



YAMAHA

2008

**SUPPLEMENTARY
SERVICE MANUAL**

**YFM7FGPX
YFM7FGX**

GRIZZLY
700 FI

3B4-28197-E1

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and data for the YFM7FGPX/YFM7FGX. For complete service information procedures it is necessary to use this Supplementary Service Manual together with the following manual.

YFM7FGPW SERVICE MANUAL: 3B4-28197-E0

**YFM7FGPX/YFM7FGX
SUPPLEMENTARY
SERVICE MANUAL**
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NOTICE

This manual was produced by the Yamaha Motor Company 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, so it is assumed that anyone who uses this book to perform maintenance and repairs on Yamaha vehicle has a basic understanding of the mechanical ideas and the procedures of vehicle repair. Repairs attempted by anyone without this knowledge are likely to render the vehicle unsafe and unfit for use.

This model has been designed and manufactured to perform within certain specifications in regard to performance and emissions. Proper service with the correct tools is necessary to ensure that the vehicle will operate as designed. If there is any question about a service procedure, it is imperative that you contact a Yamaha dealer for any service information changes that apply to this model. This policy is intended to provide the customer with the most satisfaction from his vehicle and to conform to federal environmental quality objectives.

Yamaha Motor Company, Ltd. is continually striving to improve all 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:

-
- This Service Manual contains information regarding periodic maintenance to the emission control system. Please read this material carefully.
 - Designs and specifications are subject to change without notice.
-

IMPORTANT INFORMATION

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



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 vehicle operator, a bystander or a person checking or repairing the vehicle.

CAUTION:

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

NOTE:

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

HOW TO USE THIS MANUAL

MANUAL ORGANIZATION

This manual consists of chapters for the main categories of subjects. (See “SYMBOLS”.)

1st title ①: This is the title of the chapter with its symbol in the upper right corner of each page.

2nd title ②: This title indicates the section of the chapter and only appears on the first page of each section. It is located in the upper left corner of the page.

3rd title ③: This title indicates a sub-section that is followed by step-by-step procedures accompanied by corresponding illustrations.

EXPLODED DIAGRAMS

To help identify parts and clarify procedure steps, there are exploded diagrams at the start of each removal and disassembly section.

1. An easy-to-see exploded diagram ④ is provided for removal and disassembly jobs.
2. Numbers ⑤ are given in the order of the jobs in the exploded diagram. A number that is enclosed by a circle indicates a disassembly step.
3. An explanation of jobs and notes is presented in an easy-to-read way by the use of symbol marks ⑥. The meanings of the symbol marks are given on the next page.
4. A job instruction chart ⑦ accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.
5. For jobs requiring more information, the step-by-step format supplements ⑧ are given in addition to the exploded diagram and the job instruction chart.

②

CLUTCH

①

ENG

④

⑤

⑥

⑦

Order	Job/Part	Q'ty	Remarks
Removing the clutch			
	Primary sheave/secondary sheave		Remove the parts in the order listed. Refer to "PRIMARY AND SECONDARY SHEAVES".
1	Clutch housing assembly	1	
2	Gasket	1	
3	Dowel pin	2	Refer to "REMOVING THE CLUTCH" and "INSTALLING THE CLUTCH".
4	One-way clutch bearing	1	
5	Nut	1	
6	Clutch carrier assembly	1	For installation, reverse the removal procedure.

CLUTCH

ENG

③

⑧

REMOVING THE CLUTCH

1. Remove:

- clutch housing assembly
- gasket
- dowel pins

NOTE:
Working in crisscross pattern, loosen each bolt 1/4 of a turn. Remove them after all of them are loosened.

2. Straighten:
• punched portion of the nut ①

3. Remove:
• nut ①

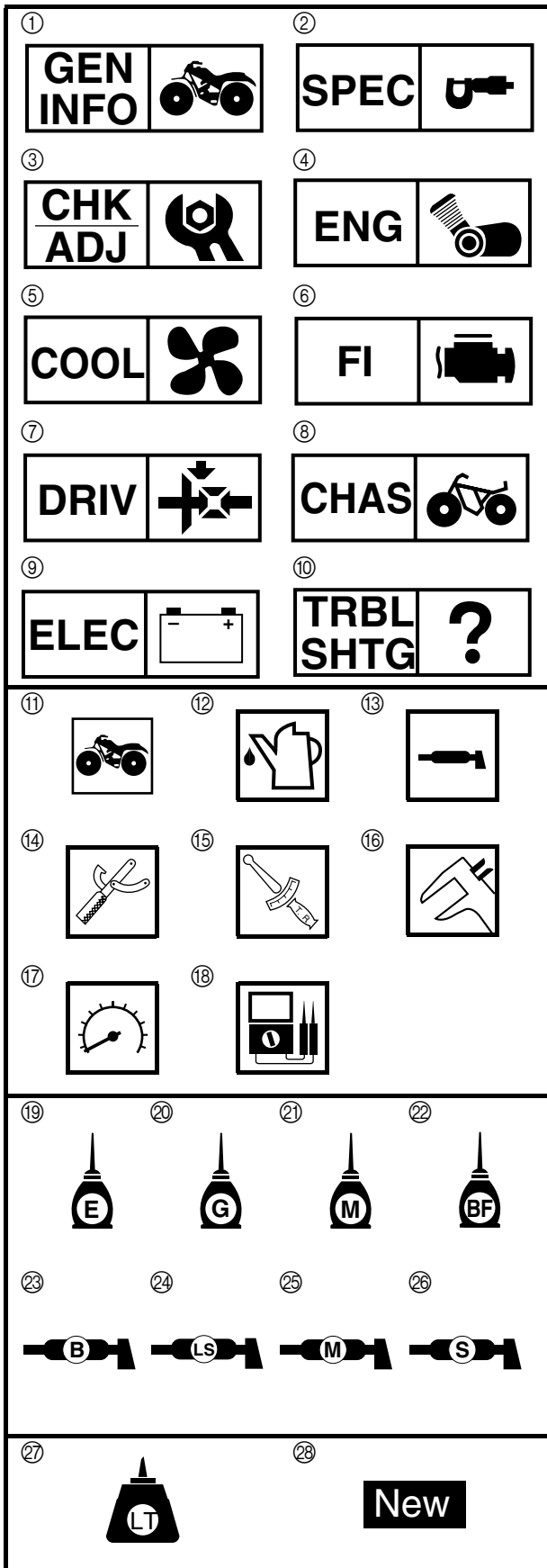
CAUTION:
The clutch carrier assembly nut has left-handed threads. To loosen the clutch carrier assembly nut turn it clockwise.

NOTE:
Use a clutch holding tool ② to hold the clutch carrier assembly.

Universal clutch holder
90890-04086, YM-91042

4 - 63

4 - 65



EBS00006

SYMBOLS

The following symbols are not relevant to every vehicle.

Symbols ① to ⑩ indicate the subject of each chapter.

- ① General information
- ② Specifications
- ③ Periodic checks and adjustments
- ④ Engine
- ⑤ Cooling system
- ⑥ Fuel injection system
- ⑦ Drive train
- ⑧ Chassis
- ⑨ Electrical
- ⑩ Troubleshooting

Symbols ⑪ to ⑱ indicate the following

- ⑪ Can be serviced with engine mounted
- ⑫ Filling fluid
- ⑬ Lubricant
- ⑭ Special tool
- ⑮ Torque
- ⑯ Wear limit, clearance
- ⑰ Engine speed
- ⑱ Electrical data (Ω , V, A)

Symbols ⑲ to ⑳ in the exploded diagrams indicate the types of lubricants and lubrication points.

- ⑲ Apply engine oil
- ⑳ Apply gear oil
- ㉑ Apply molybdenum disulfide oil
- ㉒ Apply brake fluid
- ㉓ Apply wheel bearing grease
- ㉔ Apply lithium-soap-based grease
- ㉕ Apply molybdenum disulfide grease
- ㉖ Apply silicone grease

Symbols ㉗ to ㉘ in the exploded diagrams indicate where to apply a locking agent ㉗ and when to install a new part ㉘.

- ㉗ Apply the locking agent (LOCTITE®)
- ㉘ Replace

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EBS00021

GENERAL INFORMATION

SPECIAL TOOLS

The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools; this will help prevent damage caused by the use of inappropriate tools or improvised techniques. Special tools may differ by shape and part number from country to country. In such a case, two types are provided.

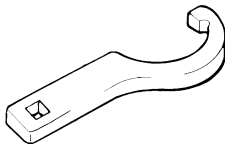
When placing an order, refer to the list provided below to avoid any mistakes.

For US and CDN

P/N. YM-, YU-, YS-, YK-, ACC-

Except for US and CDN

P/N. 90890-

Tool No.	Tool name/How to use	Illustration
90890-01443 YU-33975	Steering nut wrench Spanner wrench This tool is needed to loosen and tighten the front shock absorber and rear shock absorber locknuts.	

GENERAL SPECIFICATIONS

SPEC



Item	Standard
Transmission	
Primary reduction system	V-belt
Secondary reduction system	Shaft drive
Secondary reduction ratio	41/21 × 24/18 × 33/9 (9.544)
Transmission type	V-belt automatic
Operation	Left hand operation
Single speed automatic	2.380 ~ 0.700 : 1
Sub transmission ratio	low 31/16 (1.938)
	high 31/27 (1.148)
Reverse gear	23/14 × 28/23 (2.000)
Bulb voltage/wattage × quantity	
Headlight	12 V 35.0 W/35.0 W × 2
Tail/brake light	12 V 5.0/21.0 W × 1
Indicator light	
Neutral indicator light	LED
Reverse indicator light	LED
Coolant temperature warning light	LED
Engine trouble warning light	LED
EPS warning light	LED (YFM7FGPX only)
Park indicator light	LED
On-command four-wheel drive/differential gear lock indicator	LCD
High-range indicator light	LED
Low-range indicator light	LED
Differential gear lock indicator light	LED



EBS01002

ENGINE SPECIFICATIONS

Item	Standard	Limit
Valve spring		
Free length		
Intake	40.38 mm (1.59 in)	38.36 mm (1.51 in)
Exhaust	40.38 mm (1.59 in)	38.36 mm (1.51 in)
Installed length (valve closed)		
Intake	35.00 mm (1.38 in)	----
Exhaust	35.00 mm (1.38 in)	----
Compressed spring force (installed)		
Intake	171 ~ 197 N (17.44 ~ 20.09 kgf, 38.44 ~ 44.29 lb)	----
Exhaust	171 ~ 197 N (17.44 ~ 20.09 kgf, 38.44 ~ 44.29 lb)	----
Spring tilt *		
Intake	----	2.5°/1.80 mm (2.5°/0.071 in)
Exhaust	----	2.5°/1.80 mm (2.5°/0.071 in)
Winding direction (top view)		
Intake	Clockwise	----
Exhaust	Clockwise	----

EBS01003

CHASSIS SPECIFICATIONS

Item	Standard	Limit
Front wheel		
Type	Panel wheel	----
Rim size	12 × 6.0 AT	----
Rim material	Aluminum (YFM7FGPX) Steel (YFM7FGX)	----
Maximum radial wheel runout	----	2.0 mm (0.08 in)
Maximum lateral wheel runout	----	2.0 mm (0.08 in)
Rear wheel		
Type	Panel wheel	----
Rim size	12 × 7.5 AT	----
Rim material	Aluminum (YFM7FGPX) Steel (YFM7FGX)	----
Maximum radial wheel runout	----	2.0 mm (0.08 in)
Maximum lateral wheel runout	----	2.0 mm (0.08 in)



EBS01004

ELECTRICAL SPECIFICATIONS

Item	Standard	Limit
ECU		
Model/manufacture	F8T83472/MITSUBISHI	----
Ignition coil		
Model/manufacture	2JN/YAMAHA	----
Minimum ignition spark gap	6.0 mm (0.24 in)	----
Primary coil resistance	2.16 ~ 2.64 Ω at 20 °C (68 °F)	----
Secondary coil resistance	8.64 ~ 12.96 k Ω at 20 °C (68 °F)	----
Circuit breaker		
Circuit breaker type	Fuse	----
Fuses		
Main fuse	40.0 A	----
Headlight fuse	15.0 A	----
Signaling system fuse	5.0 A	----
Ignition fuse	10.0 A	----
Auxiliary DC jack fuse	15.0 A	----
Fuel injection system fuse	15.0 A	----
Four-wheel-drive motor fuse	10.0 A	----
EPS fuse	40.0 A (YFM7FGPX only)	----
Radiator fan motor fuse	15.0 A	----
Spare fuse	40.0 A	----
	15.0 A	----
	10.0 A	----
	5.0 A	----

TIGHTENING TORQUES

SPEC



EBS01005

TIGHTENING TORQUES ENGINE TIGHTENING TORQUES

Item	Part name	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m · kg	ft · lb	
Oil filter cartridge union bolt	Union bolt	M20	1	30	3.0	22	
Exhaust pipe	Nut	M8	4	14	1.4	10	
Middle drive pinion gear nut	Nut	M22	1	190	19.0	140	Stake.

EBS01006

CHASSIS TIGHTENING TORQUES

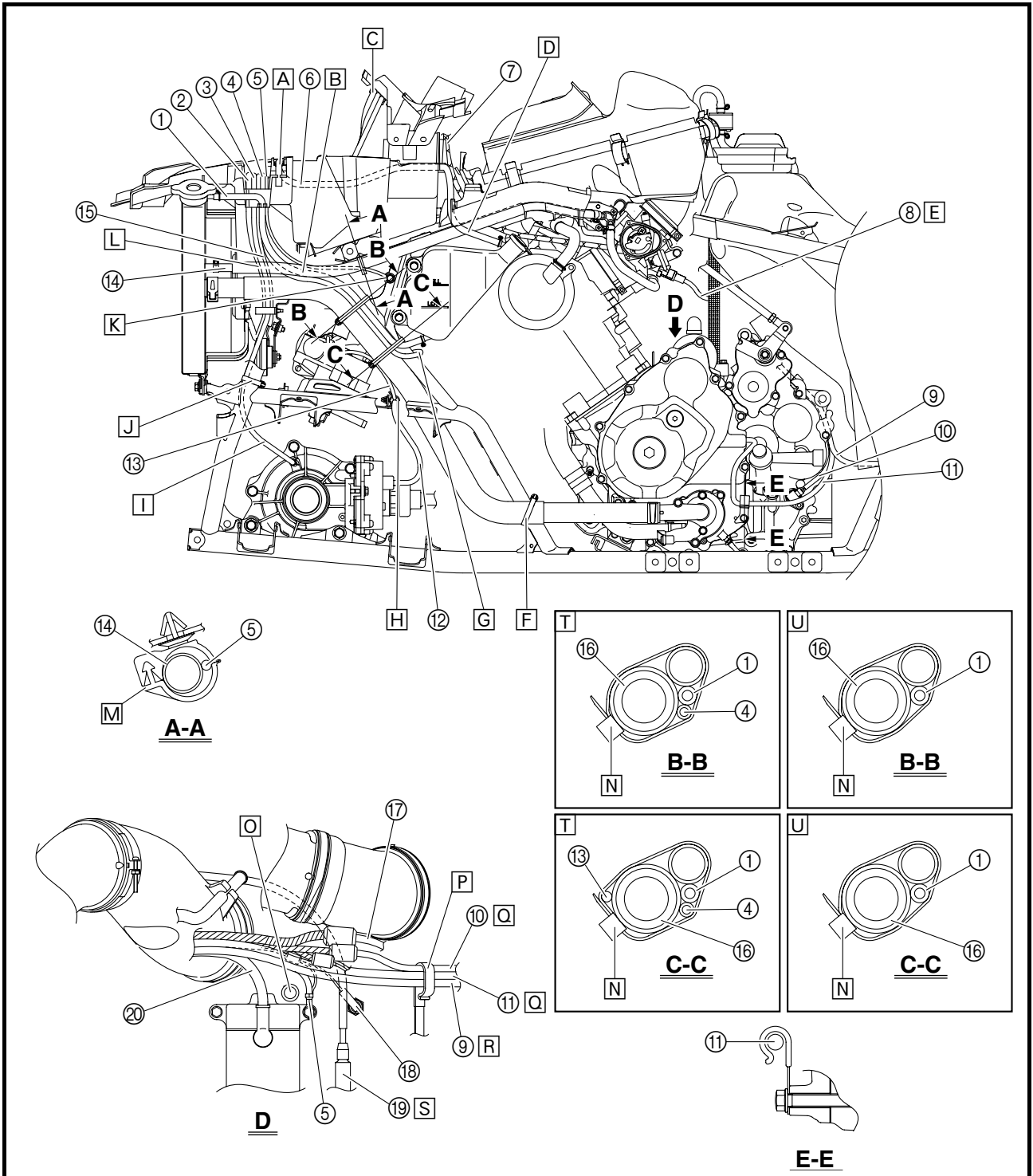
Part to be tightened	Thread size	Tightening torque			Remarks
		Nm	m · kg	ft · lb	
Steering stem bracket and frame	M10	51	5.1	37	
Steering stem support and frame (YFM7FGX only)	M8	30	3.0	22	
EPS control unit and frame (YFM7FGPX only)	M8	30	3.0	22	
Pitman arm nut (YFM7FGX)	M14	190	19.0	140	
Pitman arm nut (YFM7FGPX)	M16	210	21.0	150	
Steering stem joint bolt (YFM7FGPX only)	M8	35	3.5	25	
Steering stem bearing and frame (YFM7FGPX only)	M10	51	5.1	37	
Steering stem bearing nut (YFM7FGPX only)	M22	125	12.5	90	
EPS motor cover (YFM7FGPX only)	M6	7	0.7	5.1	



