YAMAHA

YZF-R1V
YZF-R1VC
YZF-R1LEV
YZF-R1LEVC

SUPPLEMENTARY SERVICE MANUAL

LIT-11616-19-75 5VY-28197-11

FOREWORD

This Supplementary Service Manual has been prepared to introduce new service and data for the YZF-R1V/YZF-R1VC/YZF-R1LEV/YZF-R1LEVC. For complete service information procedures it is necessary to use this Supplementary Service Manual together with the following manual.

YZF-R1S/YZF-R1SC SERVICE MANUAL: LIT-11616-17-55 (5VY-28197-10)

EAS00001

YZF-R1V/YZF-R1VC
YZF-R1LEV/YZF-R1LEVC
SUPPLEMENTARY
SERVICE MANUAL

First edition, October 2005

Printed in U.S.A.
LIT-11616-19-75

EAS00030

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.

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 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:

- 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.

EAS00040

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 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.

EAS00007

HOW TO USE THIS MANUAL

This manual is intended as a handy, easy-to-read reference book for the mechanic. Comprehensive explanations of all installation, removal, disassembly, assembly, repair and check procedures are laid out with the individual steps in sequential order.

① The manual is divided into chapters. An abbreviation and symbol in the upper right corner of each page indicate the current chapter.
Refer to “SYMBOLS”.

② Each chapter is divided into sections. The current section title is shown at the top of each page, except in Chapter 3 (“PERIODIC CHECKS AND ADJUSTMENTS”), where the sub-section title(s) appears.

③ Sub-section titles appear in smaller print than the section title.

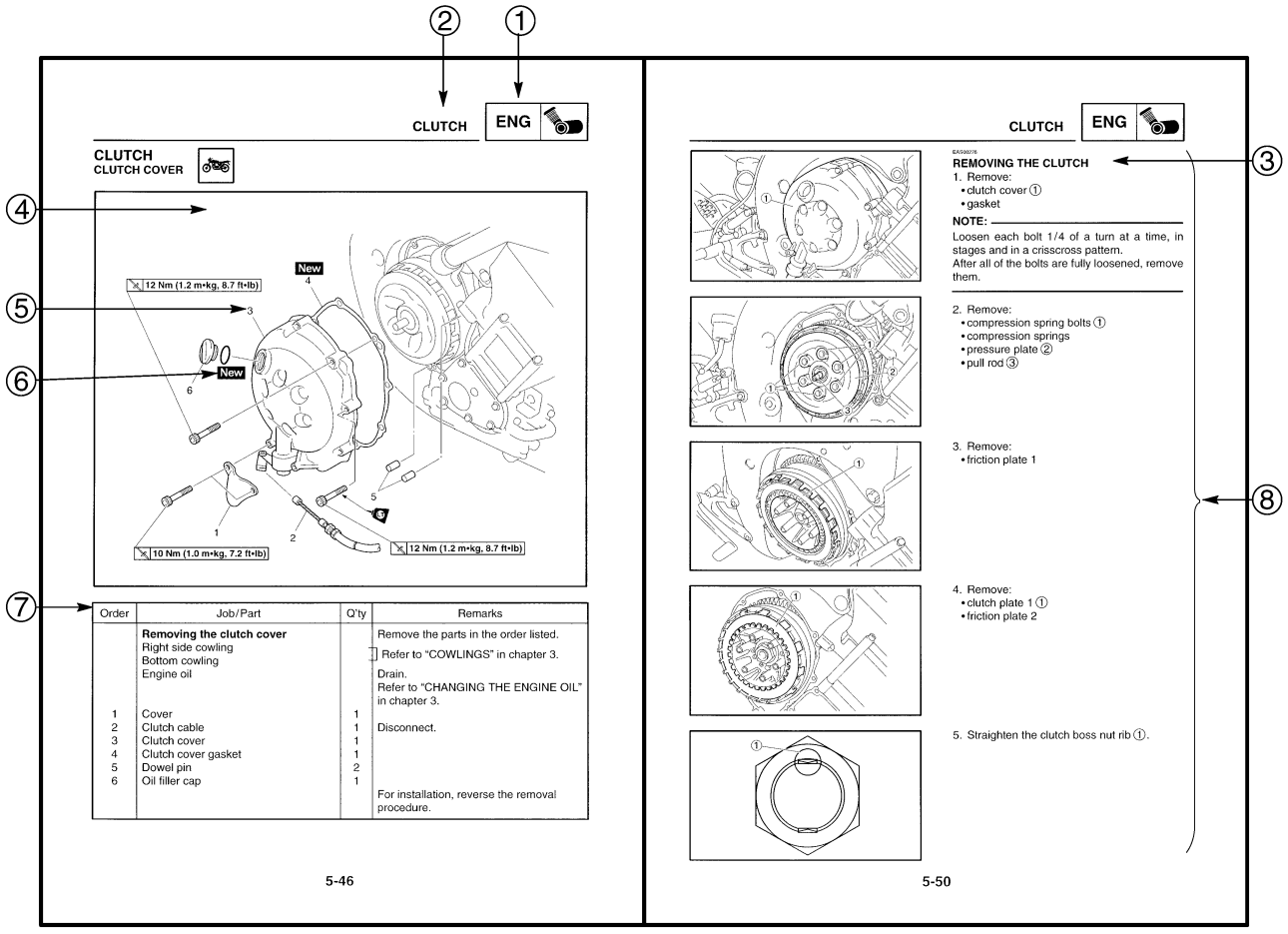
④ To help identify parts and clarify procedure steps, there are exploded diagrams at the start of each removal and disassembly section.

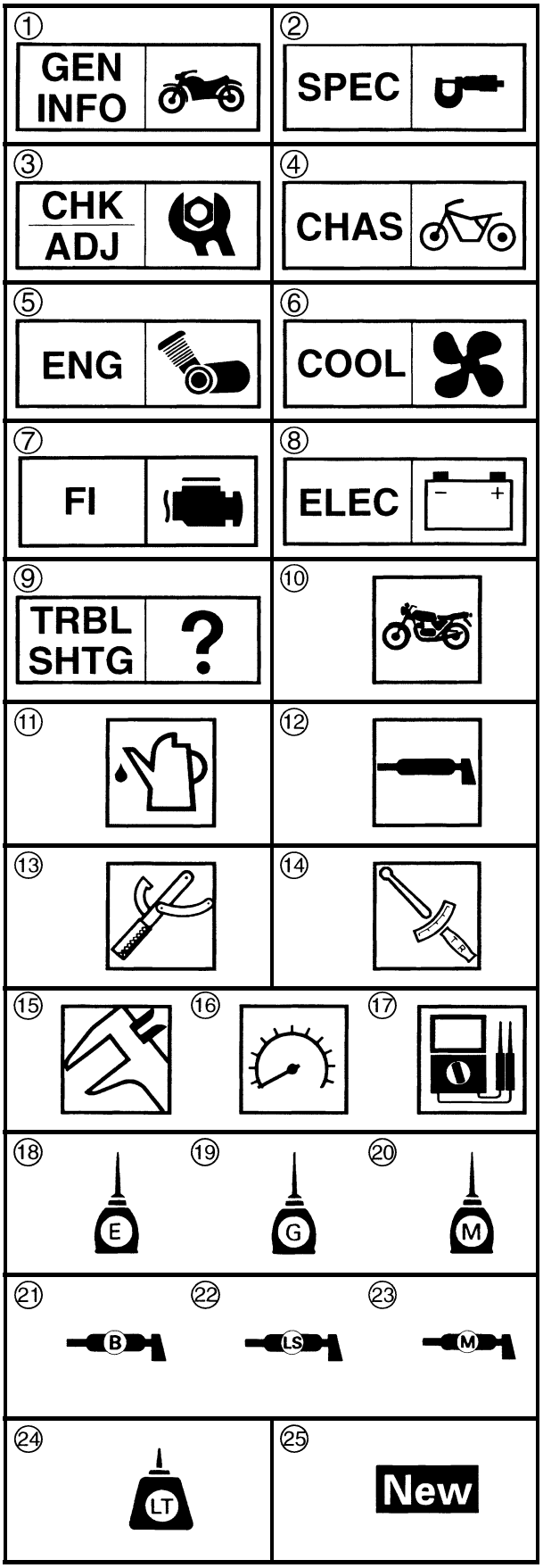
⑤ Numbers are given in the order of the jobs in the exploded diagram. A circled number indicates a disassembly step.

⑥ Symbols indicate parts to be lubricated or replaced.
Refer to “SYMBOLS”.

⑦ A job instruction chart accompanies the exploded diagram, providing the order of jobs, names of parts, notes in jobs, etc.

⑧ Jobs requiring more information (such as special tools and technical data) are described sequentially.





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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 Chassis
⑤ Engine
⑥ Cooling system
⑦ Fuel injection system
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-based 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 with a new one.

CONTENTS

ENGINE

YZF-R1V/YZF-R1VC/YZF-R1LEV/YZF-R1LEVC 2006 WIRING DIAGRAM

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GENERAL INFORMATION

SPECIAL TOOLS

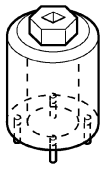
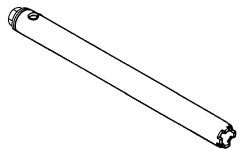
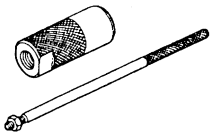
The following special tools are necessary for complete and accurate tune-up and assembly. Use only the appropriate special tools as this will help prevent damage caused by the use of inappropriate tools or improvised techniques. Special tools, part numbers or both may differ depending on the country.

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

NOTE:

- For U.S.A. and Canada, use part number starting with "YM-", "YU-", or "ACC-".
- For others, use part number starting with "90890-".

(YZF-R1LE)

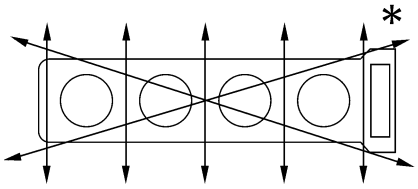
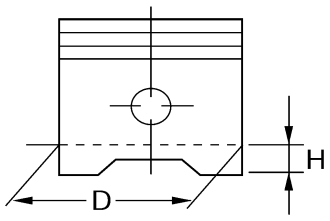
Tool No.	Tool name/Function	Illustration
90890-01472	Front fork cap bolt wrench This tool is used to loosen or tighten the front fork cap bolt.	
90890-01504	Damper rod holder This tool is used to loosening or tightening the damper rod assembly.	
Rod puller 90890-01437 YM-A8703 Rod puller attachment 90890-01435 YM-A8703	Rod puller Rod puller attachment These tools are used to pull up the front fork damper rod.	

SPECIFICATIONS

GENERAL SPECIFICATIONS

Item	Standard	Limit
Model code	YZF-R1	
	5VYH (USA), 5VYL (USA)	•••
	5VYJ (CAL), 5VYM (CAL)	
	YZF-R1LE	
	4B14 (USA), 4B15 (CAL)	•••
Dimensions		
Overall length	2,085 mm (82.1 in)	•••
Wheelbase	1,415 mm (55.7 in)	•••
Weight		
Wet (with oil and a full fuel tank)	194 kg (428 lb) (USA) (YZF-R1)	•••
	195 kg (430 lb) (CAL) (YZF-R1)	•••
	195 kg (430 lb) (USA) (YZF-R1LE)	•••
	195 kg (430 lb) (CAL) (YZF-R1LE)	•••
Maximum load (except vehicle)	201 kg (443 lb) (USA) (YZF-R1)	•••
	200 kg (441 lb) (CAL) (YZF-R1)	•••
	200 kg (441 lb) (USA) (YZF-R1LE)	•••
	200 kg (441 lb) (CAL) (YZF-R1LE)	•••

ENGINE SPECIFICATIONS

Item	Standard	Limit
Oil pump		
Oil-pump-housing-to-inner-and-outer-rotor clearance	0.06 ~ 0.13 mm (0.0024 ~ 0.0051 in)	0.20 mm (0.0079 in)
Cylinder head		
Volume	12.3 ~ 12.9 cm^3 (0.75 ~ 0.79 cu.in)	•••
Max. warpage	•••	0.10 mm (0.0039 in)
		
Piston		
Diameter D	76.975 ~ 76.990 mm (3.0305 ~ 3.0311 in)	•••
		
Height H	12 mm (0.47 in)	•••
Clutch		
Friction plates		
Color code	Red	•••
Thickness	2.9 ~ 3.1 mm (0.114 ~ 0.122 in)	2.8 mm (0.110 in)
Plate quantity	7	•••
Color code	Red	•••
Thickness	2.9 ~ 3.1 mm (0.114~ 0.122 in)	2.8 mm (0.110 in)
Plate quantity	1	•••
Color code	Red	•••
Thickness	2.9 ~ 3.1 mm (0.114 ~ 0.122 in)	2.8 mm (0.110 in)
Plate quantity	1	•••
Clutch plates		
Thickness	1.9 ~ 2.1 mm (0.07 ~ 0.08 in)	•••
Plate quantity	8	•••
Max. warpage	•••	0.1 mm (0.0039 in)
Clutch springs		
Free length	43.8 mm (1.72 in) (YZF-R1LE)	41.6 mm (1.64 in)
Throttle bodies		
ID mark	5VY1 30 (USA), 5VY1 40 (CAL)	•••

CHASSIS SPECIFICATIONS

Item	Standard	Limit
Front wheel		
Wheel type	Forged wheel (YZF-R1LE)	•••
Rear wheel		
Wheel type	Forged wheel (YZF-R1LE)	•••
Front tire		
Model (manufacturer)	Pilot POWER (MICHELIN) (YZF-R1)	•••
	D218FG (DUNLOP) (YZF-R1)	•••
	DIABLO CORSA H (PIRELLI) (YZF-R1LE)	•••
Tire pressure (cold)		
90 ~ 201 kg (198 ~ 443 lb)	250 kPa (2.5 kgf/cm^2, 2.5 bar, 35.6 psi) (USA) (YZF-R1)	•••
90 ~ 200 kg (198 ~ 441 lb)	250 kPa (2.5 kgf/cm^2, 2.5 bar, 35.6 psi) (CAL) (YZF-R1)	•••
90 ~ 200 kg (198 ~ 441 lb)	250 kPa (2.5 kgf/cm^2, 2.5 bar, 35.6 psi) (USA) (YZF-R1LE)	•••
90 ~ 200 kg (198 ~ 441 lb)	250 kPa (2.5 kgf/cm^2, 2.5 bar, 35.6 psi) (CAL) (YZF-R1LE)	•••
Rear tire		
Model (manufacturer)	Pilot POWER/Pilot POWER G (MICHELIN) (YZF-R1)	•••
	D218G (DUNLOP) (YZF-R1)	•••
	DIABLO CORSA (PIRELLI) (YZF-R1LE)	•••
Tire pressure (cold)		
90 ~ 201 kg (198 ~ 443 lb)	290 kPa (2.9 kgf/cm^2, 2.9 bar, 41.3 psi) (USA) (YZF-R1)	•••
90 ~ 200 kg (198 ~ 441 lb)	290 kPa (2.9 kgf/cm^2, 2.9 bar, 41.3 psi) (CAL) (YZF-R1)	•••
90 ~ 200 kg (198 ~ 441 lb)	290 kPa (2.9 kgf/cm^2, 2.9 bar, 41.3 psi) (USA) (YZF-R1LE)	•••
90 ~ 200 kg (198 ~ 441 lb)	290 kPa (2.9 kgf/cm^2, 2.9 bar, 41.3 psi) (CAL) (YZF-R1LE)	•••

Item	Standard	Limit
Front brakes		
Master cylinder inside diameter	16 mm (0.63 in)	•••
Caliper cylinder inside diameter	30.2 mm and 27 mm (1.19 in and 1.06 in)	•••
Front suspension		
(YZF-R1)		
Fork oil		
Quantity (each front fork leg)	0.52 L (0.46 Imp qt, 0.55 US qt)	•••
Level (from the top of the outer tube, with the outer tube fully compressed, and without the fork spring)	90 mm (3.54 in)	•••
Spring preload adjusting positions		
Minimum	8	•••
Standard	4.5	•••
Maximum	0	•••
(YZF-R1LE)		
Spring		
Free length	260 mm (10.24 in)	254.8 mm (10.03 in)
Coller length	42 mm (1.653 in)	•••
Installed length	248.0 mm (9.76 in)	•••
Spring rate (K1)	9.50 N/mm (0.97 kg/mm, 54.22 lb/in)	•••
Fork oil		
Recommended oil	Suspension oil “Ohlins R&T 43” (ACC-RT43F-00-00)	•••
Quantity (each front fork leg)	0.43 L (0.38 Imp qt, 0.45 US qt)	•••
Level (from the top of the outer tube, with the outer tube fully compressed, and without the fork spring)	145 mm (5.71 in)	•••
Spring preload adjusting positions		
Minimum*	11 turns out*	•••
Maximum*	2 turns in*	•••
*from the standard position		
Rebound damping adjusting positions		
Minimum**	17	•••
Standard**	12	•••
Maximum**	1	•••
Compression damping adjusting positions		
Minimum**	20	•••
Standard**	12	•••
Maximum**	1	•••
**from the fully turned-in direction		

Item	Standard	Limit
Rear suspension		
(YZF-R1)		
Spring preload adjusting positions		
Minimum	1	•••
Standard	5	•••
Maximum	9	•••
(YZF-R1LE)		
Spring		
Free length	150.0 mm (5.91 in)	•••
Installed length	139.0 mm (5.47 in)	•••
Spring rate (K1)	95.0 N/mm (9.68 kg/mm, 542.18 lb/in)	•••
Spring preload adjusting positions		
Minimum*	0	•••
Standard*	6	•••
Maximum*	20	•••
Rebound damping adjusting positions		
Minimum*	18	•••
Standard*	14	•••
Maximum*	1	•••
Compression damping adjusting positions (fast compression damping)		
Minimum*	42	•••
Standard*	30	•••
Maximum*	1	•••
Compression damping adjusting positions (slow compression damping)		
Minimum*	17	•••
Standard*	10	•••
Maximum*	1	•••
*from the fully turned-in position		
Drive chain		
Model (manufacturer)	50VA8 (DAIDO)	•••
Link quantity	118	•••
Drive chain slack	20 ~ 25 mm (0.79 ~ 0.98 in)	•••
Maximum 15-link section	•••	239.3 mm (9.42 in)

ELECTRICAL SPECIFICATIONS

Item	Standard	Limit
Ignition system		
T.C.I. unit model (manufacturer)	F8T82075 (MITSUBISHI)	•••
Battery		
Manufacturer	GS-YUASA	•••
Ten hour rate amperage	0.9 A	•••

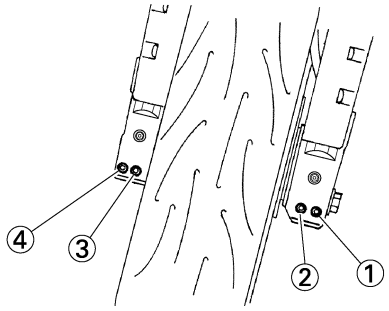
TIGHTENING TORQUES

ENGINE TIGHTENING TORQUES

Item	Fastener	Thread size	Q'ty	Tightening torque			Remarks
				Nm	m•kg	ft•lb	
Exhaust pipe and exhaust valve pipe assembly	Bolt	M6	5	12	1.2	8.7	
EXUP servo motor	Bolt	M6	2	6	0.6	4.3	
Crankcase	Bolt	M6	10	10	1.0	7.2	E
Drive sprocket cover	Bolt	M6	2	12	1.2	8.7	
Drive sprocket cover	Bolt	M6	1	12	1.2	8.7	LT
Plate	Bolt	M6	2	12	1.2	8.7	LT

CHASSIS TIGHTENING TORQUES

Item	Thread size	Tightening			Remarks
		Nm	m•kg	ft•lb	
Horn bracket and under bracket	M6	7	0.7	5.1	
Connecting rod assembly (YZF-R1LE)	M6	8	0.8	5.8	
Side cover and fuel tank	M5	4	0.4	2.9	
Front fork and stay (YZF-R1LE)	M5	6	0.6	4.3	LT
Front fork and bracket (YZF-R1LE)	M5	6	0.6	4.3	LT
Rear brake master cylinder and foot rest bracket	M6	13	1.3	9.4	
Front brake disc and front wheel (YZF-R1LE)	M6	23	2.3	17	LT
Front wheel axle pinch bolt (YZF-R1LE)	M8	26	2.6	19	See NOTE
Cap bolt (YZF-R1LE)	–	20	2.0	14	
Cap bolt and lock nut (YZF-R1LE)	M12	25	2.5	18	
Damper rod assembly (YZF-R1LE)	–	48	4.8	35	LT



NOTE:

1. Insert the front wheel axle from the right side and tighten it with the flange bolt from the left side to 91 Nm (9.1 m•kg, 65.8 ft•lb).
2. In the order from the pinch bolt ② → pinch bolt ① → pinch bolt ②, tighten each bolt to 26 Nm (2.6 m•kg, 19 ft•lb) without performing temporary tightening.
3. Check that the end face of the axle head and the end face of the fork side are flush-mounted. If they are out of alignment, make sure to fit them by adding the external force by hand or with a plastic hammer, etc.
   If the end face of the axle is not parallel to the end face of the fork, align them so that one point of the axle circumference is positioned on the end face of the fork.
   At this stage, it can be accepted if the end face of the axle becomes partially concave to the end face of the fork.
4. In the order from the pinch bolt ④ → pinch bolt ③ → pinch bolt ④, tighten each bolt to 26 Nm (2.6 m•kg, 19 ft•lb) without performing temporary tightening.

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LUBRICATION POINTS AND LUBRICANT TYPES
ENGINE

Lubrication point	Lubricant
Valve lifter surfaces (intake and exhaust)	E
Valve stem ends (intake and exhaust)	E

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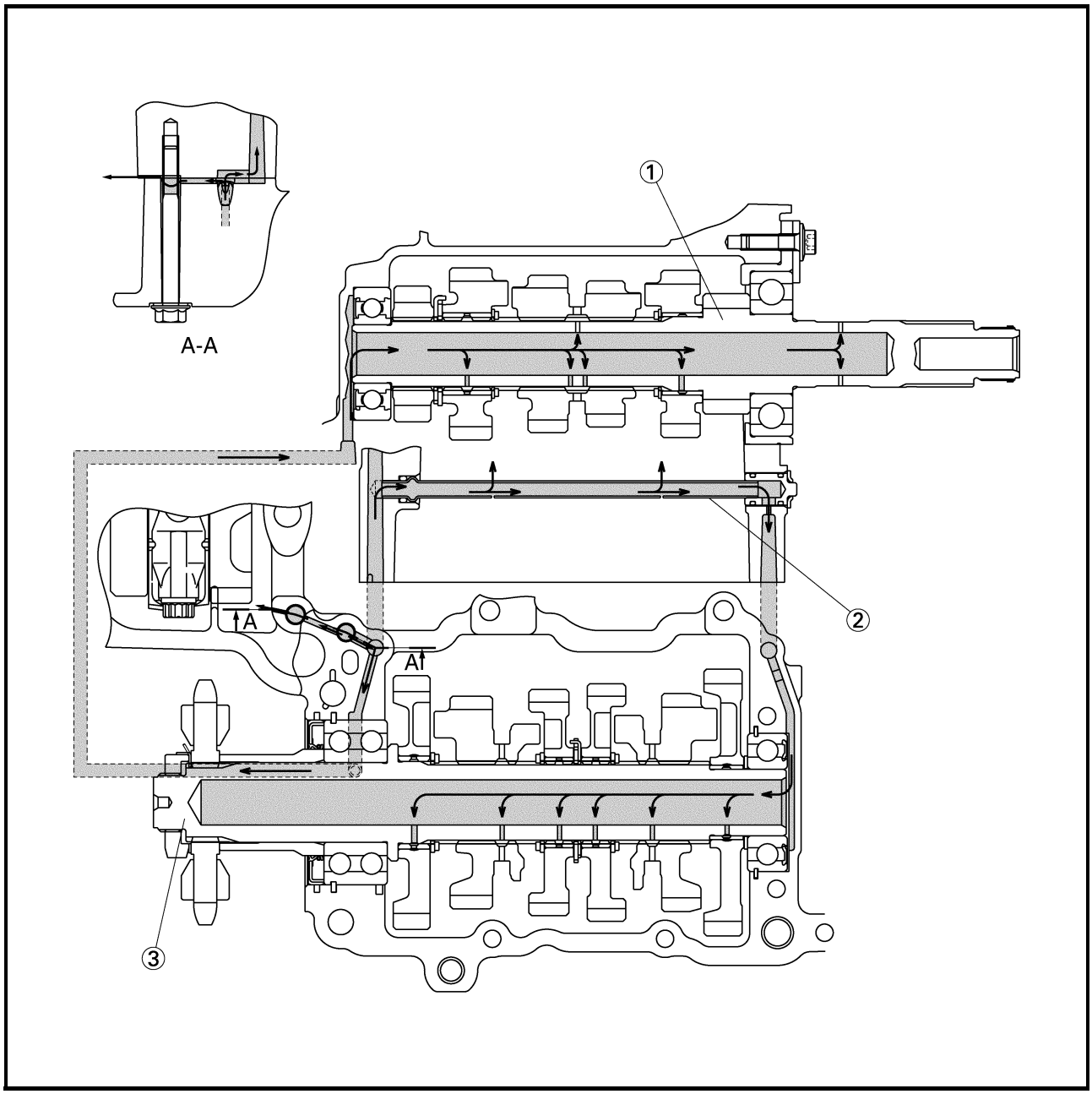
CHASSIS

Lubrication point	Lubricant
Pivot shaft	LS

LUBRICATION DIAGRAMS

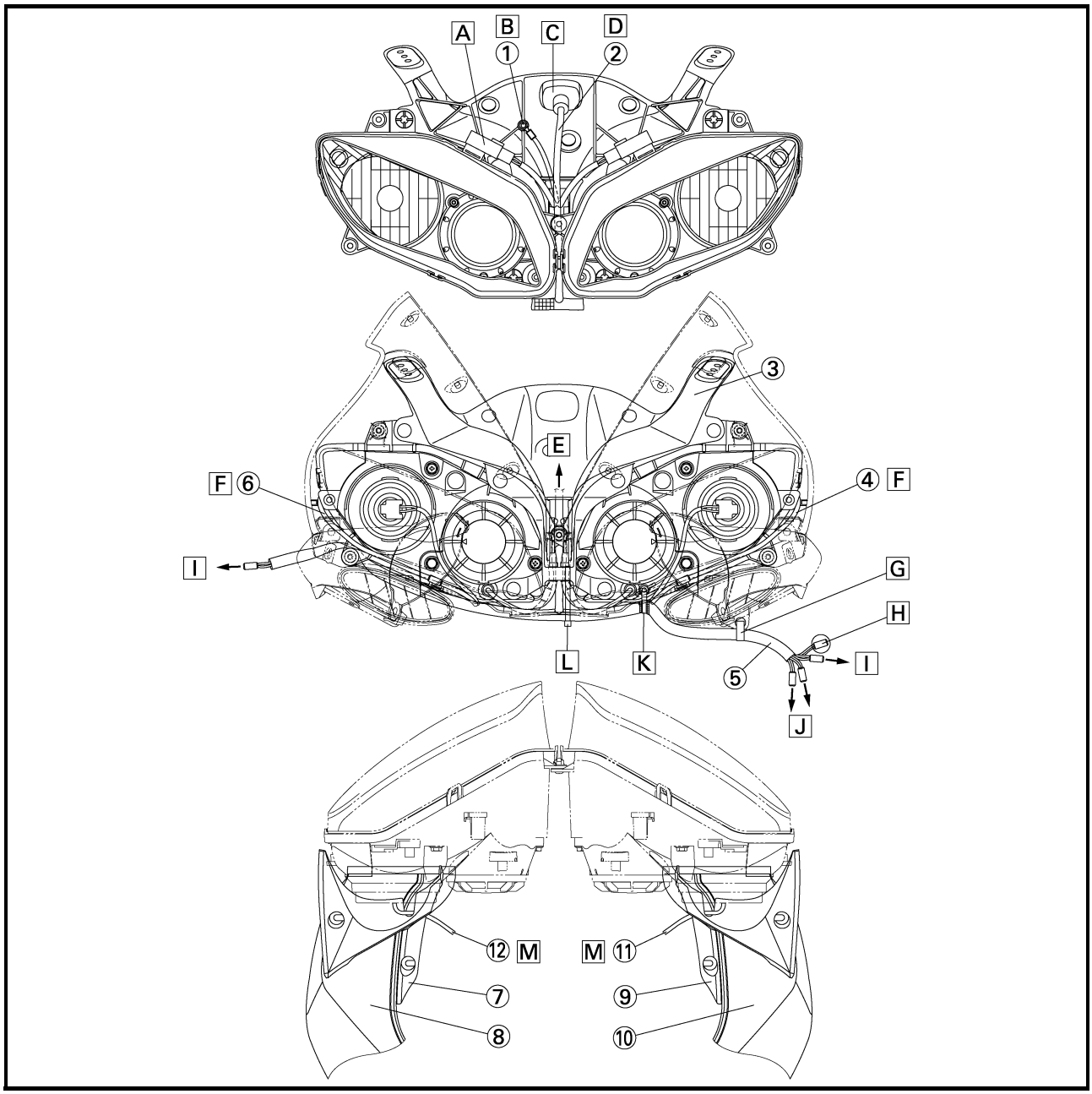
① Main axle
② Oil delivery pipe
③ Drive axle



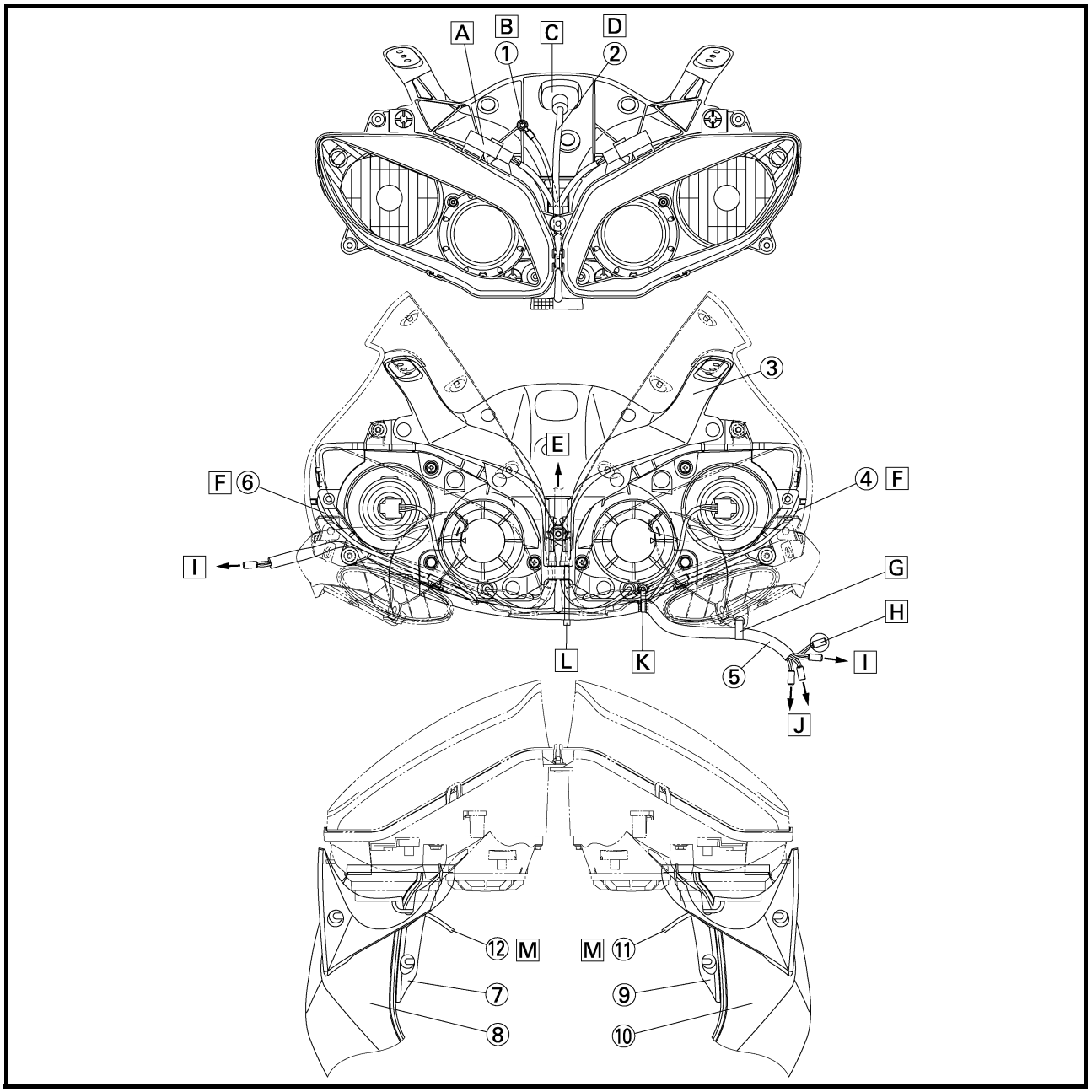
EAS00035
CABLE ROUTING

① Ground lead
② Meter lead
③ Stay 1
④ Auxiliary light lead (right)
⑤ Headlight lead
⑥ Auxiliary light lead (left)
⑦ Console panel 1
⑧ Duct 1
⑨ Console panel 2
⑩ Duct 2
⑪ Headlight lead (right)
⑫ Headlight lead (left)

A Insert to the rib of the head light. (Either location of the right and left relays is acceptable.)
B The lead should not stretch too much.
Direction of the ground terminal can be either top side or flip side.
C Make sure to insert the coupler and boot to the stay 1 hole.
D The speedometer lead should not be strained.
E To the stay 1 hole
F Connect after passing over the upper side of the duct.
G Clamp the head light lead by wrapping and insert it to the intake air grill hole. (only at the right side.)
H Do not connect the wire to the coupler with the plug for options.
I To the turn signal light
J To the wire harness
K Cut the tip of the clamp.
Clamp the headlight lead to the positioning white tape section.

