YAMAHA

YZ250T

www.legends-yamaha-enduros.com

OWNER'S SERVICE MANUAL

LIT-11626-05-76

2HH-28199-10

www.legends-yamaha-enduros.com

YZ250T
OWNER'S SERVICE MANUAL
©1986 by Yamaha Motor Corporation, U.S.A.
1st Edition, August 1986
All rights reserved. Any reprinting or
unauthorized use without the written
permission of Yamaha Motor Corporation
U.S.A. is expressly prohibited.
Printed in Japan
P/N LIT-11626-05-76

INTRODUCTION

Congratulations on your purchase of a Yamaha YZ250T. This model is the culmination of Yamaha's vast experience in the production of pacesetting racing machines. It represents the highest grade of the craftsmanship and reliability that have made Yamaha a leader.
This manual explains operation, inspection, and basic maintenance of your machine. If you have any questions about this manual or your machine, please contact your Yamaha dealer.

NOTE:

As improvements are made on this model, some data in this manual may become outdated. If you have any questoins, please consult a Yamaha dealer.

WARNING:

PLEASE READ THIS MANUAL CAREFULLY AND COMPLETELY BEFORE ATTEMPTING TO OPERATE THIS MACHINE. DO NOT ATTEMPT TO OPERATE THIS MACHINE UNTIL YOU HAVE ATTAINED SATISFACTORY KNOWLEDGE OF ITS CONTROLS AND OPERATING FEATURES.

www.legends-yamaha-enduros.com

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

YZ MOTORCYCLE LIMITED WARRANTY

Yamaha Motor Corporation, U.S.A. hereby warrants to the original retail purchaser that the following components equipped on new Yamaha YZ motorcycles purchased from an authorized Yamaha motorcycle dealer in the continental United States will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations. YZ components included under this warranty are the engine, frame, swingarm, and monoshock. It is understood that the balance of the YZ components are not covered by any warranty, expressed or implied. The balance of the components equipped on the unit are sold on an "as is" basis. This warranty applies to the original purchaser only and is not transferable.

THE PERIOD OF WARRANTY for the above-listed Yamaha YZ components as originally installed on the unit shall be thirty (30) days from the date of purchase.

MODELS EXCLUDED FROM WARRANTY include those used for non-Yamaha-authorized renting, leasing, or other commercial purposes.

DURING THE PERIOD OF WARRANTY any authorized Yamaha motorcycle dealer will provide:

1. The replacement of any part adjudged defective by Yamaha due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the machine's warranty period. All parts replaced under warranty become property of Yamaha Motor Corporation, U.S.A.
2. Any repairs made necessary by faulty workmanship or material from the factory.

GENERAL EXCLUSIONS from this warranty shall include any failures caused by:

a. Installation of parts or accessories that are not qualitatively equivalent to genuine Yamaha parts.
b. Abnormal strain, neglect, or abuse.
c. Accident or collision damage.
d. Modification to original parts.
e. Lack of proper maintenance.

SPECIFIC EXCLUSIONS from this warranty shall include parts replaced due to normal wear or routine maintenance.

THE CUSTOMER'S RESPONSIBILITY under this warranty shall be to:

1. Operate and maintain the YZ as specified in the appropriate Owner's Service Manual, and
2. Give notice to an authorized Yamaha motorcycle dealer of any and all apparent defects within ten (10) days after discovery, and make the machine available at that time for inspection and repairs at such dealer's place of business.

YAMAHA MOTOR CORPORATION, U.S.A. MAKES NO OTHER WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED. ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE OBLIGATIONS AND TIME LIMITS STATED IN THIS WARRANTY ARE HEREBY DISCLAIMED BY YAMAHA MOTOR CORPORATION, U.S.A. AND EXCLUDED FROM THIS WARRANTY.

SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU. ALSO EXCLUDED FROM THIS WARRANTY ARE ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING LOSS OF USE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE EXCLUSION MAY NOT APPLY TO YOU.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

YAMAHA MOTOR CORPORATION, U.S.A.
Post Office Box 6555
Cypress, California 90630

WARRANTY QUESTIONS AND ANSWERS

Q. What costs are my responsibility during the warranty period?
A. The customer's responsibility includes all costs of normal maintenance services, non-warranty repairs, accident and collision damages, and oil, oil filters, air filters, spark plugs, and brake shoes.

Q. What are some examples of "abnormal" strain, neglect, or abuse?
A. These terms are general and overlap each other in areas. Specific examples include: Running the machine out of oil, sustained high-rpm, full-throttle, operating the machine with a broken or damaged part which causes another part to fail, damage or failure due to improper or careless transporation and or tie down. If you have any specific questions on operation or maintenance, please contact your dealer for advice.

Q. Does the warranty cover incidental costs such as towing or transportation due to a failure?
A. No. The warranty is limited to repair of the machine itself.

Q. May I perform any or all of the recommended maintenance shown in the Owner's Manual instead of having the dealer do them?
A. Yes, if you are a qualified mechanic and follow the procedures specified in the Owner's and Service Manual. We do recommend, however, that the critical adjustments to timing, carburetion, and oil injection be done by a Yamaha motorcycle dealer.

Q. Will the warranty be void or cancelled if I do not operate or maintain my new motorcycle exactly as specified in the Owner's Manual?
A. No. The warranty on a new motorcycle cannot be "voided" or "cancelled." **However, if a particular failure is caused by operation or maintenance other than as shown in the Owner's Manual, that failure may not be covered under warranty.**

Q. What responsibility does my dealer have under this warranty?
A. Each Yamaha motorcycle dealer is expected to:
   1. Completely set up every new machine before sale.
   2. Explain the operation, maintenance, and warranty requirements to your satisfaction at the time of sale, and upon your request at any later date.
   3. Each Yamaha motorcycle dealer is held responsible for his setup, service and warranty repair work.

Q. Is the warranty transferable to second owners?
A. Yes. The remainder of the existing warranty can be transferred upon request. The unit has to be inspected and re-registered by an authorized Yamaha motorcycle dealer for the policy to remain effective.

CUSTOMER SERVICE

If your machine requires warranty service, you must take it to any authorized Yamaha motorcycle dealer within the continental United States. Be sure to bring your warranty registration card or other valid proof of the original date of purchase. If a question or problem arises regarding warranty, first contact the owner of the dealership. Since all warranty matters are handled at the dealer level, this person is in the best position to help you. If you are still not satisfied and require additional assistance, please write:

YAMAHA MOTOR CORPORATION U.S.A.
WARRANTY/CUSTOMER RELATIONS DEPARTMENT
P.O. Box 6555
Cypress, California 90630

When contacting Yamaha Motor Corporation, U.S.A. don't forget to include any important information such as names, addresses, model, engine serial number, dates, and receipts.

CHANGE OF ADDRESS

The federal government requires each manufacturer of a motor vehicle to maintain a complete, up-to-date list of all first purchasers against the possibility of a safety-related defect and recall. This list is compiled from the purchase registrations sent to Yamaha Motor Corporation, U.S.A. by the selling dealer at the time of your purchase.

If you should move after you have purchased your new motorcycle, please advise us of your new address by sending a postcard listing your motorcycle model name, engine serial number, dealer number (or dealer's name) as it is shown on your warranty card, your name and new mailing address. Mail to:

YAMAHA MOTOR CORPORATION, U.S.A.
P.O. Box 6555
Cypress, California 90630
Attention: Warranty Department

This will ensure that Yamaha Motor Corporation, U.S.A. has an up-to-date registration record in accordance with federal law.

IMPORTANT NOTICE

THIS MACHINE IS DESIGNED STRICTLY FOR COMPETITION USE ONLY IN A CLOSED COURSE. It is illegal to operate this machine to be operated on any public street, road or highway. Off-road use on public lands may also be illegal. Please check local regulations before riding.

SAFETY WARNINGS:

1. **THIS MACHINE IS TO BE OPERATED BY AN EXPERIENCED RIDER ONLY.**
   Do not attempt to operate this vehicle at maximum power until you are totally familiar with its characteristics.
2. **THIS MACHINE IS DESIGNED TO BE RIDDEN BY THE OPERATOR ONLY.**
   Do not carry passengers on this machine.
3. **ALWAYS WEAR PROTECTIVE APPAREL.**
   When operating this machine, always wear an approved helmet with goggles or a face shield. Also wear heavy boots, gloves, and protective clothing. Always wear proper fitting clothing that will not be caught in any of the moving parts or controls of the machine.
4. **ALWAYS MAINTAIN YOUR MACHINE IN PROPER WORKING ORDER.**
   For safety and reliability, the machine must be properly maintained.
   Your machine should receive service from a qualified mechanic whenever indicated in this manual and/or if the mechanical condition of the machine makes it necessary.
   Always perform the pre-operation checks indicated in this manual.
   Correcting a mechanical problem before you ride may prevent an accident.
5. **GASOLINE IS HIGHLY FLAMMABLE.**
   Always turn off the engine while refueling. Take care to not spill any gasoline on the engine or exhaust system. Never refuel in the vicinity of an open flame, or while smoking.
6. **GASOLINE CAN CAUSE INJURY.**
   If you should swallow some gasoline, inhale excess gasoline vapors, or allow any gasoline to get into your eyes, contact a doctor immediately. If any gasoline spills onto your skin or clothing, immediately wash skin areas with soap and water, and change your clothes.
7. **ONLY OPERATE THE MACHINE IN AN AREA WITH ADEQUATE VENTILATION.**
   Never start the engine or let it run for any length of time in an enclosed area. Exhaust fumes are poisonous. These fumes contain carbon monoxide, which by itself is odorless and colorless. Carbon monoxide is a dangerous gas which can cause unconciousness or can be lethal.
8. **PARK THE MACHINE CAREFULLY; TURN OFF THE ENGINE.**
   Always turn off the engine if you are going to leave the machine. Do not park the machine on a slope or soft ground as it may fall over.
9. **PROPERLY SECURE THE MACHINE BEFORE TRANSPORTING IT.**
   When transporting the machine in another vehicle, always be sure it is properly secured and in an upright position. If the machine should fall over, gasoline may leak from the carburetor or fuel tank.

TO THE NEW OWNER

This manual will provide you with a good basic understanding of features, operation, and basic maintenace and inspection items of this machine.
Pleas read this manual carefully and completely before operating your new machine. Suspension and carburetor on this machine can be adjusted. For details of tuning, refer to the race preparation and tuning manual.
If you have any questions regarding the operation or maintenance of your machine, pleas consult your Yamaha dealer.

NOTE:

This manual should be considered a parmanent part of this machine and should remain with it even if the machine is subsequently sold.

NOTICE

Some data in this manual may become outdated due to improvements made to this model in the future. If there is any question you have regarding this manual or your machine, please consult your Yamaha dealer.

F.I.M. MACHINE WEIGHTS

Weights of machines without fuel
The minimum weights for motocross machines are:
for the class 125 cc ..... minimum 88 kg (194 lb)
for the class 250 cc ..... minimum 98 kg (216 lb)
for the class 500 cc ..... minimum 102 kg (225 lb)
In modifying your machine (e.g., for weight reduction), take note of the above limits of weight.

www.legends-yamaha-enduro.com

HOW TO USE THIS MANUAL

PARTICULARLY IMPORTANT INFORMATION

This material is distinguished by the following notation.

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

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

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

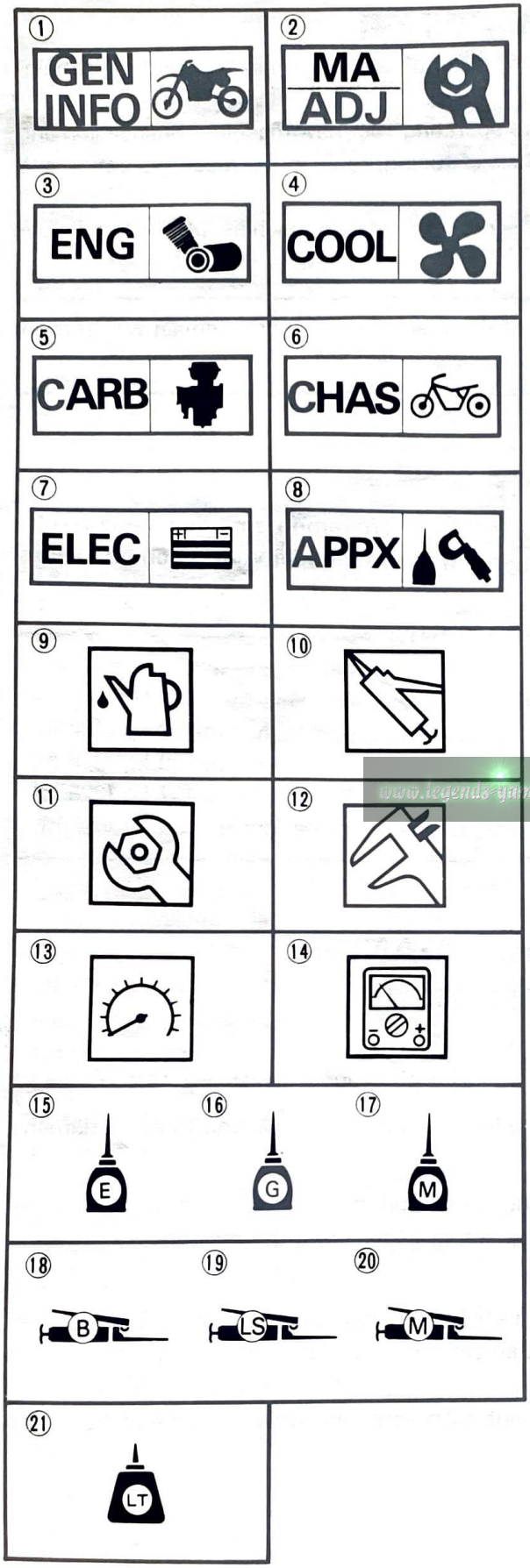
MANUAL FORMAT

All of the procedures in this manual are organized in a sequential, step-by-step format. The information has been compiled to provide the mechanic with an easy to read, handy reference that contains comprehensive explanations of all disassembly, repair, assembly, and inspection operations.
In this revised format, the condition of a faulty component will precede an arrow symbol and the course of action required will follow the symbol, e.g.,

- Bearings
  Pitting/Damage→Replace.

EXPLODED DIAGRAM

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



ILLUSTRATED SYMBOLS (Refer to the illustration)

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

① General information
② Regular maintenance and adjustment
③ Engine
④ Cooling system
⑤ Carburetion
⑥ Chassis
⑦ Electrical
⑧ Appendices

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

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

www.legends-yamaha-enthusiasts.com

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

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

INDEX

GENERAL INFORMATION — GEN INFO 1

REGULAR MAINTENANCE AND ADJUSTMENTS — MA ADJ 2

ENGINE MAINTENANCE AND REPAIR — ENG 3

COOLING SYSTEM MAINTENANCE AND REPAIR — COOL 4

CHASSIS — CHAS 5

ELECTRICAL — ELEC 6

APPENDICES — APPX 7

www.legends-yamaha-enduros.com

CHAPTER 1
GENERAL INFORMATION

DESCRIPTION 1-1

MACHINE IDENTIFICATION 1-2
VEHICLE IDENTIFICATION NUMBER 1-2
ENGINE SERIAL NUMBER 1-2

IMPORTANT INFORMATION 1-3
PREPARATION FOR REMOVAL AND DISASSEMBLY 1-3
ALL REPLACEMENT PARTS 1-4
GASKETS, OIL SEALS AND O-RINGS 1-4
LOCK WASHERS/PLATES AND COTTER PINS 1-4
BEARINGS AND OIL SEALS 1-4
CIRCRIPS 1-5

SPECIAL TOOLS 1-5
FOR TUNE UP 1-5
FOR ENGINE SERVICE 1-5
FOR CHASSIS SERVICE 1-6
FOR ELECTRICAL SERVICE 1-7

CONTROL FUNCTIONS 1-7

FUEL, OIL AND COOLANT 1-10
FUEL AND ENGINE MIXING OIL 1-10
TRANSMISSION OIL 1-10
COOLANT 1-11

PRE-OPERATION CHECK LIST 1-12

STARTING AND BREAK-IN 1-13
STARTING A COLD ENGINE 1-13
STARTING A WARM ENGINE 1-13
BREAK-IN PROCEDURES 1-13

CLEANING AND STORAGE 1-14
CLEANING 1-14
STORAGE 1-14

www.legends-yamaha-enduros.com

GENERAL INFORMATION

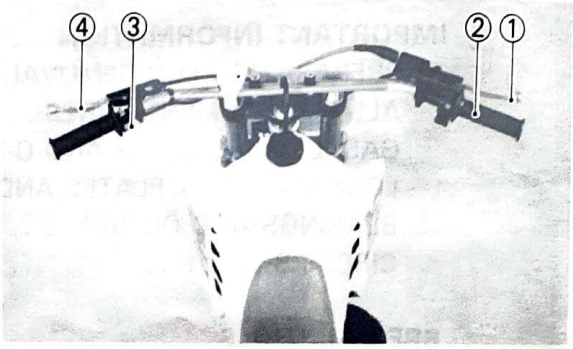
DESCRIPTION

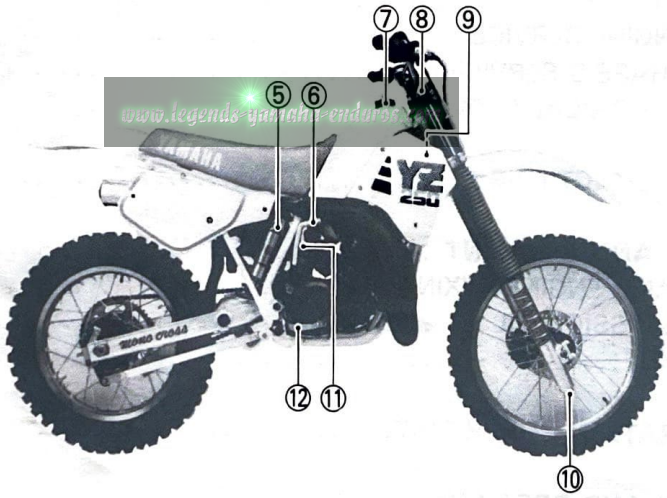
1

① Front brake lever
② Throttle grip
③ "ENGINE STOP" button
④ Clutch lever
⑤ Rear shock absorber compression damping adjuster
⑥ Kick starter
⑦ Tank cap
⑧ Front fork air valve
⑨ Radiator cap
⑩ Front fork compression damping adjuster
⑪ Starter knob
⑫ Rear brake pedal
⑬ Rear shock absorber spring preroad adjuster
⑭ Rear shock absorber rebound damping adjuster
⑮ Change pedal
⑯ Fuel cock

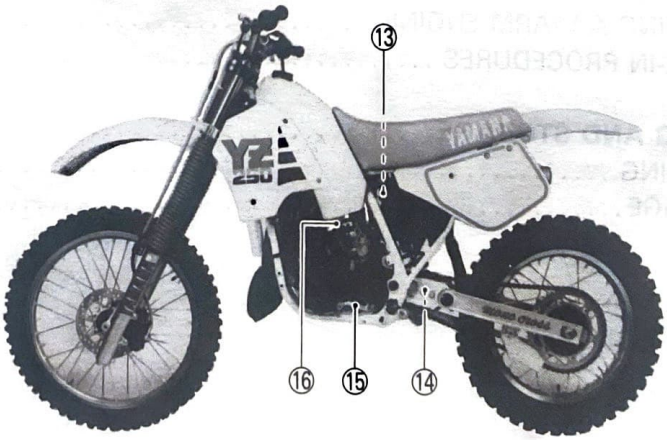
NOTE:

- The machine you have purchased may differ slightly from those shown in the photographs.
- Designs and specifications are subject to change without notice.





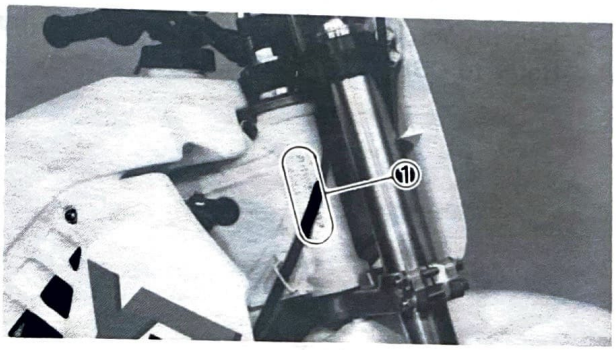
www.legende-yamaha-enduro.fr



MACHINE IDENTIFICATION

There are two significant reasons for knowing the serial number of your machine:

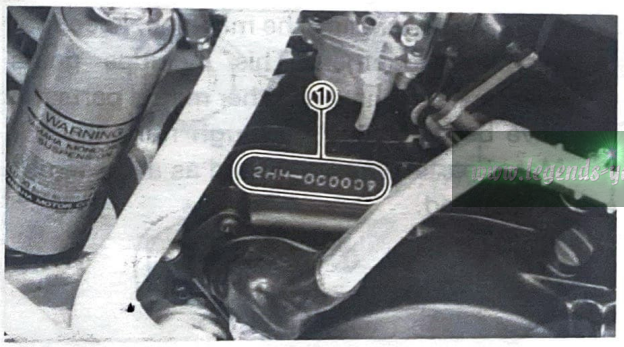
1. When ordering parts, you can give the number to your Yamaha dealer for positive identification of the model you own;
2. If your bike is stolen, the authorities will need the number to search for and identify your machine.



VEHICLE IDENTIFICATION NUMBER

The vehicle identification number ① is stamped on the right of the steering head pipe.

Starting Serial Number:
JYA2HH00✱HA000101



ENGINE SERIAL NUMBER

The engine serial number ① is stamped into the elevated part of the right rear section of the engine.

www.legends-yamaha-motors.com

NOTE:

The first three digits of these numbers are for model identifications; the remaining digits are the unit production number.

Starting Serial Number:
2HH-000101

IMPORTANT INFORMATION

PREPARATION FOR REMOVAL AND DISASSEMBLY

1. Remove all dirt, mud, dust, and foreign material before removal and disassembly.

2. Use proper tools and cleaning equipment. Refer to "SPECIAL TOOL."

3. When disassembling the machine, keep mated parts together. This includes gears, cylinders, pistons, and other mated parts that have been "mated" through normal wear. Mated parts must be reused as an assembly or replaced.

www.legends-yamaha-enduros.com

4. During the machine disassembly, clean all parts and place them in trays in the order of disassembly. This will speed up assembly time and help assure that all parts are correctly reinstalled.

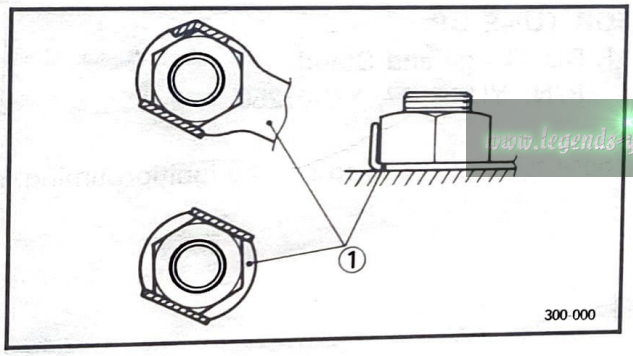
5. Keep away from fire.

ALL REPLACEMENT PARTS

1. We recommend to use Yamaha genuine parts for all replacements. Use oil and/or grease recommended by Yamaha for assembly and adjustment.

GASKETS, OIL SEALS, AND O-RINGS

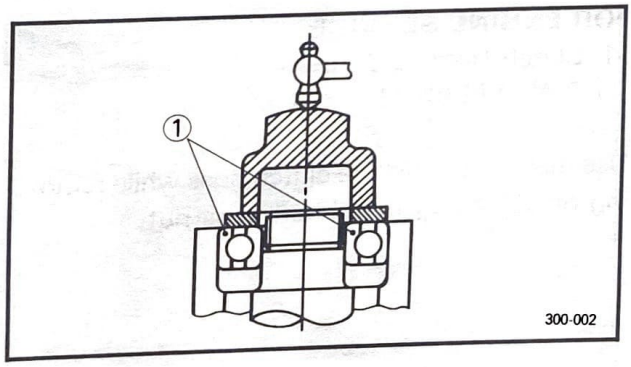
1. All gaskets, seals, and O-rings should be replaced when an engine is overhauled. All gasket surfaces, oil seal lips, and O-rings must be cleaned.
2. Properly oil all mating parts and bearings during reassembly. Apply grease to the oil seal lips.



LOCK WASHERS/PLATES AND COTTER PINS

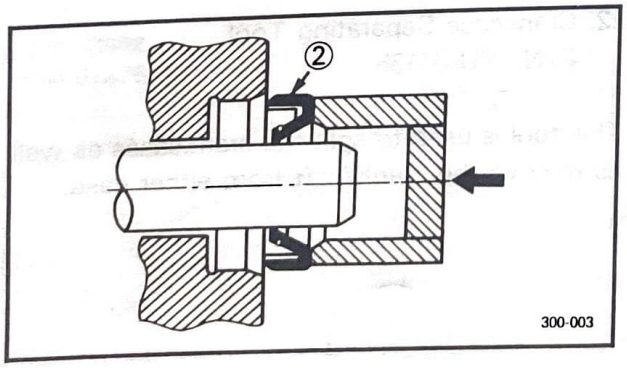
1. All lock washers/plates ① and cotter pins must be replaced when they are removed. Lock tab(s) should be bent along the bolt or nut flat(s) after the bolt or nut has been properly tightened.

www.legends-yamaha-enduros.com



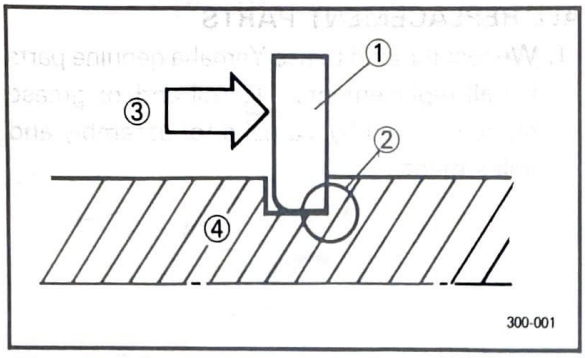
BEARINGS AND OIL SEALS

1. Install the bearing(s) ① and oil seal(s) ② with their manufacturer's marks or numbers facing outward. (In other words, the stamped letters must be on the side exposed to view.) When installing oil seal(s), apply a light coating of light-weight lithium base grease to the seal lip(s). Oil the bearings liberally when installing.



CAUTION:

Do not use compressed air to spin the bearings dry. This causes damage to the bearing surfaces.



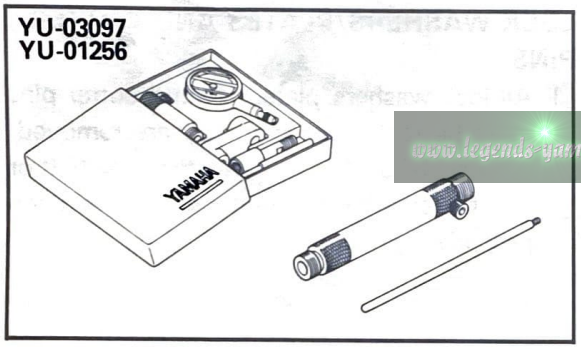
CIRCLIPS

1. All circlips should be inspected carefully before reassembly. Always replace piston pin clips after one use. Replace distorted circlips. When installing a circlip ①, make sure that the sharp-edged corner ② is positioned opposite to the thrust ③ it receives. See the sectional view.

④ Shaft

SPECIAL TOOLS

The following special tools are required to perform maintenance, adjustments, and repairs on your machine. These tools can be obtained through your Yamaha dealer.

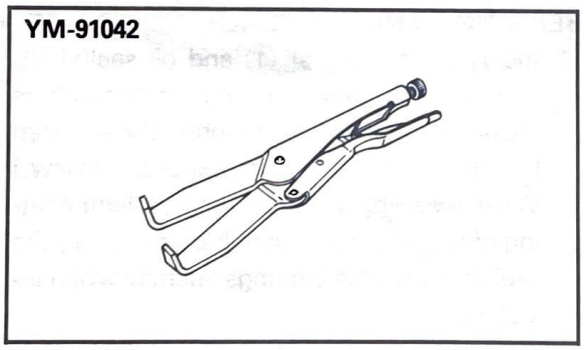


FOR TUNE UP

1. Dial Gauge and Stand
   P/N. YU-03097, YU-01256

www.legends-yamaha-enduros.com

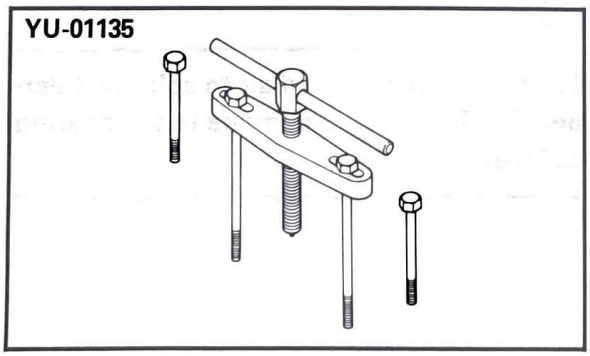
These tools are used to set the ignition timing.



FOR ENGINE SERVICE

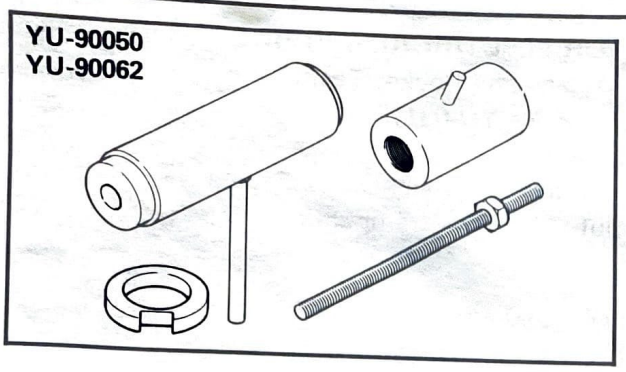
1. Clutch Holding Tool
   P/N. YM-91042

Use this tool to hold the clutch boss while removing or tightening the clutch boss nut.



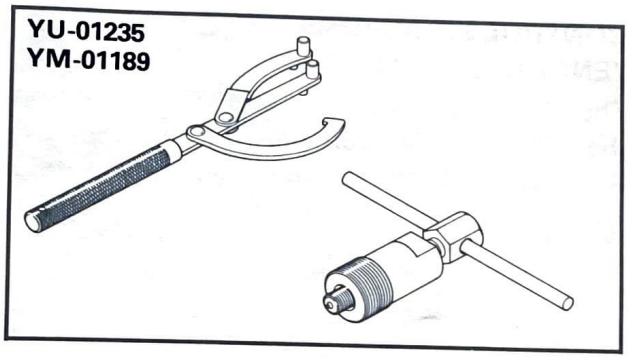
2. Crankcase Separating Tool
   P/N. YU-01135

This tool is used to split the crankcases as well as remove the crankshaft from either case.

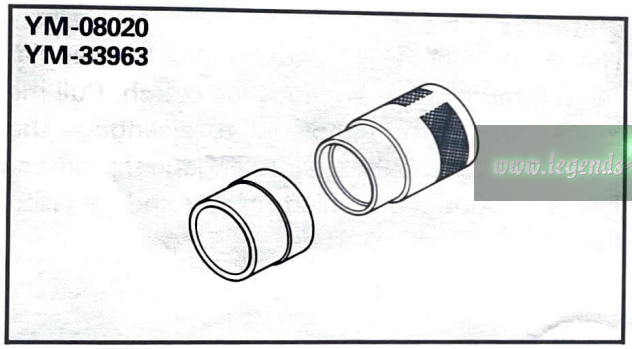


3. Crankshaft Installing Tool
   Pot, Bolt
   P/N. YU-90050
   Spacer, Adapter
   P/N. YU-90062

These tools are used to install the cranksahft.



4. Rotor Holder and Rotor Puller
   Holder
   P/N. YU-01235
   This tool is used when loosening or tightening the flywheel magneto securing nut,
   Puller
   P/N. YM-01189
   tool is used to remove the magneto.

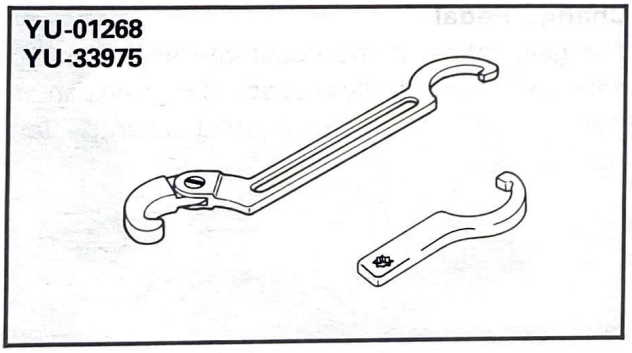


FOR CHASSIS SERVICE

1. Fork Seal and Bushing Service Tool
   P/N. YM-08020, YM-33963

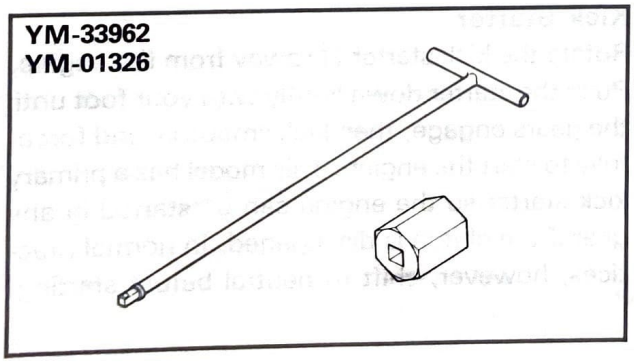
www.legendsyamaha.com

This tool is used when install the fork oil seal.



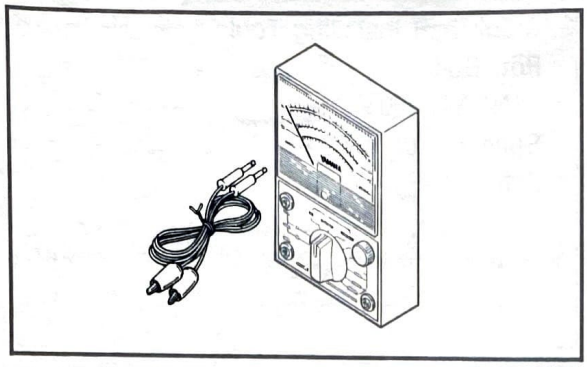
2. Steering Nut Wrench
   P/N. YU-01268, YU-33975

Use this wrench to put the proper tension on the steering head bearings.



3. Fork Cylinder Holder and Adapter
   P/N. YM-33962, YM-01326

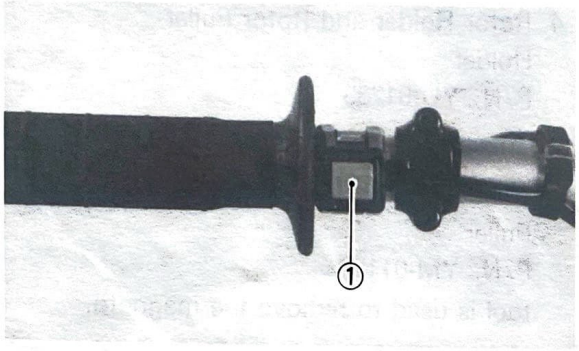
Use these tools to remove and install the fork cylinder.



FOR ELECTRICAL SERVICE

1. Yamaha Pocket Tester
   P/N. YU-03112

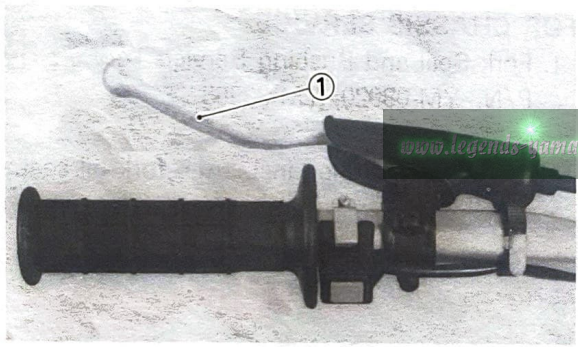
Use this tool to inspect the coil resistance, output voltage and amperage.



CONTROL FUNCTIONS

"ENGINE STOP" button

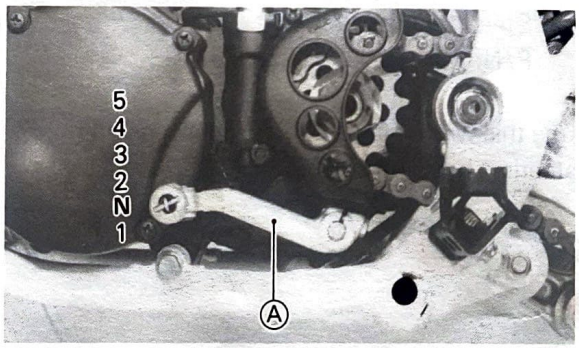
The "ENGINE STOP" button ① is located on the left handlebar. Continue pushing the "ENGINE STOP" button till the engine comes to a stop.



Clutch Lever

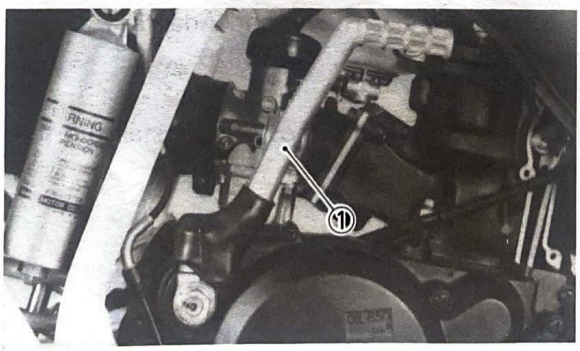
The clutch lever ① is located on the left handlebar; it disengages or engages the clutch. Pull the clutch lever to the handlebar to disengage the clutch, and release the lever to engage the clutch. The lever should be pulled rapidly and released slowly for smooth starts.

www.legends-yamaha-enduro.com



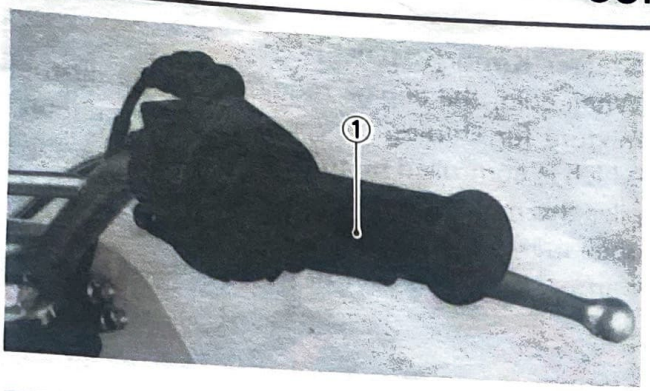
Change Pedal

The gear ratios of the constant-mesh 5-speed transmission are ideally spaced. The gears can be shifted by using the change pedal ① on the left side of the engine.



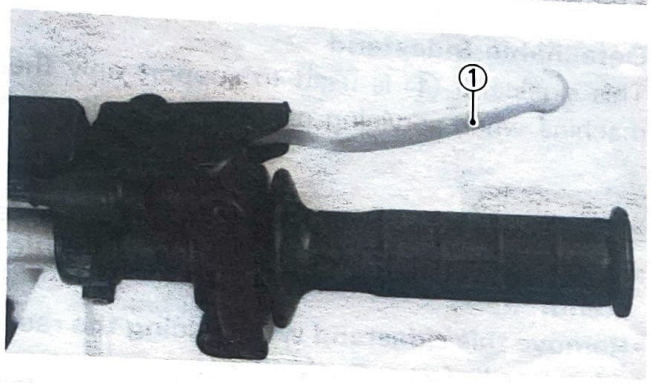
Kick Starter

Rotate the kick starter ① away from the engine. Push the starter down lightly with your foot until the gears engage, then kick smoothly and forcefully to start the engine. This model has a primary kick starter so the engine can be started in any gear if the clutch is disengaged. In normal practices, however, shift to neutral before starting.



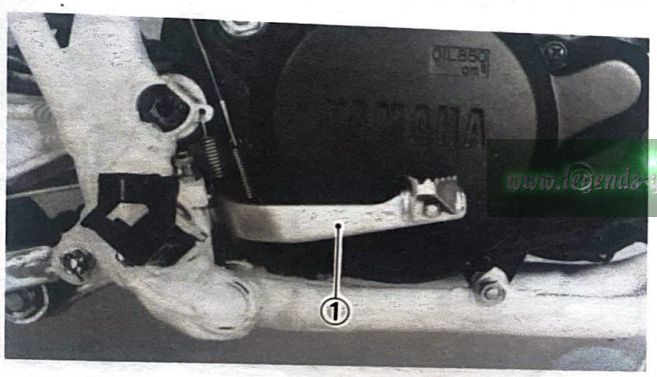
Throttle Grip

Throttle grip ① is located on the right handlebar; it accelerates or decelerates the engine. For acceleration, turn the grip toward you; for deceleration turn it away from you.



Front Brake Lever

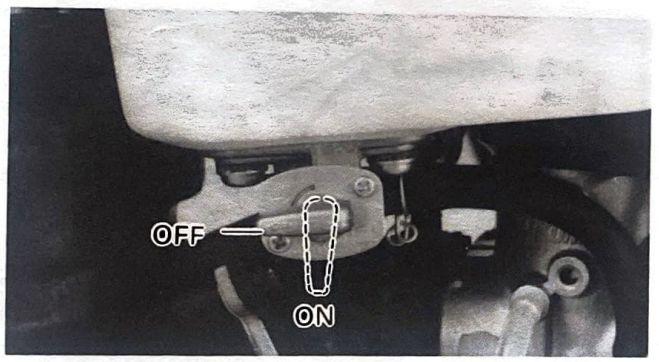
The front brake lever ① is located on the right handlebar. Pull it toward the handlebar to activate the front brake.



Rear Brake Pedal

The rear brake pedal ① is on the right side of the machine. Press down on the brake pedal to activate the rear brake.

www.legends-yamaha-enduro.com

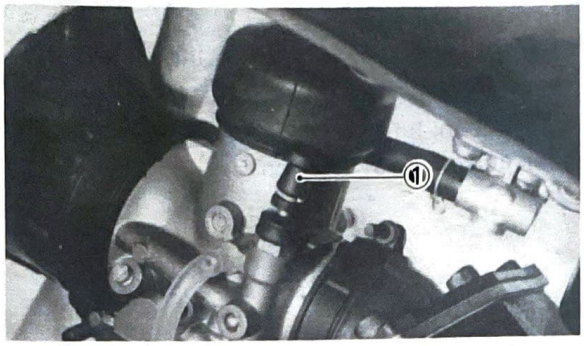


Fuel Cock

The fuel cock supplys fuel from the tank to carburetor while filtering the fuel. The fuel cock has the two positions:

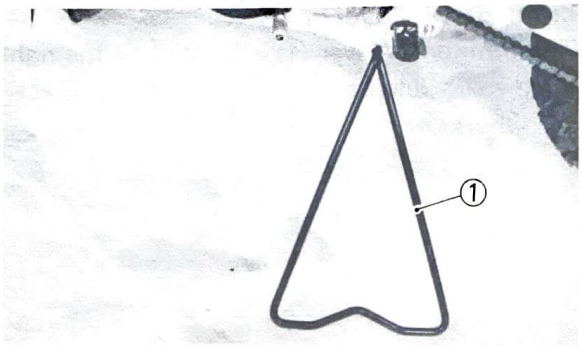
OFF: With the lever in this position, fuel will not flow. Always return the lever to this position when the engine is not running.

