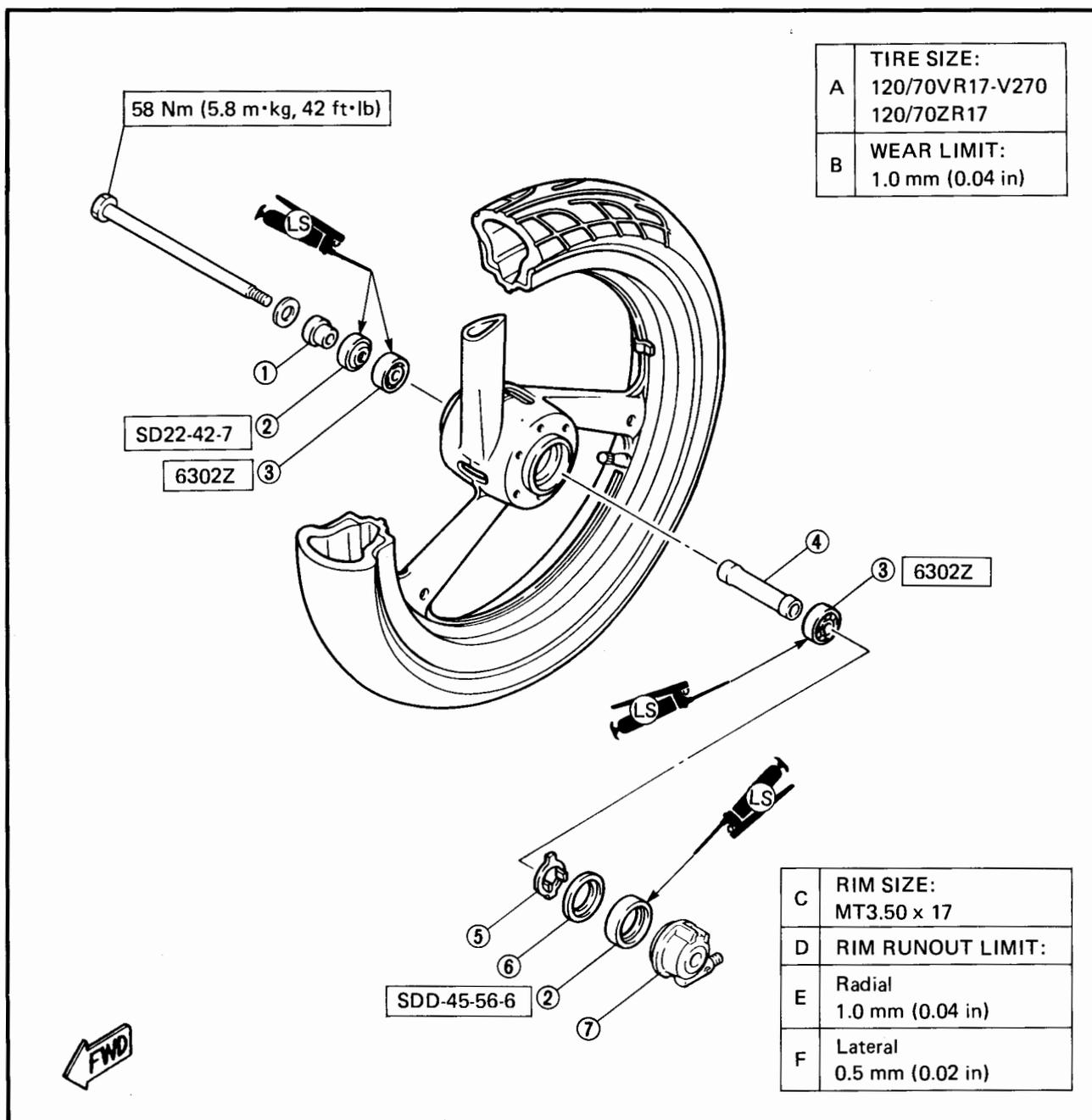


FRONT WHEEL

- ① Collar
- ② Oil seal
- ③ Bearing
- ④ Spacer
- ⑤ Meter clutch
- ⑥ Clutch retainer
- ⑦ Speedometer gear unit

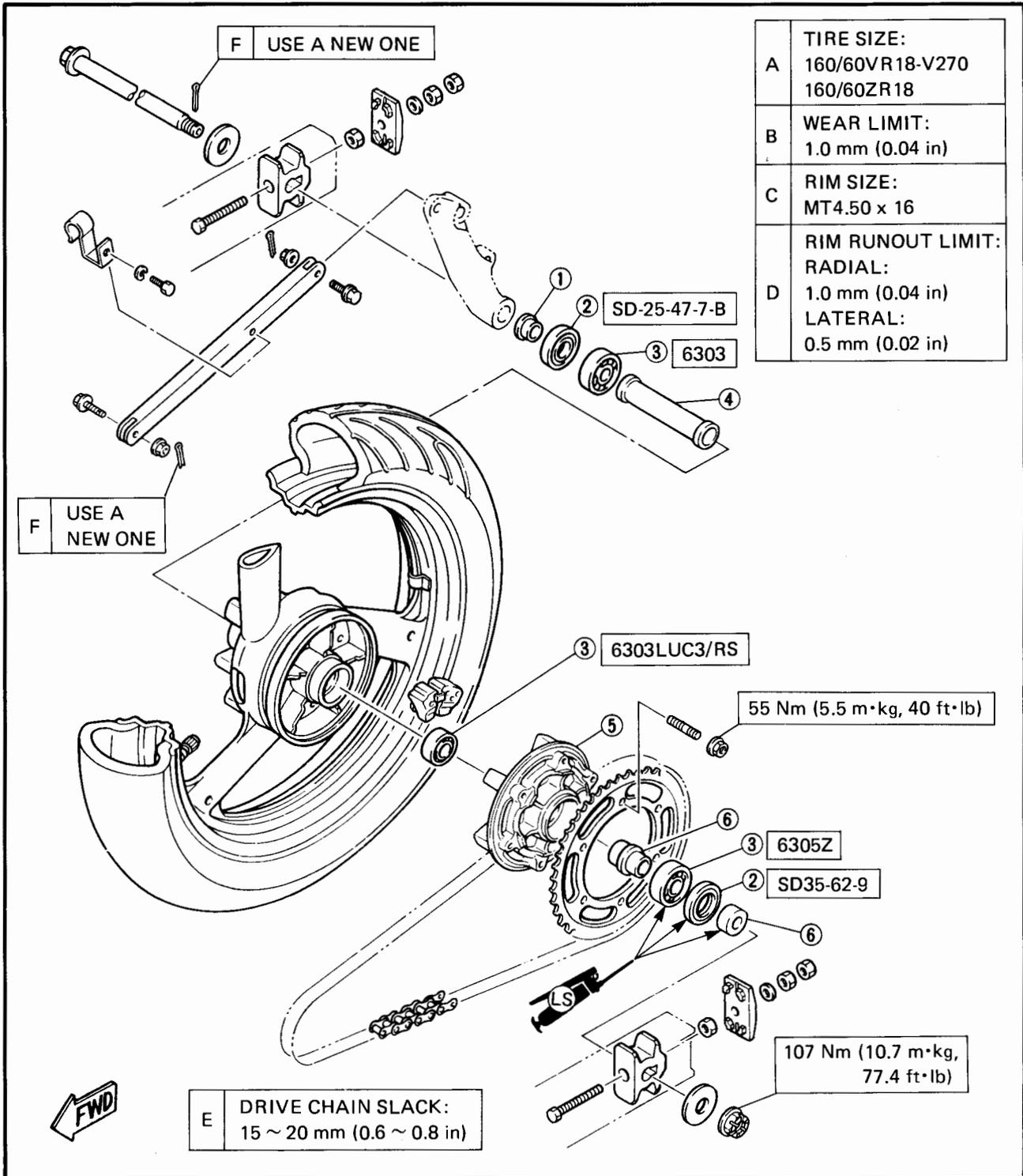
TIRE AIR PRESSURE (COLD):		
Cold tire pressure	Front	Rear
Up to 90 kg (198 lb) load*	250 kPa 2.5 kg/cm ² , 36 psi)	250 kPa (2.5 kg/cm ² , 36 psi)
90 kg (198 lb) ~ Maximum load*	250 kPa 2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)
High speed riding	250 kPa 2.5 kg/cm ² , 36 psi)	290 kPa (2.9 kg/cm ² , 42 psi)