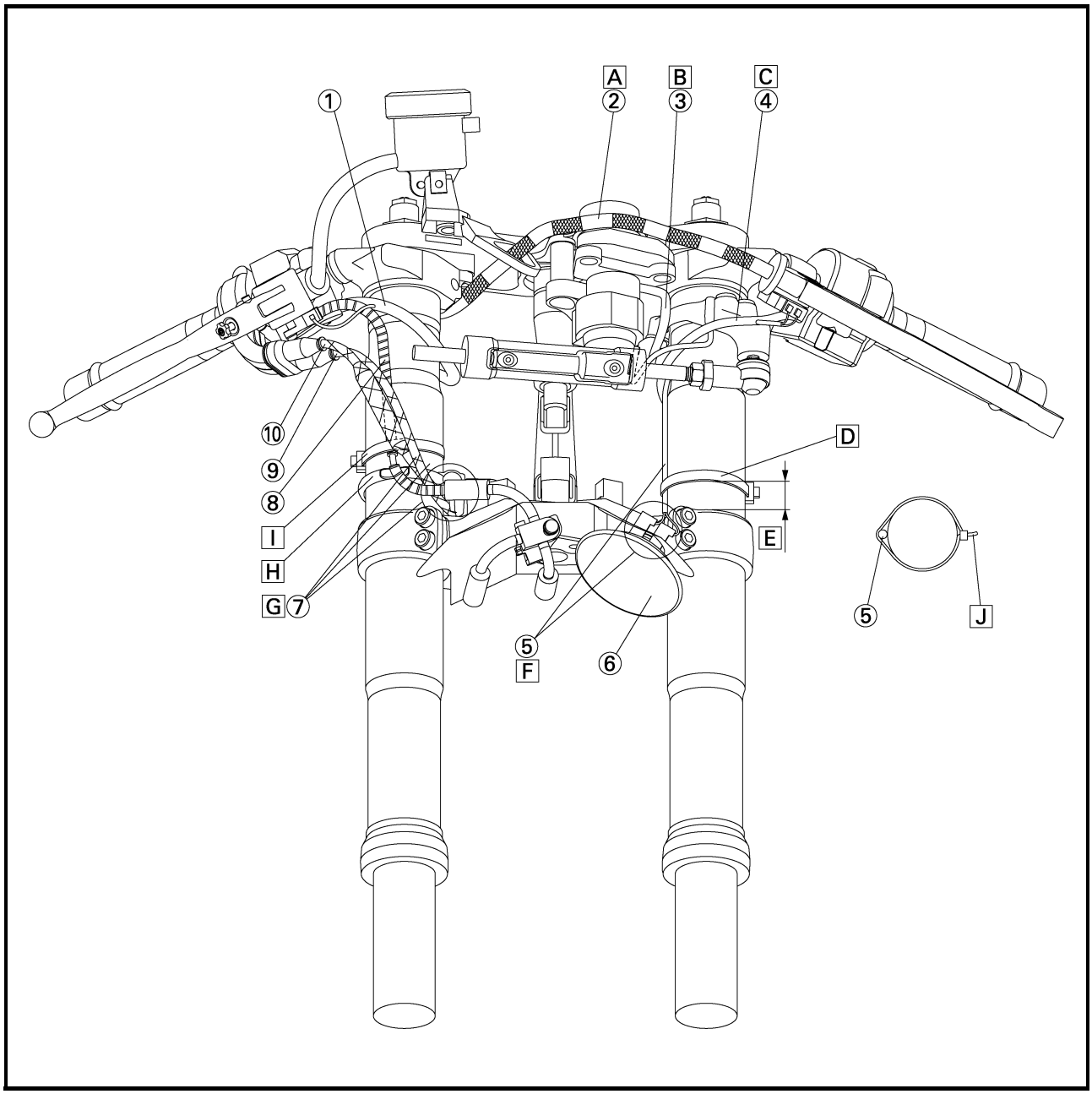


L There should be no slack when clamping. Point the tip of the clamp (excessive part) to the front side of the vehicle. Fasten the head light lead with a clamp.
M Feed a lead wire through the U shape cutout of the console panel.



① Right handlebar switch lead
② Clutch cable
③ Main switch lead
④ Left handlebar switch lead
⑤ Horn lead
⑥ Horn
⑦ Throttle cables
⑧ Brake hose
⑨ Throttle cable (return side)
⑩ Throttle cable (pull side)

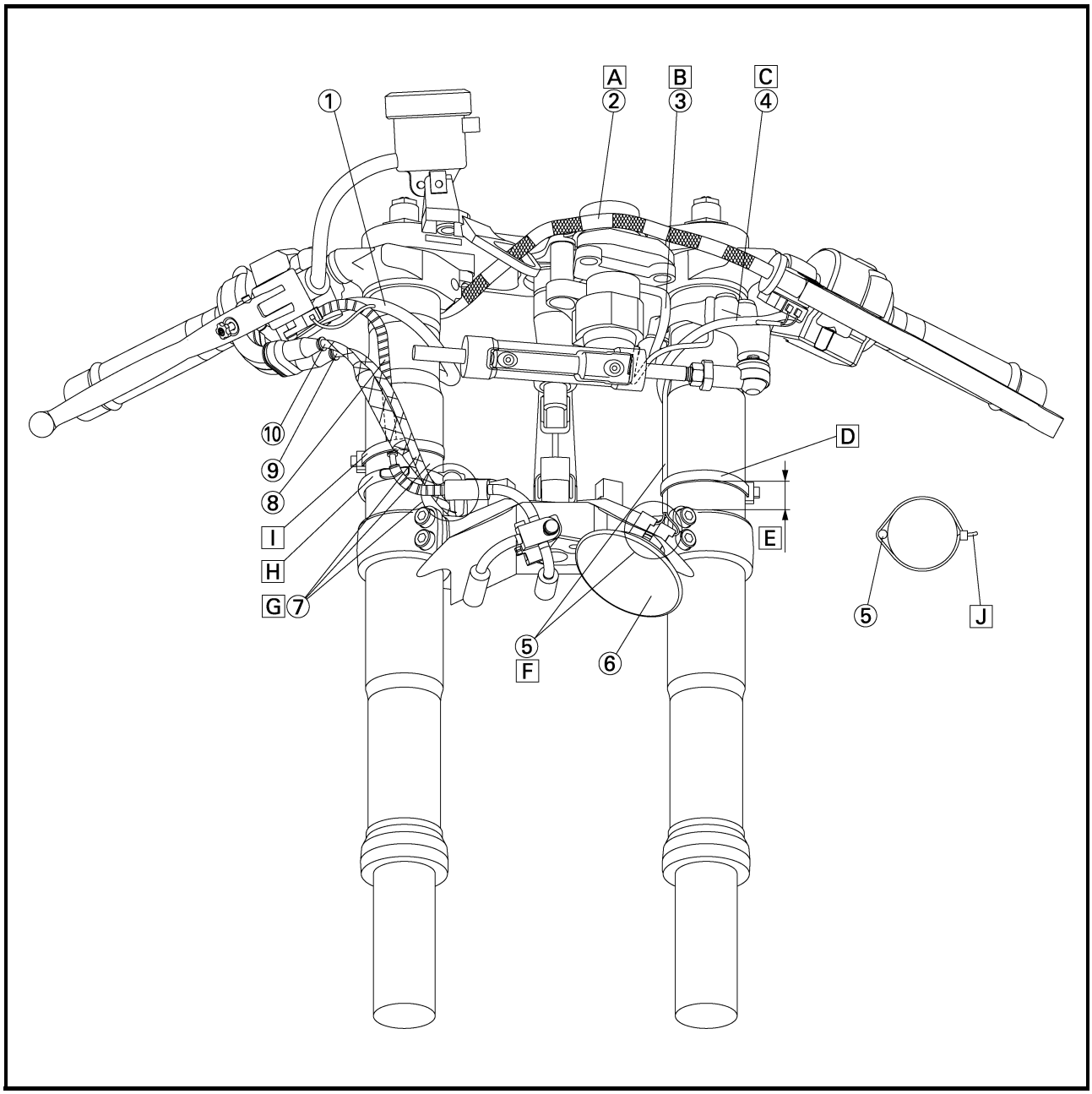
A Route the clutch cable so as to get along the front side of the main switch after passing it through the guide.
B Pass the main switch lead through the guide wire.
C Pass the left handlebar switch lead through the guide wire.
D Point the tip of the band (excessive part) to the left side of the vehicle and cut the surplus section.
E Clamp the section between 0 and 20 mm (0 and 0.79 in) from the split of the under bracket.
F Clamp the leads inside the front fork of the vehicle. Point the exit of the horn lead to the left front fork side.
G Route two throttle cables behind the brake hose, pass between the inside of the under bracket's upper side front fork and guide wire assembly, and then pass it through the clamp that is inserted to the cover 3 under the frame.



H Contact the wire guide to the top face of the under bracket boss. The throttle cable should not be caught between the wire guide and under bracket. The throttle cable (pull side) should be positioned above the vehicle wen the wire guide is installed.

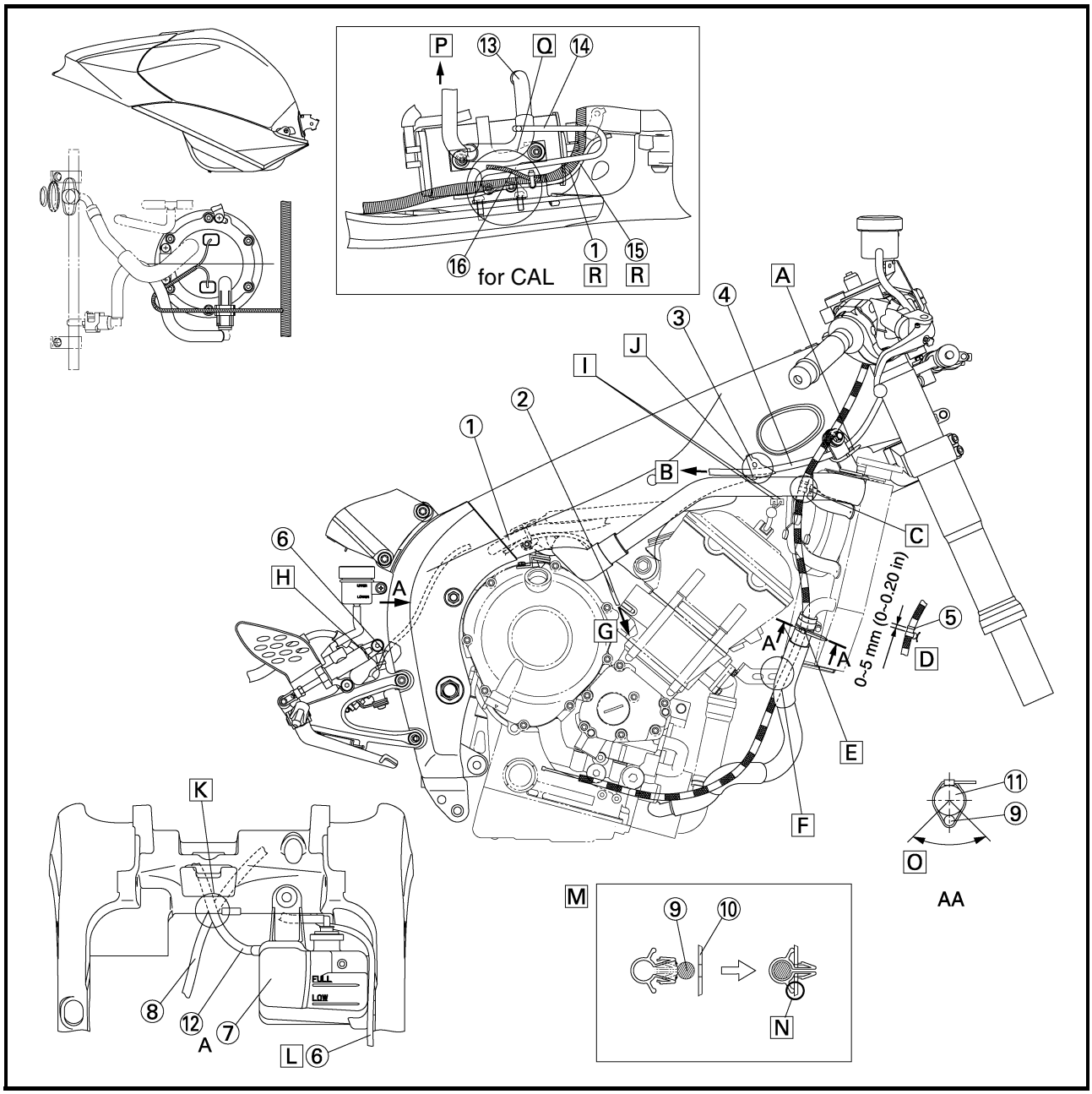
I Clamp should be positioned at the protector lower end of the brake hose and wrapped on the protector.

J Cut the tip leaving 2 to 4mm 0.08 ~ 0.16 in).



① Wire harness
② Crankshaft position sensor lead
③ Heat protector
④ Right handlebar switch lead
⑤ Positioning guide
⑥ Rear brake light switch lead
⑦ Coolant reservoir tank
⑧ Speed sensor lead
⑨ Clutch cable
⑩ Radiator
⑪ Oil cooler outlet hose
⑫ Coolant reservoir tank drain hose
⑬ Breather pipe
⑭ Fuel tank drain hose
⑮ A.C. magneto lead
⑯ Wire harness
⑰ Throttle body lead

A Clamp it after passing between the frame and radiator stay. Point the tip of the clamp (excessive part) to the front side of the vehicle. Fasten the right handlebar switch lead with a clamp.
B To the wire harness
C The clutch cable positioning guide should be above the upper end of the clamp. Fasten the clutch cable with a clamp. (Refer to M)
D Position relation between the clamp and guide.
E Clamp the clamp upper end along the line of lower end of the hose clamp assembly. Point the tip of the clamp (excessive part) to the front side of the vehicle. Clutch cable is what the clamp fastens.
F The clutch cable doesn't project outside the water hose and the cylinder head in the box part in the figure.
G To the engine
H Clamp behind the bracket 3. Cut the tip of the clamp.



I The coupler for the air induction solenoid lead and camshaft sensor lead should be connected above the ignition coil sub wire harness and it should not drop on the cylinder head cover behind the ignition coil.

J Pass the right handlebar switch lead between the frame and heat protector.

K Coolant reservoir tank drain hose should cross with the speed sensor lead under the swingarm bracket. Route the coolant reservoir tank drain hose over the up side of the vehicle.

L Pass the rear brake light switch lead between the swingarm bracket and coolant reservoir tank.

M Release the tip of the clamp and install it to the clutch cable.
Insert the clamp to the hole located on the right back side of the radiator.
Radiator fan motor lead should not be caught while inserting the clamp.

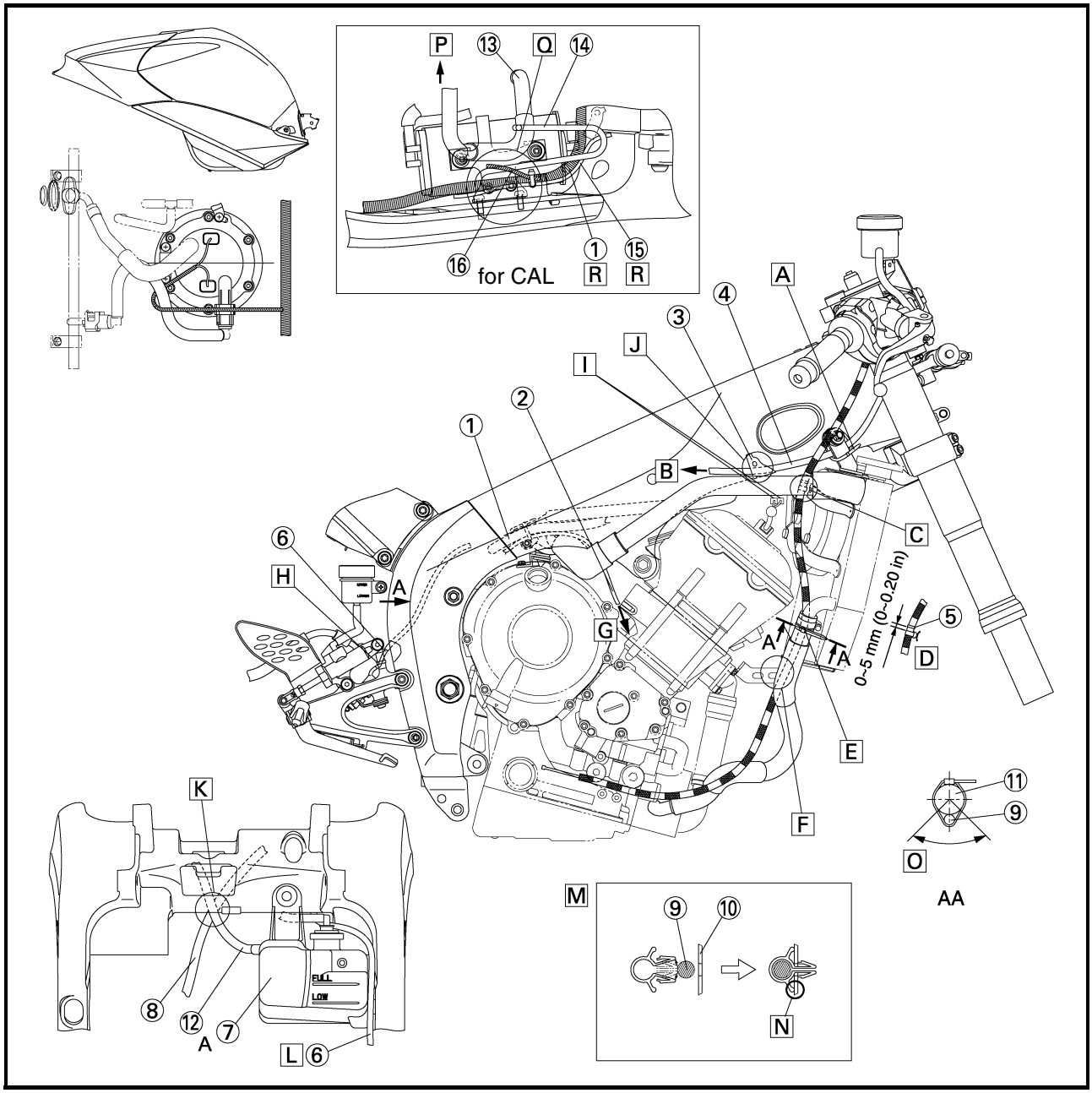
N Push the clamp until it hits the radiator side stay. Radiator fan motor lead should not be caught.

O Clamp the clutch cable so that it is within this specified clamp.

P To the air filter

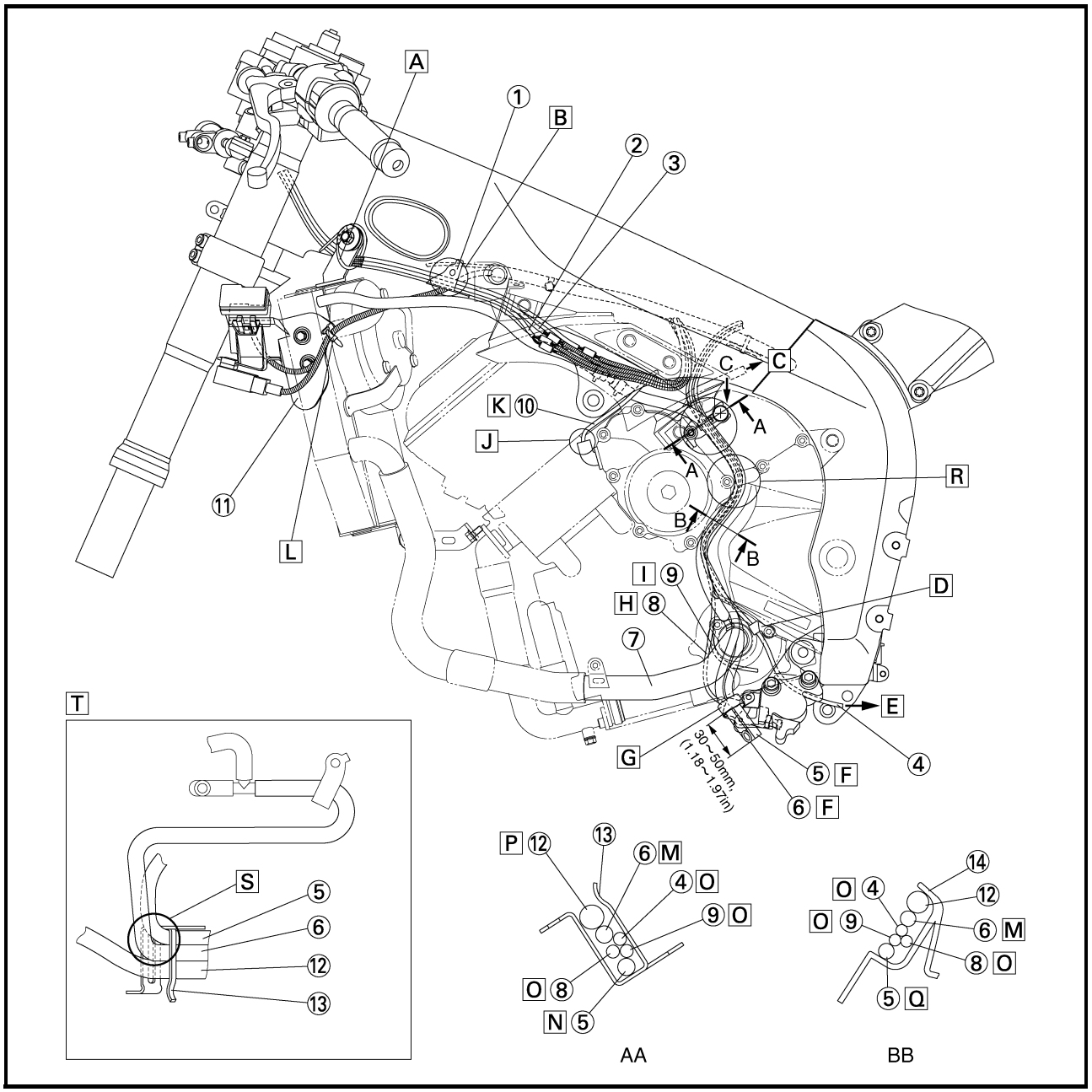
Q Route the fuel tank drain hose over the canister stay and between the breather hose 2 and wire harness. On the front side of the canister stay, let though the bottom of the A.C.magneto lead and the wire harness.

R Route by the upside of vehicle away from the canister stay.

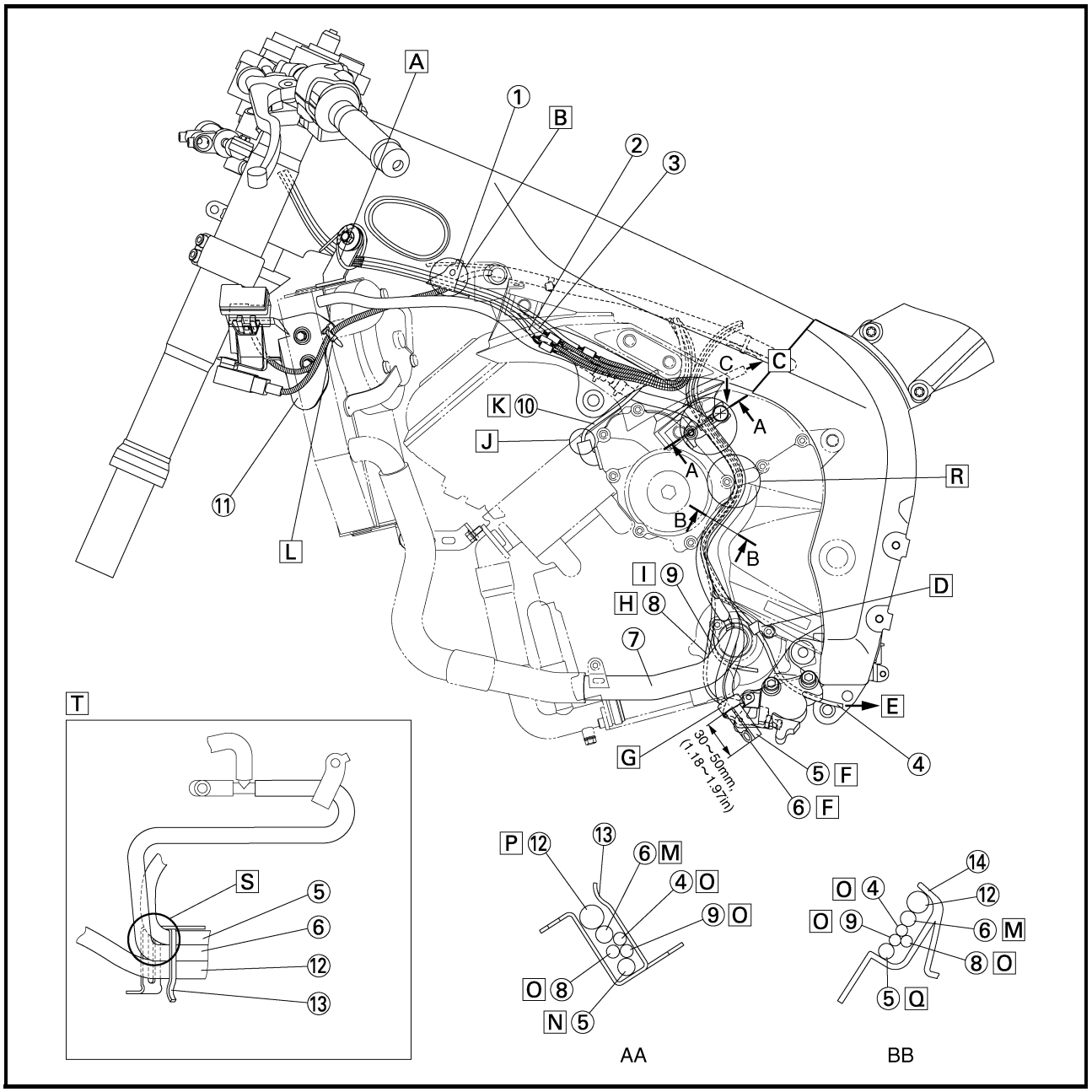


① Heat protector
② Main switch lead
③ Left handlebar switch lead
④ EXUP servo motor lead
⑤ Coolant reservoir tank drain hose
⑥ Fuel tank drain hose
⑦ Coolant outlet pipe
⑧ Sidestand switch lead
⑨ Oil level switch lead
⑩ A.C.magneto lead
⑪ Fuse box stay
⑫ Water hose
⑬ Stay 1
⑭ Chain case cover

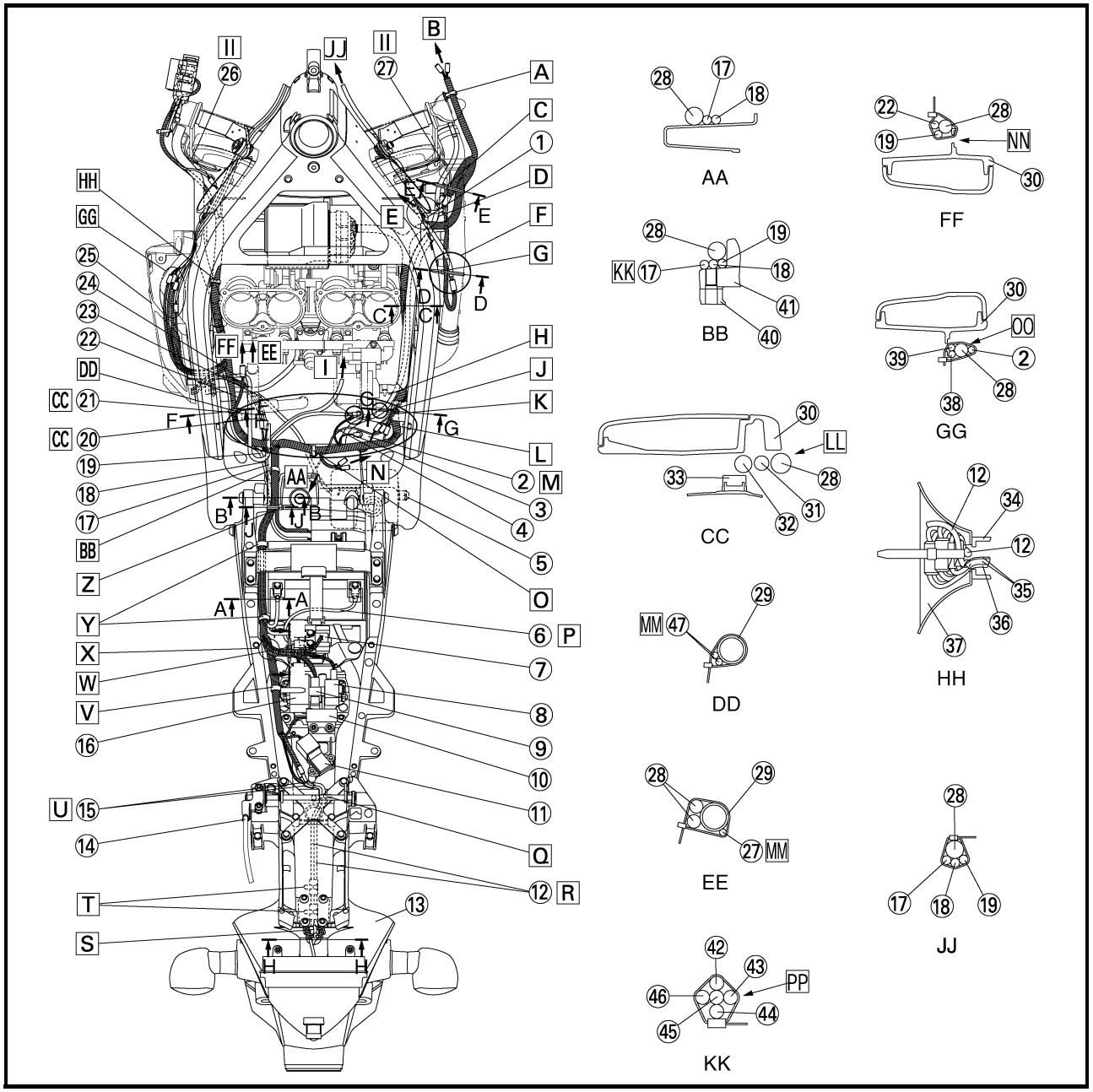
[A] Clamp the leads so that they are positioned inner of the vehicle than the washer position after routing them between the frame and radiator stay. Align the clamp position with the taping sections of leads. Point the tip of the clamp (excessive part) to the down front side of the vehicle. What the clamp fastens at this stage are the handlebar switch and main switch leads.
[B] Pass the main switch lead and left handlebar switch lead between the frame and the heat protector.
[C] To the coolant reservoir tank
[D] Fold back the clamp and secure it after passing the lead through the clamp.
[E] To the EXUP servo motor
[F] Pass the coolant reservoir tank drain hose and fuel tank drain hose through the clamp from the outer side of the water pump inlet pipe after routing it behind the water pump breather hose. The lengths of two hose ends are allowed to be random. Any direction of cut edges can be accepted. (Only for the fuel tank drain hose)