ON: With the lever in this position, fuel flows to the carburetor. Normal riding is done with the lever in this position.



Starter Knob (CHOKE)

When cold, the engine requires a richer air-fuel mixture for starting. A separate starter circuit, which is controlled by the starter knob ①, supplies this mixture. Pull the starter knob ① out to open the circuit for starting. When the engine has warmed up, push it in to close the circuit.



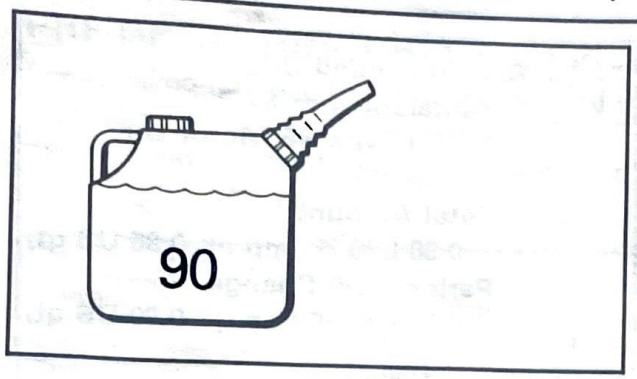
Detachable Sidestand

This sidestand ① is used to support only the machine when servicing or transporting it.

WARNING:

- **Never apply additional force to the side stand.**
- **Remove this sidestand when racing the rear wheel or before starting out.**

www.legends-yamaha-enduros.com



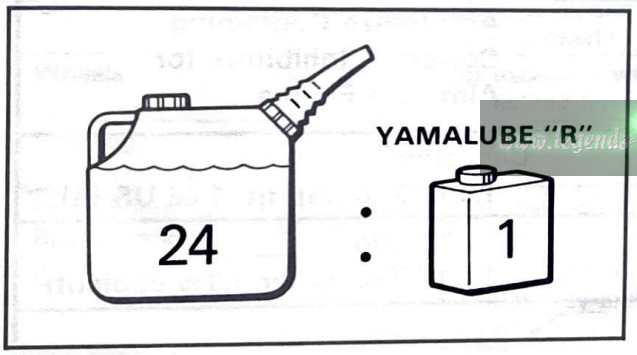
FUEL, OIL AND COOLANT

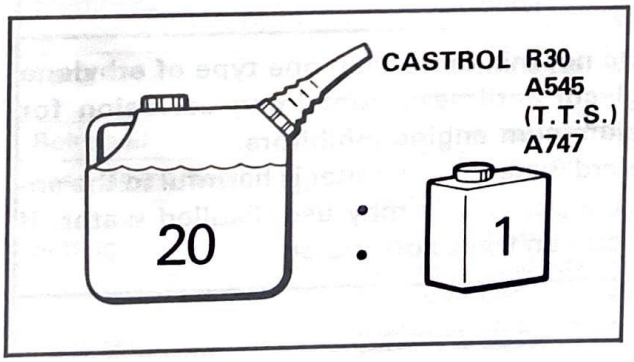
FUEL AND ENGINE MIXING OIL

Use premium fuel with an octane rating of at least 90. Mix oil with the gas at the ratio specified below. Always use fresh, name-brand gasoline, and mix the oil and gas the day of the race. Do not use premix that is more than a few hours old.

CAUTION:

Never mix two types of oil in the same batch; clotting of the oil could result. If you wish to change oil types, be sure to drain the fuel tank and the carburetor float bowl of old premix prior to filling with the new type.





Fuel Tank Capacity:
8.0 L (1.76 Imp gal, 2.11 US gal)

Mixing Oil
Recommended Oil:
Yamalube "R"
(Yamalube Racing 2-cycle Oil)
Mixing Ratio: 24 : 1
If for any reason you should use another type, select from the following list.
Mixing ratio: 20 : 1
- **Castrol R30**
- **Castrol A545**
- **Castrol A747**

TRANSMISSION OIL

The transmission oil should be replaced at the specified intervals.
Refer to Chapter 2 "MAINTENANCE INTERVALS" and "TRANSMISSION OIL REPLACEMENT" section for more detail.

1

Recommended Oil:
Yamalube 4 or SAE 10W30 Type SE Motor Oil
Oil Capacity:
Total Amount:
0.90 L (0.79 Imp qt, 0.95 US qt)
Periodic Oil Change:
0.85 L (0.75 Imp qt, 0.90 US qt)

COOLANT

The coolant should be replaced at the specified intervals.
Refer to Chapter 2 "MAINTENANCE INTERVALS" and "COOLANT REPLACEMENT" section for more detail.

Recommended Coolant:
High Quality Ethylene Glycol Anti-freeze Containing Corrosion Inhibitors for Alminum Engine

Capacity:
1.0 L (0.88 Imp qt, 1.06 US qt)

Mixed Ratio:
1 : 1 (50% water, 50% coolant)

www.legends-yamaha-enduros.com

CAUTION:

Do not mix more than one type of ethylene glycol antifreeze containing corrosion for aluminum engine inhibitors.
Hard water or salt water is harmful to the engine parts. You may use distilled water, if you can't get soft water.

PRE-OPERATION CHECK LIST

Before riding for break-in operation, practice or a race, make sure the machine is in good operating condition.

Before using this machine, check the following points.

Item	Routine	Page
Coolant	Check that coolant is filled up to the radiator filler cap. Check the cooling system for leakage.	P2-6 ~ 8
Fuel	Check that a fresh mixture of oil and gasoline is filled in the fuel tank. Check the fuel line for leakage.	P1-10
Transmission Oil	Check that the oil level is correct. Check the crankcase for leakage.	P2-8
Gear Shifter and Clutch	Check that gears can be shifted correctly in order and that the clutch operates smoothly.	P2-15 ~ 17
Throttle grip/Housing	Check for smooth operation, Lubricate/Adjust if necessary.	P2-11 ~ 12
Brakes	Check the play of both front and rear brakes and their braking effect.	P2-13 ~ 15
Brake Actuated Suspension	Check that the brake pedal height and free play are correct. Check that is operates correctly.	P2-14
Chain	Check chain slack and alignment. Check that the chain is lubricated properly.	P2-3, P2-19 ~ 20
Wheels	Check for excessive wear and tire pressure. Check for loose spokes and have no excessive play.	P2-17 ~ 20
Steering	Check that the handlebar can be turned smoothly and have no excessive play.	P2-22
Front Forks and Rear Shock	Check that they operate smoothly and there is no oil leakage.	P2-23, 2-27
Cables (Wires)	Check that the clutch and throttle cables move smoothly. Check that they are not caught when the handlebars are turned or when the front forks travel up and down.	P2-11 ~ 12, P2-15
Muffler	Check that the muffler is tightly mounted and has no cracks.	P2-11
Sprocket	Check that the rear wheel sprocket tightening bolt is not loose.	P2-19
Bolts and Nuts	Check the chassis and engine for loose bolts and nuts.	—
Lead Connectors	Check that the CDI magneto, CDI unit, and ignition coil are connected tightly.	—
Settings	Is the machine set suitably for the condition of the racing course and weather or by taking into account the results of test-runs before racing? Is inspection and maintenance completely done?	—

STARTING AND BREAK-IN

CAUTION:

Before starting the machine, perform the checks in the pre-operation check list.

WARNING:

Never start or run the engine in a closed area. The exhaust fumes are poisonous; they can cause loss of consciousness and death in a very short time. Always operate the machine in a well-ventilated area.

STARTING A COLD ENGINE

1. Shift the transmission into neutral.
2. Turn the fuel cock to "ON" and pull the starter knob (CHOKE).
3. With the throttle completely closed, start the engine by kicking the kick starter forthly with firm stroke.
4. Run the engine at idle or slightly higher until it warms up: this usually takes about one or two minutes.
5. The engine is warmed up when it responds normally to the throttle with the starter knob pushed completely.

CAUTION:

Do not warm up the engine for extended periods.

STARTING A WARM ENGINE

Do not pull the starter knob up. Open the throttle slightly and kickstart the engine with a smooth, firm stroke.

CAUTION:

Observe the following break-in procedures during initial operation to ensure optimum performance and avoid engine damage.

BREAK-IN PROCEDURES

1. Before starting the engine, fill the fuel tank with a break-in oil-fuel mixture of 12 : 1 to 14 : 1.
2. Perform the pre-operation checks on the machine.
3. Start and warm up the engine. Check the idle speed, and check the operation of the controls and the "ENGINE STOP" button.
4. Operate the machine in the lower gears at moderate throttle openings for five to eight minutes. Stop and check the spark plug condition; it will show a rich condition during break-in.
5. Allow the engine to cool. Restart the engine and operate the machine as in the step above for five minutes. Then, very briefly shift to the higher gears and check full-throttle response. Stop and check the spark plug.
6. After again allowing the engine to cool, restart and run the machine for five more minutes. Full throttle and the higher gears may be used, but sustained full-throttle operation should be avoided. Check the spark plug condition.
7. Allow the engine to cool, remove the top end, and inspect the piston and cylinder; instructions for this are on page 3-13. Remove any high spots on the piston with 600-grit, wet sandpaper. Clean all components and carefully reassemble the top end.
8. Drain the break-in oil-fuel mixture from the fuel tank and refill with the specified mix. Check the entire machine for loose screws, bolts, and nuts.
9. Restart the engine and check the operation of the machine throughout its entire operating range. Stop and check the spark plug condition. Restart the machine and operate it for about 10 to 15 more minutes. The machine will now be ready to race.

CAUTION:

•After the break-in period is completed, check the entire machine for loose fittings and fasteners. Tighten all such fasteners as required.
•When any of the following parts have been replaced, they must be broken in.
CYLINDER AND CRANKSHAFT:
About one hour of break-in operation is necessary.
PISTON, RINGS AND GEARS:
These parts require about 30 minutes of break-in operation at half-throttle or less. Observe the condition of the engine carefully during operation.

4. After the majority of the dirt has been hosed off, wash all surfaces with warm water and a mild detergent. Use an old toothbrush to clean hard-to-reach places.
5. Rinse the machine off immediately with clean water, and dry all surfaces with a soft towel or cloth.
6. Immediately after washing, remove excess water from the chain with a paper towel and lubricate the chain to prevent rust.
7. Clean the seat with a vinyl upholstery cleaner to keep the cover pliable and glossy.
8. Automotive wax may be applied to all painted or chromed surfaces. Avoid combination cleaner-waxes, as they may contain abrasives.
9. After completing the above, start the engine and allow it to idle for several minutes.

CLEANING AND STORAGE

CLEANING

Frequent cleaning of your machine will enhance its appearance, maintain good overall performance, and extend the life of many components.

1. Before washing the machine, block off the end of the exhaust pipe to prevent water from entering. A plastic bag secured with a rubber band may be used for this purpose.
2. If the engine is excessively greasy, apply some degreaser to it with a paint brush. Do not apply degreaser to the chain, sprockets, or wheel axles.
3. Rinse the dirt and degreaser off with a garden hose; use only enough pressure to do the job.

CAUTION:

Excessive hose pressure can force water into wheel bearings, front fork seals, brake drum, and transmission seals. Avoid using high-pressure hoses such as those found in coin-operated car washes.

STORAGE

If your machine is to be stored for 60 days or more, some preventive measures must be taken to avoid deterioration. After cleaning the machine thoroughly, prepare it for storage as follows:

1. Drain the fuel tank, fuel lines, and the carburetor float bowl.
2. Remove the spark plug, pour a tablespoon of SAE 10W30 motor oil in the spark plug hole, and reinstall the plug. With the engine stop switch pushed in, kick the engine over several times to coat the cylinder walls with oil.
3. Remove the drive chain, clean it thoroughly with solvent, and lubricate it. Reinstall the chain or store it in a plastic bag tied to the frame.
4. Lubricate all control cables.
5. Block the frame up to raise the wheels off the ground.
6. Tie a plastic bag over the exhaust pipe outlet to prevent moisture from entering.
7. If the machine is to be stored in a humid or salt-air environment, coat all exposed metal surfaces with a film of light oil. Do not apply oil to rubber parts or the seat cover.

NOTE:

Make any necessary repairs before the machine is stored.

www.legends-yamaha-enduros.com

CHAPTER 2
REGULAR MAINTENANCE AND ADJUSTMENT

MAINTENANCE INTERVALS 2-1

LUBRICATION 2-3

ENGINE 2-4
- SPARK PLUG INSPECTION 2-4
- IDLE SPEED ADJUSTMENT 2-5
- COOLANT LEVEL INSPECTION 2-6
- COOLANT REPLACEMENT 2-7
- RADIATOR HOSE INSPECTION 2-8
- TRANSMISSION OIL LEVEL CHECK 2-8
- TRANSMISSION OIL REPLACEMENT 2-9
- AIR FILTER CLEANING 2-9
- EXHAUST SYSTEM INSPECTION 2-11

CHASSIS 2-11
- THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK 2-11
- BRAKE PAD INSPECTION 2-12
- BRAKE PAD REPLACEMENT 2-12
- FRONT BRAKE ADJUSTMENT 2-13
- BRAKE FLUID LEVEL AND HOSE INSPECTION 2-13
- REAR BRAKE ADJUSTMENT 2-14
- CLUTCH ADJUSTMENT 2-15
- DRIVE CHAIN SLACK ADJUSTMENT 2-17
- DRIVE CHAIN AND SPROCKETS INSPECTION 2-19
- CHAIN TENSIONER AND CHAIN GUIDE INSPECTION 2-20
- TIRE PRESSURE CHECK 2-21
- TIRE AND WHEEL INSPECTION 2-21
- SPOKES INSPECTION AND TIGHTENING 2-21
- STEERING HEAD INSPECTION AND ADJUSTMENT 2-22
- FRONT FORK INSPECTION AND ADJUSTMENT 2-23
- FRONT FORK OIL REPLACEMENT 2-24
- REAR SHOCK ABSORBER INSPECTION AND ADJUSTMENT 2-26

ELECTRICAL 2-29
- IGNITION TIMING CHECK AND ADJUSTMENT 2-29

REGULAR MAINTENANCE AND ADJUSTMENT

MAINTENANCE INTERVALS

The following schedule is intended as a general guide to maintenance and lubrication. Bear in mind that such factors as weather, terrain, geographical location, and individual usage will alter the required maintenance and lubrication intervals. If you are a doubt as to what intervals to follow in maintaining and lubricating your machine, consult your Yamaha dealer.

Item	After break-in	Every race	Every third	Every fifth	As required	Remarks
PISTON Inspect and clean Replace		●			●	Inspect crack Remove carbon
PISTON RING Inspect Replace	●	●	●		●	Check ring end gap
PISTON PIN, SMALL END BEARING Inspect Replace				●	●	
CYLINDER HEAD Inspect and clean Retighten	● ●	● ●				Remove carbon Check gasket
CYLINDER Inspect and clean Replace		●			●	Seizure Wear
Y.P.V.S. Check operation and retighten	●	●				
CLUTCH Inspect and adjust Replace	●	●			●	Inspect friction plate, clutch plate and spring
TRANSMISSION Replace oil Inspect transmission	●			●	●	Yamalube 4 or SAE 10W30 SE motor oil
SHIFT CAM, FORK Inspect					●	Inspect wear
ROTOR NUT Retighten				●		
MUFFLER Inspect Clean	●	●		●		
CRANK Inspect and clean				●	●	
CARBURETOR Inspect, adjust and clean	●	●				
SPARK PLUG Inspect and clean Replace	●	●			●	STD plug: N-86 B8EG Gap: 0.5~0.6 mm (0.020~0.024 in)
DRIVE CHAIN Lubricate, slack, alignment Replace	●	●			●	Use chain lube Chain slack: 15~20 mm (0.6~0.8 in)

www.legends-yamaha-enduros.com

Item	After break-in	Every race	Every third	Every fifth	As required	Remarks
COOLING SYSTEM						
Check coolant level and leakage	●	●				
Check radiator cap operation					●	Every two years
Replace coolant					●	
Inspect hoses		●				
OUTSIDE NUTS AND BOLTS						
Retighten	●	●				
AIR FILTER						
Clean and oil	●	●				Use Foam air-filter oil or SAE 10W30 motor oil
Replace					●	
FRAME						
Clean and inspect	●	●				
FUEL TANK, COCK						
Clean and inspect	●		●			
BRAKES						
Adjust free play	●	●				
Lubricate pivot point	●	●				
Check fluid level and leakage	●	●				Brake pad wear limit: 0.8 mm (0.03 in)
Retighten brake disc bolts, caliper bolts and union bolts	●	●				Lining wear limit: 2 mm (0.08 in)
Replace linings/pads					●	
FRONT FORKS						
Inspect and adjust	●	●				
Replace oil	●			●		Fork oil 10 wt
Replace oil seal					●	
REAR SHOCK						
Inspect and adjust	●	●				
Lube and retighten	●	●				Lithium base grease
CHAIN GUARD AND ROLLES						
Inspect and replace					●	
SWINGARM						
Inspect and retighten	●	●				
RELAY ARM, CONNECTING ROD						
Inspect and lube	●	●				Lithium base grease
STEERING HEAD						
Inspect free play and retighten	●	●				
Clean and lube				●		Medium weight wheel bearing grease
Replace bearing					●	
TIRE, WHEELS						
Inspect air pressure, wheel run-out, tire wear and spoke looseness	●	●				
Retighten sprocket bolt	●	●				
Inspect bearings			●			
Replace bearings					●	Medium weight wheel bearing grease
Lubricate			●			
THROTTLE, CONTROL CABLE						
Check routing and connection	●	●				Yamaha cable lube or SAE 10W30 motor oil
Lubricate	●	●				

www.legends-yamaha-enduros.com

LUBRICATION

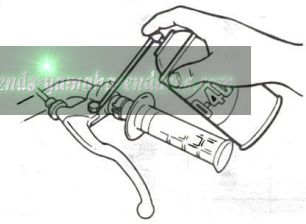
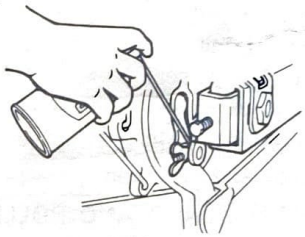
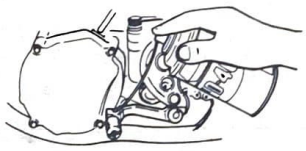
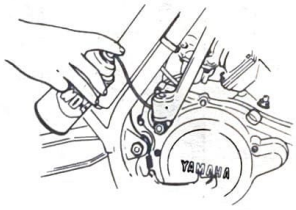
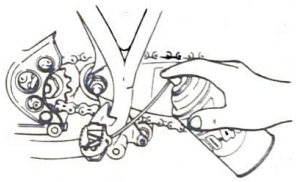
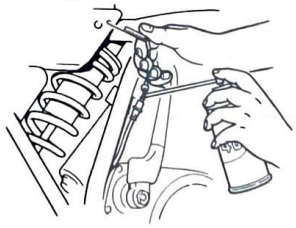
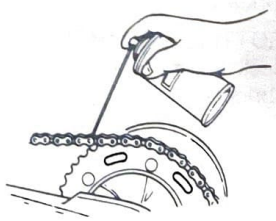
To ensure smooth operation of all components, lubricate your machine during setup, after break-in, and after every race.

A. Use Yamaha cable lube or equivalent on these areas.
B. Use Yamaha chain lube or equivalent.
C. Lubricate the following areas with highquality, lightweight lithium-soap base grease.

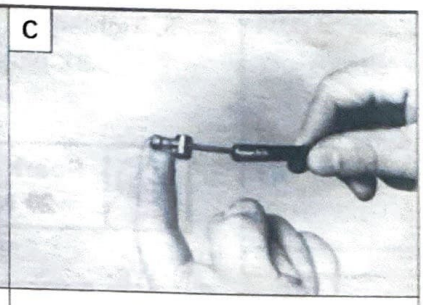
CAUTION:

Wipe off any excess grease, and avoid getting grease on the brake disc and brake shoes.

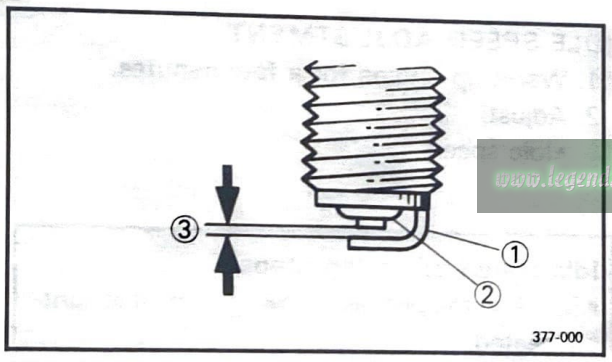
2

A All control cables	A  Brake and clutch lever pivots	A  Brake arm pivot
A  Shift lever pivot	A  Kick starter lever pivot	A  Footrest pivots
A Throttle-to-handlebar contact	A  Brake actuated suspension control cable	B  Drive chain

Throttle guide and cable end



Clutch cable ends



ENGINE

SPARK PLUG INSPECTION

1. Remove:
   - Spark plug
2. Inspect:
   - Electrode ①
     Wear/Damage→Replace.
   - Insulator color ②
3. Measure:
   - Plug gap ③
     Use a Wire Gauge or Feeler Gauge.
     Out of specification→Regap.

Spark Plug Gap:
0.5~0.6 mm (0.020~0.024 in)

Standard Spark Plug:
N-86, N-86G, N-2G, 2-2C (CHAMPION)
B8EG, B8EGV (NGK)

4. Clean the plug with a spark plug cleaner if necessary.

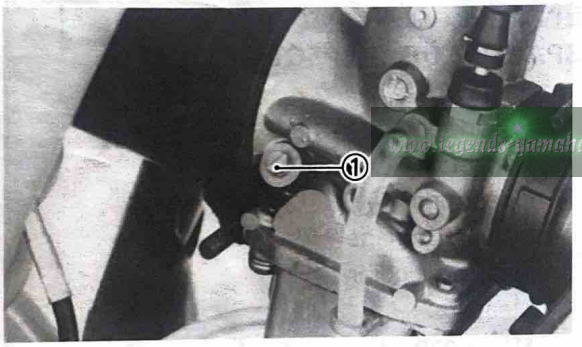
IDLE SPEED ADJUSTMENT

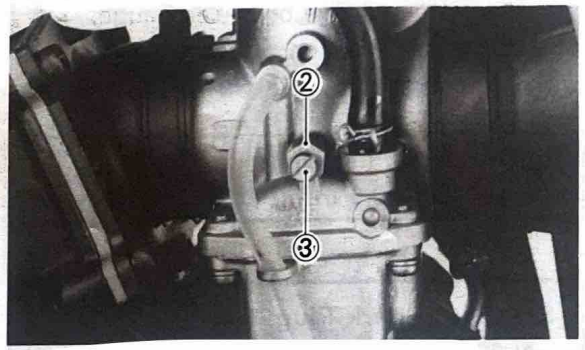
5. Tighten:
   - Spark plug

Spark Plug:
20 Nm (2.0 m•kg, 14 ft•lb)

NOTE:

- Before installing a spark plug, clean the gasket surface and plug surface.
- Finger-tighten the spark plug before torquing to specification.





copylegendeyamaha-enduros.com

IDLE SPEED ADJUSTMENT

1. Warm up engine for a few minutes.
2. Adjust:
   - Idle speed

Idle speed adjusting steps:

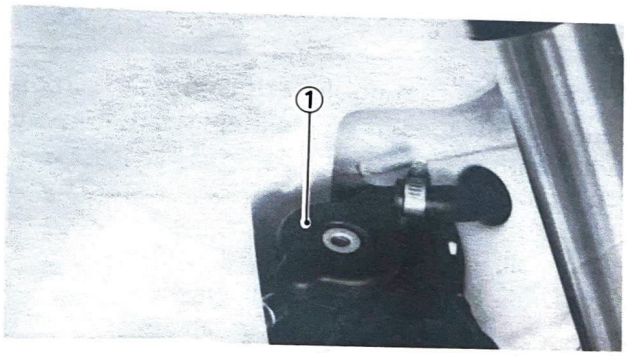
- Screw in the pilot air screw ① until it is lightly seated.
- Back out by the specified number of turns.

Pilot Air Screw:
2 turns out

- Loosen the locknut ② on the throttle stop screw ③ and turn the screw until the idle is at the desired rpm.
- Turn the pilot air screw ① in or out in 1/8-turn increments to achieve the highest rpm with just the pilot screw.
- Once again, turn the throttle stop screw ③ to attain the desired idle rpm, and tighten the locknut ②.

NOTE:

The throttle response off idle should be crisp and clean, without any hesitation. If the engine is completely warmed up and hesitates off idle, turn the pilot air screw in or out in 1/8-turn increments until the problem is eliminated.



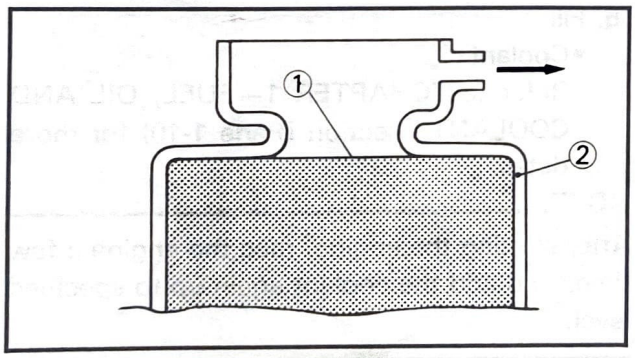
COOLANT LEVEL INSPECTION

WARNING:

Do not remove the radiator cap ①, drain bolt and hoses when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury.

When the engine has cooled, place a thick towel over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

www.legends-yamaha.com

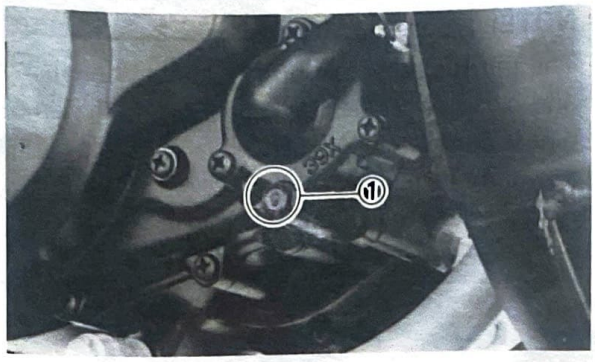


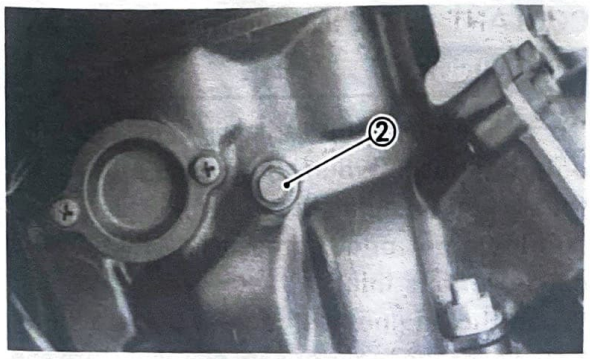
1. Place the machine on a level place, and hold it in an upright position.
2. Remove:
   - Radiator cap
3. Check:
   - Coolant level

   Coolant level low→Add coolant.

   Refer to "CHARPTER 1—FUEL, OIL AND COOLANT" section (Page 1-10) for more detail.

① Coolant level
② Radiator





2

COOLANT REPLACEMENT

1. Place a container under the engine.
2. Remove:
   - Pump cover drain bolt ①
   - Cylinder drain bolt ②
3. Remove:
   - Radiator cap

   Drain the coolant completely. Thoroughly flush the cooling system with clean tap water.

CAUTION:

Take care so that coolant does not splash on painted surfaces. If it splashes, wash it away with water.

4. Install:
   - Drain bolts (with copper washer)

Drain Bolt:
10 Nm (1.0 m•kg, 7.2 ft•lb)

www.legends-yamaha-enduro

NOTE:

Before pouring the coolant into the radiator, check the cooling system for damage, loose joints or leaks.

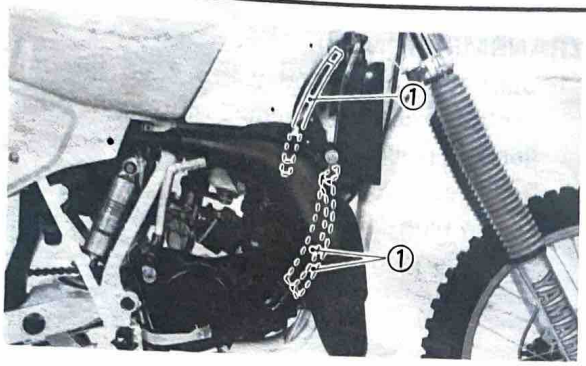
5. Fill:
   - Coolant

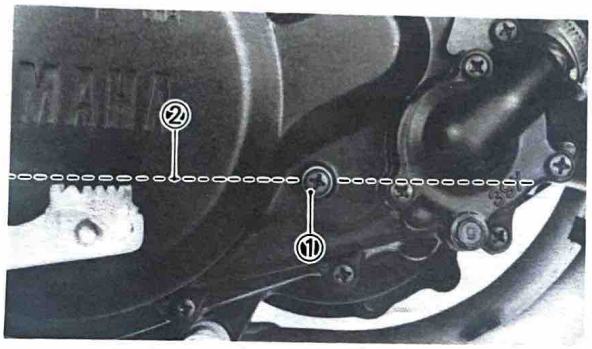
   Refer to "CHAPTER 1—FUEL, OIL AND COOLANT" section (Page 1-10) for more detail.

NOTE:

After starting the engine, race the engine a few times and add the coolant again up to specified level.

6. Install:
   - Radiator cap





RADIATOR HOSE INSPECTION

1. Inspect:
   - Radiator hose ①
     Crack/Damage/Coolant leakage→Repair or replace.
2. Inspect:
   - Cylinder
   - Crankcase cover
     Coolant leakage→Repair or replace.

TRANSMISSION OIL LEVEL CHECK

1. Start the engine and warm it up for one minute.
2. Place the machine on upright position.
3. Check:
   - Transmission oil level

Transmission oil level checking steps:
- Remove the checking screw ①.
- Inspect the oil level.

NOTE:

Be sure the machine is positioned straight up when inspecting the oil level.

www.legends-yamaha.com

Oil flows out→Oil level is correct.
Oil does not flow out→Oil level is low. Add transmission oil until oil flows out.

- Inspect the gasket (checking screw), replace if damaged.
- Tighten the checking screw.

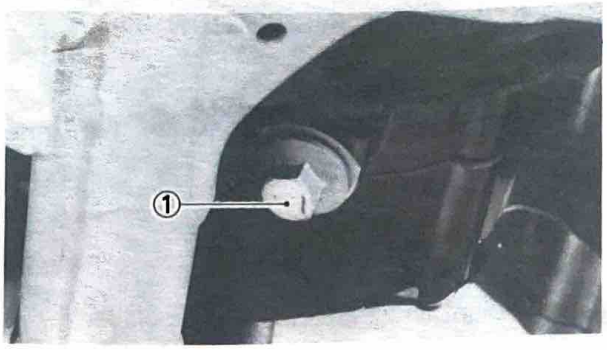
WARNING:

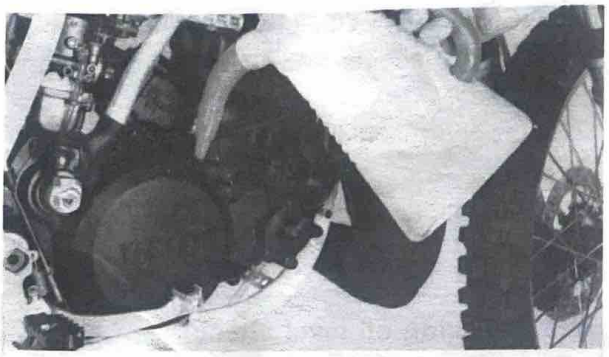
Never attempt to remove the checking screw just after high speed operation. The heated oil could spout out, causing danger. Wait until the oil cools down.

② Correct oil level

4. Inspect:
   - Crankcase
     Crack/Damage/Oil leakage→Repair or replace.

TRANSMISSION OIL REPLACEMENT/ AIR FILTER CLEANING





TRANSMISSION OIL REPLACEMENT

1. Start the engine and warm it up for one minute, place the machine on upright position and place a container under the engine.
2. Remove:
   - Drain plug ①
   - Oil filler plug

   Drain the transmission oil.
3. Install:
   - Drain plug

Drain Plug:
20 Nm (2.0 m•kg, 14 ft•lb)

4. Fill:
   - Transmission oil

   Refer to "CHAPTER 1—FUEL, OIL AND COOLANT" section for more detail.
5. Check:
   - Transmission oil level

   Refer to "TRNSMISSION OIL LEVEL CHECK" section.

www.legends-yamaha-enduros.com

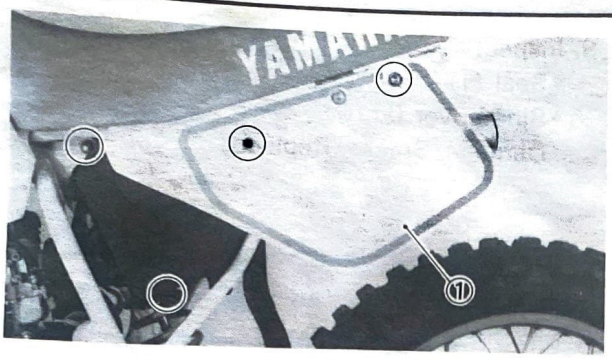
AIR FILTER CLEANING

NOTE:

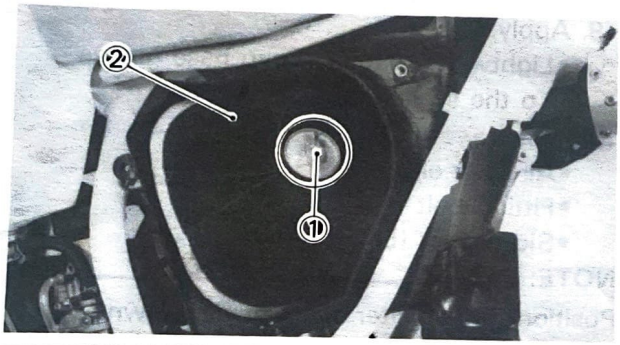
Proper air filter maintenance is the biggest key to preventing premature engine wear and damage.

CAUTION:

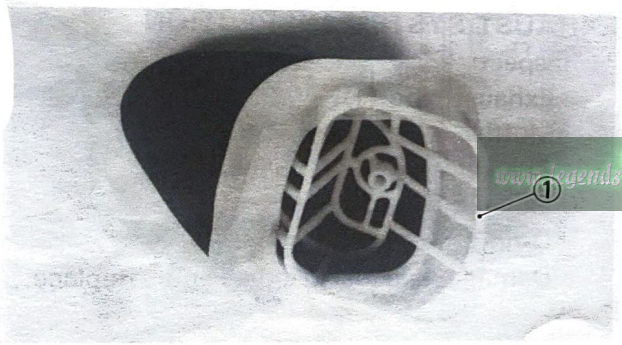
Never run the engine without the air filter element in place; this would allow dirt and dust to enter the engine and cause rapid wear and possible engine damage.



1. Remove:
   - Side cover (Left) ①

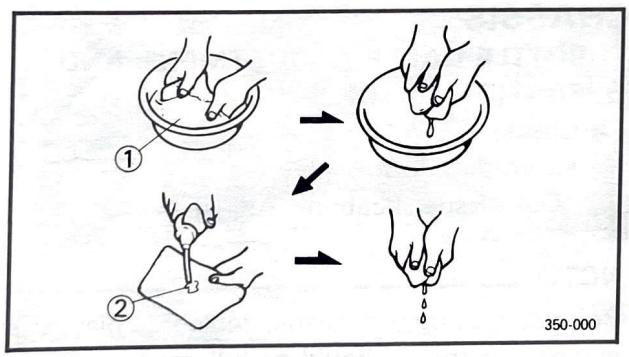


2. Remove:
   - Fitting bolt ①
   - Air filter element ②



3. Remove:
   - Air filter guide ①

www.legends-yamaha-enduros.com



4. Clean:
   - Air filter element
     Clean it with solvent ①.

NOTE:

After cleaning, remove the remaining solvent by squeezing the element.

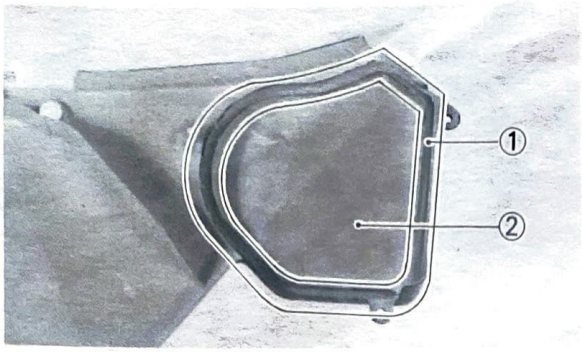
5. Inspect:
   - Air cleaner element
     Damage→Replace.
6. Apply:
   - Foam-air-filter oil ②
     To the element.

NOTE:

Sqeeze out the excess oil. Element should be wet but not dripping.

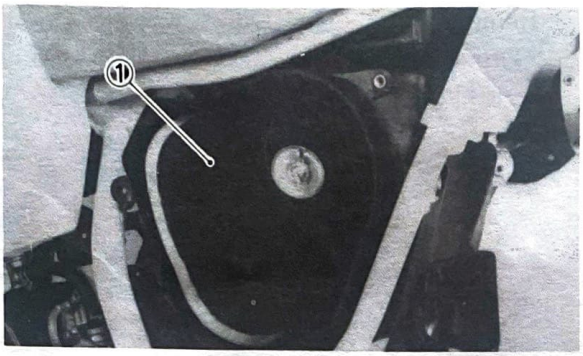
7. Install:
   - Air filter guide

EXHAUST SYSTEM INSPECTION/THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK



8. Inspect:
   - Seal ①
   - Side cover (Left) ②

   Damage/Crack → Replace.

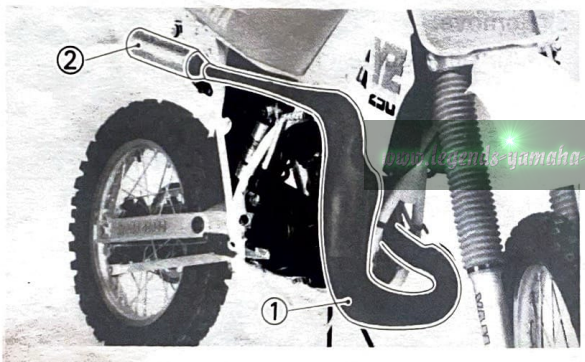


9. Apply:
   - Lightweight lithium-soap base grease

   To the sealing edge.
10. Install:
    - Air filter element ①
    - Fitting bolt
    - Side cover (Left)

NOTE:

Position the air filter element as shown.



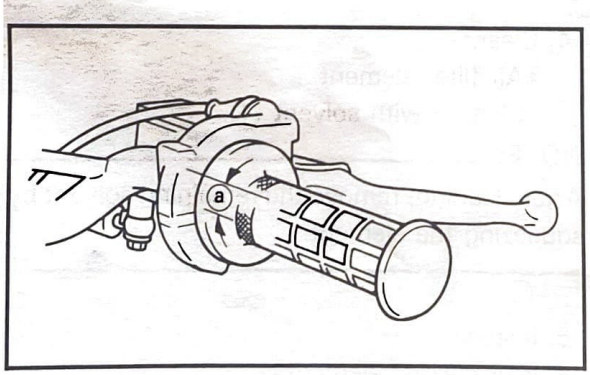
www.legends-yamaha-enduros.com

EXHAUST SYSTEM INSPECTION

1. Inspect:
   - Exhaust pipe ①
   - Muffler ②

   Crack/Damage → Replace
   - Exhaust pipe gasket
   - O-ring

   Damage/Exhaust gas leakage → Replace.



CHASSIS

THROTTLE CABLE ADJUSTMENT AND OPERATION CHECK

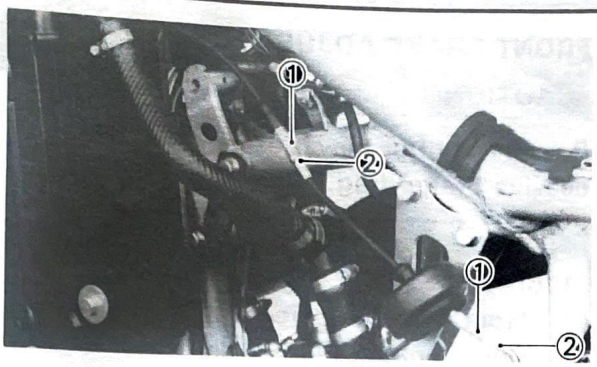
1. Check:
   - Throttle grip free play ⓐ

   Out of specification → Adjust.

NOTE:

Before adjusting the throttle cable free play, the engine idle speed should be adjusted.

Free Play ⓐ:
3 ~ 5 mm (0.12 ~ 0.20 in)



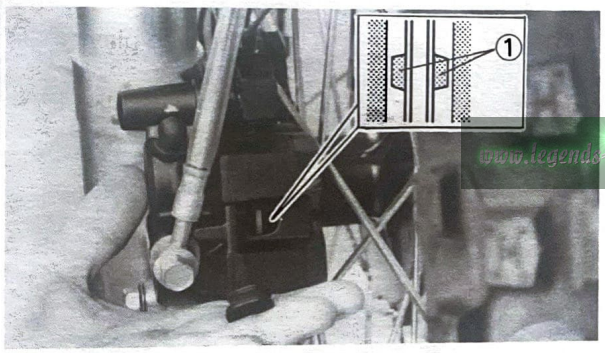
2. Adjust:
   • Throttle cable free play

Throttle cable free play adjustment steps:
- Loosen the locknut ②.
- Turn the adjuster ① until the specified free play is obtained.
- Tighten the locknut.

WARNING:

After adjusting, turn the handlebar to right and left and make sure that the engine idling does not run faster.

