YAMAHA

2000

YZF-R1(M)

4XV1-SE2

SERVICE INFORMATION

Yamaha Motor Co., Ltd.

FOREWORD

This service information has been prepared to introduce new service and data for the YZF-R1(M) 2000. For complete service information procedures, it is necessary to use this Supplementary Service Information together with the following manual.

YZF-R1(M) 2000 SERVICE MANUAL: 4XV1-ME2
YZF-R1 '98 SERVICE INFORMATION: 4XV1-SE1

Yamaha Motor Co., Ltd.

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NOTICE

This manual was produced by the Yamaha Motor Company, Ltd. primarily for use by Yamaha dealers and their qualified mechanics. it is not possible to include all the knowledge of a mechanic in one manual. Therefore, anyone who uses this book to perform maintenance and repairs on Yamaha vehicles should have a basic understanding of mechanics and the techniques to repair these types of vehicles. Repair and maintenance work attempted by anyone without this knowledge is likely to render the vehicle unsafe and unfit for use.

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

NOTE:

Designs and specifications are subject to change without notice.

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IMPORTANT MANUAL INFORMATION

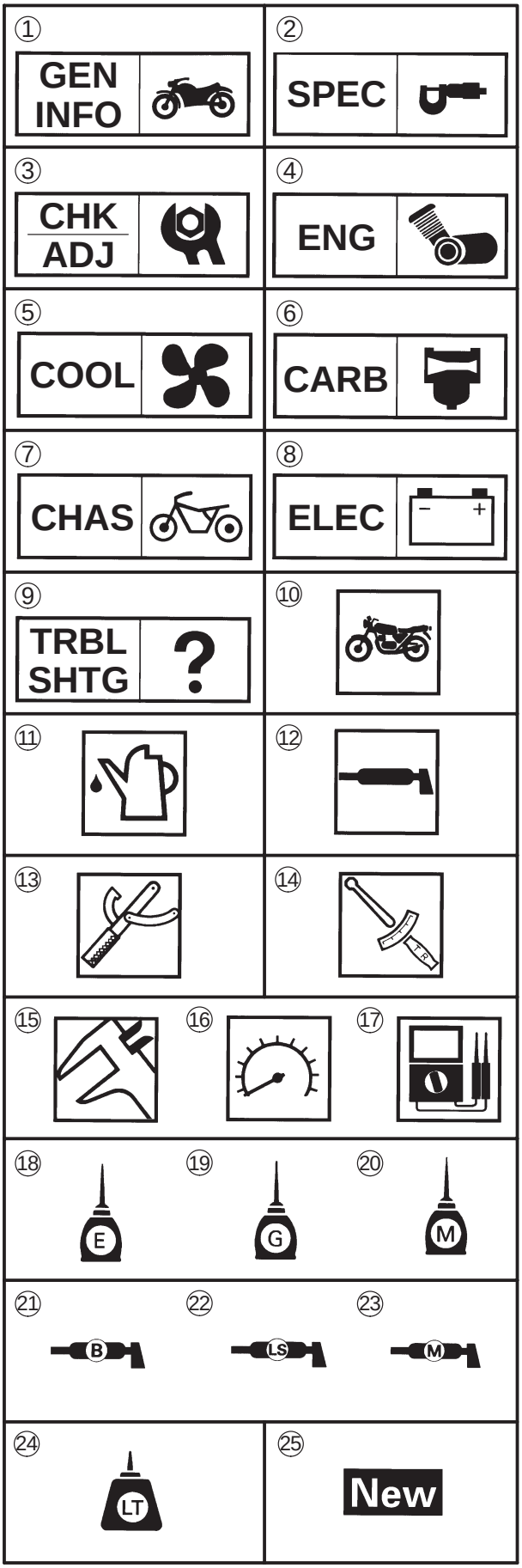
Particularly important information is distinguished in this manual by the following.

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

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

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

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



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SYMBOLS

The following symbols are not relevant to every vehicle.

Symbols ① to ⑨ indicate the subject of each chapter.

① General information
② Specifications
③ Periodic checks and adjustments
④ Engine
⑤ Cooling system
⑥ Carburetor(-s)
⑦ Chassis
⑧ Electrical system
⑨ Troubleshooting

Symbols ⑩ to ⑰ indicate the following.

⑩ Serviceable with engine mounted
⑪ Filling fluid
⑫ Lubricant
⑬ Special tool
⑭ Tightening torque
⑮ Wear limit, clearance
⑯ Engine speed
⑰ Electrical data

Symbols ⑱ to ㉓ in the exploded diagrams indicate the types of lubricants and lubrication points.

⑱ Engine oil
⑲ Gear oil
⑳ Molybdenum disulfide oil
㉑ Wheel bearing grease
㉒ Lithium soap base grease
㉓ Molybdenum disulfide grease

Symbols ㉔ to ㉕ in the exploded diagrams indicate the following.

㉔ Apply locking agent (LOCTITE®)
㉕ Replace the part

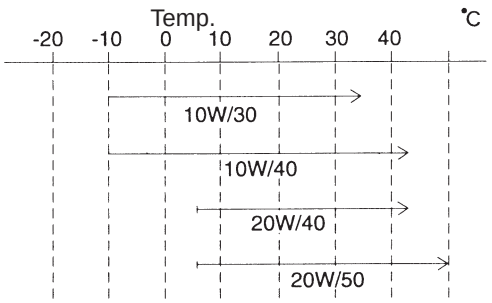
CONTENTS

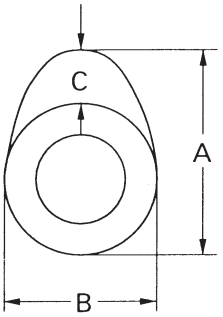
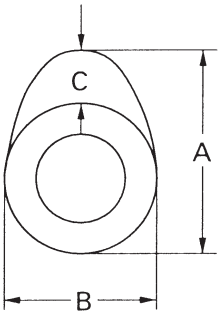
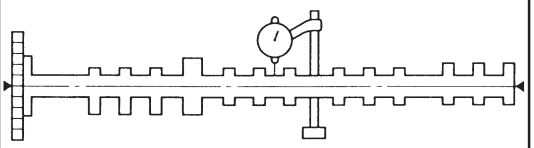
SPECIFICATIONS

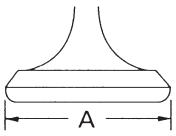
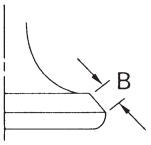
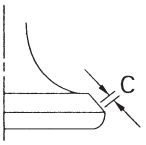
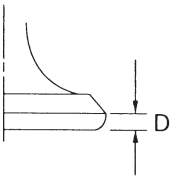
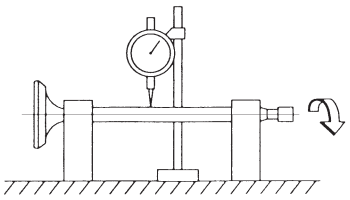
GENERAL SPECIFICATIONS

Item	Standard	Limit
Dimensions		
Overall length	2,035 mm	•••
	2,095 mm (for AUS)	•••
Overall width	695 mm	•••
Overall height	1,105 mm	•••
Seat height	815 mm	•••
Wheelbase	1,395 mm	•••
Minimum ground clearance	140 mm	•••
Minimum turning radius	3,400 mm	•••
Weight		
Wet (with oil and a full fuel tank)	194 kg	•••
Dry (without oil and fuel)	175 kg	•••
Maximum load (total of cargo, rider, passenger, and accessories)	201 kg	•••

ENGINE SPECIFICATIONS

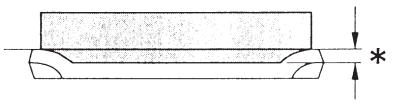
Item	Standard	Limit
Engine		
Engine type	Liquid-cooled, 4-stroke, DOHC	•••
Displacement	998 cm^3	•••
Cylinder arrangement	Forward-inclined parallel 4-cylinder	•••
Bore × stroke	74 × 58 mm	•••
Compression ratio	11.8 : 1	•••
Engine idling speed	1,000 ~ 1,100 r/min	•••
Vacuum pressure at engine idling speed	29.3 kPa (220 mm Hg)	•••
Standard compression pressure (at sea level)	1,450 kPa (14.5 kgf/cm^2) at 400 r/min	•••
Fuel		
Recommended fuel	Regular unleaded gasoline Unleaded fuel (for AUS)	•••
Fuel tank capacity		
Total (including reserve)	18 L	•••
Reserve only	3.8 L	•••
Engine oil		
Lubrication system	Wet sump	•••
Recommended oil	 SAE20W40SE or SAE10W30SE	•••
Quantity		•••
Total amount	3.6 L	•••
Without oil filter cartridge replacement	2.7 L	•••
With oil filter cartridge replacement	2.9 L	•••
Oil pressure (hot)	45 kPa at 1,100 r/min (0.45 kgf/cm^2 at 1,100 r/min)	•••
Relief valve opening pressure	490 ~ 570 kPa (4.9 ~ 5.7 kgf/cm^2)	•••

Item	Standard	Limit
Camshafts		
Drive system	Chain drive (right)	•••
Camshaft cap inside diameter	24.500 ~ 24.521 mm	•••
Camshaft journal diameter	24.459 ~ 24.472 mm	•••
Camshaft-journal-to-camshaft-cap clearance	0.028 ~ 0.062 mm	•••
Intake camshaft lobe dimensions		
		
Measurement A	32.5 ~ 32.6 mm	32.4 mm
Measurement B	24.95 ~ 25.05 mm	24.85 mm
Measurement C	7.45 ~ 7.65 mm	•••
Exhaust camshaft lobe dimensions		
		
Measurement A	32.95 ~ 33.05 mm	32.85 mm
Measurement B	24.95 ~ 25.05 mm	24.85 mm
Measurement C	7.75 ~ 7.95 mm	•••
Max. camshaft runout	•••	0.03 mm
		

Item	Standard	Limit
Valves, valve seats, valve guides		
Valve clearance (cold)		
Intake	0.11 ~ 0.20 mm	•••
Exhaust	0.21 ~ 0.25 mm	•••
Valve dimensions		
 Head Diameter	 Face Width	 Seat Width	 Margin Thickness
Valve head diameter A		
Intake	22.9 ~ 23.1 mm	•••
Exhaust	24.4 ~ 24.6 mm	•••
Valve face width B		
Intake	1.76 ~ 2.90 mm	•••
Exhaust	1.76 ~ 2.90 mm	•••
Valve seat width C		
Intake	0.9 ~ 1.1 mm	•••
Exhaust	0.9 ~ 1.1 mm	•••
Valve margin thickness D		
Intake	0.5 ~ 0.9 mm	•••
Exhaust	0.5 ~ 0.9 mm	•••
Valve stem diameter		
Intake	3.975 ~ 3.990 mm	3.945 mm
Exhaust	4.465 ~ 4.480 mm	4.43 mm
Valve guide inside diameter		
Intake	4.000 ~ 4.012 mm	4.05 mm
Exhaust	4.500 ~ 4.512 mm	4.55 mm
Valve-stem-to-valve-guide clearance		
Intake	0.010 ~ 0.037 mm	0.08 mm
Exhaust	0.020 ~ 0.047 mm	0.1 mm
Valve stem runout	•••	0.01 mm
		
Valve seat width		
Intake	0.9 ~ 1.1 mm	•••
Exhaust	0.9 ~ 1.1 mm	•••
Connecting rods		
Crankshaft-pin-to-big-end-bearing clearance	0.031 ~ 0.055 mm	•••
Bearing color code	–1 = Violet 0 = White 1 = Blue 2 = Black	•••

Item	Standard	Limit
Transmission		
Transmission type	Constant mesh, 6-speed	•••
Primary reduction system	Spur gear	•••
Primary reduction ratio	68/43 (1.581)	•••
Secondary reduction system	Chain drive	•••
Secondary reduction ratio	43/16 (2.688)	•••
Operation	Left-foot operation	•••
Gear ratios		
1st gear	35/14 (2.500)	•••
2nd gear	35/19 (1.842)	•••
3rd gear	30/20 (1.500)	•••
4nd gear	28/21 (1.333)	•••
5th gear	30/25 (1.200)	•••
6th gear	29/26 (1.115)	•••
Max. main axle runout	•••	0.08 mm
Max. drive axle runout	•••	0.08 mm
Carburetors		
Model (manufacturer) √ quantity	BDSR40 (MIKUNI) √ 4	•••
Throttle cable free play (at the flange of the throttle grip)	3 ~ 5 mm	•••
ID mark	5JJ1 00	•••
Main jet	#130	•••
Main air jet	Carburetors 1 and 4: #60 Carburetors 2 and 3: #65	•••
Jet needle	6DEY5-53-3	•••
Needle jet	P-OM	•••
Pilot air jet	#120	•••
Pilot outlet	1.0	•••
Pilot jet	#15	•••
Bypass 1	0.8	•••
Bypass 2	0.9	•••
Bypass 3	0.8	•••
Pilot screw turns out	3.125	•••
Valve seat size	1.5	•••

CHASSIS SPECIFICATIONS

Item	Standard	Limit
Front tire		
Tire type	Tubeless	•••
Size	120/70 ZR17 (58W)	•••
Model (manufacturer)	MEZ3Y FRONT (METZELER) D207FQ (DUNLOP)	•••
Tire pressure (cold)		
0 ~ 90 kg	250 kPa (2.5 kg/cm^2, 2.5 bar)	•••
90 ~ 197 kg	250 kPa (2.5 kg/cm^2, 2.5 bar)	•••
High-speed riding	250 kPa (2.5 kg/cm^2, 2.5 bar)	•••
Min. tire tread depth	•••	1.6 mm
Rear tire		
Tire type	Tubeless	•••
Size	190/50 ZR17 (73W)	•••
Model (manufacturer)	MEZ3Y (METZELER)/D207N (DUNLOP)	•••
Tire pressure (cold)		
0 ~ 90 kg	250 kPa (2.5 kg/cm^2, 2.5 bar)	•••
90 ~ 197 kg	290 kPa (2.9 kg/cm^2, 2.9 bar)	•••
High-speed riding	250 kPa (2.5 kg/cm^2, 2.5 bar)	•••
Min. tire tread depth	•••	1.6 mm
Rear brake		
Brake type	Single-disc brake	•••
Operation	Right-foot operation	•••
Brake pedal position (from the top of the brake pedal to the bottom of the rider footrest bracket)	35 ~ 40 mm	•••
Recommended fluid	DOT 4	•••
Brake discs		
Diameter √ thickness	245 √ 5 mm	•••
Min. thickness	•••	4.5 mm
Max. deflection	•••	0.1 mm
Brake pad lining thickness	5.5 mm	0.5 mm
		
Master cylinder inside diameter	12.7 mm	•••
Caliper cylinder inside diameter	38.2 mm	•••