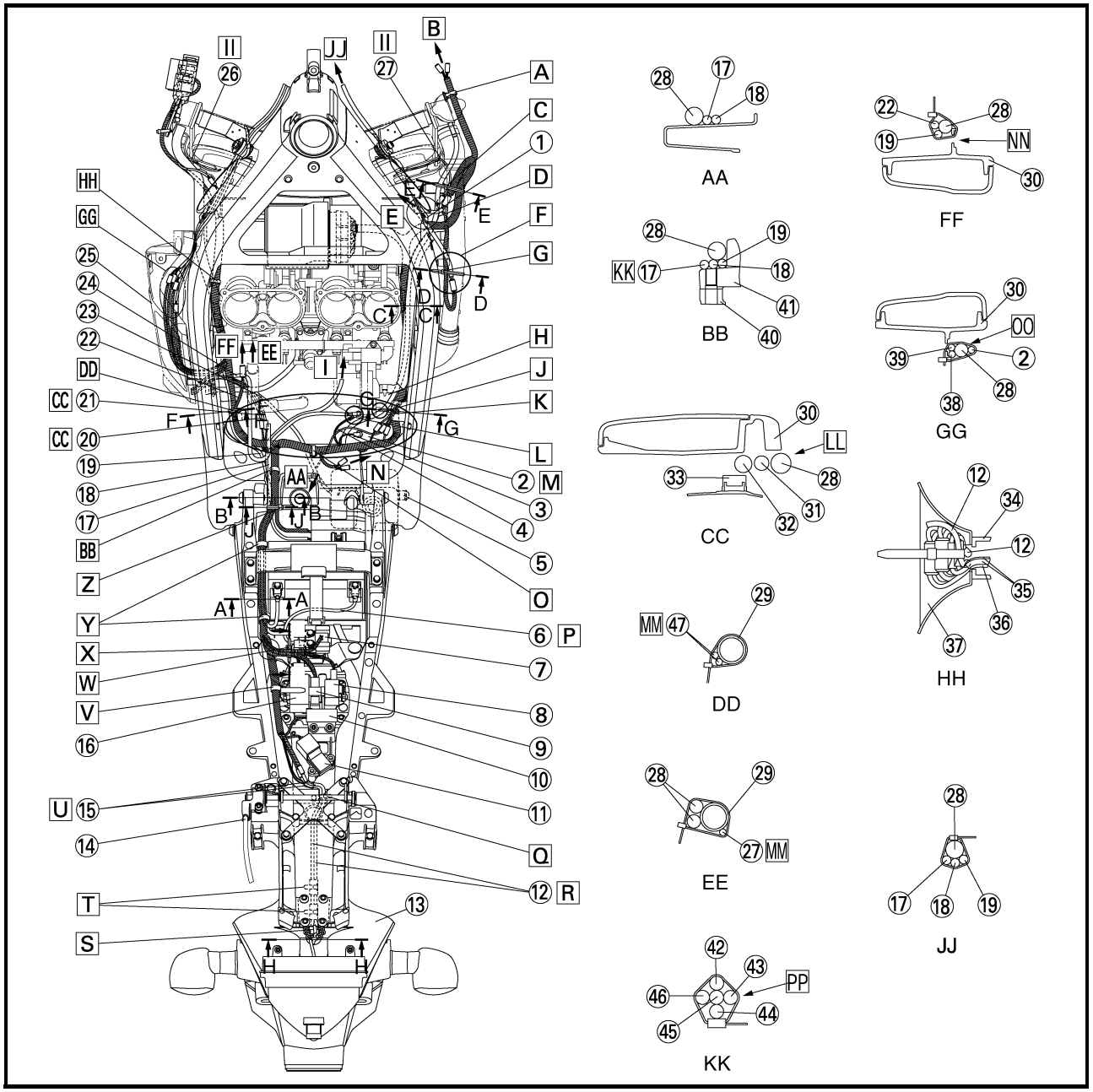
[G] Clamp the fuel tank drain hose and fuel tank breather hose.
[H] Route the lead by the inside of the water hose and water pipe.
[I] Route the lead by the inside of the water hose and water pipe.
[J] There should be no exposure of bared conductors due to the displacement of the tube.
[K] Route by the outside of vehicle away from the water hose.
[L] Point the tip of the clamp (excessive part) to the down rear side of the vehicle. Fasten the wire harness with a clamp.
[M] The outside of the vehicle.
[N] Inner most section of the vehicle.
[O] Can be routed in any order.
[P] Route the water hose so that it is placed at the outermost position finally after routing other leads and hoses in the guide.
[Q] Route the coolant reservoir tank drain hose so that it is routed at the innermost position to each hose and lead.
[R] Arrange so as not for each hose to cross in the part between "BB" from the section "AA" which is in the illustration.
[S] Align the molded part of the fuel tank drain hose with the stay 1.
[T] Routing of the fuel tank drain hose.
EXUP servo motor, oil level switch and sidestand switch leads are omitted in this drawing.



① Heat protector
② Crankshaft position sensor lead
③ Neutral switch lead
④ Ground lead
⑤ Coolant reservoir tank
⑥ Battery positive lead
⑦ Starter relay
⑧ Turn signal relay
⑨ Main fuse
⑩ Lean angle sensor
⑪ Atmospheric pressure sensor
⑫ Tail /brake light lead
⑬ Rear fender
⑭ Seat lock cable
⑮ Anti safety alarm coupler
⑯ Starting circuit cut-off relay
⑰ Battery negative lead
⑱ Starter motor lead
⑲ A.C.magneto lead
⑳ Oil level switch lead
㉑ Sidestand switch lead
㉒ Throttle body lead
㉓ Coolant reservoir tank drain hose
㉔ Fuel tank drain hose
㉕ Cover 7
㉖ Radiator fan motor lead (left)
㉗ Radiator fan motor lead (right)
㉘ Wire harness
㉙ Pipe 3
㉚ Frame
㉛ Coolant reservoir tank hose
㉜ Thermo stat assembly breather hose
㉝ Throttle body side cap
㉞ Mud guard
㉟ Turn signal light lead
㊱ License plate light lead
㊲ Rear fender rib
㊳ Speed sensor lead
㊴ Rear brake light switch lead
㊵ Rear frame
㊶ Swingarm bracket
㊷ Main fuse lead
㊸ Starting circuit cut-off relay lead
㊹ Turn signal light relay lead
㊺ Starter relay lead
㊻ Main fuse lead (To the battery positive lead)
㊼ Right handlebar switch lead



A Pass the wire harness through the clamp inserted to the radiator stay.
B To the headlight lead
C Clamp the lead between three protrusions of the pipe (the first and second parts from the vehicle front). Point the tip of the clamp (excessive part) to the inside of the vehicle.
D To the vehicle right side diagram
E To the engine
F Clamp the lead between three protrusions of the pipe (the inside and outside of the vehicle).
G Point the tip of the clamp (excessive part) to the inside of the vehicle.
H All hoses and leads should be routed over the vehicle's upper side above the heat protector.
I To the starter motor
J Fasten the wire harness, clank shaft position sensor lead, rear brake light switch lead and speed sensor lead with a clamp. Then, point the tip of the clamp (cut the tip of the clamp leaving 2 to 4 mm (0.08 to 0.16 in).) to the inside of the vehicle.
K Pass the water hose lower side of the thermostat, and between the ground lead and the neutral switch.
L Install the leads so that the engine ground lead is positioned lower and the battery negative lead to be upper. Install the protrusion of each lead to be above the vehicle.
M Route the crankshaft position sensor lead under the wire harness.
N To the fuel pump
O Clamp the wire harness winding in and insert it to the frame hole.



P Pass the lead through inside of the battery band.

Q Press on the tip of the clamp after passing the leads through it.

R Insert the tail /brake light lead to the rear frame hole.

S Insert the clamp from the vehicle front to the rear side and fasten each lead, coupler and onionhead to the fender rib, and then point the tip of the clamp (excessive part) to the upper side of the vehicle.

T Hold down the clamp tips after passing each lead.

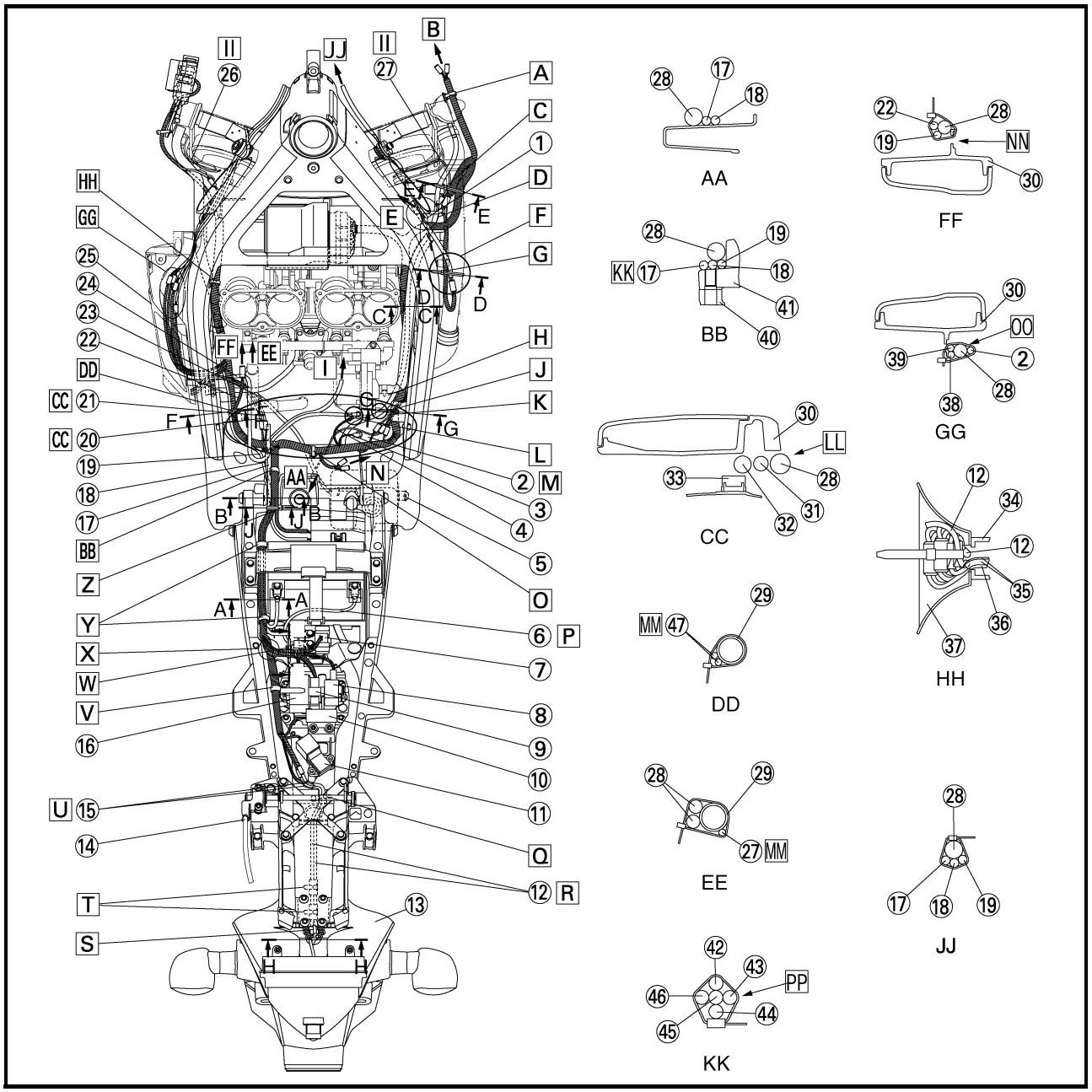
U Make sure to position the coupler at the downmost position of leads. However, the coupler should be set in the rear frame so that it is not caught by the seat bottom, cover and other components.

V Point the tip of the clamp (excessive part) to the inside of the vehicle. Fasten the wire harness with a clamp.

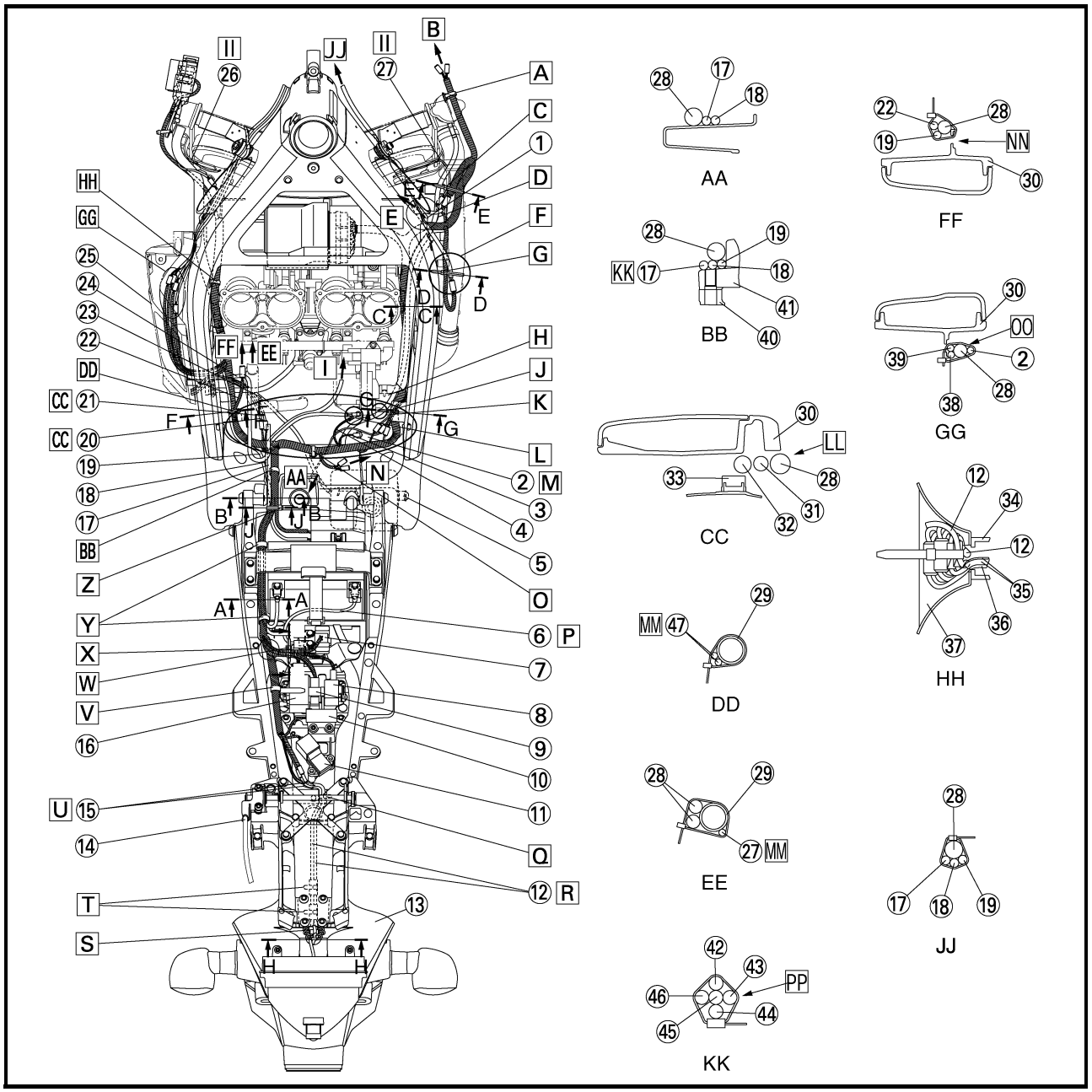
W Point the tip of the clamp (surplus section) to the rear side of the vehicle. Fasten the starter relay lead, turn signal relay lead, main fuse lead, main fuse lead (from the battery positive lead) and starting circuit cut-off relay lead with a clamp.

X Route each lead upper side the wire harness.

Y Fasten the wire harness, battery negative lead and starter motor lead with a clamp. Point the tip of the clamp (excessive part) to the inside of the vehicle.



Z Point the tip of the clamp (excessive part) to the down side of the vehicle. Fasten the wire harness, battery negative lead, A.C.magneto lead and starter motor lead with a clamp.
AA To the speed sensor
BB Insert the wire harness wrapping clamp to the hole of the frame.
CC After passing the lead between the wire harness and starter motor leads, fastening by the clamp should be cancelled and route the lead under the idle remote controller.
DD Fasten the wire harness, A.C.magneto lead, and throttle body lead with a clamp. Point the tip of the clamp (cut the tip of the clamp leaving 2 to 4 mm (0.08 to 0.16 in).) to the inside of the vehicle.
EE To the air filter
FF To the throttle body
GG To install the cover 7, install so as to set each coupler in the cover. Make sure that each lead is not caught by the cover 7.
HH Insert the wire harness wrapping clamp to the hole of the frame.
II Make sure that the lead is fastened with the guide of the radiator stay.
JJ To the right handlebar switch
KK Battery negative lead should not run on the swingarm bracket.
LL The hoses should not be located higher than the throttle body side cap over the up side of the vehicle.

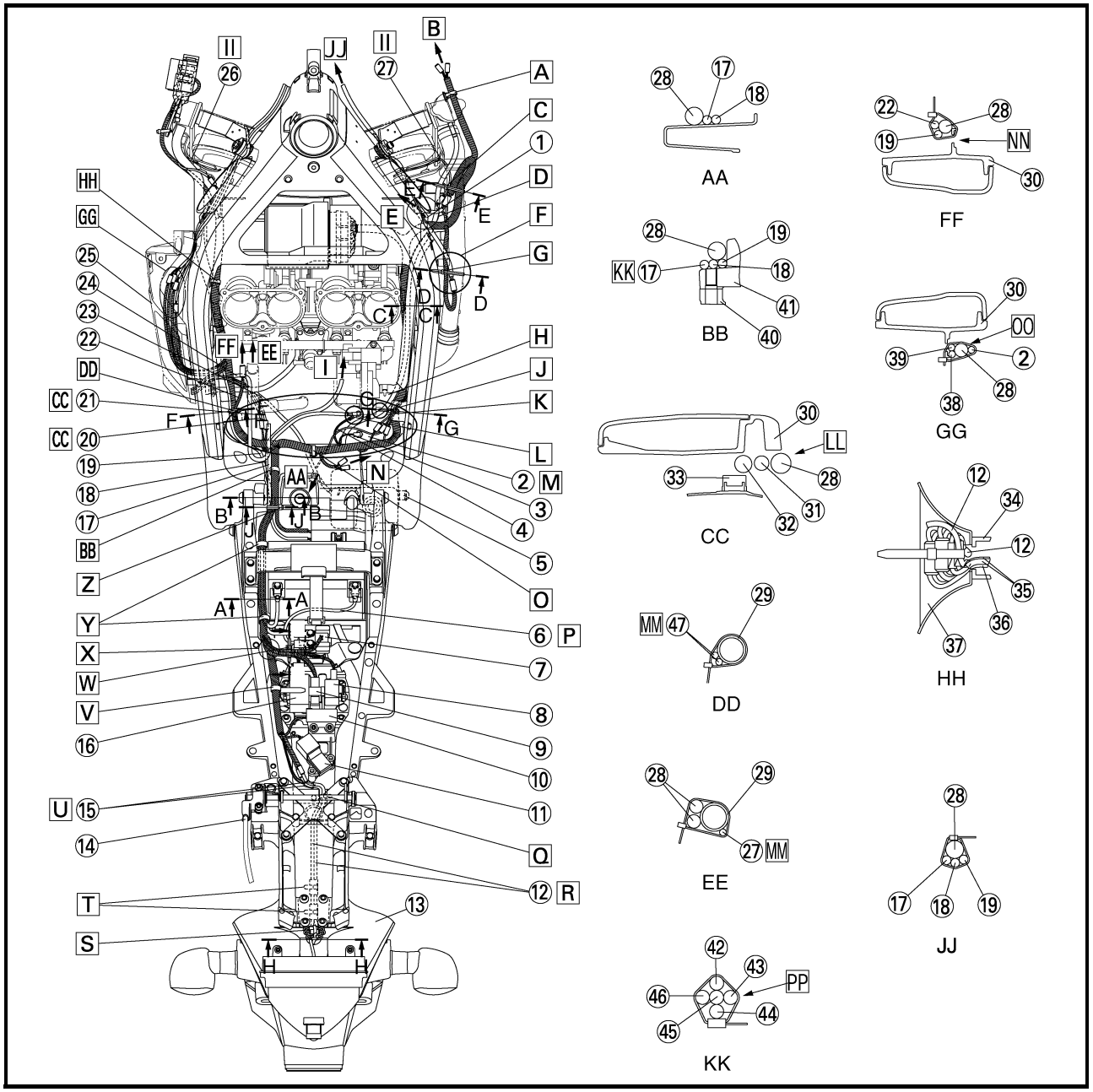


MM Do not place it beyond pipe 3 in the direction to the external part of the vehicle.

NN Route each lead higher than the frame plate, pass it to the inside of the vehicle from the hole. Leads should be routed in random order. Clamp can be inserted in any direction.

OO Route each lead lower than the frame plate. Leads should be routed in random order. Clamp can be inserted in any direction.

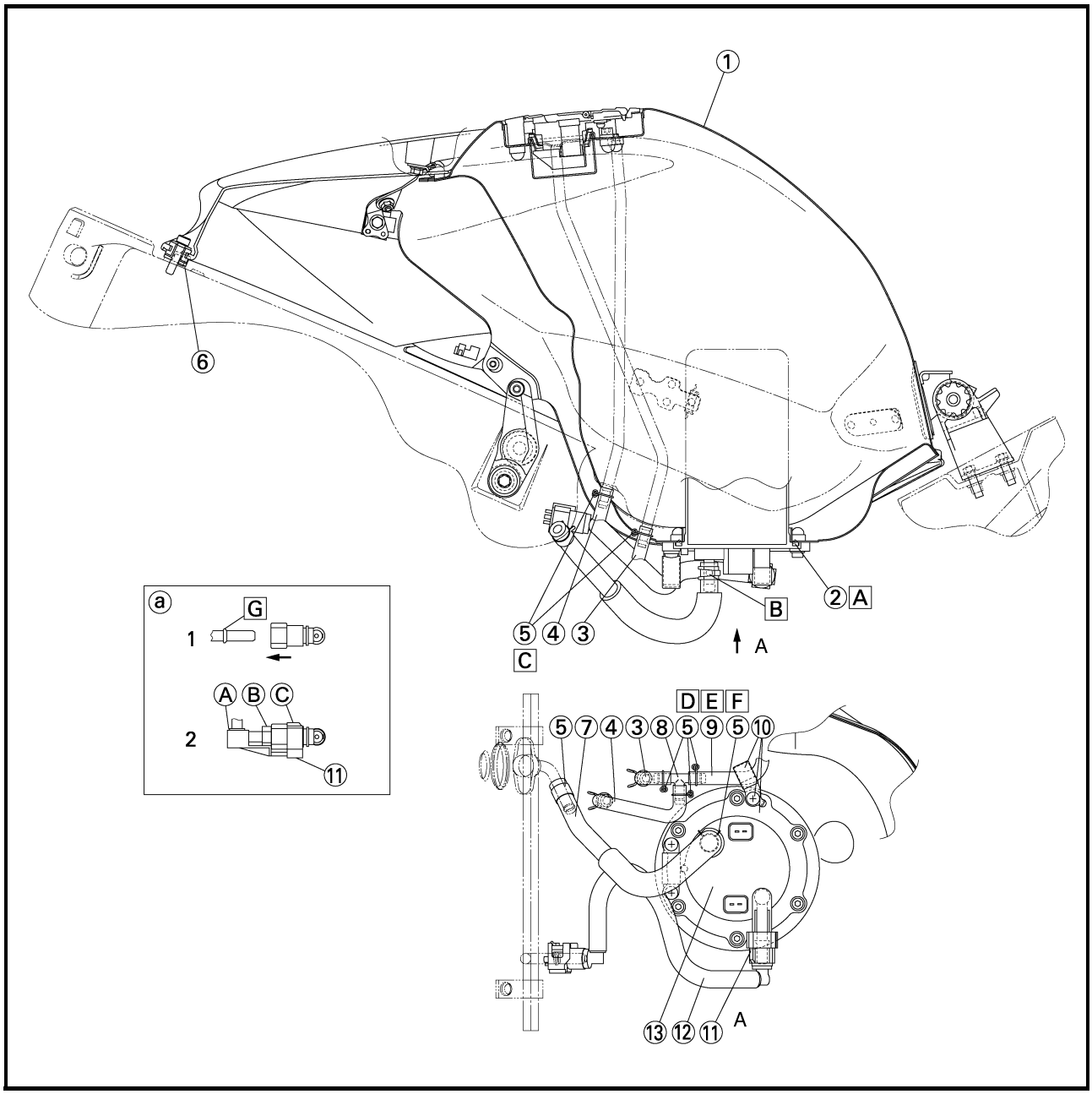
PP Route the leads in random order.



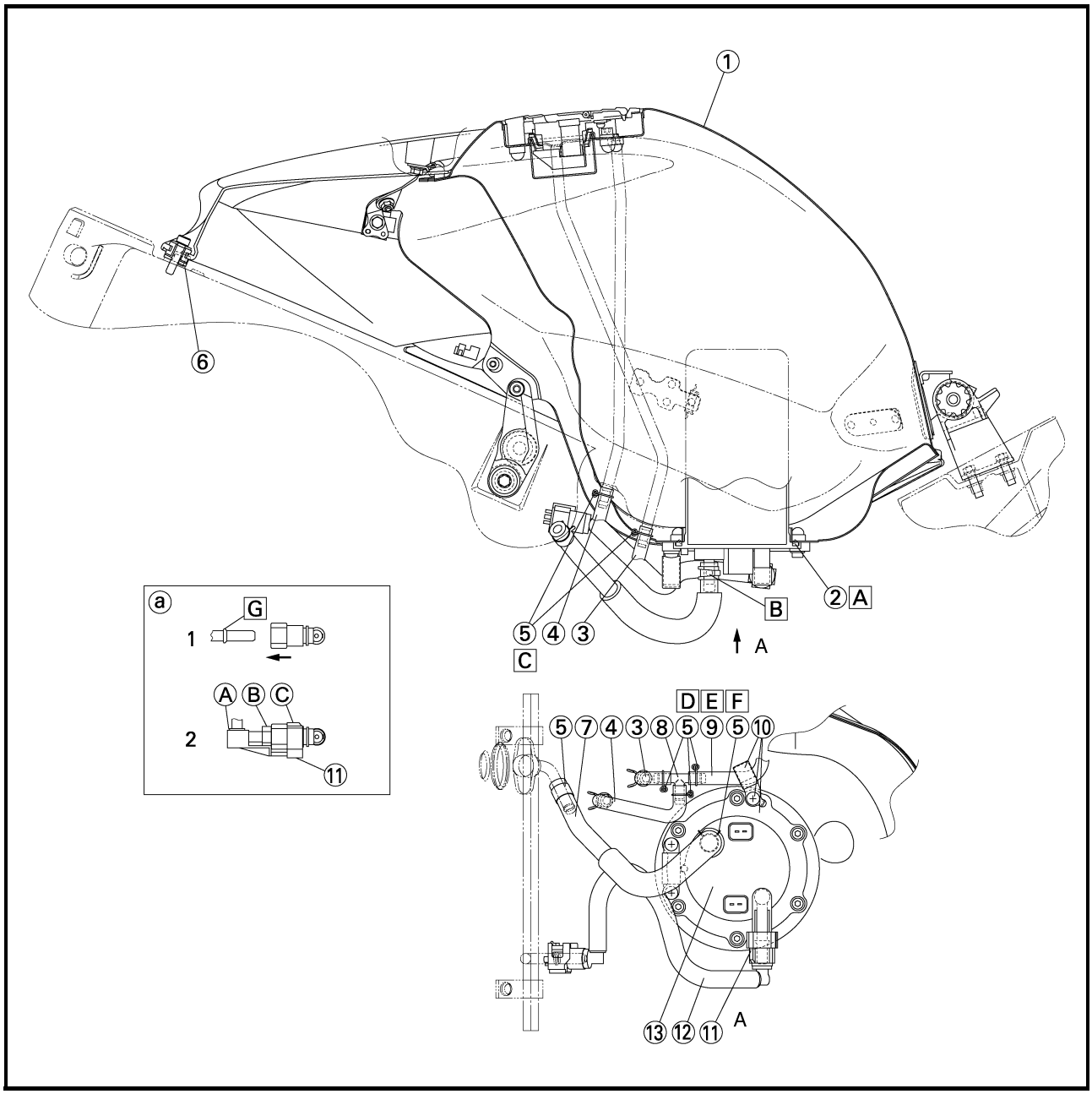
① Fuel tank
② O-ring
③ Fuel tank drain hose
④ Fuel tank breather hose
⑤ Clip
⑥ Air filter stay
⑦ Fuel hose 2
⑧ 3 way connector
⑨ Pipe
⑩ Fuel tank bracket
⑪ Fuel hose clamp
⑫ Fuel hose 1
⑬ Fuel pump assembly

[A] Install the lip of O-ring facing upward.
[B] Install the part pointing the white paint part of the hose to the left side of the vehicle.
[C] Any direction of the clip grip can be accepted.
[D] Install the clip grip as specified in the drawing.
[E] Install the part pointing the white paint part of the hose to the left side of the vehicle.
[F] Point the clip grip to the left side of the vehicle.
ⓐ Fuel piping connector attachment directions. (fuel pump side) Always use hands to connect/disconnect the connector without using tool.
1. Insert the connector until the click sound is heard and check that the connector does not come off. Make sure that no foreign matter is caught in the sealing section. (It is prohibited to wear the cotton work gloves or equivalent coverings.)

[G] This part works as a dropout stopper.