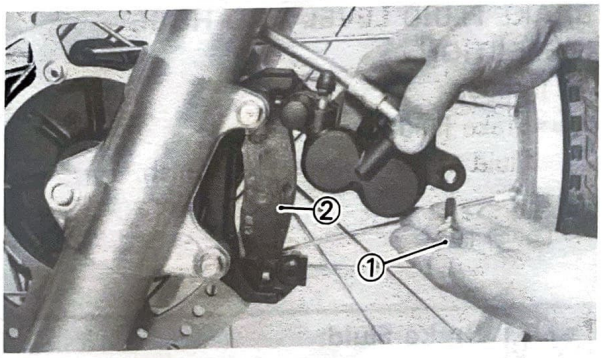
3. Check:
   • Throttle grip for smooth action
   Unsmooth action → Repair or replace throttle grip and/or throttle cable.



BRAKE PAD INSPECTION

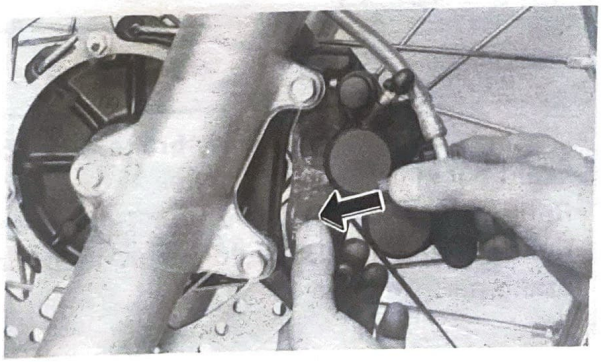
1. Remove:
   • Rubber plug
2. Inspect:
   • Brake pads
   Over wear limit ① → Replace as a set.

Front Brake Pad Wear Limit:
0.8 mm (0.03 in)



BRAKE PAD REPLACEMENT

1. Remove:
   • Caliper bolt ①
2. Turn the caliper body counterclockwise.
3. Remove:
   • Pads ②



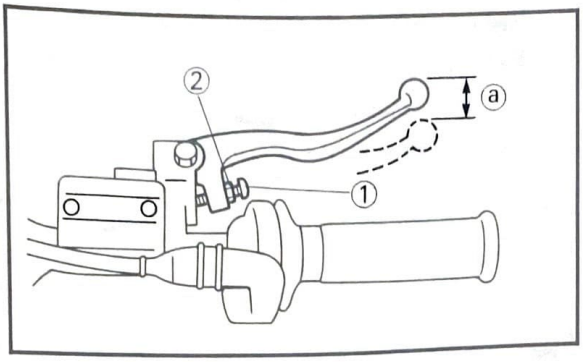
4. Install:
   • Pads (New)
   • Caliper bolt
   Hold the pads in the caliper bracket and turn the caliper body clockwise.

NOTE:

Replace the brake pads as a set.

Caliper Bolt:
23 Nm (2.3 m•kg, 17 ft•lb)

BRAKE FLUID LEVEL AND HOSE INSPECTION



FRONT BRAKE ADJUSTMENT

CAUTION:

Proper lever free play is essential to avoid excessive brake drag.

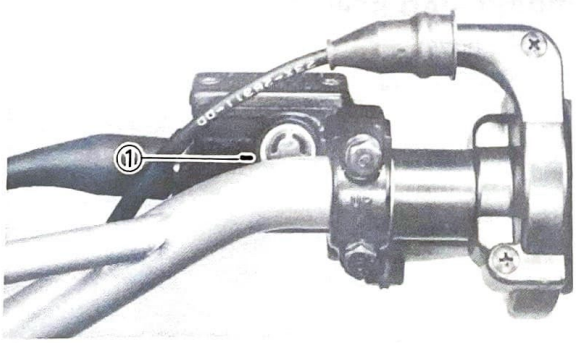
1. Check:
   - Front brake lever free play ⓐ
     Out of specification→Adjust.

Front Brake Lever Free Play:
10~20 mm (0.4~0.8 in)

2. Adjust:
   - Front brake lever free play

Front brake lever free play adjustment steps:
- Loosen the locknut ②.
- Turn the adjuster ① until the free play ⓐ is within the specified limits.
- Tighten the locknut.

www.legends-yamaha-enduro.com



BRAKE FLUID LEVEL AND HOSE INSPECTION

1. Inspect:
   - Brake fluid level
     Fluid at lower level→Replenish.

① Lower level

Brake Fluid:
DOT #3

WARNING:

- **Use only designated quality brake fluid to avoid poor brake performance.**
- **Refill with same type and brand of brake fluid; mixing fluids could result in poor brake performance.**

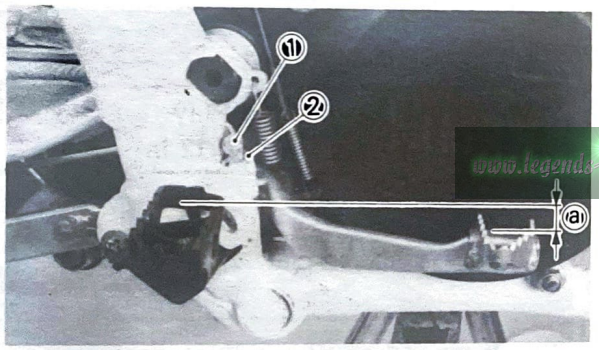
- **Be sure that water or other contaminants do not enter master cylinder when refilling.**
- **Clean up spilled fluid immediately to avoid erosion of painted surfaces or plastic parts.**

2. Inspect:
   - Brake hose
     Crack/Damage/Fluid leakage→Repair or replace.

REAR BRAKE ADJUSTMENT

CAUTION:

To permit the interlocking mechanism with the rear suspension to operate correctly, set the brake pedal height and free play properly.

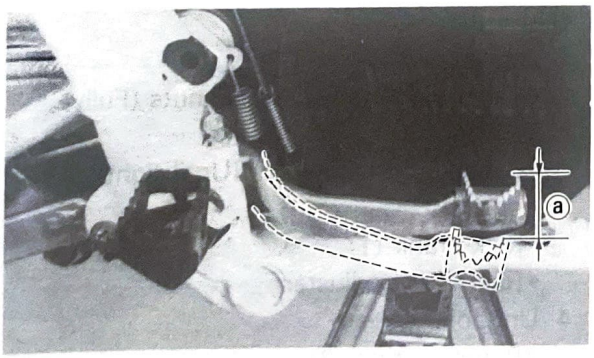


1. Check:
   - Brake pedal height
     Out of specification→Adjust.

Brake Pedal Height ⓐ:
Zero mm (Zero in)

2. Adjust:
   - Brake pedal height

Brake pedal height adjustment steps:
- Loosen the locknut ②.
- Turn the adjuster ① until pedal height ⓐ is within the specified limits.
- Tighten the locknut.



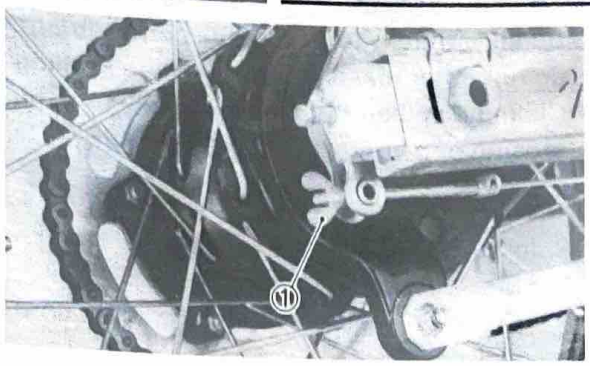
3. Check:
   - Brake pedal free play ⓐ
     Out of specification→Adjust.

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

NOTE:

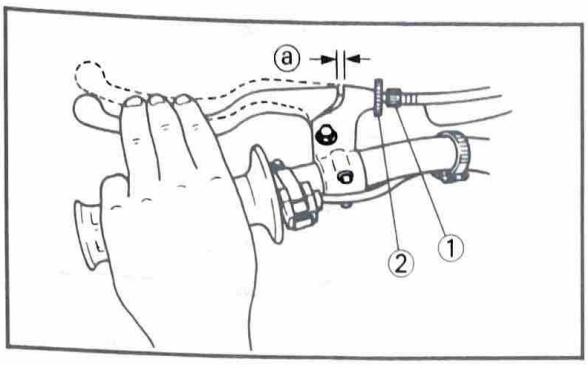
Before adjusting the brake pedal free play, the brake pedal height should be adjusted.

CLUTCH ADJUSTMENT



4. Adjust:
   - Brake pedal free play

Brake pedal free play adjustment steps:
- Turn the adjuster ① until free play is within the specified limits.



CLUTCH ADJUSTMENT

CAUTION:

To avoid clutch slipping or dragging, the clutch mechanism and cable must be adjusted correctly.

1. Check:
   - Clutch lever free play ⓐ
     Out of specification → Adjust

Clutch Lever Free Play ⓐ:
2 ~ 3 mm (0.08 ~ 0.12 in)

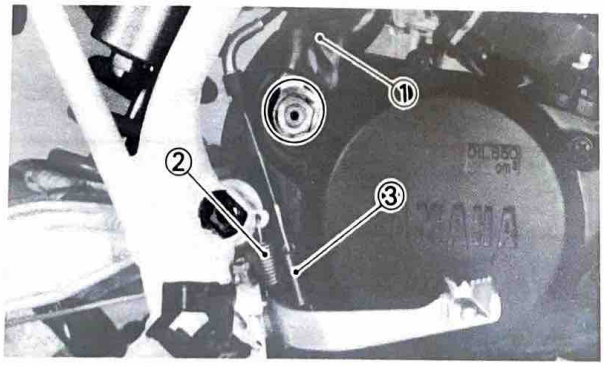
www.legends-yamaha-enduro.com

2. Adjust:
   - Clutch lever free play

Clutch lever free play adjustment steps:
- Loosen the locknut ②.
- Turn the adjuster ① until free play ⓐ is within the specified limits.
- Tighten the locknut.

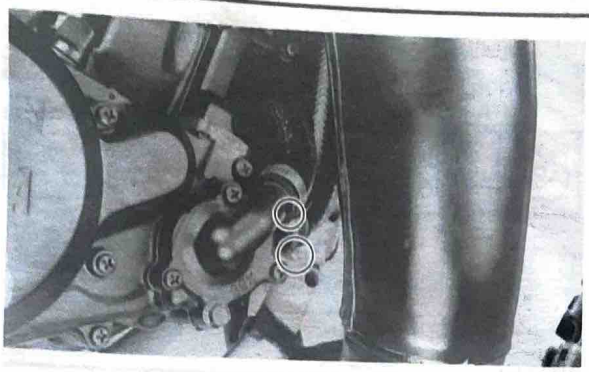
NOTE:

The above procedure provides for maximum cable free play to allow for proper clutch actuating mechanism adjustment.

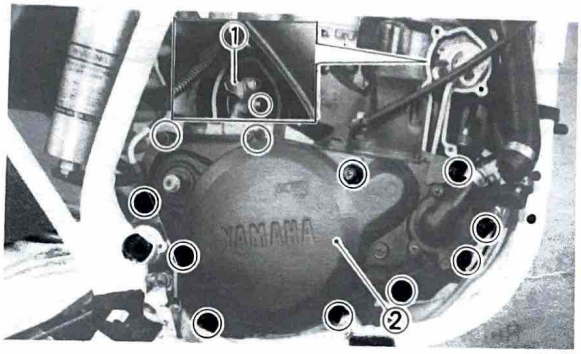


Mechanism Adjustment

1. Loosen:
   - Cable length adjuster locknuts (Fully)
2. Tighten:
   - Cable length adjusters (Until tight)
3. Remove:
   - Kick crank ①
   - Rear brake adjuster
4. Unhook:
   - Return spring ②
   - B.A.S.S. control cable ③



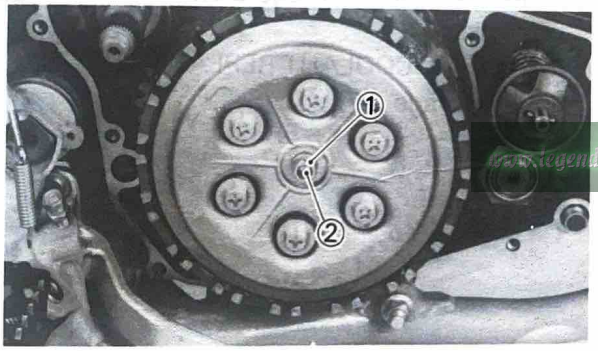
5. Drain:
   - Transmission oil
   - Coolant
6. Disconnect:
   - Radiator hoses
7. Remove:
   - Muffler
   - Exhaust pipe



8. Remove:
   - Power valve housing
   - Power valve lever
     Use locating pin ① to lock the lever.
   - Crankcase cover ②
   - Dowel pins
   - Gasket

NOTE:

Locating pin ① is included in owner's tool kit. Refer to page 3-16.

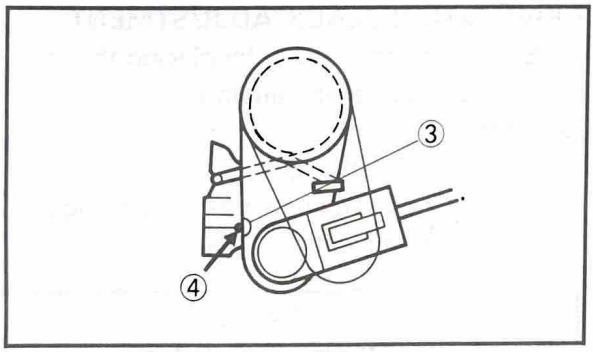


8. Adjust:
   - Free play

www.legends-yamaha-enduros.com

Clutch mechanism free play adjustment steps:

- Loosen the locknut ①.
- Push the push lever toward the front of the engine with your finger until it stops.
- With the push lever in this position, turn the adjuster ② either in or out until the push lever mark ③ and crankcase match mark ④ are aligned.
- Tighten the locknut.



Locknut:
8 Nm (0.8 m•kg, 5.8 ft•lb)

9. Install:
   - Dowel pins
   - Gasket (New)
   - Crankcase cover (Right)

Crankcase Cover (Right):
10 Nm (1.0 m•kg, 7.2 ft•lb)

10. Install:
    - Kick crank

Kick Crank:
60 Nm (6.0 m•kg, 43 ft•lb)

11. Install:
    - Power valve lever

    Use the locating pin.

NOTE:

Refer to page 3-23.

    - Power valve housing

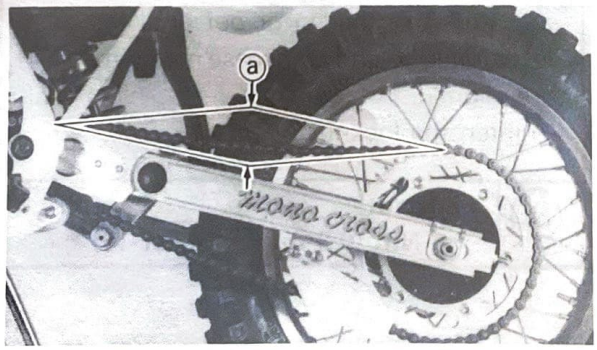
12. Connect:
    - Radiator hoses

13. Fill:
    - Transmission oil

    Refer to "TRANSMISSION OIL REPLACEMENT" section (Page 2-9).
    - Coolant

    Refer to "COOLANT REPLACEMENT" section. (Page 2-7).

www.legends-yamaha-enduros.com



DRIVE CHAIN SLACK ADJUSTMENT

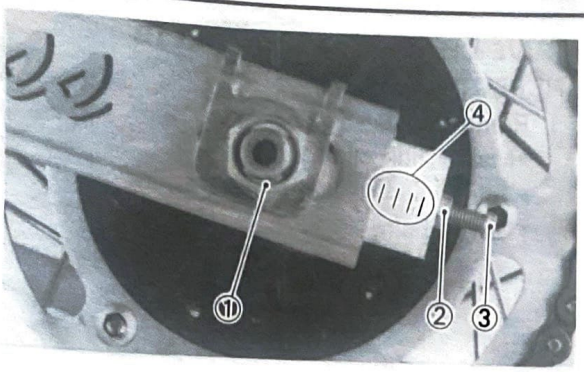
1. Elevate the rear wheel by placing the suitable stand under the engine.
2. Check:
    - Drive chain slack ⓐ

    At the position shown in the photograph.
    Out of specification→Adjust.

Drive Chain Slack:
15 ~ 20 mm (0.6 ~ 0.8 in)

NOTE:

Before checking and/or adjusting, rotate the rear wheel through several revolutions and check the slack several times to find the tightest point. Check and/or adjust chain slack with rear wheel in this "tight chain" position.



3. Adjust:
   • Drive chain slack

Drive chain slack adjustment steps:
- Loosen the axle nut ① and locknut ②.
- Loosen the rear brake adjuster.
- Adjust chain slack by turning the adjuster ③.

To Tighten → Turn adjuster ③ clockwise.
To Loosen → Turn adjuster ③ counter-clockwise and push wheel forward.

- Turn each adjuster exactly the same amount to maintain correct axle alignment. (There are marks ④ on each side of chain puller alignment.)

CAUTION:

Excessive chain slack will overload the engine and other vital parts; keep the slack within the specified limits.

www.legends-yamaha.com

- If the chain slack can not be adjusted, replace the sprockets and drive chain as a set.
- Tighten the axle nut and locknuts.

Locknuts (Chain Puller):
6 Nm (0.6 m•kg, 4.3 ft•lb)
Axle Nut:
100 Nm (10.0 m•kg, 72 ft•lb)

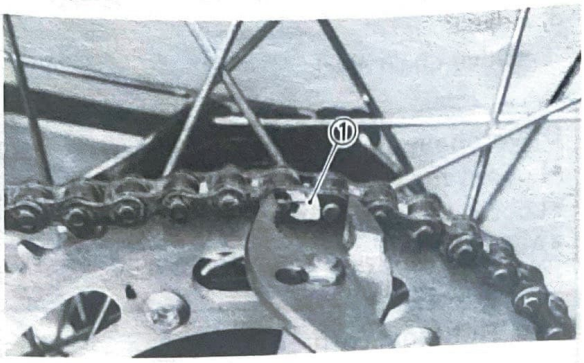
NOTE:

The chain should be cleaned and lubricated after every use of the machine.

CAUTION:

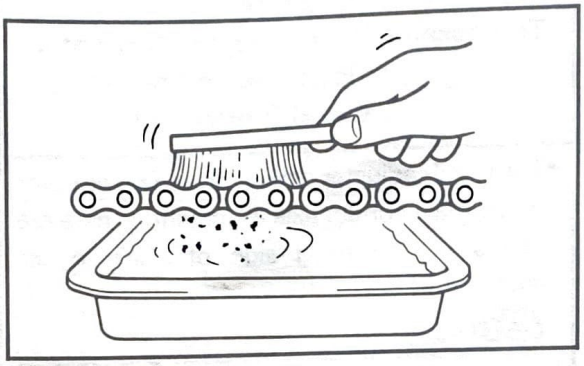
The brake pedal free play and the rear axle alignment must always be checked after the chain is adjusted or the rear wheel is removed.

3. Adjust:
   • Brake pedal free play



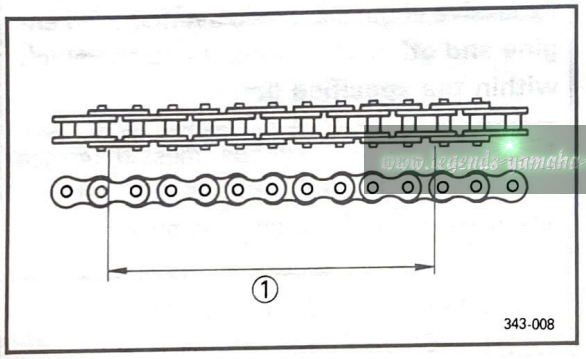
DRIVE CHAIN AND SPROCKETS INSPECTION

1. Remove:
   - Master link clip ①
   - Joint
   - Drive chain



2. Clean:
   - Drive chain

   Place it in solvent, and brush off as much dirt as possible. Then remove the chain from the solvent and dry the chain.

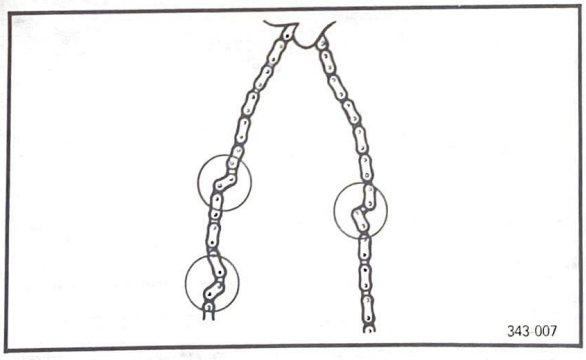


3. Measure:
   - Drive chain length (10 links) ①

   Out of specification→Replace.

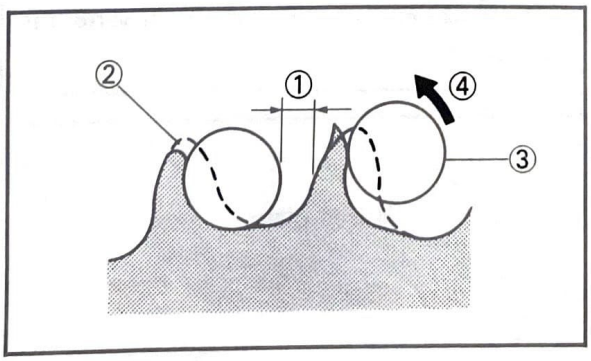
www.legends-yamaha-enduros.com

Drive Chain Length (10 links):
New: 148.6 mm (5.850 in)
Limit: 151.5 mm (5.965 in)



4. Check:
   - Drive chain stiffness

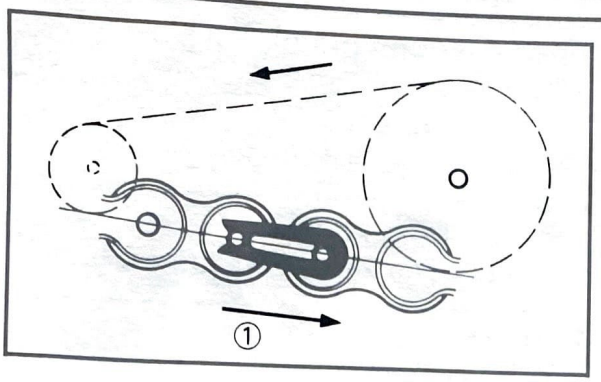
   Clean and oil the chain and hold as illustrated.



5. Inspect:
   - Drive sprocket/Driven sprocket

   More than 1/4 teeth ① wear→Replace sprocket.
   Bent teeth→Replace sprocket.
   Refor to "CHAPTER 5—REAR WHEEL, REAR DRUM BRAKE AND SPROCKETS" section (Page 5-5).

② Correct
③ Roller
④ Slip off



6. Install:
   Drive chain

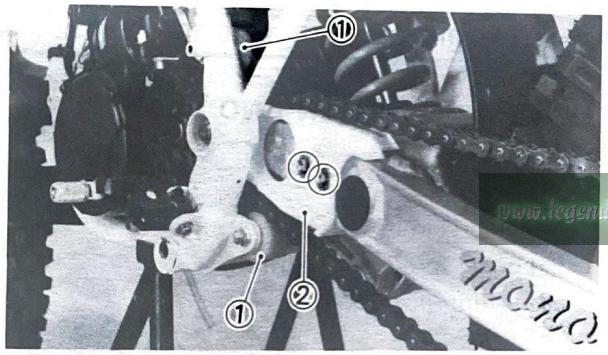
NOTE:
During reassembly, the master link clip must be installed with the rounded end facing the direction of travel.

① Turning direction

7. Lubricate:
   • Drive chain

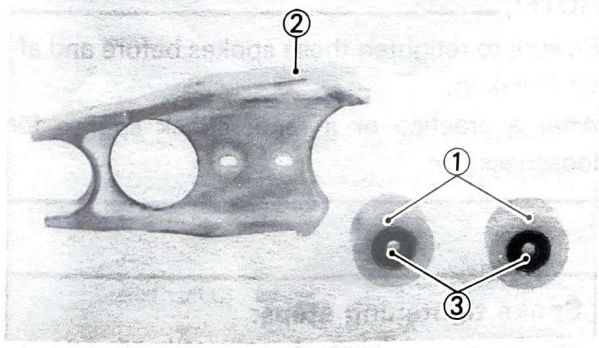
Chain Lube:
Yamaha Chain Lube or equivalent

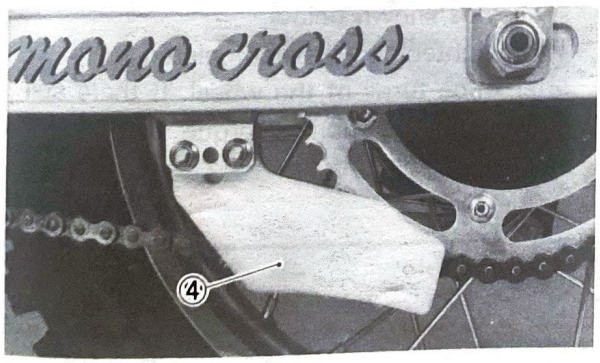
8. Adjust:
   • Drive chain slack
   • Rear brake pedal free play



CHAIN TENSIONER AND CHAIN GUIDE INSPECTION

1. Remove:
   • Chain tensioner (Upper and lower) ①
   • Chain guide ②

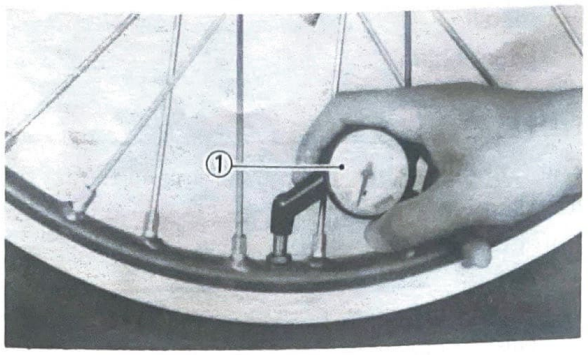




2. Inspect:
   • Chain tensioner roller ①
   • Chain guide ②
   Excessive wear → Replace.
3. Check:
   • Chain tensioner bearing ③
   Tightness/Binding/Damage → Replace.
4. Inspect:
   • Chain support ④
   Damage → Replace.
5. Install:
   • Chain tensioner (Upper and lower)
   • Chain guide
   • Chain support

Bolt (Chain Tensioner):
9 Nm (0.9 m•kg, 6.8 ft•lb)
Bolt (Chain Guide):
20 Nm (2.0 m•kg, 14 ft•lb)

TIRE PRESSURE CHECK/TIRE AND WHEEL INSPECTION/SPOKES INSPECTION AND TIGHTENING



TIRE PRESSURE CHECK

1. Measure:
   - Tire pressure
     Out of specification → Adjust.

Standard Tire Pressure:
98 kPa (1.0 kg/cm², 14 psi)

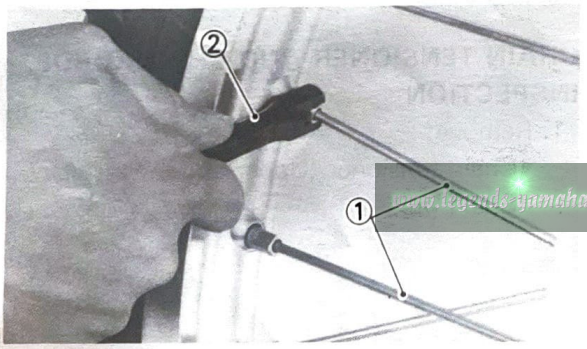
① Air gauge

TIRE AND WHEEL INSPECTION

1. Inspect:
   - Tire surface
     Wear/Crack/Damage → Replace.
   - Wheel:
     Bend/Damage → Replace.

Recommended Tire:

	Manufacturer	Size	Pattern
Front	BRIDGESTONE	80/100-21	M23
Rear	BRIDGESTONE	110/100-18	M22



SPOKES INSPECTION AND TIGHTENING

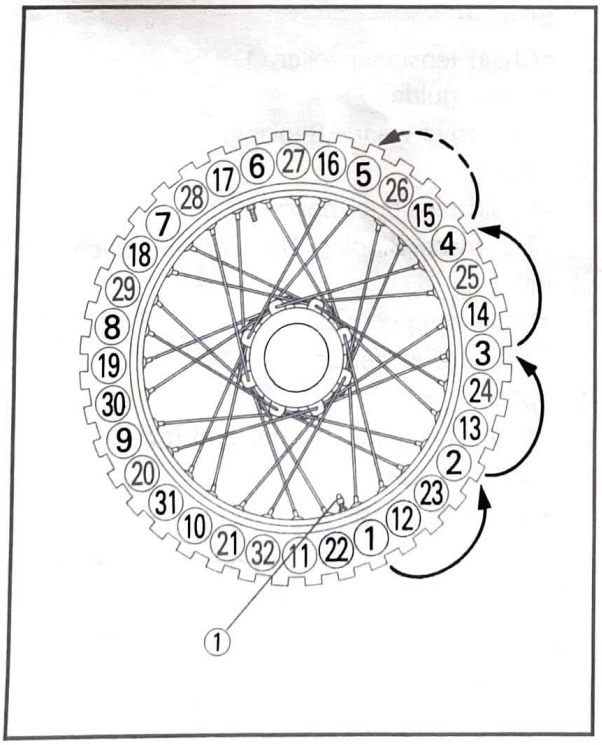
1. Inspect:
   - Spokes ①
     Bend/Damage → Replace.
     Loose spoke → Retighten.
2. Tighten:
   - Spokes

② Spoke wrench

NOTE:

Be sure to retighten these spokes before and after Break-in.

After a practice or a race, check spokes for looseness.

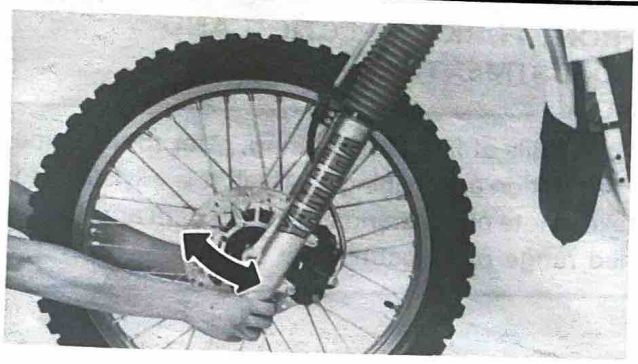


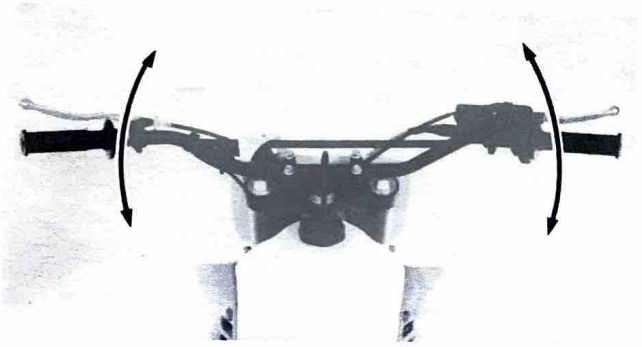
Spoke tightening steps:

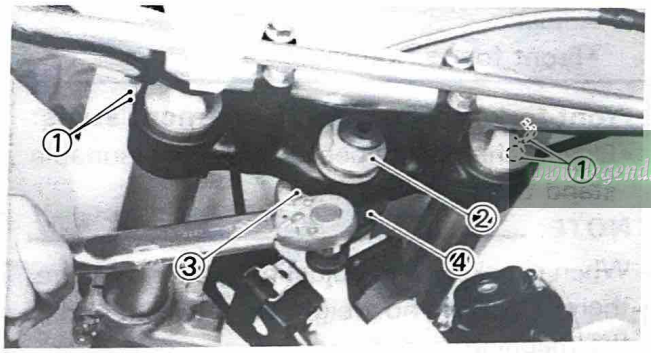
- Perform the retightening at an interval of three spokes as shown below.
- The retightening will be completed at No. 32 after three turns of the wheel. If there still spokes that are short of torque, then repeat the same procedure.

① :Air valve

Nipple:
6 Nm (0.6 m•kg, 4.3 ft•lb)







STEERING HEAD INSPECTION AND ADJUSTMENT

1. Elevate the front wheel by placing a suitable stand under the engine.
2. Check:
   - Steering stem
     Grasp the bottom of the forks and gently rock the fork assembly back and forth.
     Free play→Adjust steering head.
3. Check:
   - Steering smooth action
     Turn the handlebar lock to lock.
     Unsmooth action→Adjust steering head.
4. Adjust:
   - Steering ring nut

Steering head adjustment steps:
- Remove the seat and fuel tank.
- Loosen the front fork pinch bolts (Upper) ①.
- Loosen the steering stem nut ②.
- Elevate the front wheel by placing the suitable stand.
- Tighten the ring nut ③ using the ring nut wrench (YU-01268) ④.

www.legends-yamaha-enduros.com

Steering Ring Nut ③:
10 Nm (1.0 m•kg, 7.2 ft•lb)

- Tighten the steering stem nut and pinch bolt.

CAUTION:

Tighten the steering stem nut first.

Steering Stem Nut:
130 Nm (13.0 m•kg, 94 ft•lb)
Pinch Bolt (Upper):
23 Nm (2.3 m•kg, 17 ft•lb)

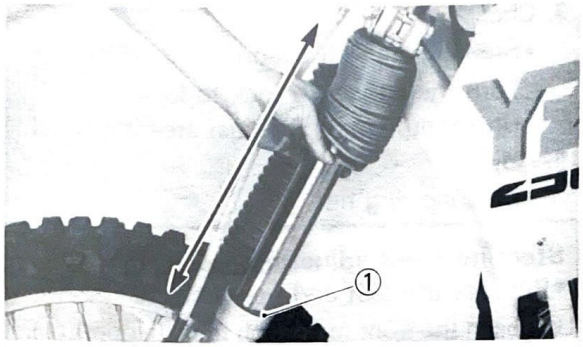
- Check the steering stem for free play and steering smooth action. If there is any free play or binding, inspect the steering bearing. Refer to "CHAPTER 5—STEERING HEAD" for more details.

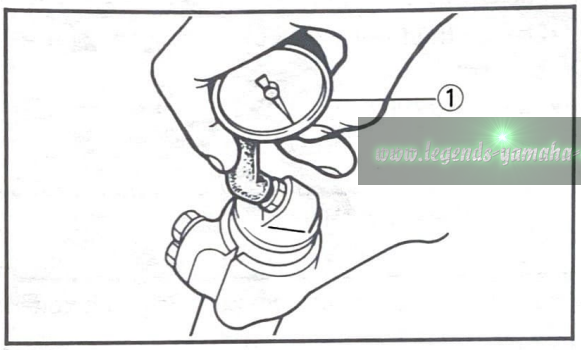
CAUTION:

After a short running period, check steering head for proper adjustment.

5. Adjust:
   - Front fork top end
     Refer to "CHAPTER 5—FRONT FORK" section.

2





FRONT FORK INSPECTION AND ADJUSTMENT

NOTE:

For details of front fork setting, refer to the Race Preparation and Tuning Manual. It is advisable to take a note of the standard setting data and specified range of adjustment.

1. Inspect:
   - Front fork smooth action
     Oprate the front brake and stroke the front fork.
     Unsmooth action→Repair or replace.
   - Dust seal ①
     Oil leakage→Repair or replace.
     Refer to "CHAPTER 5—FRONT FORK" section.

2. Adjust:
   - Front fork air pressure

Front fork air pressure adjustment steps:

- Elevate the front wheel by placing a suitable stand under the engine.

NOTE:

When checking and adjusting the air pressure, there should be no weight on the front end of the machine.

- Remove the valve caps.
- Using the air check gauge ①, check and adjust the air pressure.

Stiffer→Increase the air pressure.
(Use an air pump or pressurized air supply.)
Softer→Decrease the air pressure.
(Release the air by pushing the valve.)

Standard Air Pressure:
Zero kPa (Zero kg/cm^3, Zero psi)
Maximum Air Pressure:
98 kPa (1.0 kg/cm^2, 14 psi)

CAUTION:

Never exceed the maximum pressure, or oil seal damage may occur.

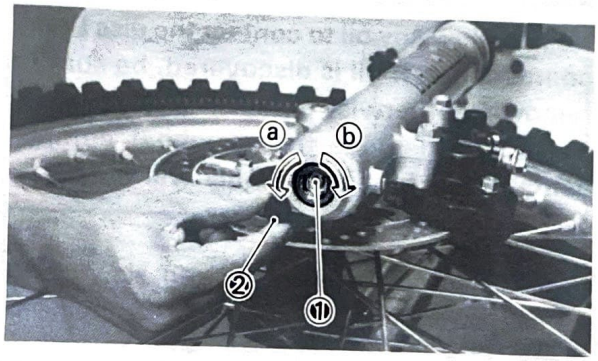
www.legends-yamaha-enduro.com

WARNING:

The difference between both the left and right tubes should be 9.8 kPa (0.1 kg/cm², 1.4 psi) or less.

- Install the air valve cap.

3. Adjust:
   - Compression damping force



Compression damping force adjustment steps:
- Remove the rubber cap ②.
- Turn the adjuster ① 13 clicks back from the fully turned-out position. (It is standard position).
- Adjust the compression damping force.

Stiffer ⓑ → Increase the compression damping force. (Turn the adjuster ① in.)
Softer ⓐ → Decrease the compression damping force. (Turn the adjuster ① out.)

Minimum setting:
13 clicks out (From standard setting)
Maximum setting:
13 clicks in (From standard setting)

www.legends-yamaha.com

CAUTION:

Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.

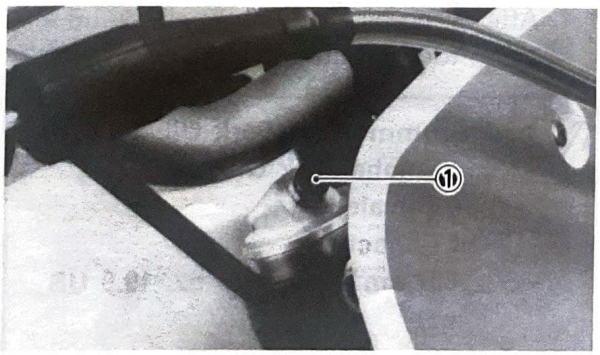
WARNING:

Always adjust each front fork to the same setting. Uneven adjustment can cause poor handling and loss of stability.

- Install the rubber cap.

CAUTION:

Be sure to fit the rubber cap to prevent malfunction due to dust, lint, etc.



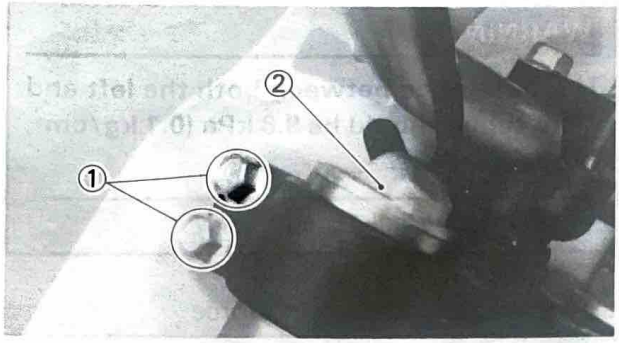
FRONT FORK OIL REPLACEMENT

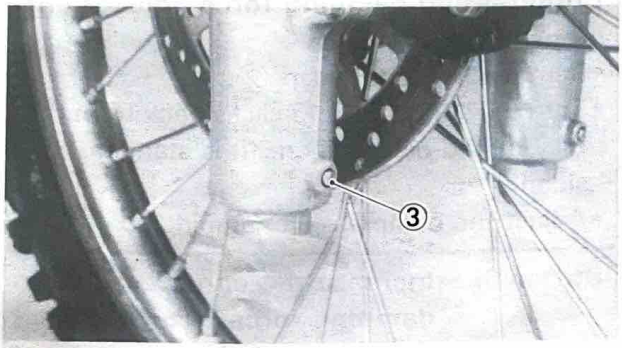
WARNING:

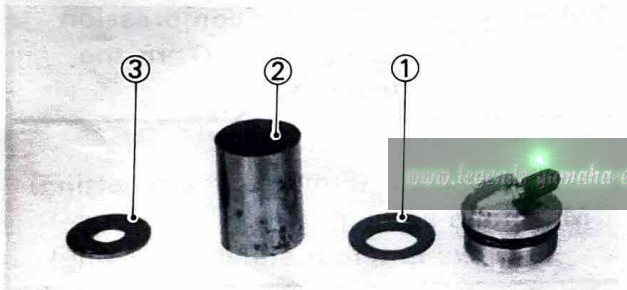
Securely support the machine so there is no danger of it falling over.

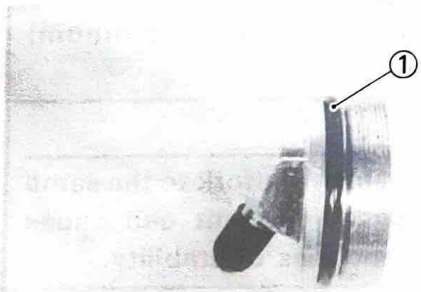
1. Elevate the front wheel by placing a suitable stand under the engine.
2. Remove:
   - Valve cap ①

FRONT FORK OIL REPLACEMENT









3. Depress the air valve to allow the air to escape from the fork legs.
4. Place receptacle under drain hole.
5. Loosen:
   - Pinch bolts (Upper) ①
6. Remove:
   - Cap bolt ②
   - Drain screw ③

WARNING:

Do not allow any oil to contact the disc brake components. If oil is discovered, be sure to remove it, otherwise diminished braking capacity and damage to the rubber components of the brake assembly will occur.

5. After most of the oil has drained, slowly raise and lower outer tubes to pump out remaining oil.
6. Loosen:
   - Front fork upper pinch bolt
7. Remove:
   - Handlebar
   - Spring seat ①
   - Spacer ②
   - Spring seat ③
   - Spring

www.legends-yamaha-enduros.com

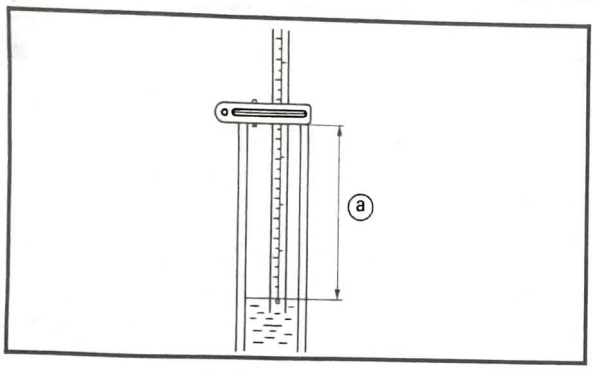
8. Inspect:
   - Cap bolt O-ring ①
   - Drain screw gasket

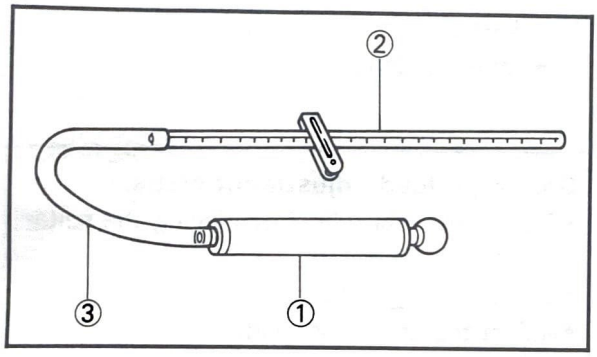
   Wear/Damage→Replace.
9. Install:
   - Drain screw
10. Fill:
    - Front fork

      With correct amount of oil to get your desired oil level.