EBS00028

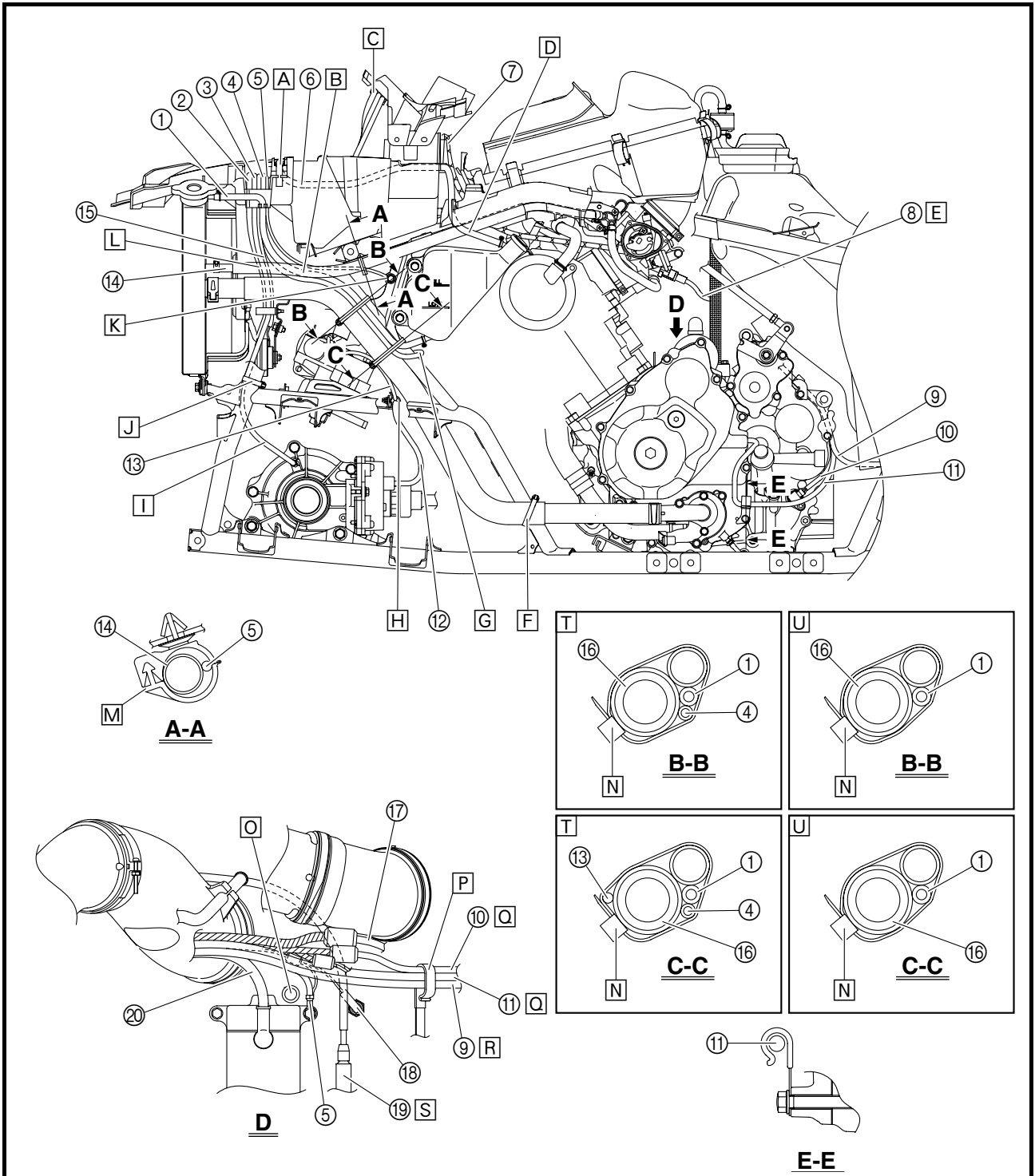
CABLE ROUTING

- ① Coolant reservoir hose
- ② Radiator fan motor breather hose
- ③ Differential gear case breather hose
- ④ EPS motor breather hose (YFM7FGPX only)
- ⑤ Ground lead
- ⑥ Coolant reservoir breather hose
- ⑦ Throttle cable
- ⑧ Fuel injector lead
- ⑨ Final gear case breather hose
- ⑩ Speed sensor lead
- ⑪ Crankshaft position sensor lead
- ⑫ Differential gear motor lead
- ⑬ EPS torque sensor lead (YFM7FGPX only)
- ⑭ Fast idle plunger outlet hose
- ⑮ Horn switch lead (for Europe and Oceania)
- ⑯ Radiator outlet hose
- ⑰ Gear position switch lead
- ⑱ Reverse switch lead



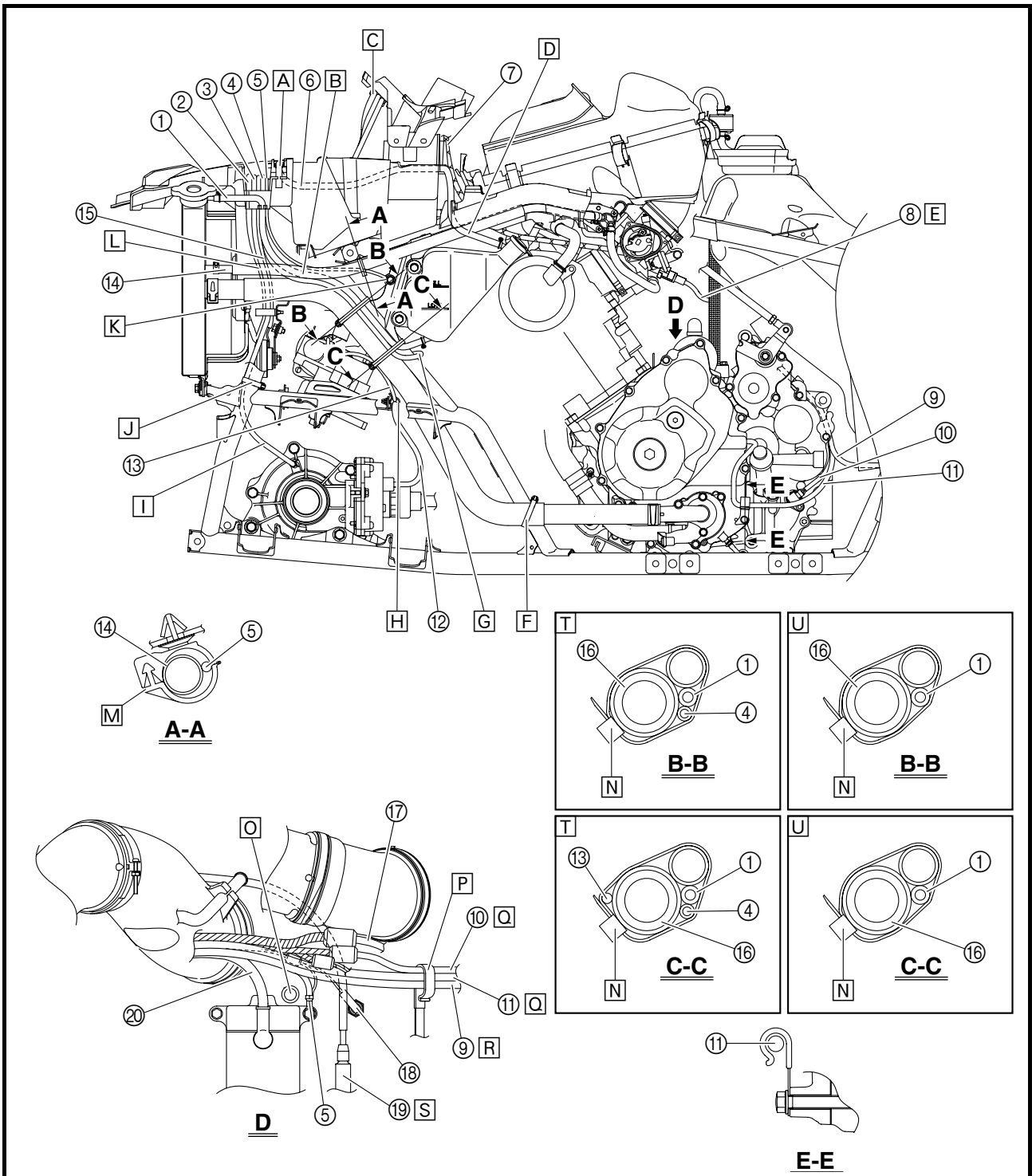


- ⑰ Shift control cable
- ⑱ Starter motor lead
- Ⓐ Face the end of the coolant reservoir breather hose downward.
- Ⓑ Route the ground lead, radiator fan motor breather hose, differential gear case breather hose, and EPS motor breather hose to the inside of the fast idle plunger outlet hose.
- Ⓒ Pass the radiator fan motor breather hose through the larger diameter guide.
- Ⓓ Route the coolant reservoir breather hose to the outside of the fast idle plunger outlet hose.
- Ⓔ Route the fuel injector lead under the fuel hose.
- Ⓕ Fasten the radiator outlet hose to the frame with the plastic band, making sure to face the end of the band inward.
- Ⓖ Route the EPS motor breather hose under the coolant reservoir hose.





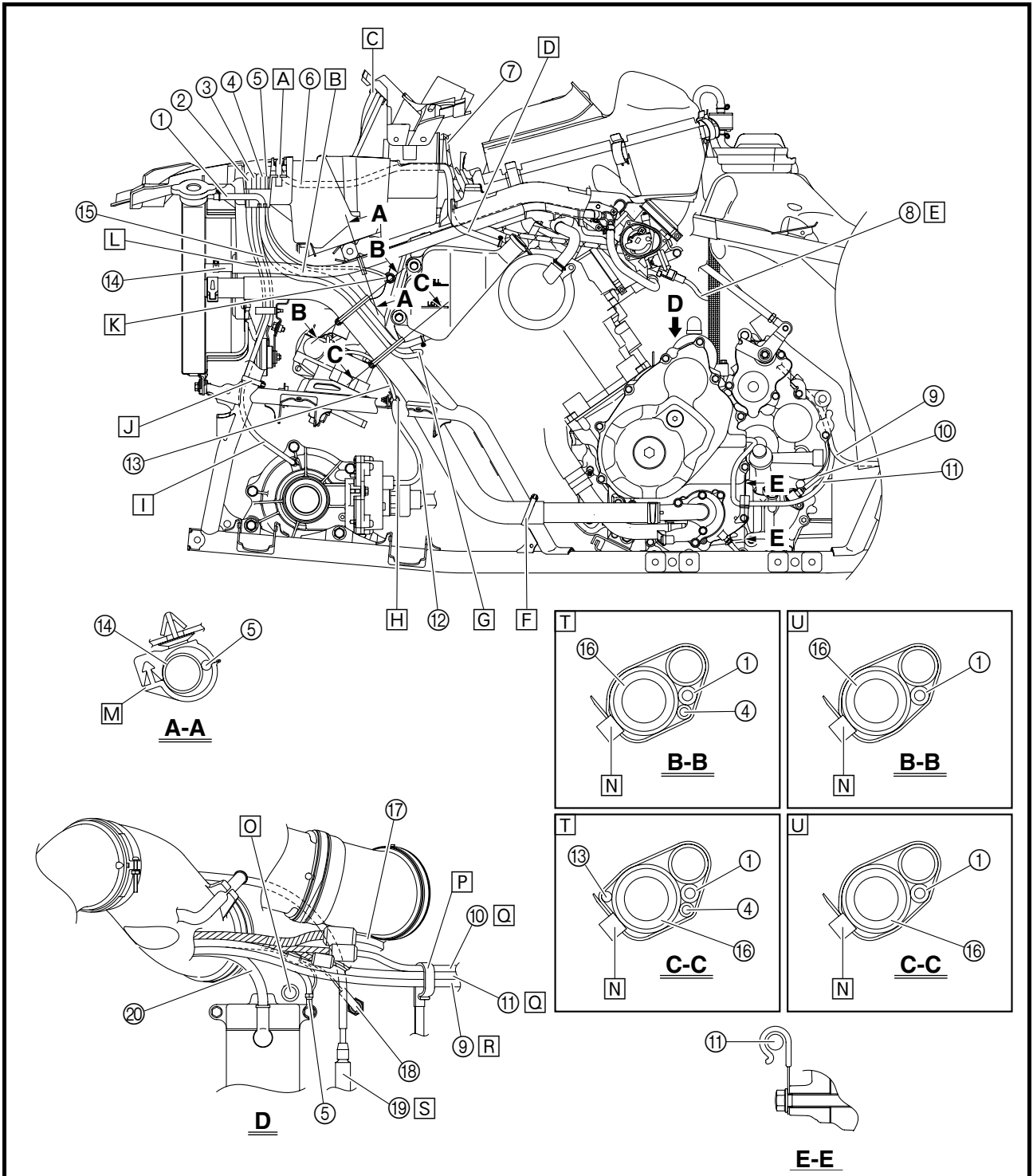
- [H] Place the EPS torque sensor lead and differential gear motor lead in the holder, and then insert the ends of the holder into the hole in the stay on the frame.
- [I] Route the differential gear case breather hose to the inside of the frame.
- [J] Fasten the differential gear case breather hose to the frame with the plastic band, making sure to face the end of the band inward.
- [K] Attach the ground lead terminal to the frame using the bolt.
- [L] Route the radiator fan motor breather hose, differential gear case breather hose, and horn switch lead to the inside of the fast idle plunger outlet hose and radiator outlet hose.
- [M] Make sure that the catch of the holder is facing outward.
- [N] Face the end of the plastic band inward.
- [O] Route the fuel tank drain hose and position the end of the hose as shown in the illustration.





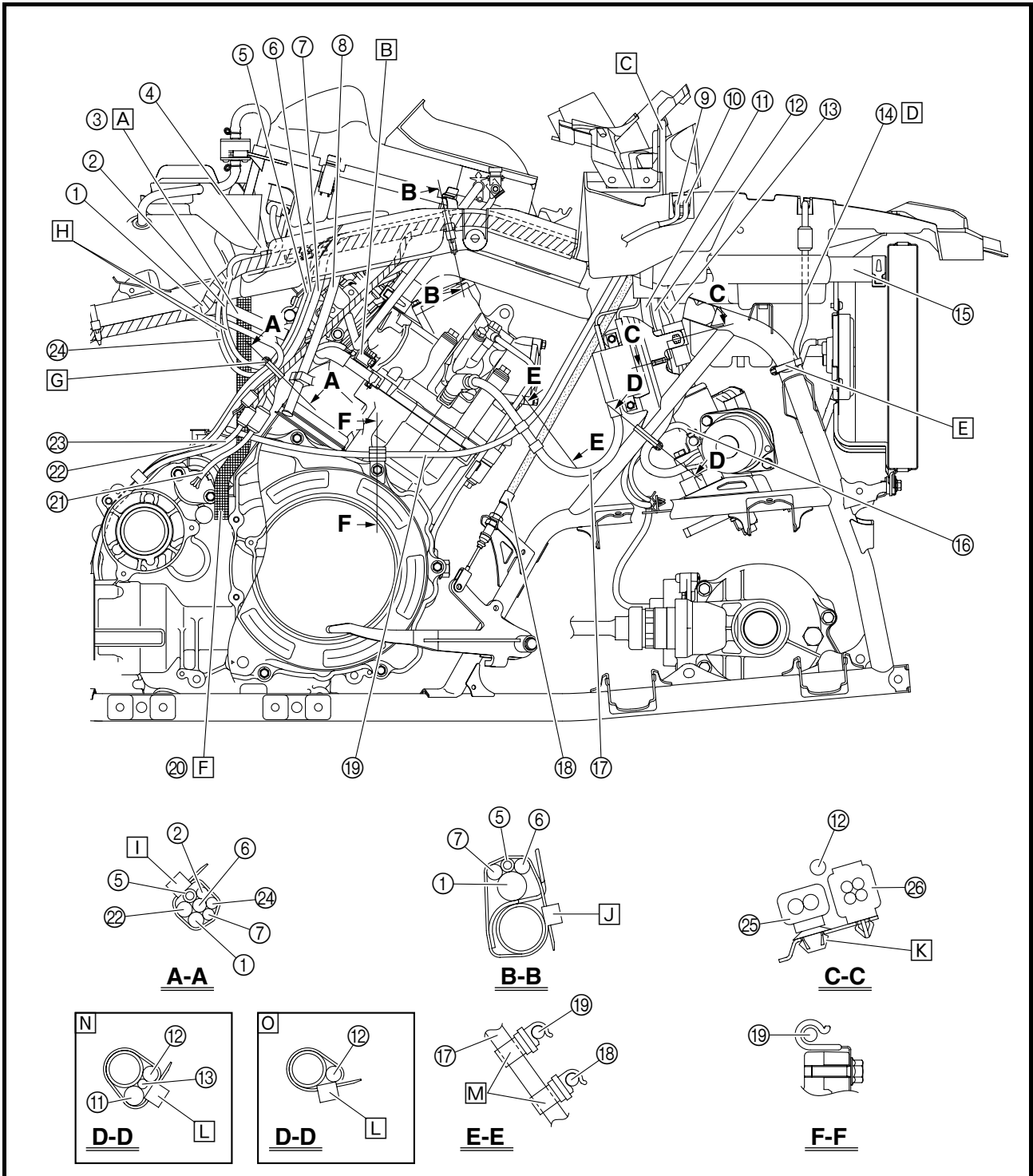
- P** Pass the speed sensor lead, AC magneto lead, and final gear case breather hose through the guide in the order listed.
- Q** Route the speed sensor lead, AC magneto lead, and final gear case breather hose to the right of the reverse switch.
- R** Route the final gear case breather hose above the reverse switch lead and ground leads.
- S** Route the shift control cable under the gear position switch lead, speed sensor lead, and crankshaft position sensor lead.