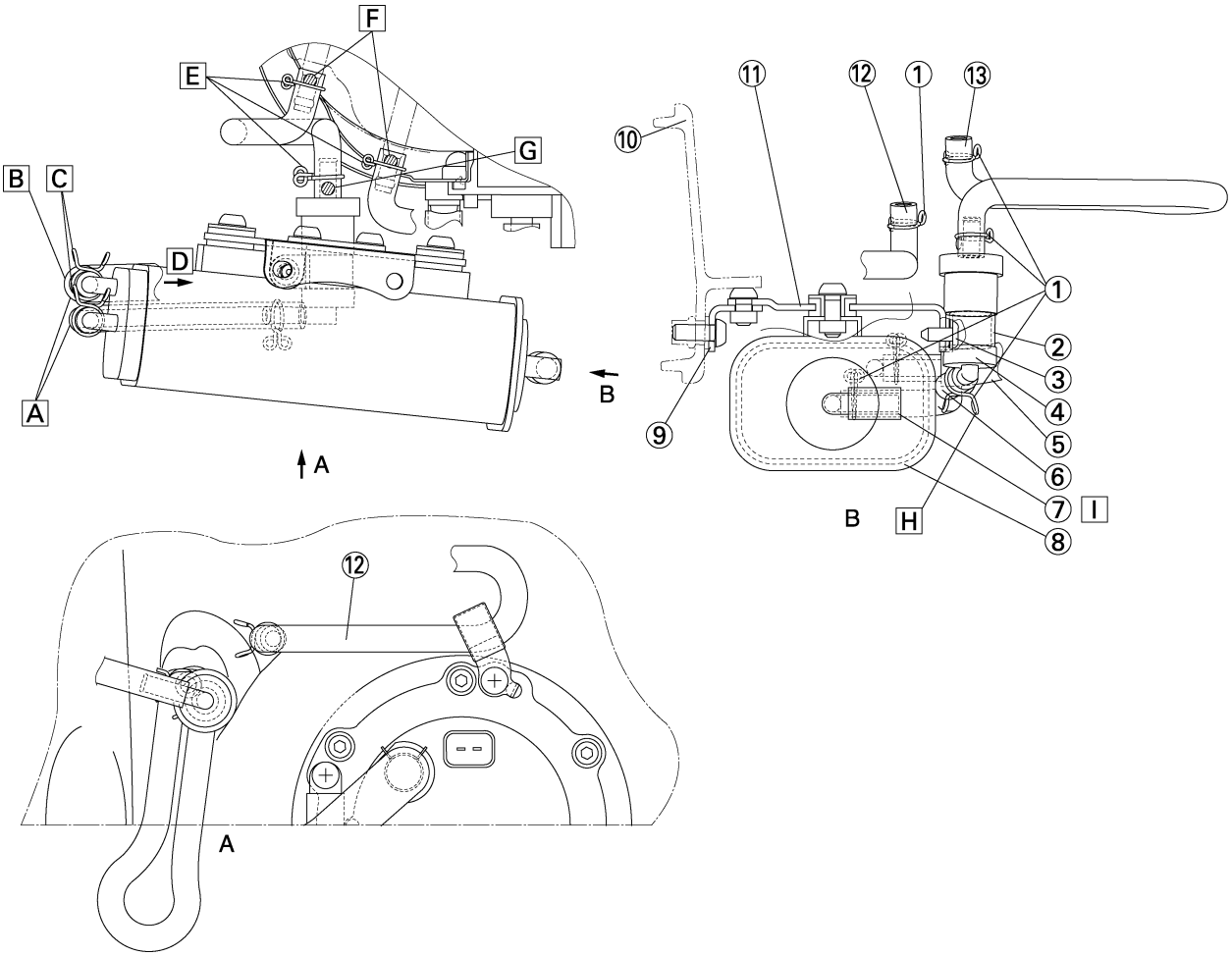


2. After Item 1 mentioned above is finished, check that the clamp is inserted from the down side, and Ⓐ, Ⓑ and Ⓒ-sections are perfectly equipped.



for CAL
① Clip
② Clamp
③ Rivet
④ Roll over valve assembly
⑤ Balance pipe
⑥ Pipe 4
⑦ Canister hose
⑧ Canister assembly
⑨ Canister bracket
⑩ Frame
⑪ Canister stay
⑫ Pipe 2
⑬ Pipe 3

[A] Insert the hose until it reaches the R-bottom of the pipe.
[B] Install the part pointing the white paint mark to the front side of the vehicle.
[C] Point the clip grip to the upper side of the vehicle.
[D] To the throttle body
[E] The knob of the clip can be positioned in any direction.
[F] Install the part pointing the white paint mark to the left side of the vehicle.
[G] Install the part pointing the yellow paint mark to the left side of the vehicle.
[H] Point the clip grip to the down side of the vehicle.
[I] Insert the hose so that its tip of the nipple does not protrude.



EAS00036

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.

PERIODIC MAINTENANCE CHART FOR THE EMISSION CONTROL SYSTEM

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1,000 km) or 1 month	4,000 mi (7,000 km) or 6 months	8,000 mi (13,000 km) or 12 months	12,000 mi (19,000 km) or 18 months	16,000 mi (25,000 km) or 24 months	20,000 mi (31,000 km) or 30 months
1	*	**Fuel line**	• Check fuel hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
2	*	**Spark plugs**	• Check condition. • Adjust gap and clean. • Replace every 8,000 mi (13,000 km) or 12 months.		√	Replace.	√	Replace.	√
3	*	**Valve clearance**	• Check and adjust valve clearance when engine is cold.	Every 26,600 mi (42,000 km)					
4	*	**Crankcase breather system**	• Check breather hose for cracks or damage. • Replace if necessary.		√	√	√	√	√
5	*	**Fuel injection**	• Check and adjust engine idle speed and synchronization.	√	√	√	√	√	√
6	*	**Exhaust system**	• Check for leakage. • Tighten if necessary. • Replace gasket(s) if necessary.		√	√	√	√	√
7	*	**Evaporative emission control system (For California only)**	• Check control system for damage. • Replace if necessary.				√		√
8	*	**Air induction system**	• Check the air cut-off valve, reed valve, and hose for damage. • Replace any damaged parts if necessary.				√		√

GENERAL MAINTENANCE AND LUBRICATION CHART

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1,000 km) or 1 month	4,000 mi (7,000 km) or 6 months	8,000 mi (13,000 km) or 12 months	12,000 mi (19,000 km) or 18 months	16,000 mi (25,000 km) or 24 months	20,000 mi (31,000 km) or 30 months
1	*	**Air filter element**	• Check condition and damage. • Replace if necessary.		√	√	√	√	√
2	*	**Clutch**	• Check operation. • Adjust or replace cable.	√	√	√	√	√	√
3	*	**Front brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
4	*	**Rear brake**	• Check operation, fluid level, and for fluid leakage. • Replace brake pads if necessary.	√	√	√	√	√	√
5	*	**Brake hoses**	• Check for cracks or damage.		√	√	√	√	√
			• Replace.	Every 4 years					
6	*	**Wheels**	• Check runout and for damage. • Replace if necessary.		√	√	√	√	√
7	*	**Tires**	• Check tread depth and for damage. • Replace if necessary. • Check air pressure. • Correct if necessary.		√	√	√	√	√
8	*	**Wheel bearings**	• Check bearings for smooth operation. • Replace if necessary.		√	√	√	√	√

No.		ITEM	ROUTINE	INITIAL	ODOMETER READINGS				
				600 mi (1,000 km) or 1 month	4,000 mi (7,000 km) or 6 months	8,000 mi (13,000 km) or 12 months	12,000 mi (19,000 km) or 18 months	16,000 mi (25,000 km) or 24 months	20,000 mi (31,000 km) or 30 months
9	*	**Swingarm pivot bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease.			√		Repack.	
10		**Drive chain**	• Check chain slack'alignment and condition. • Adjust and lubricate chain with a special O-ring chain lubricant thoroughly.	Every 500 mi (800 km) and after washing the vehicle or riding in the rain					
11	*	**Steering bearings**	• Check bearing assemblies for looseness. • Moderately repack with lithium-soap-based grease every 16,000 mi (2,5000 km) or 24 months.	√	√	√	√	Repack.	√
12	*	**Steering damper**	• Check operation and for oil leakage.		√	√	√	√	√
13	*	**Chassis fasteners**	• Check all chassis fitting and fasteners. • Correct if necessary.		√	√	√	√	√
14		**Brake and clutch lever pivot shafts**	• Apply lithium-soap-based grease (all-purpose grease) lightly.		√	√	√	√	√
15		**Sidestand pivot**	• Check operation. • Apply lithium-soap-based grease (all-purpose grease) lightly.		√	√	√	√	√
16	*	**Sidestand switch**	• Check operation and replace if necessary.	√	√	√	√	√	√
17	*	**Front fork**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
18	*	**Shock absorber assembly**	• Check operation and for oil leakage. • Replace if necessary.		√	√	√	√	√
19	*	**Rear suspension link pivots**	• Check operation. • Correct if necessary.			√		√	
20		**Engine oil**	• Change (warm engine before draining.)	√	√	√	√	√	√
21	*	**Engine oil filter cartridge**	• Replace.	√		√		√	
22	*	**Cooling system**	• Check hoses for cracks or damage. • Replace if necessary.		√	√	√	√	√
			• Change with ethylene glycol antifreeze coolant every 24 months.					Change.	
23	*	**EXUP system**	• Check operation, cable free play and pulley position.	√	Every 12,000 mi (19,000 km)				
24	*	**Front and rear brake switches**	• Check operation.	√	√	√	√	√	√
25	*	**Control cables**	• Apply Yamaha chain and cable lube or engine oil SAE 10W-30 thoroughly.	√	√	√	√	√	√
26	*	**Throttle grip housing and cable**	• Check operation and free play • Adjust the throttle cable free play if necessary. • Lubricate the throttle grip housing and cable.		√	√	√	√	√
27	*	**Lights, signals and switches**	• Check operation. • Adjust headlight beam.	√	√	√	√	√	√

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

NOTE:

From 24,000 mi (37,000 km) or 36 months, repeat the maintenance intervals starting from 8,000 mi (13,000 km) or 12 months.

NOTE:

- Air filter
  - This model's air filter is equipped with a disposable oil-coated paper element, which must not be cleaned with compressed air to avoid damaging it.
  - The air filter element needs to be replaced more frequently when riding in unusually wet or dusty areas.
- Hydraulic brake service
  - After disassembling the brake master cylinders and calipers, always change the fluid. Regularly check the brake fluid levels and fill the reservoirs as required.
  - 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.

EAS00155
CHASSIS
ADJUSTING THE FRONT FORK LEGS
(YZF-R1LE)

The following procedure applies to both of the front fork legs.

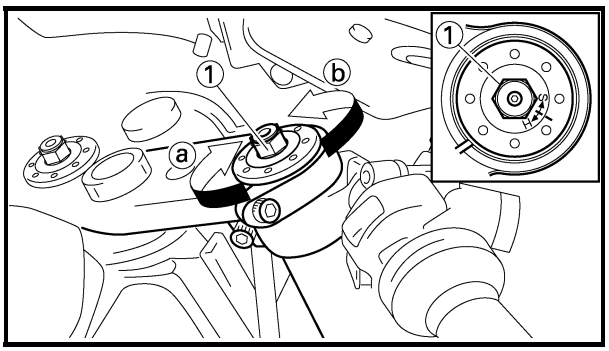
⚠ WARNING

- **Always adjust both front fork legs evenly. Uneven adjustment can result in poor handling and loss of stability.**
- **Securely support the vehicle so that there is no danger of it falling over.**

Spring preload

CAUTION:

Never go beyond the maximum or minimum adjustment positions.



1. Adjust:
   - spring preload

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

a. Turn the adjusting bolt ① in direction ⓐ or ⓑ.

NOTE:

Be sure to align the alignment mark on the adjusting bolt with the alignment mark on the front fork cap.

Direction ⓐ	**Spring preload is increased (suspension is harder).**
Direction ⓑ	**Spring preload is decreased (suspension is softer).**

Adjusting positions
Minimum: 11 turns in direction ⓑ*
Maximum: 2 turns in direction ⓐ*
***from the standard position**

NOTE:

To find the standard position, turn the adjusting bolt in direction ⓐ until it stop.

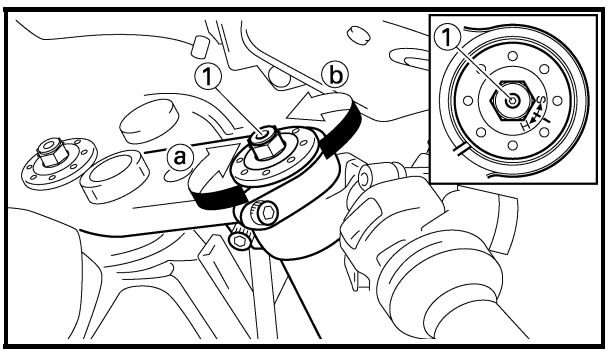
1. If the alignment mark on the adjusting bolt is positioned past the alignment mark on the front fork cap, turn the adjusting bolt in direction ⓑ until the alignment marks match.
   Turn the adjusting bolt 3 complete turns in direction ⓑ, and be sure the alignment mark match.
   This is the standard position.
2. If the alignment mark on the adjusting bolt is positioned before the alignment mark on the front fork cap, turn the adjusting bolt in direction ⓑ until the alignment marks match.
   Turn the adjusting bolt 2 complete turns in direction ⓑ, and be sure the alignment mark match.
   This is the standard position.

Rebound damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

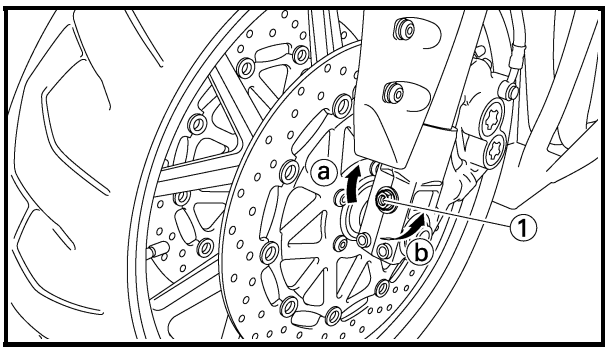
1. Adjust:
   • rebound damping



a. Turn the adjusting screw ① in direction ⓐ or ⓑ.

Direction ⓐ	**Rebound damping is increased (suspension is harder).**
Direction ⓑ	**Rebound damping is decreased (suspension is softer).**

Adjusting positions
Minimum: 17 clicks in direction ⓑ*
Standard: 12 clicks in direction ⓑ *
Maximum: 1 clicks in direction ⓑ *
*** with the adjusting screw fully turned-in direction ⓐ**



Compression damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
   • compression damping

▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼▼

a. Turn the adjusting screw ① in direction ⓐ or ⓑ.

Direction ⓐ	**Compression damping is increased (suspension is harder).**
Direction ⓑ	**Compression damping is decreased (suspension is softer).**

Adjusting positions
Minimum:20 clicks in direction ⓑ*
Standard: 12 clicks in direction ⓑ*
Maximum: 1 clicks in direction ⓑ*
*** with the adjusting screw fully turned-in direction ⓐ**

▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲▲

EAS00158

ADJUSTING THE REAR SHOCK ABSORBER ASSEMBLY

(YZF-R1LE)

⚠ WARNING

Securely support the vehicle so that there is no danger of it falling over.

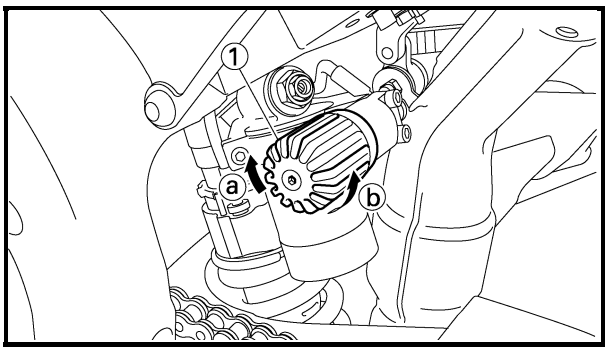
Spring preload

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
   • spring preload

a. Turn the adjusting knob ① in direction ⓐ or ⓑ.



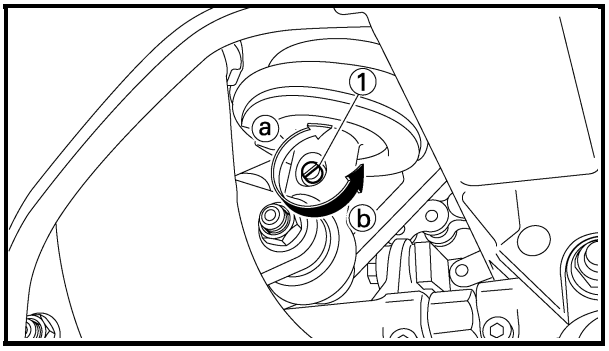
Direction ⓐ	**Spring preload is increased (suspension is harder).**
Direction ⓑ	**Spring preload is decreased (suspension is softer).**

Adjusting positions
Minimum: 0 turns in direction ⓐ*
Standard: 6 turns in direction ⓐ*
Maximum: 20 turns in direction ⓐ*
***with the adjusting knob fully turned-in direction ⓑ**

Rebound damping

CAUTION:

Never go beyond the maximum or minimum adjustment positions.



1. Adjust:
   • rebound damping

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a. Turn the adjusting screw ① in direction ⓐ or ⓑ.

Direction ⓐ	**Rebound damping is increased (suspension is harder).**
Direction ⓑ	**Rebound damping is decreased (suspension is softer).**

Adjusting positions
Minimum: 18 clicks in direction ⓑ *
Standard: 14 clicks in direction ⓑ*
Maximum: 1 clicks in direction ⓑ*
*** with the adjusting screw fully turned-in direction ⓐ**

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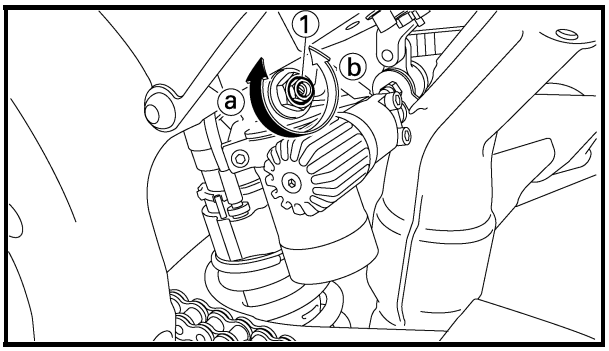
Compression damping (fast compression damping)

CAUTION:

Never go beyond the maximum or minimum adjustment positions.



1. Adjust:
   • fast compression damping

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a. Turn the adjusting bolt ① in direction ⓐ or ⓑ.

Direction ⓐ	**Compression damping is increased (suspension is harder).**
Direction ⓑ	**Compression damping is decreased (suspension is softer).**

Adjusting positions
Minimum: 42 clicks in direction ⓑ *
Standard: 30 clicks in direction ⓑ*
Maximum: 1 clicks in direction ⓑ*
*** with the adjusting screw fully turned-in direction ⓐ**

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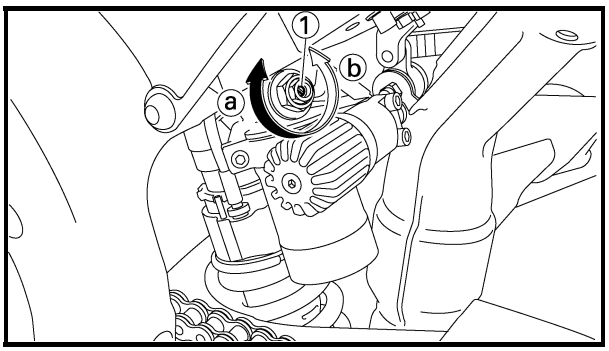

Compression damping (slow compression damping)

CAUTION:

Never go beyond the maximum or minimum adjustment positions.

1. Adjust:
   • slow compression damping

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a. Turn the adjusting screw ① in direction ⓐ or ⓑ.

Direction ⓐ	**Compression damping is increased (suspension is harder).**
Direction ⓑ	**Compression damping is decreased (suspension is softer).**

Adjusting positions
Minimum: 17 clicks in direction ⓑ *
Standard: 10 clicks in direction ⓑ*
Maximum: 1 clicks in direction ⓑ*
*** with the adjusting screw fully turned-in direction ⓐ**

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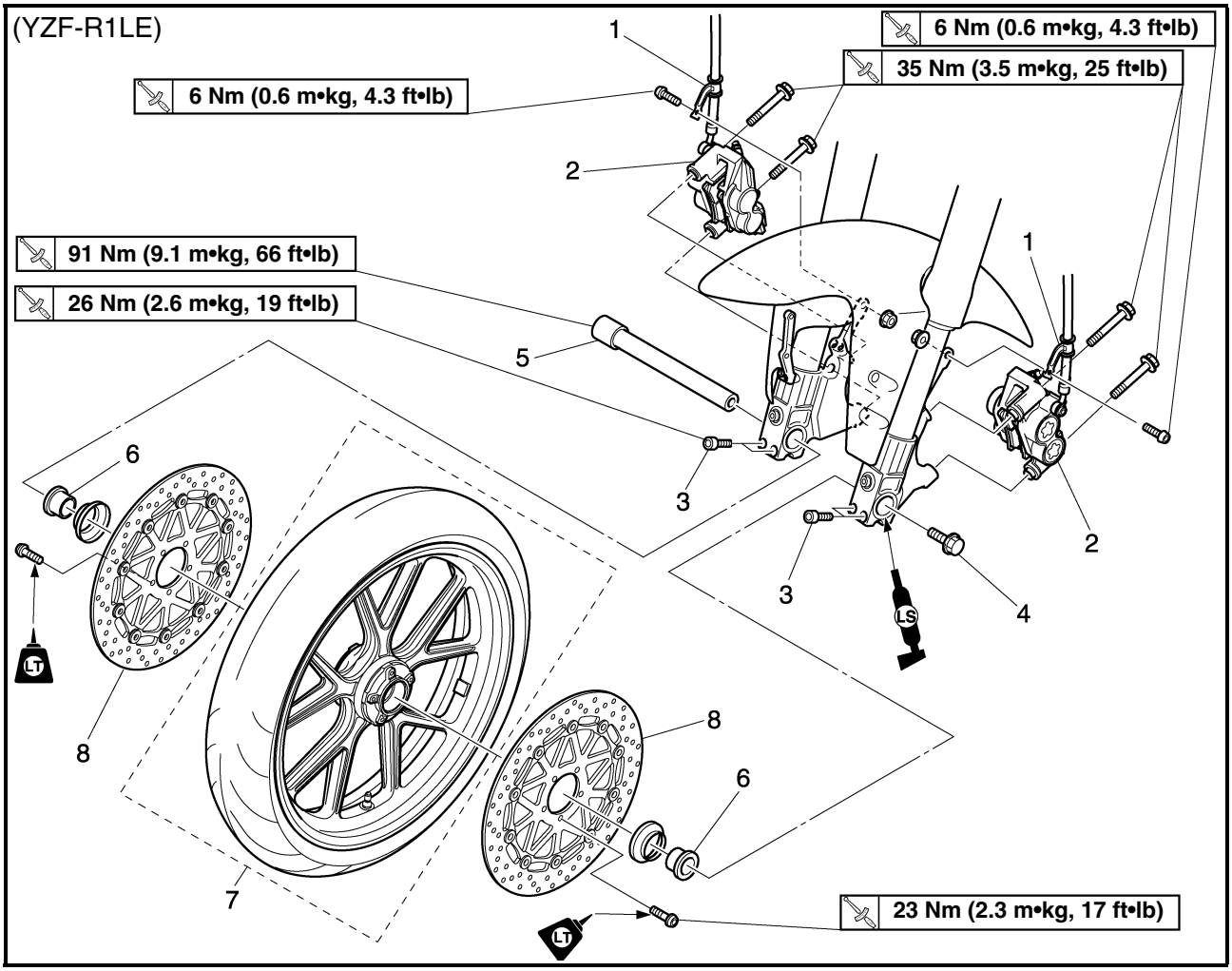
EAS00514

CHASSIS

FRONT WHEEL AND BRAKE DISCS

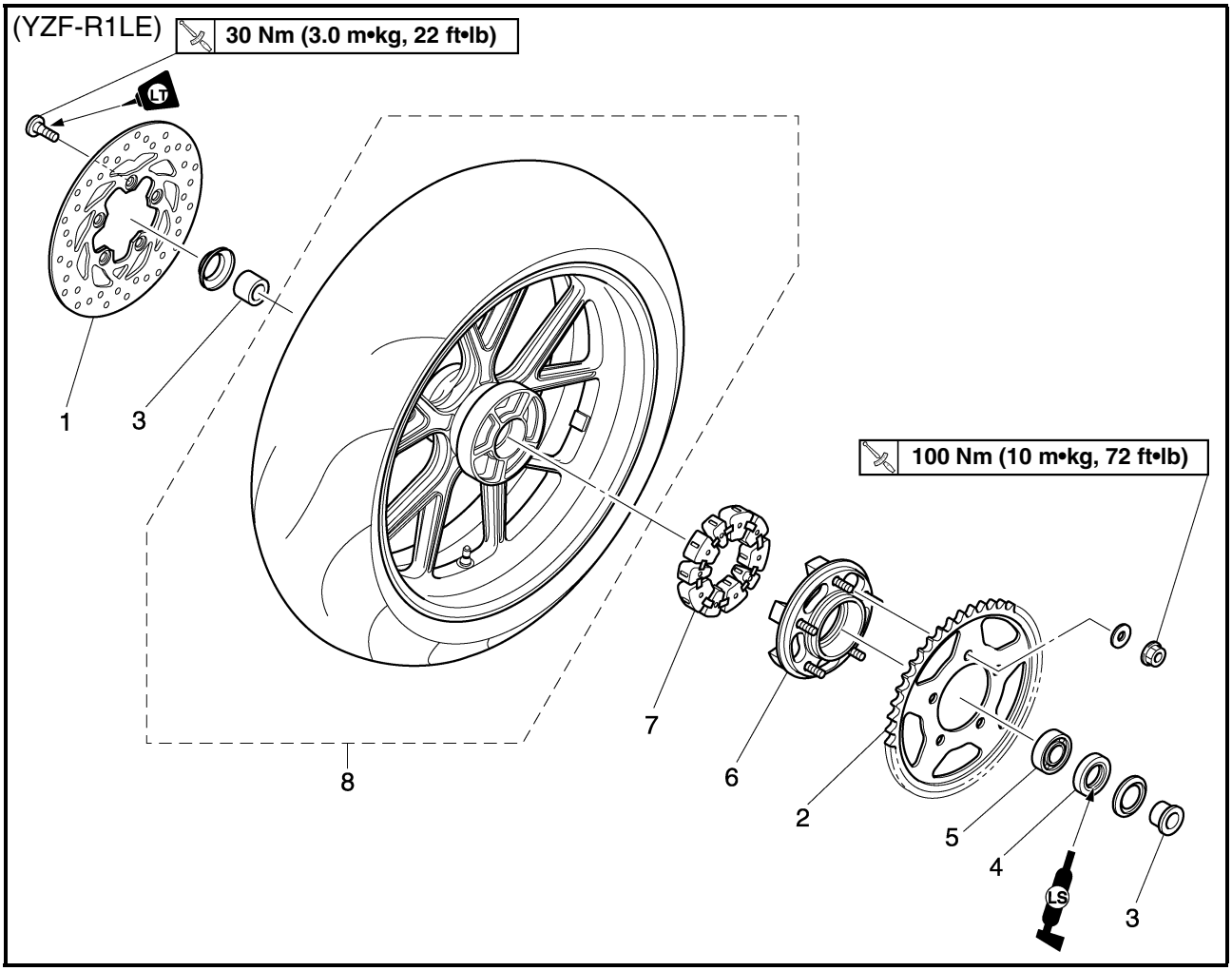


Order	Job/Part	Q'ty	Remarks
	Removing the front wheel and brake discs		Remove the parts in the order listed. **NOTE:** Place the vehicle on a suitable stand so that the front wheel is elevated.
1	Brake hose holder (left and right)	2	
2	Front brake caliper (left and right)	2	
3	Front wheel axle pinch bolt	4	
4	Front wheel axle bolt	1	
5	Front wheel axle	1	
6	Collar (left and right)	2	
7	Front wheel	1	
8	Front brake disc (left and right)	2	
			For installation, reverse the removal procedure.

EAS00560

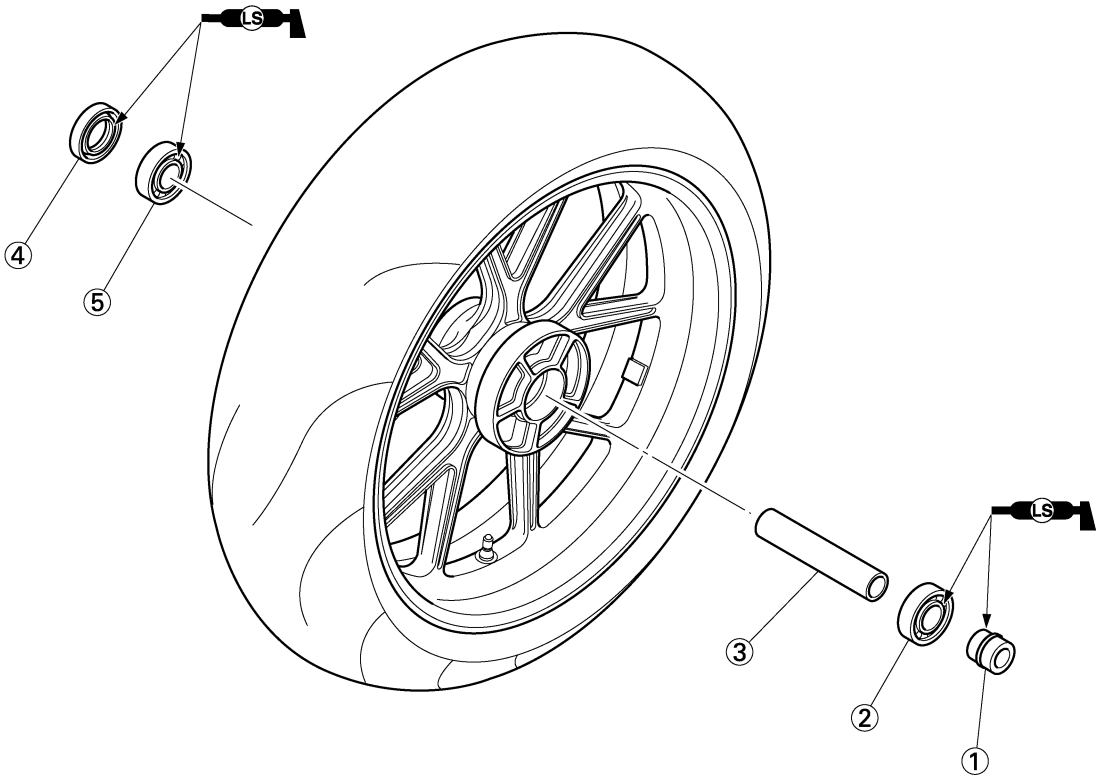
REAR WHEEL AND BRAKE DISCS

REAR BRAKE DISC AND REAR WHEEL SPROCKET



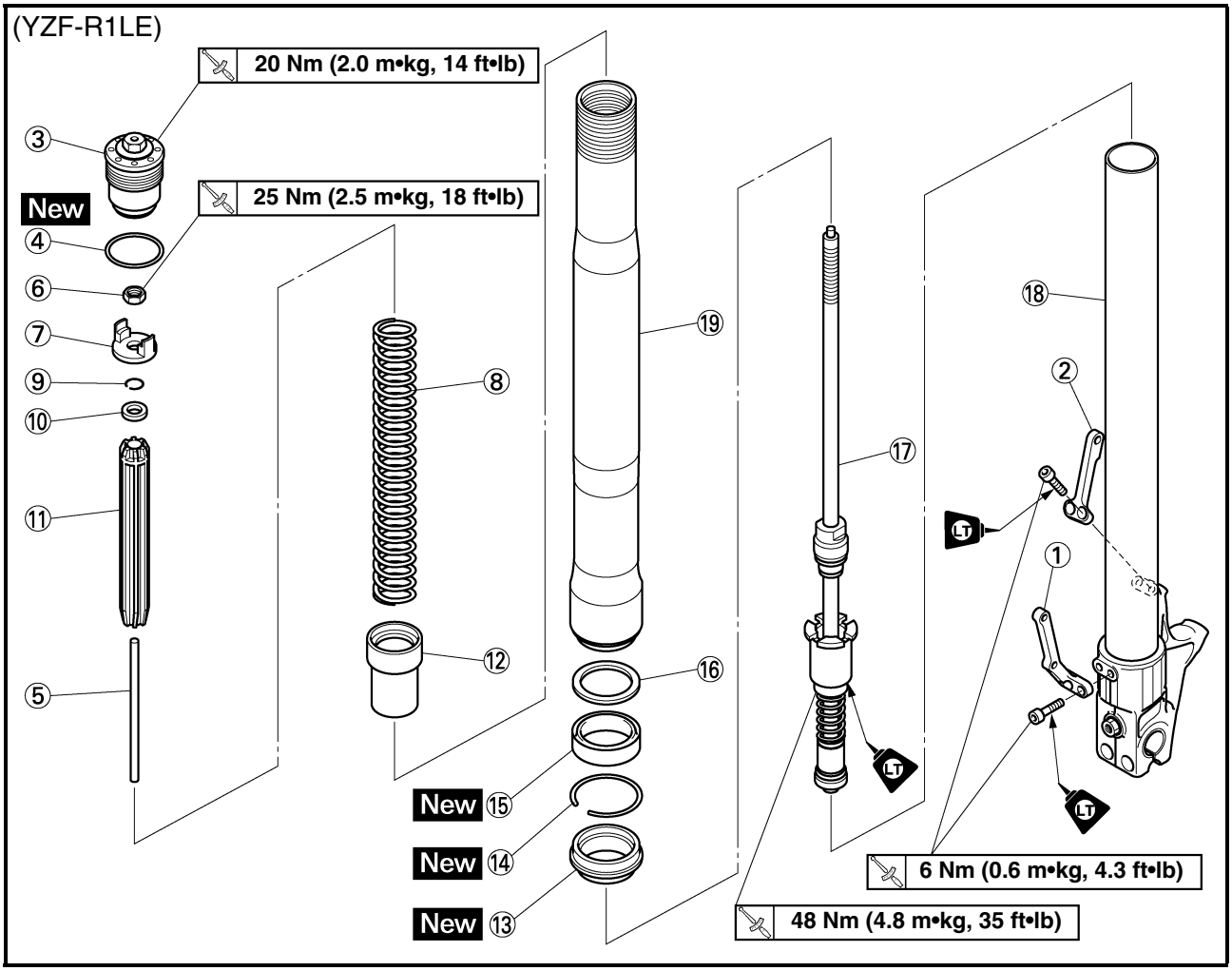
Order	Job/Part	Q'ty	Remarks
	Removing the rear brake disc and rear wheel sprocket		Remove the parts in the order listed.
1	Rear brake disc	1	
2	Rear wheel sprocket	1	
3	Collar	2	
4	Oil seal	1	
5	Bearing	1	
6	Rear wheel drive hub	1	
7	Rear wheel drive hub damper	5	
8	Rear wheel	1	
			For installation, reverse the disassembly procedure.