      After filling pump the forks slowly up and down to distribute the oil.

Recommended Fork Oil:
Yamaha Fork Oil 7.5WT or Equivalent
Oil Capacity:
587 cm³ (20.7 Imp oz, 19.9 US oz)





11. Measure:
    - Oil level (Left and right) ⓐ
      Out of specification→Add or reduce oil.

Fork Oil Level	
Standard	120 mm (4.72 in)
Minimum	108 mm (4.25 in)
Maximum	165 mm (6.50 in)

NOTE:

Measure the oil level from top of the fork tube with the oil level tool or the tape measure roll.

NOTE:

The oil level tool can be made easily as shown in illust. Fork tube must be fully bottomed.

① Syringe
② Glass tube
③ Vinyl hose

12. Install:
    - Spring
    - Spring seat
    - Spacer
    - Spring seat
    - Cap bolt
    - Handlebar

www.legends-yamaha-enduros.com

Cap Bolt:
23 Nm (2.3 m•kg, 17 ft•lb)
Handlebar:
23 Nm (2.3 m•kg, 17 ft•lb)
Pinch Bolt:
23 Nm (2.3 m•kg, 17 ft•lb)

13. Set the air pressure to specification.

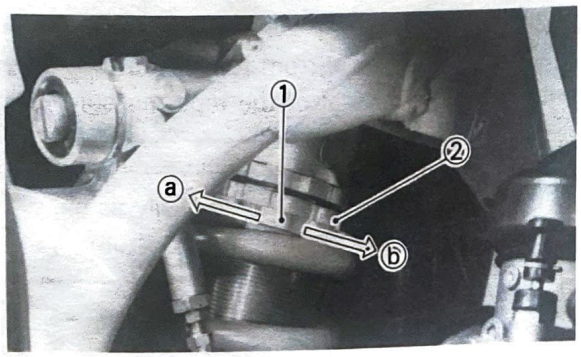
REAR CHOCK ABSORBER INSPECTION AND ADJUSTMENT

NOTE:

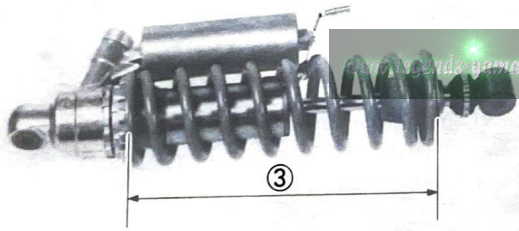
For details of rear shock setting, refer to the Race Preparation and Tuning Manual. It is advisable to take a note of the standard setting and specified range of adjustment.

REAR SHOCK ABSORBER INSPECTION AND ADJUSTMENT

1. Inspect:
   - Rear shock absorber
     Damage/oil leakage → Replace.
   - Swingarm smooth action
     Abnormal noise/Unsmooth action → Grease the swingarm pivot or repair the swingarm. Refer to "CHAPTER 5—SWINGARM" section (Page 5-39).



2. Adjust:
   - Spring preload



Spring preload adjustment steps:
- Elevate the rear wheel by placing the suitable stand.
- Loosen the locknut ②.
- Adjust the spring preload.

NOTE:

The length of the spring (installed) changes 1.5 mm (0.06 in) per turn of the adjuster.

③ Spring length

Stiffer ⓐ → Increase the spring preload. (Turn the adjuster ① in.)
Softer ⓑ → Decrease the spring preload. (Turn the adjuster ① out.)

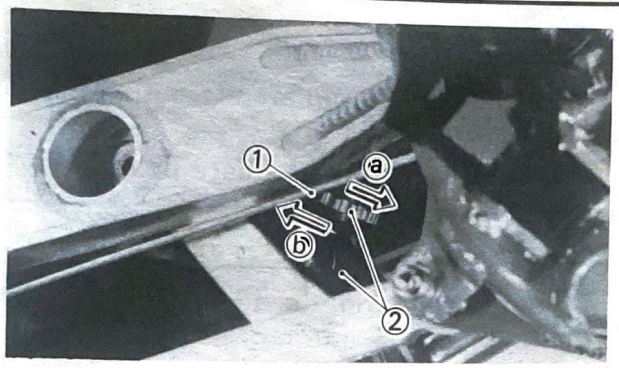
Standard Spring Length (Installed):
270 mm (10.5 in)
Minimum Length (Installed):
251 mm (9.9 in)
Maximum Length (Installed):
273.5 mm (10.8 in)

CAUTION:

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

- Tighten the locknuts.

Locknut:
70 Nm (7.0 m•kg, 50 ft•lb)



3. Adjust:
   • Rebound damping force

Rebound damping force adjustment steps:
- Turn the adjuster ① 14 clicks back from the fully turned-in position. (It is standard position.)
- Adjust the rebound damping force.

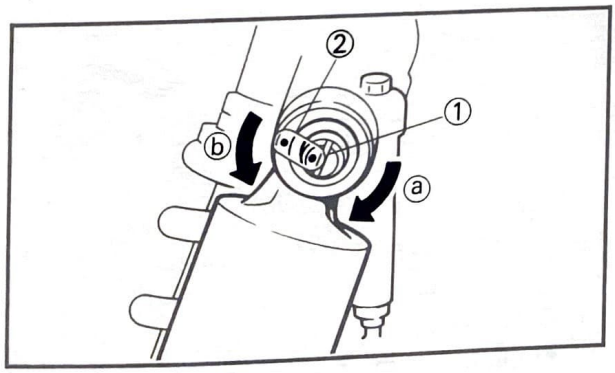
Slower ⓐ → Increase the rebound damping force. (Turn the adjuster ① in.)
Faster ⓑ → Decrease the rebound damping force. (Turn the adjuster ① out.) clockwise)

Minimum setting:
9 clicks turns out (From standard position)
Maximum setting:
14 clicks turns in (From standard position)

CAUTION:
Don't turn out (in) the adjuster from the damping force minimum (maximum) setting.

② Standard adjustment marks

www.legends-yamaha-enduro.com



4. Adjust:
   • Compression damping force

Compression damping force adjustment steps:
- Turn the adjuster ① 8 clicks back from the fully turned-out position. (It is standard position.)
- Adjust the compression damping force.

Slower ⓐ → Increase the compression damping force. (Turn the adjuster ① clockwise.)
Faster ⓑ → Decrease the compression damping force (Turn the adjuster ① counter-clockwise.)

Minimum setting:
20 click out (From standard position)
Maximum setting:
8 clicks in (From standard position)

CAUTION:

Do not turn out (in) the adjuster from the damping force minimum (maximum) setting.
clicks from the softest position.

WARNING:

The compression damping adjuster is very hot immediately aftr a run.
Never allow your bare hand or part of your body to touch it.

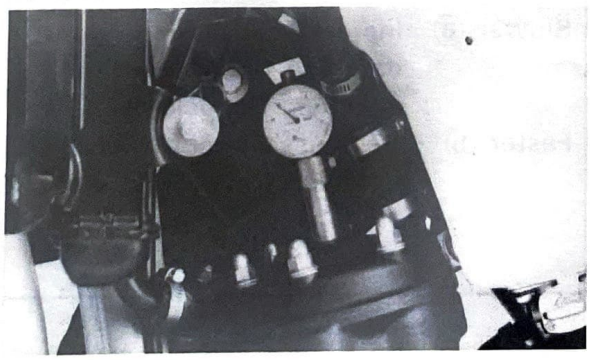
② Standard adjustment marks

www.legends-yamaha-enduros.com

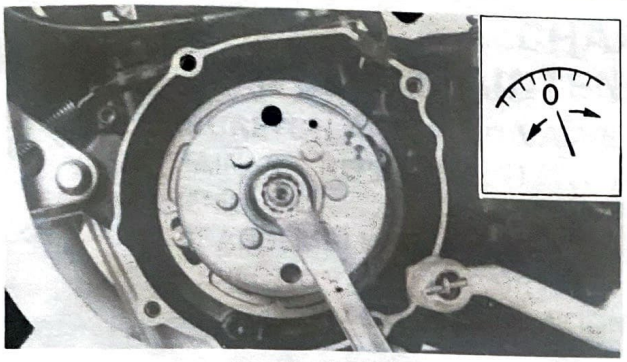
ELECTRICAL

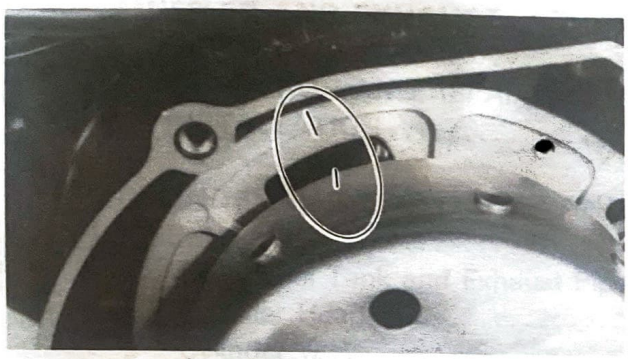
IGNITION TIMING CHECK AND ADJUSTMENT

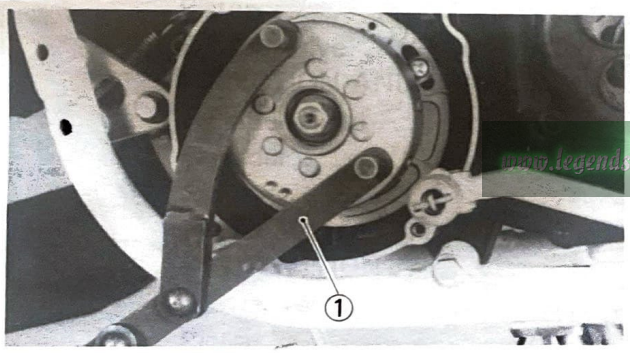
1. Check/Adjust:
   - Ignition timing

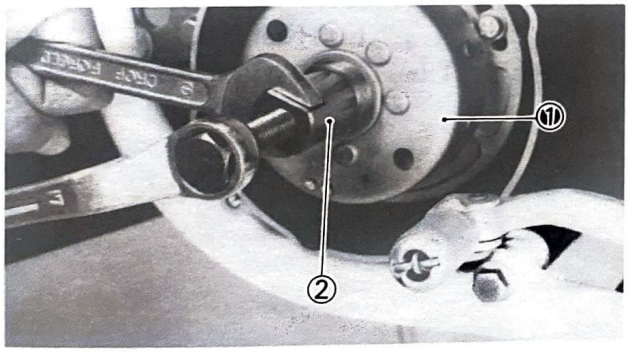


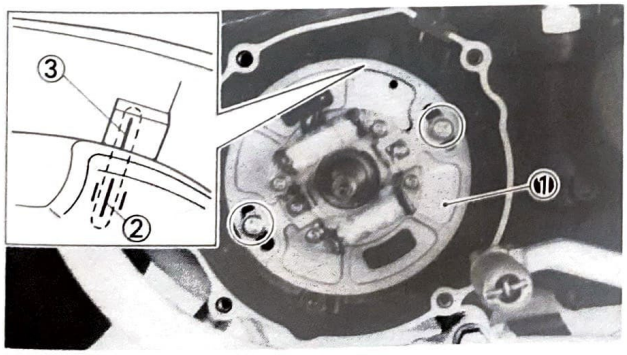
Ignition timing adjustment steps:
- Remove the spark plug.
- Install the extension on the dial gauge (YU-03097), and slide the dial gauge assembly into the dial gauge stand (YU-01126).
- Screw the dial gauge stand into the spark plug hole.











- Rotate the magneto rotor until the piston reaches top dead center (TDC). When this happens, the needle on the dial gauge will stop and reverse directions even though the rotor is being turned in the same direction. Set the dial gauge to Zero at TDC.
- From TDC, rotate the rotor clockwise until the dial gauge indicates that the piston is at a specified distance from TDC. At this point, the scribed marks on the rotor and the stator plate should be aligned.

Ignition Timing:
1.4 ~ 1.6 mm (0.055 ~ 0.063 in)

- If the marks are not aligned, remove the CDI magneto using the Universal Rotor Holder (YU-01235) ① and Rotor Puller (YM-01189) ②.
- Loosen the base set screws and turn the base ① right or left until the base mark ② aligns the crankcase mark ③. And tighten the base set screws.
- Reinstall the CDI magneto tighten the nut.
- Recheck the ignition timing.

www.legends-yamaha-enduros.com

Nut (CDI magneto):
85 Nm (8.5 m•kg, 61 ft•lb)

www.legends-yamaha-enduros.com

CHAPTER 3
ENGINE MAINTENANCE AND REPAIR

CARBURETOR AND REED VALVE 3-1
MAIN JET REPLACEMENT 3-2
REMOVAL 3-3
DISASSEMBLY 3-3
INSPECTION AND REPAIR 3-4
ASSEMBLY AND INSTALLATION 3-7

MUFFLER AND EXHAUST PIPE 3-9
REMOVAL 3-10
INSPECTION AND REPAIR 3-11
INSTALLATION 3-12

CYLINDER HEAD, CYLINDER AND PISTON 3-13
REMOVAL 3-14
Seat, Fuel Tank and Exhaust Pipe 3-14
Cylinder Head 3-15
Cylinder 3-15
Piston 3-17
Power Valve 3-17
INSPECTION AND REPAIR 3-18
Cylinder Head 3-18
Cylinder 3-19
Piston 3-19
Power Valve 3-22
INSTALLATION 3-22
Power Valve 3-22
Piston 3-23
Cylinder 3-24
Cylinder Head 3-26
Exhaust Pipe, Fuel Tank and Seat 3-27

www.legendsyamaha-enduros.com

CLUTCH, KICK AXLE, SHIFT SHAFT AND PRIMARY DRIVE GEAR 3-28
REMOVAL 3-30
Crankcase Cover (Left) 3-30
Clutch 3-31
Kick Axle 3-32
Shift Shaft 3-32
Primary Drive Gear 3-32
INSPECTION AND REPAIR 3-33
Clutch 3-33
Kick Axle 3-34
Shift Shaft 3-35
Primary Drive Gear 3-35
INSTALLATION 3-35
Primary Drive Gear 3-35
Shift Shaft 3-36
Kick Axle 3-36
Clutch 3-36
Crankcase Cover (Left) 3-38

YPVS GOVERNOR 3-39
REMOVAL 3-39
DISASSEMBLY 3-40
INSPECTION AND REPAIR 3-40
ASSEMBLY 3-41
INSTALLATION 3-41

CDI MAGNETO 3-42
REMOVAL 3-42
INSPECTION AND REPAIR 3-43
INSTALLATION 3-43

CRANKSHAFT, TRANSMISSION AND SHIFTER 3-45
ENGINE REMOVAL 3-47
REMOVAL 3-51
DISASSEMBLY 3-51
Crankcase 3-51
Transmission and Shifter 3-52
Crankshaft 3-53
INSPECTION AND REPAIR 3-53
Crankshaft and Crankcase 3-53
Transmission and Shifter 3-55
ASSEMBLY 3-57
Crankshaft 3-57
Transmission and Shifter 3-57
INSTALLATION 3-61
REMOUNTING ENGINE 3-61

www.legends-yamaha-enduros.com

www.legends-yamaha-enduros.com

CARBURETION

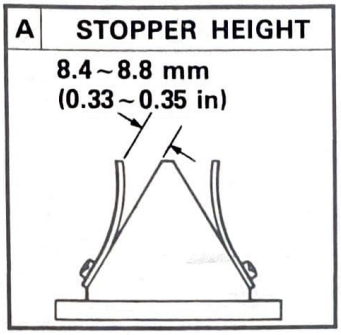
CARBURETOR AND REED VALVE

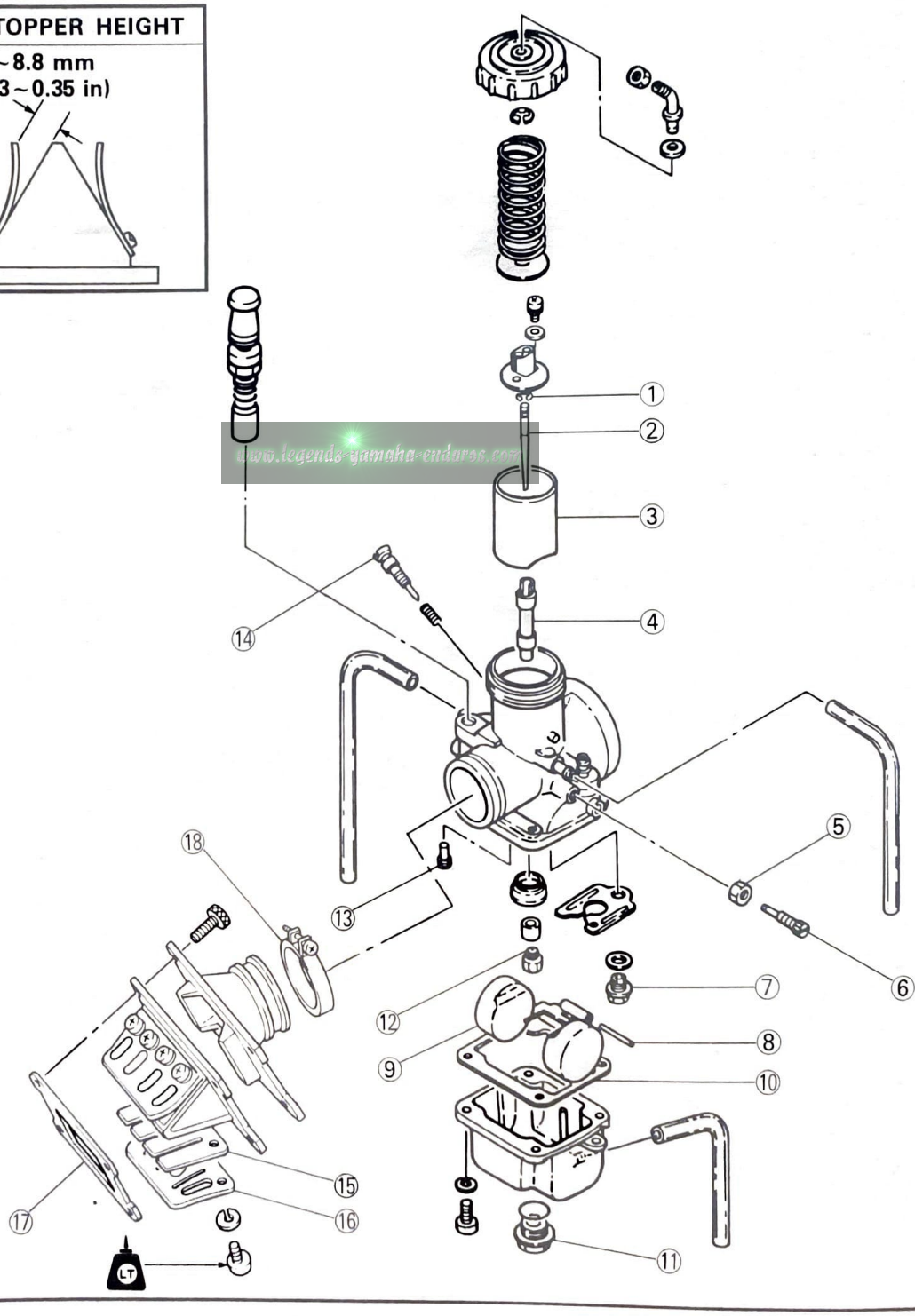
① Clip
② Jet needle
③ Throttle valve
④ Needle jet
⑤ Locknut
⑥ Throttle stop screw
⑦ Valve seat
⑧ Float pin
⑨ Float
⑩ Gasket
⑪ Drain plug
⑫ Main jet
⑬ Pilot jet
⑭ Pilot air screw
⑮ Reed valve
⑯ Reed valve stopper
⑰ Gasket
⑱ Joint

SPECIFICATIONS	
MAIN JET (M.J.)	#350
JET NEEDLE (J.N.)	6F16-2
NEEDLE JET (N.J.)	Q-4
PILOT JET (P.J.)	#30
PILOT AIR SCREW (P.A.S.)	2
FLOAT HEIGHT	26 ~ 28 mm (1.02 ~ 1.10 in)

A STOPPER HEIGHT

8.4 ~ 8.8 mm (0.33 ~ 0.35 in)



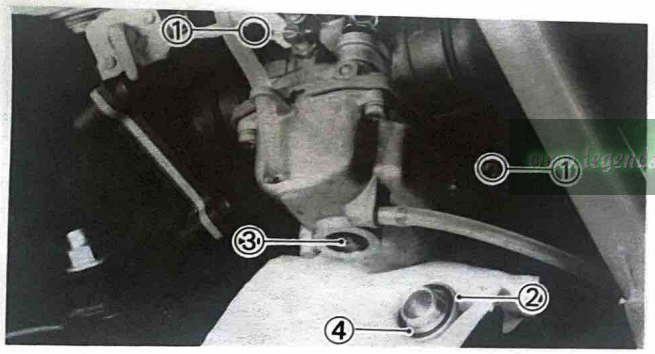


www.legends-yamaha-enduros.com

For details of carburetor tuning, refer to the "RACE PREPARATION AND TUNING MANUAL" (90894-13400).

IMPORTANT:

The carburetor has been set for operation at or near sea level; in most instances, it will not require changes. Some conditions, however, do demand carb setting changes to maintain performance. If this is the case, make the changes in small increments and check the results with a spark plug check. Improper settings can lead to poor performance or possible engine damage. If you are in doubt as to what setting changes to make, consult your Yamaha dealer.



MAIN JET REPLACEMENT

1. Turn the fuel cock to "OFF".
2. Loosen:
   - Clamps ①
3. Remove:
   - Drain plug ②
   - Main jet ③
4. Check:
   - O-ring ④

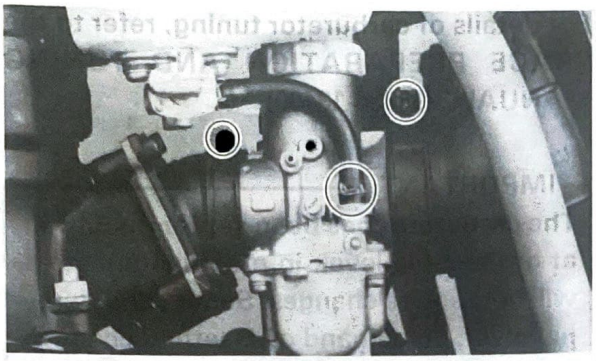
   Damage→Replace.

WARNING:

When the drain plug is removed, the fuel in the float bowl will drain. Do not remove the plug when the engine is hot. Place a rag under the carb when removing the plug to catch the fuel. Remove the plug in a well-ventilated area, away from any open flame. Always clean and dry the machine after completing main jet changes.

5. Install:
   - Main jet
   - Drain plug
6. Tighten:
   - Clamps

CARBURETOR AND REED VALVE

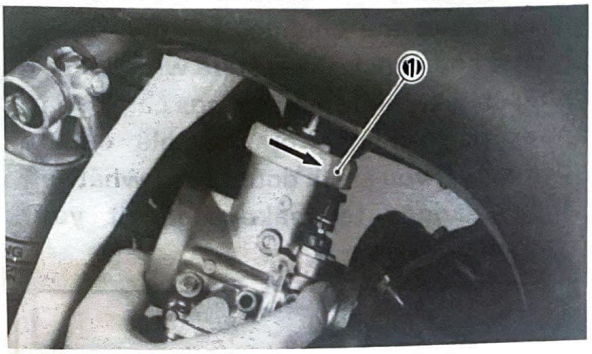


REMOVAL

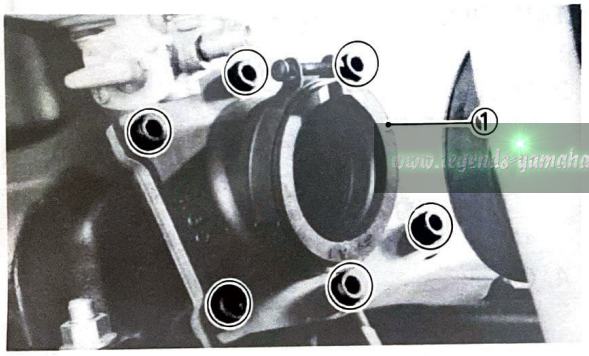
1. Turn the fuel cock to "OFF".
2. Loosen:
   - Clamps
3. Disconnect:
   - Fuel hose
4. Remove:
   - Carburetor assembly

NOTE:

Cover the carburetor joint with the clean cloth.



5. Remove:
   - Carburetor top ①

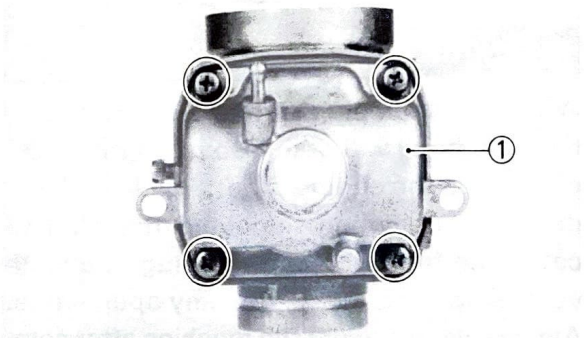


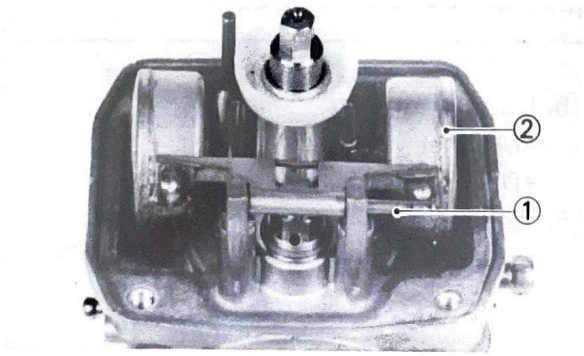
www.legends-yamaha-enduros.com

6. Remove:
   - Carburetor joint ①
   - Reed valve assembly

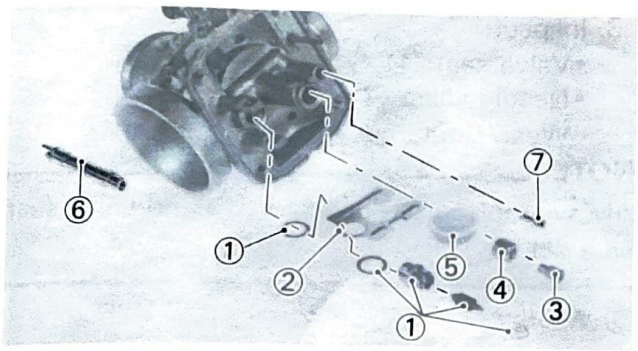
DISASSEMBLY

1. Remove:
   - Float chamber ①

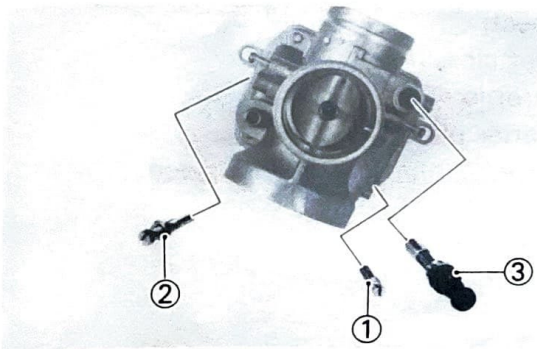




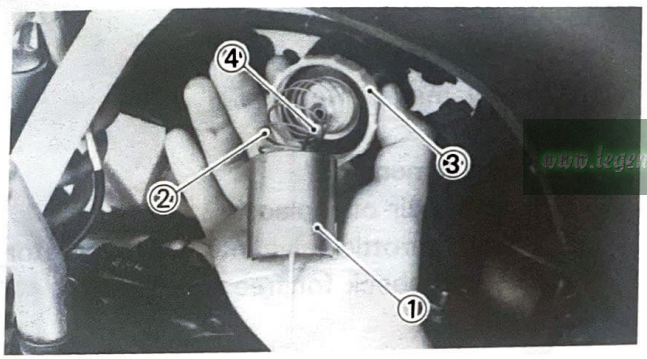
2. Remove:
   - Float pin
   - Float



3. Remove:
   - Needle valve assembly ①
   - Plate ②
   - Main jet ③
   - Washer (Main jet) ④
   - Needle jet center ⑤
   - Main nozzle ⑥
   - Pilot jet ⑦

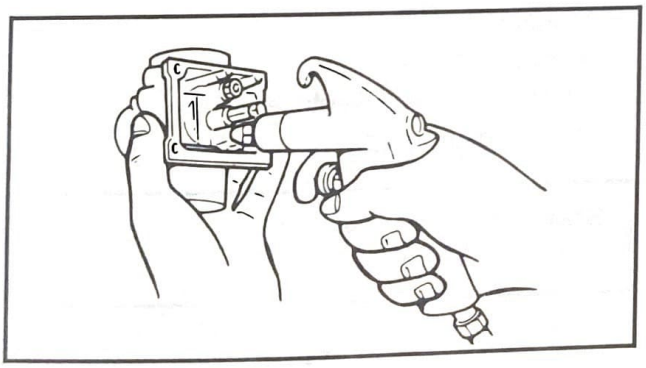


4. Remove:
   - Pilot air screw ①
   - Throttle stop screw ②
   - Starter plunger ③



5. Remove:
   - Throttle valve ①
   - Spring (Throttle valve) ②
   - Carburetor top ③
   - Throttle cable ④

www.legends-yamaha-...



INSPECTION AND REPAIR

1. Inspect:
   - Carburetor body
     Contamination → Clean.

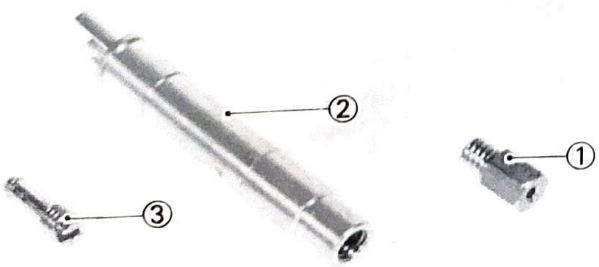
NOTE:

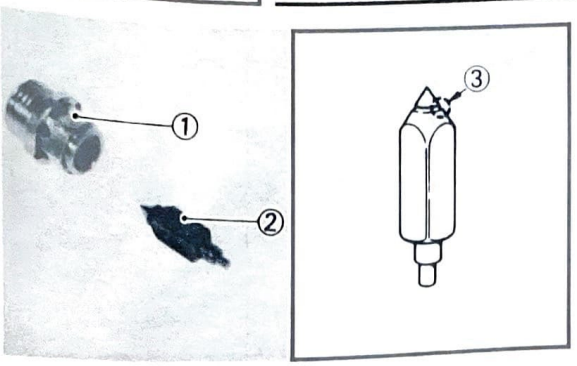
- Use a petroleum based solvent for cleaning. Blow out all passages and jets with compressed air.
- Never use the wire.

2. Inspect:
   - Main jet ①
   - Main nozzle ②
   - Pilot jet ③
     Contamination → Clean.

NOTE:

- Use a petroleum based solvent for cleaning. Blow out all passages and jets with compressed air.
- Never use the wire.





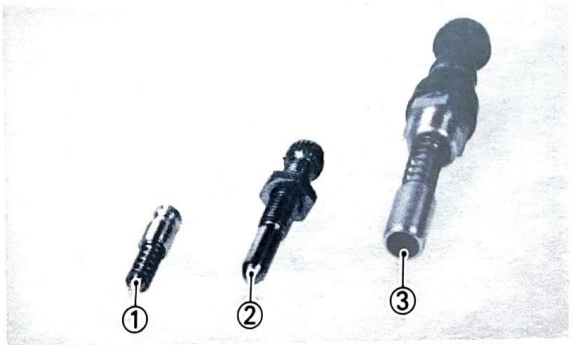
3. Inspect:
   - Valve seat ①
   - Needle valve ②

   Wear/Contamination→Replace.

NOTE:

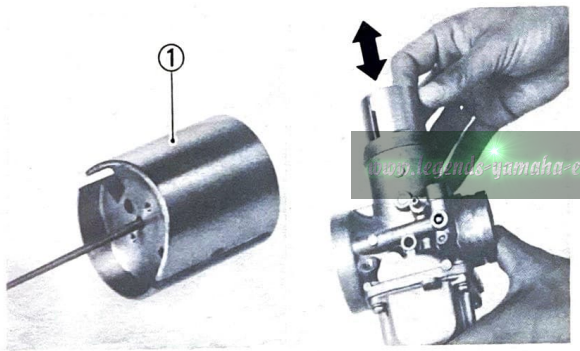
Always replace the needle valve and valve seat as a set.

③ Wear



4. Inspect:
   - Pilot air screw ①
   - Throttle stop screw ②
   - Starter plunger ③

   Wear/Contamination→Replace.

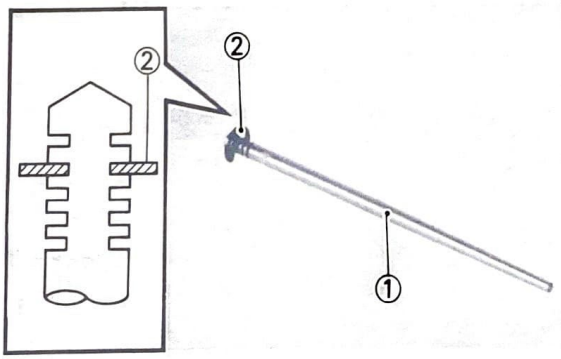


5. Inspect:
   - Throttle valve ①

   Wear/Damage→Replace.
6. Check:
   - Free movement

   Stick→Repair or replace.

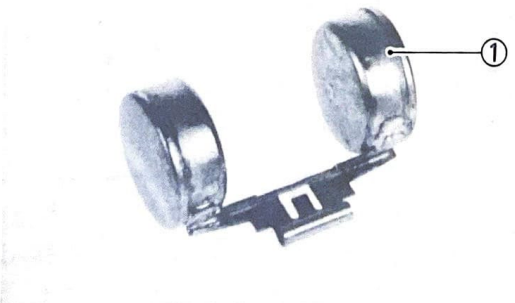
   Insert the throttle valve into the carburetor body, and check for free movement.



7. Inspect:
   - Jet needle ①

   Bends/Wear→Replace.
   - Clip position ②

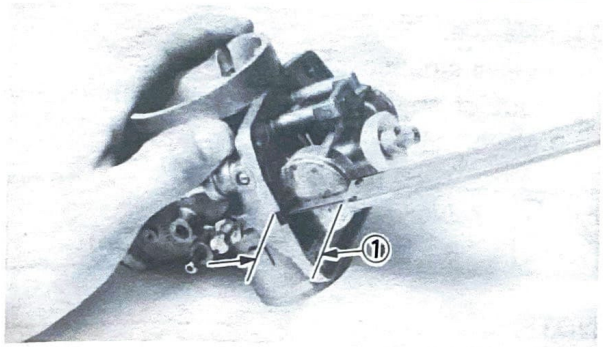
Standard Clip Position:
No. 2 Groove

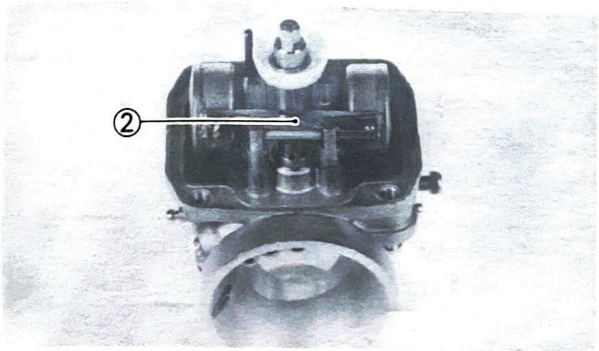


8. Inspect:
   - Float ①

   Damage→Replace.
   - Gasket/O-ring

   Damage→Replace.





9. Measure:
   - Float height ①
     Out of specification→Adjust.

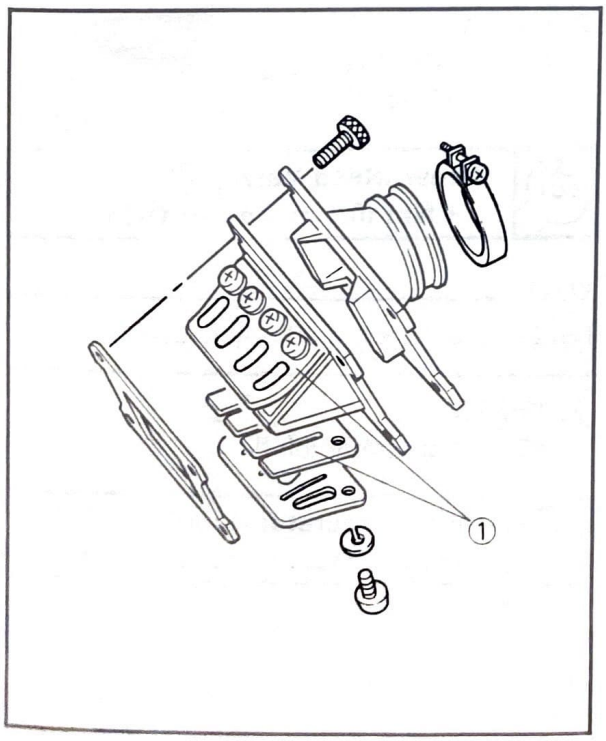
Float Height (F.H.):
26~28 mm (1.02~1.10 in)

Measurement and adjustment steps:
- Install the needle valve assembly, float and float pin.
- Hold the carburetor in an upside down position.
- Measure the distance between the mating surface of the float chamber (gasket removed) and top of the float using a gauge.

NOTE:
The float arm should be resting on the needle valve, but not compressing the needle valve.

- If the float height is not within specification, inspect the valve seat and needle valve.
- If either is worn, replace them both.
- If both are fine, adjust the float height by bending the float tang ② on the float.
- Recheck the float height.

www.legends-yamaha.com

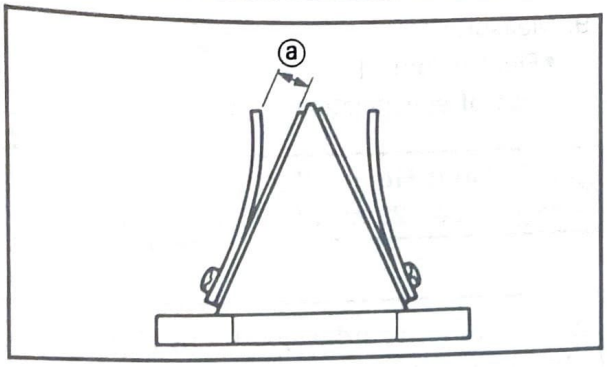


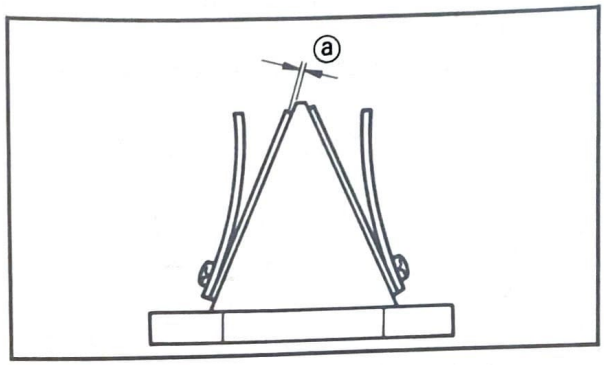
10. Inspect:
    - Rubber joint
      Weathering/Other Deterioration→Replace.
    - Reed petals ①
      Fatigue Cracks→Replace.

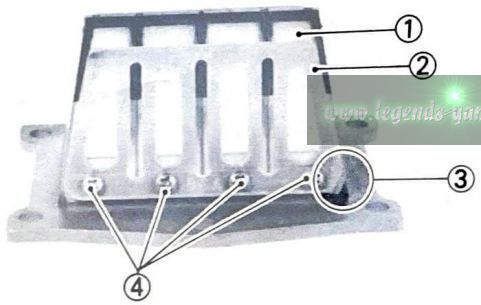
Inspection steps:
- Visually inspect the reed petals.

NOTE:
Correct reed petals should fit flush or nearly flush against neoprene seats.

- If in doubt as to sealing ability, apply suction to carburetor side of assembly.
- Leakage should be slight to moderate.







11. Measure:
    - Valve stopper height ⓐ
      Out of specification → Adjust stopper/Replace valve stopper.

Valve Stopper Height:
8.4 ~ 8.8 mm (0.33 ~ 0.35 in)

NOTE:
If it is 0.4 mm (0.016 in) more or less than specified, replace the valve stopper.

12. Measure:
    - Reed valve bending ⓐ
      Out of specification → Replace.

Reed Valve Bending Limit:
0.4 mm (0.02 in)

ASSEMBLY AND INSTALLATION

Reverse removal and disassembly steps. Pay close attention to following points.

1. Install:
    - Reed valve ①
    - Reed valve stopper ②

NOTE:
Note the cut ③ in the lower corner of the reed and stopper plate.

2. Tighten:
    - Screw (Reed valve) ④
      Use LOCTITE®.

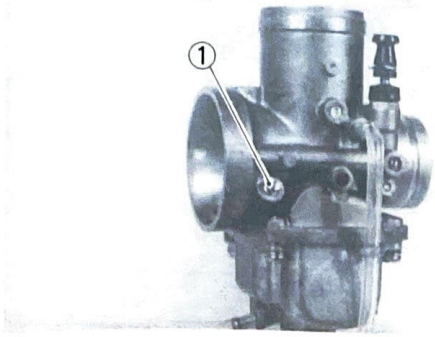
Screw (Reed Valve) ④:
1 Nm (0.1 m•kg, 0.7 ft•lb)

NOTE:
Tighten each screw gradually to avoid warping.

3. Tighten:
    - Bolt (Carburetor joint)

Bolt (Carburetor Joint):
12 Nm (1.2 m•kg, 8.7 ft•lb)

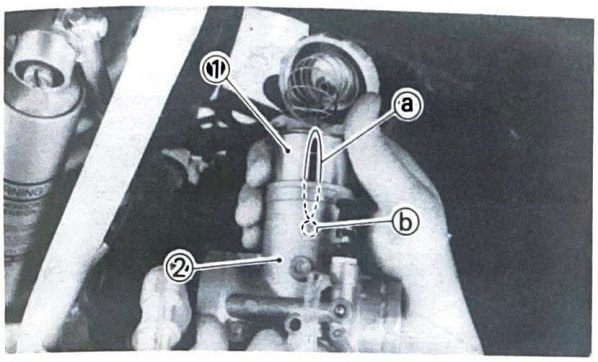
www.legends-yamaha-enduros.com



4. Install:
   • Pilot air screw

Note the following installation points:
- Screw in the pilot air screw ① until it is lightly seated.
- Back out by the specified number of turns.