Item	Standard	Limit
Front suspension		
Suspension type	Telescopic fork	•••
Front fork type	Coil spring/oil damper	•••
Front fork travel	135 mm	•••
Spring		
Free length	255 mm	•••
Spacer length	85 mm	•••
Installed length	242.4 mm	•••
Spring rate (K1)	7.35 N/mm (0.75 kgf/mm)	
Spring stroke (K1)	0 ~ 135 mm	•••
Optional spring available	No	•••
Fork oil		
Recommended oil	Suspension oil "01" or equivalent	•••
Quantity (each front fork leg)	482 cm^3	•••
Level (from the top of the outer tube, with the outer tube fully compressed, and without the fork spring)	74 mm	•••
Damper adjusting rod locknut distance	11 mm	•••
Spring preload adjusting positions		
Minimum	8	•••
Standard	6	•••
Maximum	1	•••
Rebound damping adjusting positions		
Minimum*	11	•••
Standard*	5	•••
Maximum*	1	•••
Compression damping adjusting positions		
Minimum*	9	•••
Standard*	5	•••
Maximum*	1	•••
*with the adjusting screw fully turned in position		

Item	Standard	Limit
Rear suspension		
Suspension type	Swingarm (link suspension)	•••
Rear shock absorber assembly type	Coil spring/gas-oil damper	•••
Rear shock absorber assembly travel	65 mm	•••
Spring		
Free length	176 mm	•••
Installed length	162.5 mm	•••
Spring rate (K1)	78.4 N/mm (7.84 kgf/mm)	•••
Spring stroke (K1)	0 ~ 65 mm	•••
Optional spring available	No	•••
Standard spring preload gas/air pressure	1,200 kPa (12 kgf/cm^2)	•••
Spring preload adjusting positions		
Minimum	1	•••
Standard	4	•••
Maximum	9	•••
Rebound damping adjusting positions		
Minimum*	11	•••
Standard*	7	•••
Maximum*	1	•••
Compression damping adjusting positions		
Minimum*	11	•••
Standard*	9	•••
Maximum*	1	•••
*with the adjusting screw fully turned in position		

ELECTRICAL SPECIFICATIONS

Item	Standard	Limit
System voltage	12 V	•••
Ignition system		
Ignition system type	Transistorized coil ignition	•••
Ignition timing	5° BTDC at 1,050 r/min	•••
Advanced timing	55° BTDC at 5,000 r/min	•••
Advancer type	Throttle position sensor and electrical	•••
Pickup coil resistance/color	248 ~ 372 W/Gy-B	•••
Transistorized coil ignition unit model (manufacturer)	TNDF54 (DENSO)	•••
Voltage regulator		
Regulator type	Semiconductor short circuit	•••
Model	SH650A-12	•••
No-load regulated voltage	14.1 ~ 14.9 V	•••
Bulbs (voltage/wattage √ quantity)		
Headlight	12 V 60 W/55 W √ 2	•••
Auxiliary light	12 V 5 W √ 2	•••
Tail/brake light	12 V 5 W/21 W √ 2	•••
Turn signal light	12 V 21 W √ 4	•••
Meter light	LED	•••
Electric starting system		
System type	Constant mesh	•••
Starter motor		
Model (manufacturer)	5JJ (YAMAHA)	•••
Power output	0.75 kW	•••
Brushes		
Overall length	9.8 mm	3.65 mm
Spring force	4.88 ~ 7.32 N (488 ~ 732 gf)	•••
Commutator resistance	0.009 ~ 0.011 Ω	•••
Commutator diameter	24.5 mm	23.5 mm
Mica undercut	1.5 mm	•••
Turn signal relay		
Relay type	Full-transistor	•••
Model (manufacturer)	FE246BH (DENSO)	•••
Self-cancelling device built-in	No	•••
Turn signal blinking frequency	75 ~ 95 cycles/min.	•••
Wattage	21 W √ 2	•••
Oil level switch model (manufacturer)	4XV (DENSO)	•••
Fuel pump relay model (manufacturer)	G8R-30Y-M (OMRON)	•••

Item	Standard	Limit
Thermo unit		
Model (manufacturer)	5JJ (NIPPON THERMOSTAT)	•••
Fuses (amperage √ quantity)		
Main fuse	30 A √ 1	•••
Headlight fuse	20 A √ 1	•••
Signaling system fuse	20 A √ 1	•••
Ignition fuse	15 A √ 1	•••
Radiator fan fuse	10 A √ 1	•••
Backup fuse (odometer)	10 A √ 1	•••
Reserve fuse	30 A √ 1	•••
	20 A √ 1	•••
	15 A √ 1	•••
	10 A √ 1	•••

TIGHTENING TORQUES

ENGINE TIGHTENING TORQUES

Item	Fastener	Thread size	Q'ty	Tightening torque		Remarks
				Nm	m•kgf	
Cylinder head	Nut	M10	8	50	5.0	
Cylinder head	Cap nut	M10	2	65	6.5	
Generator rotor	Bolt	M10	1	65	6.5	
Oil/water pump assembly driven sprocket cover	Bolt	M6	1	12	1.2	
Air induction system hose	Clamp	M7	4	4	0.4	
Crankcase	Bolt	M9	10	See NOTE		
Crankcase	Bolt	M6	2	14	1.4	
Crankcase	Bolt	M6	14	12	1.2	
Crankcase	Bolt	M8	2	24	2.4	
Ignitor unit	Screw	M5	2	7	0.7	

NOTE:

After tightening to 15 Nm (1.5 m•kg), tighten another 45° ~ 50°

CHASSIS TIGHTENING TORQUES

Item	Thread size	Tightening		Remarks
		Nm	m•kgf	
Lower ring nut	M30	9	0.9	See NOTE.
Engine mounting				
Front mounting bolts	M10	40	4.0	
Rear upper mounting bolt	M10	55	5.5	
Rear under mounting bolts	M10	55	5.5	
Pinch bolts	M8	24	2.4	
Exhaust pipe bracket	M8	24	2.4	
Rear master cylinder	M8	18	1.8	

NOTE:

1. First, tighten the ring nut to approximately 18 Nm (1.8 m•kg) with a torque wrench, then loosen the ring nut completely.
2. Retighten the ring nut to specification.

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LUBRICATION POINTS AND LUBRICANT TYPES

ENGINE LUBRICATION POINTS AND LUBRICANT TYPES

Lubrication point	Lubricant
Connecting rod bolts and nuts	M

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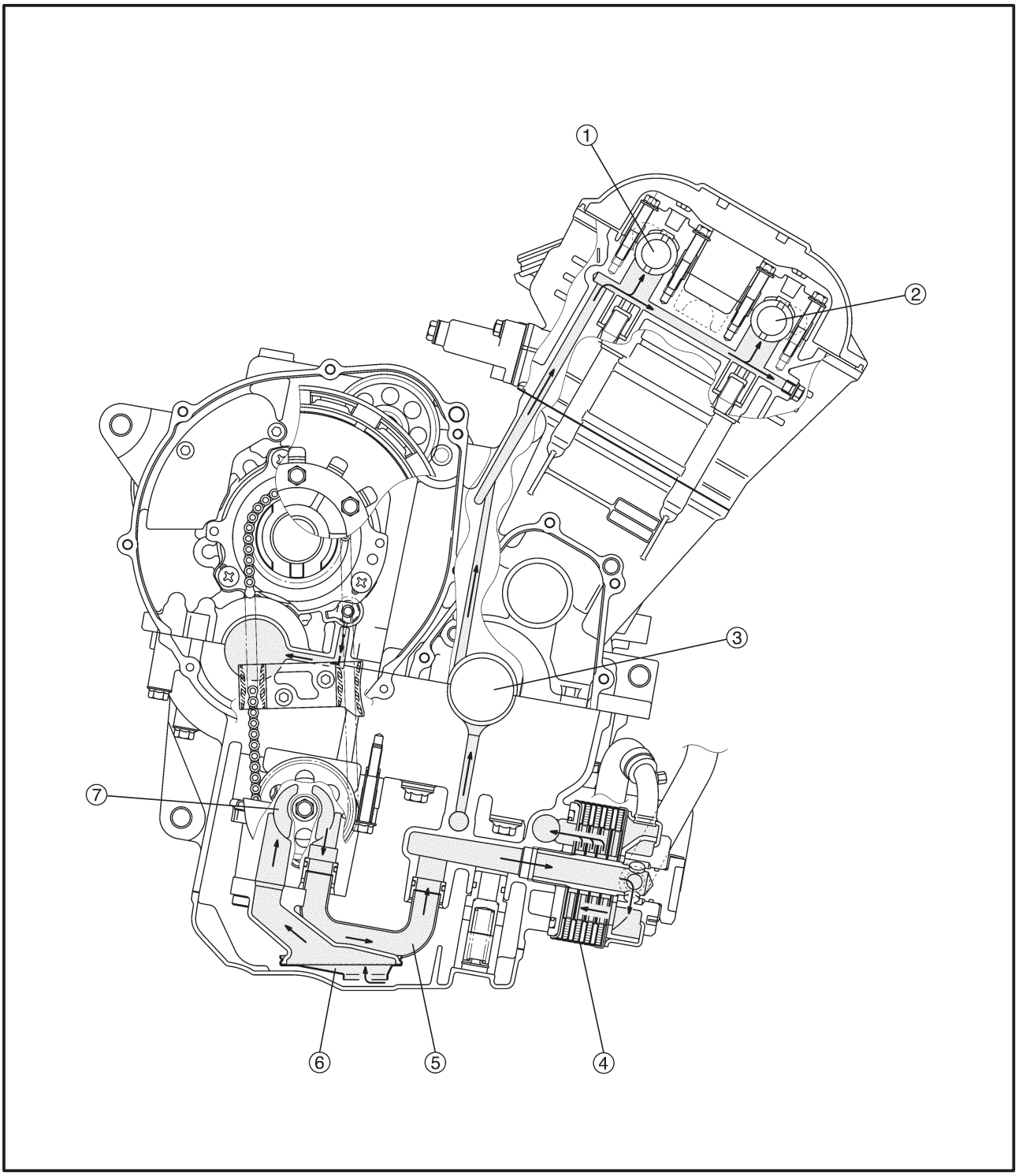
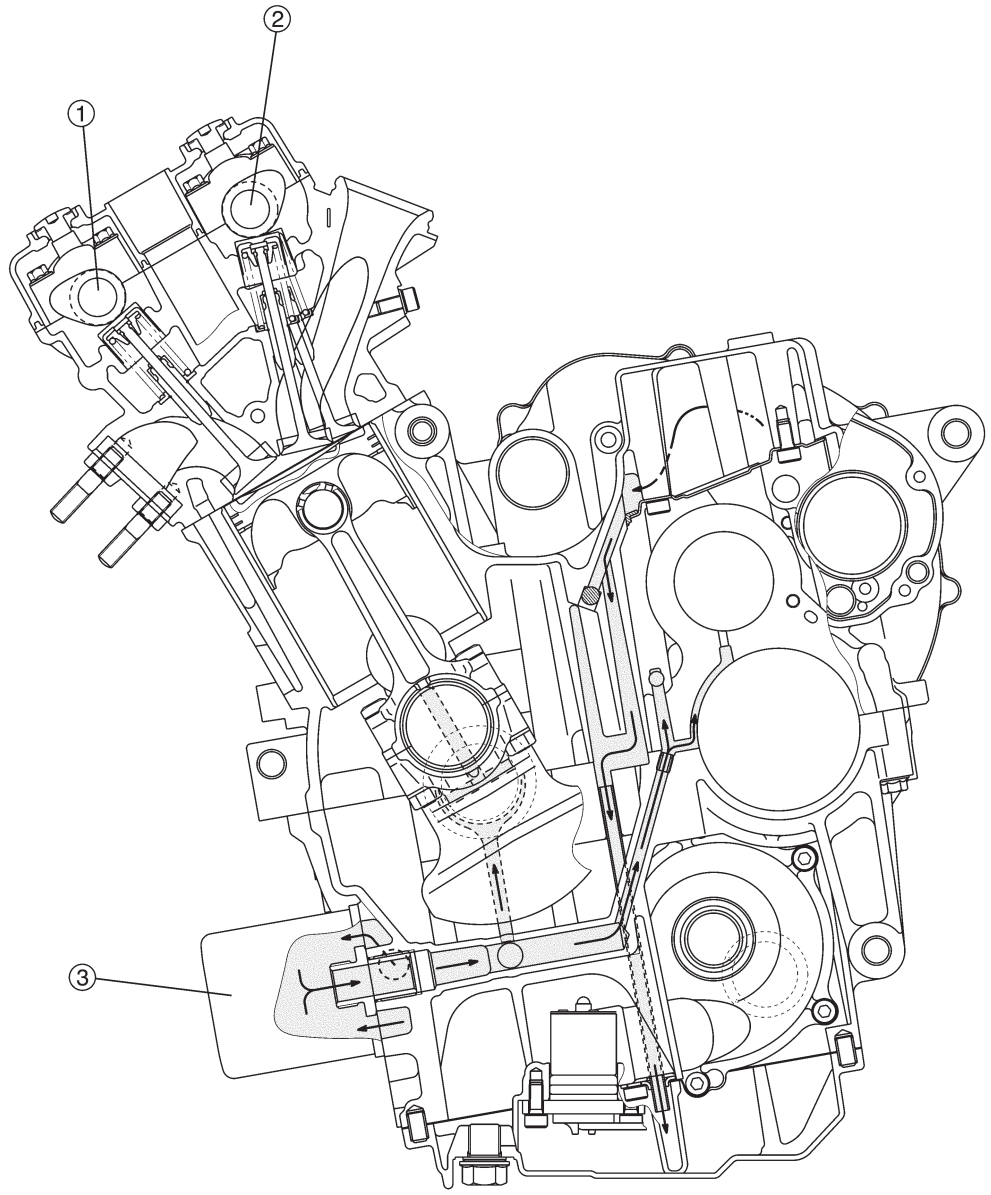
OIL FLOW DIAGRAMS