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



REAR WHEEL

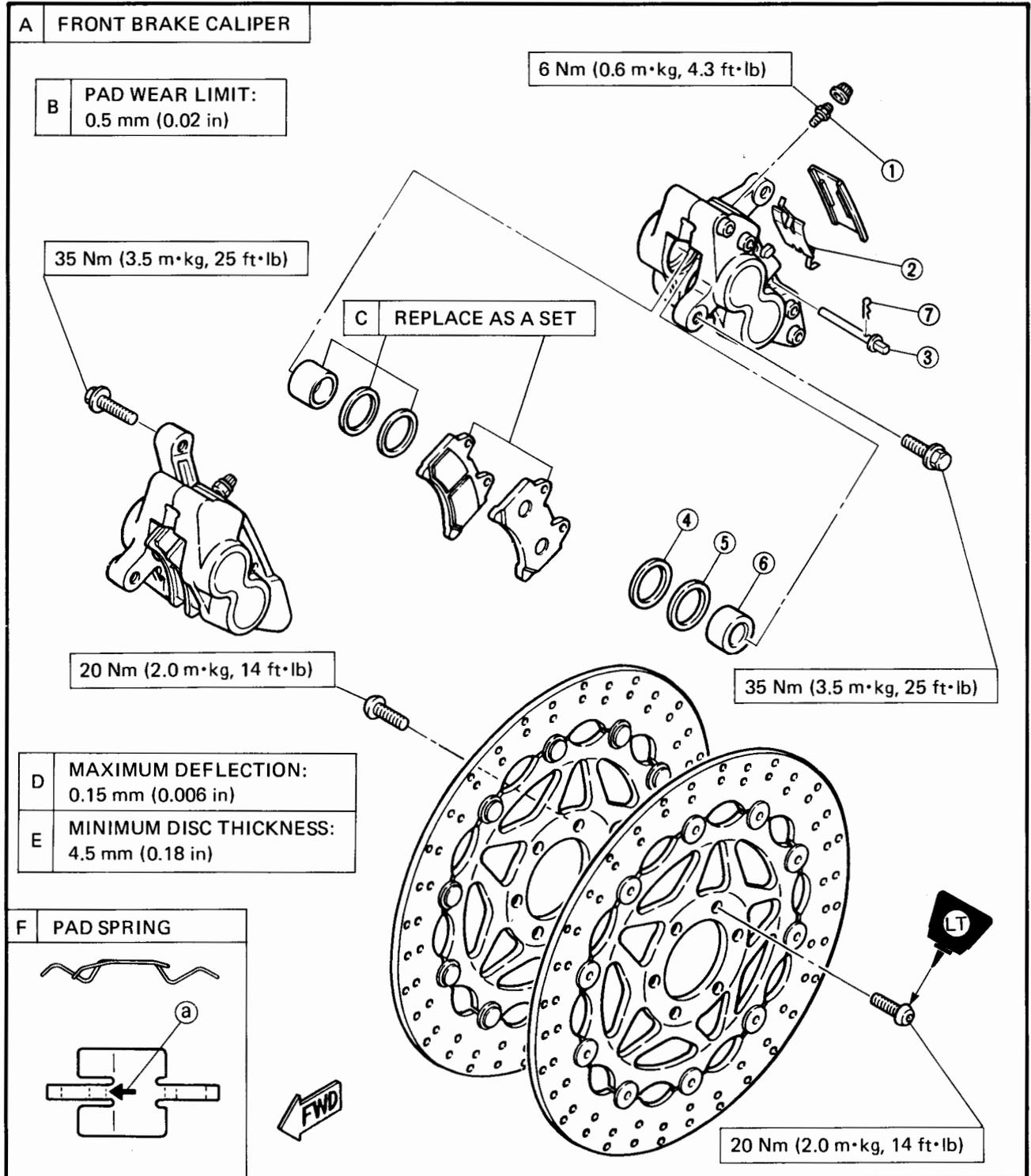
- ① Dust cover
- ② Oil seal
- ③ Bearing
- ④ Spacer
- ⑤ Clutch hub
- ⑥ Collar



FRONT AND REAR BRAKE

- ① Air bleed screw
- ② Pad spring
- ③ Retaining pin
- ④ Dust seal
- ⑤ Piston seal
- ⑥ Piston
- ⑦ Circlip

ⓕ The arrow mark ⓐ on the pad spring must pointing the disc rotating direction.

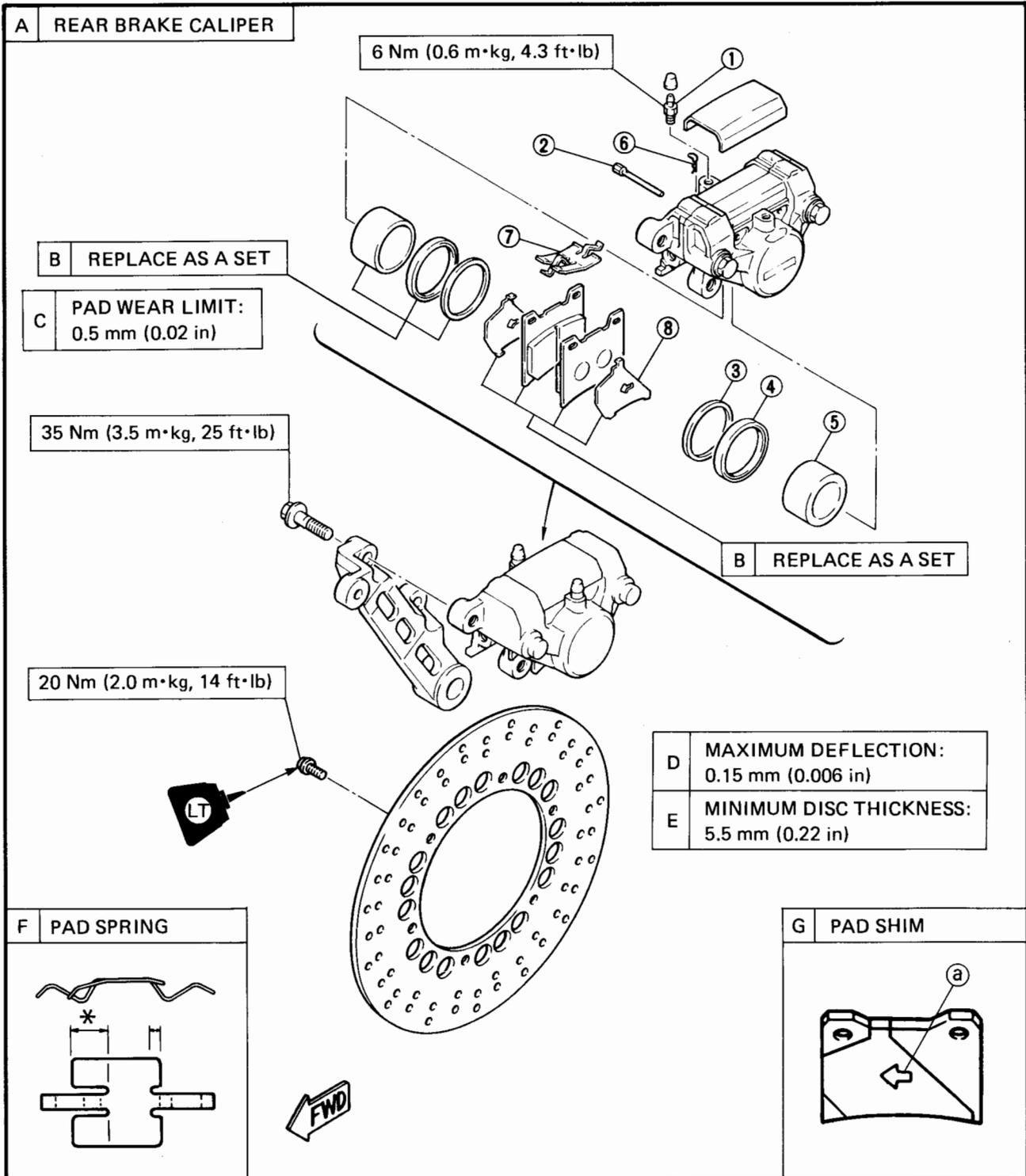


FRONT AND REAR BRAKE



- ① Air bleed screw
- ② Retaining pin
- ③ Dust seal
- ④ Piston seal
- ⑤ Piston
- ⑥ Circlip
- ⑦ Pad spring
- ⑧ Pad shim