- T** YFM7FGPX
- U** YFM7FGX





- | | |
|--------------------------------------|---|
| ① Wire harness | ⑫ Differential gear motor lead |
| ② Fuel injector lead | ⑬ EPS torque sensor lead (YFM7FGPX only) |
| ③ Fuel hose | ⑭ Radiator fan motor lead |
| ④ Intake air temperature sensor lead | ⑮ Radiator inlet hose |
| ⑤ Final gear case breather hose | ⑯ EPS motor breather hose (YFM7FGPX only) |
| ⑥ Ground lead | ⑰ Spark plug lead |
| ⑦ Starter motor lead | ⑱ Rear brake cable |
| ⑧ Air filter case breather hose | ⑲ Shift control cable |
| ⑨ Main switch lead | ⑳ Fuel tank drain hose |
| ⑩ Auxiliary DC jack lead | ㉑ Gear position switch lead |
| ⑪ EPS motor lead (YFM7FGPX only) | ㉒ AC magneto lead |

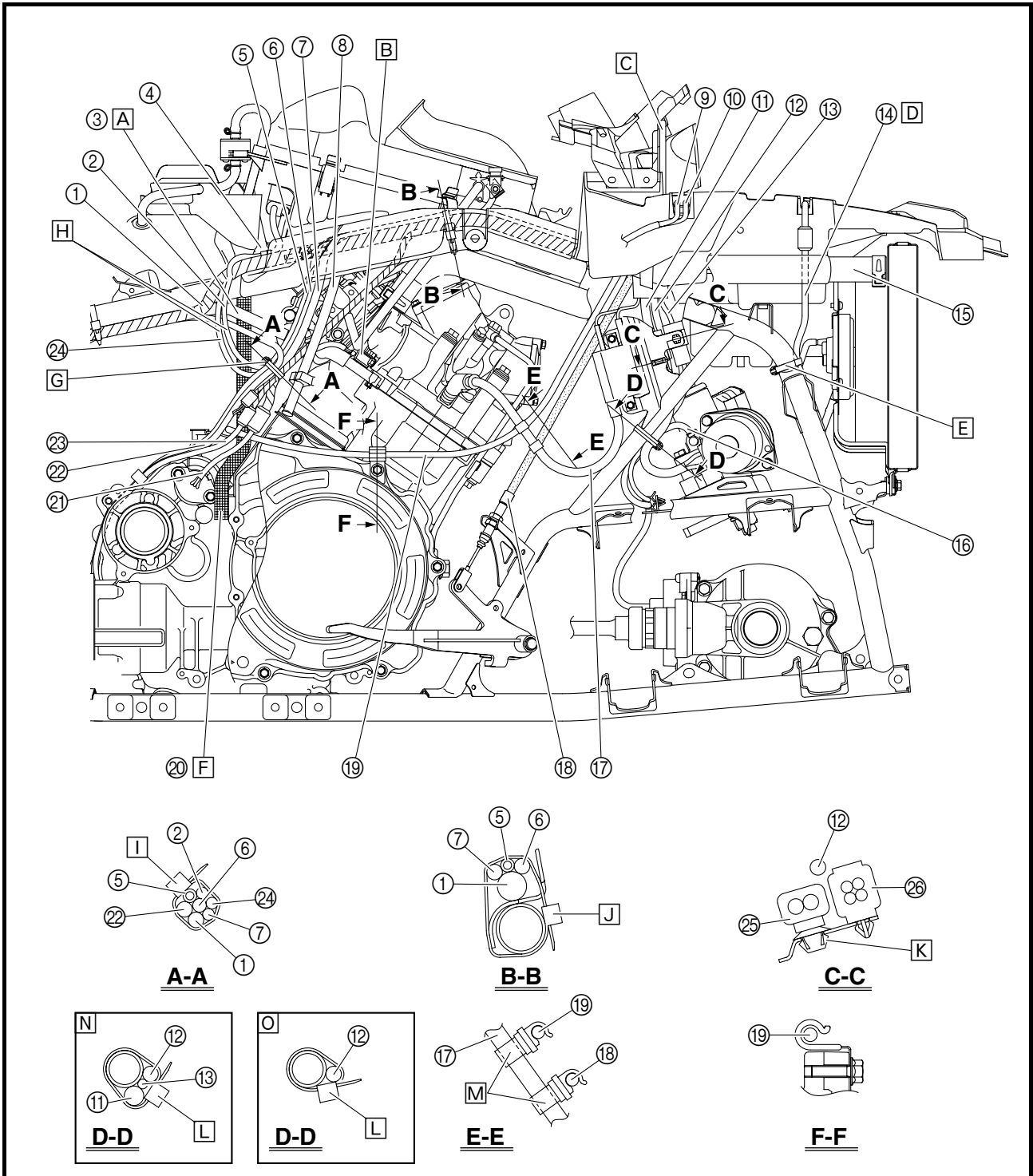




- ⑳ Speed sensor lead
- ㉑ Coolant temperature sensor lead
- ㉒ EPS motor lead coupler (YFM7FGPX only)
- ㉓ EPS torque sensor lead coupler (YFM7FGPX only)

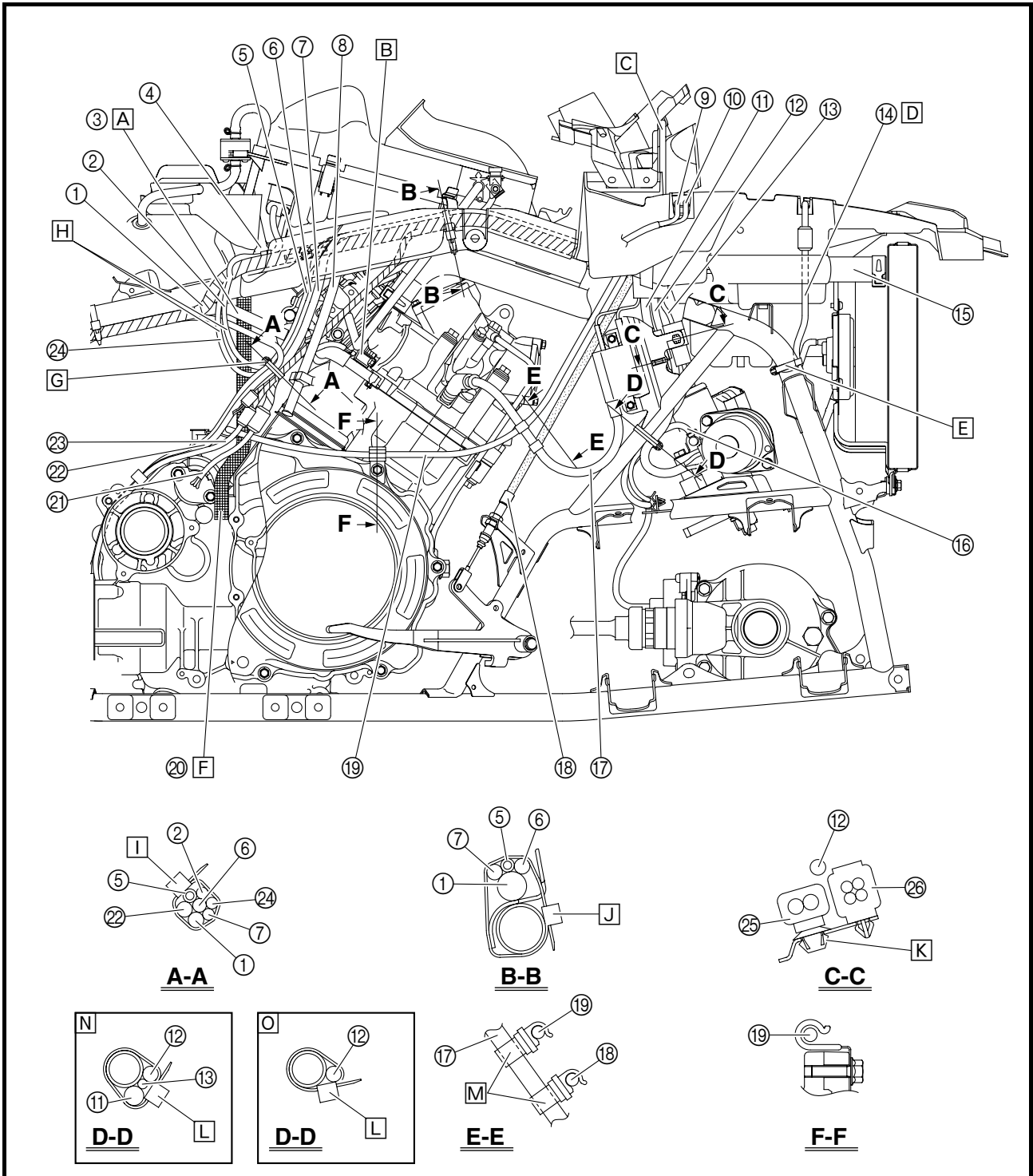
- A** Route the fuel hose between the wire harness and the fuel tank drain hose.
- B** Route the coolant temperature sensor lead above the fast idle plunger inlet hose.

- C** Route the final gear case breather hose above the V-belt cooling duct 1.
- D** Route the radiator fan motor lead between the electrical components tray and the radiator inlet hose.
- E** Fasten the radiator fan motor lead to the frame with the plastic band, making sure to face the end of the band inward.



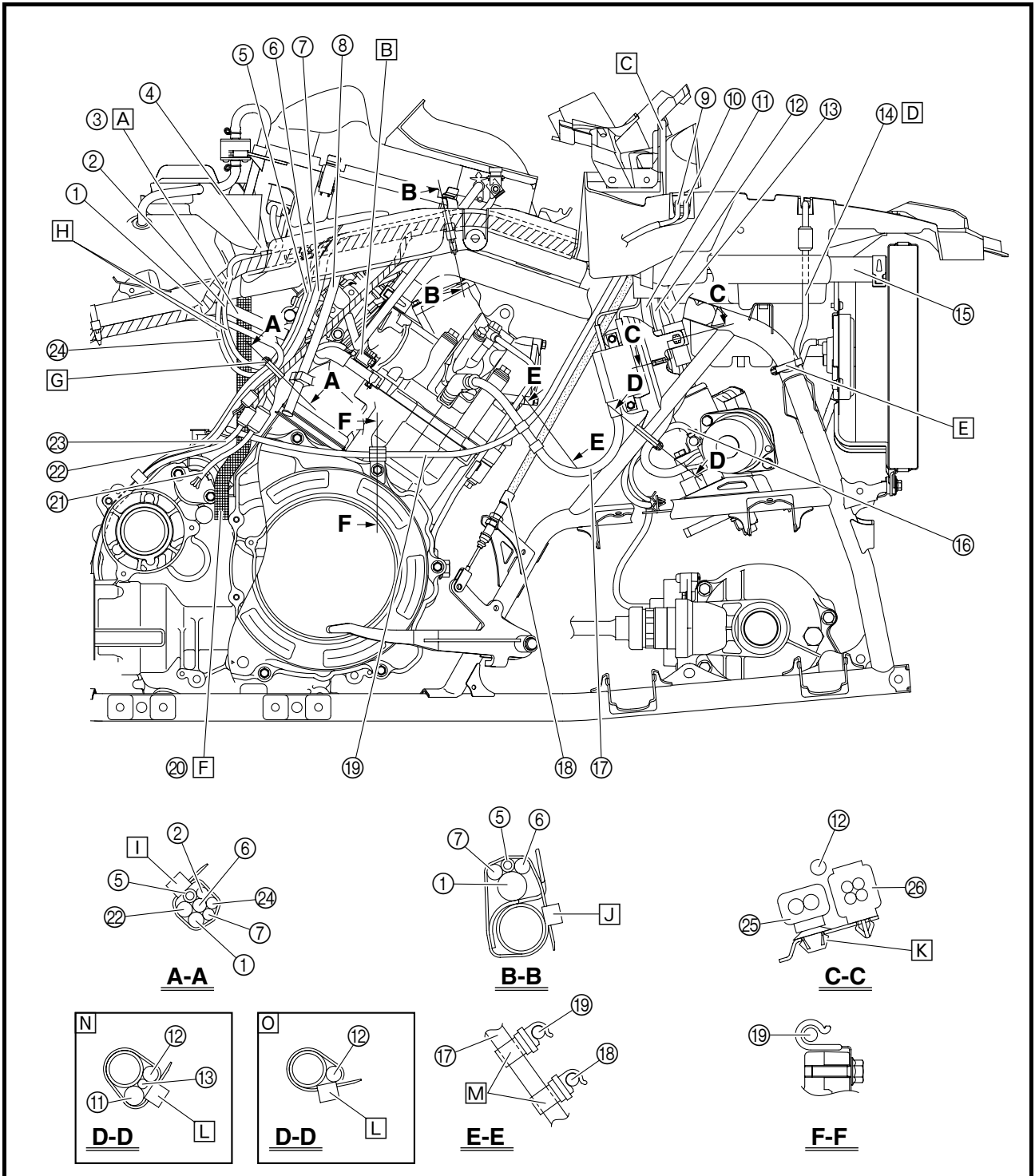


- F** Route the fuel tank drain hose to the inside of the leads and fuel hose, making sure to position the end of the drain hose as shown in the illustration.
- G** Fasten the final gear case breather hose, ground lead, starter motor lead, fuel injector lead, coolant temperature sensor lead, AC magneto lead, and wire harness with the plastic band, making sure to position the band near the split in the wire harness.
- H** Route the fuel injector lead and coolant temperature sensor lead to the inside of the ground lead, starter motor lead, final gear case breather hose, and wire harness.
- I** Face the end of the plastic band inward.
- J** Pass the plastic band through the hole in the plastic cover, and then fasten the leads and hose with the band, making sure to face the end of the band downward.
- K** Insert the projection on the coupler into the hole in the frame from the inside of the frame.



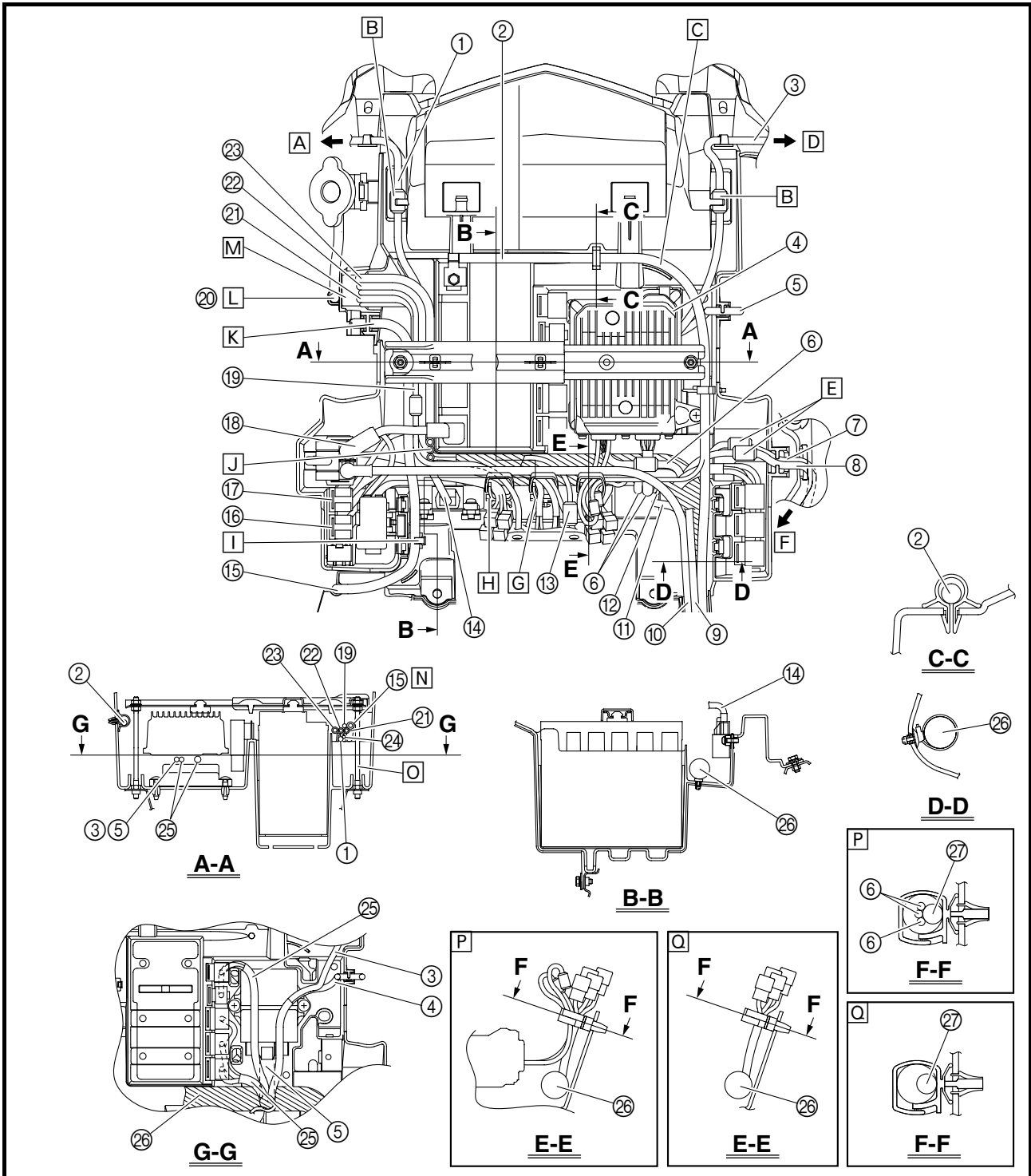


- L Face the end of the plastic band inward.
- M Fasten the spark plug lead with the larger diameter section of each holder.
- N YFM7FGPX
- O YFM7FGX





- | | |
|--|---|
| ① Left headlight lead | ⑪ Differential gear motor lead |
| ② Negative battery lead | ⑫ Ignition coil lead |
| ③ Right headlight lead | ⑬ Meter lead |
| ④ EPS (electric power steering) control unit (YFM7FGPX only) | ⑭ Lean angle sensor lead |
| ⑤ Radiator fan motor lead | ⑮ Coolant reservoir breather hose |
| ⑥ EPS control unit lead (YFM7FGPX only) | ⑯ Main fuse |
| ⑦ Auxiliary DC jack lead | ⑰ EPS fuse (YFM7FGPX only) |
| ⑧ Main switch lead | ⑱ Positive battery lead |
| ⑨ Final gear case breather hose | ⑲ Horn switch lead (for Europe and Oceania) |
| ⑩ Starter motor lead | ⑳ Coolant reservoir hose |
| | ㉑ EPS motor breather hose (YFM7FGPX only) |



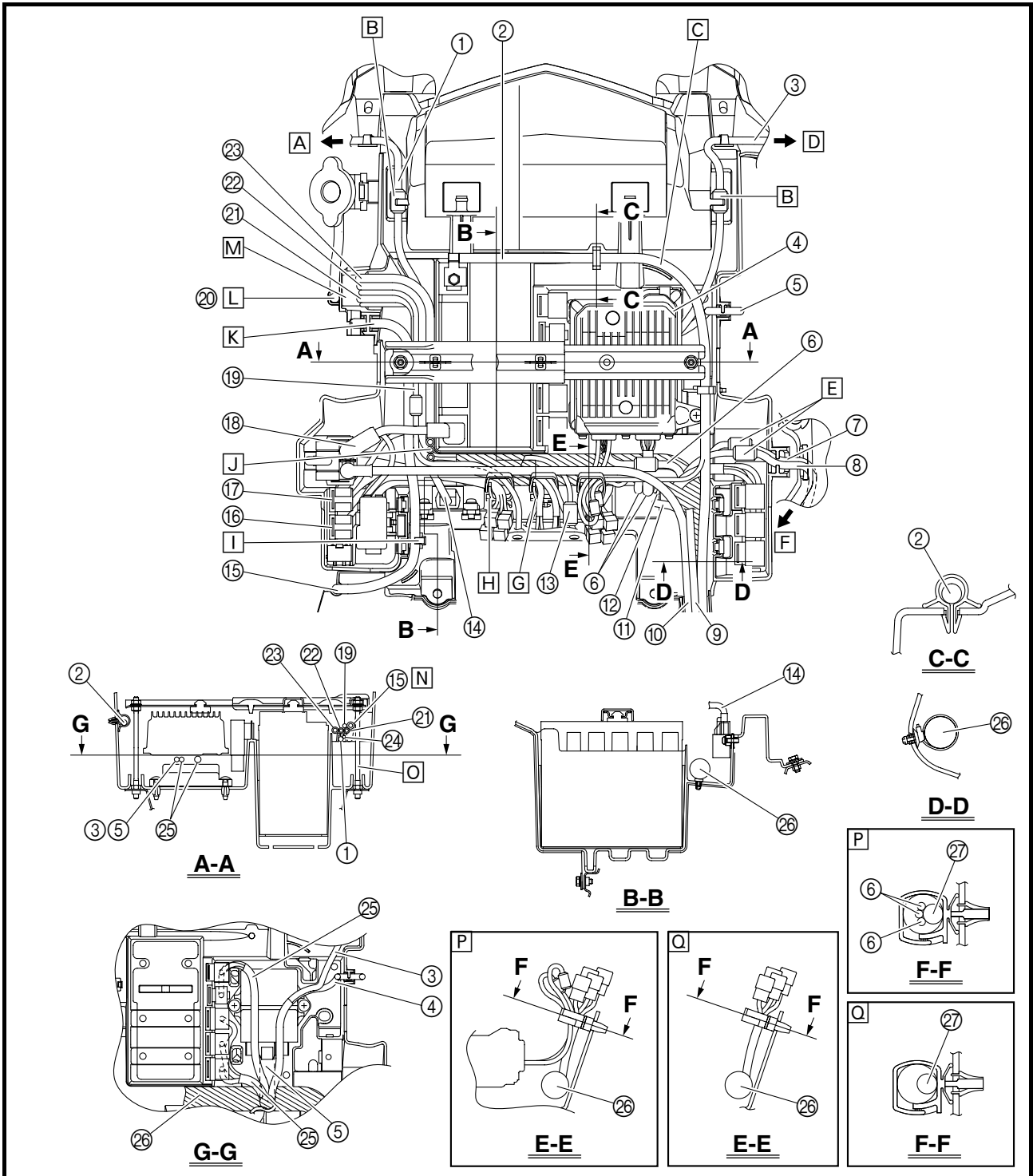
CABLE ROUTING

SPEC



- ② Differential gear case breather hose
 - ③ Radiator fan motor breather hose
 - ④ Ground lead
 - ⑤ Relay lead
 - ⑥ Wire harness
 - ⑦ Joint coupler lead
- A** To left headlight
 - B** Connect the headlight coupler, and then fasten the coupler with the holder on the electrical components tray.