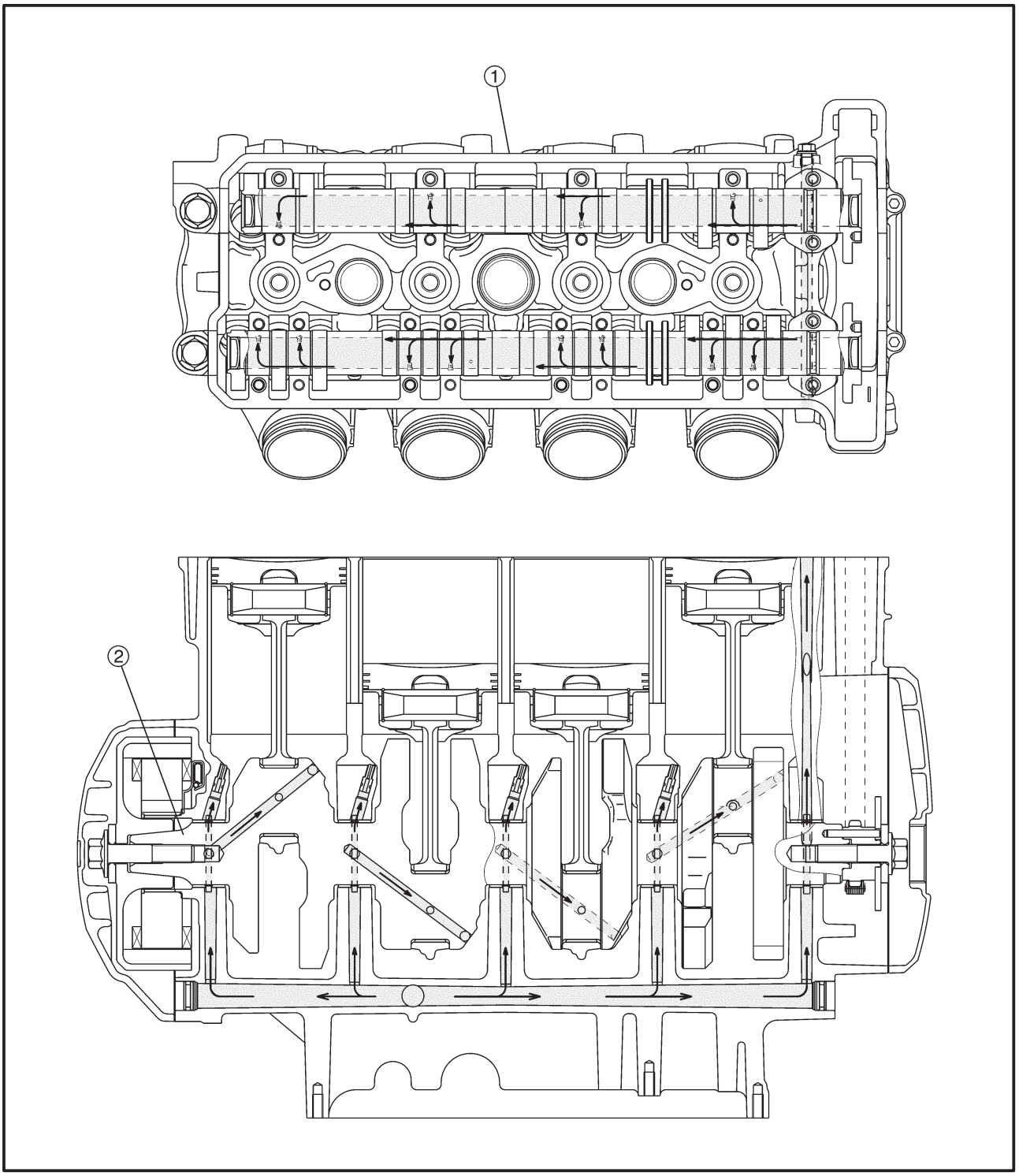
① Intake camshaft
② Exhaust camshaft
③ Crankshaft
④ Oil cooler
⑤ Oil pipe
⑥ Oil strainer
⑦ Oil pump



① Exhaust camshaft
② Intake camshaft
③ Oil filter



① Cylinder head
② Crankshaft



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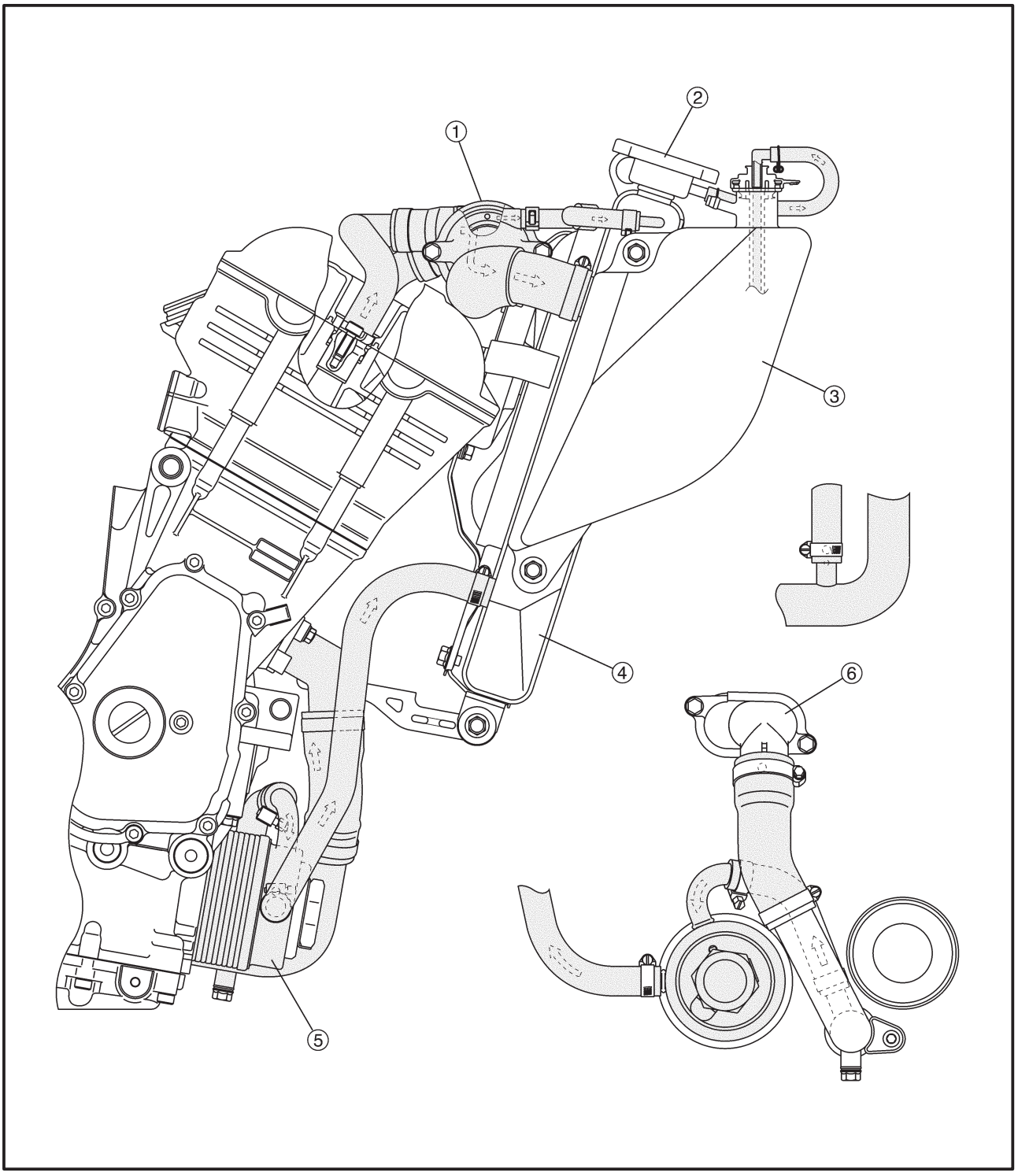
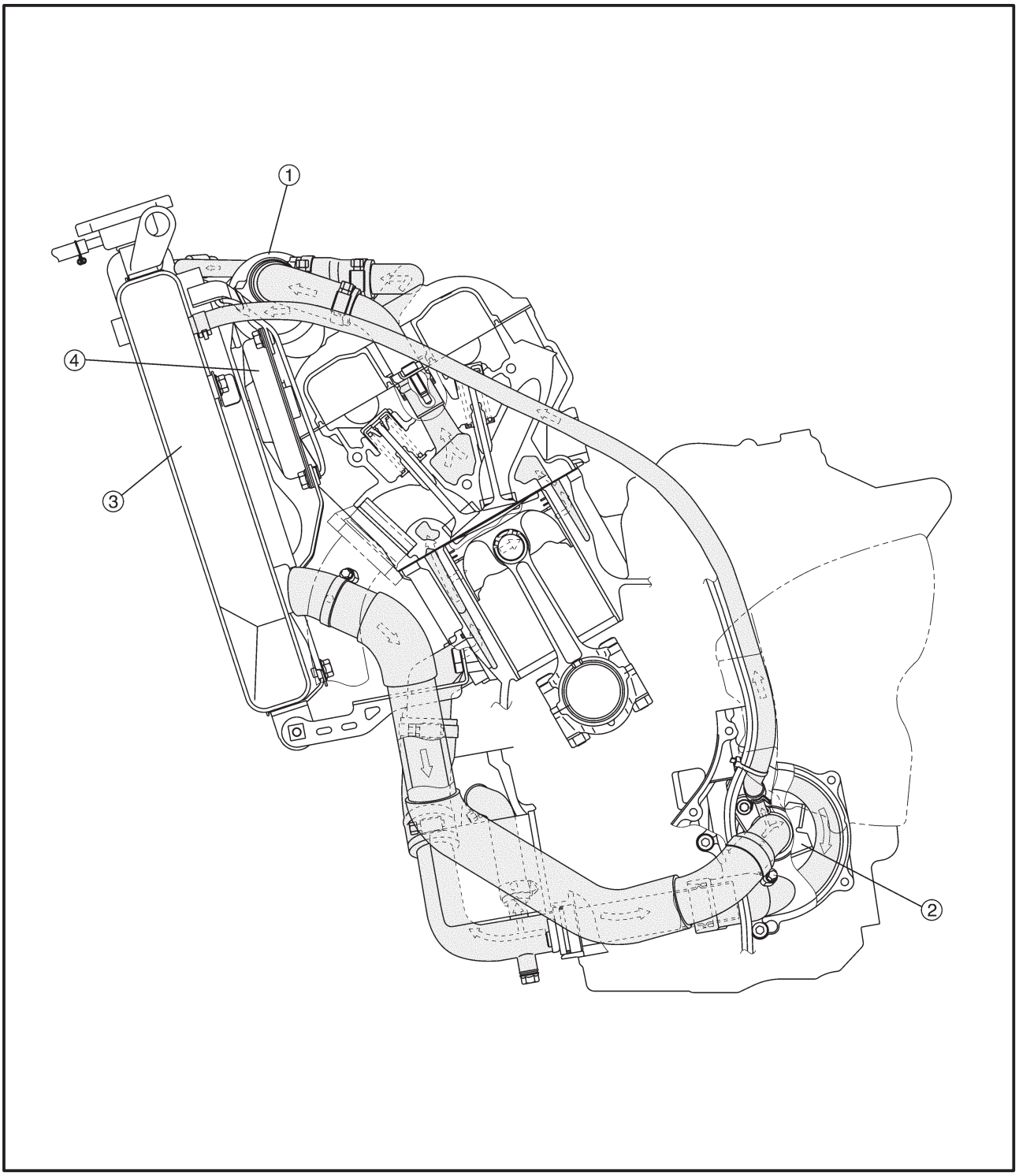
COOLANT FLOW DIAGRAMS

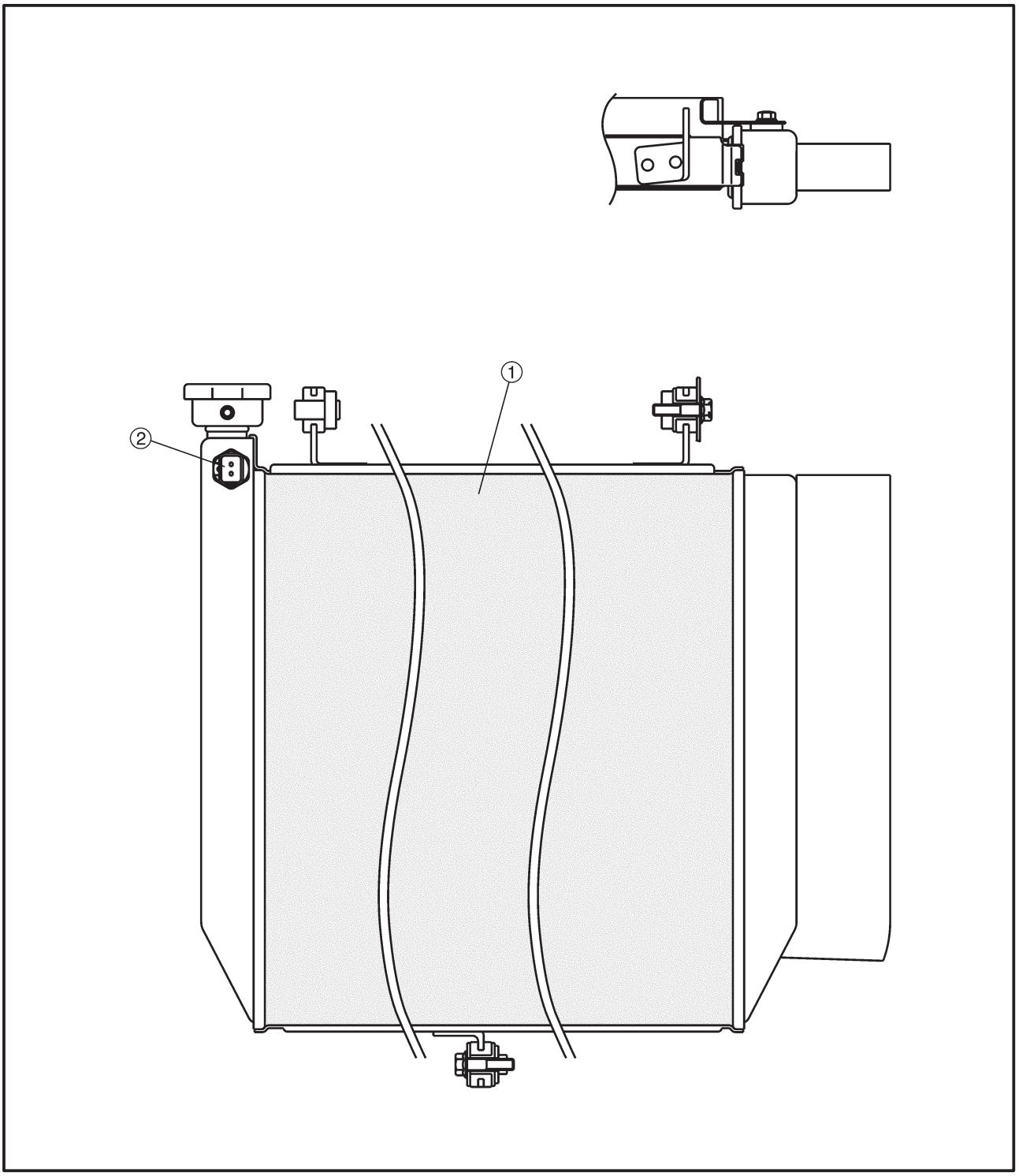
① Thermostat
② Radiator cap
③ Coolant reservoir
④ Radiator
⑤ Oil cooler
⑥ Water jacket joint