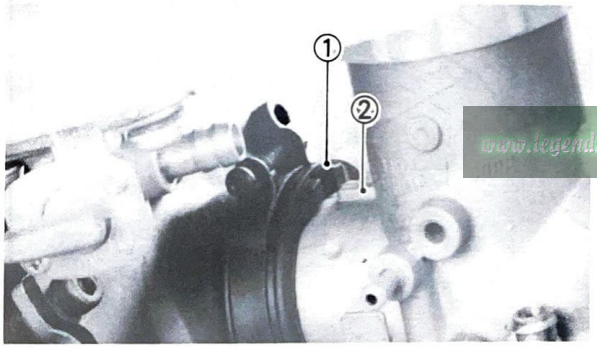
Pilot Air Screw:
2 turns out



5. Install:
   • Throttle valve ①
     To carburetor body ②.

NOTE:

Align the groove ⓐ of the throttle valve with the projection ⓑ of the carburetor body.



6. Install:
   • Carburetor

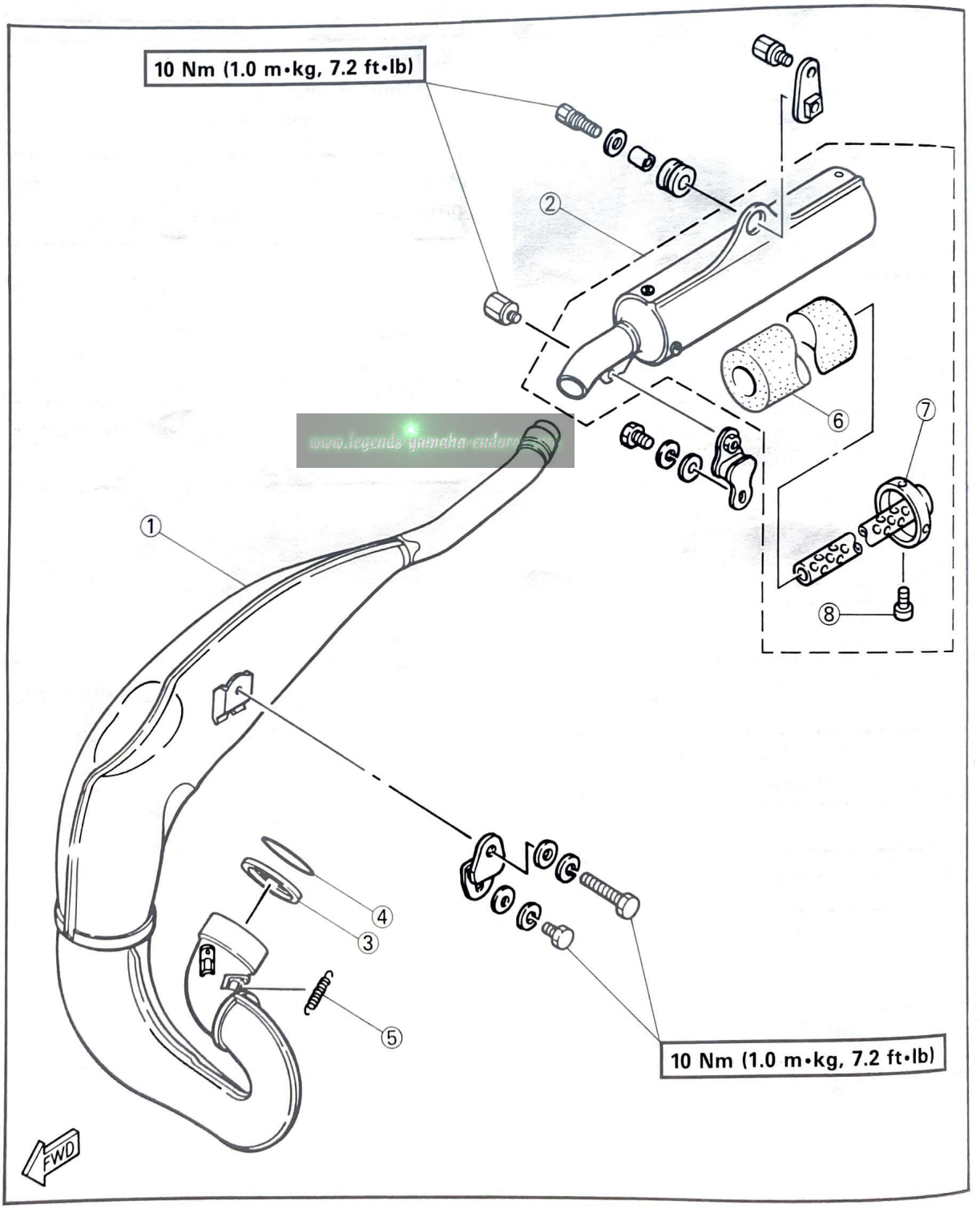
NOTE:

Install the projection ① between the carburetor joint slots ②.

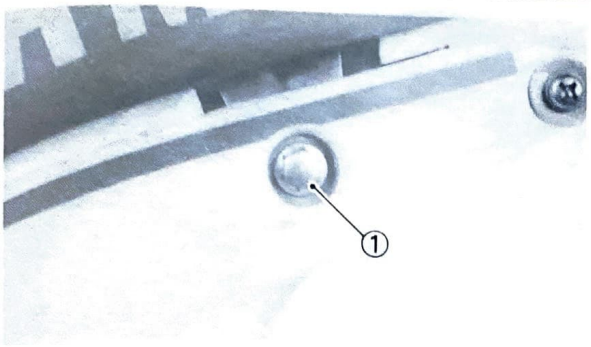
7. Adjust:
   • Idle speed
     Refer to "CHAPTER 2 — IDLE SPEED" section. (Page 2-5)

MUFFLER AND EXHAUST PIPE

① Exhaust pipe
② Muffler assembly
③ Exhaust pipe gasket
④ O-ring
⑤ Spring
⑥ Silencer
⑦ Muffler end
⑧ Screw

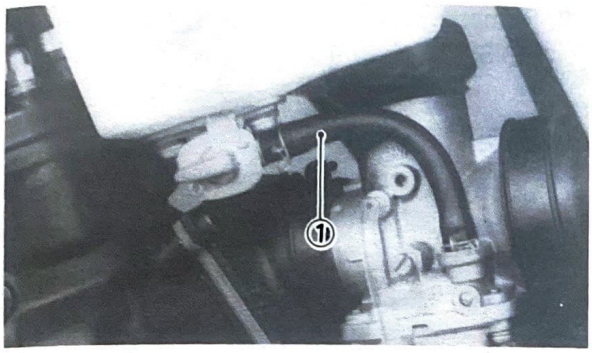


www.legends-yamaha-enduro

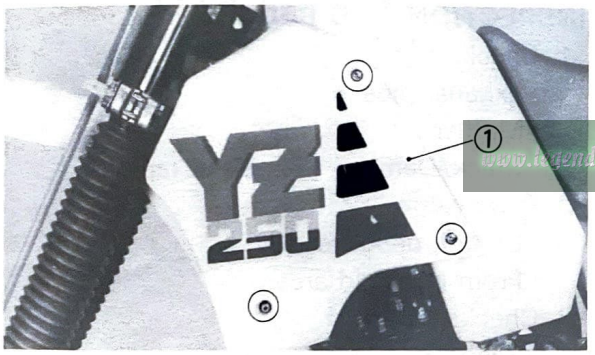


REMOVAL

1. Remove:
   - Bolts (Seat) ①
   - Seat

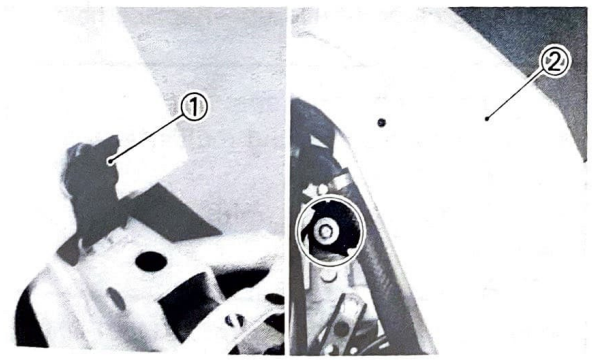


2. Turn the fuel cock to "OFF".
3. Disconnect:
   - Fuel hose ①

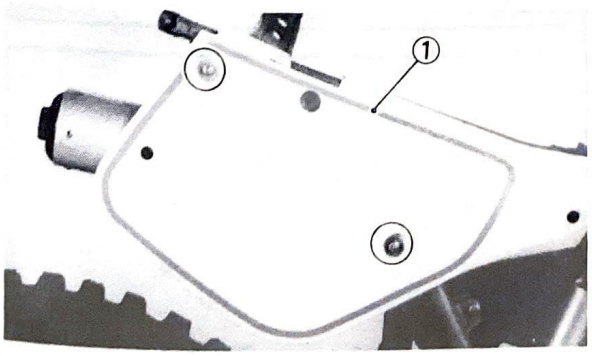


www.legends-yamaha-enduros.com

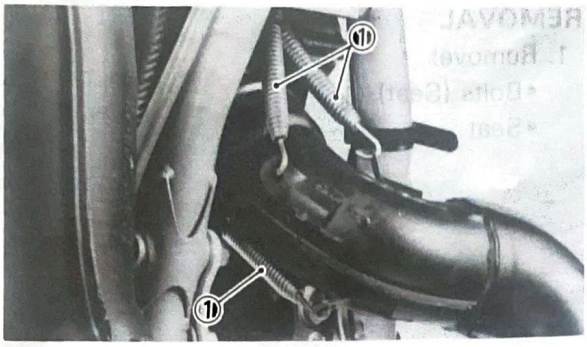
4. Remove:
   - Radiator cover (Left and right) ①



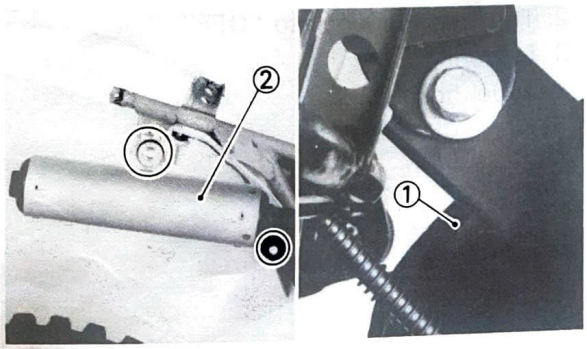
5. Remove:
   - Band ①
   - Fuel tank ②



6. Remove:
   - Side cover (Right) ①



7. Remove:
   - Spring (Exhaust pipe) ①



8. Remove:
   - Exhaust pipe ①
   - Muffler ②

INSPECTION AND REPAIR

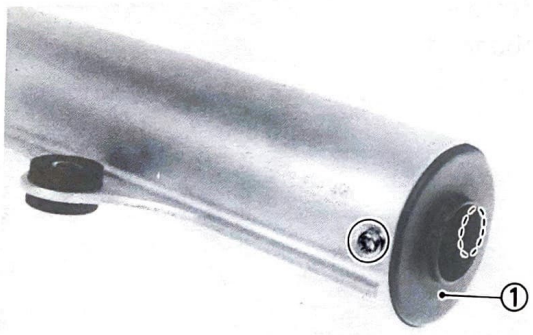
1. Check:
   - Exhaust pipe
   - Muffler

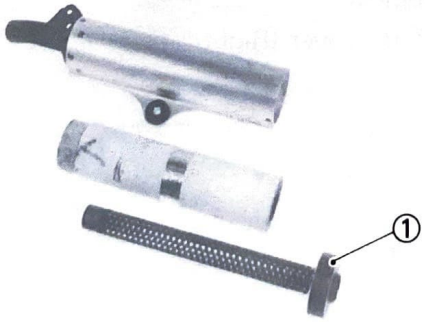
   Crack/Damage→Repair or replace.
2. Remove:
   - Carbon deposits

   From manifold area.
3. Check:
   - Silencer

   Large carbon build up→Replace fiber.

www.legends-yamaha-enduros.com

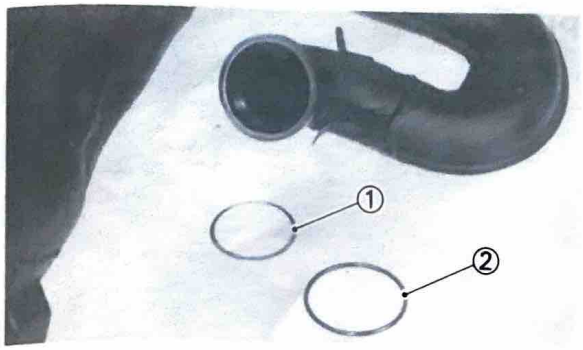




Fiber replacement steps:
- Remove the screws and muffler end ①.
- Remove the fiber.
- Install the new fiber, muffler end ① and screws.

NOTE:

Apply Yamabond No.4® (ACC-11001-30-00) onto the muffler end.



4. Inspect:
   - Exhaust pipe gasket ①
   - O-ring ②

   Damage→Replace.

INSTALLATION

Reverse removal steps. Pay close attention to installation of following points.

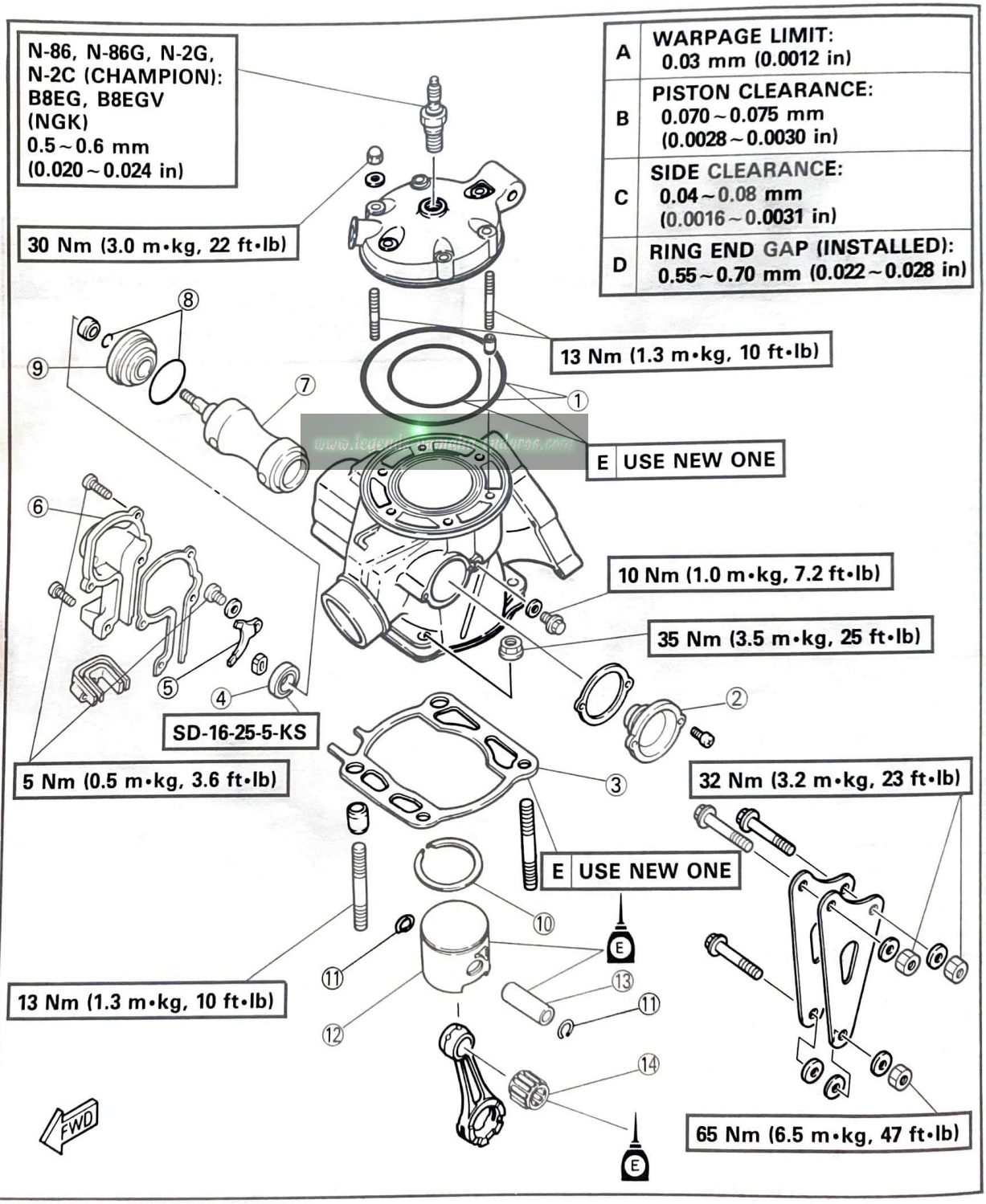
1. Tighten:
   - Bolt (Exhaust pipe)
   - Bolt (Muffler)

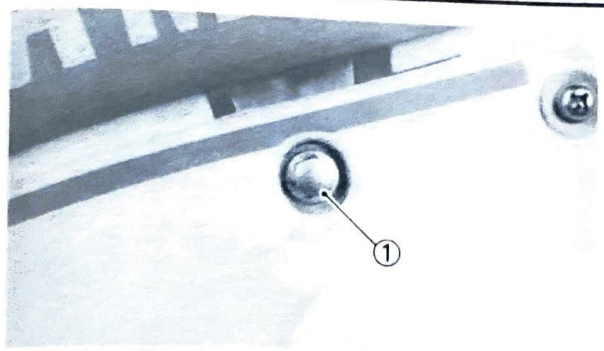
Bolt (Exhaust pipe):
10 Nm (1.0 m•kg, 7.2 ft•lb)
Bolt (Muffler):
10 Nm (1.0 m•kg, 7.2 ft•lb)

www.legends-yamaha-enduros.com

CYLINDER HEAD, CYLINDER AND PISTON

① O-rings (Cylinder head)
② Power valve holder (Left)
③ Cylinder gasket
④ Oil seal
⑤ Thrust plate
⑥ Housing (Power valve)
⑦ Power valve
⑧ O-rings (Power valve)
⑨ Power valve holder (Right)
⑩ Piston ring
⑪ Piston pin clip
⑫ Piston
⑬ Piston pin
⑭ Bearing



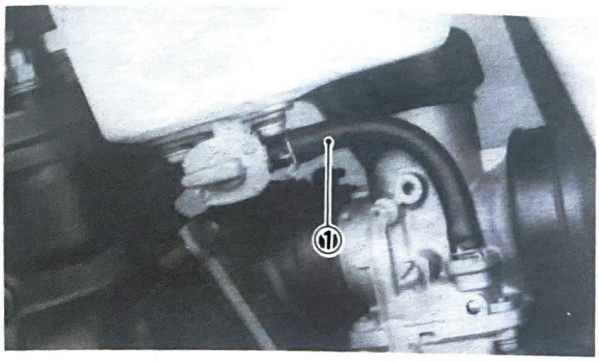


REMOVAL

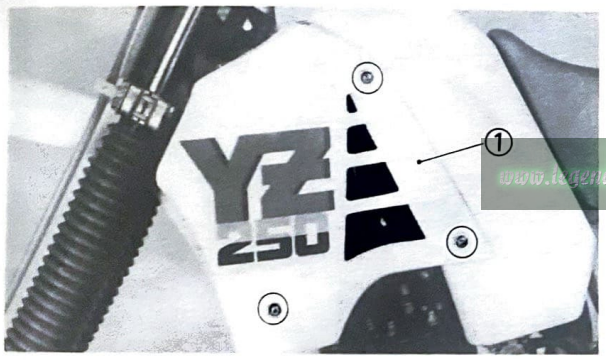
Seat, Fuel Tank and Exhaust pipe

1. Drain:
   - Coolant

   Refer to "CHAPTER 2 - COOLANT REPLACEMENT" section (Page 2-7).
2. Remove:
   - Bolts (Seat) ①
   - Seat

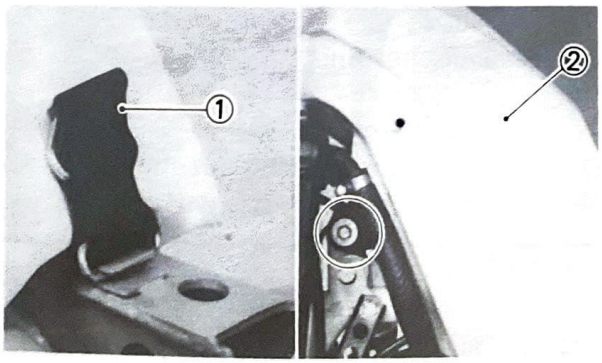


3. Turn the fuel cock to "OFF".
4. Disconnect:
   - Fuel hose ①

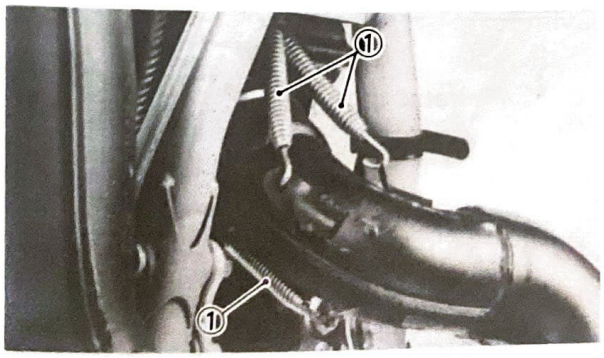


5. Remove:
   - Radiator cover (Left and right) ①

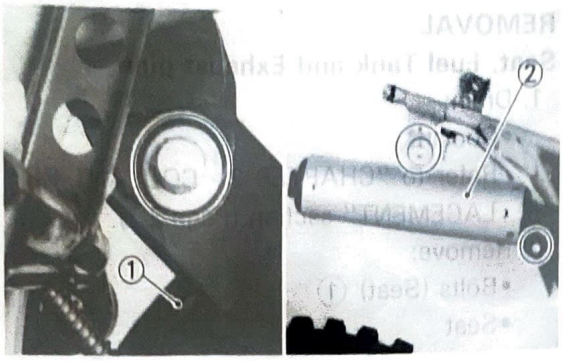
www.legends-yamaha-enduros.com



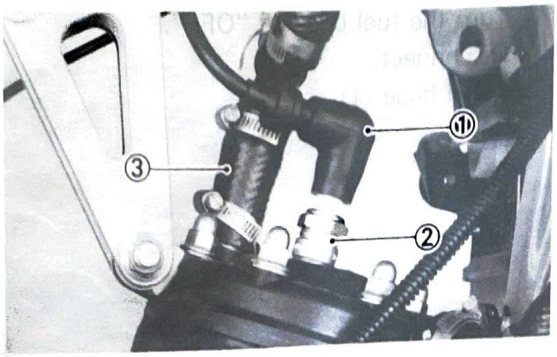
6. Remove:
   - Band ①
   - Fuel tank ②



7. Remove:
   - Spring (Exhaust pipe) ①

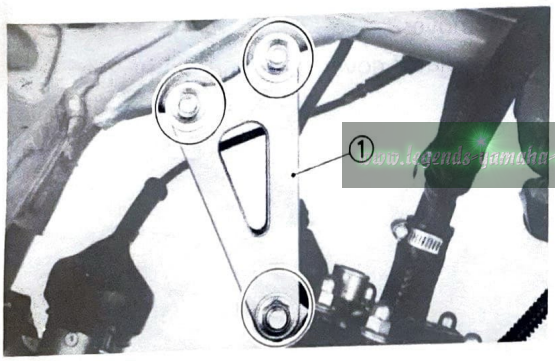


8. Remove:
   - Exhaust pipe ①
   - Muffler ②



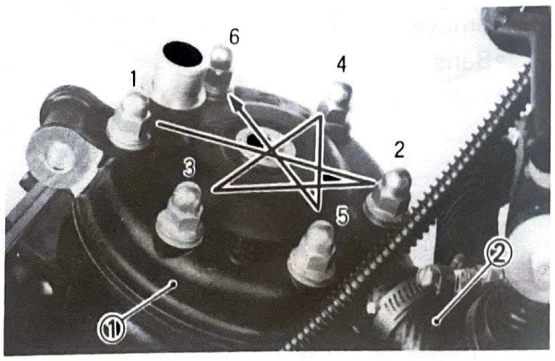
Cylinder Head

1. Remove:
   - Spark plug cap ①
   - Spark plug ②
   - Radiator hose ③



2. Remove:
   - Engine stay (Upper) ①

www.legends-yamaha-enduros.com

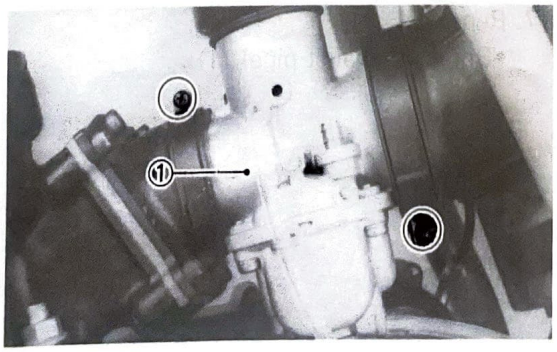


3. Loosen:
   - Cylinder head nuts

CAUTION:

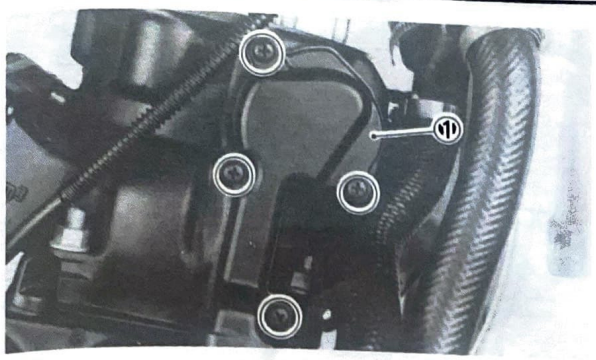
The cylinder head holding nut should be loosened 1/4 turn each time, and remove.

4. Remove:
   - Cylinder head

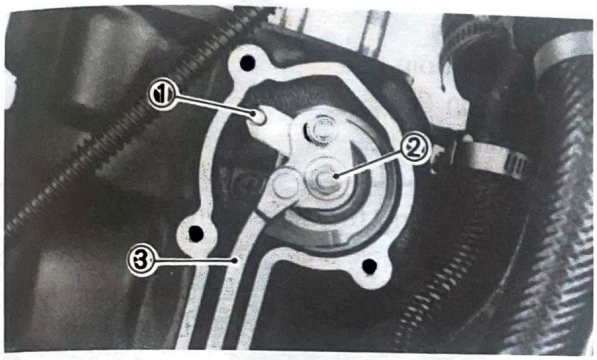


Cylinder

1. Remove:
   - Carburetor ①



2. Remove:
   • Housing (Power valve) ①

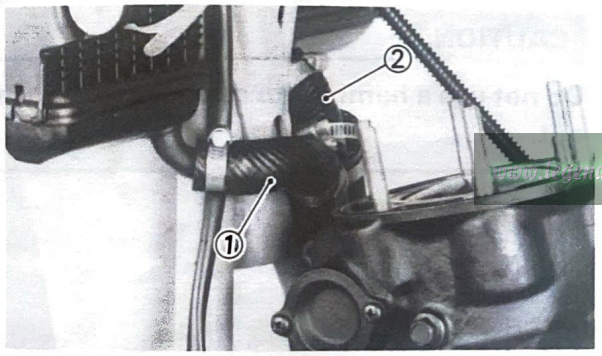


3. Install:
   • Locating pin ①
     To lock the lever to the cylinder

NOTE:

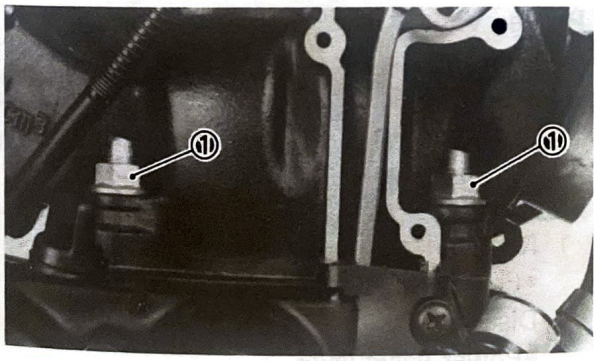
Locating Pin ① is included in Owner's Tool kit.

4. Remove:
   • Nut ②
   • Power valve lever ③

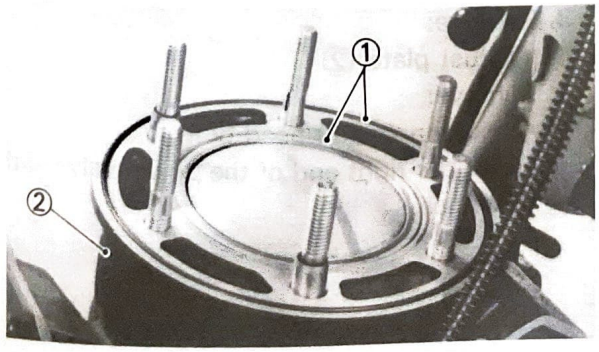


5. Disconnect:
   • Radiator hose (Right) ①
   • Radiator hose (Left) ②

www.legends-yamaha-enduros.com



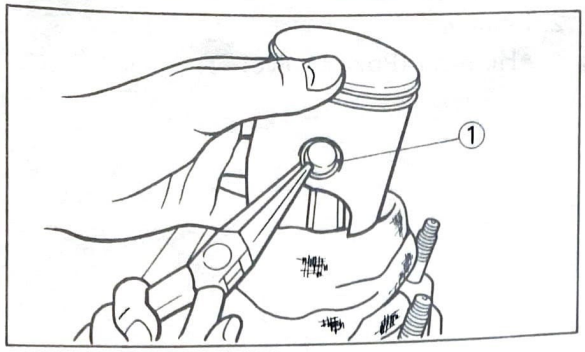
6. Remove:
   • Nut (Cylinder) ①



7. Remove:
   • O-ring (Cylinder head) ①
   • Cylinder ②

CAUTION:

Take care so that the coolant remaining in the cylinder does not enter the crankcase. If such coolant is left in the crankcase for some time, it may develop rust on bearings, etc. Clean the inside of the crankcase and apply oil to it.

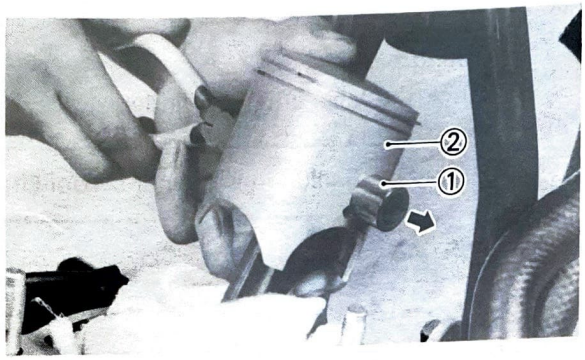


Piston

1. Remove:
   - Piston pin clip ①

NOTE:

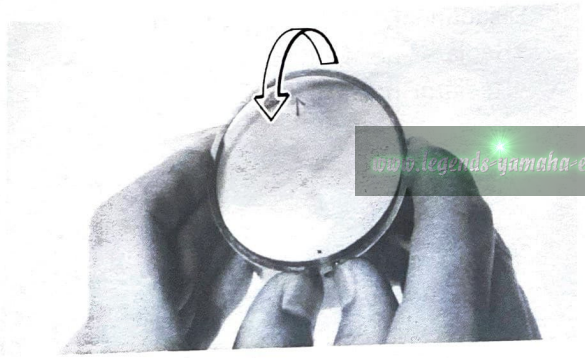
Before removing piston pin circlip, cover crankcase with a clean rag to prevent circlip from falling into crankcase cavity.



2. Remove:
   - Piston pin ①
   - Piston ②
   - Bearing

NOTE:

Before removing the piston pin, deburr the clip groove and pin hole area. If the piston pin groove is deburred and piston pin is still difficult to remove, use Piston Pin Puller (YU-01304).

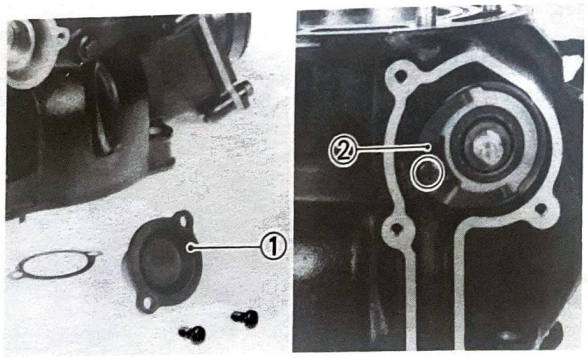


CAUTION:

Do not use a hammer to drive the piston pin out.

www.legends-yamaha-enduro.com

3. Remove:
   - Piston rings



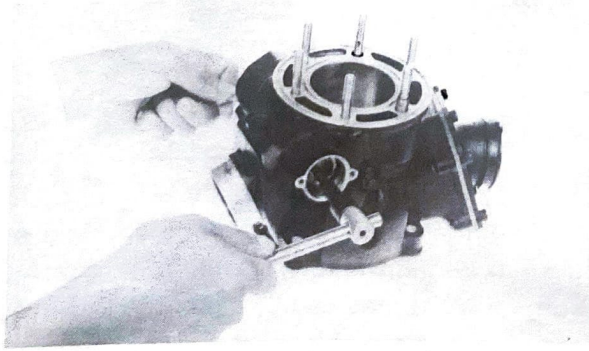
Power Valve

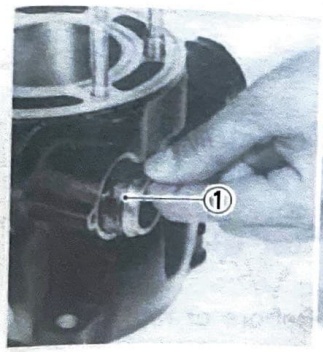
NOTE:

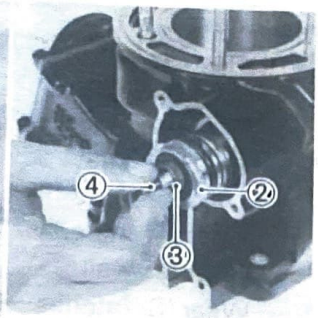
The power valve removal is not required to drain the coolant and remove the cylinder.

1. Remove:
   - Power valve holder (Left) ①
2. Disconnect:
   - Power valve lever
3. Remove:
   - Thrust plate ②
4. Remove:
   - Hexagon socket head bolt

   Hold the right end of the power valve with spanner.

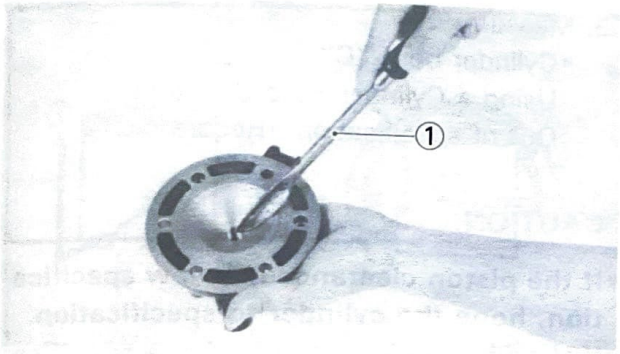






5. Remove:
   - Half power valve (Left) ①
   - Holder (Right) ②
   - Collar ③
   - Half power valve (Right) ④

   Pry out the half valve with pliers.



INSPECTION AND REPAIR

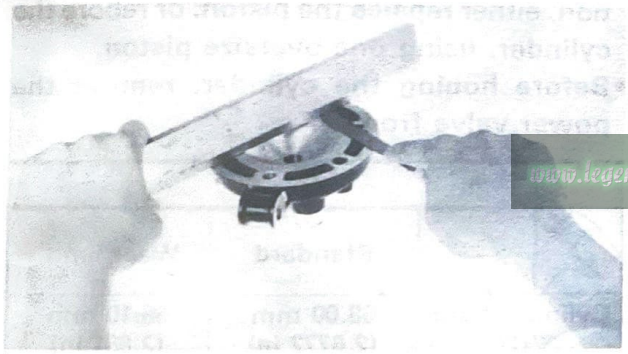
Cylinder Head

1. Remove:
   - Carbon deposits

   Use a rounded scraper ①.

NOTE:

Take care to avoid damaging the spark plug threads. Do not use a sharp instrument. Avoid scratching the aluminum.

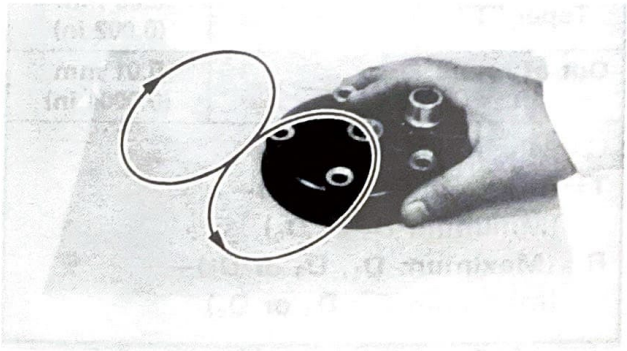


2. Inspect:
   - Cylinder head water jacket

     Crust of minerals/Rust→Remove.
   - Cylinder head warpage

     Out of specification→Re-surface.

www.legends-yamaha.com



Warpage measurement and re-surfacement steps:

- Attach a straightedge and a thickness gauge on the cylinder head.
- Measure the warpage.

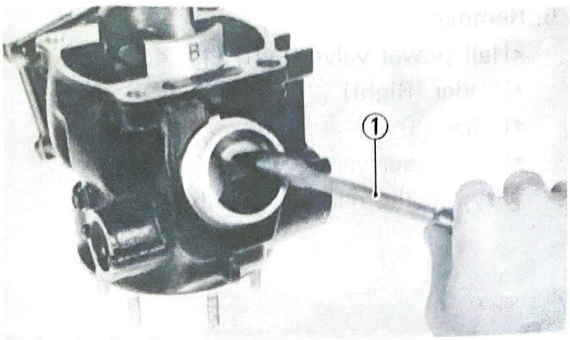
Warpage Limit:
0.03 mm (0.0012 in)

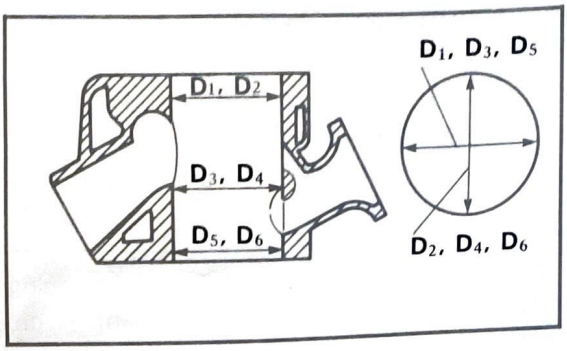
- If the warpage is out of specification, re-surface the cylinder head.
- Place a 400 ~ 600 grit wet sandpaper on the surface plate, and re-surface the head using a figure-eight sanding pattern.

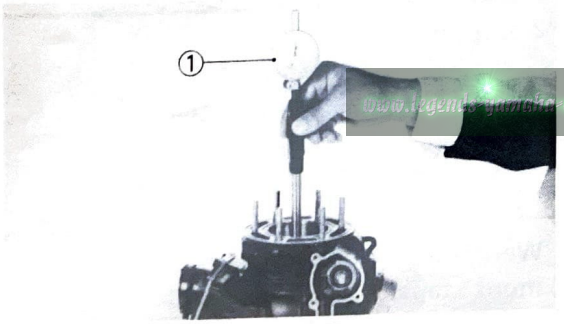
NOTE:

Rotate the head several times to avoid removing too much material from one side.

CYLINDER HEAD, CYLINDER AND PISTON







Cylinder

1. Remove:
   - Carbon deposits
     Use a rounded scraper ①.
2. Inspect:
   - Cylinder water jacket
     Crust of minerals/Rust → Remove.
   - Cylinder wall
     Wear/Scratches → Rebore or replace.
3. Measure:
   - Cylinder bore "C"
     Using a Cylinder Bore Gauge ①.
     Out of specification → Rebore.

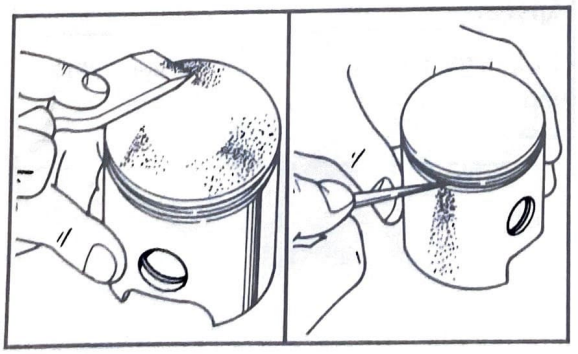
CAUTION:

- **If the piston clearance is below specification, hone the cylinder to specification.**
- **If the piston clearance is above specification, either repalce the piston, or rebore the cylinder, using one-oversize piston.**
- **Before honing the cylinder, remove the power valve from it.**

	Standard	Wear limit
Cylinder bore "C"	68.00 mm (2.6772 in)	68.10 mm (2.681 in)
Taper "T"	—	0.05 mm (0.002 in)
Out of round "R"	—	0.01 mm (0.0004 in)

C = Maximum D
T = (Maximum D_1 or D_2) − (Minimum D_5 or D_6)
R = (Maximum D_1, D_3 or D_5) − (Minimum D_2, D_4 or D_6)

① Dial gauge and Piston Ring



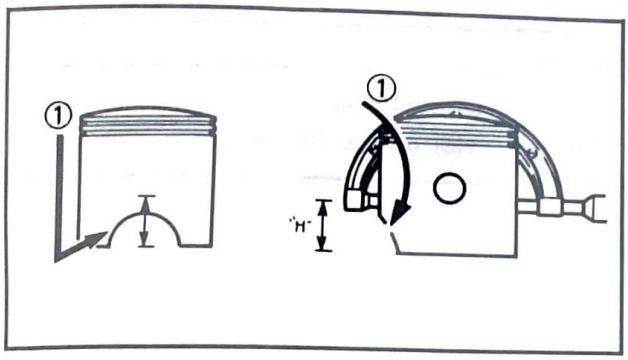
Piston

1. Remove:
   - Carbon deposits
     From the piston crown and ring groove.

2. Remove:
   • Score marks
   From the piston wall.
   Use a 600 ~ 800 grit wet sandpaper.

NOTE:

Sand in a crisscross pattern. Do not sand excessively.



3. Measure:
   • Piston outside diameter "P"
   Out of specification → Replace.
   Use a Micrometer.

NOTE:

Measurement should be made at a point 15 mm (0.59 in) ① above the bottom edge of the piston.