- C** Route the negative battery lead along the guide on the electrical components tray.
- D** To right headlight
- E** Place the couplers on the inside of the electrical components tray.
- F** To main switch and auxiliary DC jack
- G** Fasten the left handlebar switch lead, on-command four-wheel-drive motor switch and differential gear lock switch lead, front brake light switch lead, and rear brake light switch lead with the clamp.



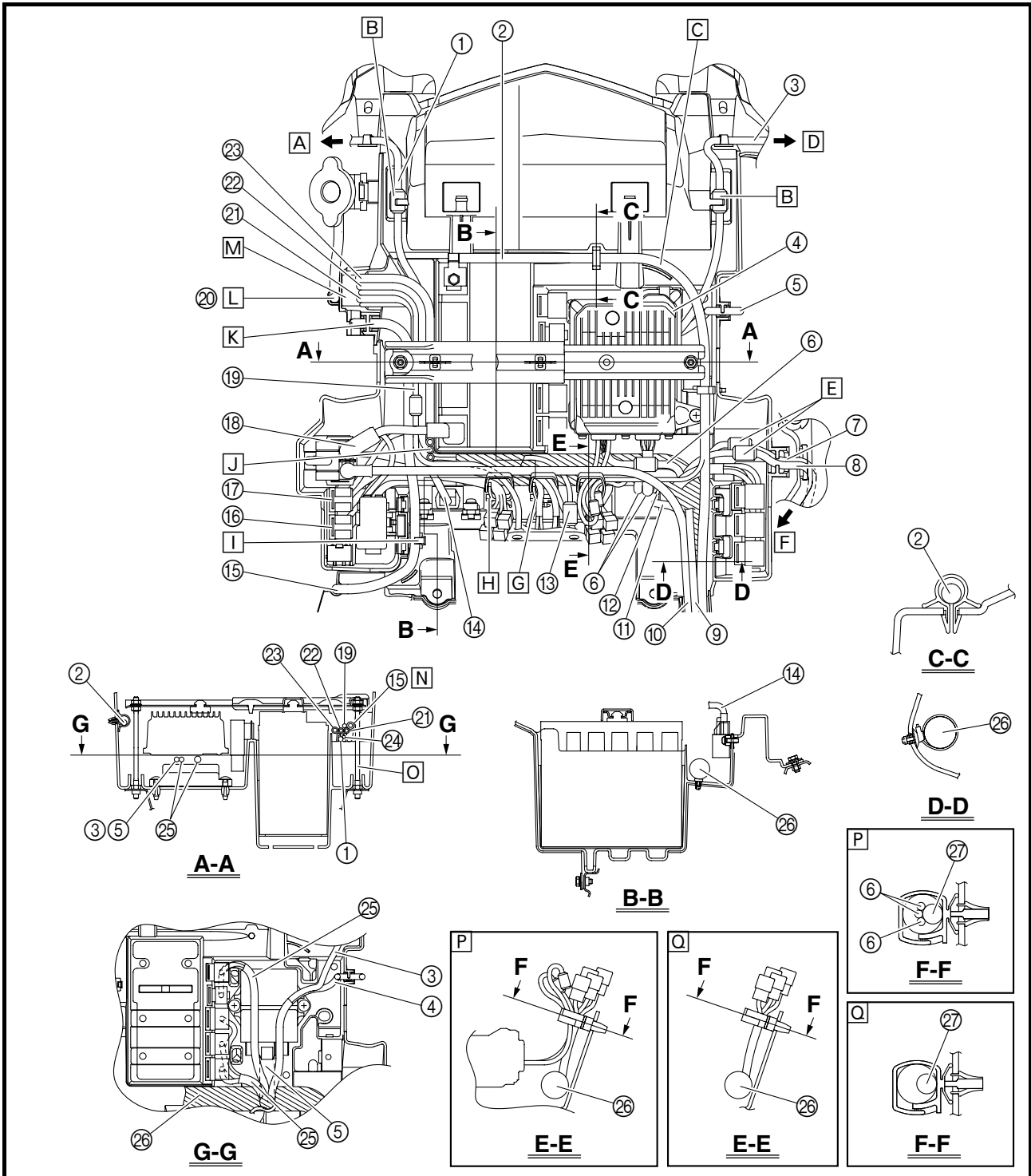
CABLE ROUTING

SPEC



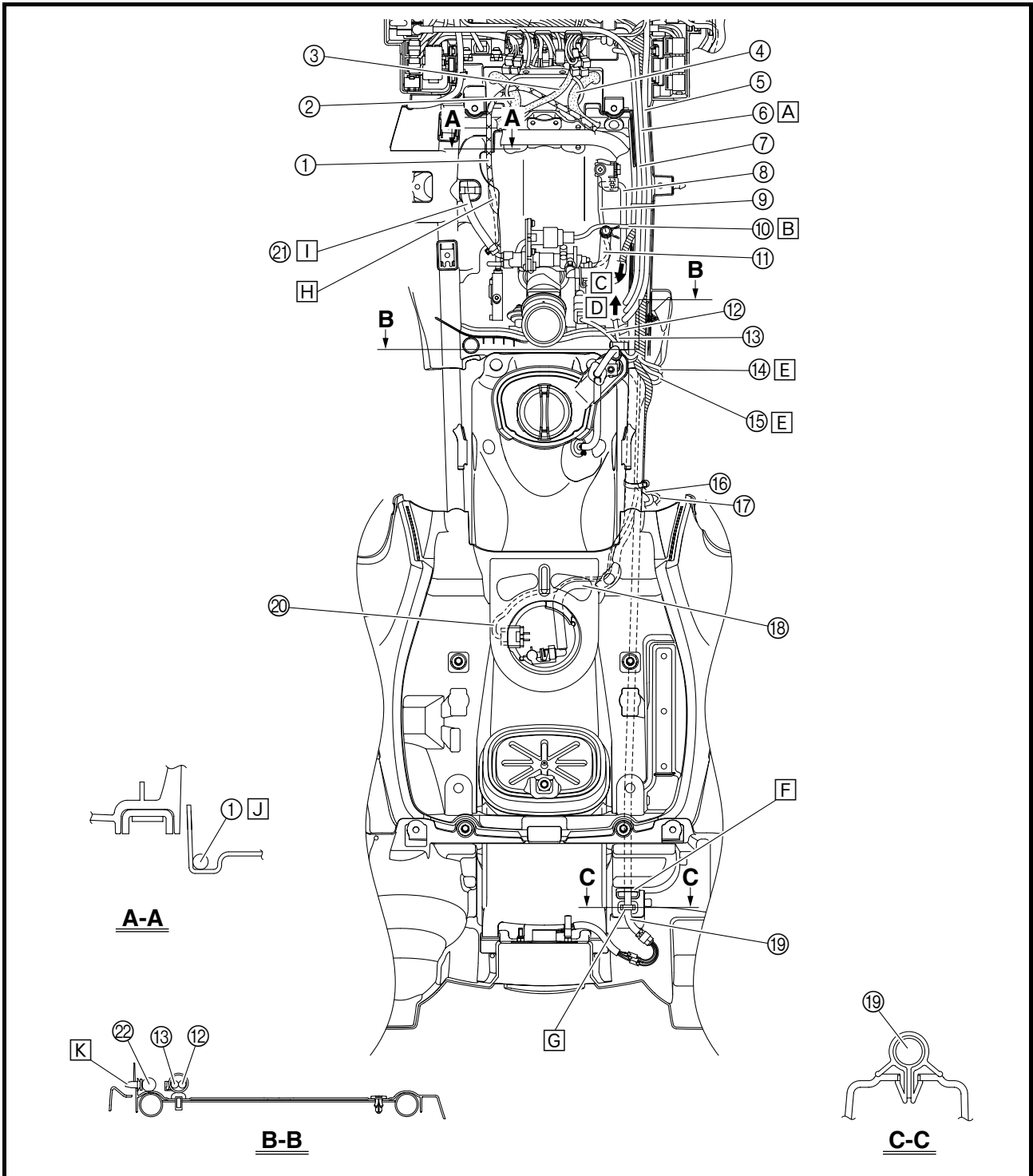
- [H] Fasten the joint coupler lead and horn switch lead (for Europe and Oceania) with the clamp.
- [I] Pass the coolant reservoir breather hose through the guides on the plastic cover and electrical components tray and route it under the positive battery lead and starter motor lead.
- [J] Route the hoses under the positive battery lead, and then route them upward, to the inside of the coolant reservoir breather hose.
- [K] Fasten the coolant reservoir breather hose with the holder on the electrical components tray.

- [L] Fasten the coolant reservoir hose with the holder on the electrical components tray.
- [M] Pass the hoses, ground lead, and horn switch lead through the opening in the electrical components tray.
- [N] Route the coolant reservoir breather hose above the other hoses.
- [O] Route the hoses to the inside of the bolt.
- [P] YFM7FGPX
- [Q] YFM7FGX





- | | |
|---------------------------------------|---|
| ① Throttle cable | ⑪ Breather hose (air filter case to fast idle plunger unit) |
| ② Rear brake hose | ⑫ TPS lead |
| ③ Rear brake cable | ⑬ Intake air temperature sensor lead |
| ④ Front brake hose | ⑭ Fuel injector lead |
| ⑤ Negative battery lead | ⑮ Coolant temperature sensor lead |
| ⑥ Final gear case breather hose | ⑯ Rectifier/regulator lead |
| ⑦ Starter motor lead | ⑰ AC magneto lead |
| ⑧ Throttle body breather hose | ⑱ Fuel hose |
| ⑨ Engine idling speed adjusting cable | ⑲ Tail/brake light lead |
| ⑩ Intake air pressure sensor lead | ⑳ Fuel pump lead |



CABLE ROUTING

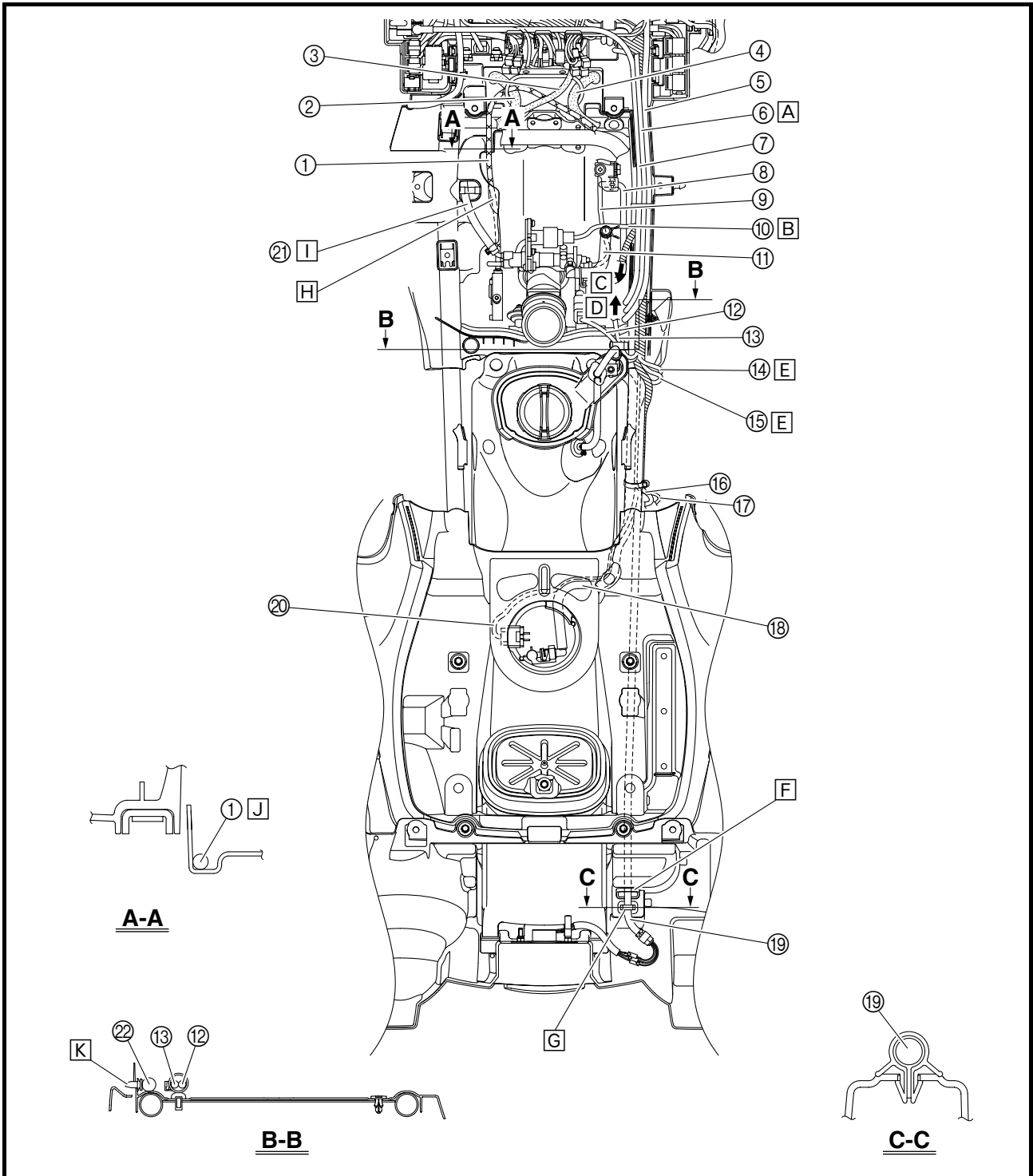
SPEC



- ① Fast idle plunger outlet hose
- ② Wire harness

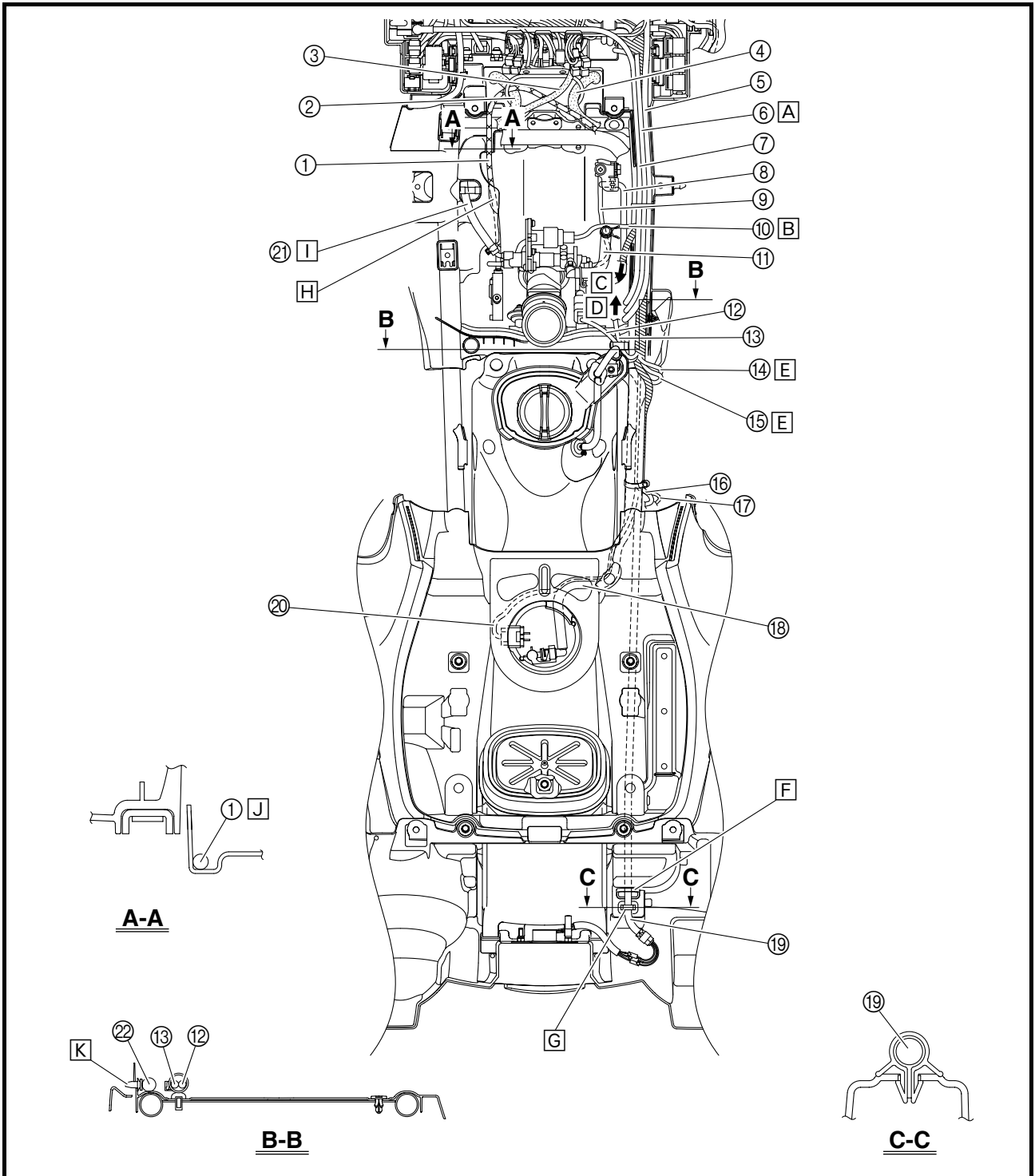
- A Route the final gear case breather hose on top of the leads.
- B Route the intake air pressure sensor lead to the front of the breather hose (air filter case to fast idle plunger unit) and above the engine idling speed adjusting cable.
- C To engine
- D To air filter case

- E Route the fuel injector lead and coolant temperature sensor lead to the outside of the frame.
- F Pass the tail/brake light lead through the hole in the rear fender.
- G Fasten the tail/brake light lead with the holder, making sure that the coupler is positioned to the rear of the holder.
- H Route the throttle cable under the plastic cover.
- I Route the fast idle plunger outlet hose above the plastic cover.