(YZF-R1LE)

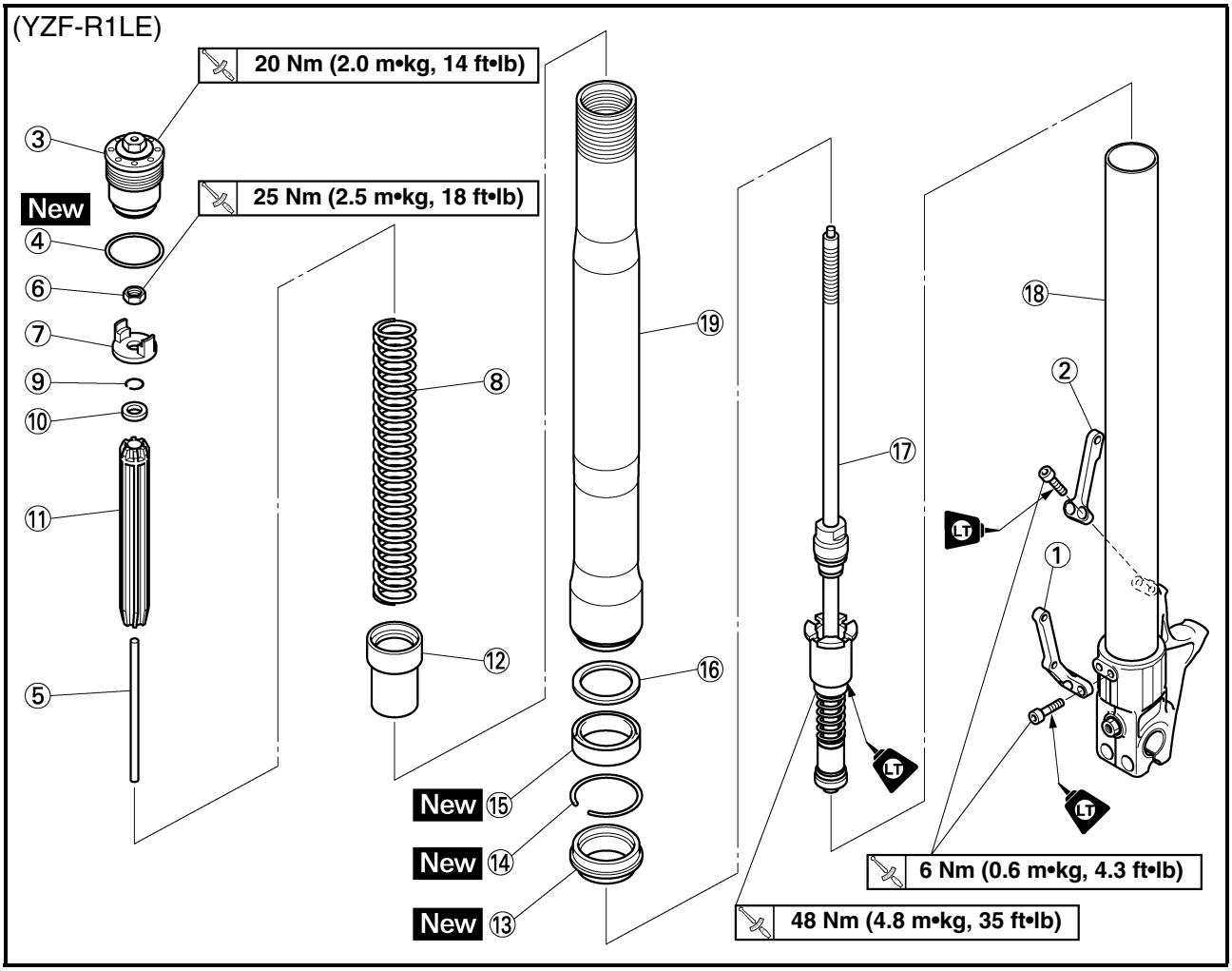


Order	Job/Part	Q'ty	Remarks
	Disassembling the rear wheel		Disassemble the parts in the order listed.
①	Collar	1	
②	Bearing	1	
③	Spacer	1	
④	Oil seal	1	
⑤	Bearing	1	
			For assembly, reverse the disassembly procedure.

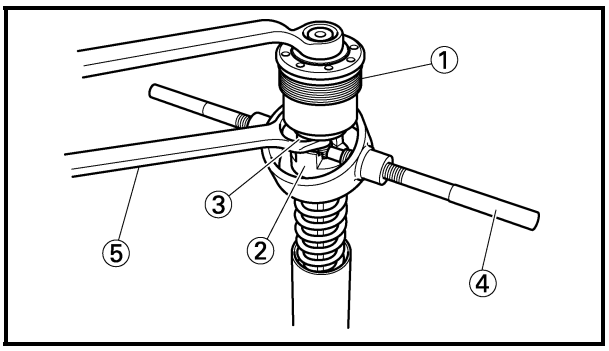
EAS00648
FRONT FORK
FRONT FORK LEGS



Order	Job/Part	Q'ty	Remarks
	Disassembling the front fork legs		Disassemble the parts in the order listed. **NOTE:** The following the procedure applies to both of the front fork legs.
①	Fork stay	1	
②	Fork bracket	1	
③	Cap bolt	1	
④	O-ring	1	
⑤	Damper adjusting rod	1	
⑥	Nut	1	
⑦	Spring seat (upper)	1	
⑧	Fork spring	1	
⑨	Clip	1	
⑩	Spacer	1	



Order	Job/Part	Q'ty	Remarks
⑪	Spring guide	1	
⑫	Spring seat	1	
⑬	Dust seal	1	
⑭	Oil seal clip	1	
⑮	Oil seal	1	
⑯	Washer	1	
⑰	Damper rod assembly	1	
⑱	Inner tube	1	
⑲	Outer tube	1	
			For assembly, reverse the disassembly procedure.



EAS00652
DISASSEMBLING THE FRONT FORK LEGS
(YZF-R1LE)
The following procedure applies to both of the front fork legs.

1. Remove:
   - fork stay
   - fork bracket
   - cap bolt ①
     (from the damper adjusting rod)

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a. Press down on the spacer with the fork spring compressor ④.
b. Install the spanner ⑤ between the nut ③ and the spring seat (upper) ②.

Fork spring compressor
90890-01441, YM-01441

c. Loosen the nut.
d. Remove the cap bolt.
e. Remove the spanner and fork spring compressor.

⚠ WARNING

The fork spring is compressed.

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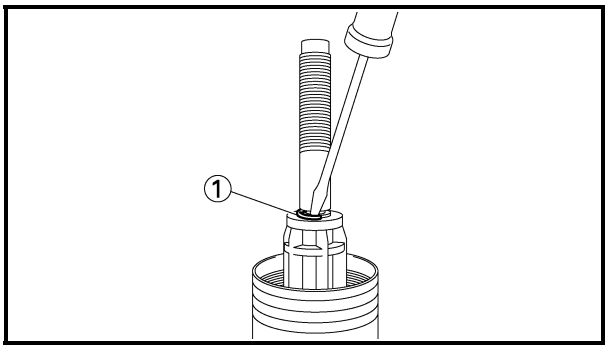
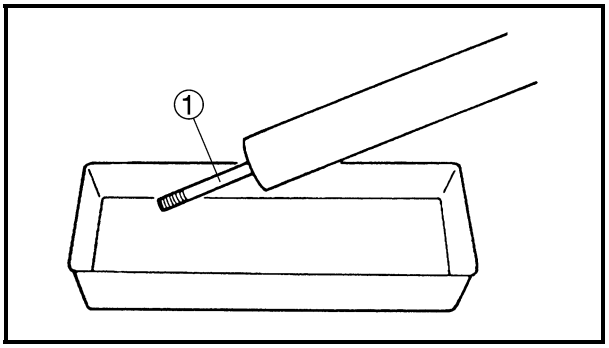


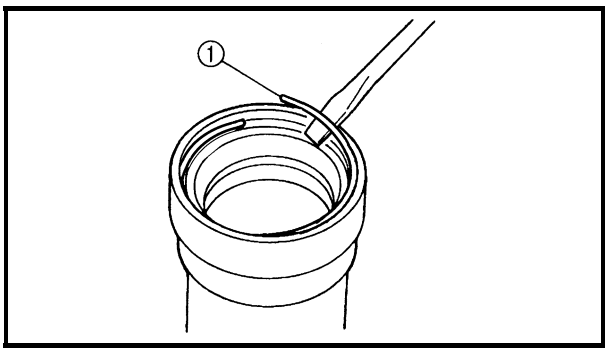
2. Remove
   - nut
   - spring seat (upper)
   - fork spring
   - clip ①
   - spacer
   - spring guide



3. Drain:
   - fork oil

NOTE:

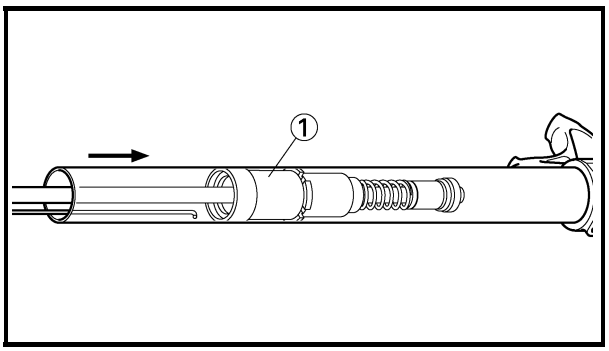
Stroke the damper rod ① several times while draining the fork oil.



4. Remove:
   • dust seal
   • oil seal clip ①
   • oil seal
   • washer
   (with a flat-head screwdriver)

CAUTION:

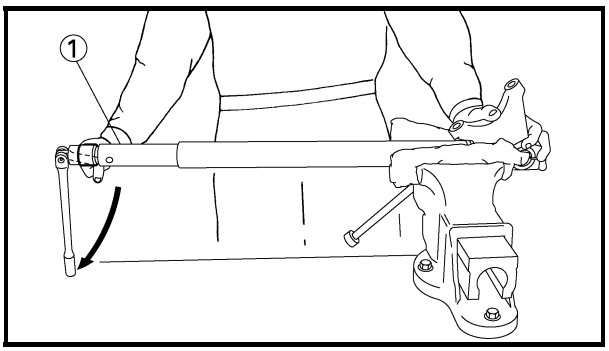
Do not scratch the inner tube.



5. Remove:
   • spring seat ①

NOTE:

Use a wire or the like and bend the end in L-letter shape for about 10 mm (0.39 in) and hook this part to the spring seat end and pull out the spring seat.

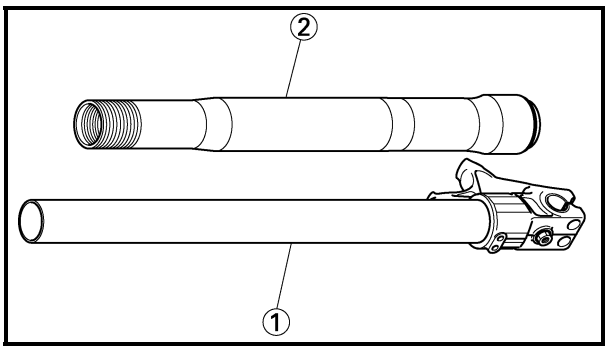


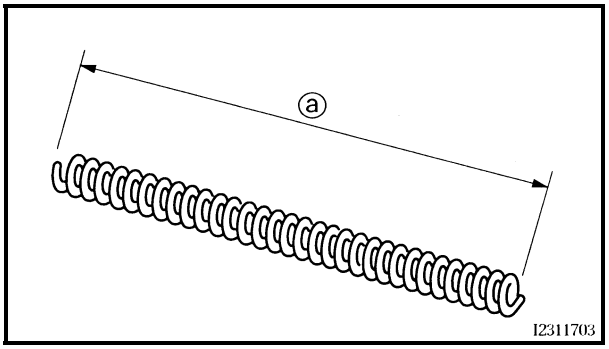
6. Remove:
   • damper rod assembly

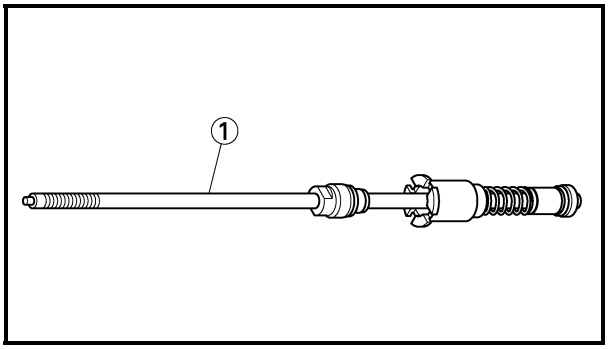
NOTE:

While holding the inner tube with the damper rod holder ①, loosen the damper rod assembly.

	Damper rod holder **90890–01504**







EAS00656
CHECKING THE FRONT FORK LEGS
(YZF-R1LE)
The following procedure applies to both of the front fork legs.

1. Check:
   - inner tube ①
   - outer tube ②
     Bends/damage/scratches → Replace.

⚠ WARNING

Do not attempt to straighten a bent inner tube as this may dangerously weaken it.

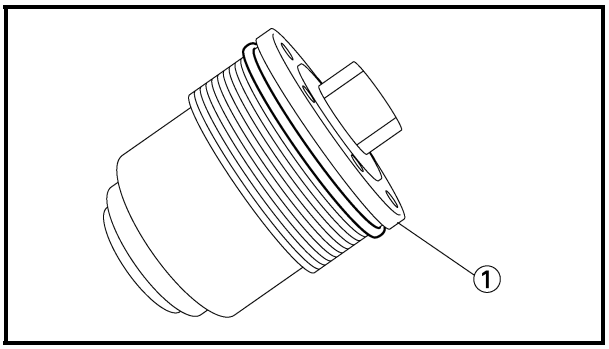
2. Measure:
   - spring free length ⓐ
     Out of specification → Replace.

Spring free length
260 mm (10.24 in)
<Limit> : 254.8 mm (10.03 in)

3. Check:
   - damper rod ①
     Damage/wear → Replace.
     Obstruction → Blow out all of the oil passages with compressed air.
   - damper rod adjusting rod
     Bends/damage → Replace.

CAUTION:

- **The front fork leg has a built-in damper adjusting rod and a very sophisticated internal construction, which are particularly sensitive to foreign material.**
- **When disassembling and assembling the front fork leg, do not allow any foreign material to enter the front fork.**



4. Check:
   - cap bolt ①
     Damage → Replace.
   - cap bolt O-ring New

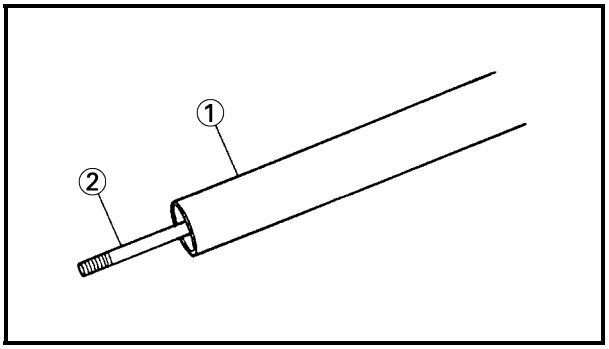
EAS00659
ASSEMBLING THE FRONT FORK LEGS
(YZF-R1LE)
The following procedure applies to both of the front fork legs.

⚠ WARNING

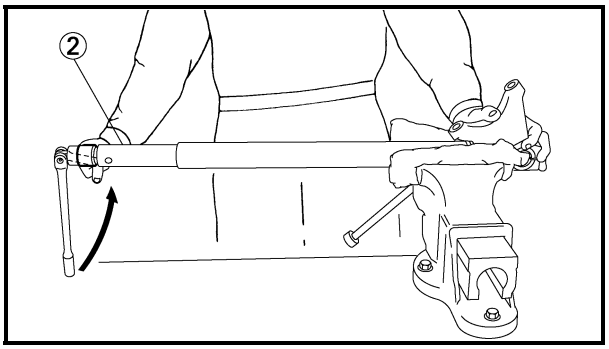
- **Make sure the oil levels in both front fork legs are equal.**
- **Uneven oil levels can result in poor handling and a loss of stability.**

NOTE:

- When assembling the front fork leg, be sure to replace the following parts:
  – oil seal clip
  – oil seal
  – dust seal
  – Before assembling the front fork leg, make sure all of the components are clean.



1. Install:
   • inner tube ①
   • damper rod assembly ②



2. Tighten:
   • damper rod assembly

48 Nm (4.8 m•kg, 35 ft•lb)
LOCTITE®

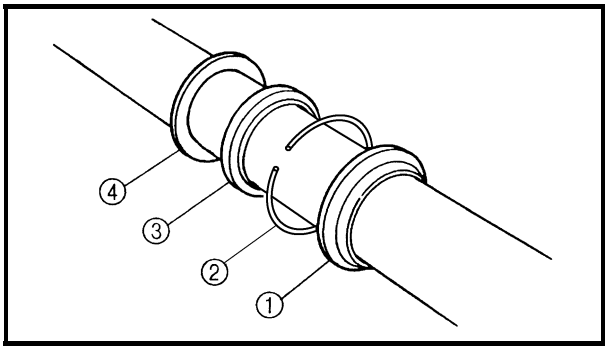
NOTE:

While holding the inner tube with the damper rod holder ②, tighten the damper rod assembly.

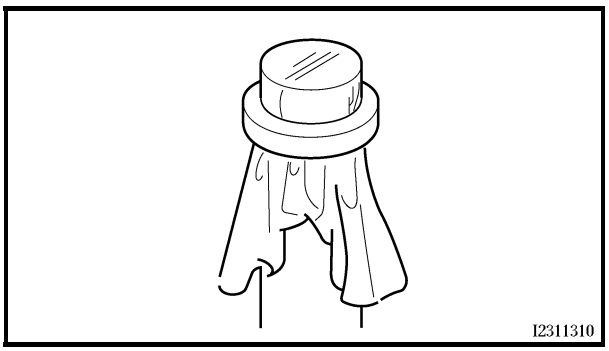
Damper rod holder
90890-01504

3. Lubricate:
   • inner tube's outer surface

Recommended lubricant
Suspension oil "Ohlins R&T 43"
(ACC-RT43F-00-00)



4. Install:
   - dust seal ①
   - oil seal clip ②
   - oil seal ③
   - washer ④

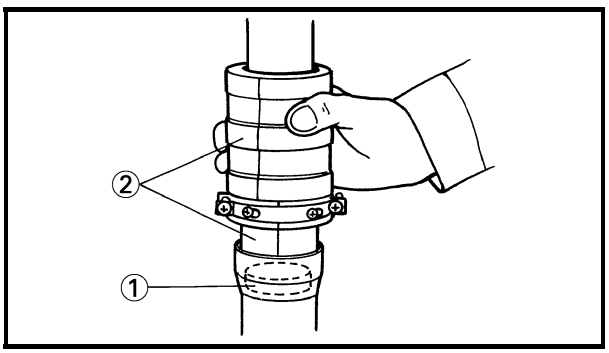


CAUTION:

Make sure the numbered side of the oil seal faces up.

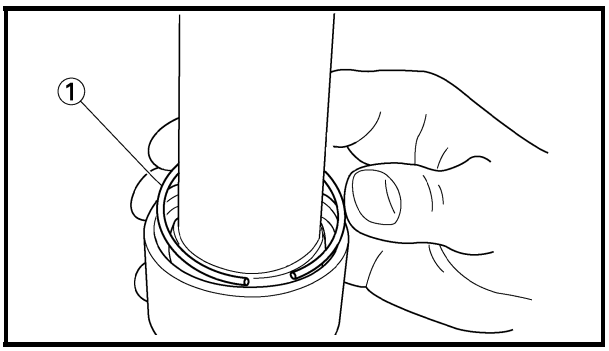
NOTE:

- Before installing the oil seal, lubricate its lips with lithium-soap-based grease.
- Lubricate the outer surface of the inner tube with fork oil.
- Before installing the oil seal, cover the top of the front fork leg with a plastic bag to protect the oil seal during installation.



5. Install:
   - Oil seal ①
     (with the fork seal driver ②)

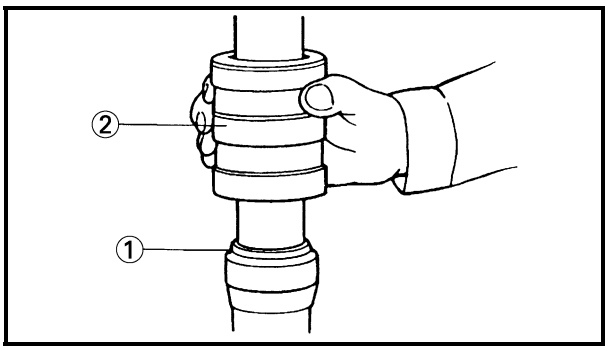
	Fork seal driver **90890-01442, YM-01442**

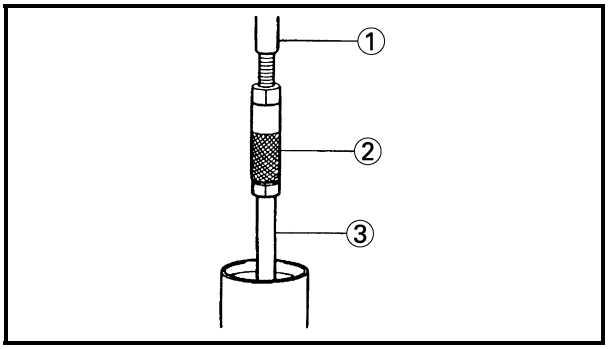


6. Install:
   - oil seal clip ①

NOTE:

Adjust the oil seal clip so that it fits into the outer tube's groove.





7. Install:
   • dust seal ①
   (with the fork seal driver weight ②)

Fork seal driver
90890-01442, YM-01442

8. Install:
   • rod puller ①
   • rod puller attachment ②
   (onto the damper rod ③)

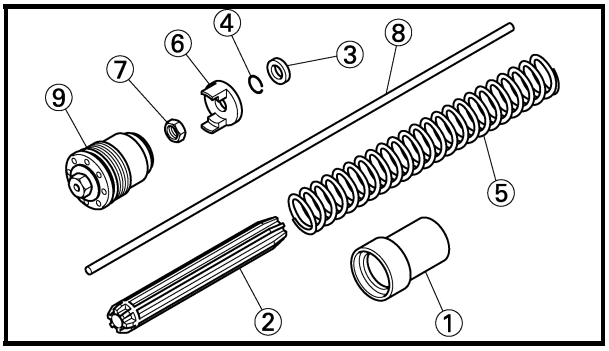
Rod puller
90890-01437, YM-A8703
Rod puller attachment
90890-01435, YM-A8703

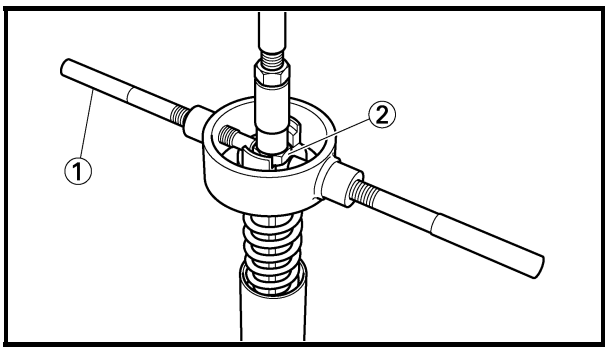
9. Fill:
   • front fork leg
   (with the specified amount of the recommended fork oil)

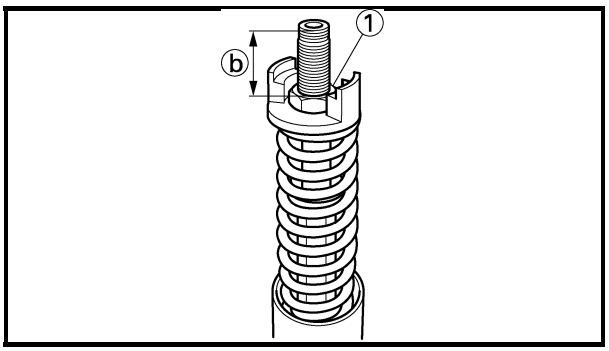
Quantity (each front fork leg)
0.43 L (0.38 Imp qt, 0.45 US qt)
Recommended oil
Suspension oil "Ohlins R&T 43"
(ACC-RT43F-00-00)

Front fork leg oil level (from the top of the outer tube, with the outer tube fully compressed and without the fork spring)
145 mm (5.71 in)

NOTE:
- While filling the front fork leg, keep it upright.
- After filling, slowly pump the front fork leg up and down to distribute the fork oil.







10. Install:
    - spring seat ①
    - spring guide ②
    - spacer ③
    - clip ④
    - fork spring ⑤
    - spring seat (upper) ⑥
    - nut ⑦
    - damper adjusting rod ⑧
    - cap bolt ⑨
    - fork bracket
    - fork stay

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a. Install the spring seat, spring guide, spacer and circlip.
b. Install the fork spring, spring seat (upper) and nut.
c. Press down on the spring seat with the fork spring compressor ①.
d. Pull up the rod puller and install the nut ②.

	Fork spring compressor **90890-01441, YM-01441**

e. Remove the rod puller and adapter.
f. Install the nut ① and position it as specified ⓑ.

	Distance ⓑ **More than 25 mm (0.98 in)**

g. Install the damper adjusting rod and cap bolt, and then finger tighten the cap bolt until it stop.

NOTE:

Install the cap bolt with rebound damping screw fully loosened.

h. Hold the cap bolt and tighten the nut to specification.

	Nut **25 Nm (2.5 m•kg, 18 ft•lb)**

i. Remove the fork spring compressor.

⚠ WARNING

• The fork spring is compressed.
• Always use a new cap bolt O-ring.

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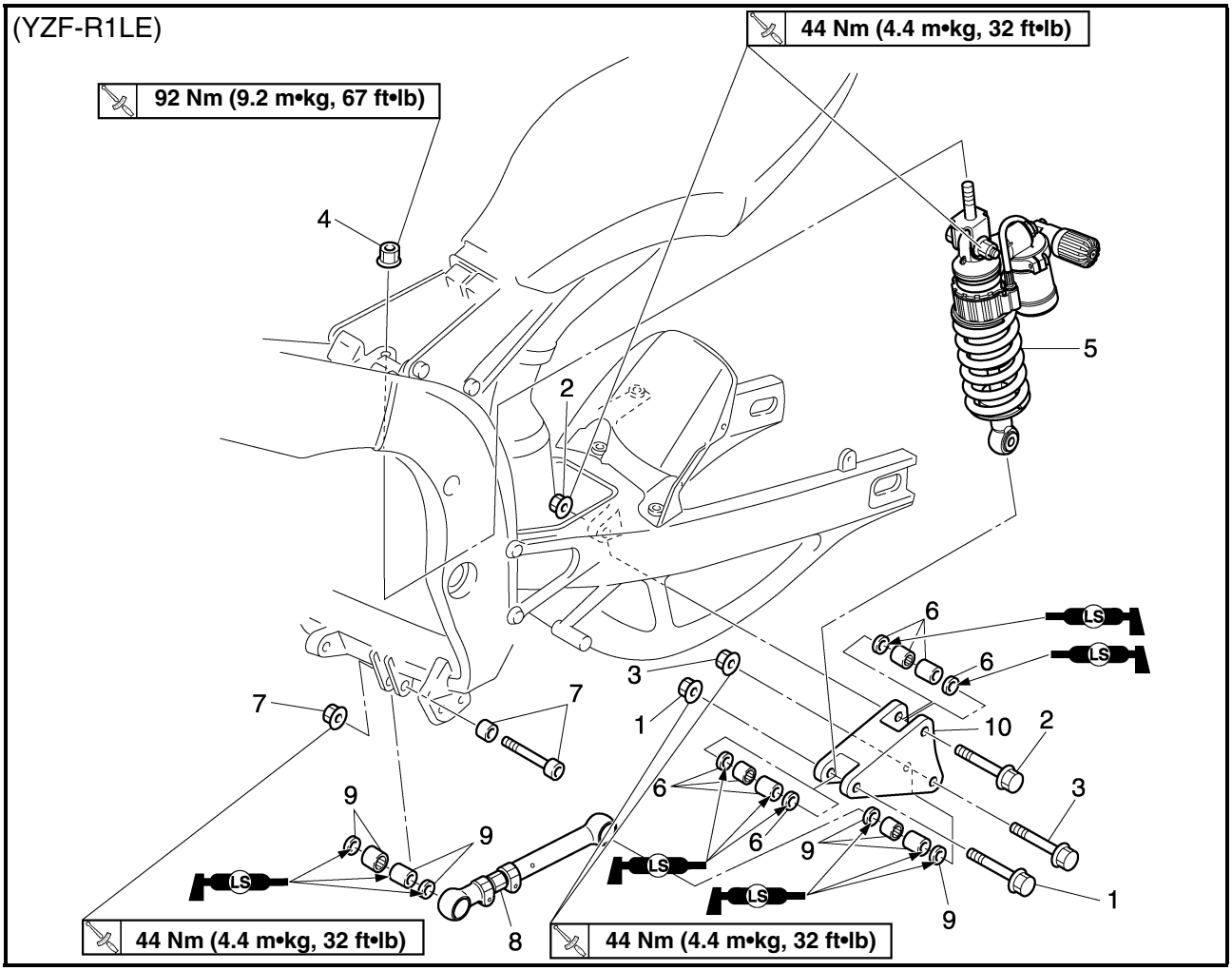
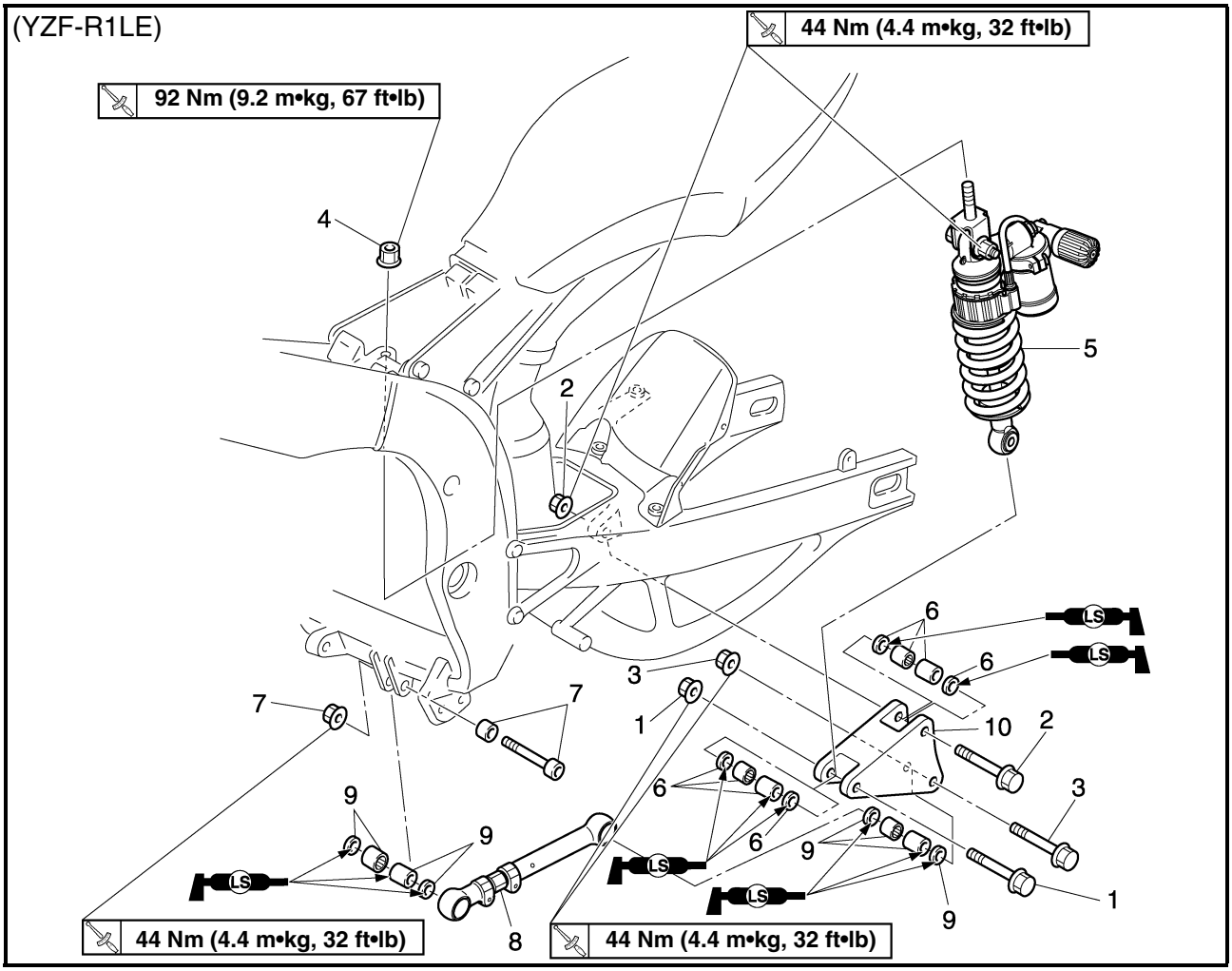
EAS00685
REAR SHOCK ABSORBER ASSEMBLY



Order	Job/Part	Q'ty	Remarks
	Removing the rear shock absorber assembly		Remove the parts in the order listed.
	Rider seat and passenger seat		Refer to "SEATS" in chapter 3.
	Fuel tank		Refer to "FUEL TANK" in chapter 3.
	Bottom cowling and rear cowling (upper)		Refer to "COWLINGS" in chapter 3.
	Protector, muffler, catalyst pipe assembly and EXUP servo motor		Refer to "EXHAUST PIPE" in chapter 5.
1	Self-locking nut/bolt	1/1	
2	Self-locking nut/bolt	1/1	
3	Self-locking nut/bolt	1/1	
4	Self-locking nut	1	
5	Rear shock absorber assembly	1	
6	Oil seal/bearing/collar	4/2/2	
7	Collar/self-locking nut/bolt	1/1/1	
8	Connecting rod	1	
9	Oil seal/bearing/collar	4/2/2	



Order	Job/Part	Q'ty	Remarks
10	Relay arm	1	For installation, reverse the removal procedure.