① Thermostat housing
② Water pump
③ Radiator
④ Radiator fan



① Radiator
② Thermo unit



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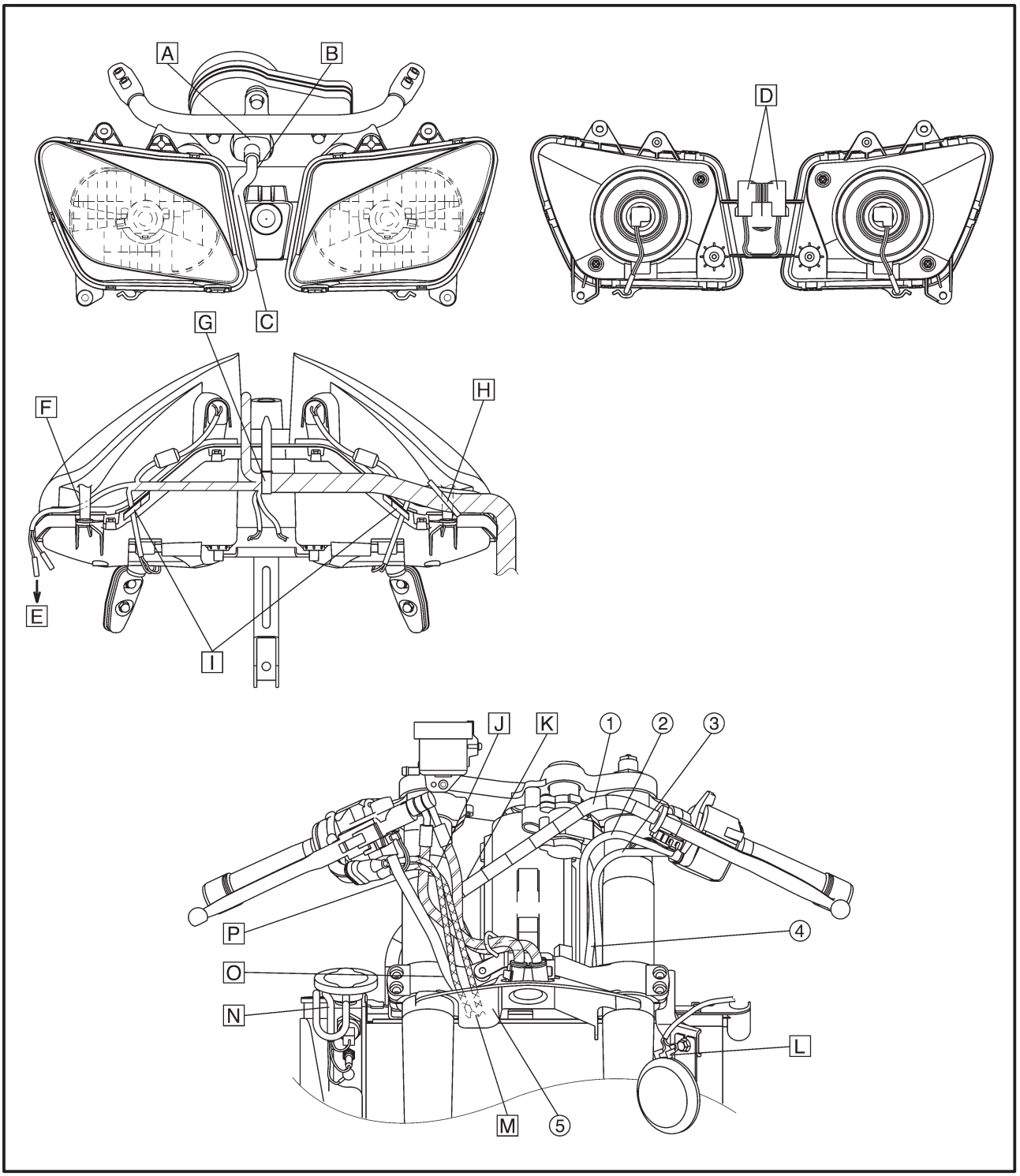
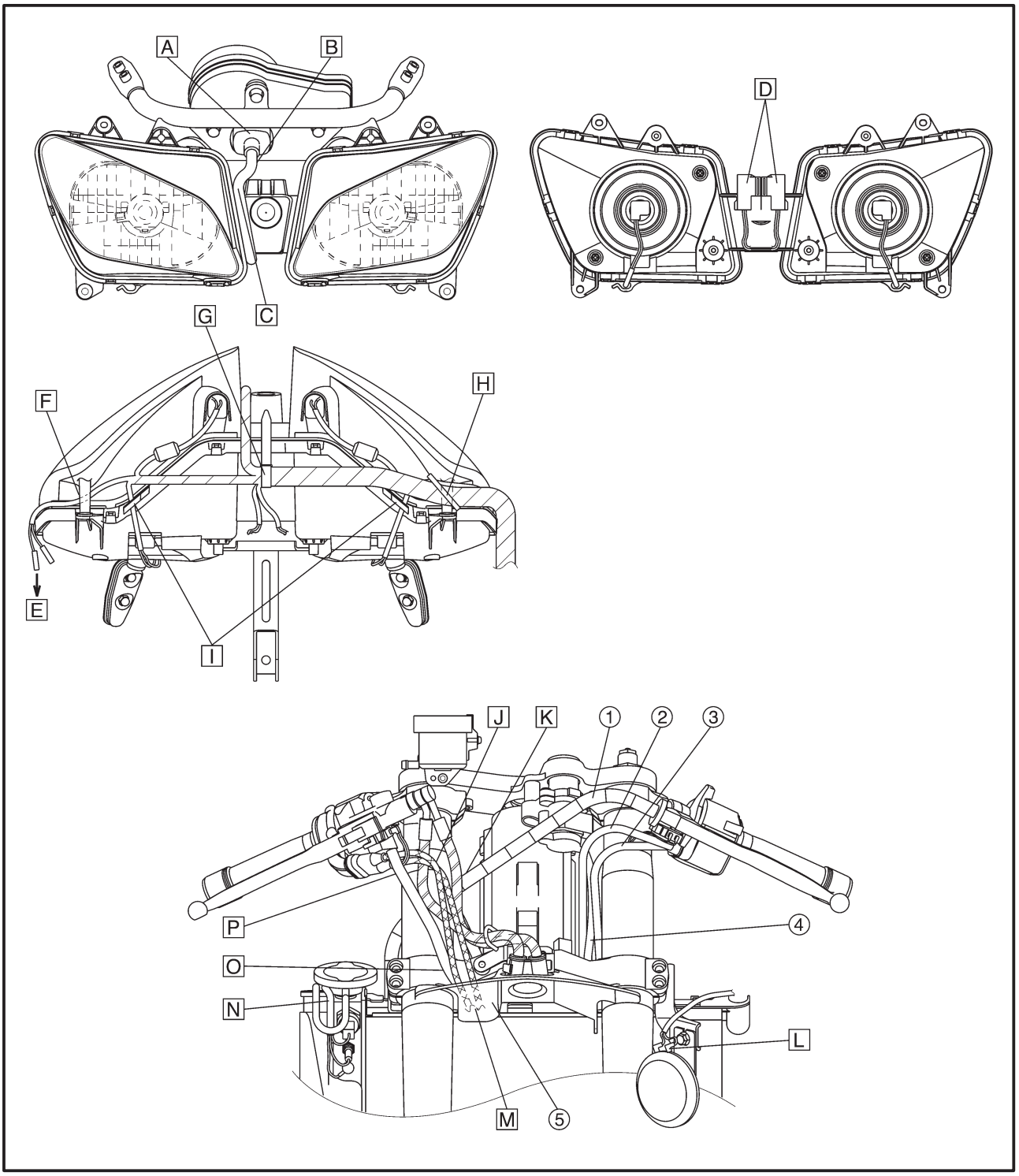
CABLE ROUTING

① Clutch cable
② Left handlebar switch lead
③ Starter cable
④ Main switch lead
⑤ Steering cover

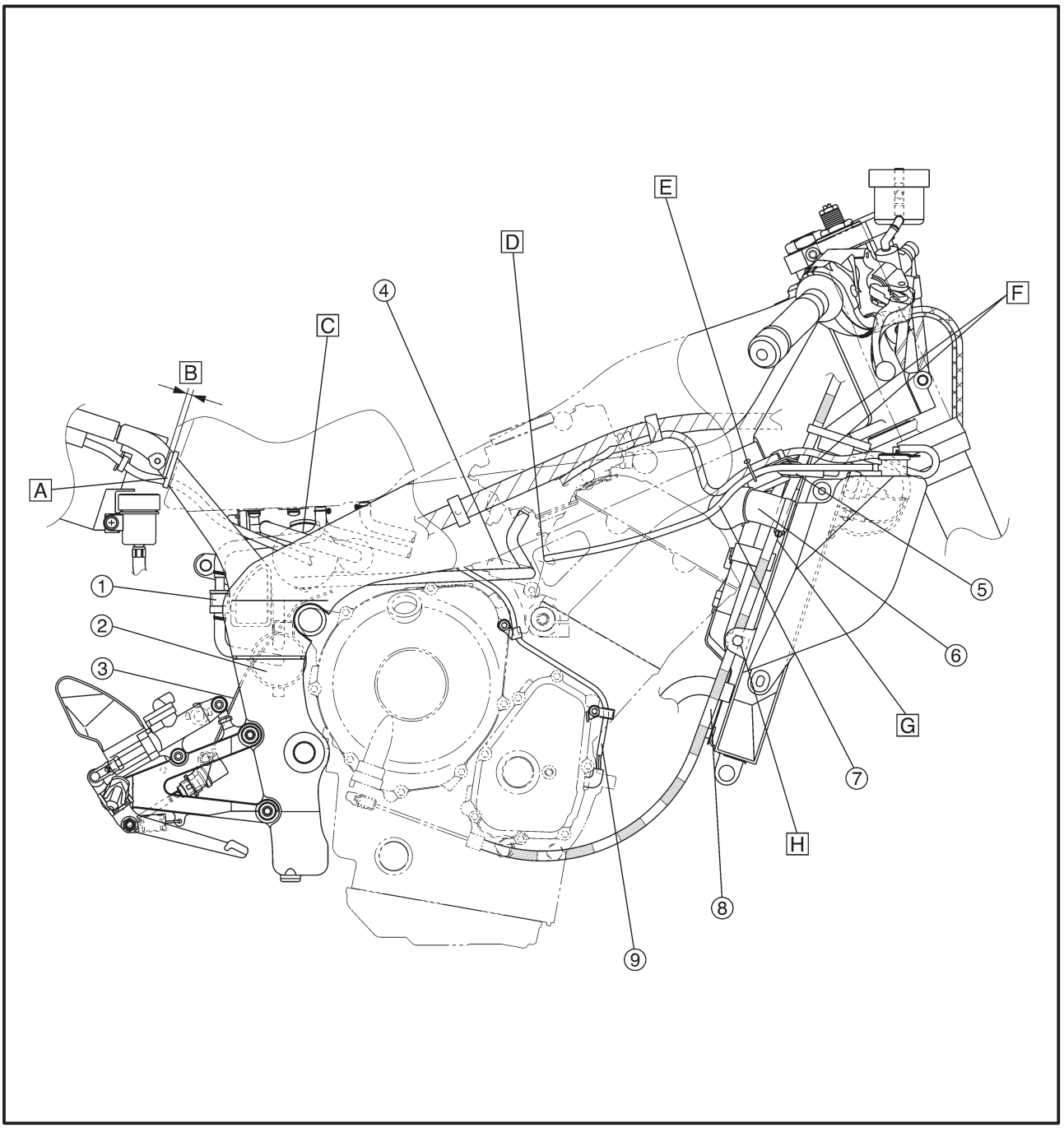
A Properly insert the meter assembly coupler and rubber boot into the meter assembly.
B Route the meter assembly lead through the left side of the headlight housing.
C The speedometer lead with not be tighten.
D Install the headlight relays onto the headlight housing bridge.
E Connect to the right front turn signal connectors.
F Route the turn signal leads upper the headlight housing boss.



[G] Fasten the headlight lead with a plastic clamp at white tape mark.
[H] Fasten the wire harness to the headlight housing boss with a plastic locking tie.
[I] Route the headlight lead through the plastic guide.
[J] Route the throttle cable to the front side of the brake hose.
[K] Route the clutch cable behind the front fork leg.
[L] Make sure that the horn leads face out.
[M] Route the throttle cables and right handlebar switch lead between the lower bracket and steering cover.
[N] Route the thermo switch/temperature sender sub-wire harness to the outside of the radiator cap.
[O] Route the right handlebar switch lead behind the throttle cables. Do not cross the throttle cables and the right handlebar switch lead.
[P] Route the right handlebar switch lead in front of the throttle cables.