- J Pass the throttle cable through the guide on the plastic cover.
- K Insert the projection on the wire harness holder into the hole in the plastic cover.



INTRODUCTION/PERIODIC MAINTENANCE CHART FOR THE EMISSION CONTROL SYSTEM



EBS00029

PERIODIC CHECKS AND ADJUSTMENTS

INTRODUCTION

This chapter includes all information necessary to perform recommended checks 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 to new vehicles that are being prepared for sale. All service technicians should be familiar with this entire chapter.

EBS00029

PERIODIC MAINTENANCE CHART FOR THE EMISSION CONTROL SYSTEM

NOTE:

- For ATVs not equipped with an odometer or an hour meter, follow the month maintenance intervals.
- For ATVs equipped with an odometer or an hour meter, follow the km (mi) or hours maintenance intervals. However, keep in mind that if the ATV isn't used for a long period of time, the month maintenance intervals should be followed.
- Items marked with an asterisk should be performed by a Yamaha dealer as they require special tools, data and technical skills.

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
hours	20	80	160	160	320				
1	* Fuel line	• Check fuel hoses for cracks or other damage, and replace if necessary.				√	√	√	
2	Spark plug	• Check condition and clean, regap, or replace if necessary.		√	√	√	√	√	
3	* Valves	• Check valve clearance and adjust if necessary.		√		√	√	√	
4	* Fuel injection	• Check and adjust engine idle speed.		√	√	√	√	√	
5	* Crankcase breather system	• Check breather hose for cracks or other damage, and replace if necessary.				√	√	√	
6	* Exhaust system	• Check for leakage and replace gasket(s) if necessary. • Check for looseness and tighten all screw clamps and joints if necessary.				√	√	√	
7	Spark arrester	• Clean.				√	√	√	

GENERAL MAINTENANCE AND LUBRICATION CHART



EBU21863

GENERAL MAINTENANCE AND LUBRICATION CHART

NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
				hours	20	80	160	160	320
1	Air filter element	• Clean and replace if necessary.		Every 20–40 hours (more often in wet or dusty areas)					
2	* Front brake	• Check operation and correct if necessary. • Check fluid level and ATV for fluid leakage, and correct if necessary. • Replace brake pads.		√	√	√	√	√	
				Whenever worn to the limit					
3	* Rear brake	• Check operation and correct if necessary. • Check brake pedal free play and adjust if necessary. • Check fluid level and ATV for fluid leakage, and correct if necessary. • Replace brake pads.		√	√	√	√	√	
				Whenever worn to the limit					
4	* Brake hoses	• Check for cracks or other damage, and replace if necessary. • Replace.			√	√	√	√	
				Every 4 years					
5	* Rear brake hose protectors	• Check for wear, cracks or other damage, and replace if necessary.		√	√	√	√	√	
6	* Wheels	• Check runout and for damage, and replace if necessary.		√		√	√	√	
7	* Tires	• Check tread depth and for damage, and replace if necessary. • Check air pressure and balance, and correct if necessary.		√		√	√	√	
8	* Wheel hub bearings	• Check for looseness or damage, and replace if necessary.		√		√	√	√	
9	* V-belt	• Check for wear, cracks or other damage, and replace if necessary.		√		√	√	√	
10	* Chassis fasteners	• Make sure that all nuts, bolts, and screws are properly tightened.		√	√	√	√	√	
11	* Shock absorber assemblies	• Check operation and correct if necessary. • Check for oil leakage and replace if necessary.				√	√	√	
12	* Stabilizer bushes	• Check for cracks or other damage, and replace if necessary.				√	√	√	
13	* Rear knuckle pivots	• Lubricate with lithium-soap-based grease.				√	√	√	
14	* Steering shaft	• Lubricate with lithium-soap-based grease.				√	√	√	
15	* Steering system	• Check operation and repair or replace if damaged. • Check toe-in and adjust if necessary.		√	√	√	√	√	
16	* Engine mount	• Check for cracks or other damage, and replace if necessary.				√	√	√	
17	* Axle boots	• Check for cracks or other damage, and replace if necessary.		√	√	√	√	√	
18	Engine oil	• Change. • Check ATV for oil leakage, and correct if necessary.		√		√	√	√	
19	Engine oil filter cartridge	• Replace.		√		√		√	
20	Differential gear oil	• Change. • Check ATV for oil leakage, and correct if necessary.		√				√	

GENERAL MAINTENANCE AND LUBRICATION CHART



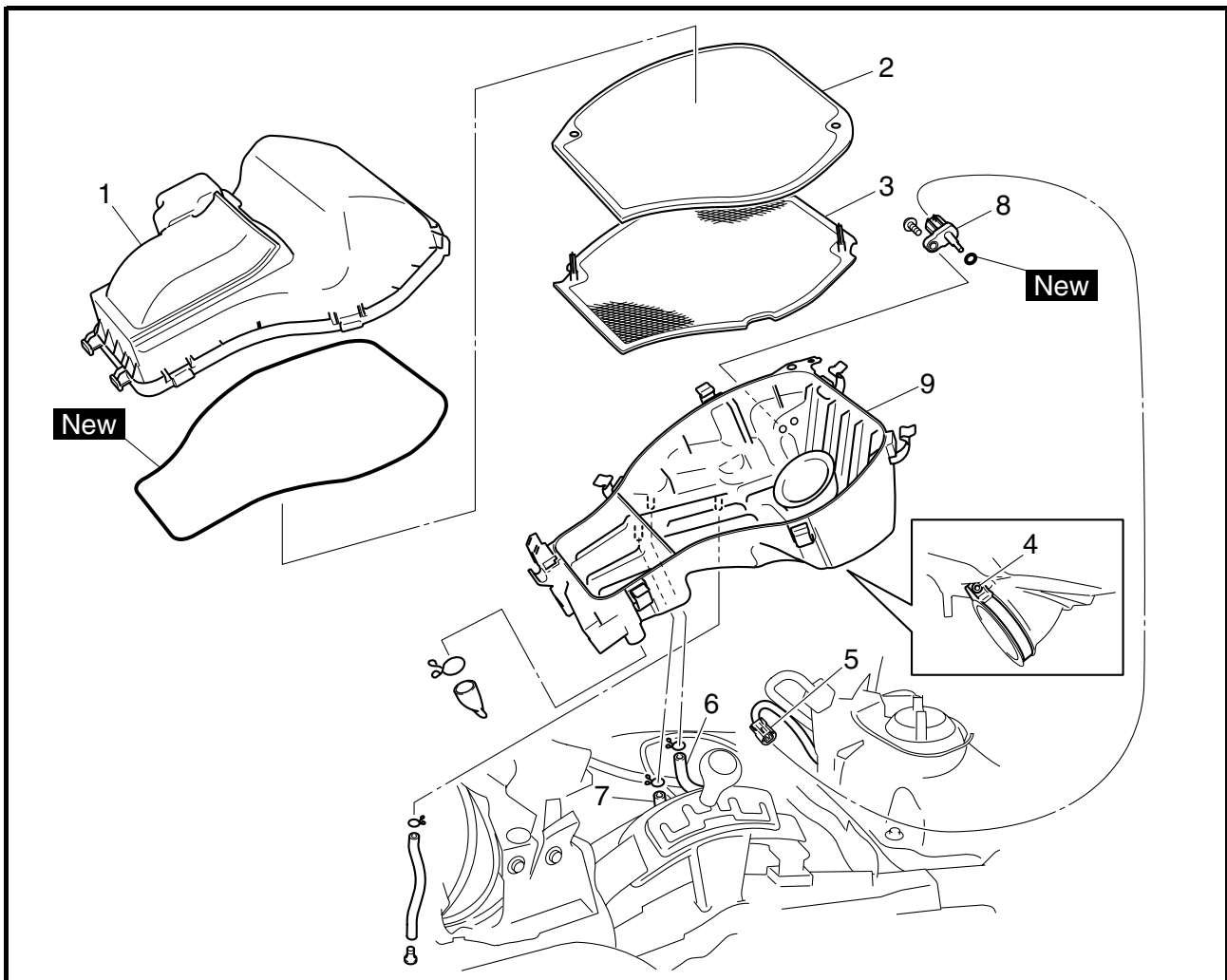
NO.	ITEM	CHECK OR MAINTENANCE JOB	Whichever comes first ⇒	INITIAL			EVERY		
				month	1	3	6	6	12
				km (mi)	320 (200)	1300 (800)	2500 (1600)	2500 (1600)	5000 (3200)
				hours	20	80	160	160	320
21	Final gear oil	<ul style="list-style-type: none"> Change. Check ATV for oil leakage, and correct if necessary. 		√				√	
22	Cooling system	<ul style="list-style-type: none"> Check coolant level and ATV for coolant leakage, and correct if necessary. 		√	√	√	√	√	
		<ul style="list-style-type: none"> Replace coolant. 	Every 2 years						
23	* Moving parts and cables	<ul style="list-style-type: none"> Lubricate. 			√	√	√	√	
24	* Drive select lever safety system cable	<ul style="list-style-type: none"> Check operation and adjust or replace if necessary. 				√	√	√	
25	* Throttle lever housing and cable	<ul style="list-style-type: none"> Check operation and correct if necessary. Check throttle cable free play and adjust if necessary. Lubricate throttle lever housing and cable. 		√	√	√	√	√	
26	* Front and rear brake switches	<ul style="list-style-type: none"> Check operation and correct if necessary. 		√	√	√	√	√	
27	* Lights and switches	<ul style="list-style-type: none"> Check operation and correct if necessary. Adjust headlight beams. 		√	√	√	√	√	

EBU23070

NOTE:

- 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 cylinders and calipers, and change the brake fluid.
 - Replace the brake hoses every four years and if cracked or damaged.

AIR FILTER CASE



Order	Job/Part	Q'ty	Remarks
	Removing the air filter case		Remove the parts in the order listed.
	Seat/side panels		Refer to "SEAT AND SIDE PANELS" in chapter 3. (Manual No.: 3B4-28197-E0)
1	Air filter case cover	1	
2	Air filter element	1	
3	Air filter element frame	1	
4	Air filter case joint clamp screw	1	Loosen.
5	Intake air temperature sensor coupler	1	Disconnect.
6	Breather hose (air filter case to fast idle plunger unit)	1	Disconnect.
7	Cylinder head breather hose	1	Disconnect.
8	Intake air temperature sensor	1	
9	Air filter case	1	
			For installation, reverse the removal procedure.

ADJUSTING THE FRONT SHOCK ABSORBERS/ ADJUSTING THE REAR SHOCK ABSORBERS

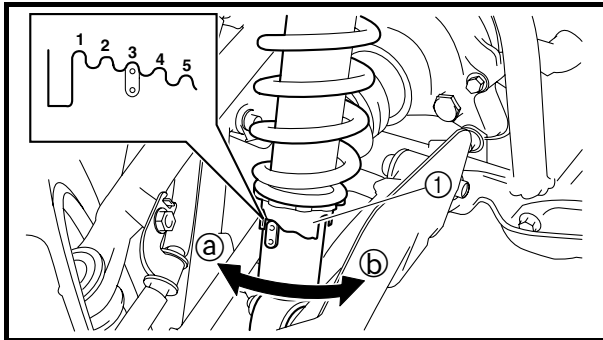


EBS00110

ADJUSTING THE FRONT SHOCK ABSORBERS

⚠ WARNING

Always adjust the spring preload for both front shock absorbers to the same setting. Uneven adjustment can cause poor handling and loss of stability.



1. Adjust:

- spring preload
Turn the adjuster ① in direction ① or ②.

	Steering nut wrench 90890-01443 Spanner wrench YU-33975
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Direction ①	Spring preload is increased (suspension is harder).
Direction ②	Spring preload is decreased (suspension is softer).

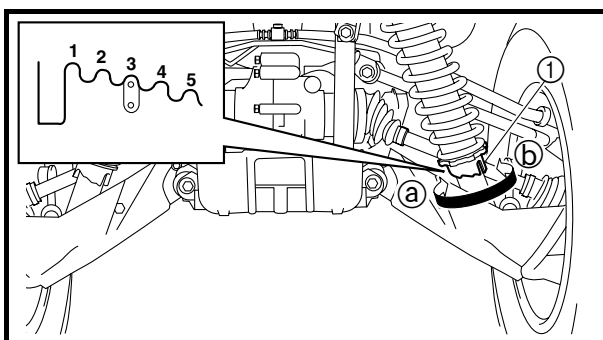
Standard position: 3 Minimum position: 1 Maximum position: 5

EBS00112

ADJUSTING THE REAR SHOCK ABSORBERS


⚠ WARNING

Always adjust the spring preload for both rear shock absorbers to the same setting. Uneven adjustment can cause poor handling and loss of stability.



1. Adjust:

- spring preload
Turn the adjuster ① in direction ① or ②.

	Steering nut wrench 90890-01443 Spanner wrench YU-33975
---	--

ADJUSTING THE REAR SHOCK ABSORBERS



Direction ①	Spring preload is increased (suspension is harder).
Direction ②	Spring preload is decreased (suspension is softer).