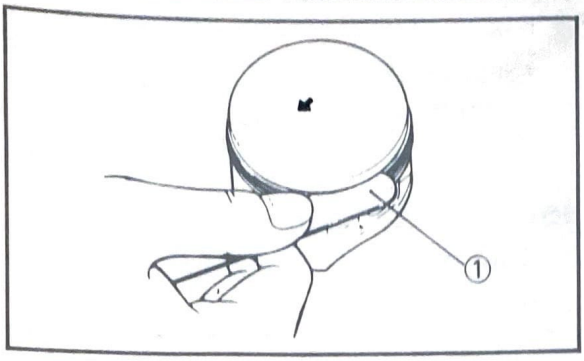
	Size
Standard	68.00 mm (2.677 in)
Oversize 1	68.25 mm (2.687 in)
Oversize 2	68.50 mm (2.697 in)
Oversize 3	68.75 mm (2.707 in)

www.legends-yamaha-enduro.com

4. Measure:
   • Piston clearance
   Out of specification → Rebore cylinder or replace piston.

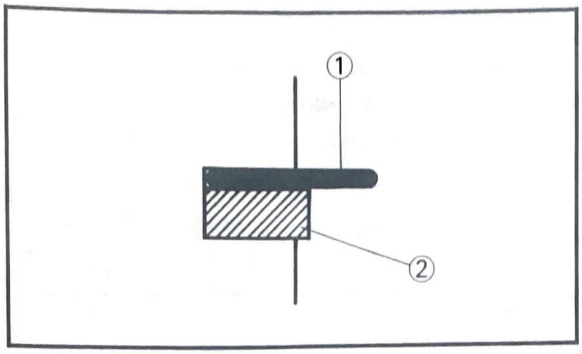
A = C − P
A: Piston clearance
C: Cylinder bore
P: Piston outside diameter

Piston Clearance
0.070 ~ 0.075 mm
(0.0028 ~ 0.0030 in)
< Limit > 0.1 mm (0.004 in)



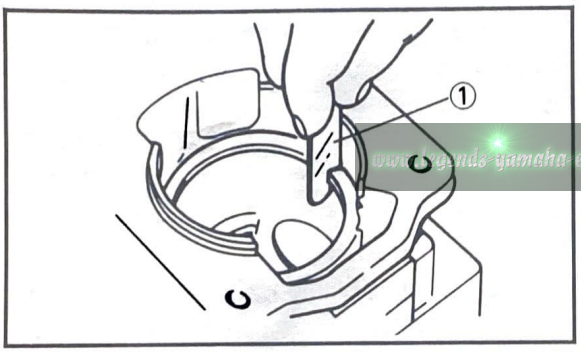
5. Measure:
   • Side clearance
   Out of specification → Replace piston and/or ring.
   Using a Feeler Gauge ①.

Side Clearance:
0.04 ~ 0.08 mm
(0.0016 ~ 0.0031 in)
Limit: 0.1 mm (0.004 in)



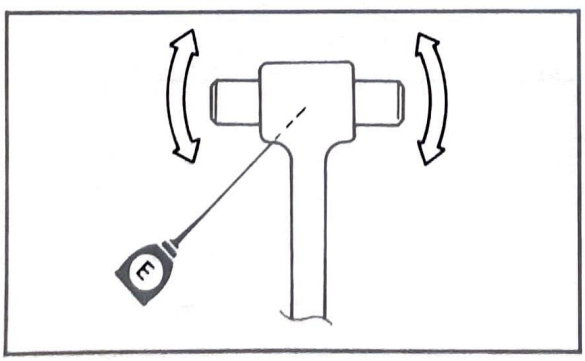
NOTE:
- Check at several points.
- Put the feeler gauge farthest in.

② Piston ring

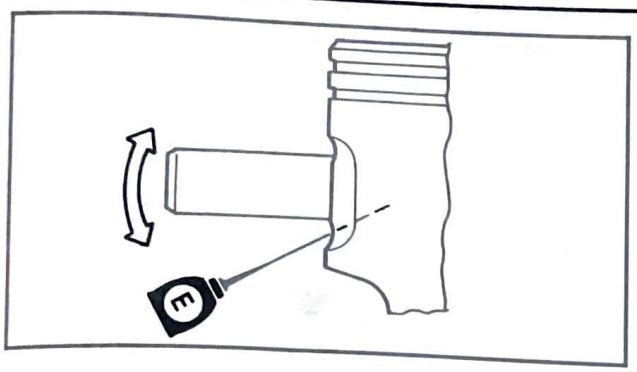


6. Install:
   • Piston ring
   Into the cylinder.
   Push the ring with the piston crown.
7. Measure:
   • End gap
   Out of specification → Replace rings as a set.
   Using a Feeler Gauge ①.

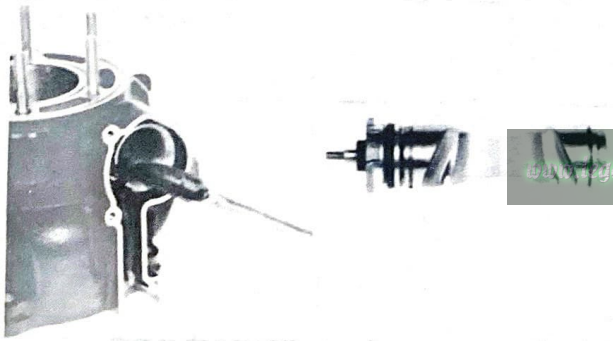
Ring End Gap (Installed):
0.55 ~ 0.70 mm (0.022 ~ 0.028 in)
Limit: 0.9 mm (0.035 in)



8. Inspect:
   • Piston pin and bearing
   Signs of heat discoloration → Replace.
9. Lubricate:
   • Piston pin (lightly)
   • Bearing
10. Install:
    • Piston pin
    • Bearing
    Into the small end of connecting rod.

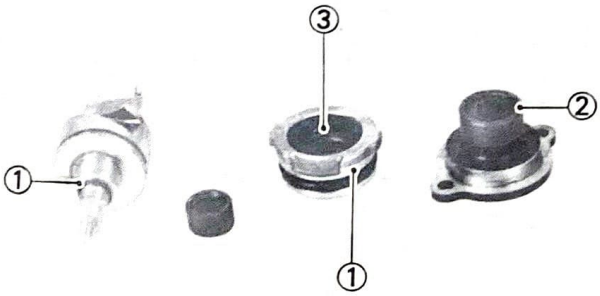


11. Check:
    - Free play
      There should be no noticeable for the play.
      Free play exists→Inspect the connecting rod for wear/Replace the pin and/or connecting rod as required.
12. Install:
    - Piston pin
      Into the piston pin hole.
13. Check:
    - Free play (when the piston pin is in place in the piston)
      There should be no noticeable for the play.
      Free play exists→Replace piston pin and/piston.

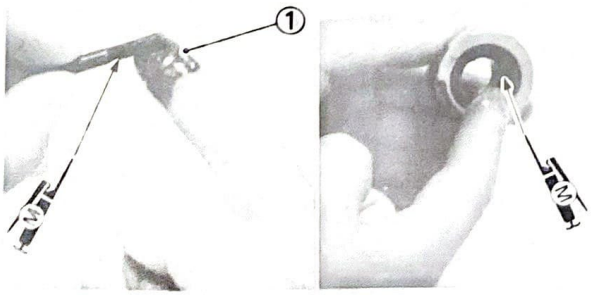


Power Valve

1. Remove:
   - Carbon deposits
     From exhaust port surface.
2. Remove:
   - Score marks and lacquer deposits
     From curved surface.



3. Inspect:
   - O-ring ①
   - Bush ②
   - Oil seal ③
     Wear/Damage→Replace.

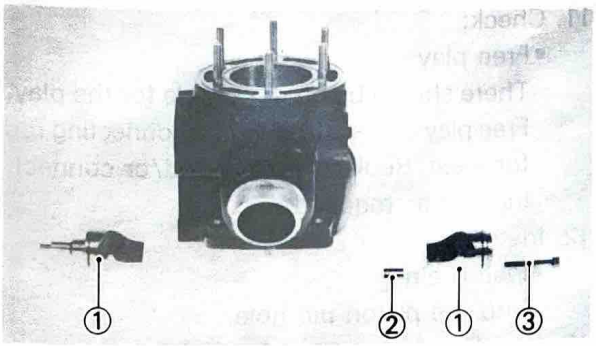


INSTALLATION

Reverse removal steps. Pay close attention to following points.

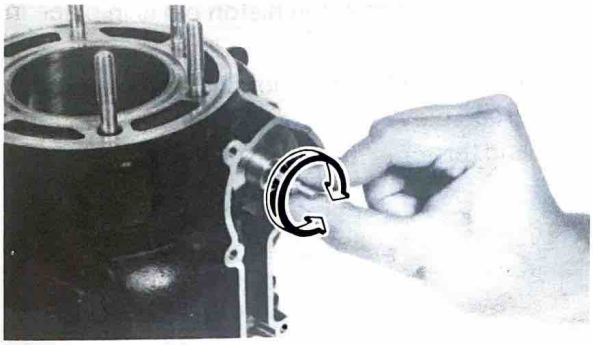
Power Valve

1. Apply:
   - Molybdenum disulfide grease
     To the O-rings on the valve holders (Left and right), oil seal and hexagon socket head bolt ①.



2. Install:
   - Power valve (Left and right) ①
   - Dowel pins ②
   - Bolt (Power valve) ③

Bolt (Power Valve) ③:
7 Nm (0.7 m•kg, 4.9 ft•lb)

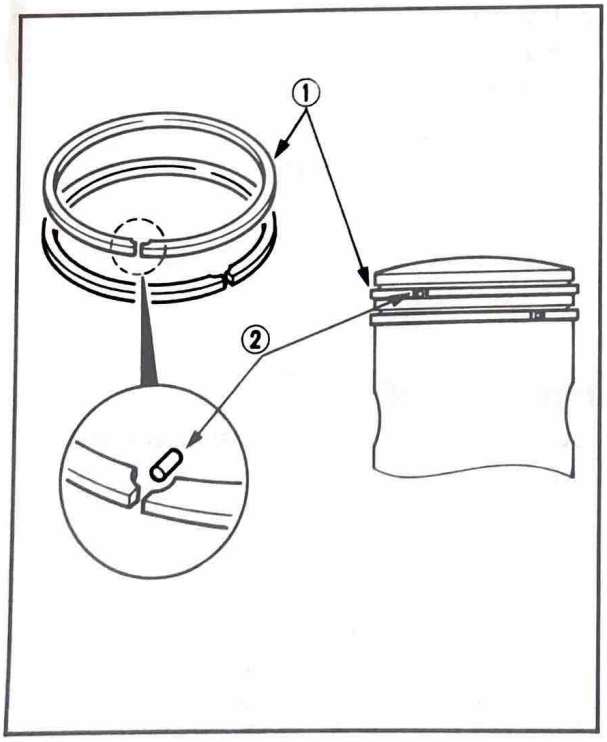


3. Tighten:
   - Screw (Power valve holder-left)
   - Screw (Turust plate)

Screw (Power Valve Holder-Left):
5 Nm (0.5 m•kg, 3.6 ft•lb)
Screw (Thrust Plate):
5 Nm (0.5 m•kg, 3.6 ft•lb)

NOTE:
After installing the power valve, check it moves smoothly.

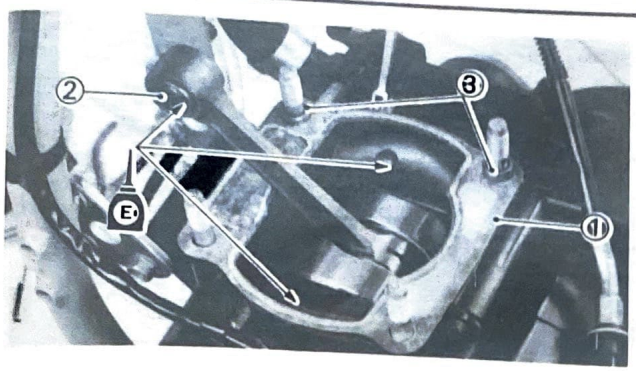
www.legends-yamaha-enduros.com



Piston

1. Install:
   - Piston rings ①

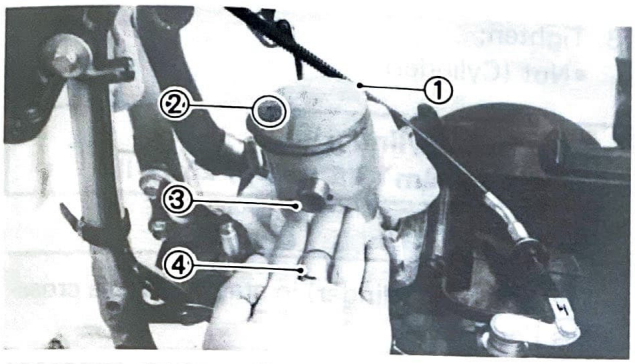
NOTE:
Align the piston ring gap with the pin ②.



2. Install:
   - Cylinder gasket (New) ①
   - Bearing ②
   - Dowel pin ③

NOTE:

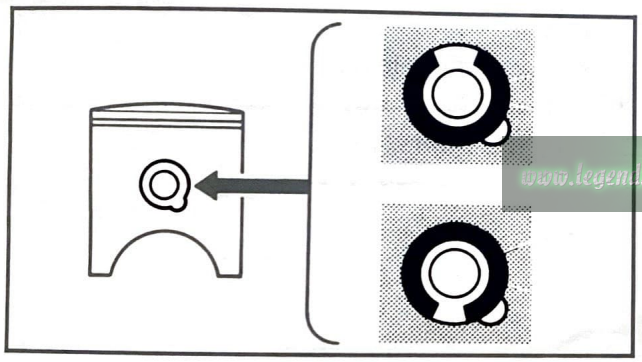
- Apply the engine mixing oil onto the bearing (Crankshaft and connecting rod).
- Use a new gasket.



3. Install:
   - Piston ①
   - Piston pin ③
   - Piston pim clip ④

NOTE:

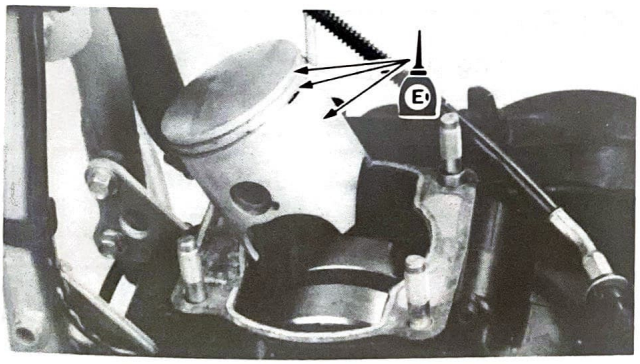
- The arrow ② on piston dome must face forward.
- Apply the engine mixing oil onto the piston pin ③.



CAUTION:

Do not allow the clip open ends to meet the piston pin slot.

www.legends-yamaha.enduro.com

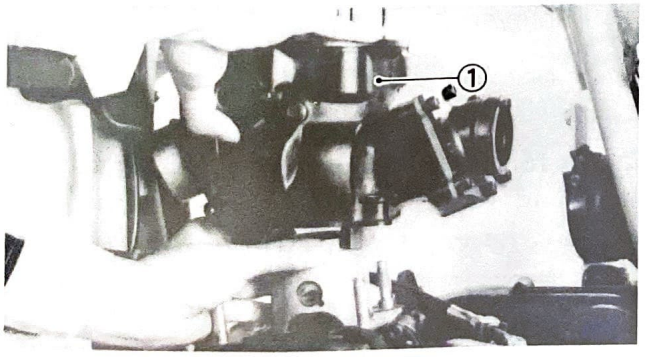


Cylinder

1. Lubricate:
   - Cylinder wall
   - Piston ring
   - Piston

NOTE:

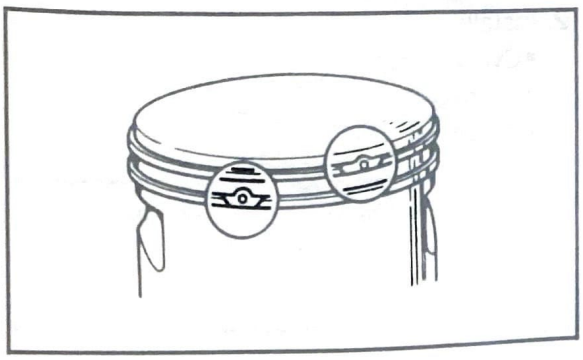
Apply the engine mixing oil onto the piston rings and piston.



2. Install:
   - Cylinder ①

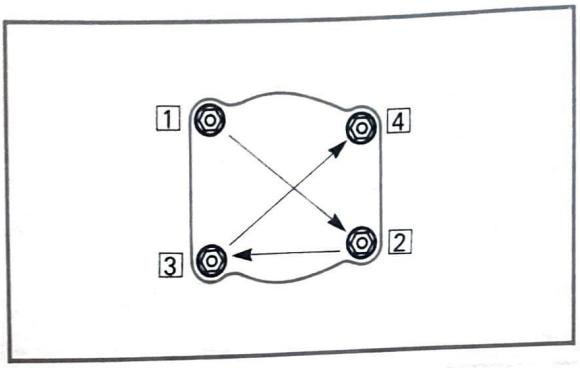
NOTE:

Install the cylinder with one hand while compressing the piston ring with the other hand.



CAUTION:

Make sure rings are properly positioned.

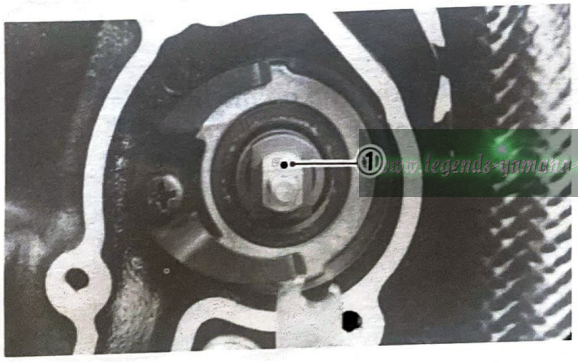


3. Tighten:
   - Nut (Cylinder)

Nut (Cylinder):
35 Nm (3.5 m•kg, 25 ft•lb)

NOTE:

Tighten the nut (cylinder) in stage, using a cross-recess pattern.

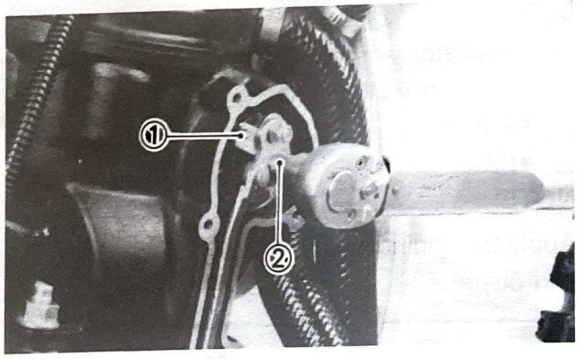


4. Install:
   - Power valve lever

NOTE:

Be sure the punch mark ① is upward.

www.legends-gamme-enduro.com

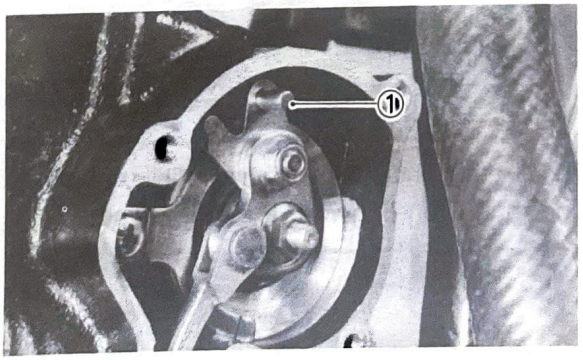


5. Install:
   - Locating pin ①
   - Nut ②

Nut (Power Valve Lever):
5 Nm (0.5 m•kg, 3.5 ft•lb)

NOTE:

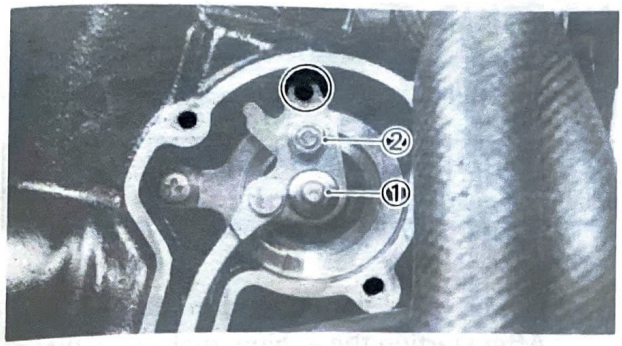
Locating pin ① is included in the owner's tool kit.



6. Remove:
   - Locating pin ①

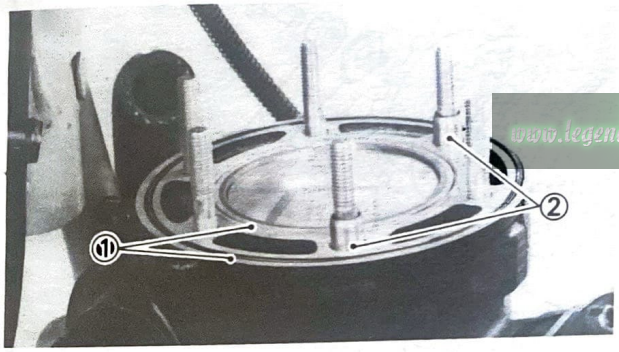
CAUTION:

Don't forget to remove the locating pin. Or it will adversely affect valve operation, and the engine will lack power at high speeds.



7. Check:
   - Valve alignement
     The holes in the valve lever and in the cylinder should be aligned.
     Not aligned→Adjust.

Valve alignment steps:
- Install the locating pin.
- Loosen the nuts ①, ②.
- Tighten the nuts ②, ①.
- Remove the locating pin.

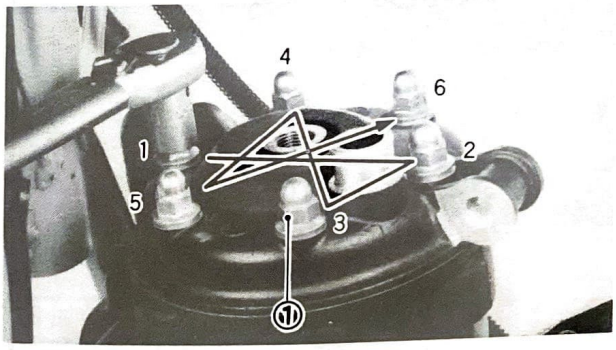


Cylinder Head

1. Install:
   - O-rings (New) ①
   - Dowel pin ②

www.legends-yamaha-enduro.com

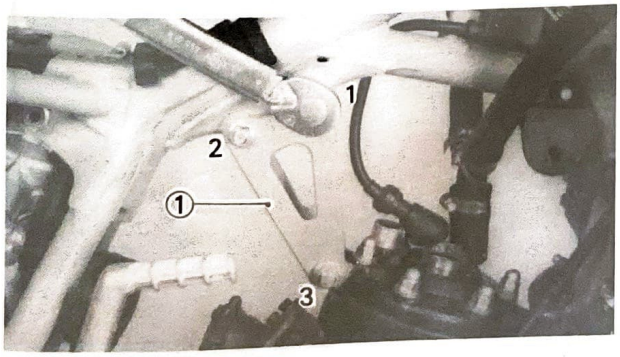
NOTE:
Use new O-ring ①.



2. Tighten:
   - Nut (Cylinder head) ①

Nut (Cylinder Head) ①:
30 Nm (3.0 m•kg, 21 ft•lb)

NOTE:
Tighten the nut (Cylinder head) ① in stage, using a crisscross pattern.



3. Install:
   - Stay ①

Bolt (Stay—Frame):
30 Nm (3.0 m•kg, 21 ft•lb)
Bolt (Stay—Cylinder):
63 Nm (6.3 m•kg, 45 ft•lb)

NOTE:
Tighten in numerical order as shown.

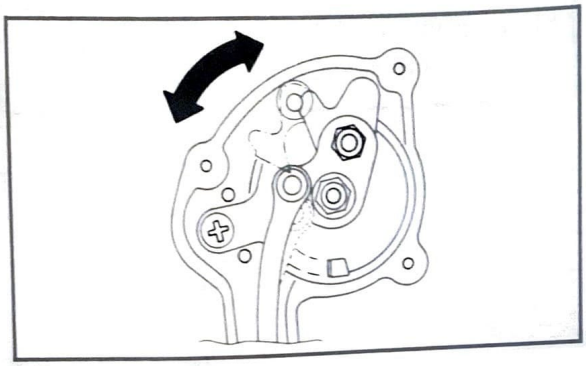
Exhaust Pipe, Fuel Tank and Seat

1. Tighten:
   - Bolt (Exhaust pipe)

Bolt (Exhaust Pipe):
10 Nm (1.0 m•kg, 7.2 ft•lb)

2. Check:
   - Power valve smooth action

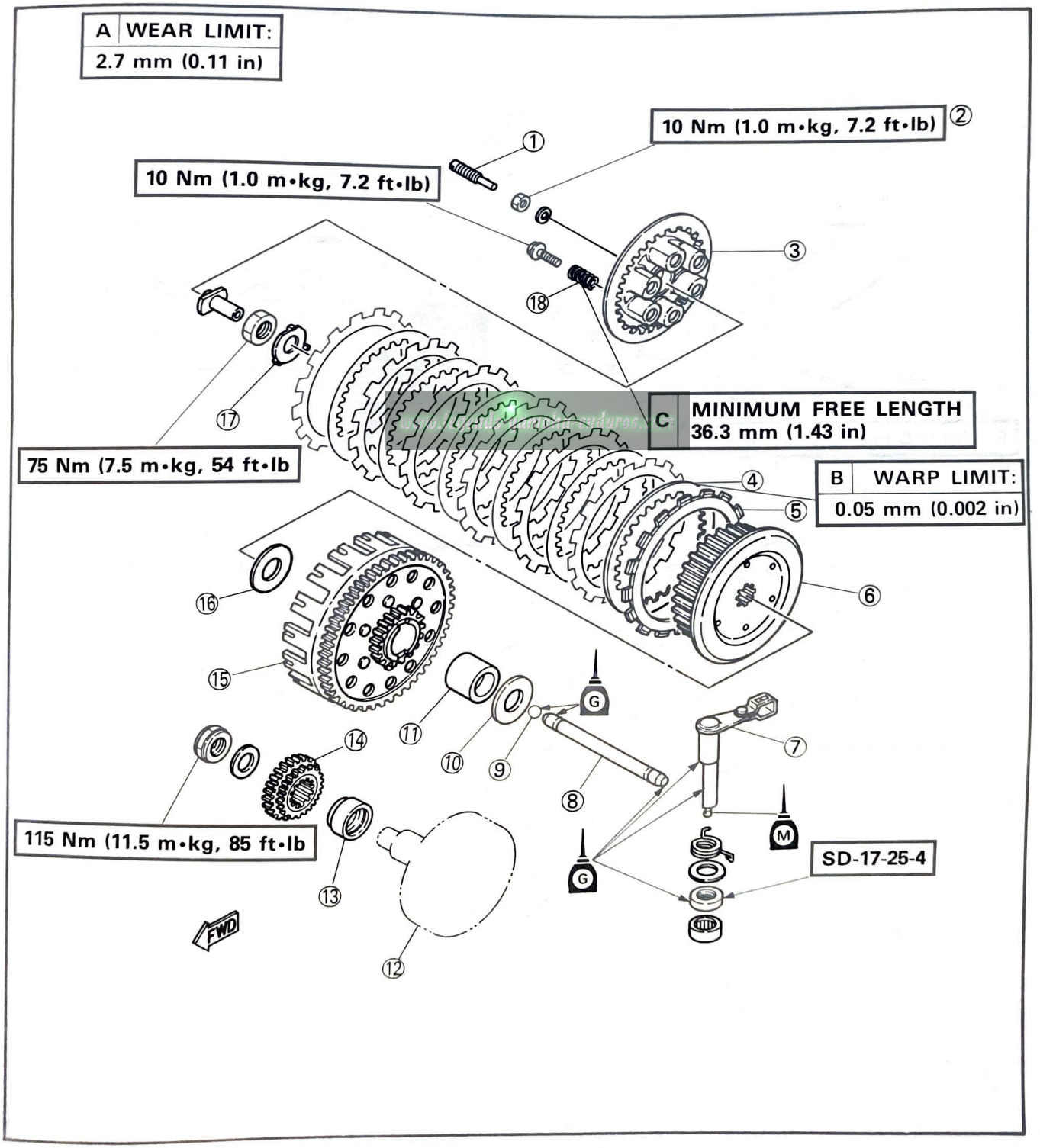
   After starting the engine, make sure that as illustrated, the arm operates smoothly while racing the engine.
   Unsmooth action→Repair.



www.legends-yamaha-enduros.com

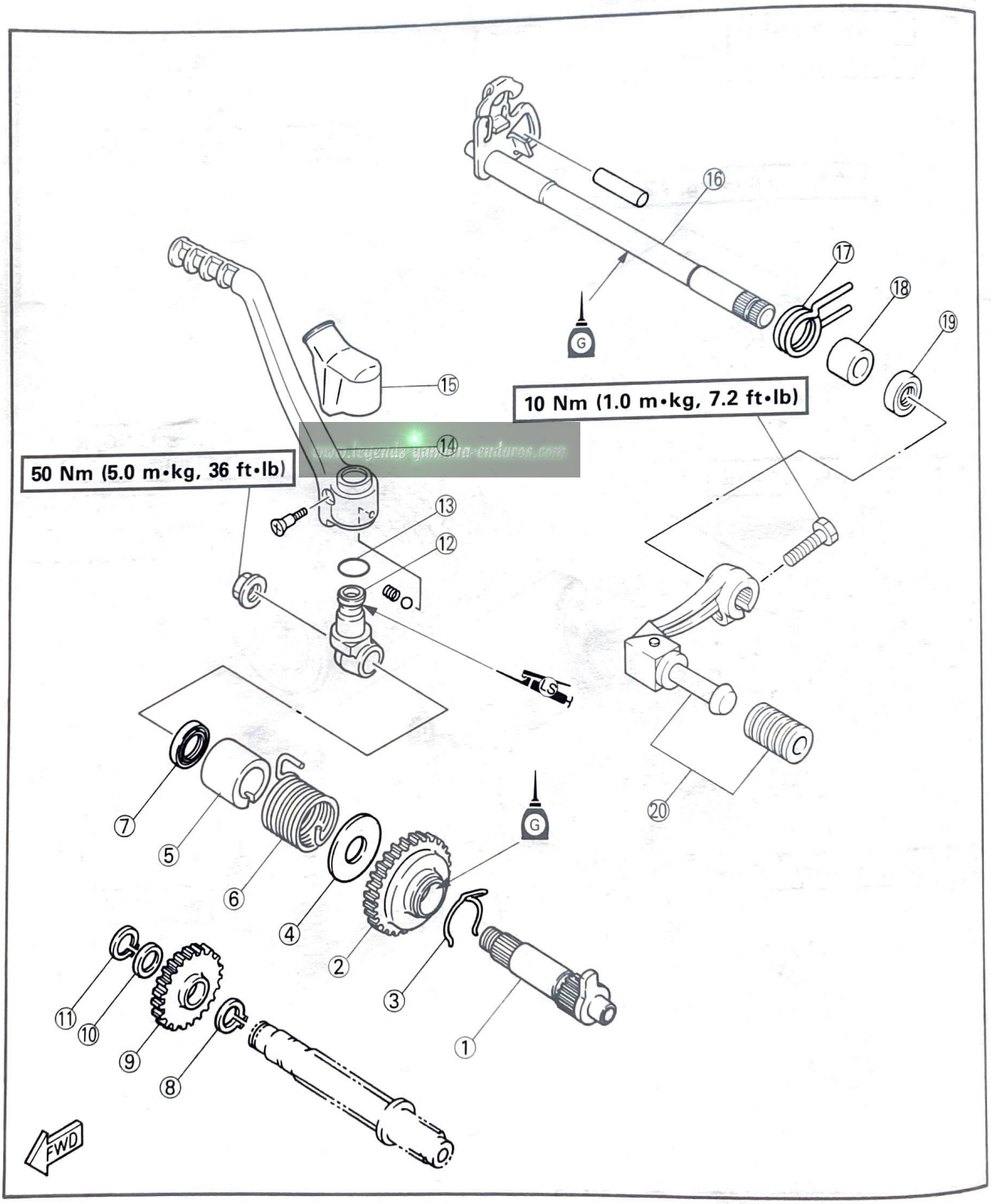
CLUTCH, KICK AXLE, SHIFT SHAFT AND PRIMARY DRIVE GEAR

① Adjuster
② Locknut
③ Pressure plate
④ Clutch plate
⑤ Friction plate
⑥ Clutch boss
⑦ Push lever assembly
⑧ Push rod
⑨ Ball
⑩ Thrust washer
⑪ Spacer
⑫ Crankshaft
⑬ Collar
⑭ Primary drive gear
⑮ Clutch housing
⑯ Thrust washer
⑰ Lock washer
⑱ Clutch spring



CLUTCH, KICK AXLE, SHIFT SHAFT AND PRIMARY DRIVE GEAR

① Kick axle
② Kick gear
③ Clip
④ Plain washer
⑤ Spacer
⑥ Return spring
⑦ Oil seal
⑧ Circlip
⑨ Kick idle gear
⑩ Plain washer
⑪ Circlip
⑫ Kick crank boss
⑬ O-ring
⑭ Kick crank
⑮ Cover
⑯ Shift shaft
⑰ Spring
⑱ Spacer
⑲ Oil seal
⑳ Change pedal

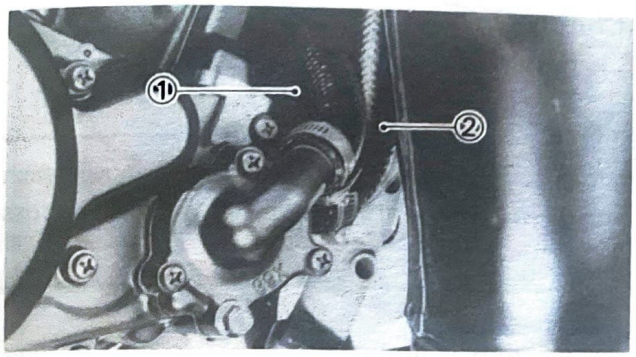


www.legends-yamaha-enduros.com

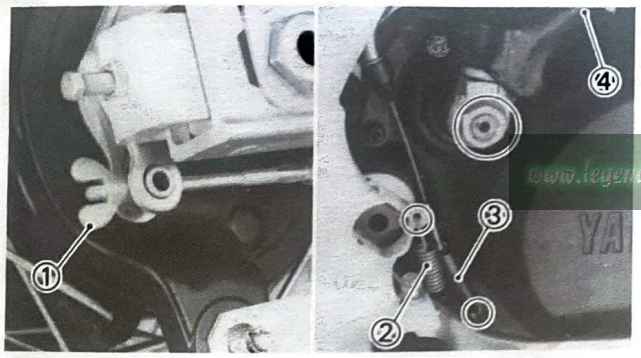
REMOVAL

Crankcase Cover (Left)

1. Drain:
   - Coolant
     Refer to "CHAPTER 2—COOLANT REPLACEMENT" section (Page 2-7).
   - Transmission oil
     Refer to "CHAPTER 2—TRANSMISSION OIL REPLACEMENT" section (Page 2-9).

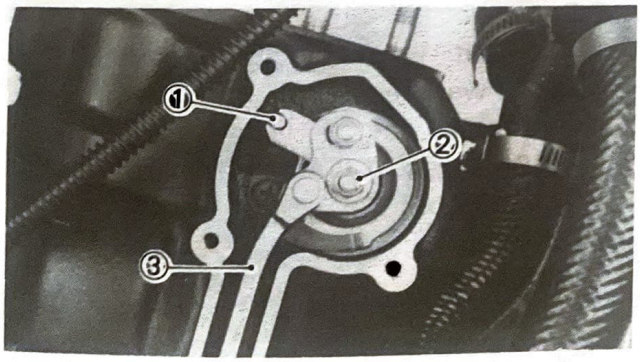


2. Disconnect:
   - Radiator hose ①
   - Radiator hose ②



3. Remove:
   - Rear brake adjuster ①
   - Return spring ②
   - B.A.S.S. control cable ③
   - Kick crank ④

www.legends-yamaha-classics.com

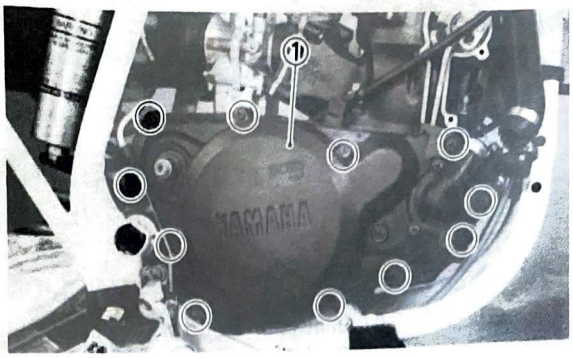


4. Remove:
   - Housing (Power valve)
5. Install:
   - Locating pin ①
   - To lock the power valve.

NOTE:

Locating pin is included in the owner's tool kit.

6. Remove:
   - Nut (Power valve lever) ②
   - Power valve lever ③



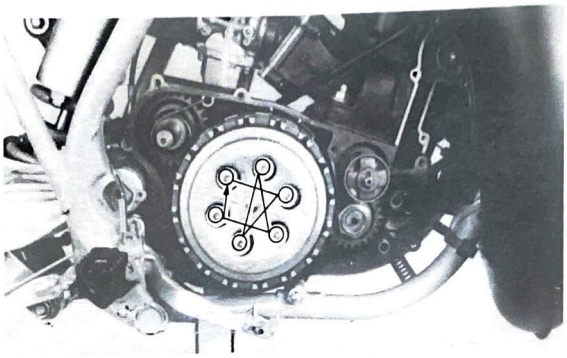
7. Remove:
   - Crankcase cover (Right) ①
   - Gasket
   - Dowel pins

Clutch

1. Remove:
   - Bolts (Clutch spring)

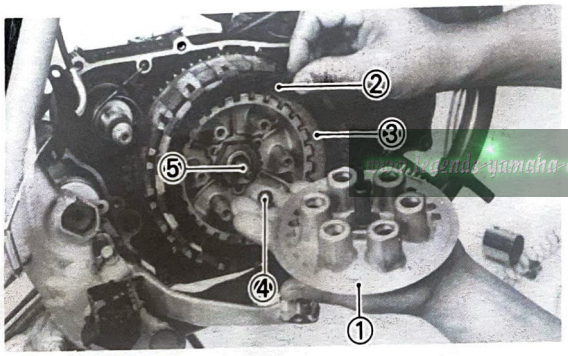
NOTE:

When removing phillips spring screw, loosen each screw in several stages working in a crisscross pattern.

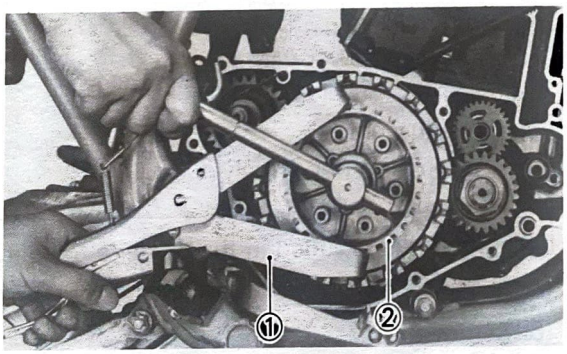


   - Clutch springs

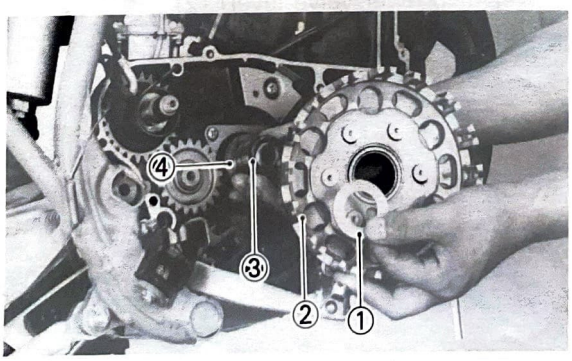
2. Remove:
   - Pressure plate ①
   - Friction plates ②
   - Clutch plates ③
   - Ball ④
   - Push rod ⑤



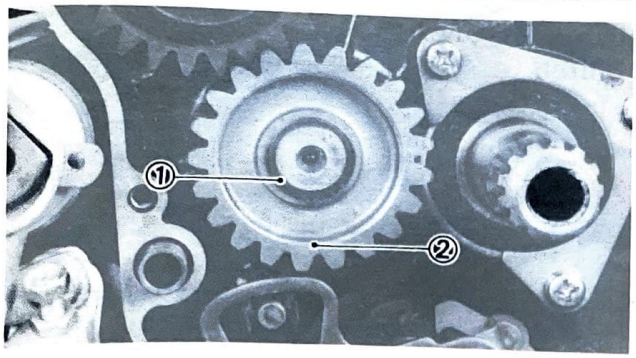
3. Straighten:
   - Lock washer tab



4. Remove:
   - Locknut
   - Lock washer
     Using the Clutch Holding Tool ① (YM-91042) to hold the clutch boss.
   - Clutch boss ②

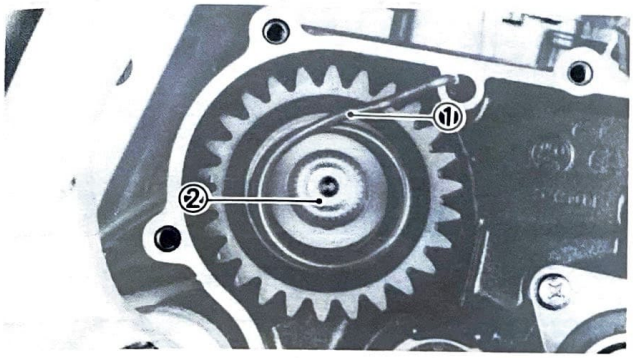


5. Remove:
   - Thrust washer ①
   - Clutch housing ②
   - Spacer ③
   - Thrust washer ④

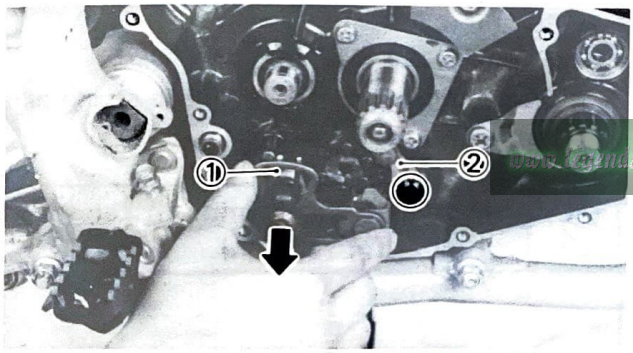


Kick Axle

1. Remove:
   - Circlip ①
   - Plain washer
   - Kick idle gear ②
   - Circlip



2. Remove:
   - Kick return spring ①
   - Kick axle ②

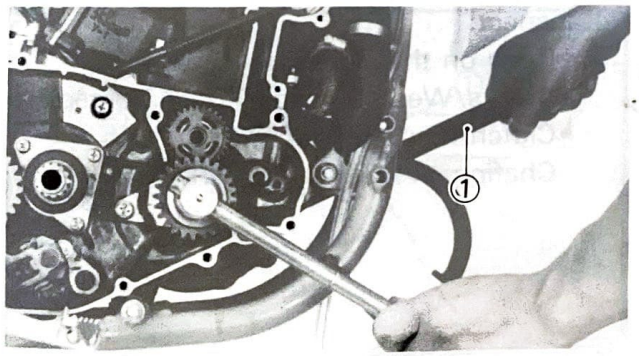


Shift Shaft

NOTE:

Shift shaft maintenance should be performed with clutch assembly removed.