EAS00690
REMOVING THE REAR SHOCK ABSORBER ASSEMBLY

(YZF-R1LE)

1. Stand the vehicle on a level surface.

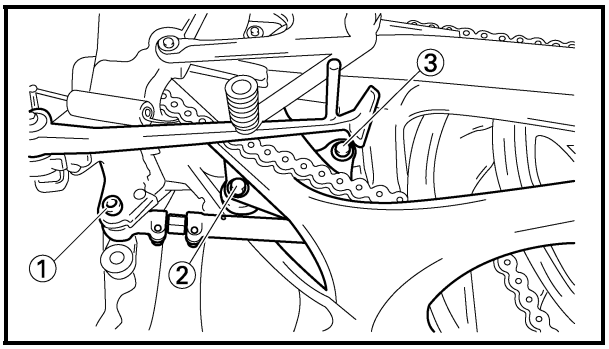
⚠ WARNING

Becurely support the vehicle so that there is no danger of it falling over.

NOTE:

Place the vehicle on a suitable stand so that the rear wheel is elevated.

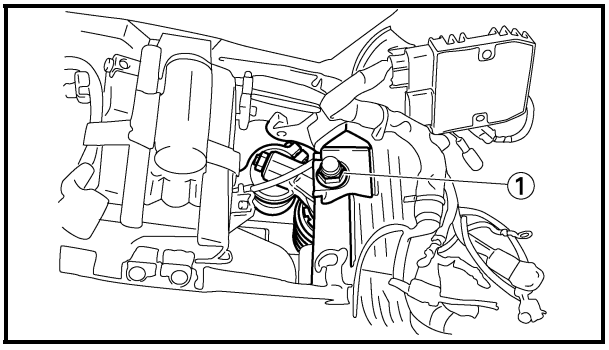
2. Remove:
   - rider seat and passengerseat
     Refer to “SEATS” in chapter 3.
   - fuel tank
     Refer to “FUEL TANK” in chapter 3.
   - bottom cowling
   - rear cowling (upper)
     Refer to “COWLINGS” in chapter 3.
   - protector
   - muffler
   - catalyst pipe assembly
   - EXUP servo motor
     Refer to “EXHAUST PIPE” in chapter 5.



3. Remove:
   - connecting rod front bolt ①
   - rear shock absorber assembly lower bolt ②
   - relay arm-to-swingarm bolt ③

NOTE:

While removing the rear shock absorber assembly lower bolt, hold the swingarm so that it does not drop down.



4. Remove:
   - rear shock absorber assembly upper nut ①
   - rear shock absorber assembly

NOTE:

Raise the swingarm and then remove the rear shock absorber assembly from between the swingarm.

EAS00698
INSTALLING THE REAR SHOCK ABSORBER ASSEMBLY
(YZF-R1LE)
1. Lubricate:
   • spacers
   • bearings

	Recommended lubricant **Lithium – soap-based grease**

2. Check:
   • connecting rod assembly
   Refer to "CHECKING THE CONNECTING ROD ASSEMBLY"
3. Install:
   • rear shock absorber assembly

NOTE:
- When installing the rear shock absorber assembly, lift up the swingarm.
- Install the connecting rod front bolt from the left.

4. Tighten:
   • rear shock absorber assembly upper nut
   92 Nm (9.2 m•kg, 67 ft•lb)
   • rear shock absorber assembly lower nut
   44 Nm (4.4 m•kg, 32 ft•lb)
   • relay arm-to swingarm nut
   44 Nm (4.4 m•kg, 32 ft•lb)
   • connecting rod front nut
   44 Nm (4.4 m•kg, 32 ft•lb)
5. Install:
   • EXUP servo motor
   • catalyst pipe assembly
   • muffler
   • protector
   Refer to "EXHAUST PIPE" in chapter 5.
   • rear cowling (upper)
   • bottom cowling
   Refer to "COWLINGS" in chapter 3.
   • fuel tank
   Refer to "FUEL TANK" in chapter 3.
   • rider seat and passenger seat
   Refer to "SEATS" in chapter 3.

EAS00703
SWINGARM AND DRIVE CHAIN
REMOVING THE SWINGARM
(YZF-R1LE)

1. Stand the vehicle on a level surface.

⚠ WARNING

Securely support the vehicle so that there is no danger of it falling over.

NOTE:

Place the vehicle on a suitable stand so that the rear wheel is elevated.

2. Remove:
   - rear wheel
   - rear shock absorber
     Refer to "REMOVING THE REAR WHEEL" and "REMOVING THE REAR SHOCK ABSORBER ASSEMBLY"
   - coolant reservoir tank

NOTE:

When removing the rear shock absorber assembly lower bolt, hold the swingarm so that it does not drop down.

3. Measure:
   - swingarm side play
   - swingarm vertical movement

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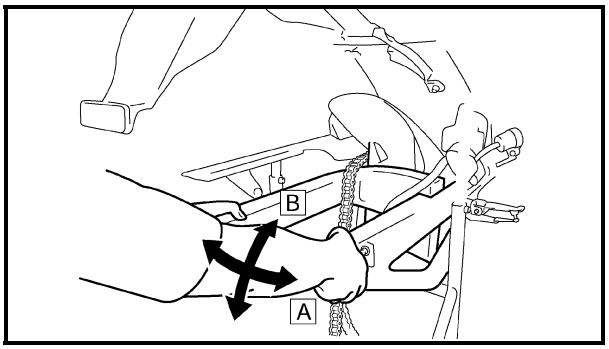
a. Measure the tightening torque of the pivot shaft nut.

Pivot shaft nut
105 Nm (10.5 m•kg, 76 ft•lb)



b. Measure the swingarm side play [A] by moving the swingarm from side to side.
c. If the swingarm side play is out of specification, check the spacers, bearings, washers, and dust covers.

Swingarm side play
(at the end of the swingarm)
1.0 mm (0.04 in)

d. Check the swingarm vertical movement [B] by moving the swingarm up and down.
   If swingarm vertical movement is not smooth or if there is binding, check the spacers, bearings, washers, and dust covers.

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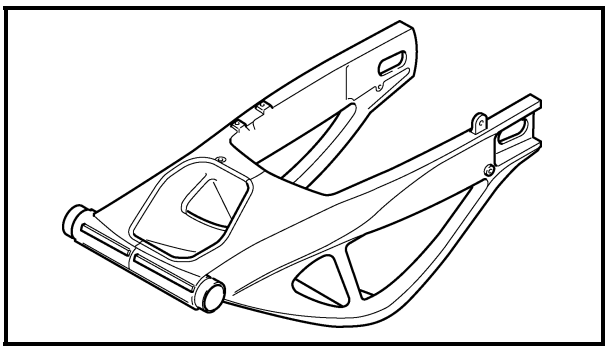
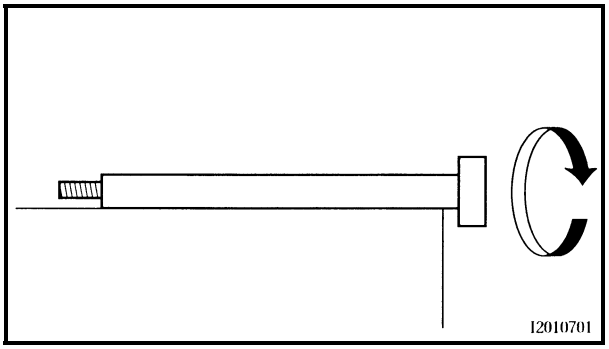


EAS00707
CHECKING THE SWINGARM
(YZF-R1LE)
1. Check:
   • swingarm
   Bends/cracks/damage → Replace.



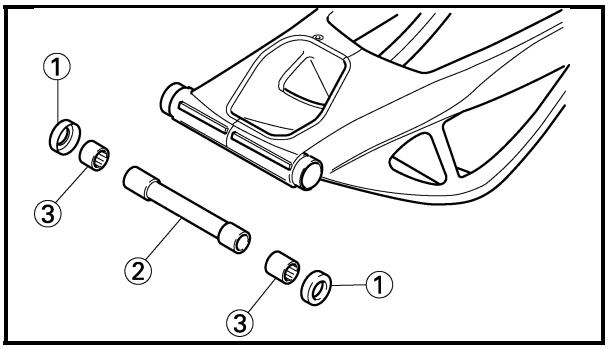
2. Check:
   • pivot shaft
   Roll the pivot shaft on a flat surface.
   Bends → Replace.

⚠ WARNING

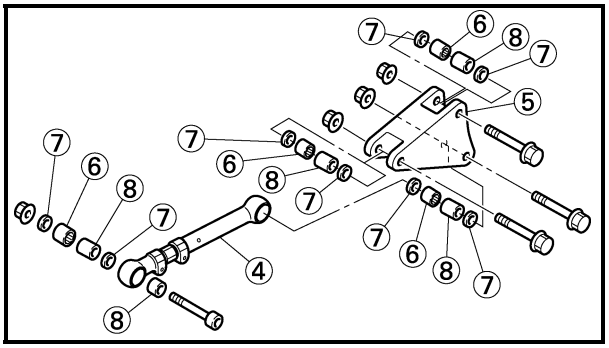
Do not attempt to straighten a bent pivot shaft.

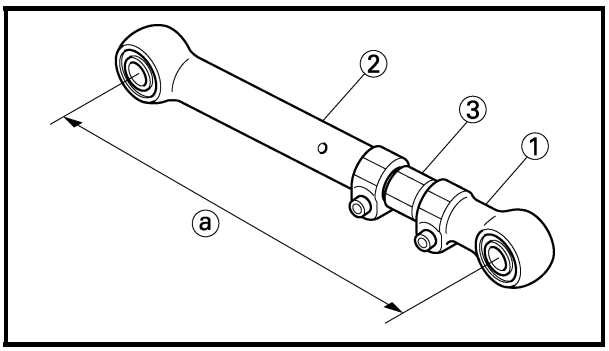
3. Wash:
   • pivot shaft
   • dust covers
   • spacer
   • washers
   • bearings

	Recommended cleaning solvent **Kerosene**



4. Check:
   • dust covers ①
   • spacer ②
   Damage/wear → Replace.
   • bearings ③
   Damage/pitting → Replace.
5. Check:
   • connecting rod assembly ④
   Refer to "CHECKING THE CONNECTING ROD ASSEMBLY"
   • relay arm ⑤
   Damage/wear → Replace.
6. Check:
   • bearings ⑥
   • oil seals ⑦
   Damage/pitting → Replace.
7. Check:
   • collars ⑧
   Damage/scratches → Replace.





CHECKING THE CONNECTING ROD ASSEMBLY

1. Check:
   - connecting rod assembly
     Bends/damage → Replace the connecting rod assembly
   - oil seal
     Damage/wear → Replace
   - bearing
     Damage/wear → Replace
2. Measure:
   - connecting rod assembly length ⓐ.
     Out of specification → Adjust

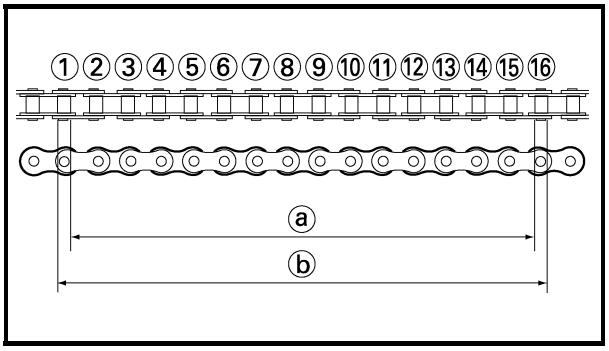
Connecting rod assembly length
STD: 206 mm (8.11 in)
Adjust length
201 ~ 206 mm (7.91 ~ 8.11 in)

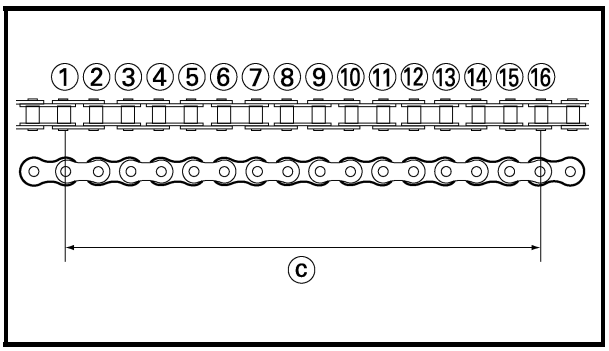
NOTE:

When the connecting rod assembly is removed, disassembled and replaced, set it to 206 mm (8.11 in).

a. Tighten the connecting rod 1 ① and connecting rod 2 ② fully to the connecting rod arm ③.
b. Rotate the connecting rod 1 ① (within one rotation) so that the bearing is parallel. At this time, align the direction of bolt.
c. Rotate the connecting rod arm ③ to adjust the connecting rod assembly length to 206 mm (8.11 in).
d. Tighten the connecting rod bolt temporarily.
e. Attach the connecting rod assembly to the vehicle and tighten the connecting rod bolt securely.

Connecting rod bolt
8 Nm (0.8 m•kg, 5.8 ft•lb)



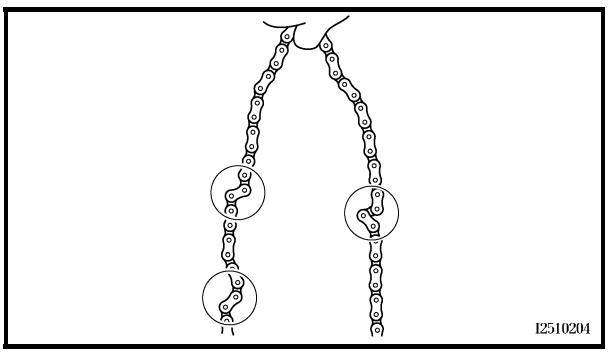


EAS00709
CHECKING THE DRIVE CHAIN

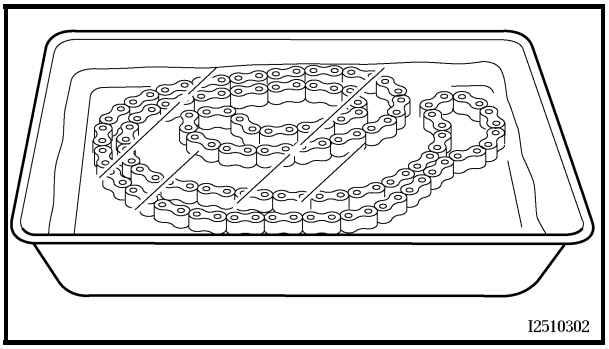
1. Measure:
   - Measure the dimension between 15-links on the inner side ⓐ and outer side ⓑ of the roller and calculate the dimension between pin centers.
   - Dimension ⓒ between pin centers = (Inner dimension ⓐ + Outer dimension ⓑ)/2
   - 15-link section ⓒ of the drive chain
     Out of specification → Replace the drive chain, front drive sprocket and rear drive sprocket as a set.

15-link drive chain section limit (maximum)
239.3 mm (9.42 in)

NOTE:
- While measuring the 15-link section, push down on the drive chain to increase its tension.
- Perform this measurement at two or three different places.



2. Check:
   - drive chain
     Stiffness → Clean and lubricate or replace.



3. Clean:
   - drive chain

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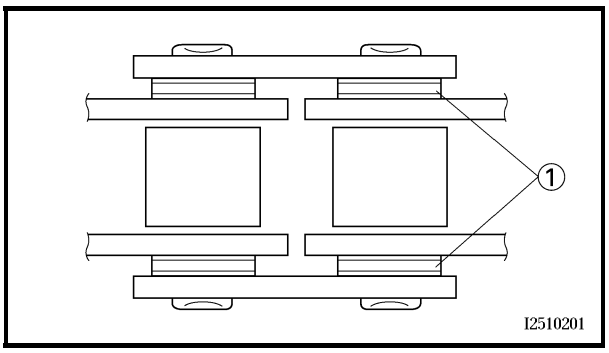
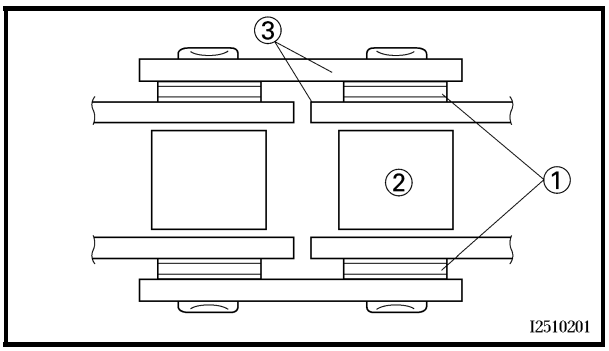
a. Wipe the drive chain with a clean cloth.
b. Put the drive chain in kerosene and remove any remaining dirt.
c. Remove the drive chain from the kerosene and completely dry it.



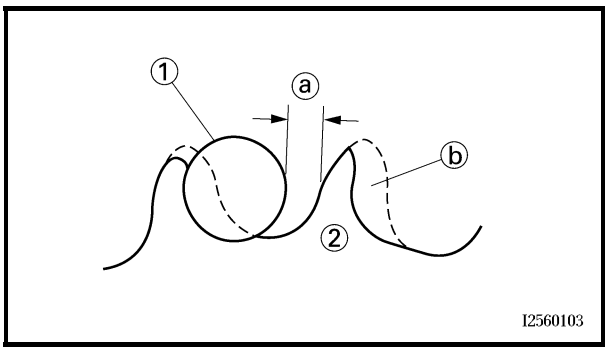
CAUTION:

This vehicle has a drive chain with small rubber O-rings ① between the drive chain side plates. Never use high-pressure water or air, steam, gasoline, certain solvents (e.g., benzine), or a coarse brush to clean the drive chain. High-pressure methods could force dirt or water into the drive chain's internals, and solvents will deteriorate the O-rings. A coarse brush can also damage the O-rings. Therefore, use only kerosine to clean the drive chain.



4. Check:
   • O-rings ①
   Damage → Replace the drive chain.
   • drive chain rollers ②
   Damage/wear → Replace the drive chain.
   • drive chain side plates ③
   Damage/wear → Replace the drive chain.
   Cracks → Replace the drive chain and make sure that the battery breather hose is properly routed away from the drive chain and below the swingarm.
5. Lubricate:
   • drive chain

Recommended lubricant
Engine oil or chain lubricant suitable for O-ring chains

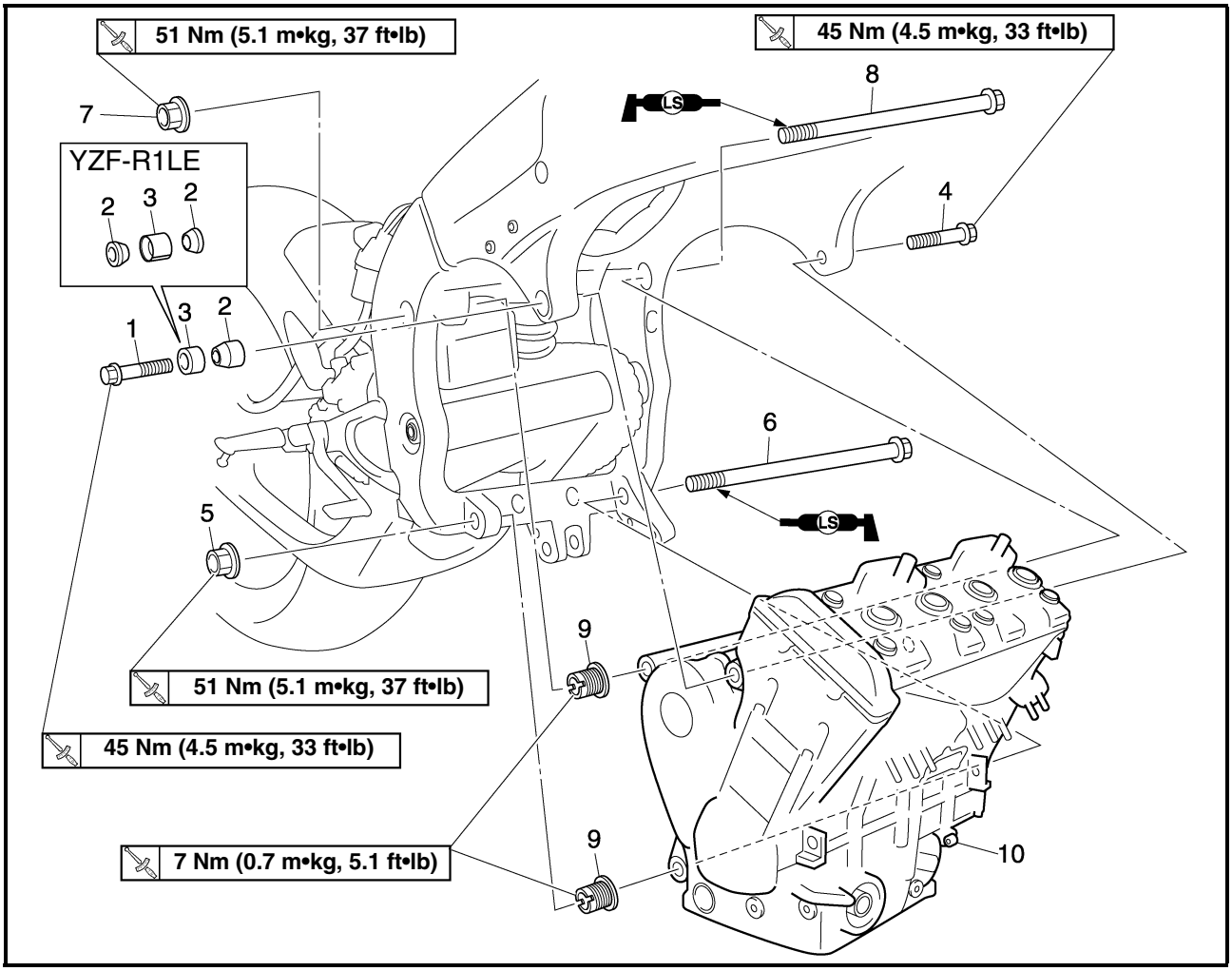


6. Check:
   • drive sprocket
   • rear wheel sprocket
   More than 1/4 tooth ⓐ wear → Replace the drive chain sprockets as a set.
   Bent teeth → Replace the drive chain sprockets as a set.

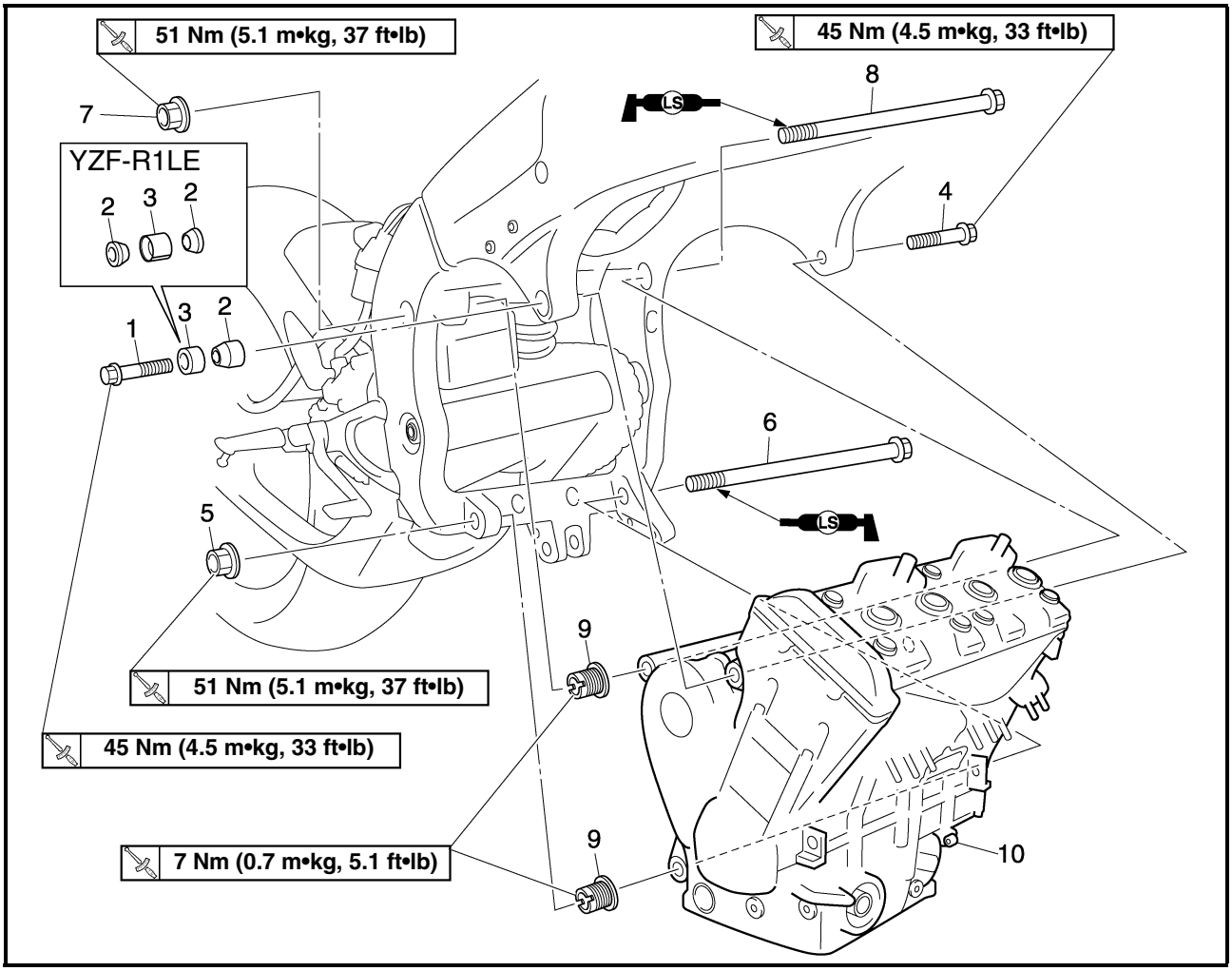
ⓑ Correct
① Drive chain roller
② Drive chain sprocket

ENGINE

ENGINE



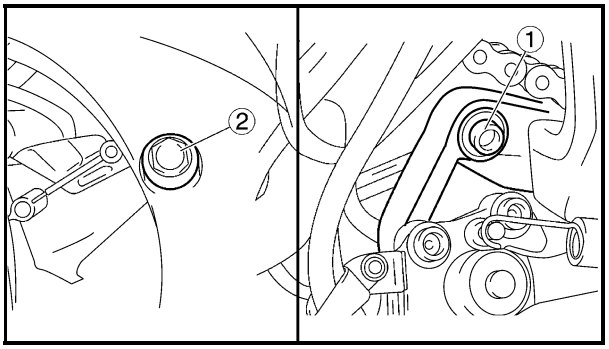
Order	Job/Part	Q'ty	Remarks
	Removing the engine		Remove the parts in the order listed. **NOTE:** Place a suitable stand under the frame and engine.
1	Right front engine mounting bolt	1	
2	Engine mount collar (inside) (YZF-R1)	1	
	Engine mount collar (inside, outside) (YZF-R1LE)	2	
3	Engine mount collar (outside) (YZF-R1)	1	
	Engine mount collar (center) (YZF-R1LE)	1	
4	Left front engine mounting bolt	1	
5	Lower self locking nut	1	
6	Lower engine mounting bolt	1	
7	Upper self locking nut	1	



Order	Job/Part	Q'ty	Remarks
8	Upper engine mounting bolt	1	
9	Engine mounting adjust bolt	2	**NOTE:** Use the pivot shaft wrench and adapter to loosen the engine mounting adjust bolts.
10	Engine	1	For installation, reverse the removal procedure.

INSTALLING THE ENGINE

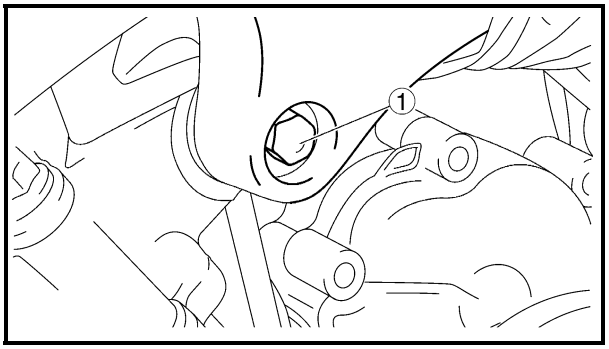
1. Install:
   • engine mounting adjust bolts (temporary tighten)
2. Install:
   • engine



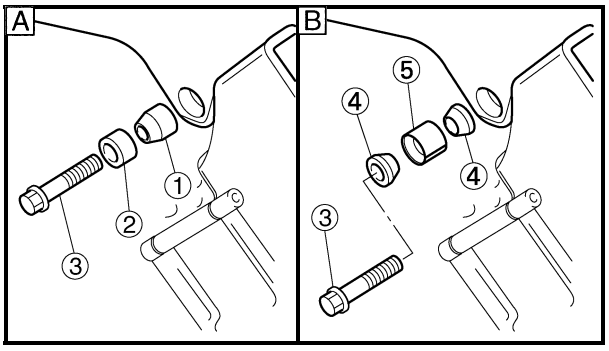
3. Install:
   • lower engine mounting bolt ①
   • upper engine mounting bolt ②
   • self locking nuts

NOTE:

Lubricate the lower and upper engine mounting bolts threads with lithium-soap-based grease.