Standard position: 3
Minimum position: 1
Maximum position: 5

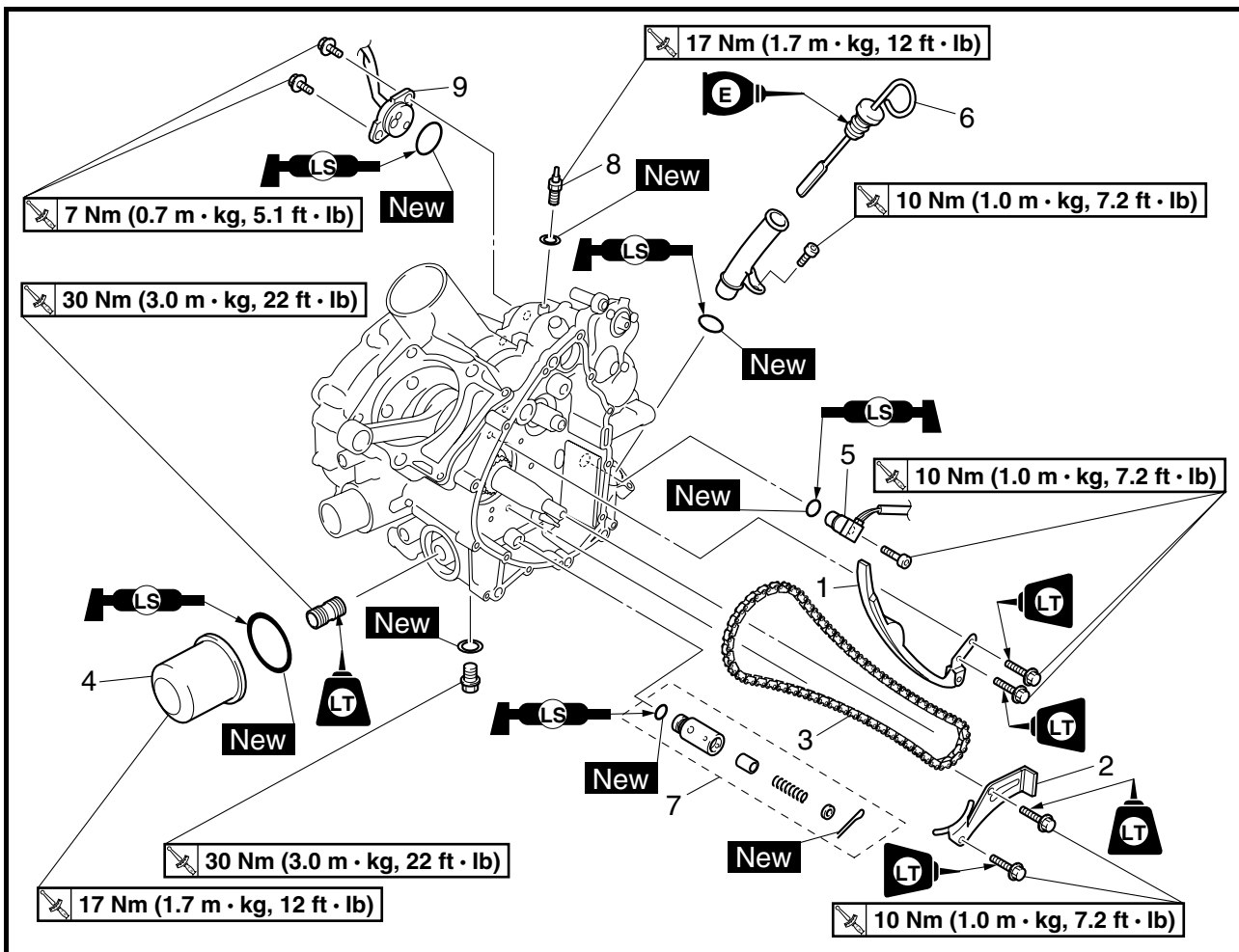


EBS00319

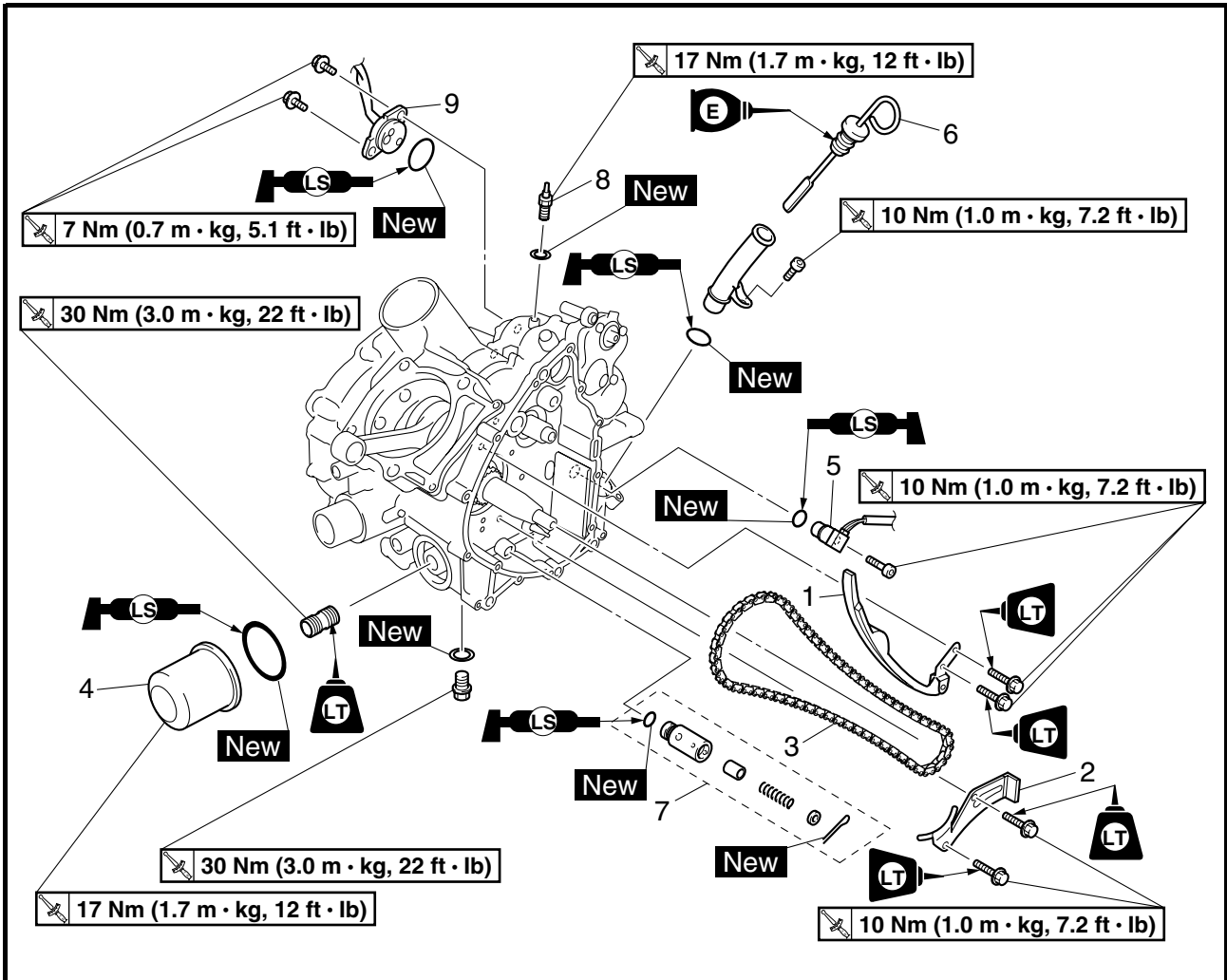
ENGINE

CRANKCASE

TIMING CHAIN AND OIL FILTER



Order	Job/Part	Q'ty	Remarks
	Removing the timing chain and oil filter		Remove the parts in the order listed.
	Engine		Refer to "ENGINE REMOVAL" in chapter 4. (Manual No.: 3B4-28197-E0)
	Cylinder head		Refer to "CYLINDER HEAD" in chapter 4. (Manual No.: 3B4-28197-E0)
	Cylinder/piston		Refer to "CYLINDER AND PISTON" in chapter 4. (Manual No.: 3B4-28197-E0)
	AC magneto rotor/starter wheel gear		Refer to "AC MAGNETO" in chapter 4. (Manual No.: 3B4-28197-E0)
	Balancer driven gear/oil pump driven gear		Refer to "BALANCER GEARS AND OIL PUMP GEARS" in chapter 4. (Manual No.: 3B4-28197-E0)



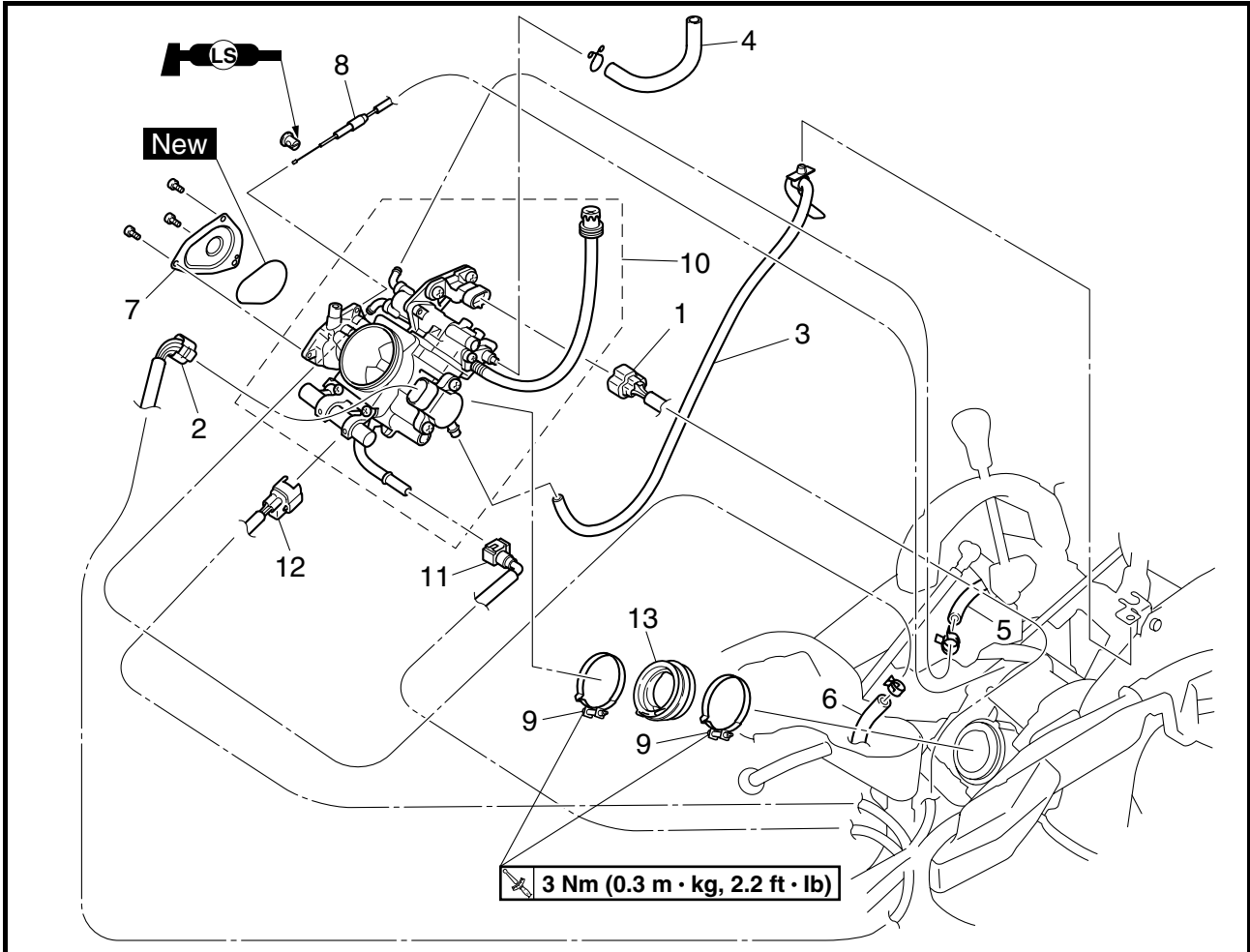
Order	Job/Part	Q'ty	Remarks
	Primary sheave assembly/secondary sheave assembly		Refer to "PRIMARY AND SECONDARY SHEAVES" in chapter 4. (Manual No.: 3B4-28197-E0)
	Clutch carrier assembly		Refer to "CLUTCH" in chapter 4. (Manual No.: 3B4-28197-E0)
1	Timing chain guide (intake side)	1	
2	Timing chain guide	1	
3	Timing chain	1	
4	Oil filter cartridge	1	
5	Speed sensor	1	
6	Dipstick	1	
7	Relief valve assembly	1	
8	Reverse switch	1	
9	Gear position switch	1	
			For installation, reverse the removal procedure.



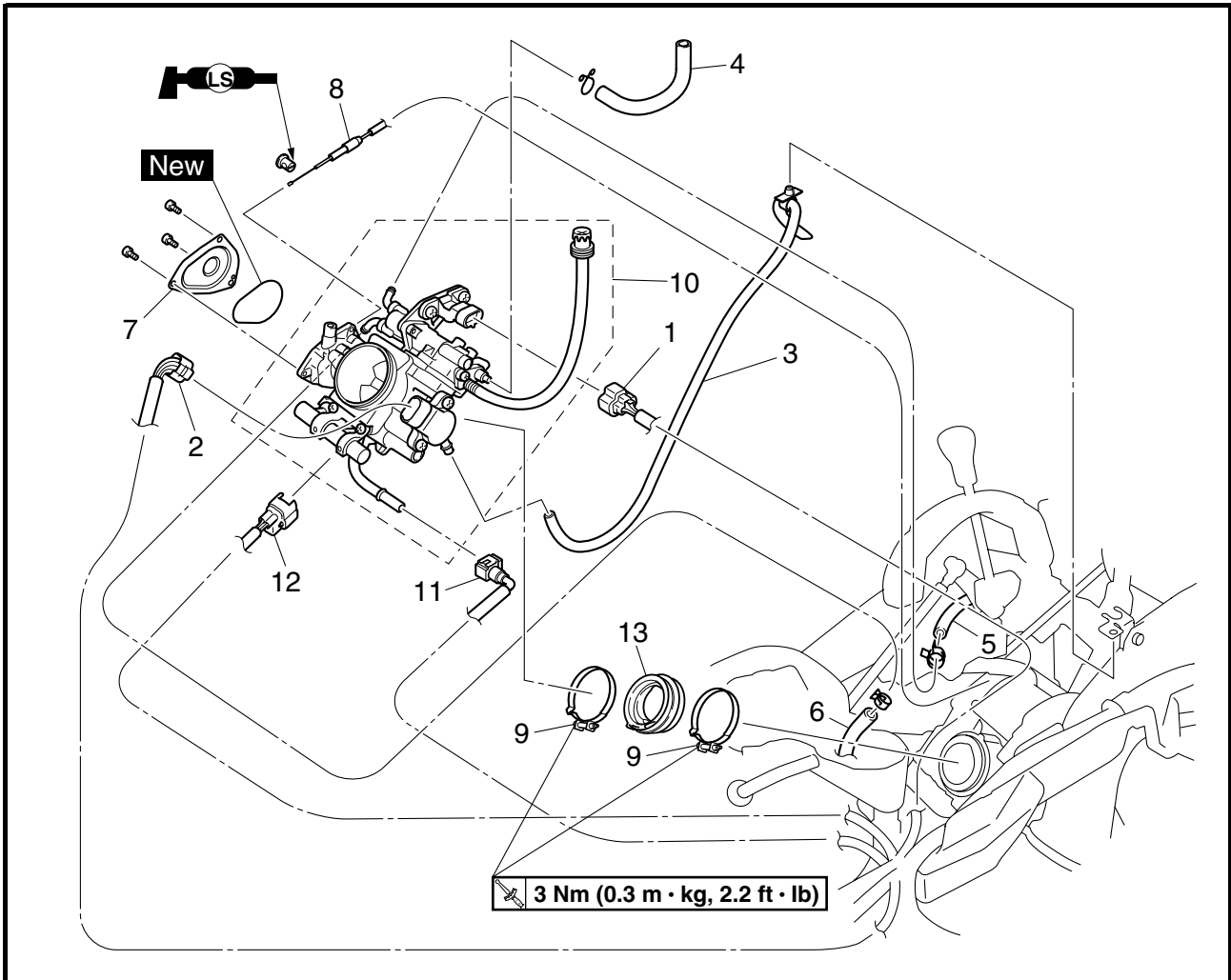
EAS00909

FUEL INJECTION SYSTEM

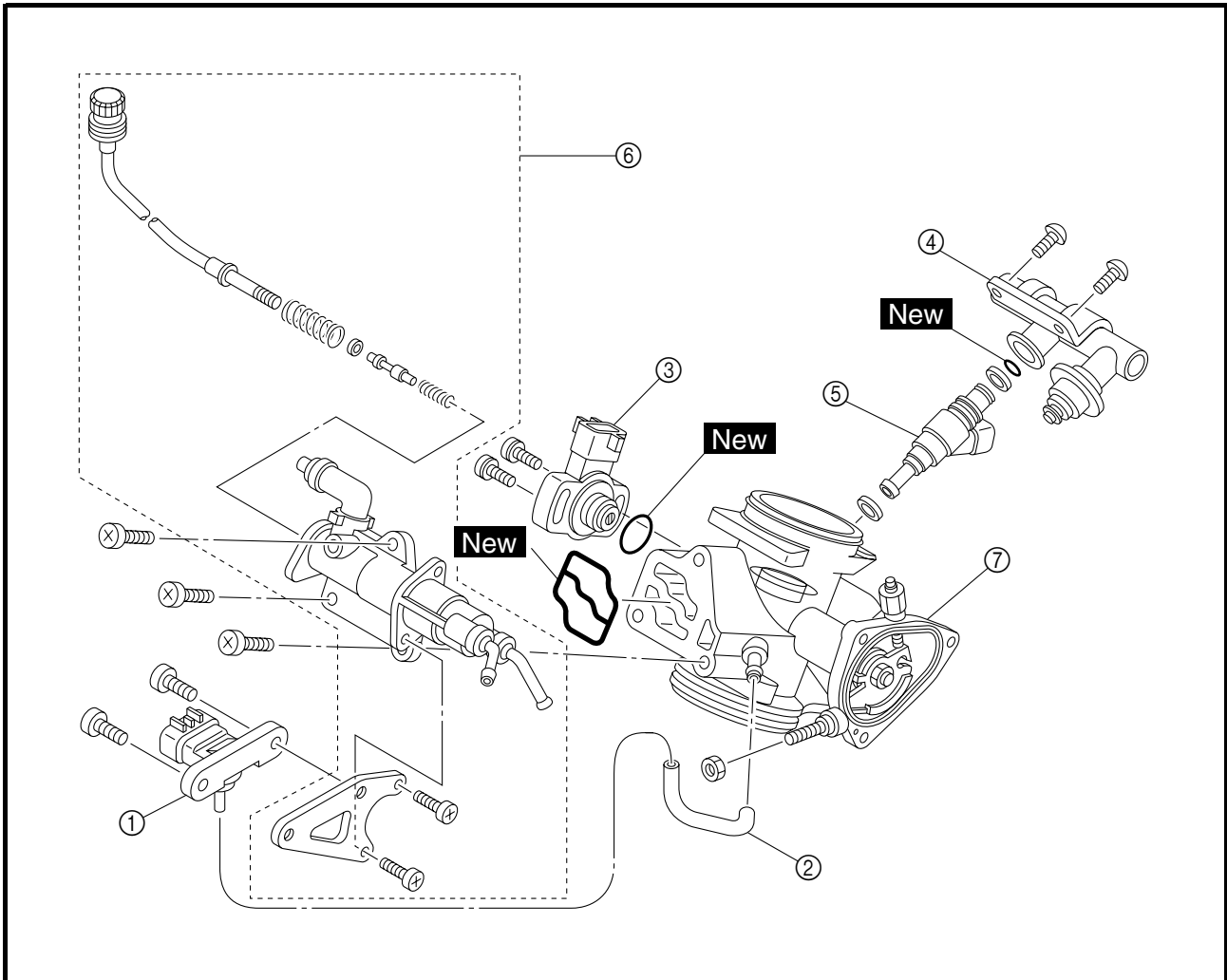
THROTTLE BODY



Order	Job/Part	Q'ty	Remarks
	Removing the throttle body		Remove the parts in the order listed.
	Air filter case		Refer to "AIR FILTER CASE" in chapter 3. (Manual No.: 3B4-28197-E0)
	Coolant		Drain. Refer to "CHANGING THE COOLANT" in chapter 3. (Manual No.: 3B4-28197-E0)
1	Intake air pressure sensor coupler	1	Disconnect.
2	Throttle position sensor coupler	1	Disconnect.
3	Throttle body breather hose	1	
4	Breather hose (air filter case to fast idle plunger unit)	1	
5	Fast idle plunger outlet hose	1	Disconnect.
6	Fast idle plunger inlet hose	1	Disconnect.
7	Throttle cable housing cover	1	
8	Throttle cable	1	Disconnect.



Order	Job/Part	Q'ty	Remarks
9	Throttle body joint clamp screw	2	Loosen. } Refer to "INSTALLING THE THROTTLE BODY ASSEMBLY" in chapter 6. (Manual No.: 3B4-28197-E0)
10	Throttle body assembly	1	
11	Fuel hose	1	Disconnect. Refer to "REMOVING THE THROTTLE BODY ASSEMBLY" and "INSTALLING THE THROTTLE BODY ASSEMBLY" in chapter 6. (Manual No.: 3B4-28197-E0)
12	Fuel injector coupler	1	Disconnect.
13	Throttle body joint	1	Refer to "INSTALLING THE THROTTLE BODY ASSEMBLY" in chapter 6. (Manual No.: 3B4-28197-E0) For installation, reverse the removal procedure.