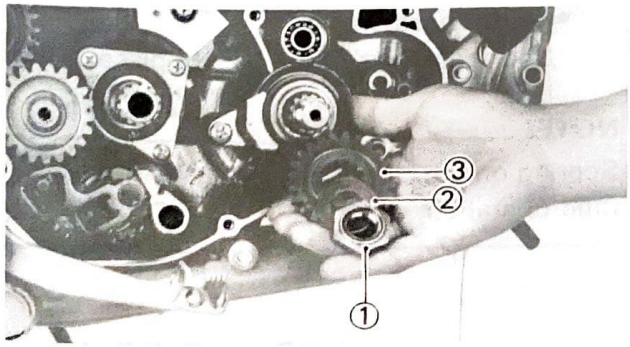
1. Remove:
   - Shift pedal
   - Shift shaft ①
   - Stopper lever ②



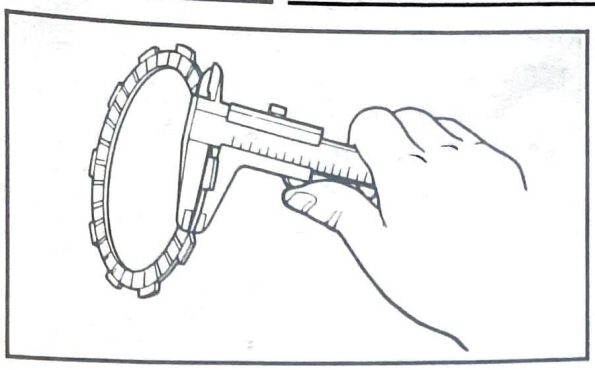
Primary Drive Gear

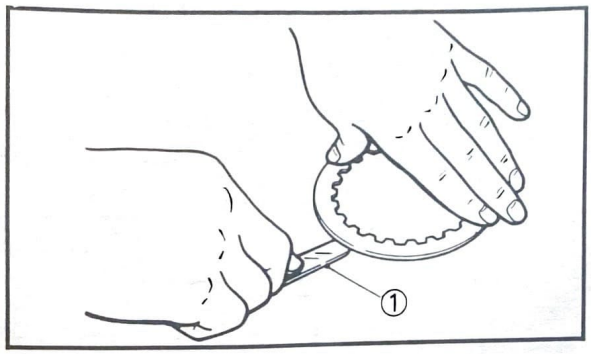
1. Loosen:
   - Nut (Primary drive gear)

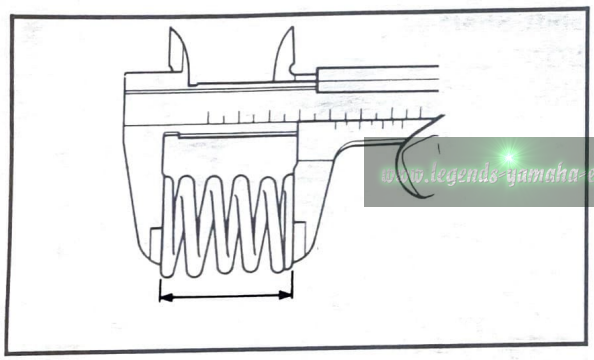
   Using the Universal Rotor Holder (YU-01235) ① to lock the crankshaft.

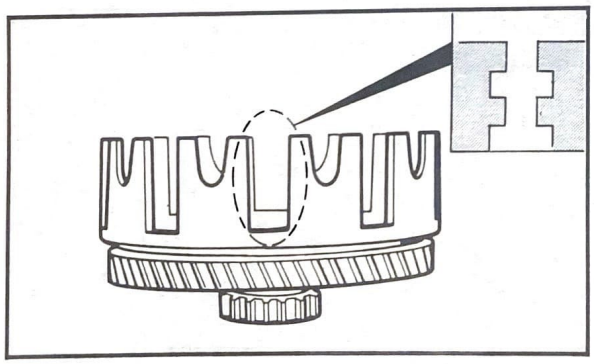


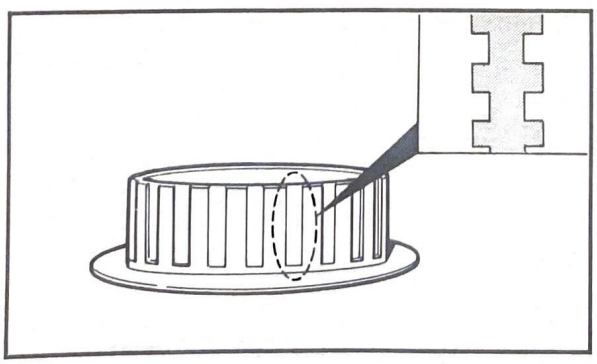
2. Remove:
   - Nut (Primary drive gear) ①
   - Washer ②
   - Primary drive gear ③











INSPECTION AND REPAIR

Clutch

1. Measure:
   - Friction plate thickness
   Out of specification → Replace friction plate as a set.
   Measure at all four point.

Wear Limit: 2.7 mm (0.11 in)

2. Measure:
   - Clutch plate warpage
   Out of specification → Replace clutch plate as a set.
   Use a surface plate and feeler gauge ①.

Warp Limit: 0.05 mm (0.002 in)

3. Measure:
   - Clutch spring free length
   Out of specification → Replace spring as a set.

Clutch Spring Minimum Length: 36.3 mm (1.43 in)

4. Inspect:
   - Dogs on the clutch housing
   Cracks/Wear/Damage → Deburr or replace.
   - Clutch housing bearing
   Chafing/Wear/Damage → Replace.

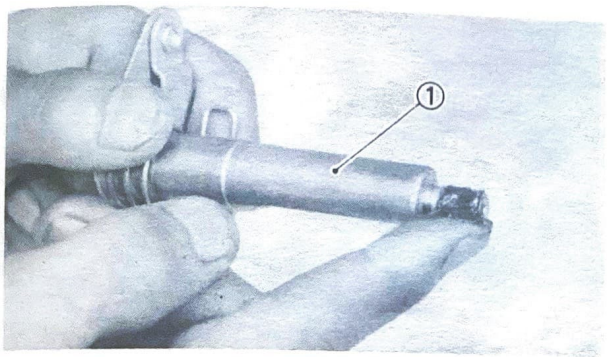
5. Inspect:
   - Clutch boss splines
   Scoring/Wear/Damage → Replace clutch boss.

NOTE:

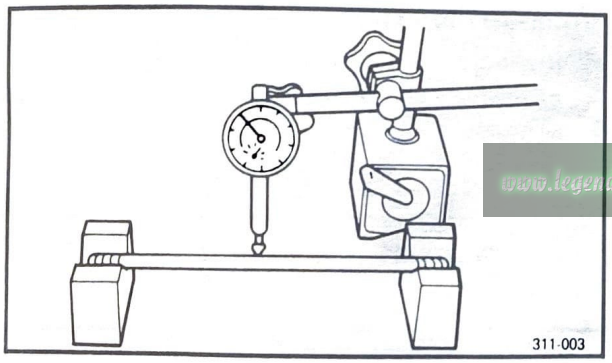
Scoring on the clutch boss splines will cause erratic operation.

www.legends-yamaha-enduros.com

6. Check:
   • Circumferential play
   Free play exists → Replace.



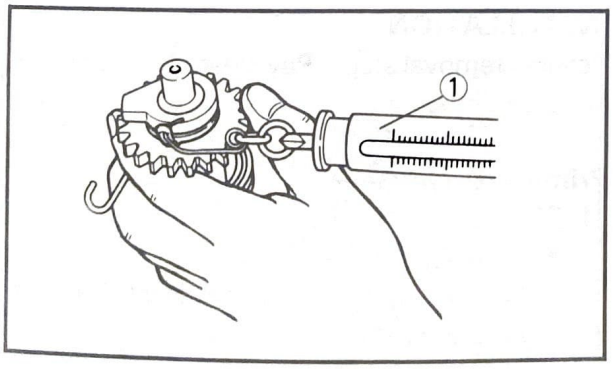
7. Inspect:
   • Push lever ①
   Wear/Damage → Repair using 300 ~ 400 grit sand paper or replace.



8. Measure:
   • Push rod runout (Long rod)
   Out of specification → Replace.
   Using V-Blocks and Dial Gauge.

www.legends-yamaha-enduros.com

Bending Limit: 0.2 mm (0.008 in)



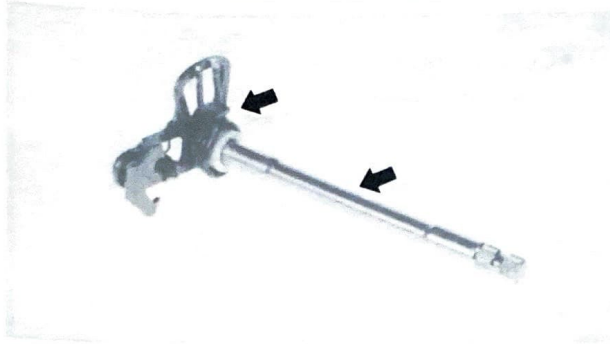
Kick Axle

1. Inspect:
   • Kick axle
   Damage/Wear → Replace.
2. Measure:
   • Kick clip friction force
   Out of specification → Replace.
   Use a spring balance ①.

Kick Clip Friction Force:
0.8 ~ 1.2 kg (1.8 ~ 2.6 lb)

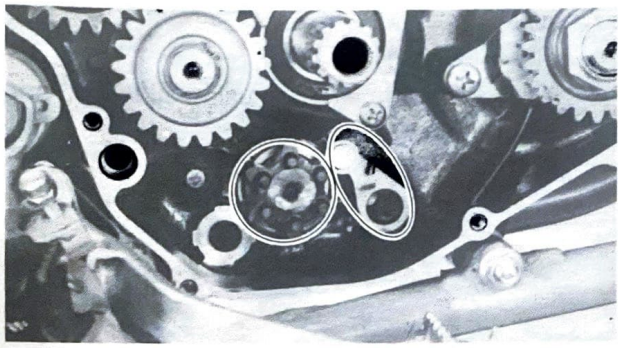
CAUTION:

Do not try to bend the clip.

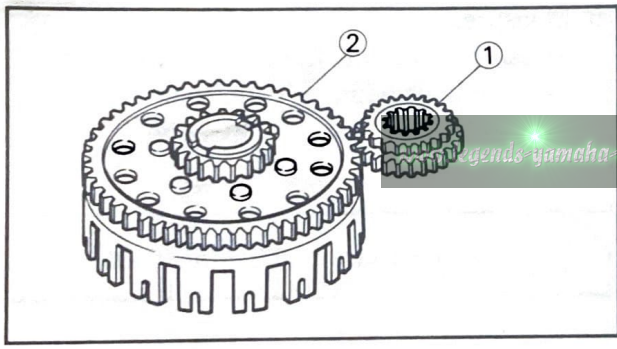


Shift Shaft

1. Inspect:
   - Return spring
     Broken → Replace.
   - Shift shaft
     Bend → Replace.



2. Inspect:
   - Segment
   - Stopper lever
     Wear/Damage → Replace.



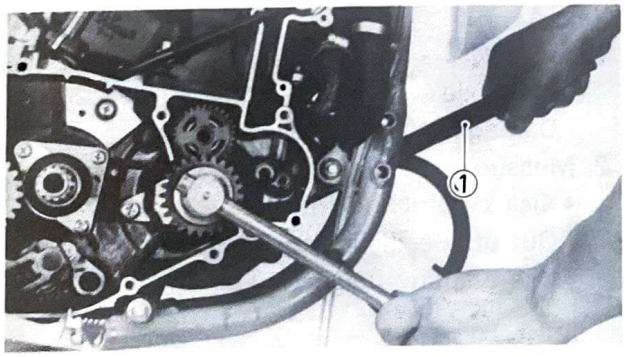
Primary Drive Gear

1. Inspect:
   - Primary drive gear teeth ①
   - Driven gear teeth ②
     Pitting/Damage → Replace.

legends-yamaha-enduros.com

NOTE:

Replace the primary drive gear and clutch housing as a set.



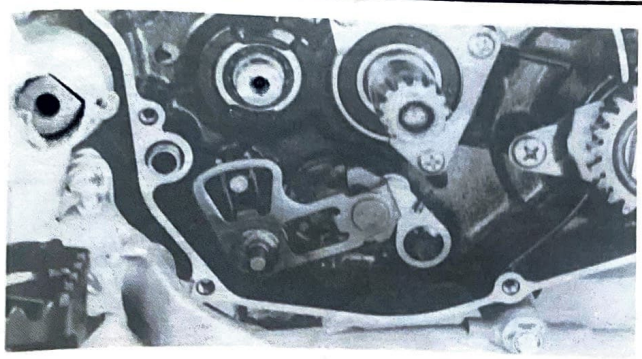
INSTALLATION

Reverse removal steps. Pay close attention to following points.

Primary Drive Gear

1. Tighten:
   - Nut (Primary drive gear)
     Using the Universal Rotor Holder (YU-01235) ① to lock the crankshaft.

	Nut (Primary Drive Gear): 115 Nm (11.5 m•kg, 85 ft•lb)

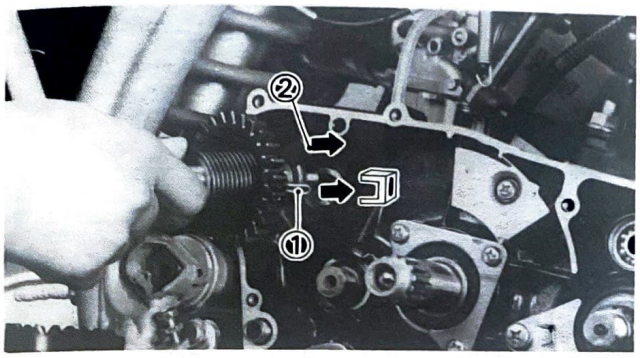


Shift Shaft

1. Tigten:
   - Bolt (Stopper lever)

Bolt (Stopper Lever):
15 Nm (1.5 m•kg, 11 ft•lb)
LOCTITE®

2. Hook:
   - Spring

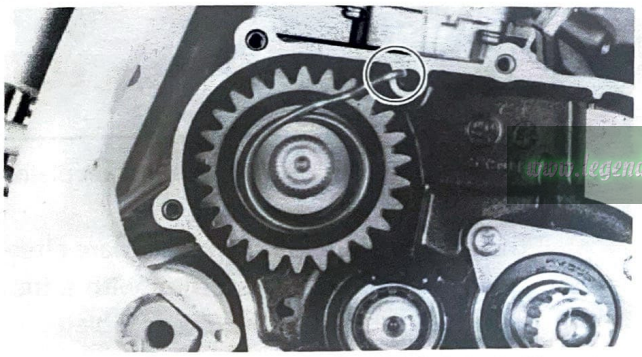


Kick Axle

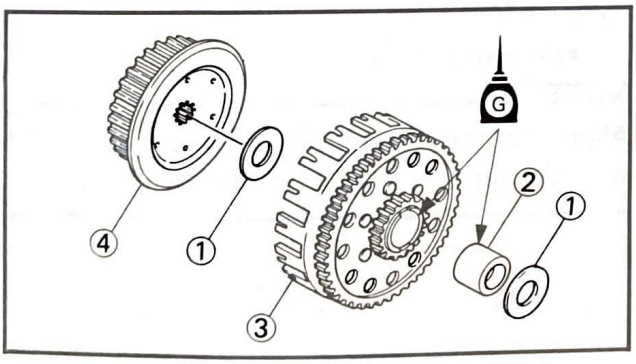
1. Install:
   - Kick axle
   - Kick idle gear

NOTE:

- Slide the axle assembly into the case; make sure the kick clip ① and kick axle stopper ② fit into their home positions.
- Turn the kick starter return spring clockwise and hook into the proper hole in the crankcase.
- After installation, make sure the kick gear engages and disengages properly with the idle gear.



www.legends-yamaha-enduro.com

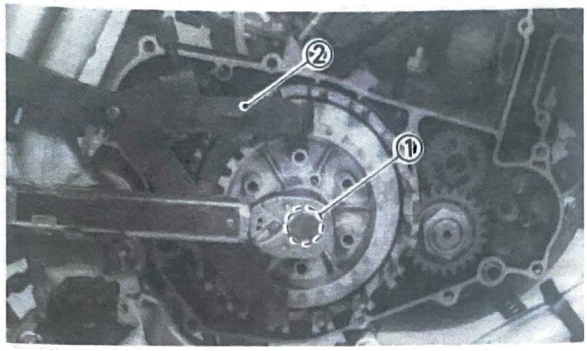


Clutch

1. Install:
   - Thrust washer ①
   - Spacer ②
   - Clutch housing ③
   - Clutch boss ④

NOTE:

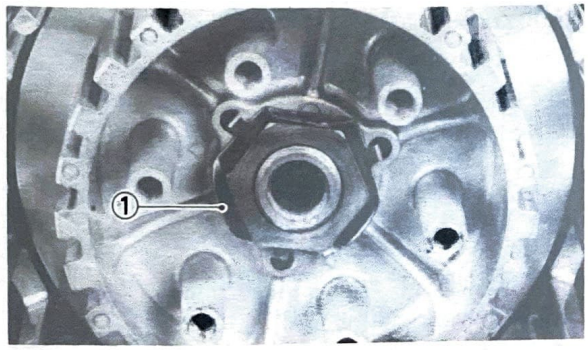
Apply the transmission oil onto the spacer ② and clutch housing.



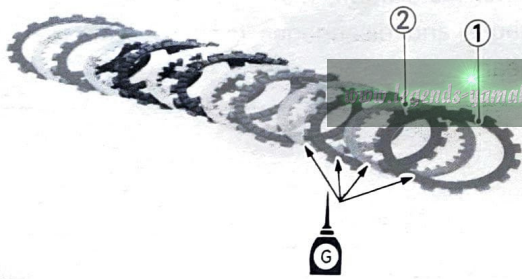
2. Tighten:
   - Nut (Clutch boss) ①

   Using the Clutch Holding Tool (YM-91042) ② to hold the clutch boss.

Nut (Clutch Boss):
75 Nm (7.5 m•kg, 54 ft•lb)

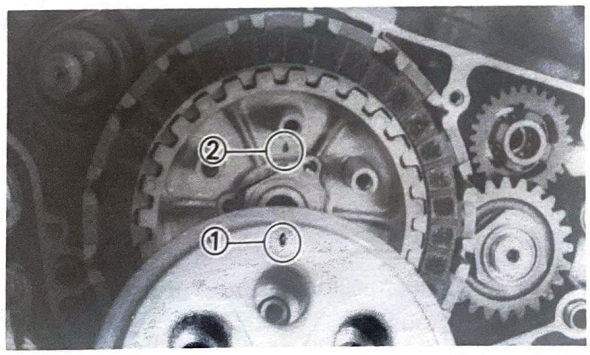


3. Bend the tab ① of the lock washer to lock the nut.



4. Install:
   - Friction plates ①
   - Clutch plates ②

NOTE:
- Apply the transmission oil onto the friction plates ①.
- Install the clutch plates and friction plate alternately on the clutch boss, starting with a friction plate and ending with a friction plate.



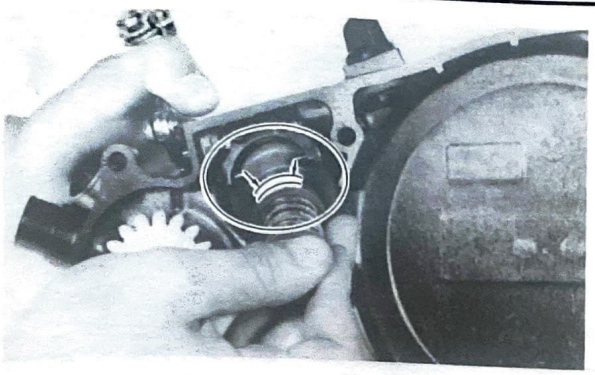
5. Install:
   - Pressure plate

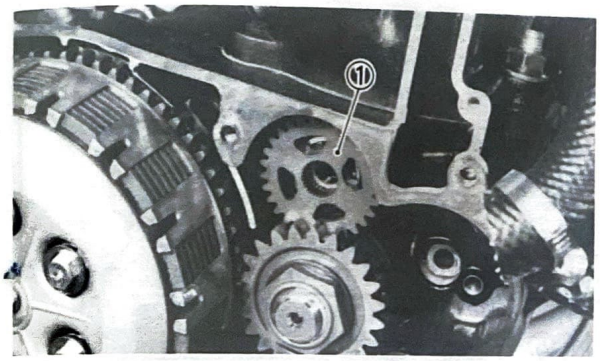
NOTE:
Align the arrow mark ① of the pressure plate with the arrow mark ② of the clutch boss.

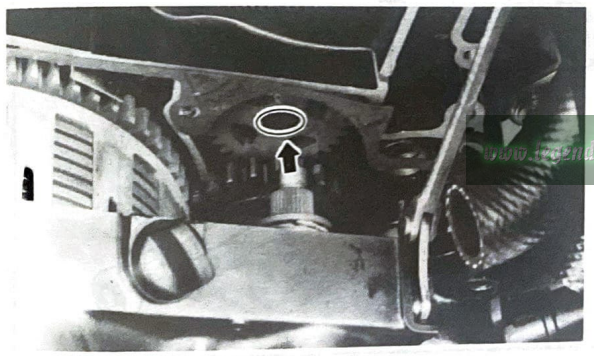
6. Tighten:
   - Bolts (Clutch spring)

NOTE:
Tighten the bolts in stage, using a crisscross pattern.

Bolts (Clutch Spring):
10 Nm (1.0 m•kg, 7.2 ft•lb)







Crankcase Cover (Left)

1. Install:
   - Dowel pins
   - Crankcase cover gasket (New)
   - Crankcase cover

NOTE:

- Align the groove in the governor with the fork and set the governor in the case.
- Make sure the governor gear ① is installed correctly.
- Bring the serrations of the governor shaft and driven gear to align.

2. Tighten:
   - Screws (Crankcase cover)

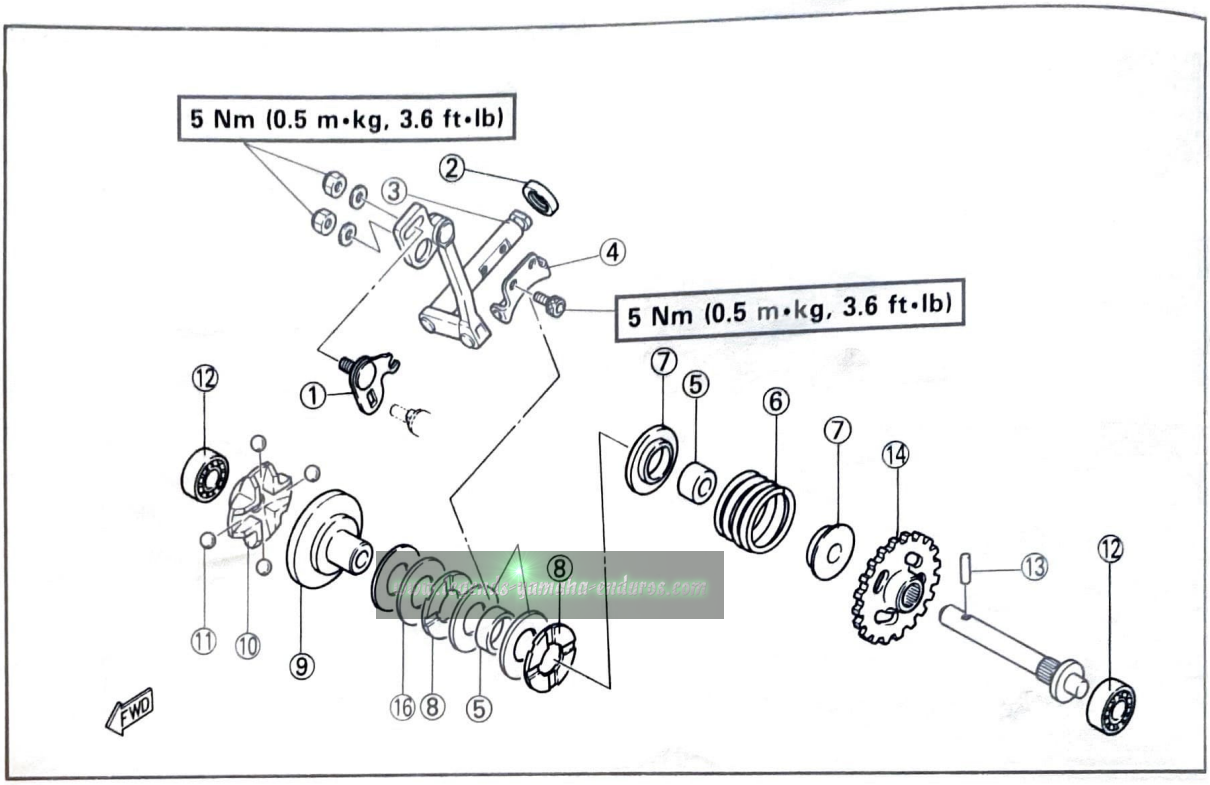
NOTE:

Tighten the screws in stage, using Crisscross pattern.

www.legends-yamaha-enduros.com

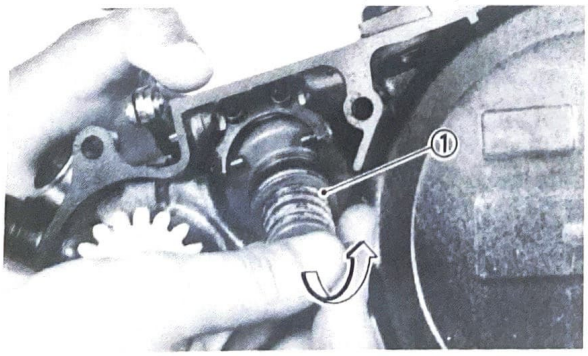
YPVS GOVERNOR

① Lever
② Oil seal
③ Push rod
④ Fork
⑤ Collar
⑥ Spring
⑦ Plate
⑧ Bush
⑨ Retainer
⑩ Cam
⑪ Ball
⑫ Bearing
⑬ Knock pin
⑭ Driven gear
⑮ Washer (1.0 mm)
⑯ Washer (0.8 or 1.0 mm)

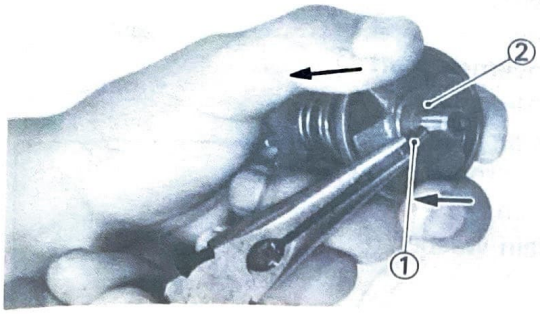


REMOVAL

1. Remove:
   • Crankcase cover (Left)
   Refer to "REMOVAL—CRANKCASE COVER (LEFT)" section (Page 3-30).

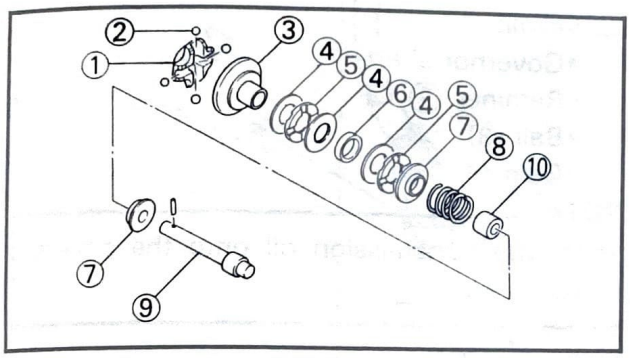


2. Remove:
   • YPVS governor assembly ①



DISASSEMBLY

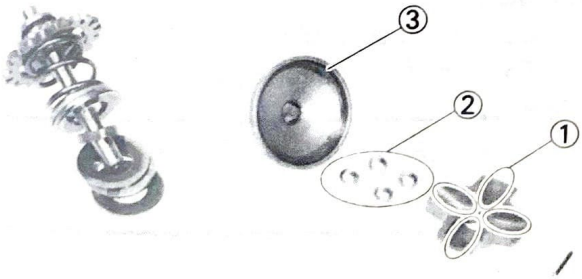
1. Remove:
   - Knock pin ①
     While depressing down the retainer plate ②.



2. Remove:
   - Cam ①
   - Ball ②
   - Retainer ③
   - Plain washer ④
   - Bush ⑤
   - Collar ⑥
   - Plate ⑦
   - Spring ⑧
   - Governor shaft ⑨
   - Collar ⑩

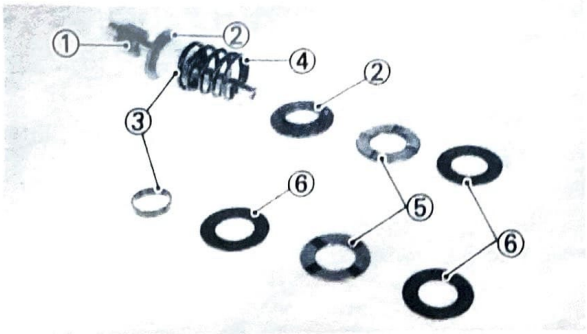
www.legends-yamaha-enduros.com

INSPECTION AND REPAIR



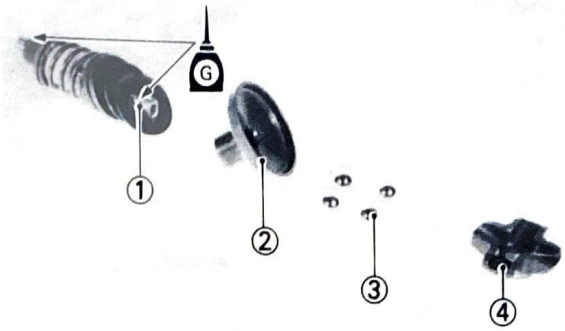
1. Inspect:
   - Cam ①
   - Retainer ②
   - Ball ③
     Wear/Damage→Replace.

2. Inspect:
   - Governor spring
     Fatique/Damage→Replace.



ASSEMBLY

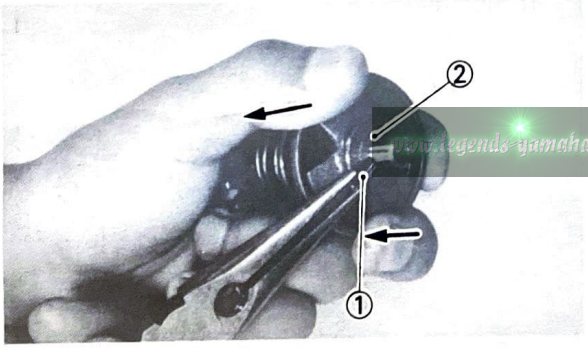
1. Install:
   - Governor shaft ①
   - Plate ②
   - Collar ③
   - Governor spring ④
   - Bush ⑤
   - Plain washer ⑥



2. Install:
   - Governor shaft ①
   - Retainer ②
   - Ball ③
   - Cam ④

NOTE:

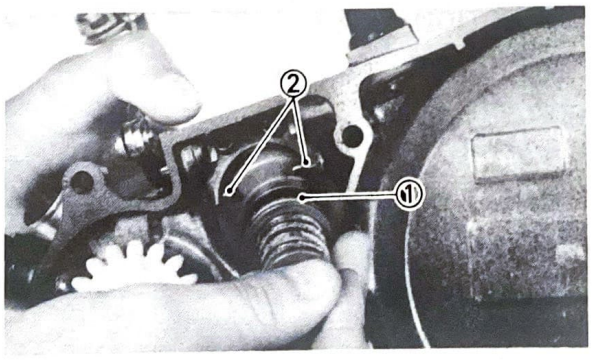
Apply the transmission oil onto the governor shaft.



3. Install:
   - Knock pin ①

   While depressing down the retainer plate ②.

www.legends-yamaha-enduros.com



INSTALLATION

1. Install:
   - Governor assembly

   To crankcase cover (Left).

NOTE:

Align the governor groove ① with the push rod fork ②.

2. Install:
   - Crankcase cover (Left)

   Refer to "INSTALLATION—CRANKCASE COVER (LEFT)" section (Page 3-30).
3. Check:
   - VPVS smooth movement

   Unsmooth action→Repair

ADDITIONAL INFORMATION
FOR YZ250T/YZ490T OWNER'S SERVICE MANUAL

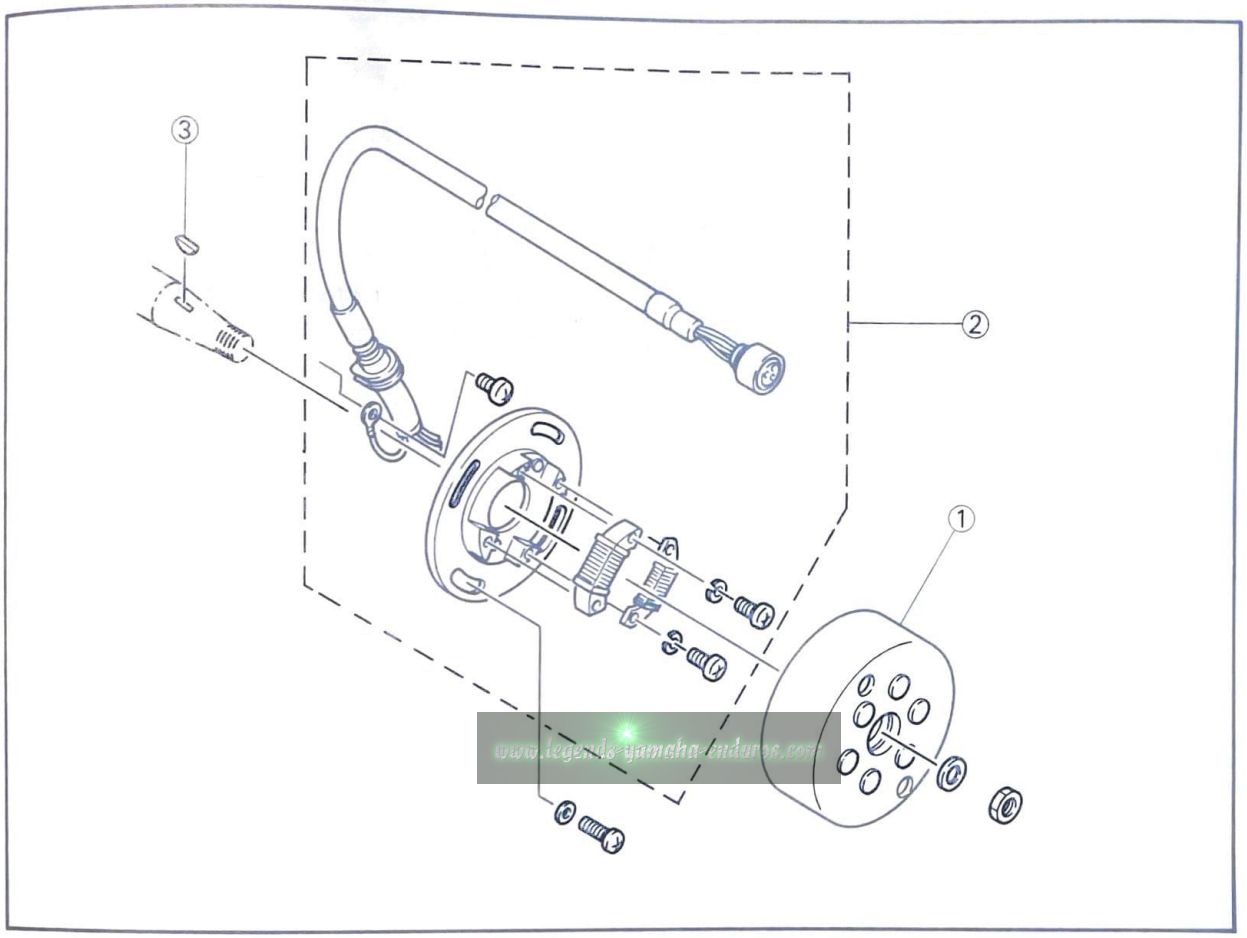
YZ250T OWNER'S SERVICE MANUAL (LIT-11626-05-76)
YZ490T OWNER'S SERVICE MANUAL (LIT-11626-05-77)

When either front fork air pressure is increased or fork spring/spacer is replaced with an optional one, be sure to make adjustment within the oil level tabulated below.

Spring/Spacer	Front fork air pressure	Oil level	
		Maximum	Minimum
HARD (Option)	Zero kpa (Zero kg/cm², Zero psi)	100 mm (3.94 in)	165 mm (6.50 in)
	49 kpa (0.5 kg/cm², 7.1 psi)	114 mm (4.49 in)	165 mm (6.50 in)
	98 kpa (1.0 kg/cm², 14.2 psi)	128 mm (5.04 in)	165 mm (6.50 in)
STANDARD	Zero kpa (Zero kg/cm², Zero psi)	108 mm (4.25 in)	165 mm (6.50 in)
	49 kpa (0.5 kg/cm², 7.1 psi)	121 mm (4.76 in)	165 mm (6.50 in)
	98 kpa (1.0 kg/cm², 14.2 psi)	135 mm (5.32 in)	165 mm (6.50 in)
SOFT (Option)	Zero kpa (Zero kg/cm², Zero psi)	112 mm (4.41 in)	165 mm (6.50 in)
	49 kpa (0.5 kg/cm², 7.1 psi)	126 mm (4.96 in)	165 mm (6.50 in)
	98 kpa (1.0 kg/cm², 14.2 psi)	140 mm (5.51 in)	165 mm (6.50 in)

CDI MAGNETO

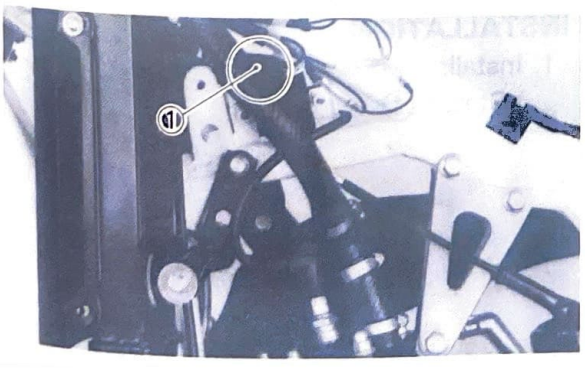
① CDI magneto
② Stator
③ Woodruff key



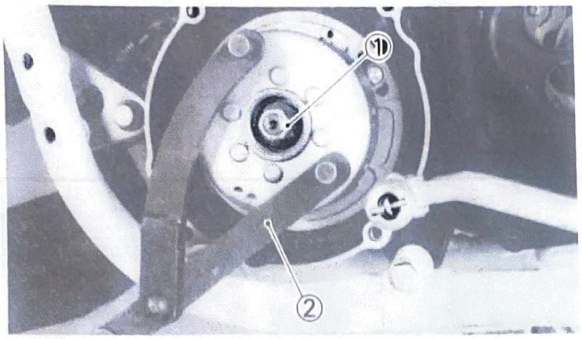
www.legends-yamaha-enduros.com

REMOVAL

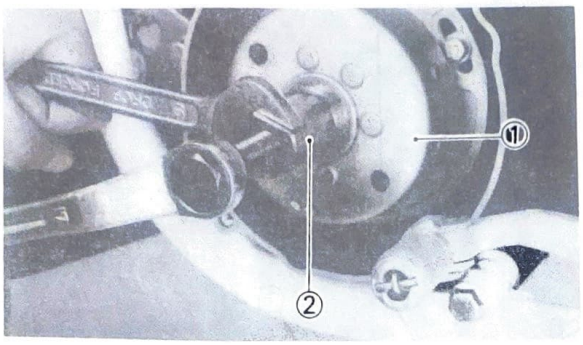
1. Turn the fuel cock to "OFF".
2. Remove:
   - Seat
   - Fuel tank
   - Crankcase cover (Right)



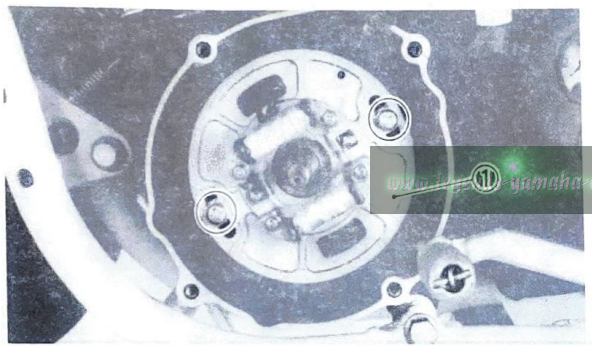
3. Disconnect:
   - CDI magneto lead ①
   - Bands



3. Remove:
   - Nut (CDI-magneto) ①
     Using Rotor Holding Tool (YU-01235) ②.

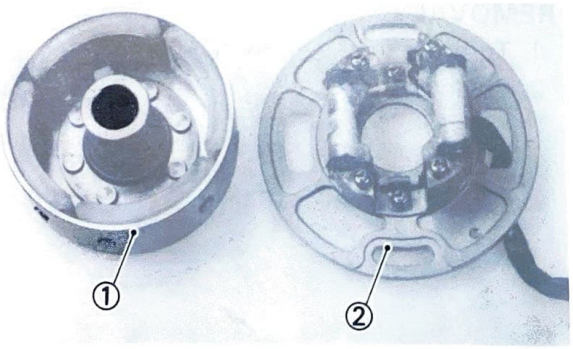


4. Remove:
   - Washer
   - CDI magneto ①
     Using the Rotor Puller (YM-01189) ②.
   - Woodruff key



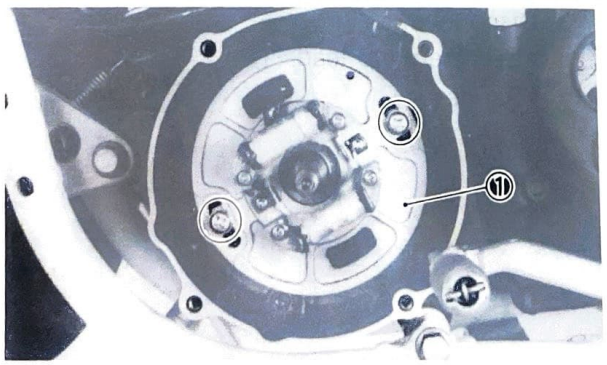
5. Remove:
   - Stator ①

www.yamahaenduros.com



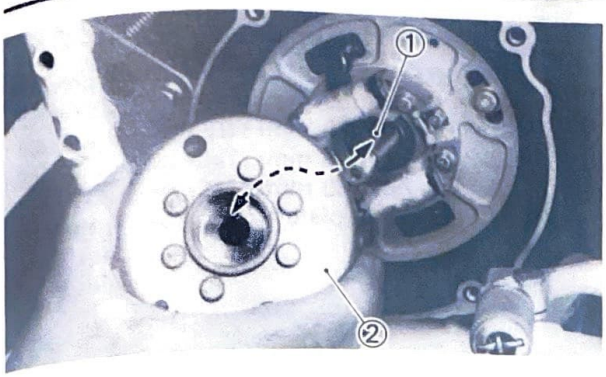
INSPECTION AND REPAIR

1. Inspect:
   - CDI magneto ①
   - Stator ②
     Damage→Inspect the crankshaft runout and crankshaft bearing.
     If necessary, replace CDI magneto/stator.
   - Woodruff key
     Damage→Replace.