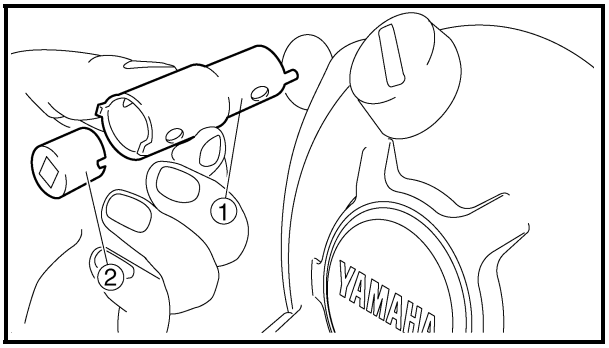


4. Install:
   • left front engine mount bolt ① (temporary tighten)



5. Install:
   • engine mount collar (inside) ①
   • engine mount collar (outside) ②
   • right front engine mount bolt ③ (temporary tighten)
   • engine mount collar (inside, outside) ④
   • engine mount collar (center) ⑤

A YZF-R1
B YZF-R1LE

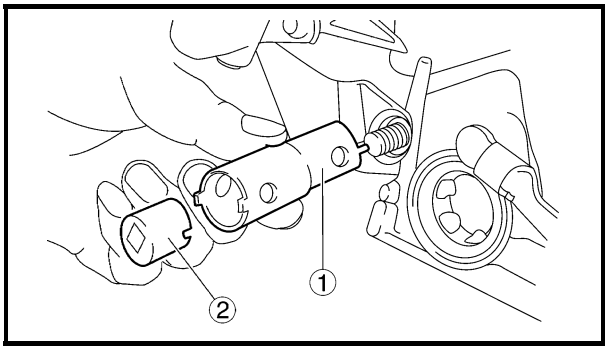


6. Tighten:
   • engine mounting adjust bolts

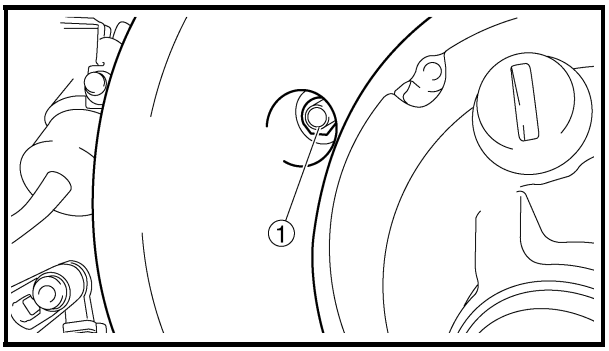
7 Nm (0.7 m•kg, 5.1 ft•lb)

NOTE:

Use the pivot shaft wrench ① and pivot shaft wrench adapter ② to tighten the engine mounting adjust bolts.



Pivot shaft wrench
90890-01471, YM-01471
Pivot shaft wrench adapter
90890-01476

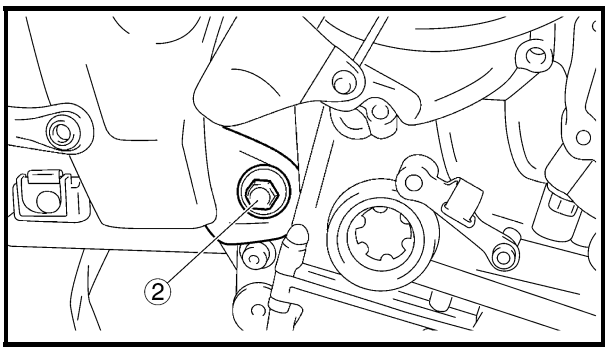


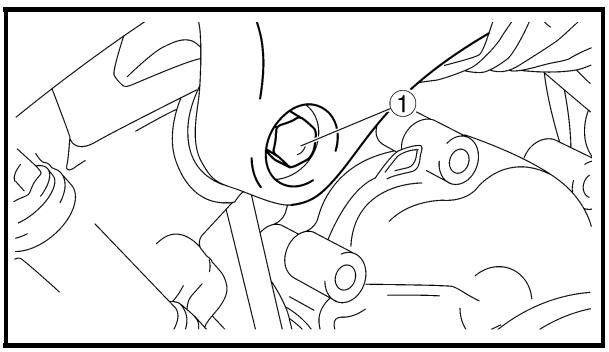
7. Tighten:
   • upper self-locking nut ①
   • lower self-locking nut ②

51 Nm (5.1 m•kg, 37 ft•lb)

NOTE:

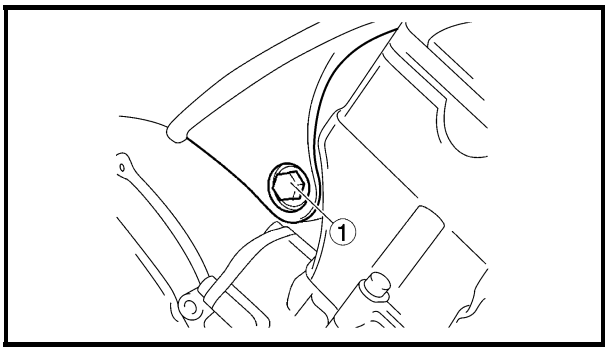
First tighten the lower self-locking nut, and then tighten the upper self-locking nut.





8. Tighten:
   • left front engine mounting bolt ①

45 Nm (4.5 m•kg, 33 ft•lb)

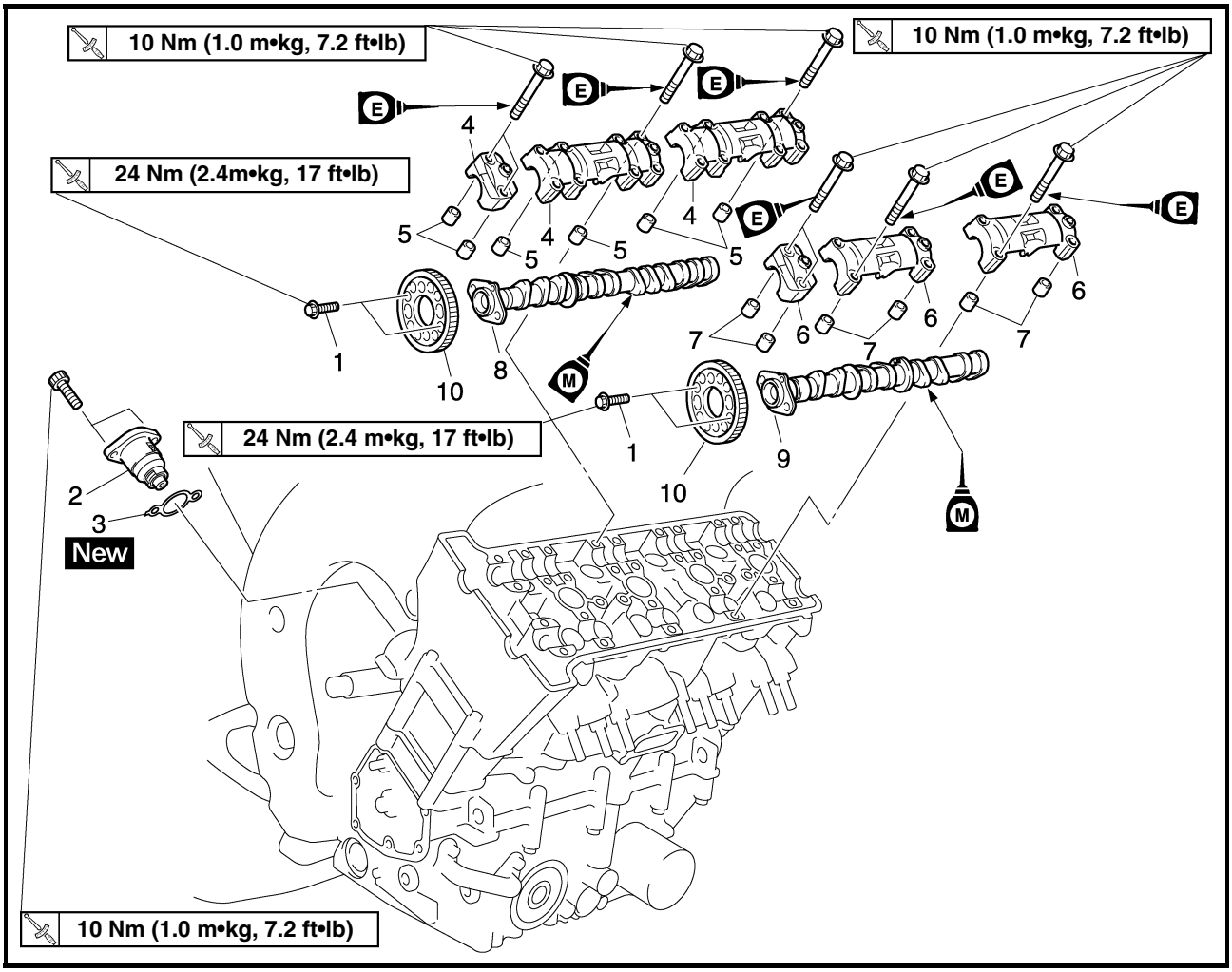


9. Tighten:
   • right front engine mounting bolt ①

45 Nm (4.5 m•kg, 33 ft•lb)

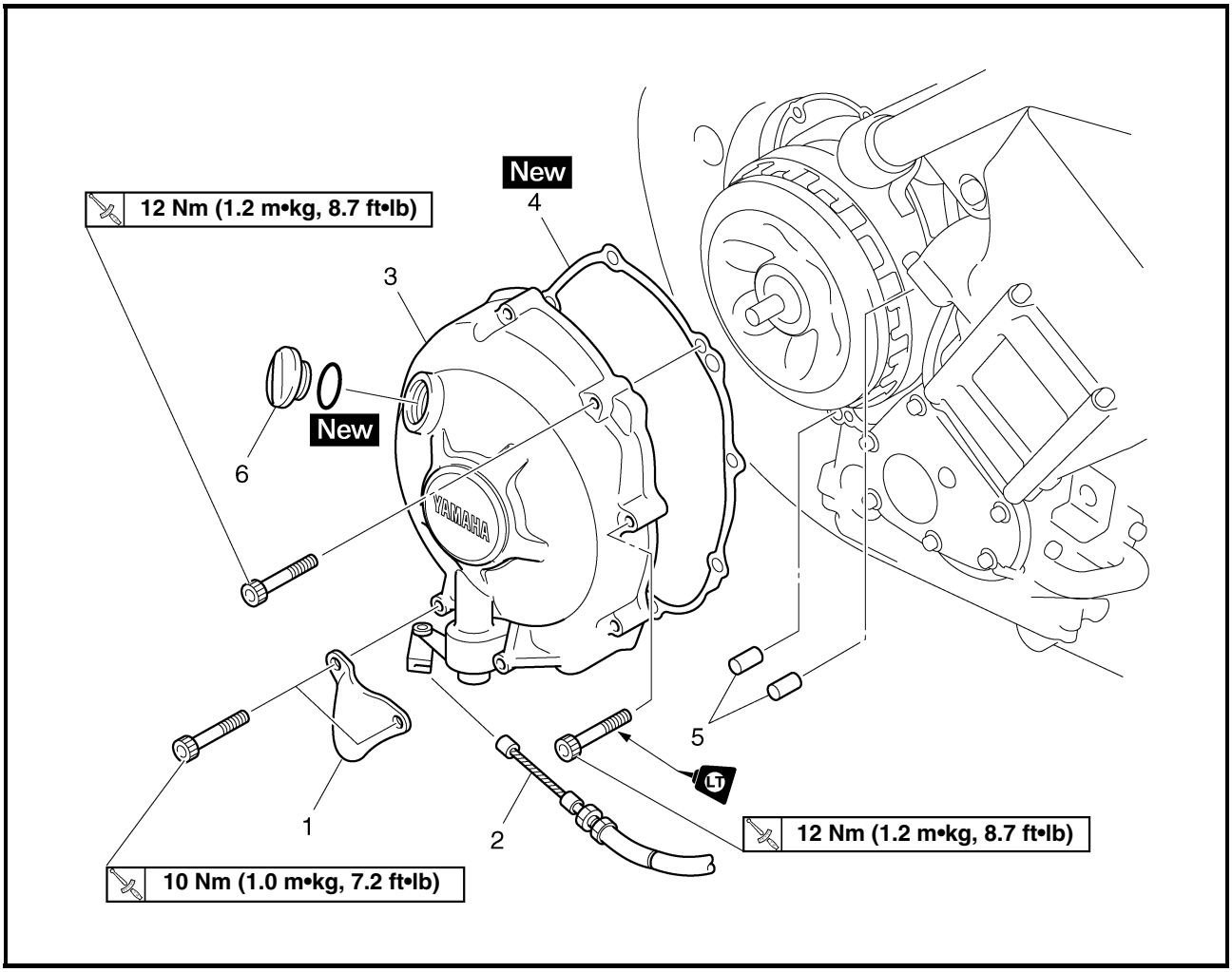
EAS00196

CAMSHAFTS



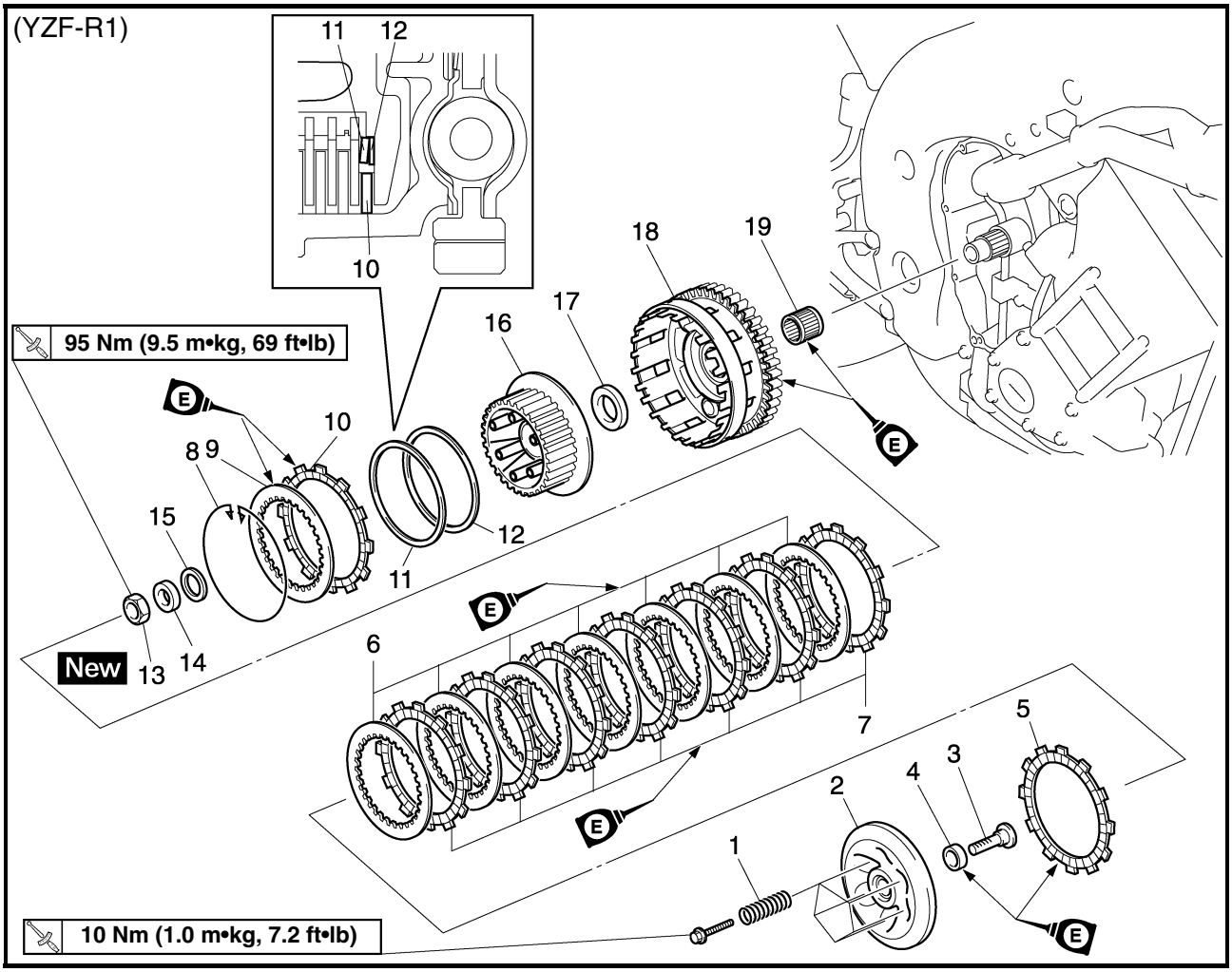
Order	Job/Part	Q'ty	Remarks
	Removing the camshafts		Remove the parts in the order listed.
	Pickup rotor cover		Refer to "CRANKSHAFT POSITION SENSOR AND PICKUP ROTOR".
1	Camshaft sprocket bolt	4	Loosen.
2	Timing chain tensioner	1	
3	Timing chain tensioner gasket	1	
4	Intake camshaft cap	3	
5	Dowel pin	6	
6	Exhaust camshaft cap	3	
7	Dowel pin	6	
			Refer to "REMOVING THE CAMSHAFTS".
8	Intake camshaft	1	
9	Exhaust camshaft	1	
10	Camshaft sprocket	2	
			For installation, reverse the removal procedure.

CLUTCH
CLUTCH COVER

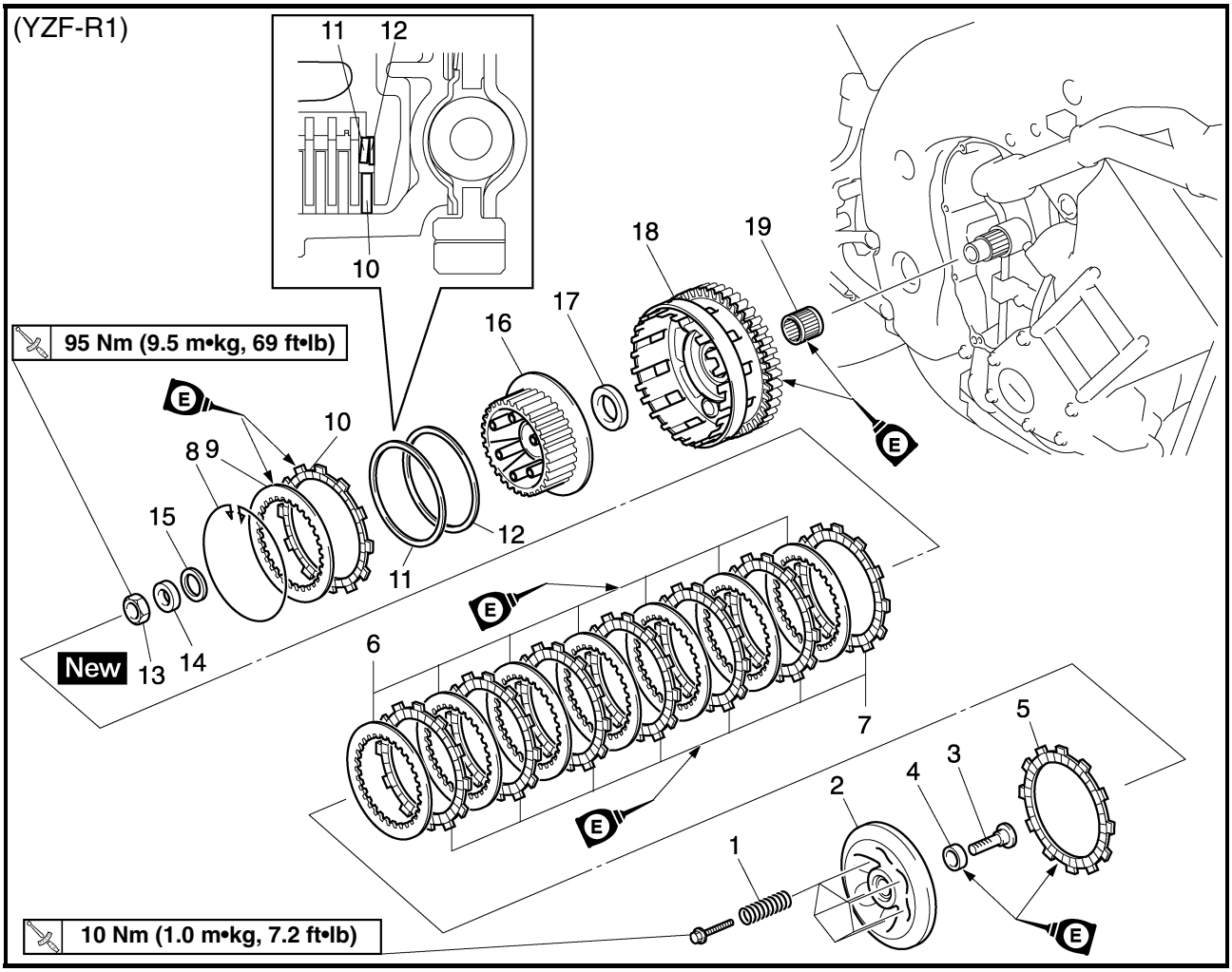


Order	Job/Part	Q'ty	Remarks
	Removing the clutch cover		Remove the parts in the order listed.
	Right side cowling		
	Right frame side cover		
	Right frame side panel		
	Bottom cowling		
	Engine oil		Drain. Refer to "CHANGING THE ENGINE OIL" in chapter 3.
1	Cover	1	
2	Clutch cable	1	Disconnect.
3	Clutch cover	1	
4	Clutch cover gasket	1	
5	Dowel pin	2	
6	Oil filler cap	1	
			For installation, reverse the removal procedure.

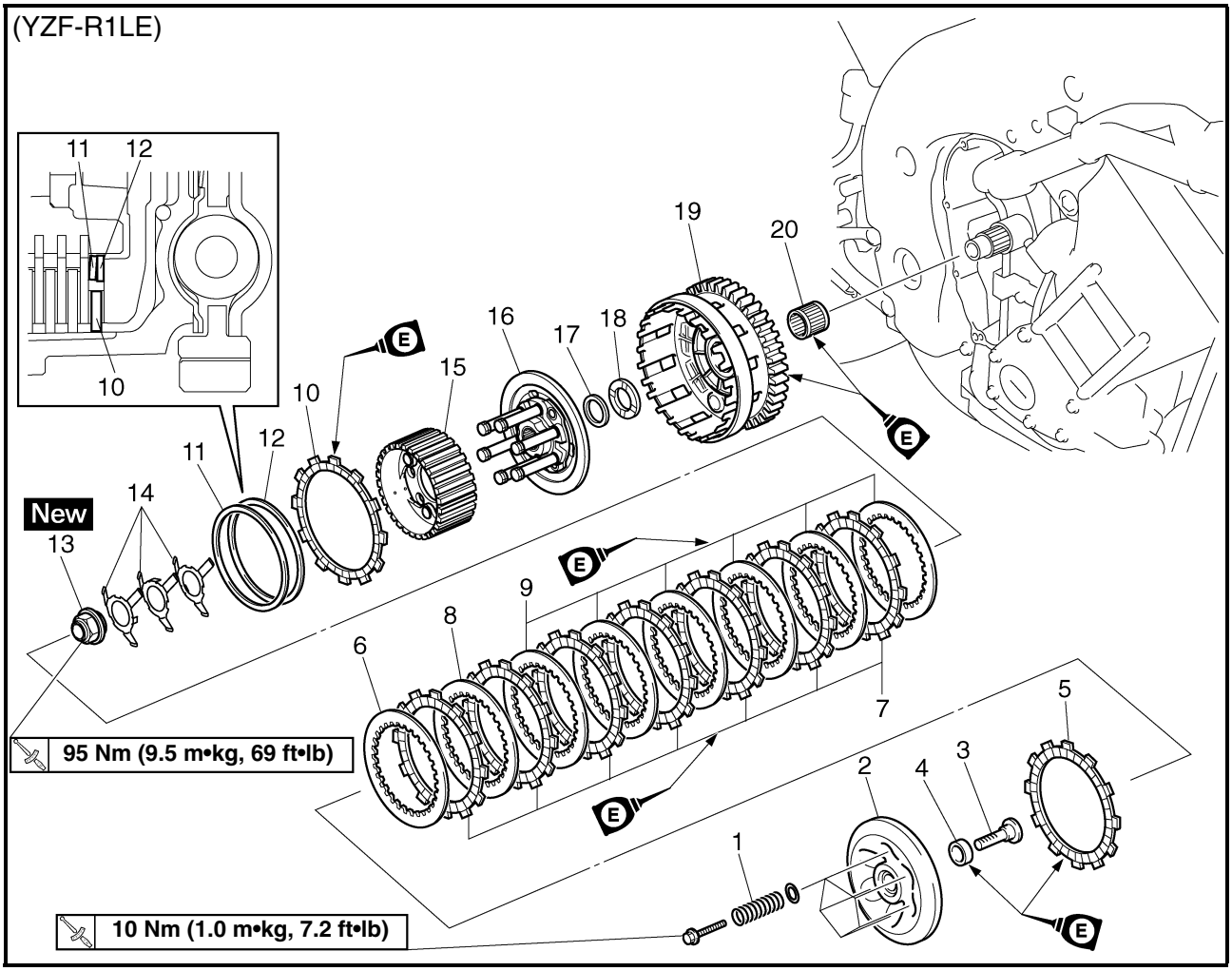
CLUTCH



Order	Job/Part	Q'ty	Remarks
	Removing the clutch		Remove the parts in the order listed.
1	Compression spring	6	
2	Pressure plate	1	
3	Pull rod	1	
4	Bearing	1	
5	Friction plate 1	1	
6	Clutch plate 1	7	
7	Friction plate 2	7	
8	Wire clip	1	
9	Clutch plate 2	1	
10	Friction plate 3	1	
11	Clutch damper spring	1	
12	Clutch damper spring seat	1	

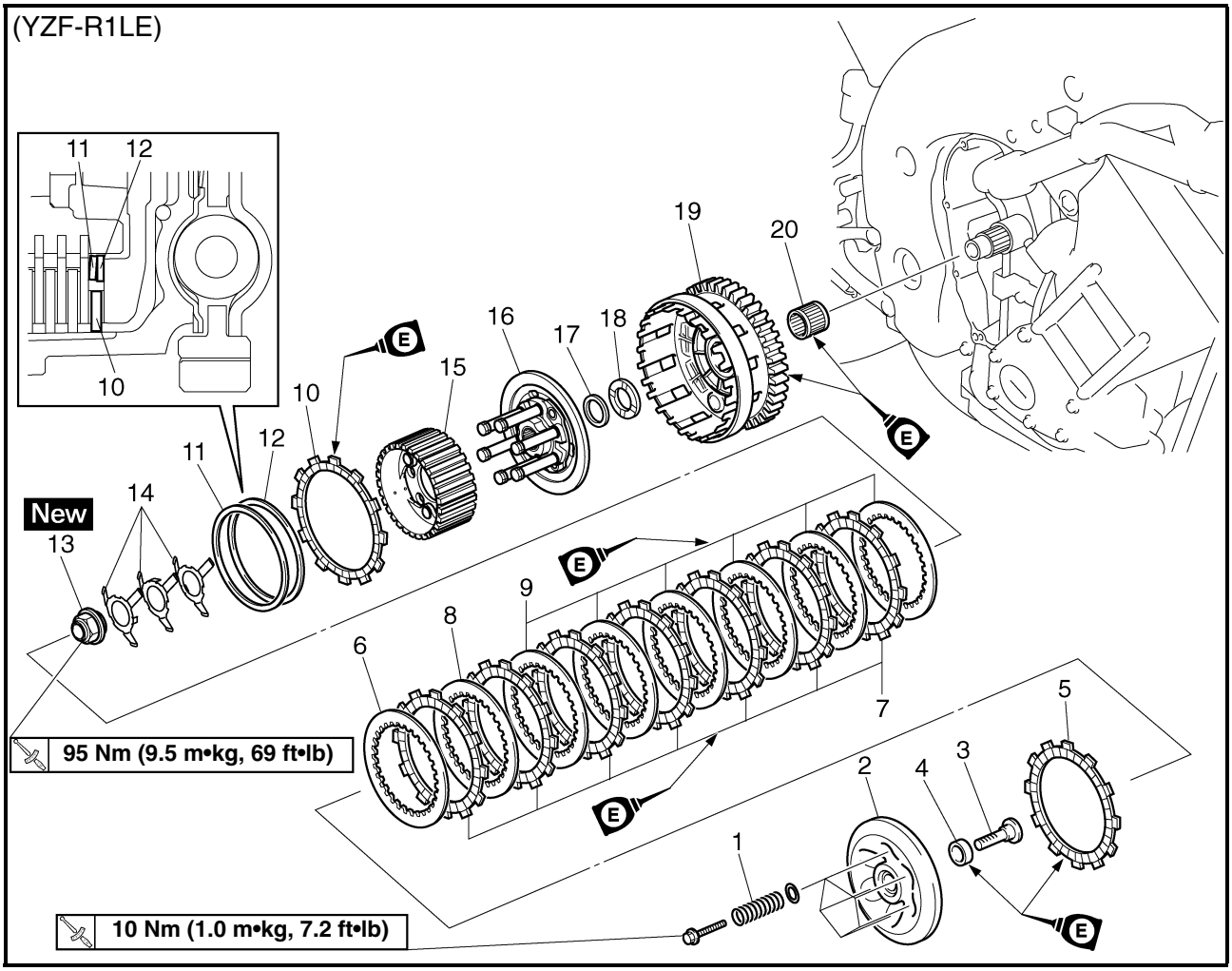


Order	Job/Part	Q'ty	Remarks
13	Clutch boss nut	1	
14	Washer	1	
15	Thrust plate 1	1	
16	Clutch boss	1	
17	Thrust plate 2	1	
18	Clutch housing	1	
19	Bearing	1	
			For installation, reverse the removal procedure.

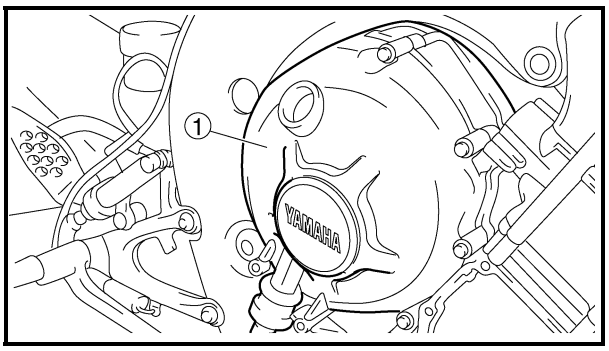


Order	Job/Part	Q'ty	Remarks
	Removing the clutch		Remove the parts in the order listed.
1	Compression spring	6	
2	Pressure plate 1	1	
3	Pull rod	1	
4	Bearing	1	
5	Friction plate 1	1	
6	Clutch plate 1	1	
7	Friction plate 2	7	
8	Clutch plate 2	1	
9	Clutch plate 3	6	
10	Friction plate 3	1	
11	Clutch damper spring	1	
12	Clutch damper spring seat	1	
13	Clutch boss nut	1	

(YZF-R1LE)

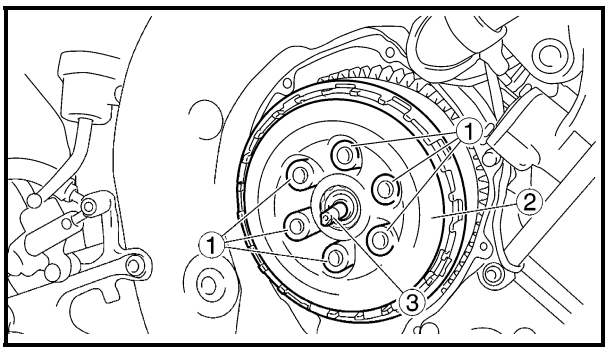


Order	Job/Part	Q'ty	Remarks
14	Spring	3	
15	Clutch boss	1	
16	Pressure plate 2	1	
17	Conical spring washer	1	
18	Thrust plate 2	1	
19	Clutch housing	1	
20	Bearing	1	
			For installation, reverse the removal procedure.