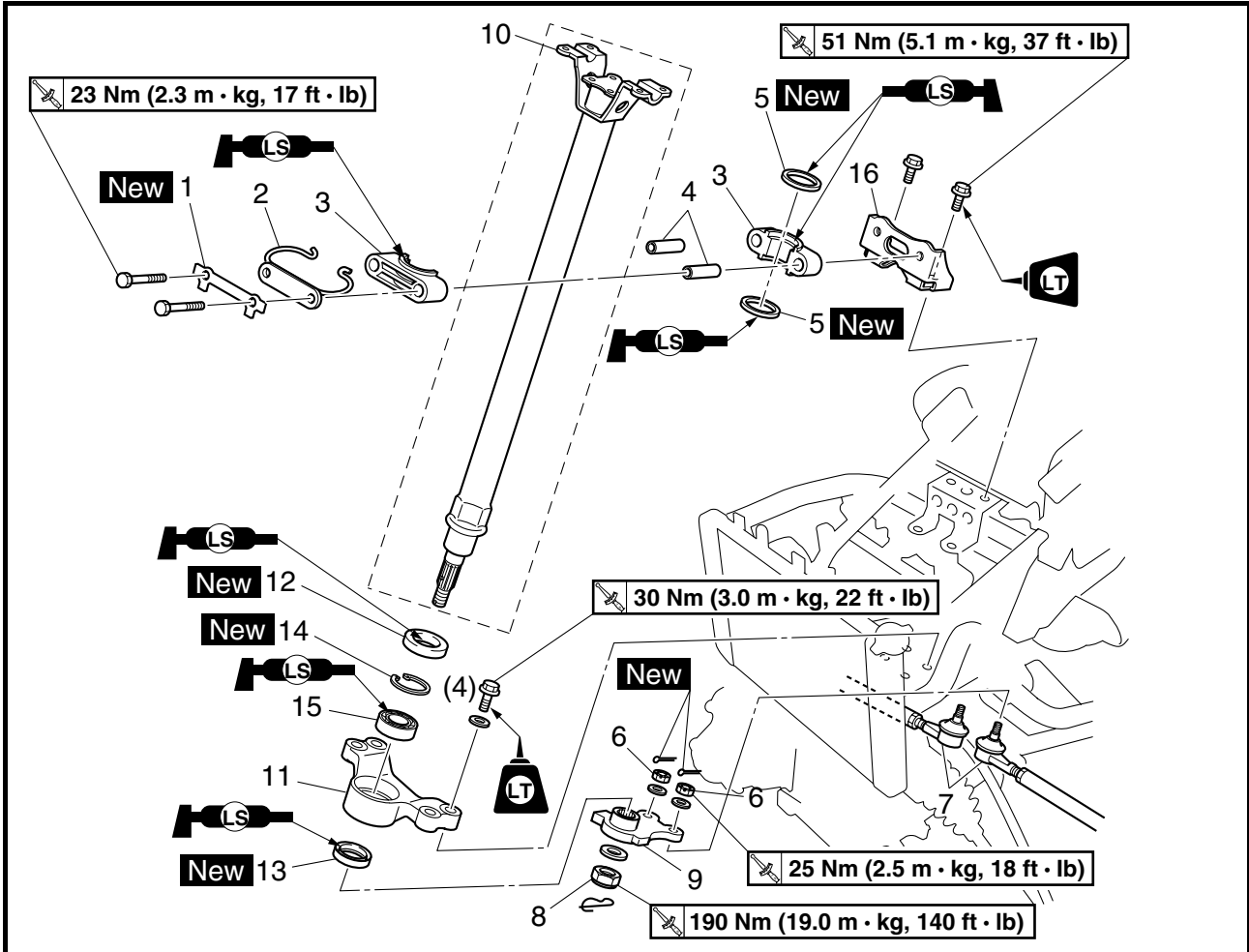
Order	Job/Part	Q'ty	Remarks
	Disassembling the throttle body assembly		Remove the parts in the order listed.
①	Intake air pressure sensor	1	
②	Intake air pressure sensor hose	1	
③	Throttle position sensor	1	
④	Injector fuel rail	1	
⑤	Fuel injector	1	
⑥	Fast idle plunger unit	1	
⑦	Throttle body	1	
			CAUTION: _____ The throttle body should not be disassembled.
			For assembly, reverse the disassembly procedure.

EBS00454

CHASSIS

STEERING SYSTEM

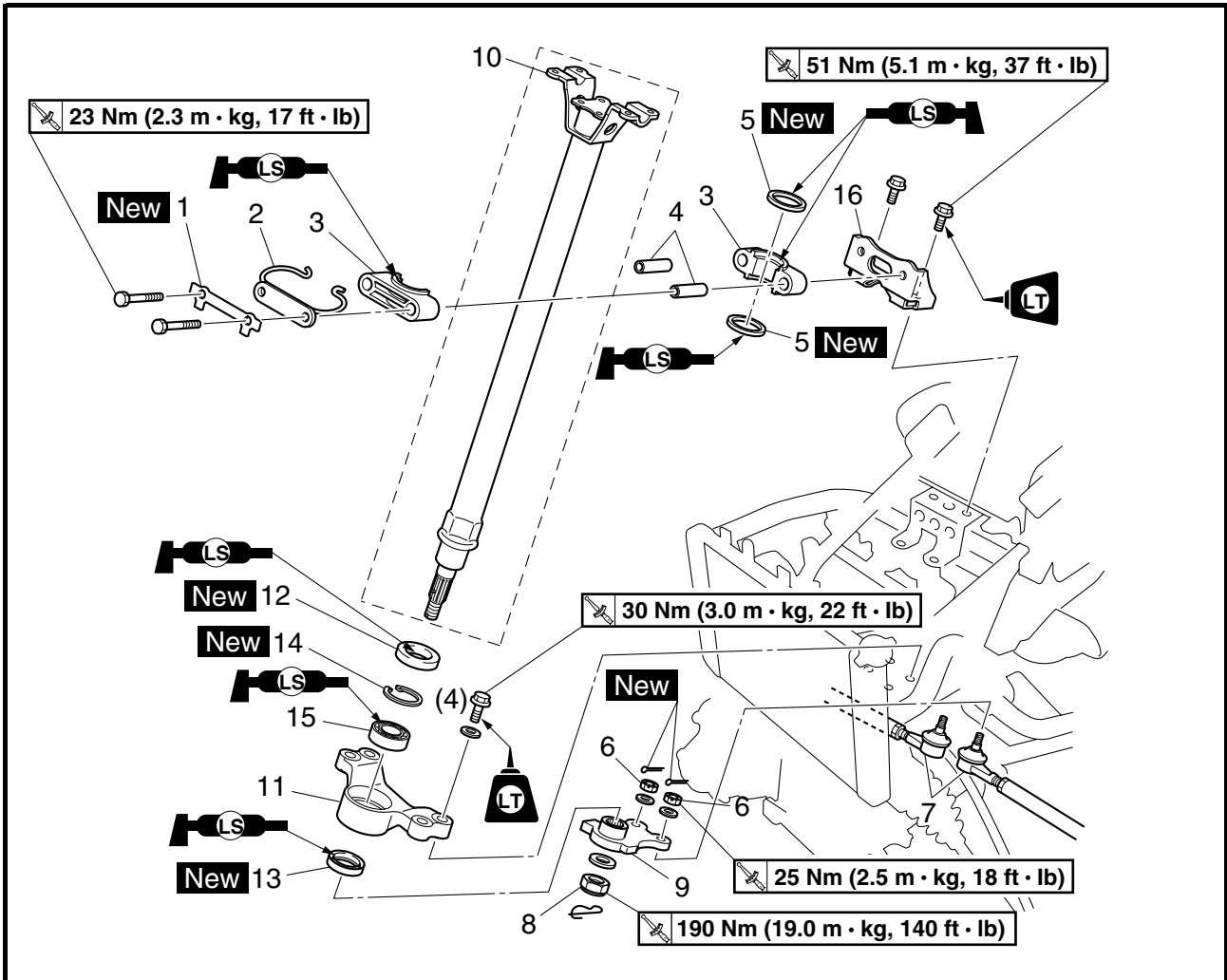
STEERING STEM (YFM7FGX only)



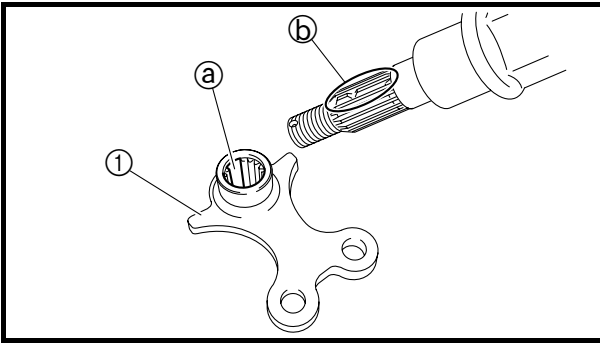
Order	Job/Part	Q'ty	Remarks
	Removing the steering stem		Remove the parts in the order listed.
	Front fender		Refer to "ENGINE SKID PLATES, SEAT, CARRIERS AND FENDERS" in chapter 3. (Manual No.: 3B4-28197-E0)
	Air filter case		Refer to "AIR FILTER CASE".
	Handlebar		Refer to "HANDLEBAR" in chapter 8. (Manual No.: 3B4-28197-E0)
	Electrical components tray		Refer to "ELECTRICAL COMPONENTS TRAY" in chapter 3. (Manual No.: 3B4-28197-E0)
1	Lock washer	1	Refer to "INSTALLING THE LOCK WASHER (YFM7FGX only)".
2	Cable guide	1	
3	Steering stem bushing	2	
4	Collar	2	
5	Oil seal	2	

STEERING SYSTEM

CHAS




Order	Job/Part	Q'ty	Remarks
6	Tie rod end nut	2	
7	Tie rod	2	Disconnect.
8	Pitman arm nut	1	Refer to "INSTALLING THE PITMAN ARM (YFM7FGX only)".
9	Pitman arm	1	
10	Steering stem	1	
11	Steering stem support	1	
12	Oil seal	1	
13	Oil seal	1	
14	Circlip	1	
15	Bearing	1	
16	Steering stem bracket	1	
			For installation, reverse the removal procedure.



INSTALLING THE PITMAN ARM (YFM7FGX only)

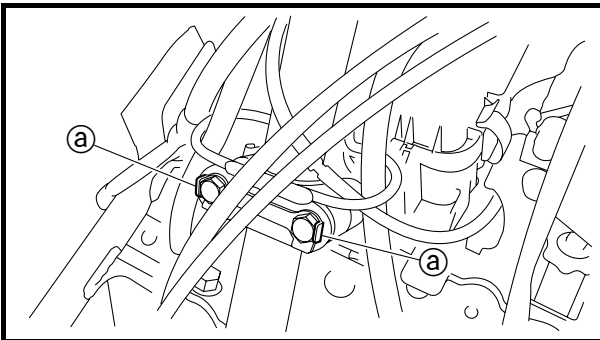
1. Install:
 - pitman arm ①
 - washer
 - pitman arm nut

 **190 Nm (19.0 m · kg, 140 ft · lb)**

- clip


NOTE:

Align the groove ① in the pitman arm with the steering stem spline ② that is indented.



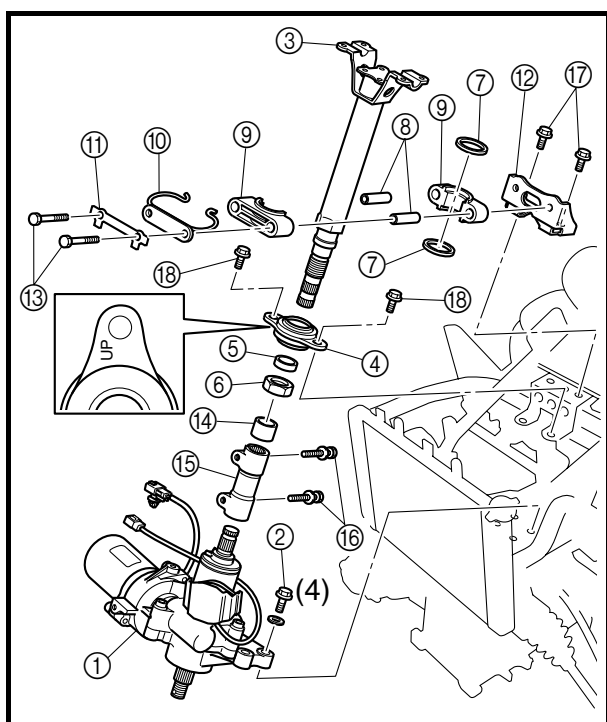
INSTALLING THE LOCK WASHER (YFM7FGX only)

1. Install:
 - cable guide
 - lock washer **New**
 - steering stem bushing bolts

 **23 Nm (2.3 m · kg, 17 ft · lb)**

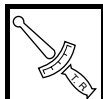
NOTE:

- Bend the lock washer tab ① along a flat side of the bolt.
- Pass the cable and hoses through the cable guide. Refer to “CABLE ROUTING”.




INSTALLING THE STEERING STEM (YFM7FGPX only)

1. Install:
- EPS unit ①
 - washers
 - EPS unit bolts ②



EPS unit bolt
30 Nm (3.0 m · kg, 22 ft · lb)
LOCTITE®

2. Install:
- steering stem ③
 - steering stem bearing ④
 - collar ⑤
 - bearing nut ⑥

 **125 Nm (12.5 m · kg, 90 ft · lb)**

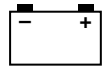
NOTE: _____

Install the steering stem bearing with the “UP” mark facing up.

3. Install:
- oil seals ⑦ **New**
 - collars ⑧
 - steering stem bushings ⑨
 - cable guide ⑩
 - lock washer ⑪ **New**
 - steering stem bracket ⑫
 - steering stem bolts ⑬
(temporarily tighten)

NOTE: _____

Apply lithium-soap-based grease to the oil seals and steering stem bushings.

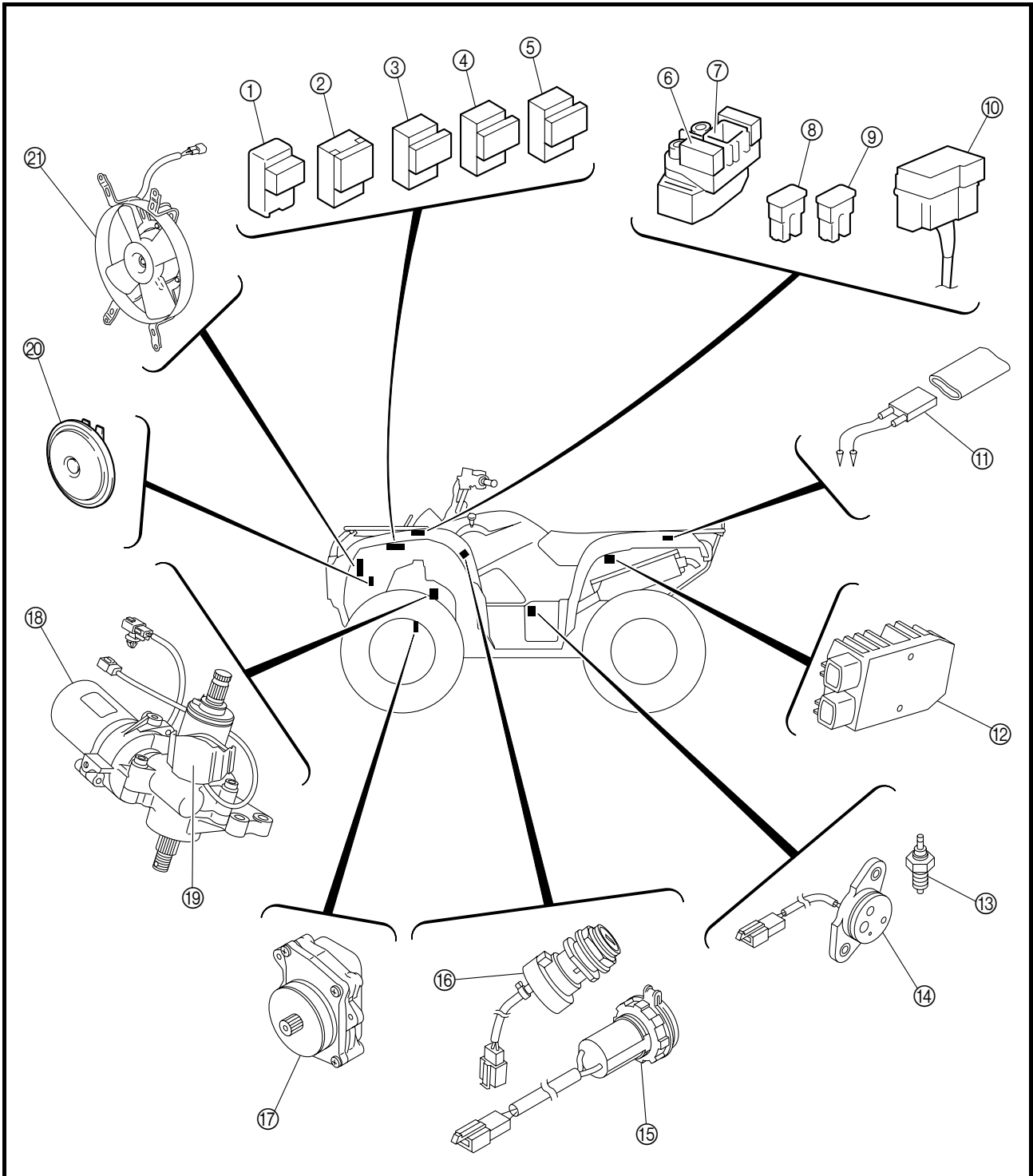


EBS00500

ELECTRICAL

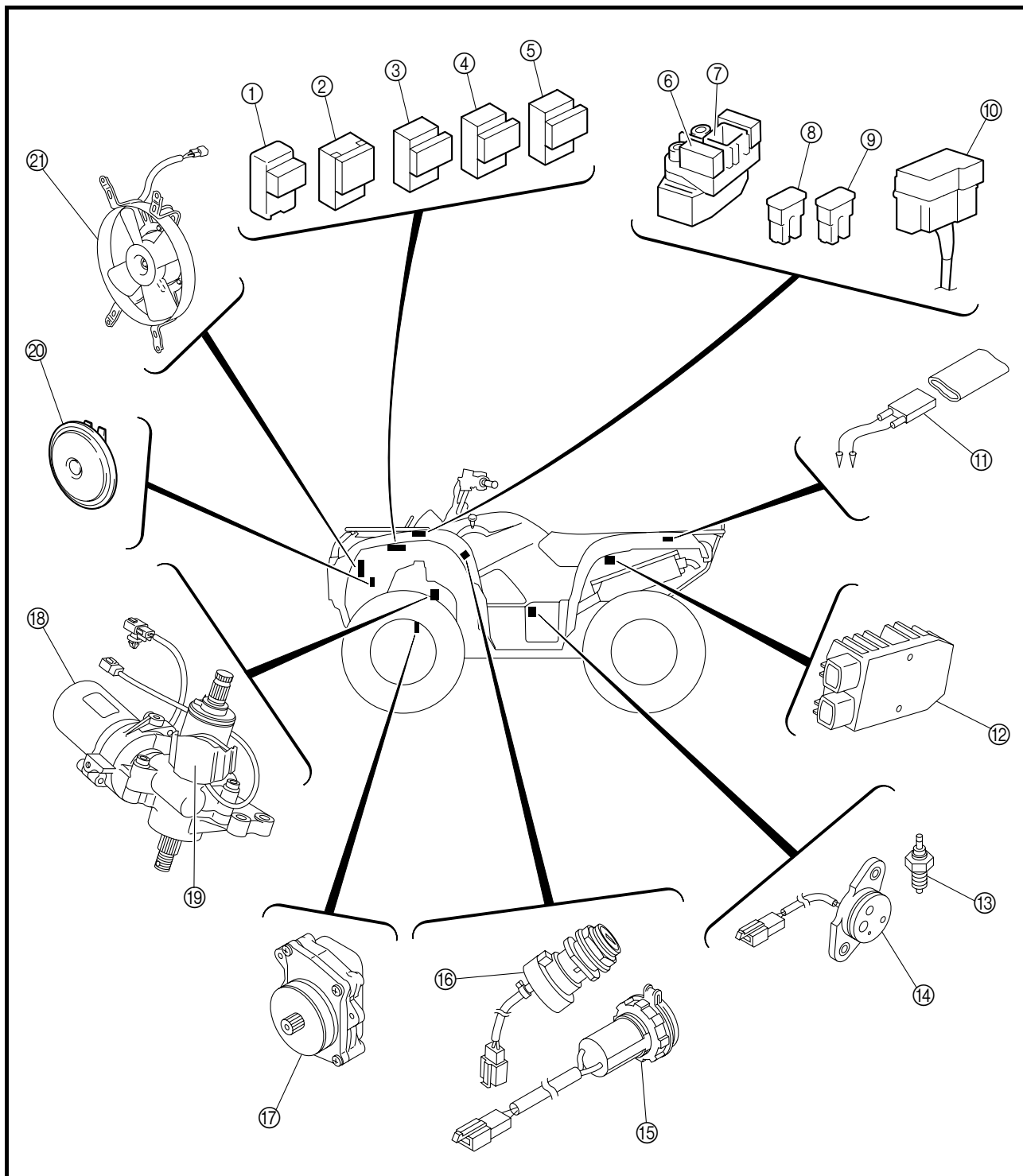
ELECTRICAL COMPONENTS

- | | |
|--|--|
| <ul style="list-style-type: none"> ① Four-wheel-drive motor relay 3 ② Rear brake relay ③ Four-wheel-drive motor relay 2 ④ Four-wheel-drive motor relay 1 ⑤ Headlight relay ⑥ Fuel injection system fuse ⑦ Starter relay | <ul style="list-style-type: none"> ⑧ EPS fuse (YFM7FGPX only) ⑨ Main fuse ⑩ Fuse box (ignition, headlights, four-wheel-drive motor, radiator fan motor, signaling system, auxiliary DC jack) ⑪ Radiator fan motor circuit breaker ⑫ Rectifier/regulator |
|--|--|