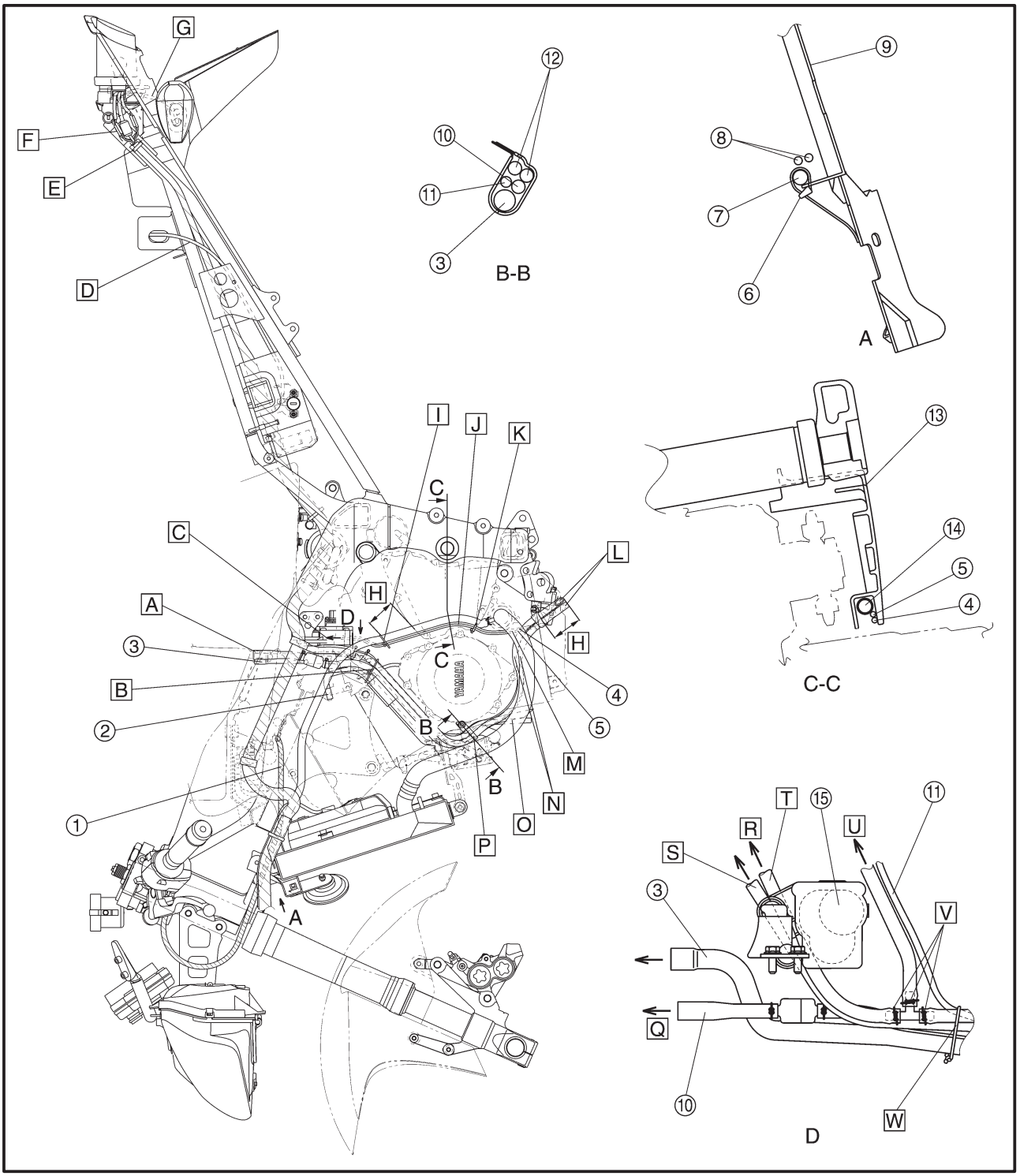
① Rollover valve (California only)
② Charcoal canister (California only)
③ Rear brake switch lead
④ Timing chain tensioner.
⑤ Thermostat assembly breather hose
⑥ Radiator inlet hose
⑦ Coolant reservoir breather hose
⑧ Clutch cable
⑨ Pickup coil lead
[A] Fasten the starter motor lead to the flame which is just before the side cover stay (0 ~ 5 mm) with a plastic clamp.
[B] 0 ~ 5 mm
[C] Route the rollover-valve-to-fuel-tank hose to the inside of the fuel hose (California only).
[D] Route the coolant reservoir breather hose over the timing chain tensioner.
[E] Insert the plastic clip through the hole in the plastic frame panel and then fasten the wire harness and coolant reservoir breather hose with it.
[F] Route the clutch cable between the radiator bracket and frame and in front of the thermostat assembly breather hose.
[G] Route the clutch cable to the inside of the radiator inlet hose.
[H] Insert the plastic clamp into the hole in the coolant reservoir's tab.



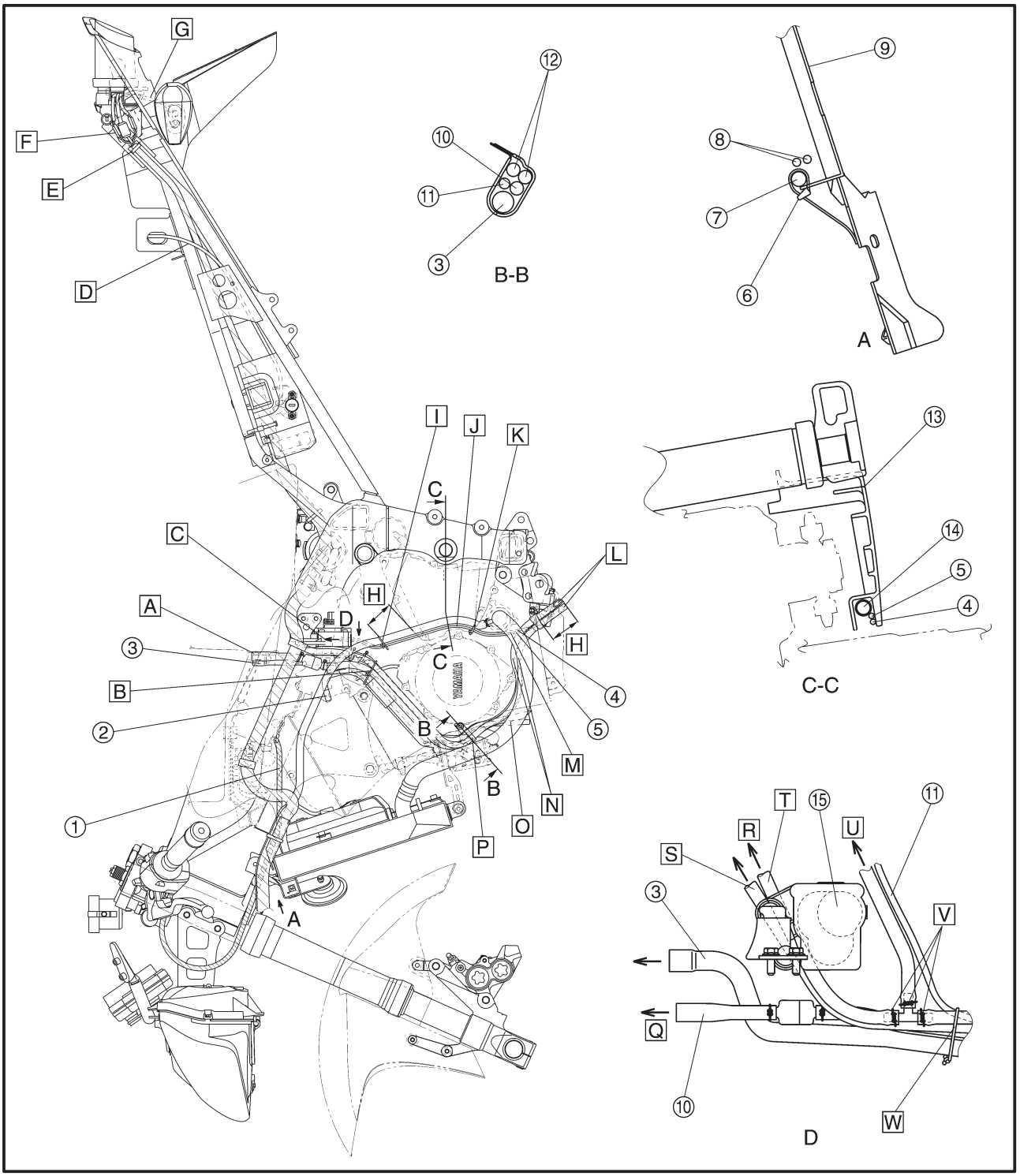
1. Starter cable
2. Air induction system vacuum hose
3. Air induction system hose
4. Sidestand switch lead
5. Oil level switch lead
6. Clamp
7. Right handlebar switch lead
8. Throttle cables
9. Air guide
10. Air filter case breather hose
11. Coolant reservoir breather hose
12. Fuel tank overflow hose and fuel tank breather hose
13. Drive chain sprocket cover
14. Coolant hose
15. EXUP servomotor

A. Route the air filter case breather hose and air induction system hose to the inside of the wire harness.

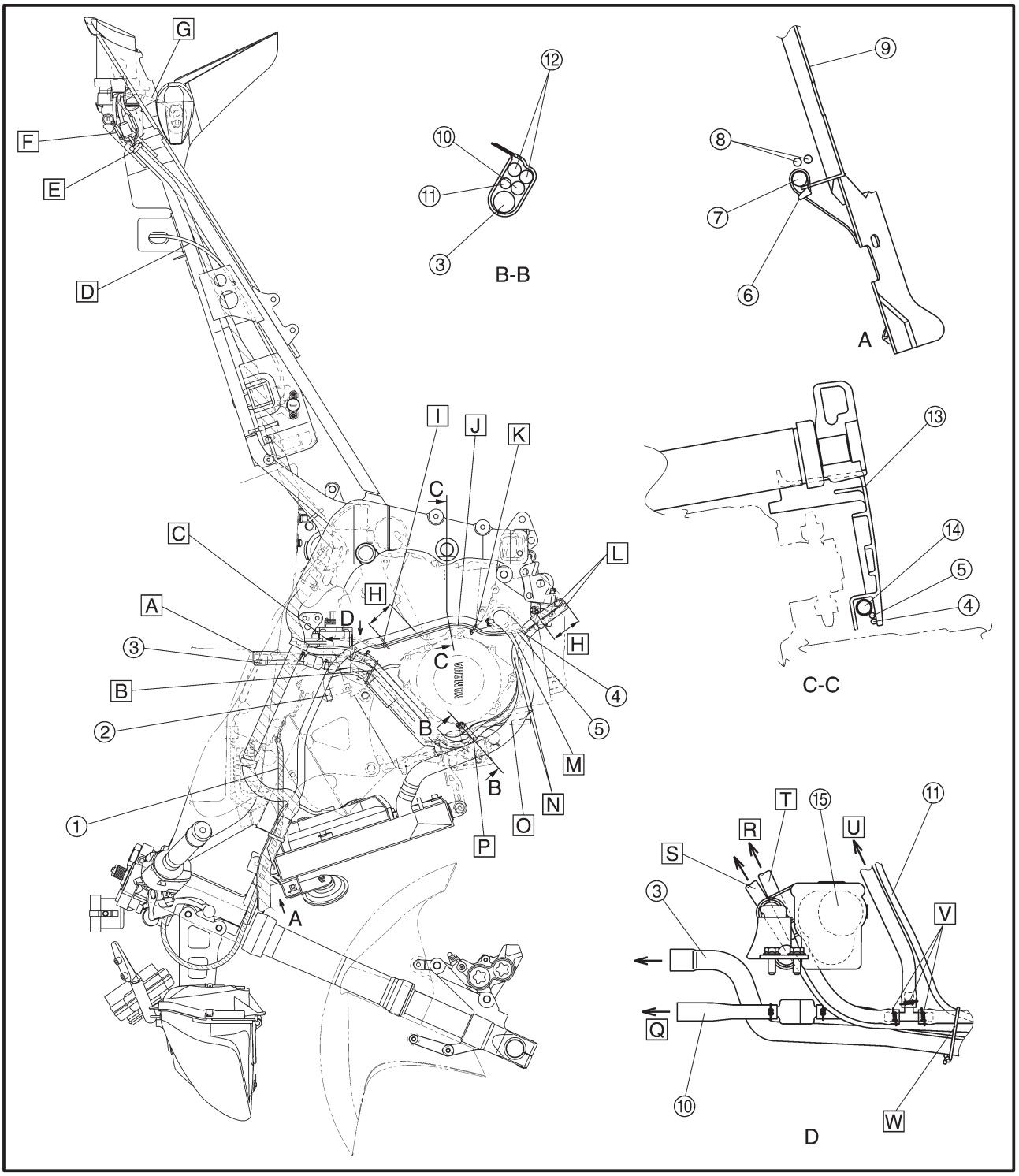
B. Through the air cleaner drain hose, coolant reservoir tank breather, fuel tank breather hose, fuel tank over flow hose, air induction system hose and air induction system vacuum hose outside of the AC magneto lead. Then, clamp all of them at just behind of the air induction system protector and air induction system vacuum hose protector, moreover at under the three sides pipe.



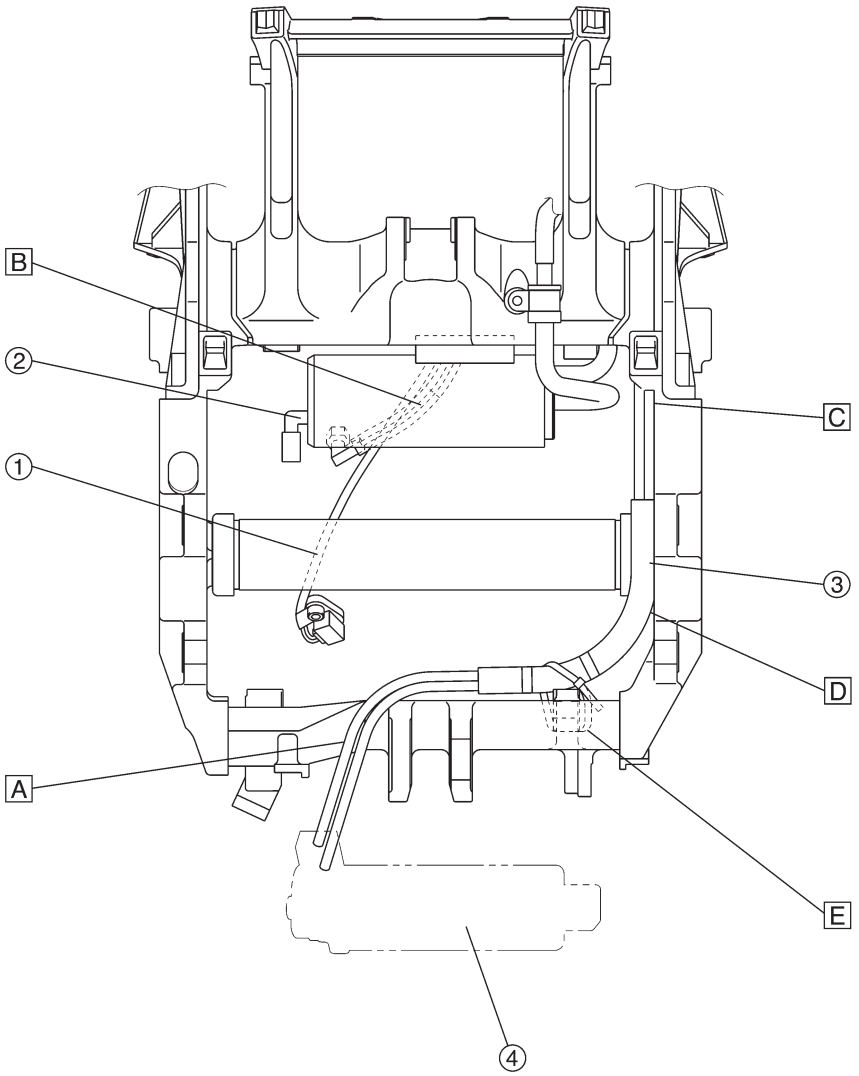
C To the connector cover.
D Route the seat lock cable over the wire harness.
E Fasten the wire harness with a plastic clamp.
F Make sure the rear flasher light lead coupler and tail light lead coupler in the rubber cover.
G Route the rear turn signal lead through the hole in the upper rear fender.
H 50 mm
I Fasten the sidestand switch lead, engine oil level switch lead, and water pump breather hose with a plastic clip.
J Route the sidestand switch lead and oil level switch lead to the inside of the drive sprocket cover.
K Do not crush the water pump breather hose and plastic clip.
L Pass the fuel tank breather hose and the air filter drain hose through the steel clamps and then after routing the hoses to the exterior of the under cowling, align the leading ends of the hoses.
M Route the engine oil level switch lead and sidestand switch lead inside the coolant hose.