- F The longer tangs (✱) of the pad spring must point in the disc rotating direction.
- G The allow mark (a) on the pad shim must point in the disc rotating direction.



A REAR BRAKE CALIPER

6 Nm (0.6 m•kg, 4.3 ft•lb)

B REPLACE AS A SET

**C PAD WEAR LIMIT:
0.5 mm (0.02 in)**

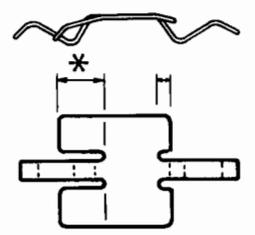
35 Nm (3.5 m•kg, 25 ft•lb)

B REPLACE AS A SET

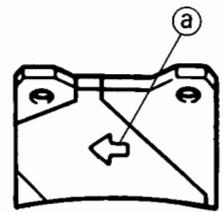
20 Nm (2.0 m•kg, 14 ft•lb)

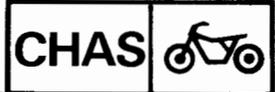
D	MAXIMUM DEFLECTION: 0.15 mm (0.006 in)
E	MINIMUM DISC THICKNESS: 5.5 mm (0.22 in)

F PAD SPRING



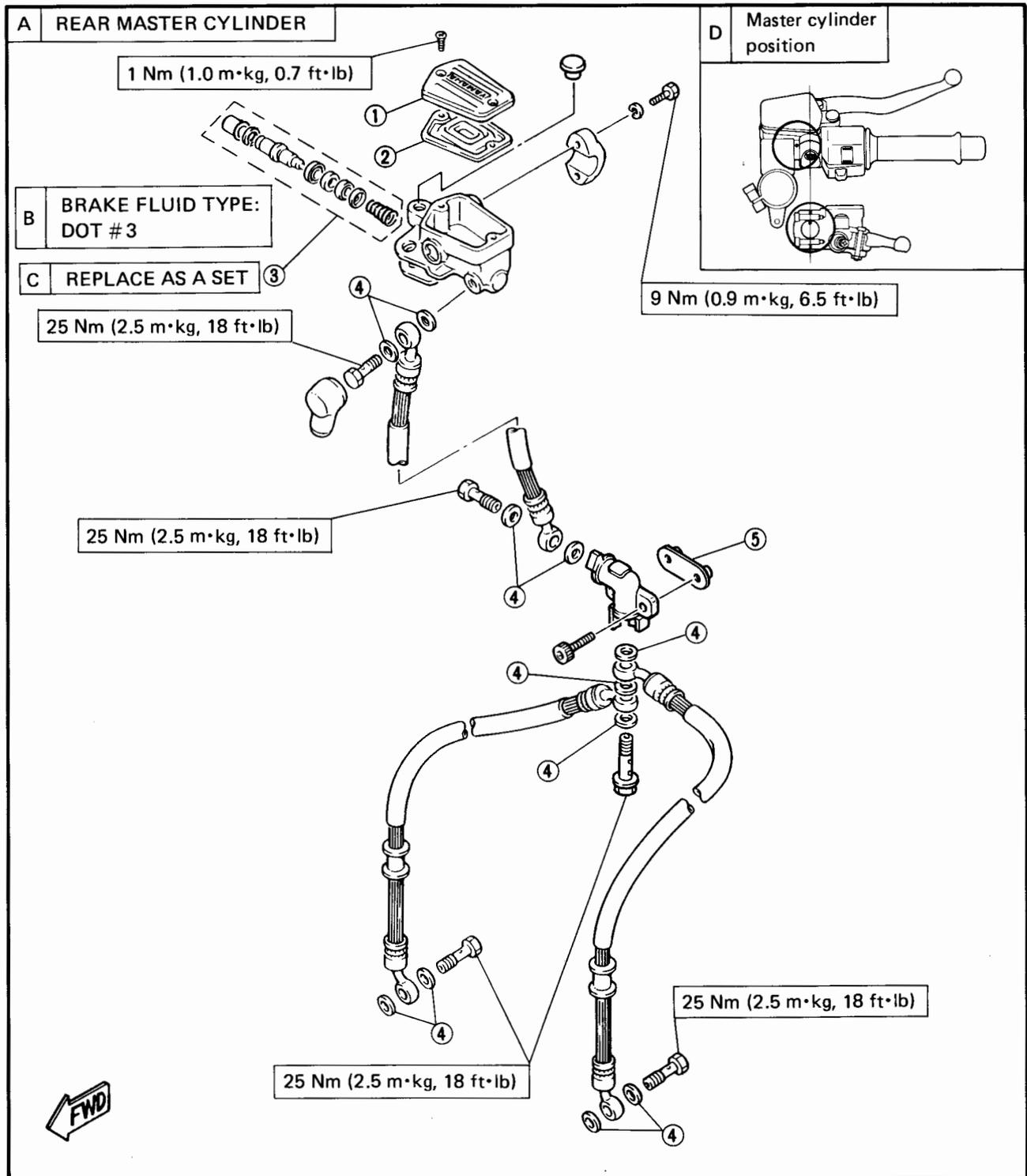
G PAD SHIM





MASTER CYLINDER

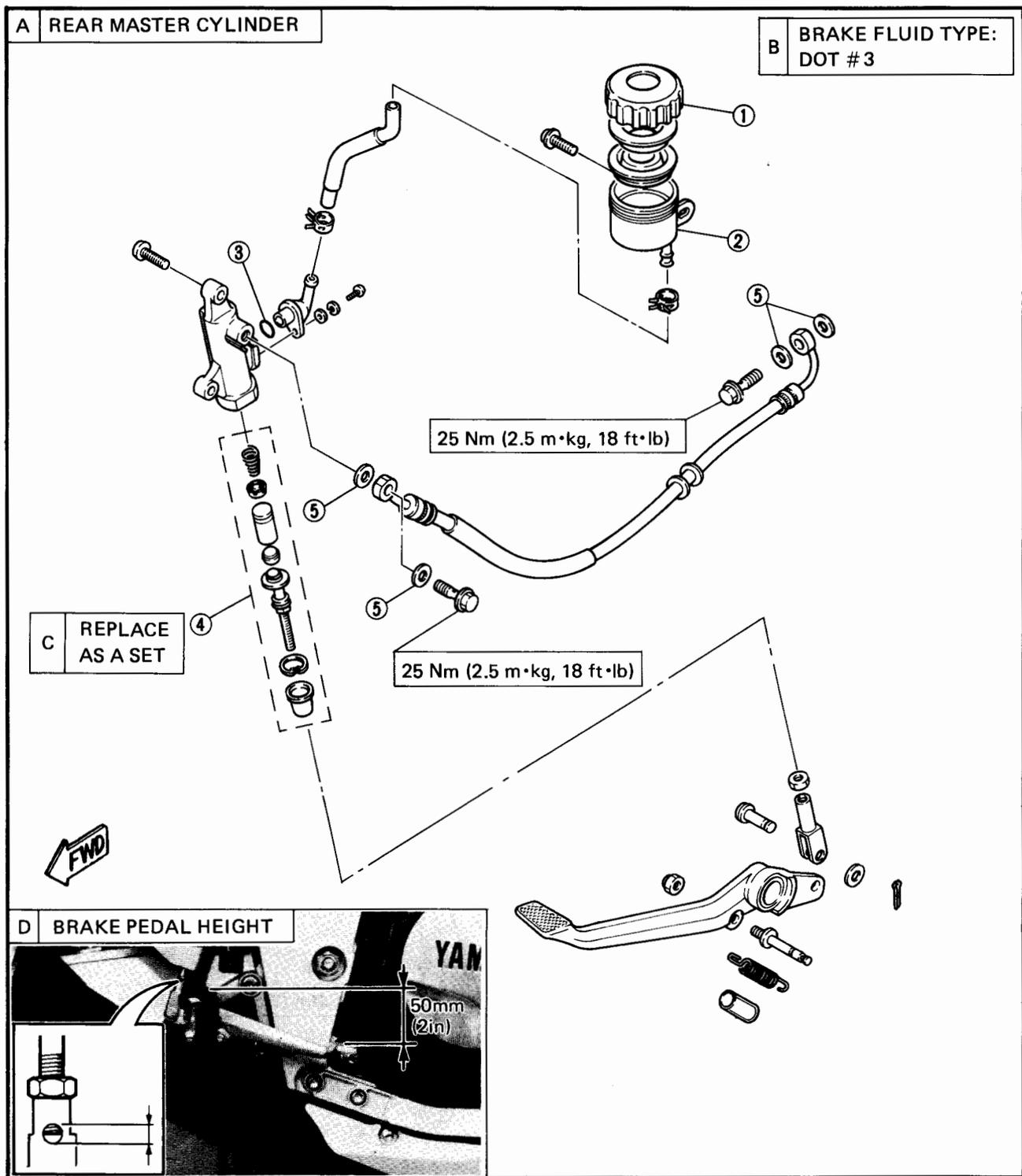
- ① Master cylinder cap
- ② Rubber seal
- ③ Master cylinder kit
- ④ Copper washer
- ⑤ Metering valve



FRONT AND REAR BRAKE

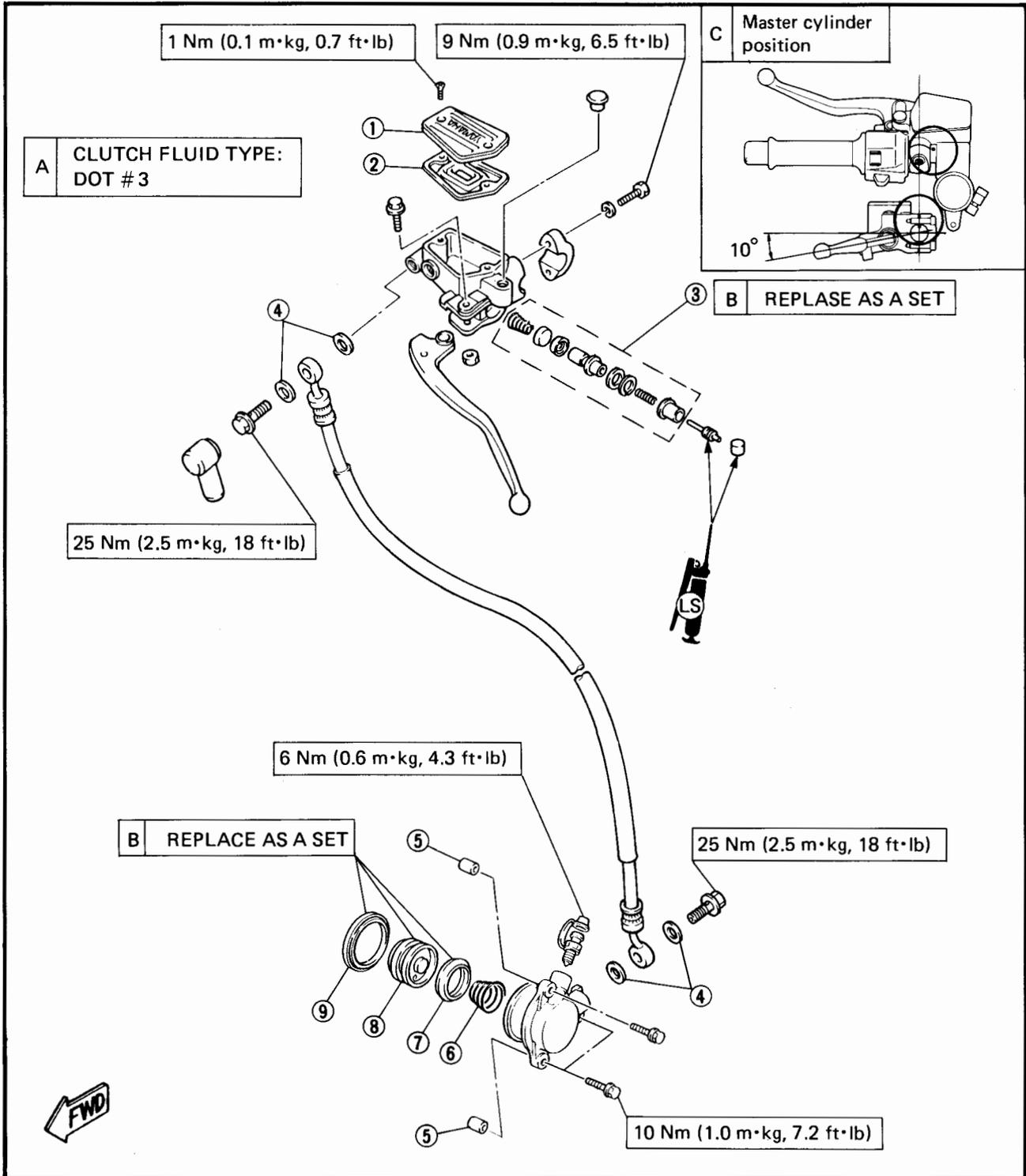


- ① Reservoir tank cap
- ② Reservoir tank
- ③ O-ring
- ④ Master cylinder kit
- ⑤ Copper washer