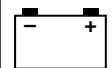


- ⑬ Reverse switch
- ⑭ Gear position switch
- ⑮ Auxiliary DC jack
- ⑯ Main switch
- ⑰ Differential gear motor
- ⑱ EPS motor (YFM7FGPX only)
- ⑲ EPS torque sensor (YFM7FGPX only)
- ⑳ Horn (for Europe and Oceania)
- ㉑ Radiator fan motor

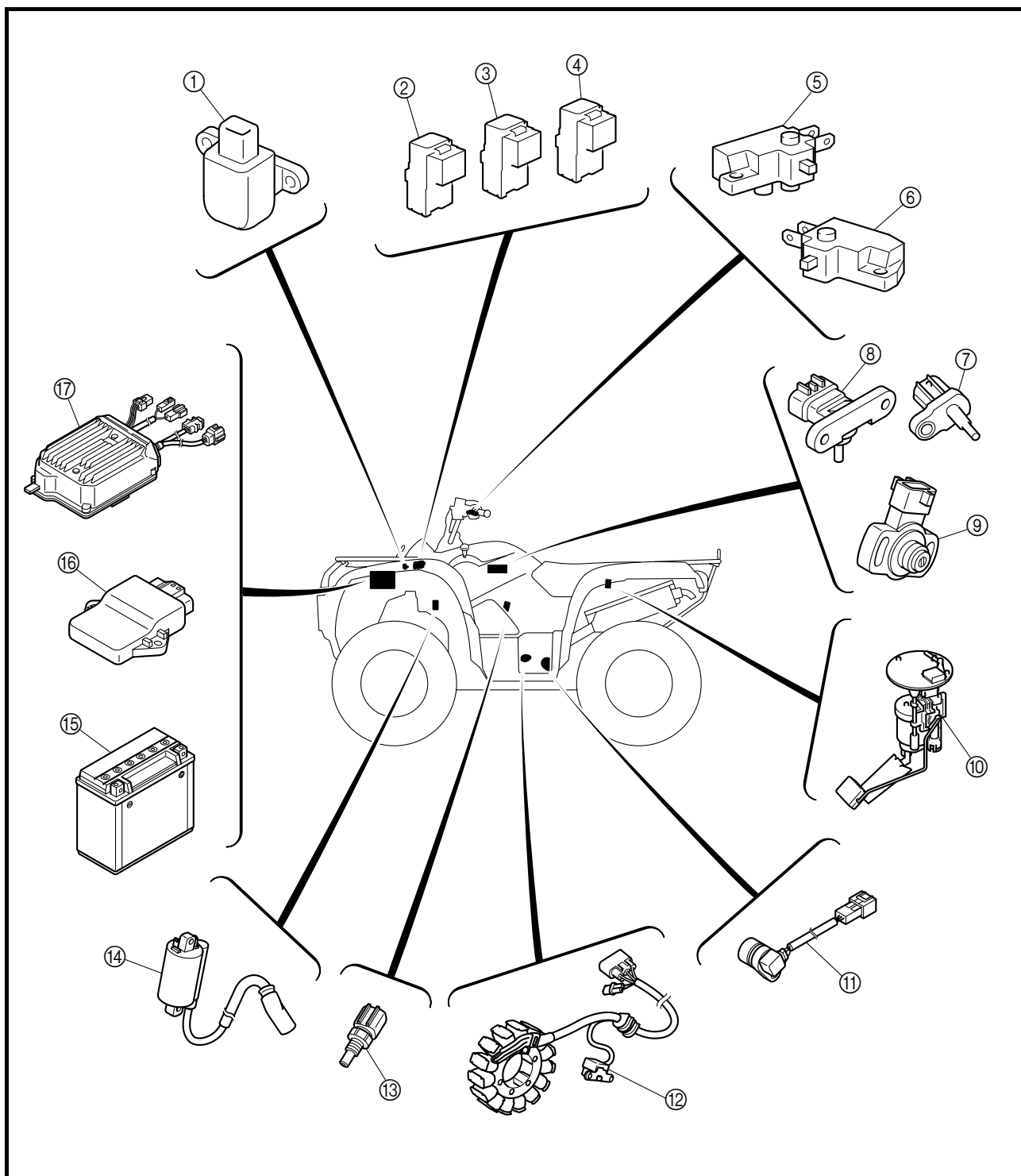


ELECTRICAL COMPONENTS

ELEC



- ① Lean angle sensor
- ② Radiator fan motor relay
- ③ Fuel injection system relay
- ④ Starting circuit cut-off relay
- ⑤ Front brake light switch
- ⑥ Rear brake light switch
- ⑦ Intake air temperature sensor
- ⑧ Intake air pressure sensor
- ⑨ TPS (throttle position sensor)
- ⑩ Fuel pump
- ⑪ Speed sensor
- ⑫ Crankshaft position sensor
- ⑬ Coolant temperature sensor
- ⑭ Ignition coil
- ⑮ Battery
- ⑯ ECU (engine control unit)
- ⑰ EPS (electric power steering) control unit (YFM7FGPX only)



YFM7FGPX/YFM7FGX 2008 WIRING DIAGRAM (for CDN)

① Crankshaft position sensor	⑤② Left handlebar switch	COLOR CODE
② AC magneto	⑤③ Light switch	B..... Black
③ Rectifier/regulator	⑤④ Engine stop switch	Br Brown
④ Main switch	⑤⑤ Start switch	G Green
⑤ Frame ground	⑤⑥ Override switch	Gy Gray
⑥ Main fuse	⑤⑦ Headlight relay	L Blue
⑦ EPS fuse	⑤⑧ Headlight	Lg Light green
⑧ Battery	⑤⑨ Ignition fuse	O Orange
⑨ Fuel injection system fuse	⑥⑩ Signaling system fuse	P..... Pink
⑩ Starter relay	⑥① Headlight fuse	R Red
⑪ Starter motor	⑥② Rear brake light switch	Sb..... Sky blue
⑫ EPS torque sensor	⑥③ Front brake light switch	W..... White
⑬ EPS motor	⑥④ Tail/brake light	Y..... Yellow
⑭ EPS (electric power steering) control unit	⑥⑤ Diode 3	B/L..... Black/Blue
⑮ EPS self-diagnosis signal connectors	⑥⑥ Rear brake relay	B/R Black/Red
⑯ Diode 1	⑥⑦ Radiator fan motor	B/W Black/White
⑰ Starting circuit cut-off relay	⑥⑧ Radiator fan motor circuit breaker	B/Y Black/Yellow
⑱ Fuel injection system relay	⑥⑨ Radiator fan motor relay	Br/B Brown/Black
⑲ Diode 2	⑦⑦ Radiator fan motor fuse	Br/L Brown/Blue
⑳ Reverse switch	Ⓐ YFM7FGPX only	Br/R Brown/Red
㉑ ECU (engine control unit)		Br/W Brown/White
㉒ Ignition coil		Br/Y Brown/Yellow
㉓ Spark plug		G/R..... Green/Red
㉔ Fuel injector		G/W Green/White
㉕ Intake air temperature sensor		G/Y Green/Yellow
㉖ Coolant temperature sensor		Gy/G..... Gray/Green
㉗ Speed sensor		L/B..... Blue/Black
㉘ TPS (throttle position sensor)		L/G Blue/Green
㉙ Intake air pressure sensor		L/R Blue/Red
㉚ Lean angle sensor		L/W..... Blue/White
㉛ Gear position switch		L/Y..... Blue/Yellow
㉜ Meter assembly		O/G Orange/Green
㉝ Multifunction meter		O/W Orange/White
㉞ Engine trouble warning light		R/B Red/Black
㉟ Coolant temperature warning light		R/L Red/Blue
㊱ Park indicator light		R/W Red/White
㊲ Reverse indicator light		R/Y Red/Yellow
㊳ Neutral indicator light		W/B White/Black
㊴ High-range indicator light		W/L..... White/Blue
㊵ Low-range indicator light		W/R White/Red
㊶ EPS warning light		Y/B Yellow/Black
㊷ Fuel sender		Y/G..... Yellow/Green
㊸ Fuel pump		Y/L..... Yellow/Blue
㊹ Four-wheel-drive motor relay 1		Y/R Yellow/Red
㊺ Four-wheel-drive motor relay 2		Y/W Yellow/White
㊻ Four-wheel-drive motor relay 3		
㊼ On-command four-wheel-drive motor switch and differential gear lock switch		
㊽ Differential gear motor		
㊾ Four-wheel-drive motor fuse		
㊿ Auxiliary DC jack fuse		
① Auxiliary DC jack		

YFM7FGPX/YFM7FGX 2008 WIRING DIAGRAM (for Europe and Oceania)

- ① Crankshaft position sensor
- ② AC magneto
- ③ Rectifier/regulator
- ④ Main switch
- ⑤ Frame ground
- ⑥ Main fuse
- ⑦ EPS fuse
- ⑧ Battery
- ⑨ Fuel injection system fuse
- ⑩ Starter relay
- ⑪ Starter motor
- ⑫ EPS torque sensor
- ⑬ EPS motor
- ⑭ EPS (electric power steering) control unit
- ⑮ EPS self-diagnosis signal connectors
- ⑯ Diode 1
- ⑰ Starting circuit cut-off relay
- ⑱ Fuel injection system relay
- ⑲ Diode 2
- ⑳ Reverse switch
- ㉑ ECU (engine control unit)
- ㉒ Ignition coil
- ㉓ Spark plug
- ㉔ Fuel injector
- ㉕ Intake air temperature sensor
- ㉖ Coolant temperature sensor
- ㉗ Speed sensor
- ㉘ TPS (throttle position sensor)
- ㉙ Intake air pressure sensor
- ㉚ Lean angle sensor
- ㉛ Gear position switch
- ㉜ Meter assembly
- ㉝ Multifunction meter
- ㉞ Engine trouble warning light
- ㉟ Coolant temperature warning light
- ㊱ Park indicator light
- ㊲ Reverse indicator light
- ㊳ Neutral indicator light
- ㊴ High-range indicator light
- ㊵ Low-range indicator light
- ㊶ EPS warning light
- ㊷ Fuel sender
- ㊸ Fuel pump
- ㊹ Four-wheel-drive motor relay 1
- ㊺ Four-wheel-drive motor relay 2
- ㊻ Four-wheel-drive motor relay 3
- ㊼ On-command four-wheel-drive motor switch and differential gear lock switch
- ㊽ Differential gear motor
- ㊾ Four-wheel-drive motor fuse
- ㊿ Auxiliary DC jack fuse
- ① Auxiliary DC jack

- ② Left handlebar switch
- ③ Light switch
- ④ Engine stop switch
- ⑤ Start switch
- ⑥ Override switch
- ⑦ Headlight relay
- ⑧ Headlight
- ⑨ Ignition fuse
- ⑩ Signaling system fuse
- ⑪ Headlight fuse
- ⑫ Rear brake light switch
- ⑬ Front brake light switch
- ⑭ Tail/brake light
- ⑮ Diode 3
- ⑯ Rear brake relay
- ⑰ Radiator fan motor
- ⑱ Radiator fan motor circuit breaker
- ⑲ Radiator fan motor relay
- ⑳ Radiator fan motor fuse
- ㉑ Horn switch
- ㉒ Horn

Ⓐ YFM7FGPX only

COLOR CODE

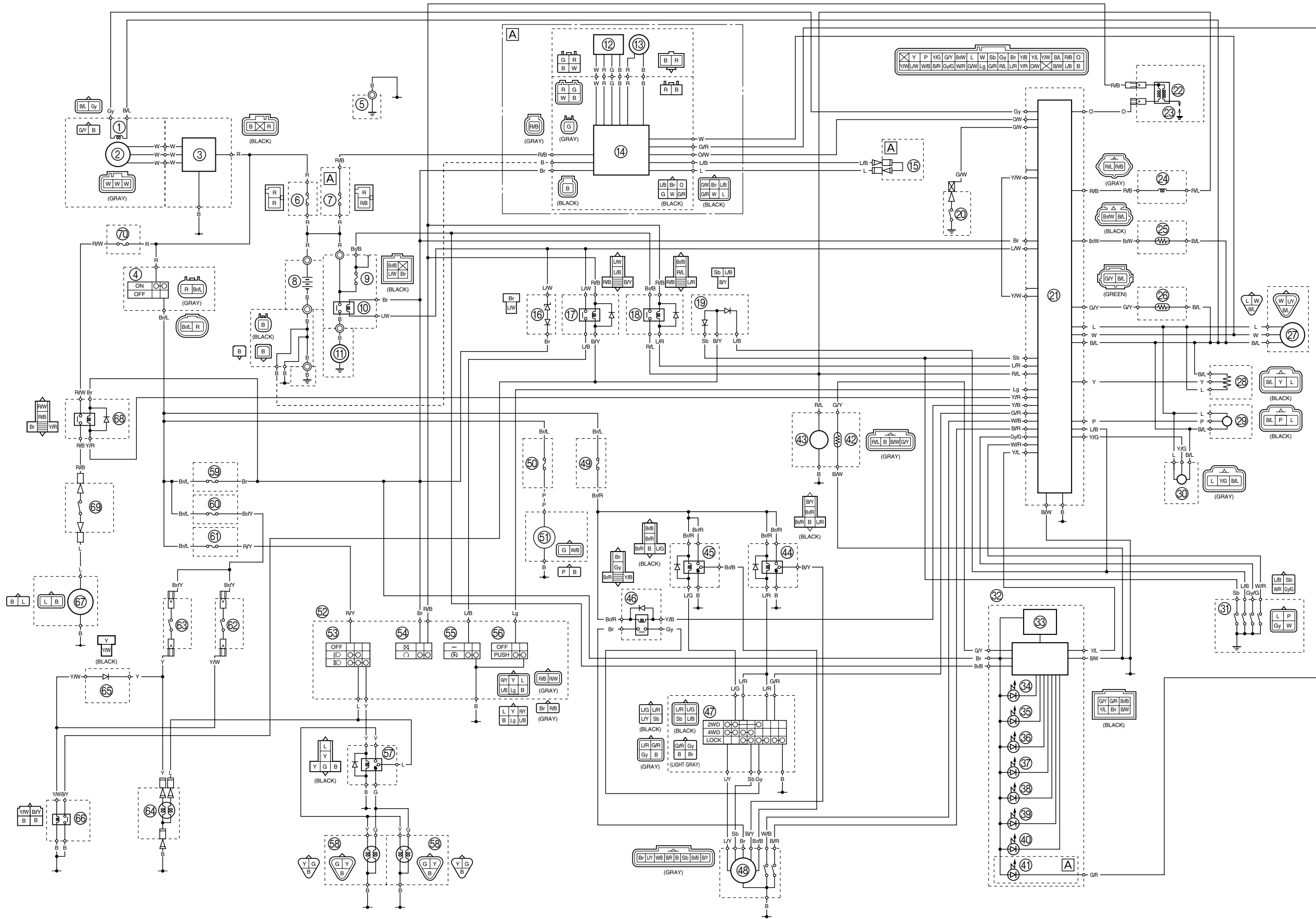
- B..... Black
- Br Brown
- G Green
- Gy Gray
- L Blue
- Lg Light green
- O Orange
- P..... Pink
- R Red
- Sb..... Sky blue
- W..... White
- Y..... Yellow
- B/L..... Black/Blue
- B/R Black/Red
- B/W Black/White
- B/Y Black/Yellow
- Br/B Brown/Black
- Br/L Brown/Blue
- Br/R Brown/Red
- Br/W Brown/White
- Br/Y Brown/Yellow
- G/R..... Green/Red
- G/W Green/White
- G/Y Green/Yellow
- Gy/G..... Gray/Green
- L/B..... Blue/Black
- L/G Blue/Green
- L/R Blue/Red
- L/W..... Blue/White
- L/Y..... Blue/Yellow
- O/G Orange/Green
- O/W Orange/White
- R/B Red/Black
- R/L Red/Blue
- R/W Red/White
- R/Y Red/Yellow
- W/B White/Black
- W/L..... White/Blue
- W/R White/Red
- Y/B Yellow/Black
- Y/G..... Yellow/Green
- Y/L..... Yellow/Blue
- Y/R Yellow/Red
- Y/W Yellow/White



YAMAHA MOTOR CO., LTD.
2500 SHINGAI IWATA SHIZUOKA JAPAN

YFM7FGPX/YFM7FGX 2008
WIRING DIAGRAM (for CDN)

YFM7FGPX/YFM7FGX 2008
SCHÉMA DE CÂBLAGE (Canada)



YFM7FGPX/YFM7FGX 2008
WIRING DIAGRAM
 (for Europe and Oceania)

YFM7FGPX/YFM7FGX 2008
SCHÉMA DE CÂBLAGE
 (Europe et Océanie)