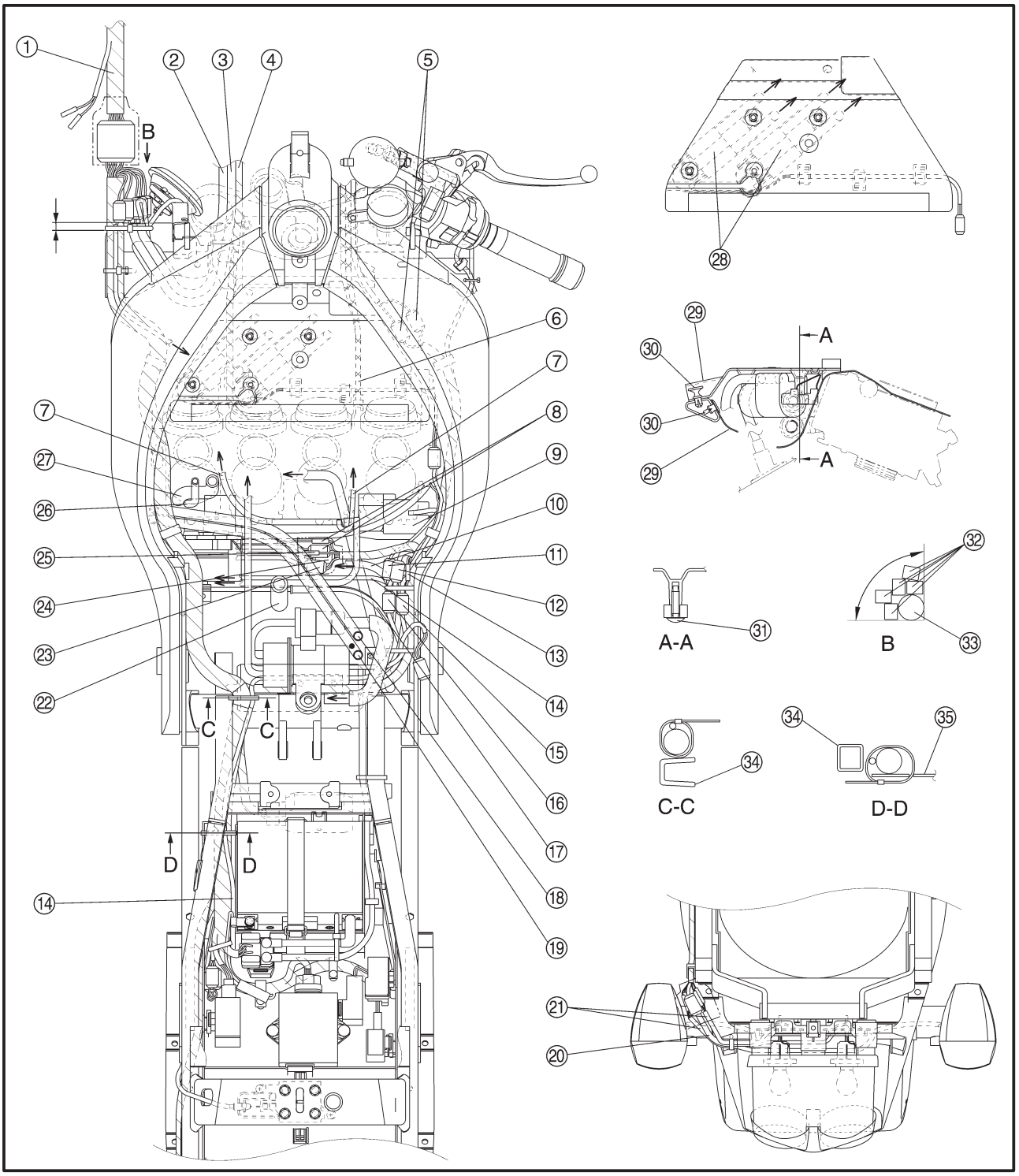
N Pass the fuel tank breather hose and the air filter drain hose through the inside of the coolant hose. No hose must be inserted into the under cowling.
O Pass the air filter drain hose and the coolant reservoir hose through the inside of the coolant hose and route the leading ends to the bottom of the coolant hose. The leading ends must not protrude from the under cowling.
P Fasten the air filter drain hose, coolant hose, coolant reservoir tank breather hose, fuel tank breather hose, fuel tank drain hose and air induction system hose at the steel clamp.
Q To the air filter.
R To the fuel tank.
S Insert the fuel tank breather hose into a back side nipple of fuel tank. The fuel tank nipple and the fuel tank breather hose have each white mark.
T Insert the fuel tank over flow hose into a front side nipple of fuel tank.
U To the air vent surge tank.
V Adjust the all clip's direction to back side of the body.
W Clamp under a three sides pipe.



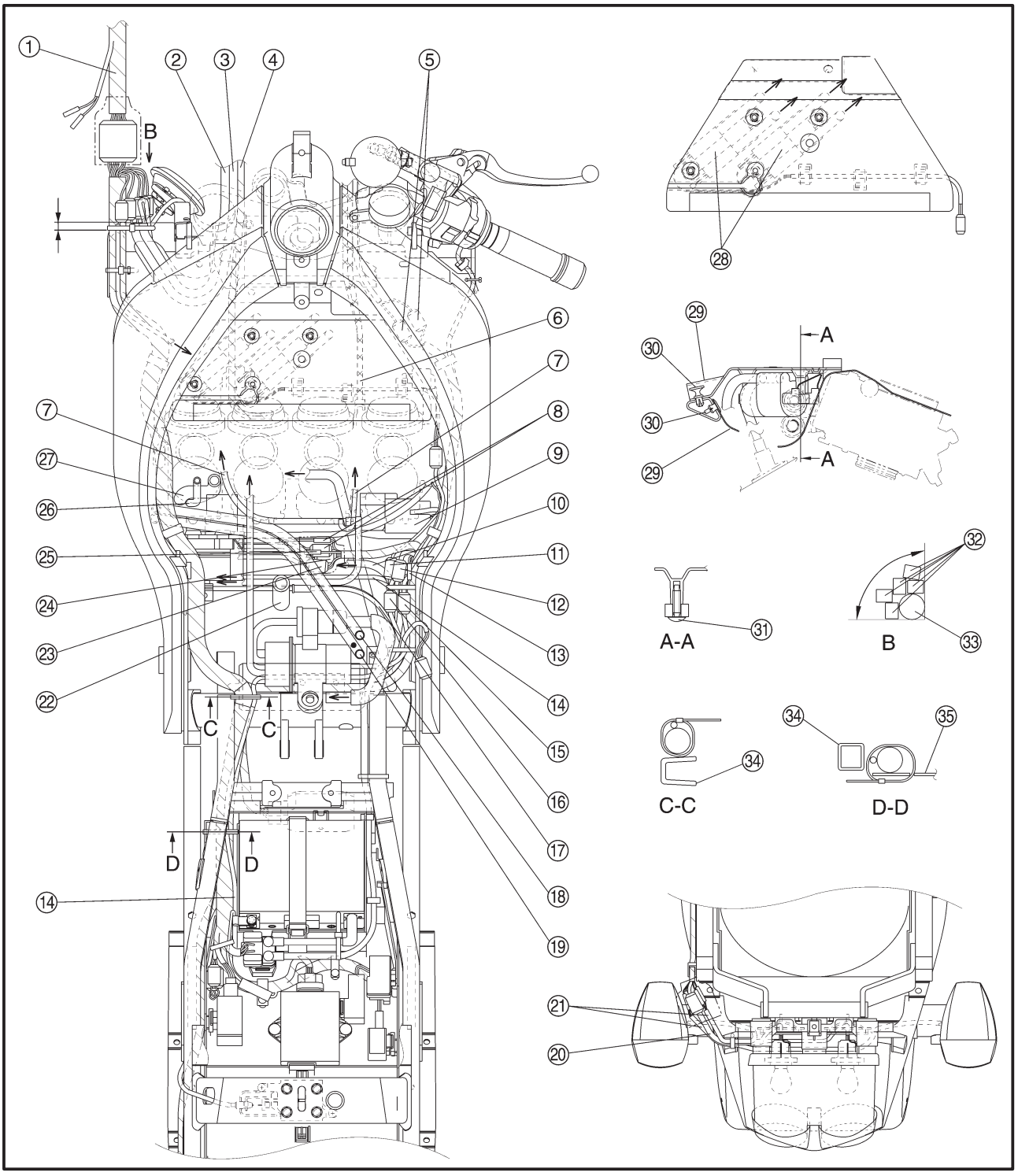
① Speed sensor lead
② Charcoal canister (California only)
③ EXUP cables
④ EXUP
A Route the EXUP cables behind the cross tube.
B Route the neutral switch lead direct to upper right side.
C Route the EXUP cables on the outside of the engine mount.
D Route the EXUP cables behind the swing arm head pipe.
E Fasten the EXUP cables and engine mount with a plastic locking tie.



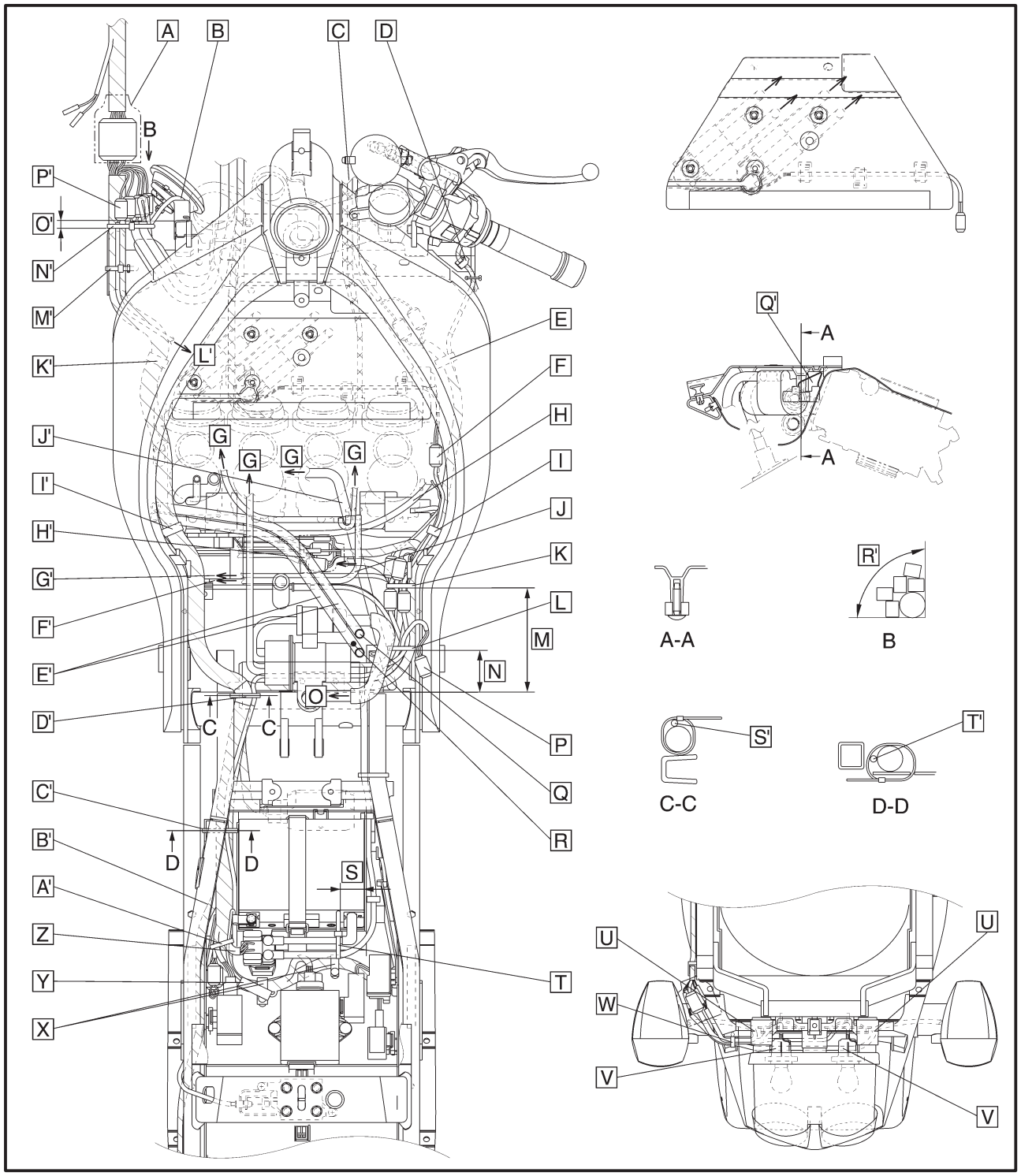
① Headlight sub-wire harness
② Left handlebar switch lead
③ Main switch lead
④ Starter cable
⑤ Right handlebar switch coupler
⑥ Throttle cables
⑦ Engine air vent hose
⑧ EXUP servomotor coupler
⑨ Air vent surge tank
⑩ Starter motor lead
⑪ Pickup coil coupler
⑫ Fuel pump coupler
⑬ Neutral switch connector
⑭ Battery negative lead
⑮ Rear brake switch coupler
⑯ Speed sensor coupler
⑰ EXUP cable
⑱ Fuel tank overflow hose
⑲ Fuel tank breather hose (except for California)
⑳ Tail light lead
㉑ Rear flasher light lead
㉒ Crankcase breather hose
㉓ Generator coupler
㉔ Sidestand switch coupler