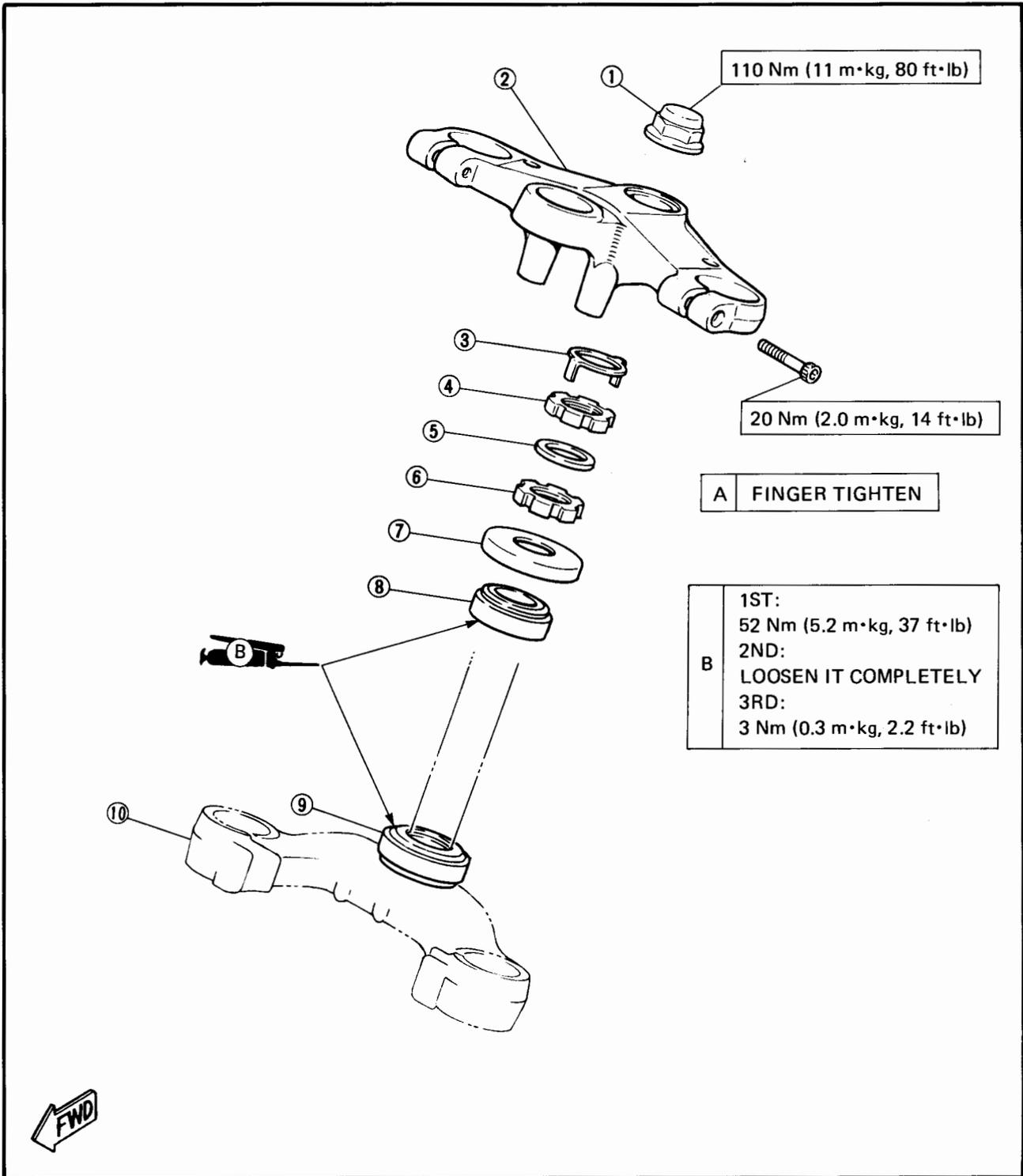
HYDRAULIC CLUTCH

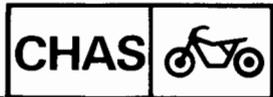
- ① Master cylinder cap
- ② Rubber seal
- ③ Master cylinder kit
- ④ Copper washer
- ⑤ Dowel pin
- ⑥ Spring
- ⑦ Piston
- ⑧ Piston seal
- ⑨ Dust seal



STEERING

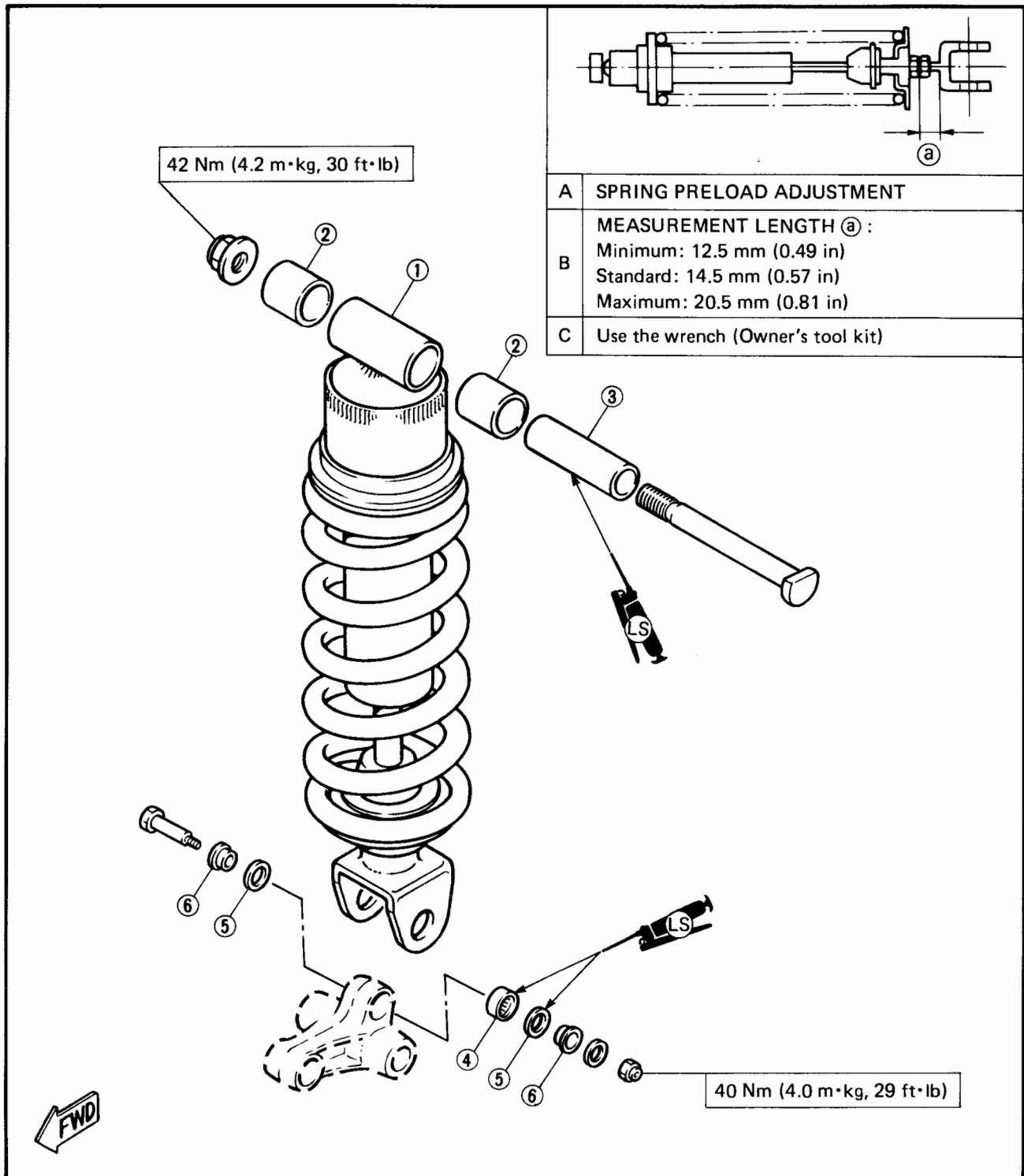
- ① Steering stem nut
- ② Handle crown
- ③ Lock washer
- ④ Ring nut (Upper)
- ⑤ Washer
- ⑥ Ring nut (Lower)
- ⑦ Bearing cover
- ⑧ Bearing (Upper)
- ⑨ Bearing (Lower)
- ⑩ Steering stem