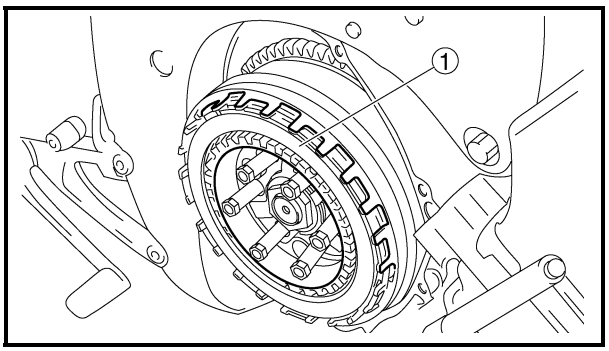


EAS00276
REMOVING THE CLUTCH
(YZF-R1LE)
1. Remove:
   • clutch cover ①
   • gasket

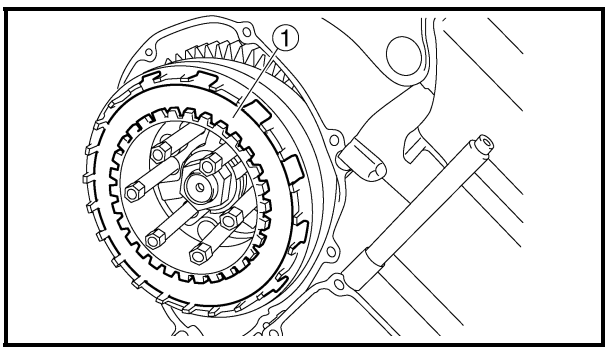
NOTE:
Loosen each bolt 1/4 of a turn at a time, in stages and in a crisscross pattern.
After all of the bolts are fully loosened, remove them.



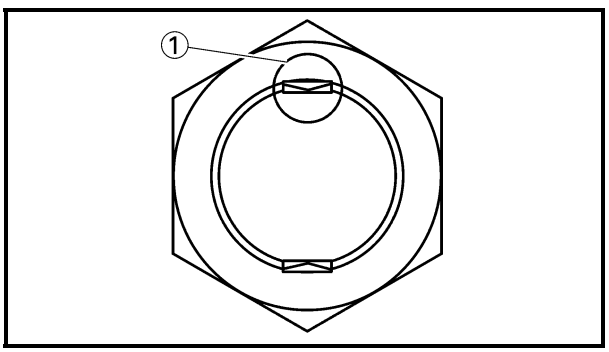
2. Remove:
   • compression spring bolts ①
   • compression springs
   • pressure plate ②
   • pull rod ③



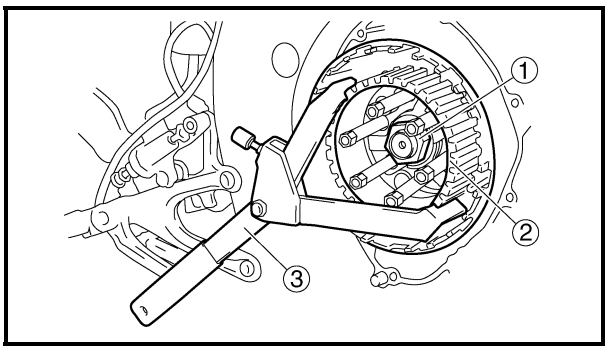
3. Remove:
   • friction plate 1 ①



4. Remove:
   • clutch plate 1 ①
   • friction plate 2
   • clutch plate 2
   • clutch plate 3
   • friction plate 3
   • clutch damper spring
   • clutch damper spring seat



5. Straighten the clutch boss nut rib ①.



6. Loosen:
   • clutch boss nut ①

NOTE:

While holding the clutch boss ② with the universal clutch holder ③, loosen the clutch boss nut.

Universal clutch holder
90890-04086, YM-91042

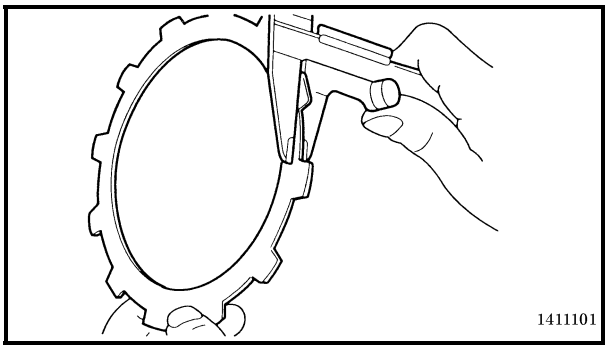
7. Remove:
   • clutch boss nut
   • springs
   • clutch boss
   • pressure plate 2
   • conical spring washer
   • thrust plate 2

EAS00280
CHECKING THE FRICTION PLATES

(YZF-R1LE)

The following procedure applies to all of the friction plates.

1. Check:
   • friction plate
   Damage/wear → Replace the friction plates as a set.



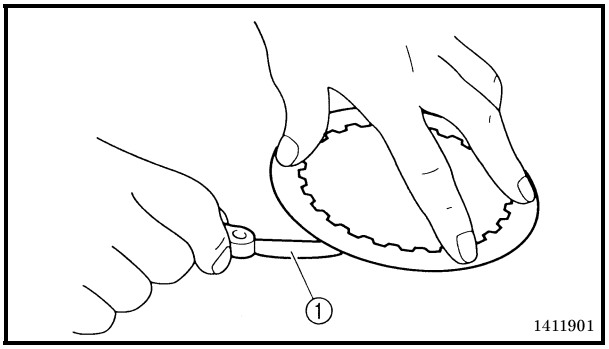
2. Measure:
   • friction plate thickness
   Out of specification → Replace the friction plates as a set.

NOTE:

Measure the friction plate at four places.

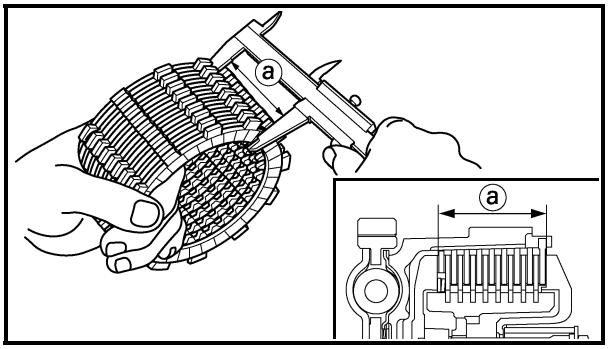
Friction plate thickness
2.9 ~ 3.1 mm (0.114 ~ 0.122 in)
<Limit>: 2.8 mm (0.110 in)

EAS00281
CHECKING THE CLUTCH PLATES
(YZF-R1LE)
The following procedure applies to all of the clutch plates.
1. Check:
   • clutch plate
   Damage → Replace the clutch plates as a set.



2. Measure:
   • clutch plate warpage
   (with a surface plate and thickness gauge ①)
   Out of specification → Replace the clutch plates as a set.

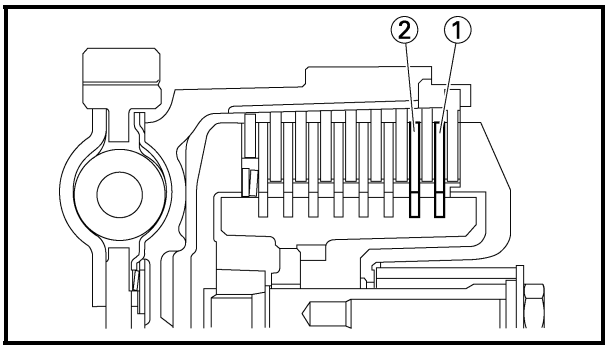
Clutch plate warpage limit
0.1 mm (0.0039 in)



3. Measure:
   • assembly width ⓐ of the friction plates and clutch plates
   Out of specification → Adjust.

Assembly width
42.4 ~ 43.0 mm (1.67 ~ 1.69 in)

NOTE:
Perform the thickness measurement without applying the oil.



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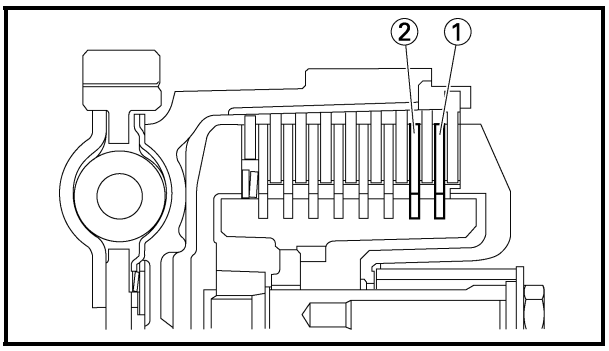
a. Assembly width adjusted by clutch plate ① and ②.
b. Select the clutch plate from the following table.

Clutch plate ①

Part No.	Thickness	
4B1-16324-00	1.6 mm (0.062 in)	
5VY-16325-00	2.0 mm (0.079 in)	STD
4B1-16325-00	2.3 mm (0.091 in)	

Clutch plate ②

Part No.	Thickness	
5VY-16325-00	2.0 mm (0.079 in)	STD
4B1-16325-00	2.3 mm (0.091 in)	



NOTE:

When adjusting the clutch assembly width [by replacing the clutch plate(s)], be sure to replace the clutch plate ① fast.
After replacing the clutch plate ①, if specifications cannot be met, replace the clutch plate ②.

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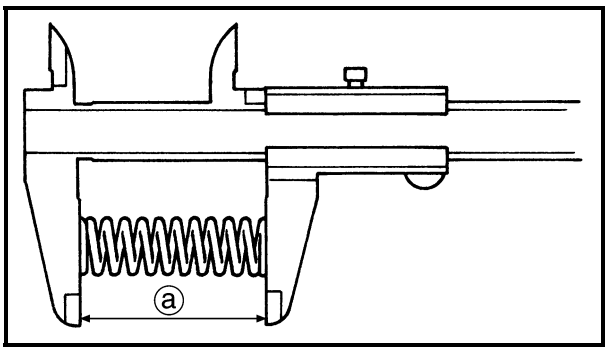
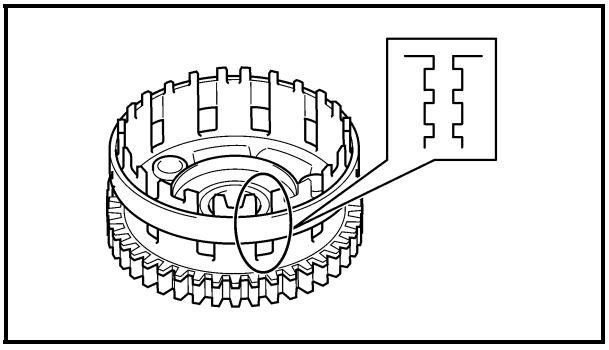


EAS00282
CHECKING THE CLUTCH SPRINGS
(YZF-R1LE)
The following procedure applies to all of the clutch springs.
1. Check:
   • clutch spring
   Damage → Replace the clutch springs as a set.
2. Measure:
   • clutch spring free length ⓐ
   Out of specification → Replace the clutch springs as a set.

Clutch spring free length
43.8 mm (1.72 in)
<Limit>: 41.6 mm (1.64 in)

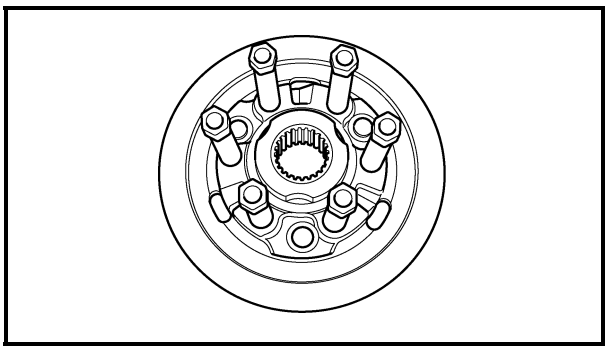


EAS00284
CHECKING THE CLUTCH HOUSING
(YZF-R1LE)
1. Check:
   • clutch housing dogs
   Damage/pitting/wear → Deburr the clutch housing dogs or replace the clutch housing.

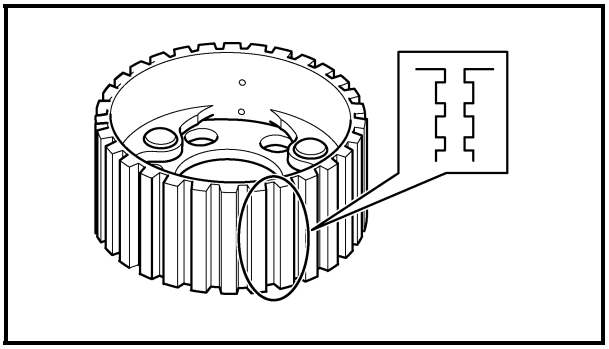
NOTE:

Pitting on the clutch housing dogs will cause erratic clutch operation.

2. Check:
   • bearing
   Damage/wear → Replace the bearing and clutch housing.



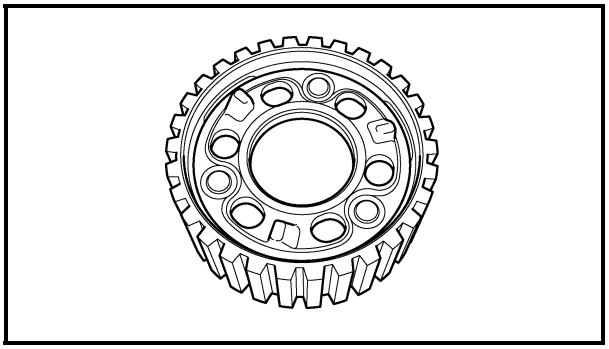
CHECKING THE PRESSUR PLATE 2
(YZF-R1LE)
1. Check:
   • pressure plate 2
   Cracks/damage → Replace.



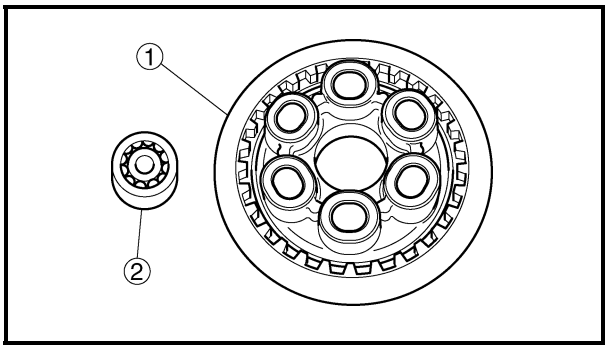
EAS00285
CHECKING THE CLUTCH BOSS
(YZF-R1LE)
1. Check:
   • clutch boss splines
   Damage/pitting/wear → Replace the clutch boss.

NOTE:

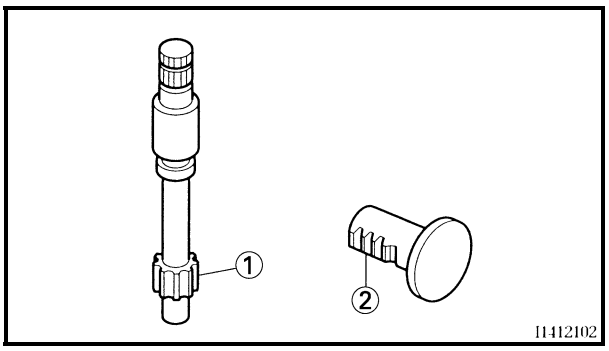
Pitting on the clutch boss splines will cause erratic clutch operation.



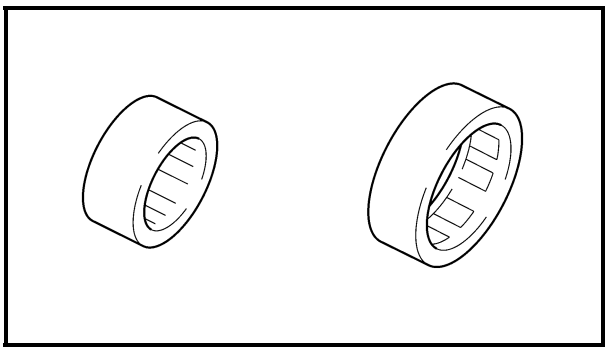
2. Check:
   • clutch boss
   Cracks/damage → Replace.



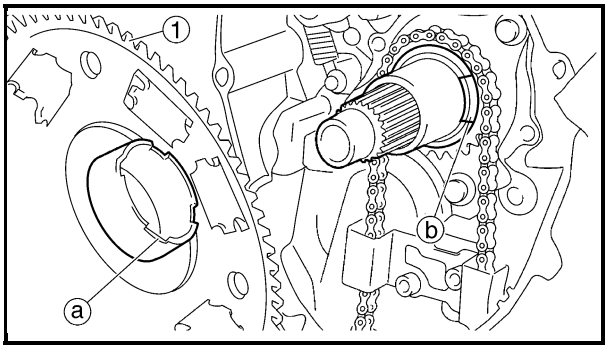
EAS00286
CHECKING THE PRESSURE PLATE 1
(YZF-R1LE)
1. Check:
   • pressure plate ①
   Cracks/damage → Replace.
   • bearing ②
   Damage/wear → Replace.



EAS00287
CHECKING THE PULL LEVER SHAFT AND PULL ROD
(YZF-R1LE)
1. Check:
   • pull lever shaft pinion gear teeth ①
   • pull rod teeth ②
   Damage/wear → Replace the pull rod and pull lever shaft pinion gear as a set.

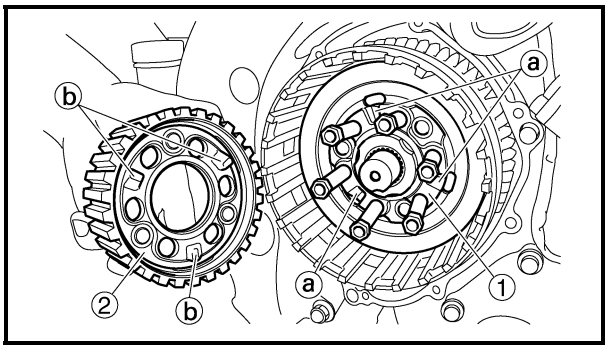


2. Check:
   • pull rod bearing
   Damage/wear → Replace.



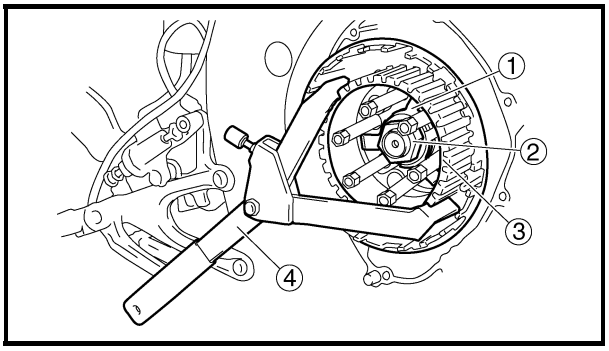
INSTALLING THE CLUTCH
(YZF-R1LE)
1. Install:
   • clutch housing ①
   • conical spring washer
   • thrust plate 2

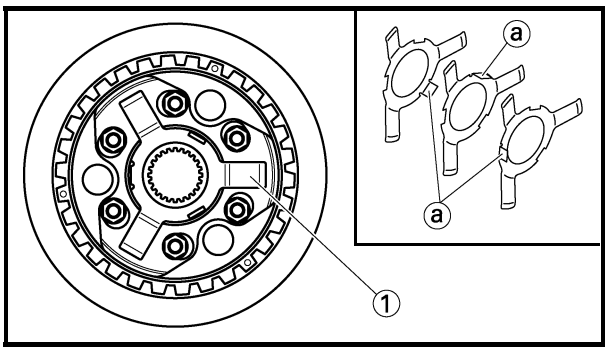
NOTE:
Align the projection of clutch housing ⓐ and hollow of the oil pump drive gear ⓑ.

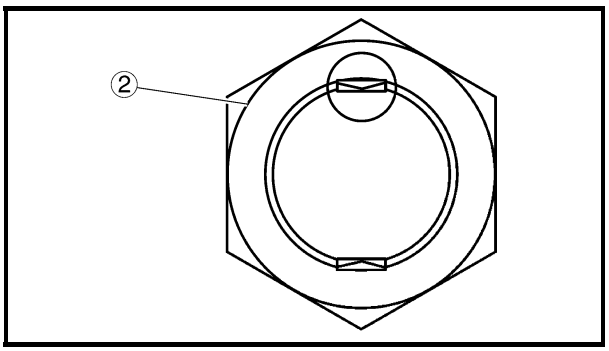


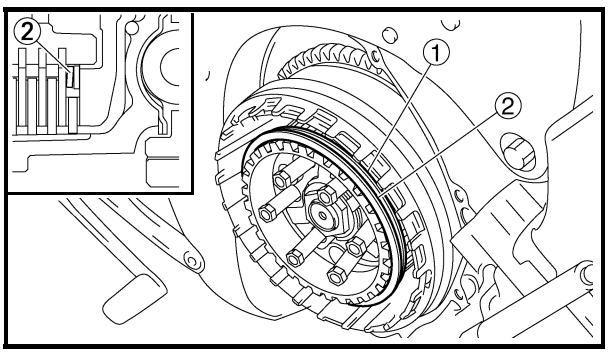
2. Install:
   • pressure plate 2 ①
   • clutch boss ②

NOTE:
Fit the groove ⓐ of the pressure plate 2 to the projection ⓑ of the clutch boss to assemble.









3. Install:
   - spring ①
   - clutch boss nut ② New

	95 Nm (9.5 m•kg, 69 ft•lb)

NOTE:

- Put the spring detent ⓐ into the groove of the pressure plate 2.
  Assemble so that each spring detent ⓐ is positioned in a different groove.
- While holding the clutch boss ③ with the clutch holding tool ④, tighten the clutch boss nut.
- Lock the threads on the clutch boss nut by staking them with a drift punch at the point aligned with the groove in the axle.

	Universal clutch holder **90890-04086, YM-91042**

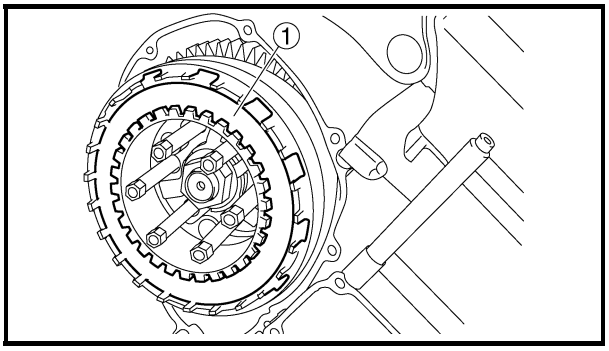
4. Install:
   - clutch damper spring seat ①
   - clutch damper spring ②

NOTE:

Install the clutch damper spring as shown in the illustration.

5. Lubricate:
   - friction plates
   - clutch plates
     (with the recommended lubricant)

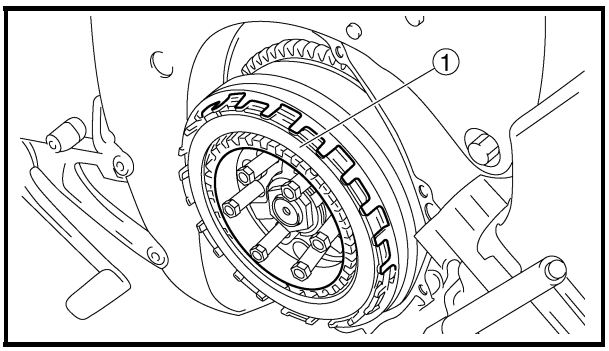
	Recommended lubricant **Engine oil**



6. Install:
   • friction plate 3
   • friction plate 2
   • clutch plate 3
   • clutch plate 2
   • clutch plate 1 ①

NOTE:

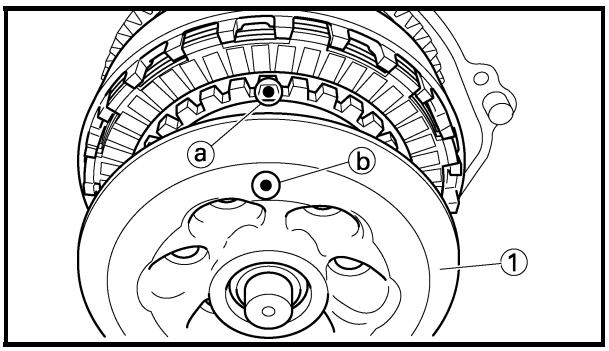
Assemble the friction plates and clutch plates according to the installation order.



7. Install:
   • friction plate 1 ①

NOTE:

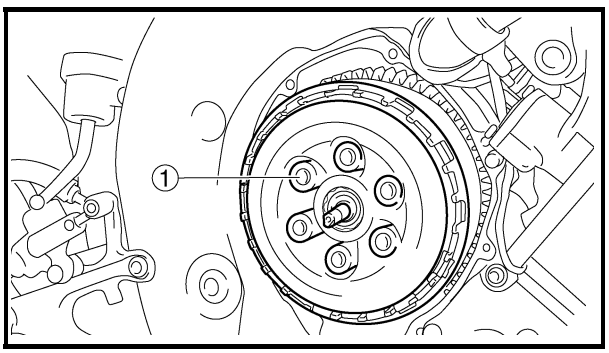
Install the last friction plate shifting half phase.



8. Install:
   • bearing
   • pull rod
   • pressure plate 1 ①

NOTE:

Align the punch mark ⓑ on the pressure plate with the punch mark ⓐ on the clutch boss.

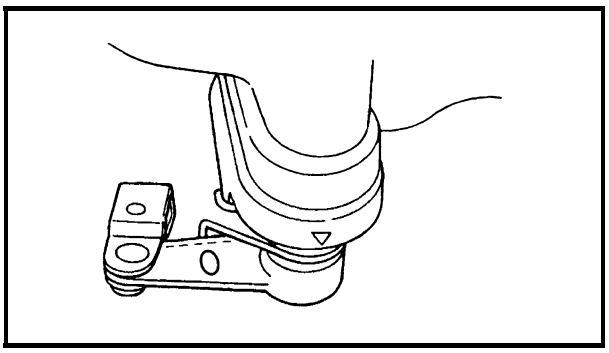


9. Install:
   • clutch springs
   • clutch spring bolts ①

10 Nm (1.0 m•kg, 7.2 ft•lb)

NOTE:

Tighten the clutch spring bolts in stages and in a crisscross pattern.



10. Install:
    • pull lever

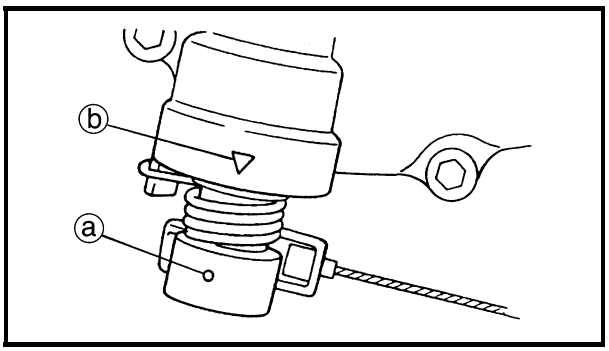
NOTE:

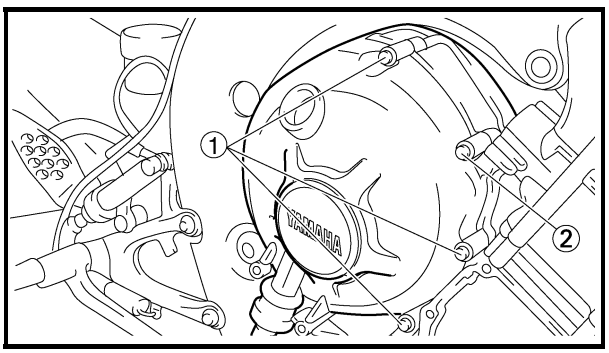
Install the pull lever with the "○" mark facing toward upper side.

11. Install:
    • clutch cover
    • clutch cover gasket New

NOTE:

- Install the pull rod so that the teeth a face towards the rear of the vehicle. Then, install the clutch cover.
- Apply oil onto the bearing.
- Apply molybdenum disulfide grease onto the pull rod.
- When installing the clutch cover, push the pull lever and check that the punch mark ⓐ on the pull lever aligns with the mark ⓑ on the clutch cover. Make sure that the pull rod teeth and pull lever shaft pinion gear are engaged.





12. Tighten:
    • clutch cover bolts ①
      12 Nm (1.2 m•kg, 8.7 ft•lb)
    • clutch cover bolt ②
      12 Nm (1.2 m•kg, 8.7 ft•lb)
      LOCTITE®

NOTE:

Tighten the clutch cover bolts in a stages and in a crisscross pattern.

13. Adjust:
    • clutch cable free play
      Refer to "ADJUSTING THE CLUTCH CABLE FREE PLAY" in chapter 3.

YZF-R1V/YZF-R1VC/YZF-R1LEV/YZF-R1LEVC 2006 WIRING DIAGRAM

① Main switch
② A.C. magneto
③ Rectifier/regulator
④ Fuse (main)
⑤ Fuse (backup)
⑥ Battery
⑦ Fuse (fuel injection)
⑧ Starter relay
⑨ Starter motor
⑩ Starting circuit cut-off relay
⑪ Neutral switch
⑫ Sidestand switch
⑬ Fuel pump
⑭ E.C.U
⑮ Ignition coil #1
⑯ Ignition coil #2
⑰ Ignition coil #3
⑱ Ignition coil #4
⑲ Spark plug
⑳ Injector #1
㉑ Injector #2
㉒ Injector #3
㉓ Injector #4
㉔ Air induction system solenoid
㉕ Sub-throttle position sensor
㉖ EXUP servo motor
㉗ Speed sensor
㉘ Coolant temperature sensor
㉙ Intake air temperature sensor
㉚ Crankshaft position sensor
㉛ Throttle position sensor
㉜ Intake air pressure sensor
㉝ Atmospheric pressure sensor
㉞ Cylinder identification sensor
㉟ Lean angle sensor
㊱ Meter assembly
㊲ Fuel level warning light
㊳ Oil level warning light
㊴ Neutral indicator light
㊵ Tacho meter
㊶ Shift timing indicator light
㊷ Multi function meter
㊸ Engine trouble warning light
㊹ Coolant temperature indicator light
㊺ Hi beam indicator light
㊻ Turn signal indicator light (left)
㊼ Turn signal indicator light (right)
㊽ Meter light
㊾ Oil level switch
㊿ Right handlebar switch
(51) Front brake light switch
(52) Engine stop switch
(53) Start switch
(54) Turn signal relay
(55) Left handlebar switch
(56) Dimmer switch
(57) Horn switch
(58) Clutch switch
(59) Turn signal switch
(60) Horn
(61) Front turn signal/ position light (left)
(62) Front turn signal/ position light (right)
(63) Rear turn signal light (left)
(64) Rear turn signal light (right)
(65) Headlight
(66) Auxiliary light
(67) License plate light
(68) Rear brake light switch
(69) Tail /brake light
(70) Headlight relay (on/off)
(71) Headlight relay (dimmer)
(72) Fuse (ignition)
(73) Fuse (signal)
(74) Fuse (headlight)
(75) Radiator fan motor relay
(76) Fuse (radiator fan motor left)
(77) Fuse (radiator fan motor right)
(78) Radiator fan motor 2
(79) Radiator fan motor 1
(80) Ground

COLOR CODE

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

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

YZF-R1V/YZF-R1VC/YZF-R1LEV/YZF-R1LEVC
2006 WIRING DIAGRAM