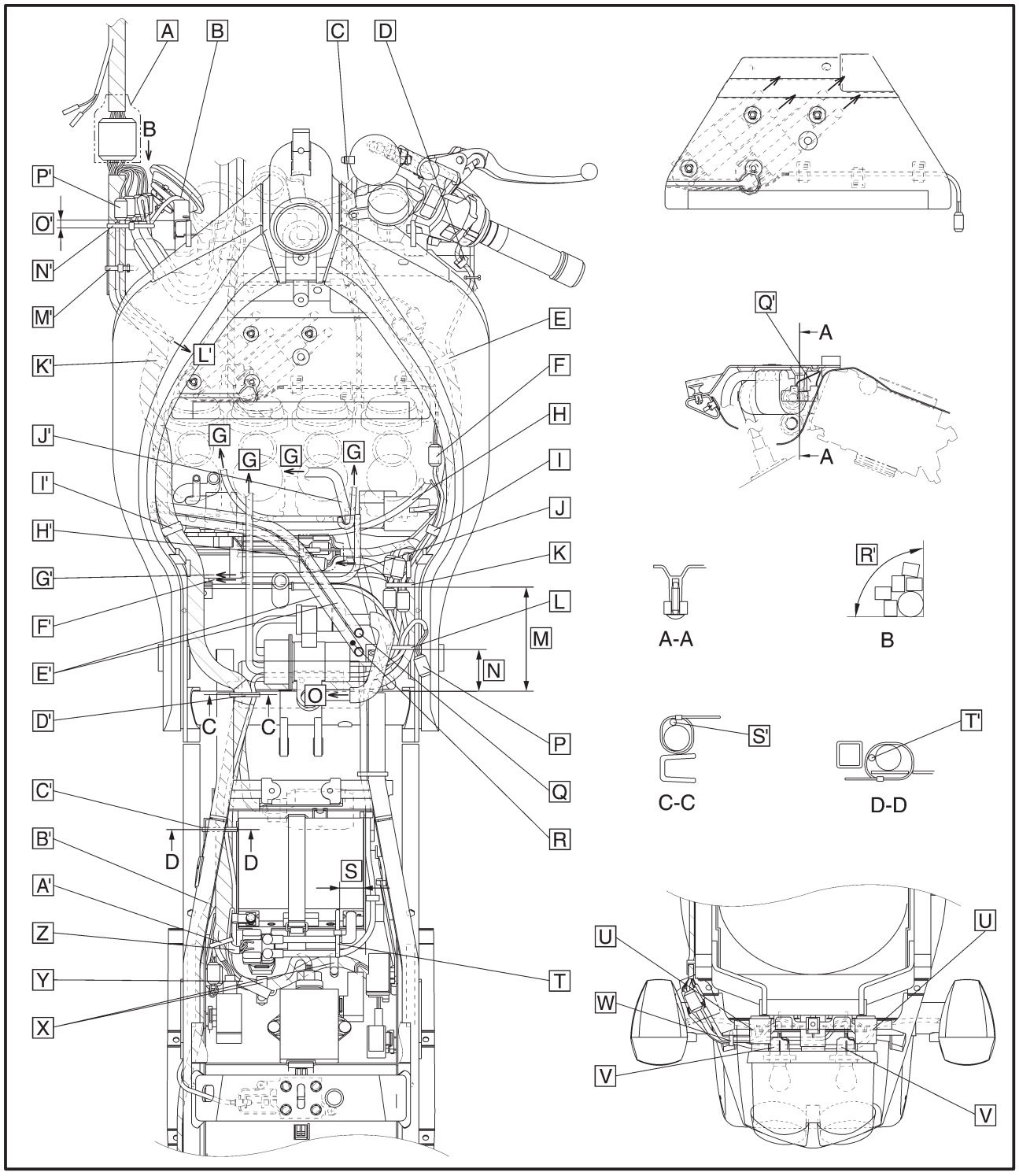
㉕ Engine oil level switch lead
㉖ Air filter case drain hose
㉗ Air induction system hose
㉘ Ignition coil
㉙ Cover
㉚ Rivet
㉛ Screw
㉜ Coupler
㉝ Main harness
㉞ Frame
㉟ Rear fender



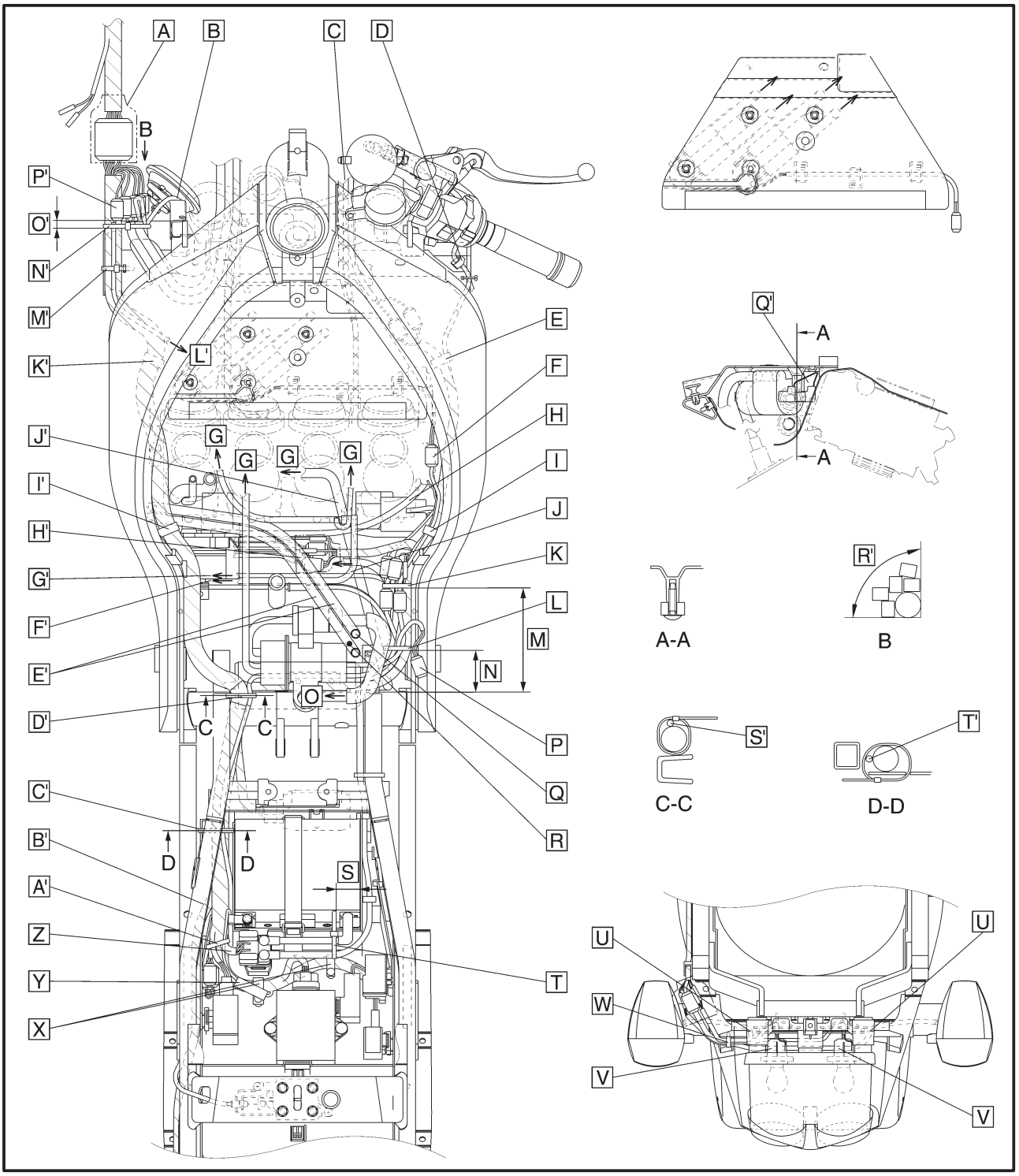
A Make sure the headlight lead in the rubber cover.
B Route the horn lead over the horn bracket and make sure that the lead has no slack.
C Do not cross the throttle cables and right handlebar switch lead.
D Route the thermo switch lead through the steel band on the radiator.
E Fasten the main harness and thermo switch lead with a plastic clamp. Insert the plastic clamp into the hole on the frame.
F Route the ignition coil sub-wire harness under the throttle position sensor.
G To the carburetor.
H Route the coolant reservoir tank breather hose upper the air vent surge tank.
I Fasten the wire harness and ignition coil subwire harness with a plastic clamp.
J Route the idle adjust cable upper the ground lead.
K Fasten the fuel pump lead, speed sensor lead, neutral switch lead, rear brake light lead, fuel sender lead, starter motor lead and EXUP cable with a plastic clamp.



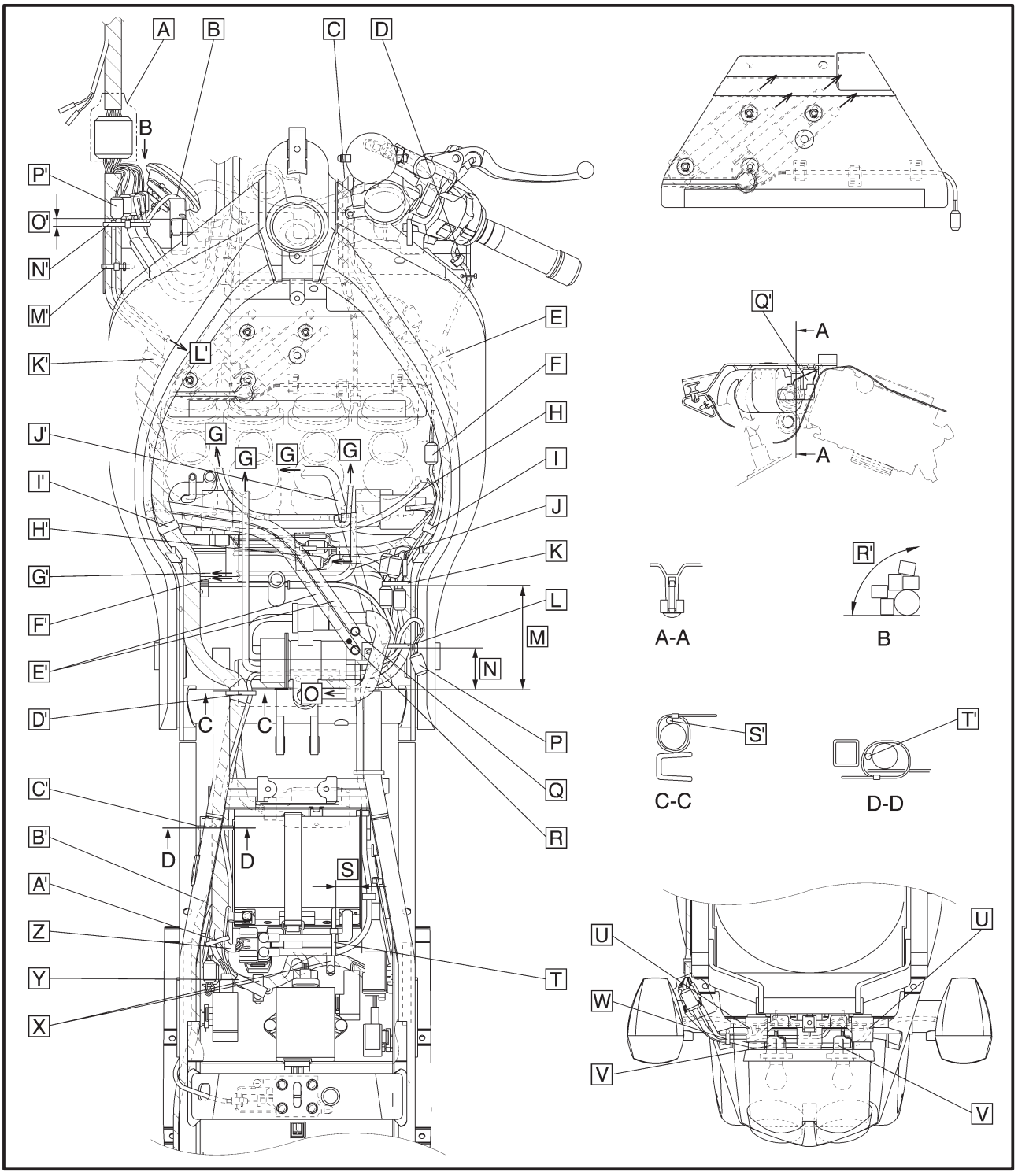
[L] Fasten the fuel pump lead, speed sensor lead, neutral switch lead, rear brake light lead, fuel sender lead, starter motor lead and EXUP cable with a plastic clamp.
[M] 125 mm (4.88 in)
[N] 50 mm (1.95 in)
[O] To the fuel cock.
[P] To the fuel sender.
[Q] Insert the fuel tank over flow hose into a front side nipple of fuel tank.
[R] Insert the fuel tank breather hose into a back side nipple of fuel tank. The fuel tank nipple and the fuel tank breather hose have each white mark.
[S] 30 mm (1.17 in)
[T] Fasten the battery positive lead and starter motor lead with a plastic locking tie.
[U] Route the rear flasher light lead in the hole on the rear fender.
[V] Insert the tail/brake light lead and turn signal leads under the tail/brake light.
[W] Fasten the rear flasher light lead and taillight lead with a plastic clamp. Route the rear flasher light lead and taillight lead in the hole on the taillight bracket.



X Fasten the main harness with a plastic band on the rear fender.
Y Position the ground coupler over the main harness.
Z Route the ground lead under the starter relay lead.
A' Fasten the starter relay lead, ground lead, starting circuit cutoff relay lead, alam lead and main harness with a plastic clamp. Route the clamp end to outside, and insert it between wire harness and fender.
B' Route the taillight leads through the rear fender.
C' Fasten the main harness, battery negative lead and rear fender with a plastic clamp. Clamp the battery negative lead with a white tape mark.
D' At the back side of turning point, battery negative lead is fixed to wire harness.
E' Route the fuel tank overflow hose and fuel tank breather hose in front of the crank case breather hose and under the fuel hose and front of the EXUP servomotor bracket and upper the EXUP servomotor.
F' To the idle adjust screw.
G' To the engine backward.
H' Make sure the sidestand switch coupler, engine oil level sensor coupler, EXUP servo motor coupler and acmagneto coupler in the rubber cover.



I' Fasten the main harness with a plastic clamp. Insert the plastic clamp into the hole on the frame.
J' Route the charcoal canister hose under the engine air vent hose, coolant reservoir tank breather hose and all of leads. (California only)
K' Fasten the wire harness with a plastic clamp and then insert the clamp into the frame.
L' To the radiator fan motor.
M' Route the main harness and fan motor lead into the hole on the air intake guide. Fasten the main harness and fan motor lead with a plastic clamp.
N' Route the band end to inside. The clamp position should be not exceed just behind 30 mm of all coupler.
O' 0 ~ 30 mm
P' Although the main switch lead couplers and the handlebar switch lead couplers are the same in shape, they differ in color (the former is white, and the latter, blue). Connect the couplers of the same color.
Q' Direct the ignition coil leads upward and insert them into position at the rubber damper.
R' 90°
S' Route the battery negative lead inside the main harness.
T' Route the battery positive lead upper the main harness.