REAR SHOCK ABSORBER

- ① Shock absorber
- ② Bushing
- ③ Collar
- ④ Bearing
- ⑤ Oil seal
- ⑥ Dust seal



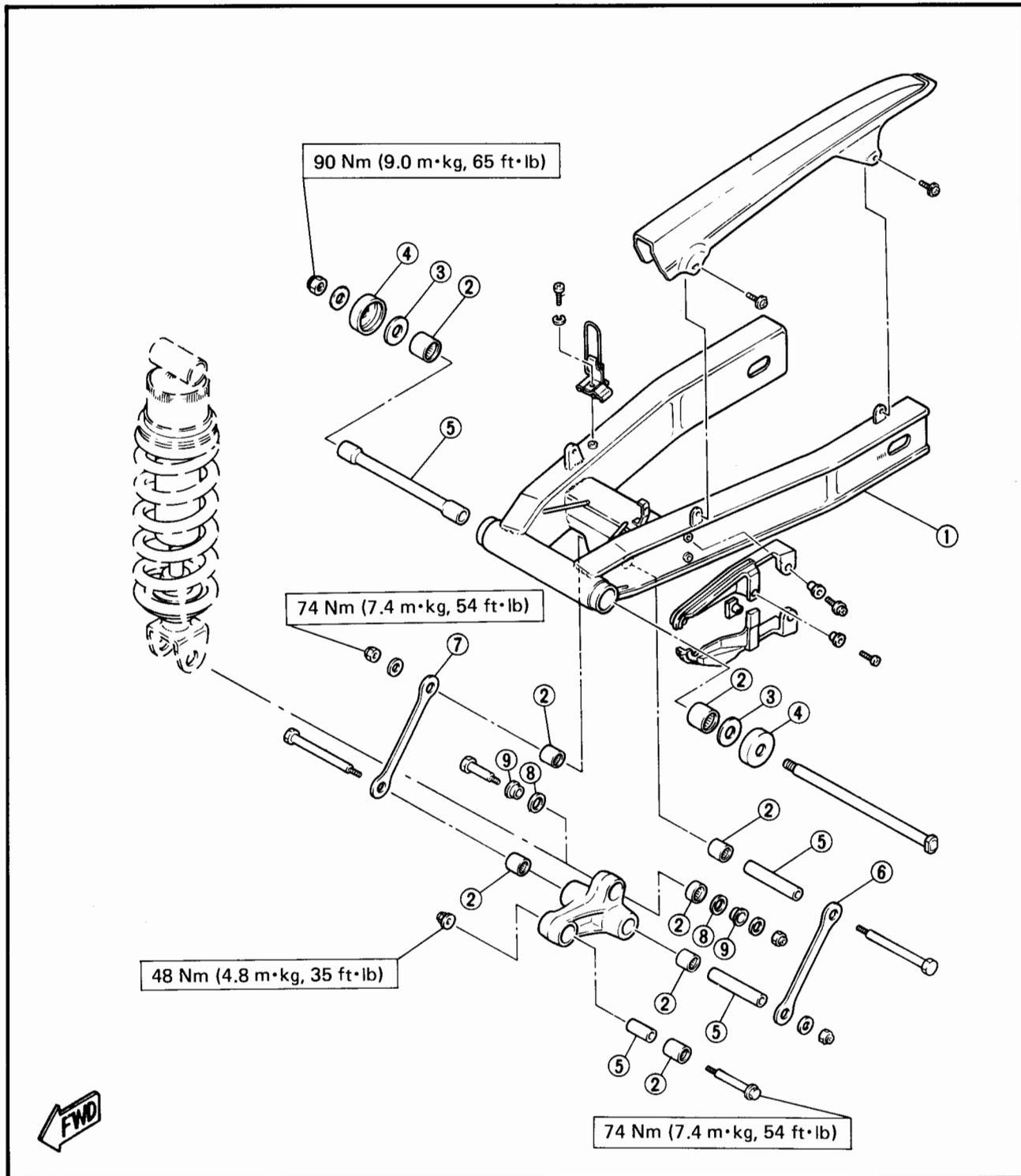
REAR SHOCK ABSORBER AND SWINGARM



SWINGARM

- ① Swingarm
- ② Bearing
- ③ Thrust washer
- ④ Thrust cover
- ⑤ Collar
- ⑥ Arm 1
- ⑦ Arm 2
- ⑧ Oil seal
- ⑨ Dust cover

NOTE:
Coat the bearings, bushings, thrust covers, oil seals, and collars with a liberal amount of light weight lithium-soap base grease before installing. After installing, thoroughly wipe off excess grease.

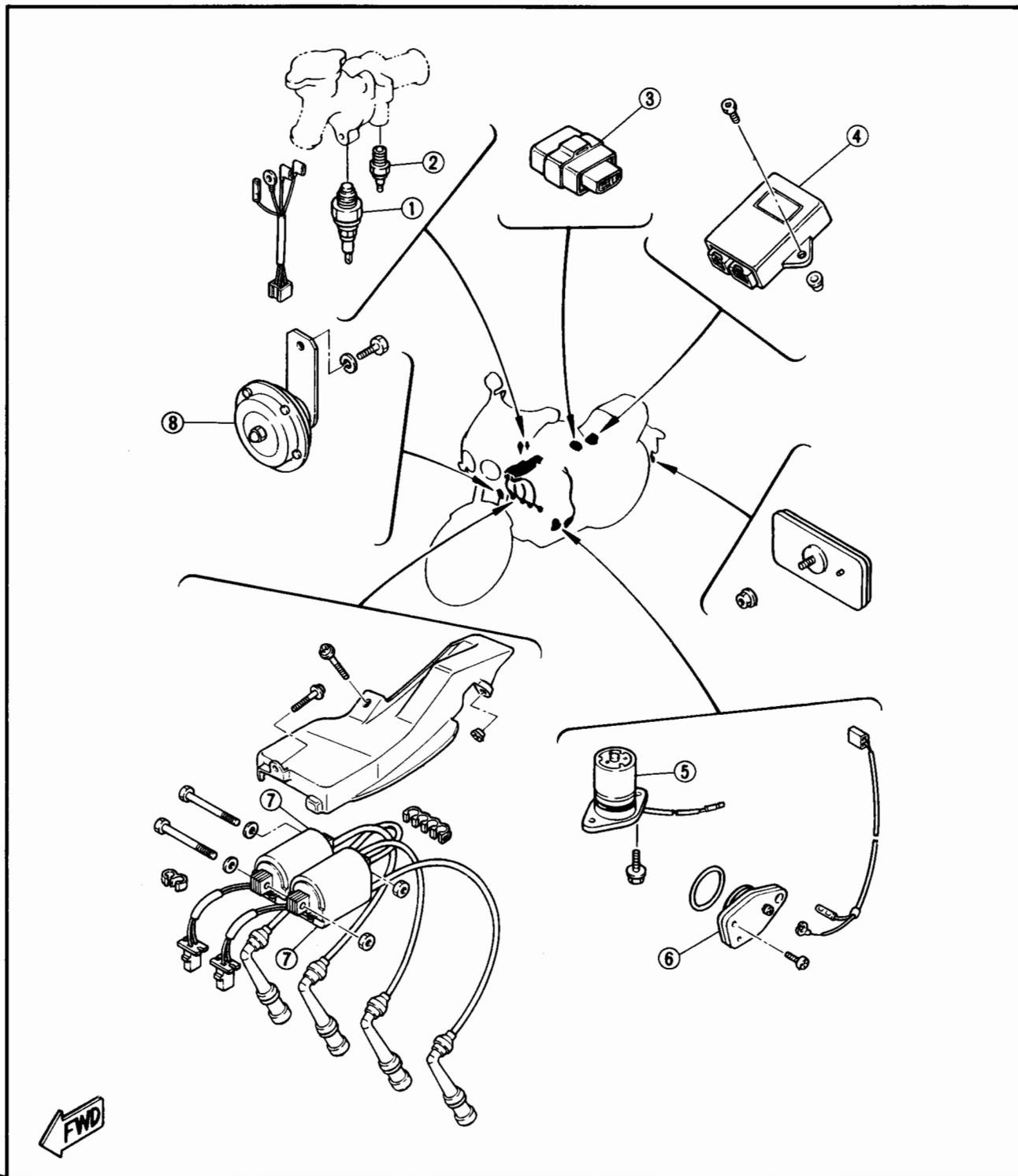




ELECTRICAL COMPONENTS (1)

- ① Thermo switch
- ② Thermo unit
- ③ Relay assembly
- ④ Digital ignitor unit
- ⑤ Oil level switch
- ⑥ Neutral switch
- ⑦ Ignition coil
- ⑧ Horn

SPECIFICATIONS	RESISTANCE
IGNITION COIL: PRIMARY	1.8 ~ 2.2Ω
SECONDARY	9.6 ~ 14.4 kΩ
PICKUP COIL:	135 ~ 165Ω

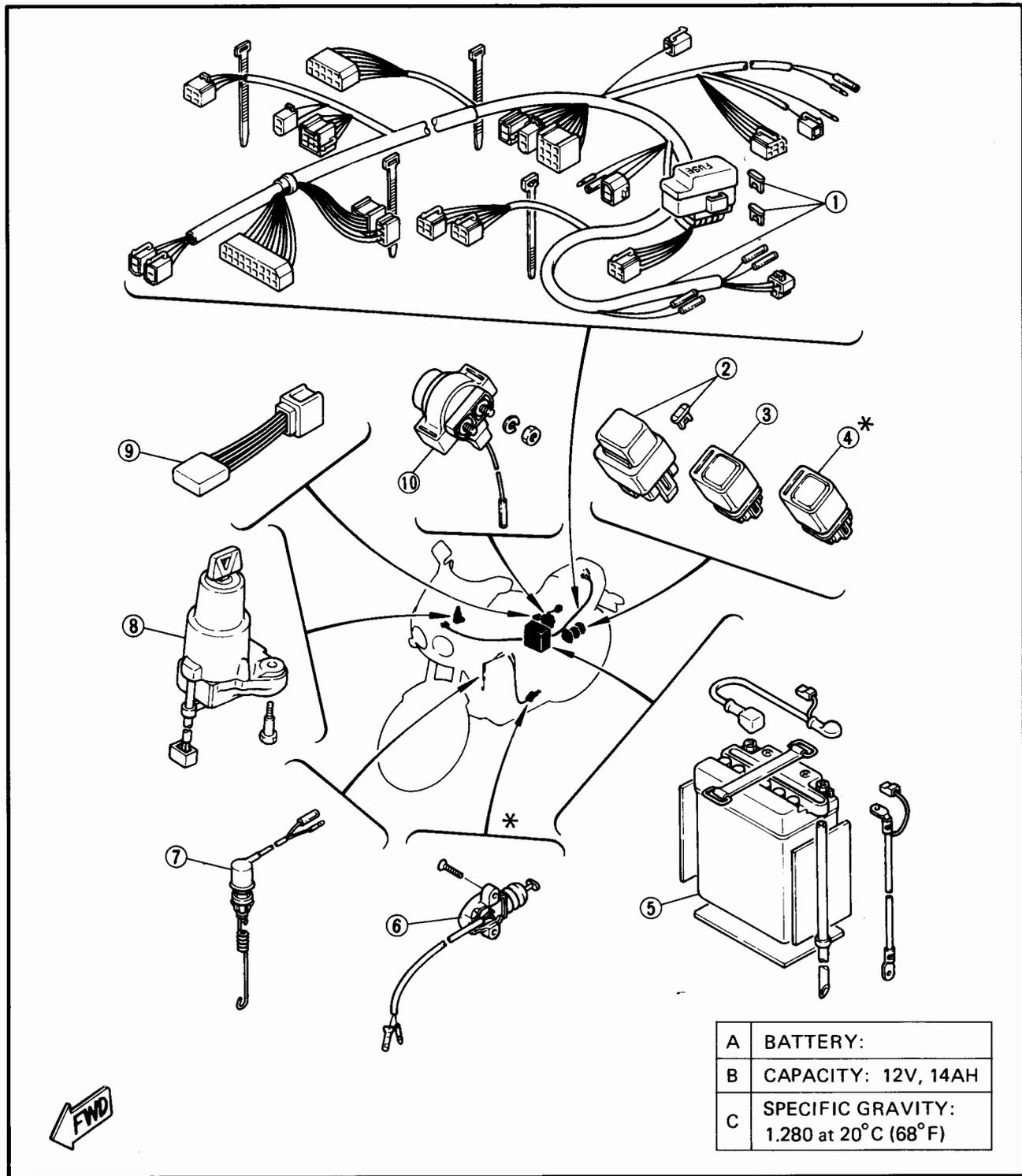




ELECTRICAL COMPONENTS (2)

- ① Wire harness
- ② Fuse "MAIN"
- ③ Fuel pump relay
- ④ Sidestand relay *
- ⑤ Battery
- ⑥ Sidestand switch *
- ⑦ Rear brake switch
- ⑧ Main switch
- ⑨ Diode block
- ⑩ Starter relay

* Except AUS, NZ, ZA

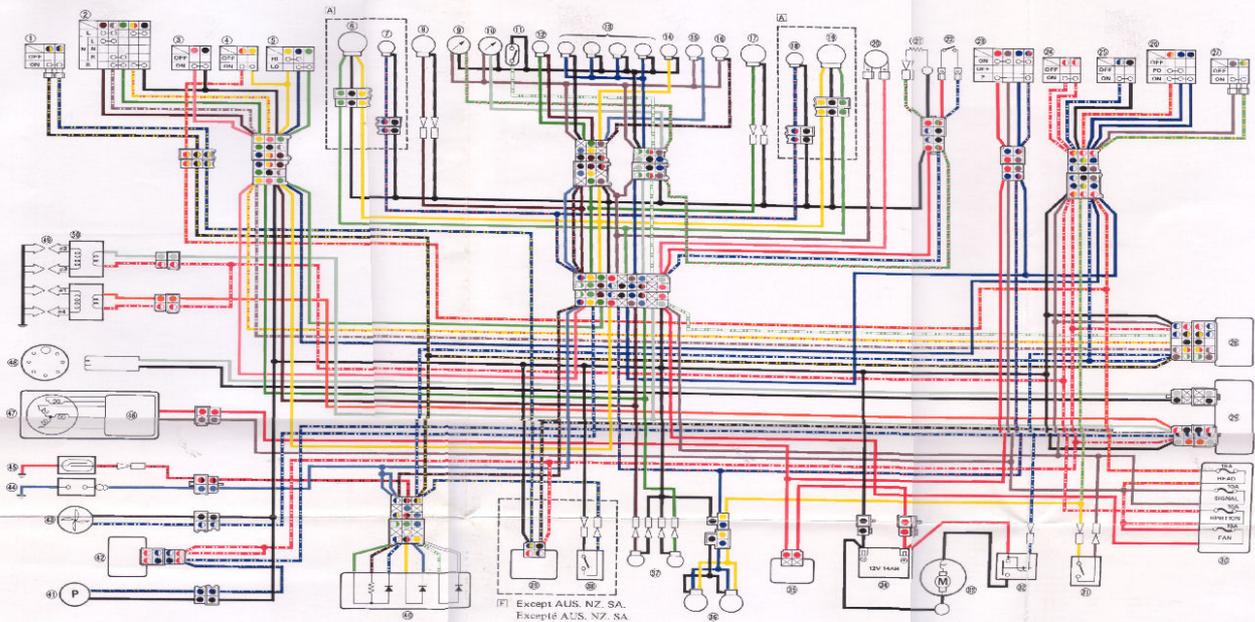




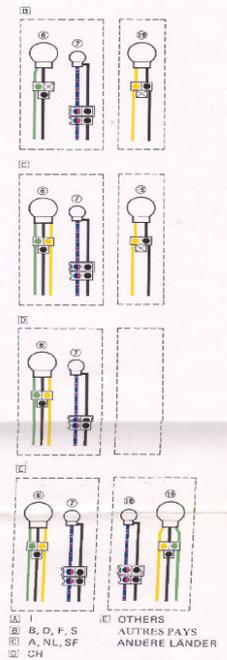
YAMAHA MOTOR CO.,LTD.

IWATA, JAPAN

PRINTED IN JAPAN
87 • 3 - 2.01 x 1 CR
(英)



(F) Except AUS, NZ, SA, Excepté AUS, NZ, SA, Ausgenommen AUS, NZ, SA.