EB300000

PERIODIC CHECKS AND ADJUSTMENTS

INTRODUCTION

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

EB301000

PERIODIC MAINTENANCE AND LUBRICATION INTERVALS

No.		ITEM	CHECKS AND MAINTENANCE JOBS	After the first 1,000 km	Every 10,000 km	Every 20,000 km	Annual check
1	*	Fuel line	• Check fuel hoses and vacuum hose for cracks or damage. • Replace if necessary.		√		√
2	*	Fuel filter	• Check condition. • Replace if necessary.			√	
3		Spark plugs	• Check condition. • Clean, regap or replace if necessary.		√		
4	*	Valves	• Check valve clearance. • Adjust if necessary.	Every 40,000 km			
5		Air filter	• Clean or replace if necessary.		√		
6		Clutch	• Check operation. • Adjust or replace cable.	√	√		
7	*	Front brake	• Check operation, fluid level and vehicle for fluid leakage. • Correct accordingly. • Replace brake pads if necessary.	√	√		√
8	*	Rear brake	• Check operation, fluid level and vehicle for fluid leakage. • Correct accordingly. • Replace brake pads if necessary.	√	√		√
9	*	Brake hose	• Check for cracks or damage. • Replace if necessary.		√		√
10	*	Wheels	• Check balance, runout and for damage. • Rebalance or replace if necessary.		√		
11	*	Tires	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√		
12	*	Wheel bearings	• Check bearing for looseness or damage. • Replace if necessary.		√		
13	*	Swingarm	• Check swingarm pivoting point for play. • Correct if necessary. • Lubricate with lithium soap base grease.		√		
14		Drive chain	• Check chain slack. • Adjust if necessary. Make sure that the rear wheel is properly aligned. • Clean and lubricate.	Every 1,000 km and after washing the motorcycle or riding in the rain			
15	*	Steering bearings	• Check bearing play and Steering for roughness. • Correct accordingly.	√	√		
			• Lubricate with lithium soap base grease.	Every 24,000 km			

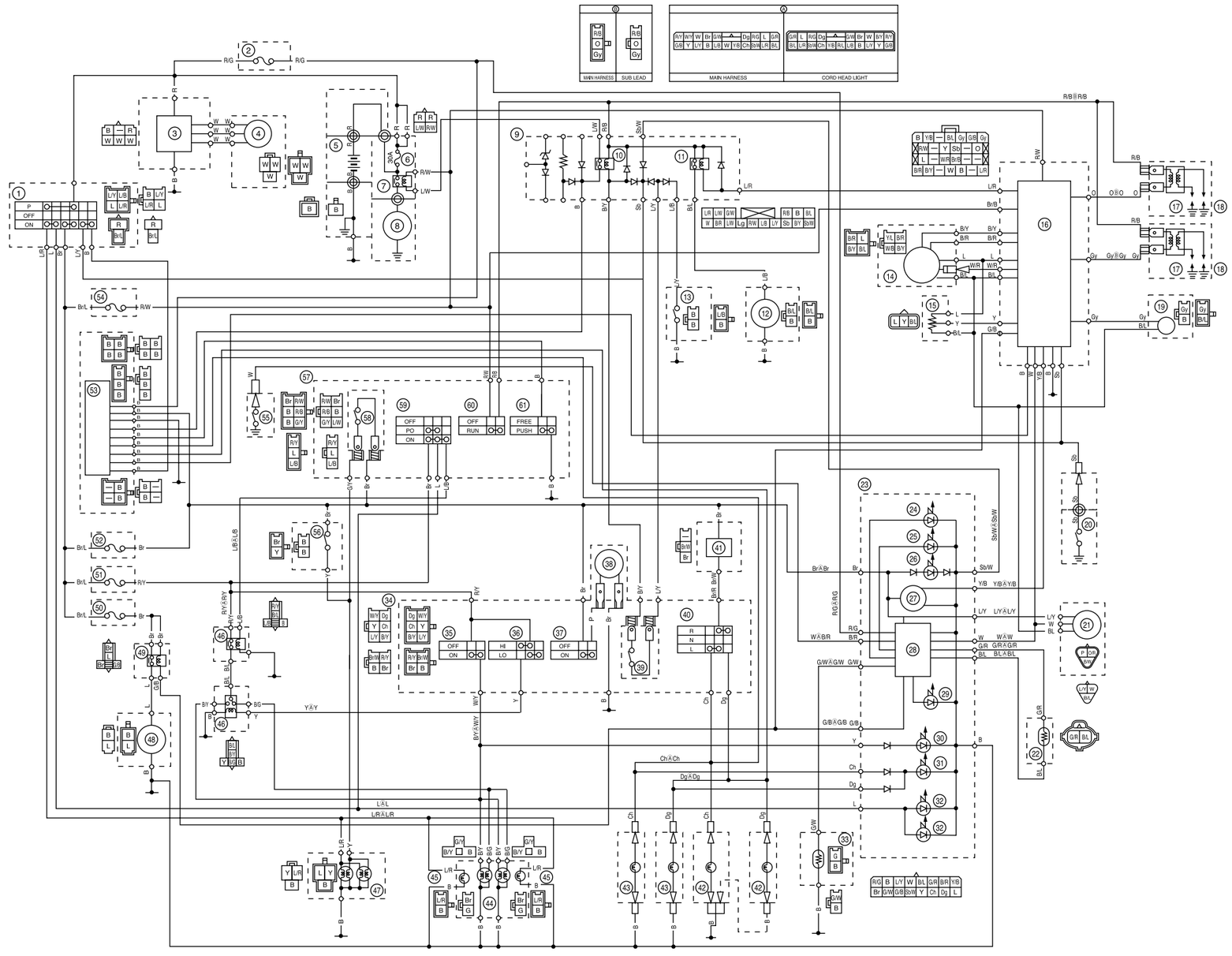
No.		ITEM	CHECKS AND MAINTENANCE JOBS	After the first 1,000 km	Every 10,000 km	Every 20,000 km	Annual check
16	*	Chassis fasteners	• Make sure that all nuts, bolts and screws are properly tightened. • Tighten if necessary.		√		√
17		Sidestand	• Check operation. • Lubricate and repair if necessary.		√		√
18	*	Sidestand switch	• Check operation. • Replace if necessary.	√	√		√
19	*	Front fork	• Check operation and for oil leakage. • Correct accordingly.		√		
20	*	Rear shock absorber assembly	• Check operation and shock absorber for oil leakage. • Replace shock absorber assembly if necessary.		√		
21	*	Rear suspension relay arm and connecting arm pivoting points	• Check operation. • Correct if necessary.		√		
22	*	Carburetors	• Check engine idling speed, synchronization and starter operation. • Adjust if necessary.	√	√		√
23		Engine oil	• Check oil level and vehicle for oil leakage. • Correct if necessary. • Change. (Warm engine before draining.)	√	√		√
24		Engine oil filter cartridge	• Replace.	√		√	
25	*	Cooling system Cooling system	• Check coolant level and vehicle for coolant leakage. • Correct if necessary.		√		√
			• Change coolant.			√	
26	*	Front and rear brake switches	• Check operation. • Correct accordingly.	√	√		√
27		Moving parts and cables	• Lubricate if necessary.		√		√
28	*	Air induction system	• Check the air cut valve and reed valve for damage. • Replace the entire air induction system if necessary.		√		
29	*	Exhaust system	• Check the screw clamp for looseness. • Tighten if necessary.	√	√		
30	*	Lights, signals and switches	• Check operation. • Correct if necessary. • Adjust headlight beam if necessary.	√	√		√

* Since these items require special tools, data and technical skills, have a Yamaha dealer perform the service.

NOTE:

- The annual checks must be performed once a year unless a 10,000 km or 20,000 km maintenance was performed in the same year.
- The air filter needs more frequent service if you are riding in unusually wet or dusty areas.
- Hydraulic brake service
  - Regularly check and, if necessary, correct the brake fluid level.
  - Every two years replace the internal components of the brake master cylinder and caliper, and change the brake fluid.
  - Replace the brake hoses every four years and if cracked or damaged.

YZF-R1 WIRING DIAGRAM (For EUR)

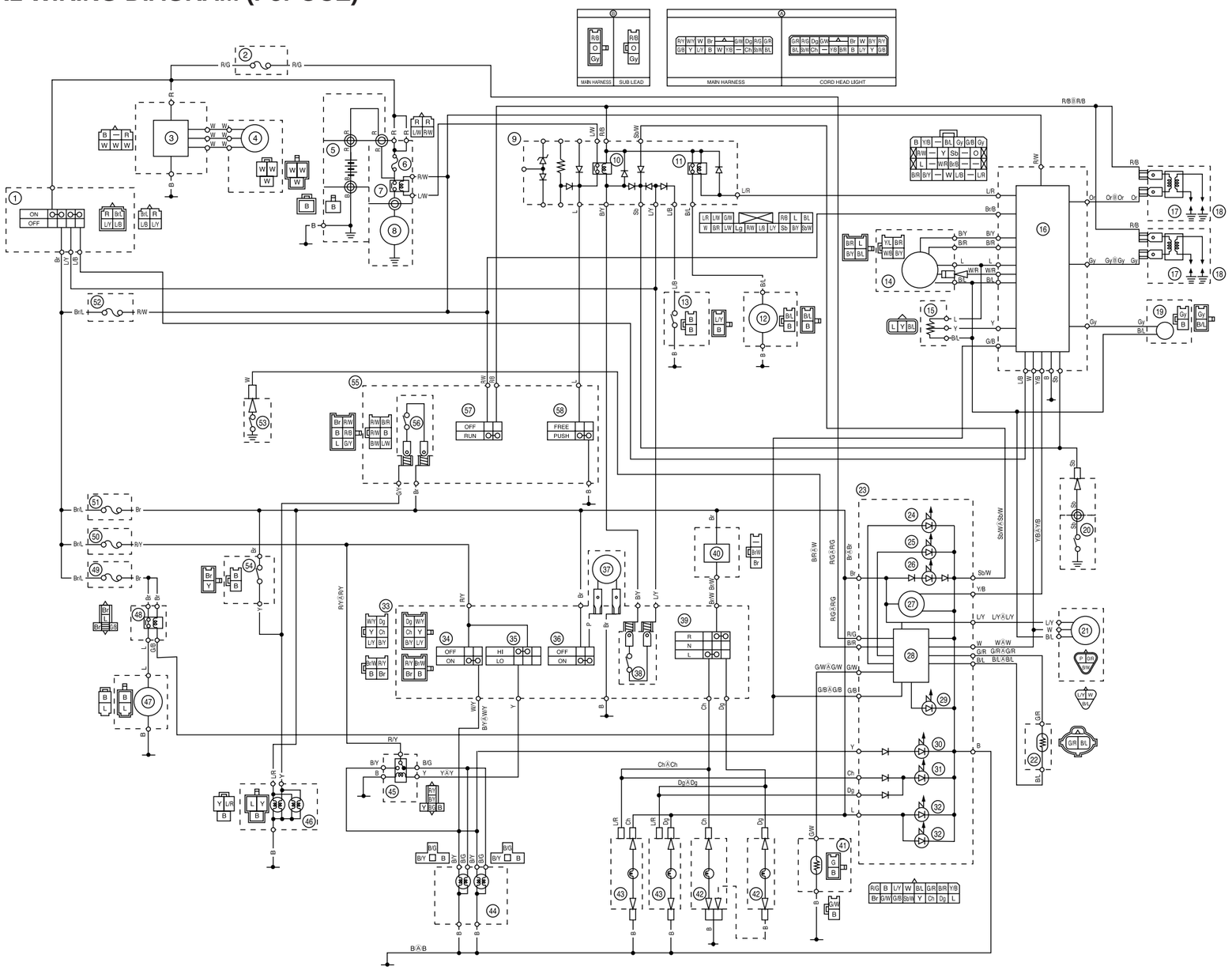


COLOR CODE

B	black	Sb	sky blue	G/R . .	green/red	R/L . . .	red/blue
Br	brown	W	white	G/W . .	green/white	R/W . .	red/white
Ch . . .	chocolate	Y	yellow	G/Y . .	green/yellow	R/Y . . .	red/yellow
Dg . . .	dark green	B/L . . .	black/blue	L/B . . .	blue/black	W/B . .	white/black
G	green	B/R . . .	black/red	L/R . . .	blue/red	W/G . .	white/green
Gy . . .	gray	B/W . .	black/white	L/W . .	blue/white	W/Y . .	white/yellow
L	blue	B/Y . . .	black/yellow	L/Y . . .	blue/yellow	Y/B . . .	yellow/black
O	orange	Br/L . .	brown/blue	O/R . .	orange/red	Y/L . . .	yellow/blue
P	pink	Br/R . .	brown/red	R/B . . .	red/black		
R	red	Br/W .	brown/white	R/G . .	red/green		

1. Main switch
2. Backup fuse (odometer)
3. Rectifier/regulator
4. Generator
5. Battery
6. Main fuse
7. Starter relay
8. Starter motor
9. Relay unit
10. Starting circuit cutoff relay
11. Fuel pump relay
12. Fuel pump
13. Sidestand switch
14. EXUP servomotor
15. Throttle position sensor
16. Ignition unit
17. Ignition coil
18. Spark plug
19. Pickup coil
20. Neutral switch
21. Speed sensor
22. Thermo unit
23. Meter assembly
24. Fuel level indicator light
25. Oil level warning light
26. Neutral indicator light
27. Tachometer
28. Combination meter
29. Coolant temperature meter
30. High beam indicator light
31. Turn signal indicator light
32. Meter light
33. Fuel sender
34. Left handlebar switch
35. Pass switch
36. Dimmer switch
37. Horn switch
38. Horn
39. Clutch switch
40. Turn signal switch
41. Turn signal relay
42. Rear turn signal light
43. Front turn signal light
44. Headlight
45. Auxiliary light
46. Headlight relay
47. Tail/brake light
48. Radiator fan motor
49. Radiator fan motor relay
50. Radiator fan motor fuse
51. Headlight fuse
52. Signaling system fuse
53. CYCLELOCK (option)
54. Ignition fuse
55. Engine oil level switch
56. Rear brake light switch
57. Right handlebar switch
58. Front brake light switch
59. Lights switch
60. Engine stop switch
61. Start switch

YZF-R1 WIRING DIAGRAM (For OCE)



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34. Pass switch
35. Dimmer switch
36. Horn switch
37. Horn
38. Clutch switch
39. Turn signal switch
40. Turn signal relay
41. Fuel sender
42. Rear turn signal light
43. Front turn signal light
44. Headlight
45. Headlight relay
46. Tail/brake light
47. Radiator fan motor
48. Radiator fan motor relay
49. Radiator fan motor fuse
50. Headlight fuse
51. Signaling system fuse
52. Ignition fuse
53. Engine oil level switch
54. Rear brake light switch
55. Right handlebar switch
56. Front brake light switch
57. Engine stop switch
58. Start switch

COLOR CODE

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G	green	B/R	black/red	L/R	blue/red	W/G	white/green
Gy	gray	B/W	black/white	L/W	blue/white	W/Y	white/yellow
L	blue	B/Y	black/yellow	L/Y	blue/yellow	Y/B	yellow/black
O	orange	Br/L	brown/blue	O/R	orange/red	Y/L	yellow/blue
P	pink	Br/R	brown/red	R/B	red/black		
R	red	Br/W	brown/white	R/G	red/green		