FZR1000 WIRING DIAGRAM

- ① Clutch switch
- ② "TURN" switch
- ③ "HORN" switch
- ④ "PASS" switch
- ⑤ "LIGHTS" (Dimmer) switch
- ⑥ Headlight (LH)
- ⑦ Auxiliary light (L&R)
- ⑧ Front flasher light (L&R)
- ⑨ Temperature gauge
- ⑩ Tachometer
- ⑪ Reed switch
- ⑫ "TURN" indicator light
- ⑬ Meter light
- ⑭ "HIGH BEAM" indicator light
- ⑮ "NEUTRAL" indicator light
- ⑯ "OIL LEVEL" indicator light
- ⑰ Front flasher light (Right)
- ⑱ Auxiliary light (Right)
- ⑲ Headlight (Right)
- ⑳ Horn
- ㉑ Thermo unit
- ㉒ Thermo switch
- ㉓ Main switch
- ㉔ "ENGINE STOP" switch
- ㉕ "START" switch
- ㉖ "LIGHTS" switch
- ㉗ Front brake switch
- ㉘ Relay assembly
- ㉙ Digital sensor unit
- ㉚ Fuse
- ㉛ Headlight (LH)
- ㉜ Rear brake switch
- ㉝ Starter relay
- ㉞ Starter motor
- ㉟ Battery
- ㊱ Main fuse
- ㊲ Tail/brake light
- ㊳ Rear flasher light
- ㊴ Sidestand switch
- ㊵ Sidestand switch
- ㊶ Diode pack
- ㊷ Fuel pump
- ㊸ Fuel pump relay
- ㊹ Fan motor
- ㊺ Neutral switch
- ㊻ Oil level switch
- ㊼ Ignition coil
- ㊽ Spark plug
- ㊾ Ignition coil
- ㊿ Commutateur d'embrayage
- 1 Commutateur des cliquetants "TURN"
- 2 Commutateur d'avertisseur "HORN"
- 3 Commutateur d'appel de phase "PASS"
- 4 Commutateur de feu de croisement "LIGHTS" (Dimmer)
- 5 Phase (Gauche)
- 6 Feu auxiliaire (faucard)
- 7 Clignoteur avant (Gauche)
- 8 Clignoteur avant (Droite)
- 9 Compensateur
- 10 Commutateur à lame
- 11 Lampe témoin de cliquetants "TURN"
- 12 Enlèvement de compensateur
- 13 Témoin de feu de croisement "HIGH BEAM"
- 14 Lampe témoin de point mort "NEUTRAL"
- 15 Témoin de niveau d'huile "OIL LEVEL"
- 16 Feu auxiliaire (Droite)
- 17 Phase (Droite)
- 18 Sonde thermique
- 19 A.C.C. generator
- 20 Pick-up coil
- 21 Spark plug
- 22 Commutateur "ENGINE STOP"
- 23 Commutateur de démarrage "START"

- 1 Klapphebelkontakt
- 2 Blinkleuchte "TURN"
- 3 Signalleuchte "HORN"
- 4 Lichtschalter "PASS"
- 5 Anleuchte "LIGHTS"
- 6 Scheinwerfer (Links)
- 7 Nummernschildbeleuchtung (Links)
- 8 Scheinwerfer (Rechts)
- 9 Tachoenergie
- 10 Zugschleife
- 11 Blinkleuchte Kontrolllampe "TURN"
- 12 Instrumentenbeleuchtung
- 13 Fernleuchte Kontrolllampe "HIGH BEAM"
- 14 Leuchtkegel
- 15 Blinkleuchte "OIL LEVEL"
- 16 Scheinwerfer (Rechts)
- 17 Nummernschildbeleuchtung (Rechts)
- 18 Scheinwerfer (Rechts)
- 19 Signalhorn
- 20 Thermoventil
- 21 Thermoventil
- 22 Hauptrelais
- 23 Motorrelais
- 24 "ENGINE STOP" Startknopf
- 25 "START"
- 26 Commutateur d'adage "LIGHTS"
- 27 Contacteurs avant de feu stop
- 28 Relais de feu stop
- 29 Fusible
- 30 Contacteurs arrière de feu stop
- 31 Relais du démarreur
- 32 Commutateur de démarrage
- 33 Batterie
- 34 Fusible principal
- 35 Feu anti-déflag
- 36 Clignoteur arrière
- 37 Commutateur de la béquille latérale
- 38 Bloc de diodes
- 39 Pompe à essence
- 40 Relais de pompe à essence
- 41 Moteur du ventilateur
- 42 Contacteur de point mort
- 43 Contacteur de niveau d'huile
- 44 Redresseur/rectificateur
- 45 Alternateur
- 46 Bobine d'excitation
- 47 Bougie
- 48 Bobine d'allumage

- 1 Lichtleuchte "LIGHTS"
- 2 Vorderfuß-Bremmschleuchte
- 3 Relaiskontakt
- 4 Digitale Zündung
- 5 Sicherung
- 6 Hinterfuß-Bremmschalter
- 7 Relaiskontakt
- 8 Anleuchte
- 9 Batterie
- 10 Hauptrelais
- 11 Sonnbüchse
- 12 Motorrelais
- 13 Relais
- 14 Zugschleife
- 15 Blinkleuchte Kontrolllampe "TURN"
- 16 Instrumentenbeleuchtung
- 17 Fernleuchte Kontrolllampe "HIGH BEAM"
- 18 Leuchtkegel
- 19 Blinkleuchte "OIL LEVEL"
- 20 Scheinwerfer (Rechts)
- 21 Nummernschildbeleuchtung (Rechts)
- 22 Scheinwerfer (Rechts)
- 23 Signalhorn
- 24 Thermoventil
- 25 Thermoventil
- 26 Hauptrelais
- 27 Motorrelais
- 28 "ENGINE STOP" Startknopf
- 29 "START"
- 30 Zugschleife
- 31 Vorderfuß-Bremmschleuchte
- 32 Relaiskontakt
- 33 Anleuchte
- 34 Batterie
- 35 Hauptrelais
- 36 Sonnbüchse
- 37 Motorrelais
- 38 Relais
- 39 Zugschleife
- 40 Blinkleuchte Kontrolllampe "TURN"
- 41 Instrumentenbeleuchtung
- 42 Fernleuchte Kontrolllampe "HIGH BEAM"
- 43 Leuchtkegel
- 44 Blinkleuchte "OIL LEVEL"
- 45 Scheinwerfer (Rechts)
- 46 Nummernschildbeleuchtung (Rechts)
- 47 Scheinwerfer (Rechts)
- 48 Signalhorn
- 49 Thermoventil
- 50 Thermoventil
- 51 Hauptrelais
- 52 Motorrelais
- 53 "ENGINE STOP" Startknopf
- 54 "START"
- 55 Zugschleife

COLOR CODE	CODE DE COULEUR	FARBENKODIERUNG
Blue Bleu Blau	Dark Green Vert Foncé Dunkelgrün	Red/Yellow Rouge/Jaune Rot/Gelb
Red Rouge Rot	Grey Gris Grau	Black/Red Noir/Rouge Schwarz/Rot
Green Vert Grün	Brown Brun Braun	Black/Yellow Noir/Jaune Schwarz/Gelb
Black Noir Schwarz	Chocolate Cacaoté Schokoladenfarbe	Black/White Noir/Blanc Schwarz/Weiß
Yellow Jaune Gelb	Orange Orange Orange	Blue/White Bleu/Blanc Blau/Weiß
Pink Rose Rosa	Orange/Red Jaune/Rouge Gelb/Rot	Green/Red Vert/Rouge Grün/Rot
Sky Blue Bleu Ciel Himmelblau	White/Red Blanc/Rouge Weiß/Rot	Blue/Black Bleu/Noir Blau/Schwarz
	Brown/White Brun/Blanc Braun/Weiß	White/Green Blanc/Vert Weiß/Grün
	White Blanc Weiß	