INSTALLATION

1. Install:
   - Stator ①



3. Install:
   - Woodruff key ①
   - CDI magneto ②

NOTE:

When installing the CDI magneto ② make sure the woodruff key ① is properly seated in the key way of the crankshaft.

   - Washer
   - Nut

	Nut (CDI Magneto): **38 Nm (3.8 m•kg, 27 ft•lb)**

4. Adjust:
   - Ignition timing

   Refer to "CHAPTER 2—IGNITION TIMING CHECKING AND ADJUSTMENT" section (Page 2-29).

CAUTION:

Incorrect ignition timing will cause engine seizure, lose of power, etc. Be sure to adjust the ignition timing when the stator is reinstalled.

5. Connect:
   - Pick-up coil lead
   - Source coil leads
6. Install:
   - Gasket (Crankcase cover-right) (New)
   - Crankcase cover
   - Fuel tank
   - Seat

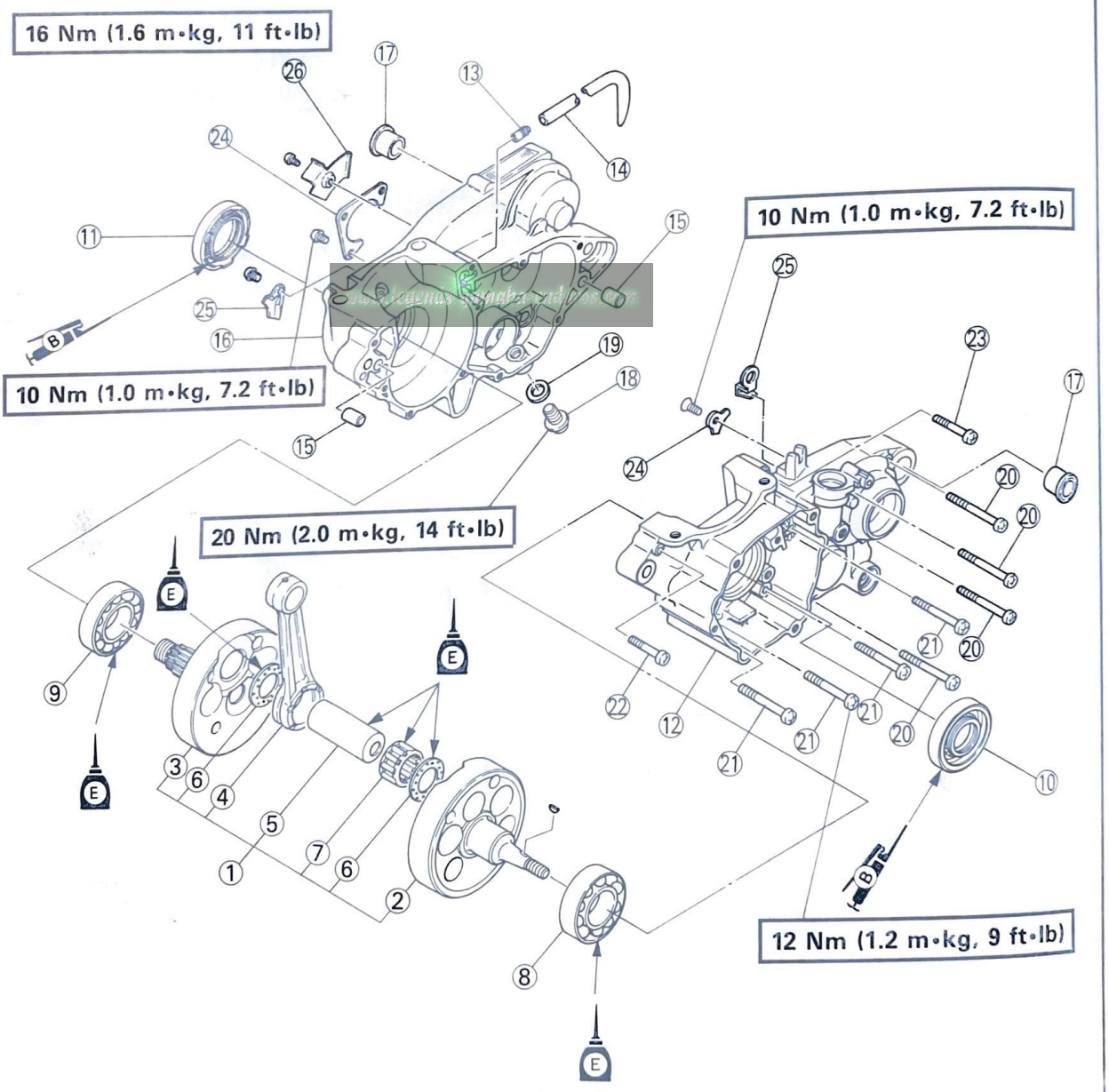
NOTE:

Use new gasket.

www.legends-yamaha.com

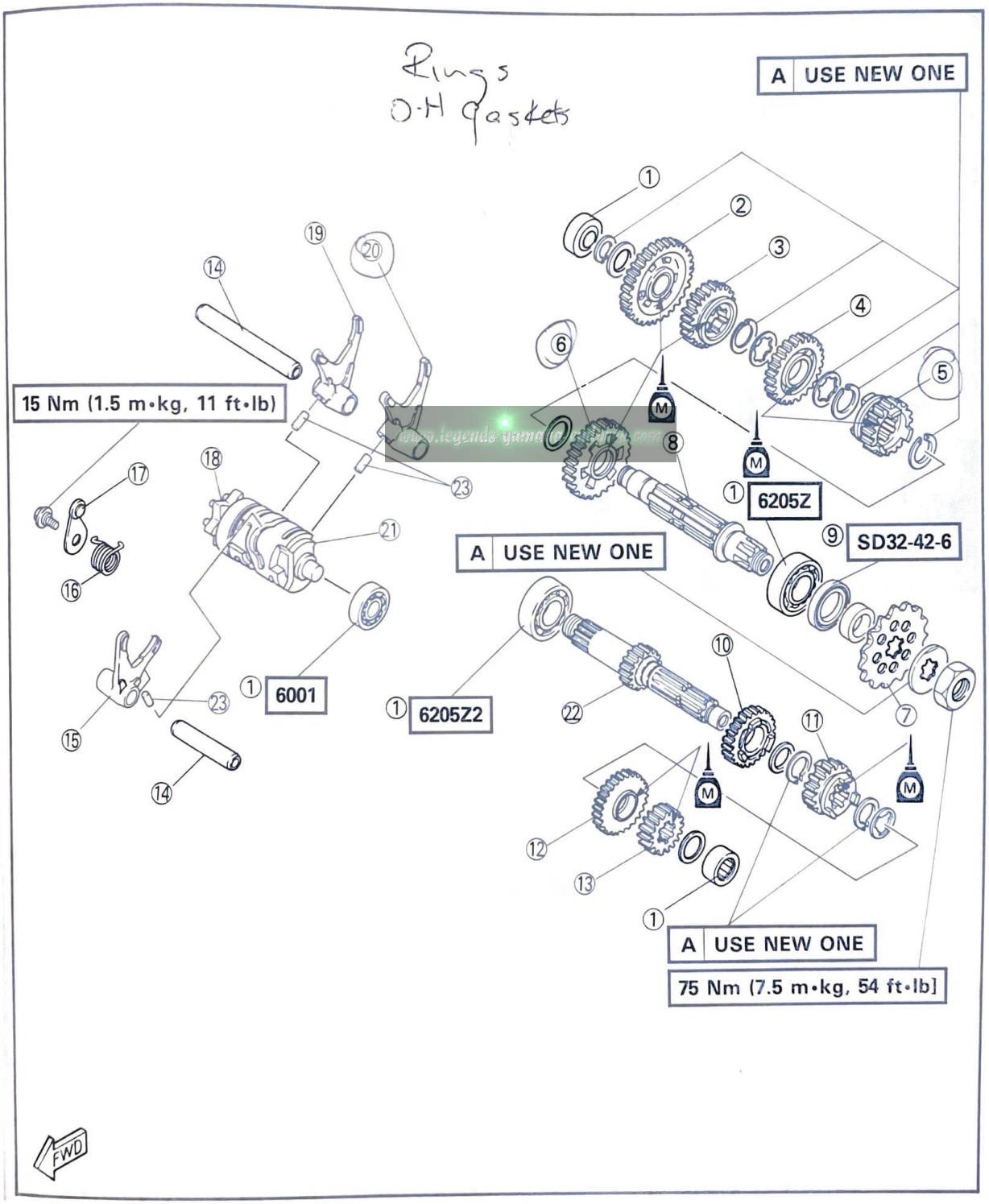
CRANKSAHFT, TRANSMISSION AND SHIFTER

① Crankshaft assembly
② Crankshaft (Left)
③ Crankshaft (Right)
④ Connecting rod
⑤ Crank pin
⑥ Washer
⑦ Bearing (Big end)
⑧ Bearing (Crankshaft)
⑨ Bearing (Crankshaft)
⑩ Oil seal
⑪ Oil seal
⑫ Crankcase (Left)
⑬ Hose connecter
⑭ Hose
⑮ Dowel pin
⑯ Crankcase (Right)
⑰ Collar
⑱ Drain bolt
⑲ Gasket
⑳ Screw (60 mm)
㉑ Screw (55 mm)
㉒ Screw (45 mm)
㉓ Screw (40 mm)
㉔ Bearing plate
㉕ Plate



TRANSMISSION AND SHIFTER

① Bearing
② 1st wheel gear (30T)
③ 4th wheel gear (20T)
④ 3rd wheel gear (24T)
⑤ 5th wheel gear (22T)
⑥ 2nd wheel gear (28T)
⑦ Drive sprocket (14T)
⑧ Drive axle
⑨ Oil seal
⑩ 4th pinion gear (17T)
⑪ 3rd pinion gear (17T)
⑫ 5th pinion gear (22T)
⑬ 2nd pinion gear (16T)
⑭ Shift fork guide bar
⑮ Shift fork 2
⑯ Return spring
⑰ Stopper lever
⑱ Segment
⑲ Shift fork 3
⑳ Shift fork 1
㉑ Shift cam
㉒ Main axle (1st pinion gear) (14T)
㉓ Dowel pin

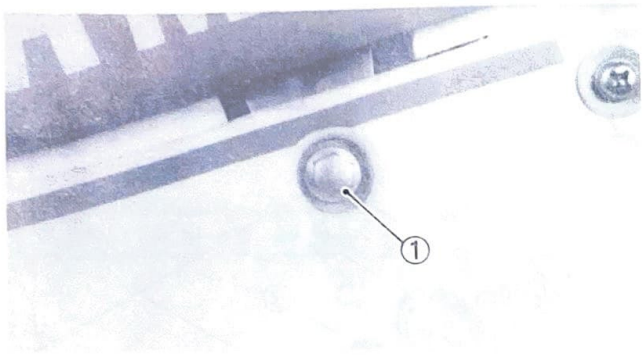


www.legends-yamaha-restoration.com

ENGINE REMOVAL

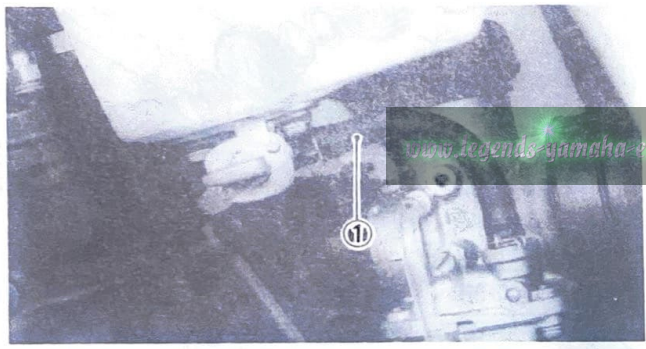
NOTE:

The engine removal is required for the servicing of the transmission, crankshaft, and bearings, oil seals, etc, of the crankcase.



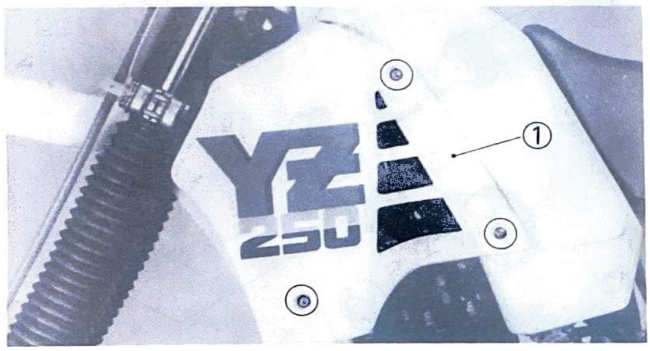
1. Drain:
   - Coolant

   Refer to "CHAPTER 2—COOLANT REPLACEMENT" section (Page 2-7).
2. Remove:
   - Bolts (seat) ①
   - Seat

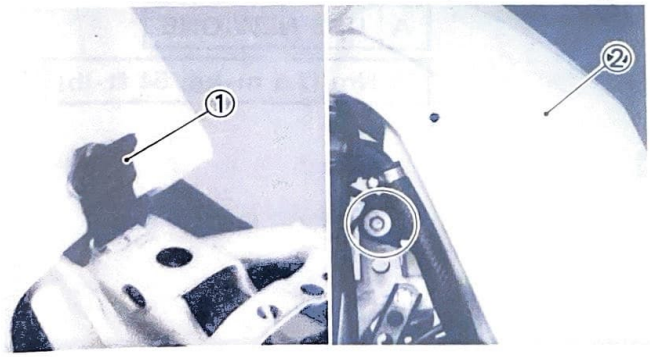


3. Turn the fuel cock to "OFF".
4. Disconnect:
   - Fuel hose ①

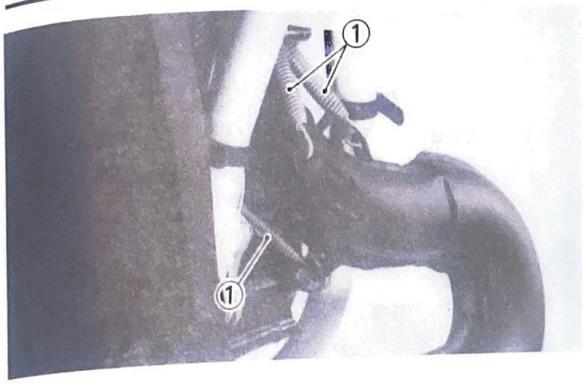
www.legends-yamaha-enduros.com



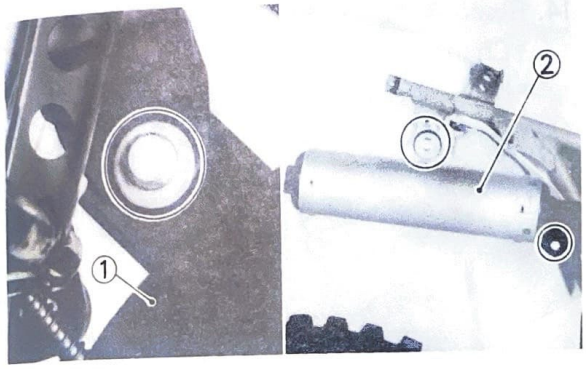
5. Remove:
   - Radiator cover (Left and right) ①



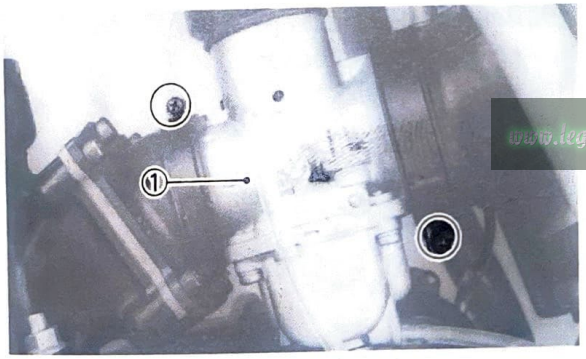
6. Remove:
   - Band ①
   - Fuel tank ②



7. Remove:
   • Spring (Muffler) ①

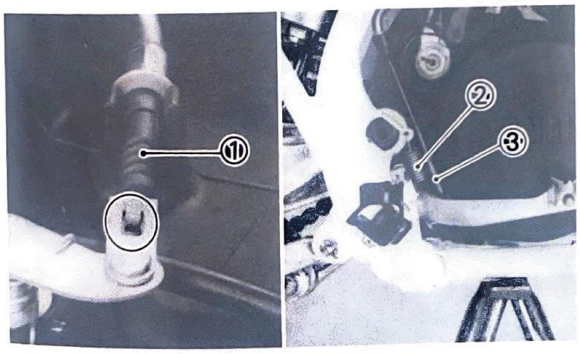


8. Remove:
   • Exhaust pipe ①
   • Muffler ②

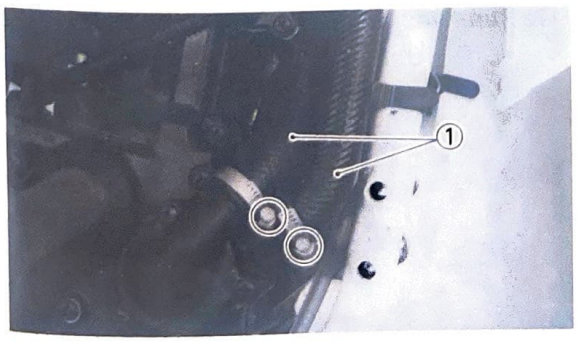


9. Remove:
   • Carburetor ①

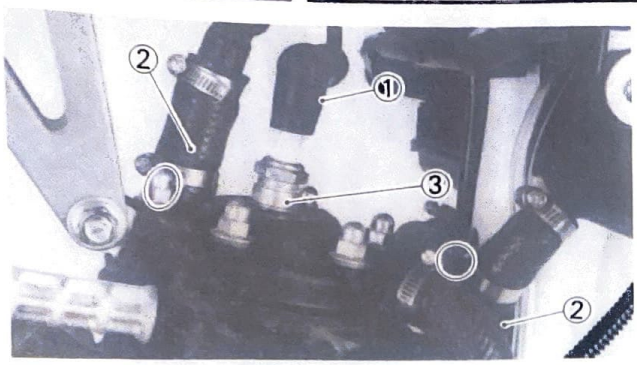
www.legends-yamaha-enduros.com



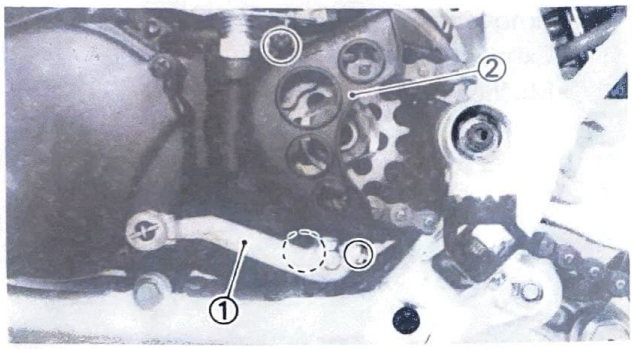
10. Disconnect:
    • Clutch cable ①
    • Rear brake adjuster
    • Return spring ②
    • B.A.S.S. spring ③



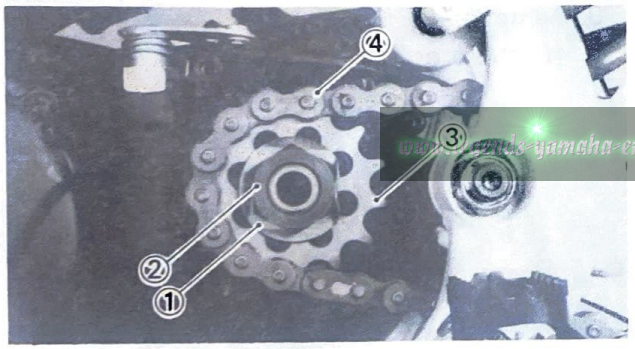
11. Disconnect:
    • Radiator hose ①



12. Disconnect:
    - Spark plug cap ①
    - Radiator hose ②
13. Remove:
    - Spark plug ③

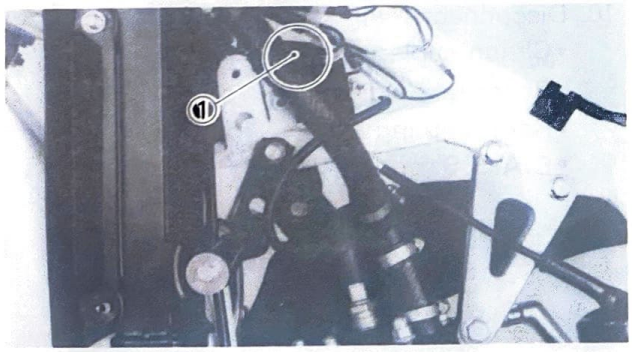


14. Remove:
    - Change pedal ①
    - Drive sprocket cover ②

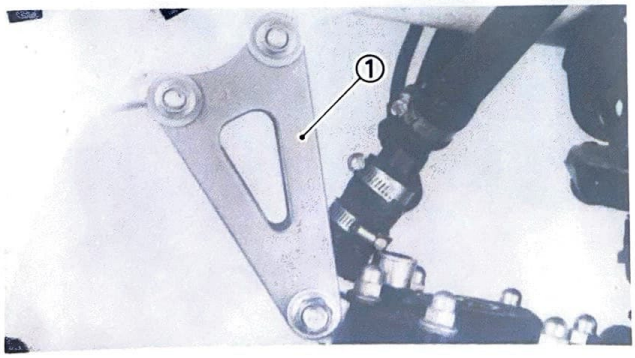


15. Remove:
    - Nut (Drive sprocket) ②
    - Lock washer ①
    - Sprocket ③
    - Drive chain ④

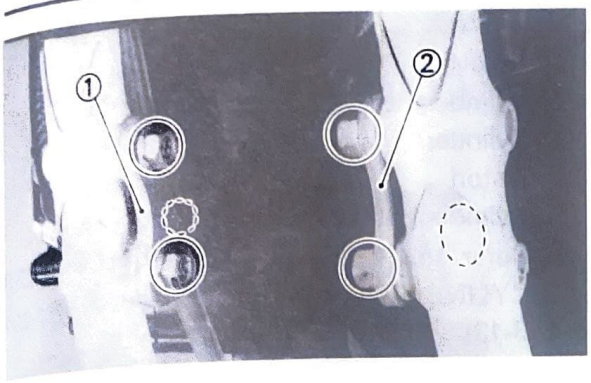
www.pitbike-yamaha-enduros.com



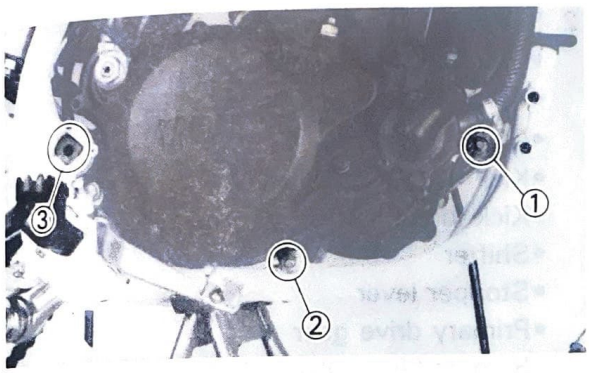
16. Disconnect:
    - CDI magneto lead ①
    - Bands



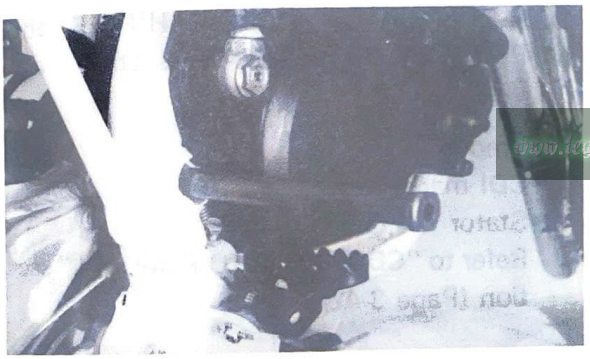
17. Remove:
    - Stay (Upper) ①



18. Remove:
    - Stay (Front) ②



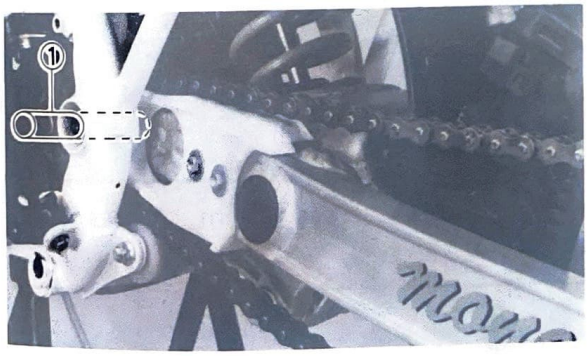
19. Remove:
    - Engine mounting bolt (Front) ①
    - Engine mounting bolt (Under) ②
    - Nut (Pivot shaft) ③

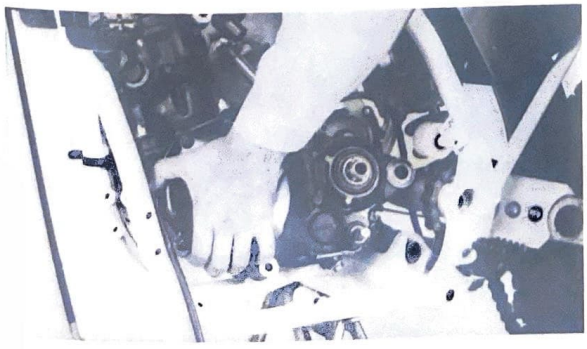


20. Pull the shaft out about 2/3 of its length.

NOTE:

If the shaft is pulled all the way out, the swingarm will come loose. If possible, insert a shaft ① of similar diameter into the other side of the swingarm to support it.





21. Remove:
    - Engine

    From left side of the frame.

REMOVAL

1. Remove:
   - Cylinder head
   - Cylinder
   - Piston
   - Cylinder gasket

   Refer to "REMOVAL-CYLINDER HEAD, CYLINDER and PISTON" section (Page 3-13).

2. Remove:
   - Crankcase cover (Left)
   - YPVS governor gear ①
   - Clutch
   - Kick axle
   - Kick idle gear
   - Shifter
   - Stopper lever
   - Primary drive gear

   Refer to "REMOVAL-CRANKCASE COVER (LEFT), KICK AXLE, SHIFTER and PRIMARY DRIVE GEAR" section (Page 3-28).

www.legends-yamaha-enduro.com

3. Remove:
   - CDI magneto
   - Stator

   Refer to "CDI MAGNETO-REMOVAL" section (Page 3-42).

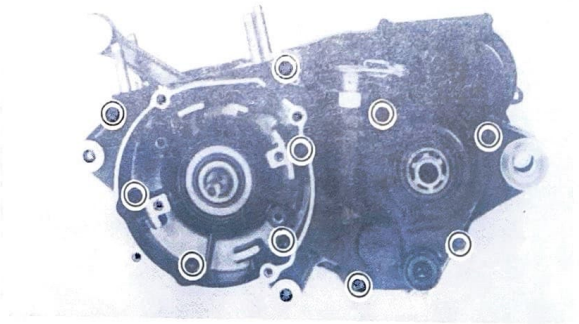
DISASSEMBLY

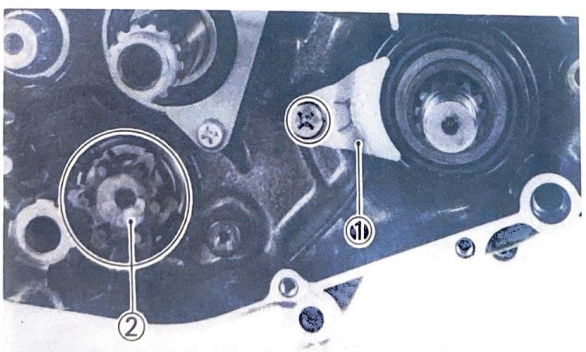
Crankcase

1. Remove:
   - Screws (Crankcase)

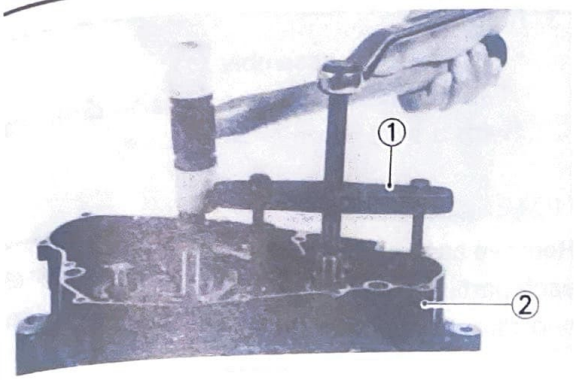
NOTE:

Working in a crisscross pattern, loosen 1/4 turn each.





2. Remove:
   - Oil seal holder ①
3. Turn the segment ② to the position shown in the figure so that it does not contact the crankcase.



4. Attach:
   - Crankcase Separating Tool (90890-01135/YU-01135) ①
5. Remove:
   - Crankcase (Right) ②

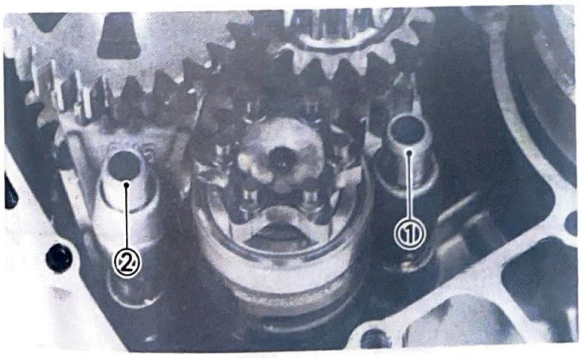
NOTE:

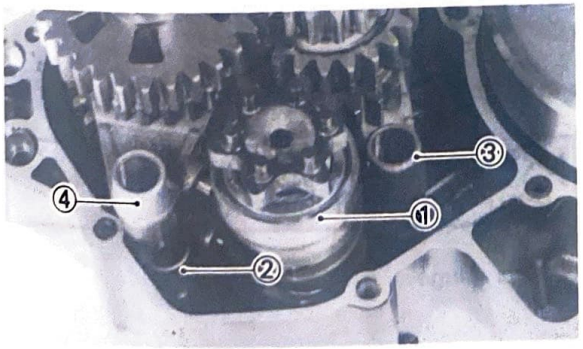
- Fully tighten the tool holding bolts, but make sure the tool body is parallel with the case. If necessary, one screw may be backed out slightly to level tool body.
- As pressure is applied, alternately tap on the front engine mounting boss, transmission shafts, and shift cam.

CAUTION:

Use soft hammer to tap on the case half. Tap only on reinforced portions of case. Do not tap on gasket mating surface. Work slowly and carefully. Make sure the case halves separate evenly. If one end "hangs up," take pressure off the push screw, realign, and start over. If the cases do not separate, check for a remaining case screw or fitting. Do not force.

www.legends-yamaha.com

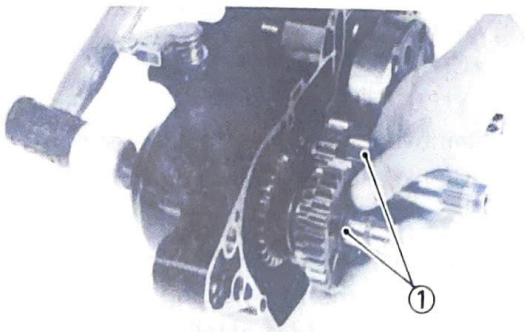




Transmission and Shifter

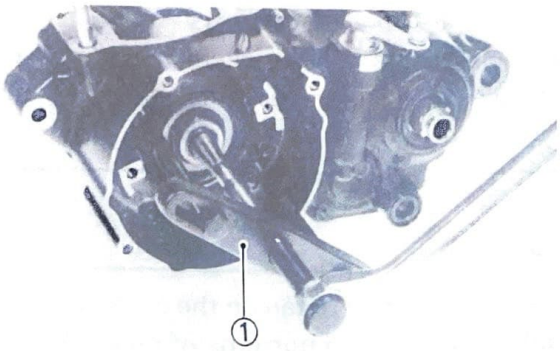
1. Remove:
   - Guide bar (Short) ①
   - Guide bar (Long) ②

2. Remove:
   - Shift cam ①
   - Shift fork 1 ②
   - Shift fork 2 ③
   - Shift fork 3 ④



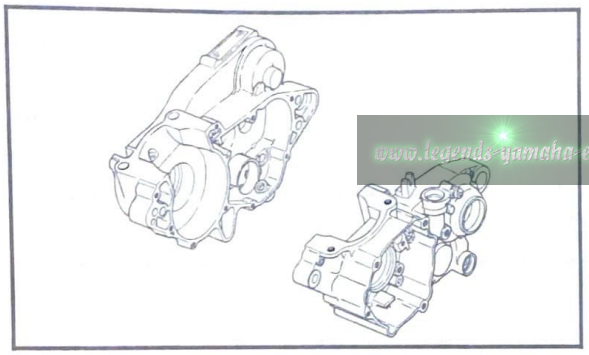
3. Remove:
   • Transmission assembly ①
   Tap lightly on the transmission drive axle with a soft hammer to remove.

NOTE:
Remove assembly carefully. Note the position of each part. Pay particular attention to the location and direction of shift forks.



Crankshaft

1. Remove:
   • Crankshaft
   Using Crankcase Separating Tool (YU-01135) ①.

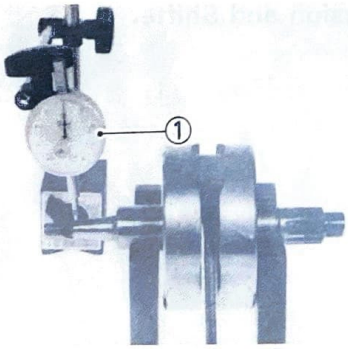


INSPECTION AND REPAIR

Crankshaft and Crankcase

1. Inspect:
   • Crankcase (Left and right)
   Crack/Damage → Replace.

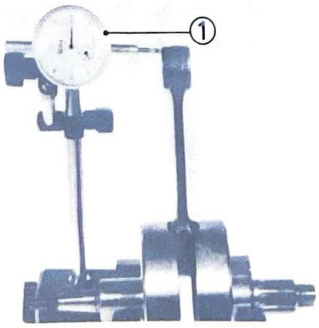
www.legends-yamaha-enduros.com



2. Measure:
   • Crankshaft runout out of specification → Replace.

Runout Limit:
0.03 mm (0.001 in)

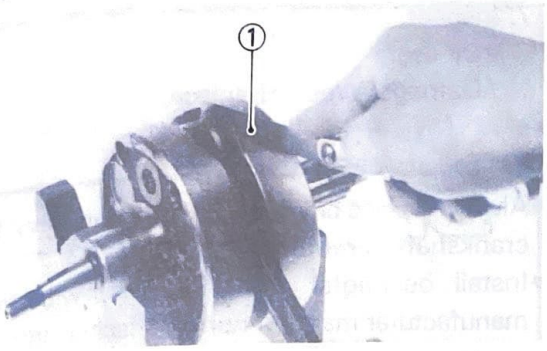
① Dial gauge



3. Measure:
   • Connecting rod small end free play
   Out of specification → Replace.

Small End Free Play Limit:
2.0 mm (0.08 in)

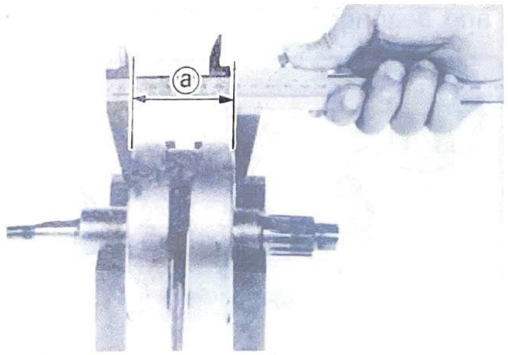
① Dial gauge



4. Measure:
   • Connecting rod big end side clearance
   Out of specification → Replace.

Connecting Rod Big End Side Clearance:
0.25 ~ 0.75 mm (0.01 ~ 0.03 in)

① Feeler gauge



5. Measure:
   • Crankshaft setting length ⓐ
   Out of specification → Replace.

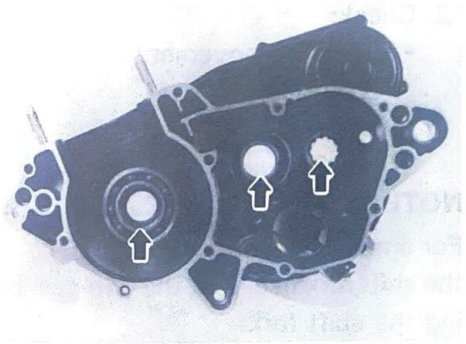
Crankshaft Setting Length:
61.95 ~ 62.00 mm
(2.439 in ~ 2.441 in)

3

NOTE:

If any of the above measurements exceed tolerance, crankshaft repair is required. Take the machine to your authorized Yamaha dealer.

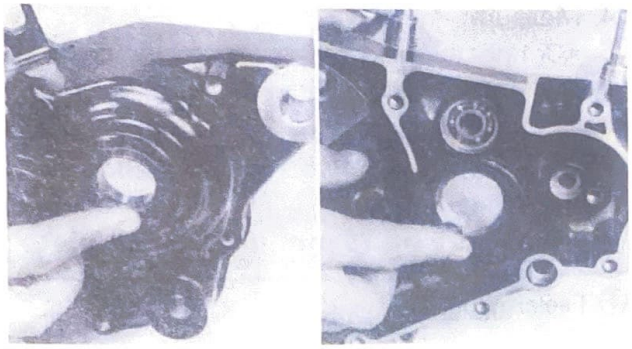
www.legends-yamaha-enduros.com



6. Clean/Lubricate/Inspect:
   • Bearings
   Rotate inner race with a finger.
   Rough spot/Seizure → Replace.

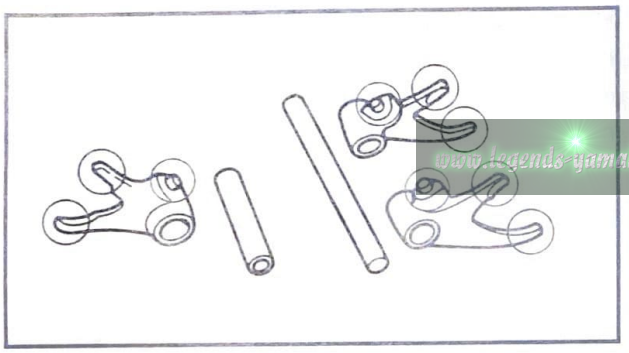
NOTE:

Bearing(s) are most easily removed or installed if the cases are first heated to approximately 90° ~ 120°C (194° ~ 248°F). Bring the case up to proper temperature slowly. Use an oven.



7. Inspect:
   - Oil seal
     Damage/Wear → Replace.

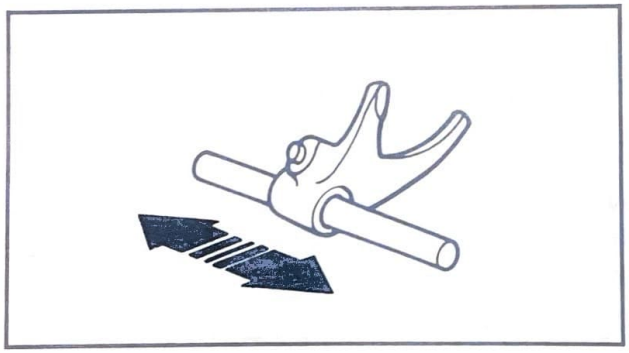
NOTE:
- Always replace crankshaft oil seals whenever the crankshaft is removed.
- Install bearing(s) and oil seal(s) with their manufacturer marks or numbers facing outward. Before installation, apply grease to oil seal lips and bearings.



Transmission and Shifter

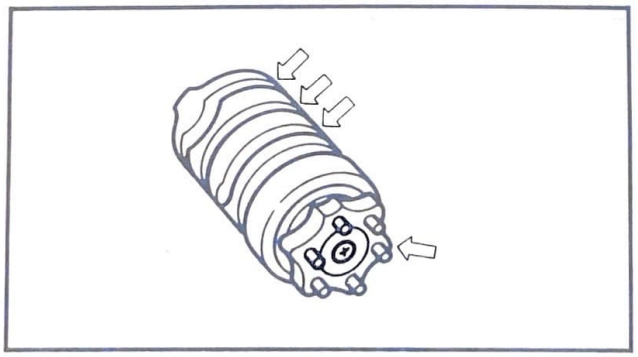
1. Inspect:
   - Shift forks (Gear and shift cam contact surfaces)
     Wear/Chafing/Bends/Damage → Replace.
   - Guide bars
     Bends/Wear → Replace.

www.legends-yamaha-enduros.com

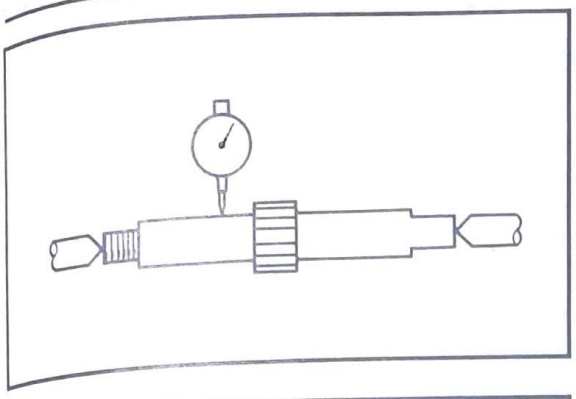


2. Check:
   - Shift fork movement
     On its guide bar
     Unsmooth operation → Replace.
     Shift fork and/or guide bar.

NOTE:
For a malfunctioning shift fork, replace not only the shift fork itself but the two gears each adjacing the shift fork.

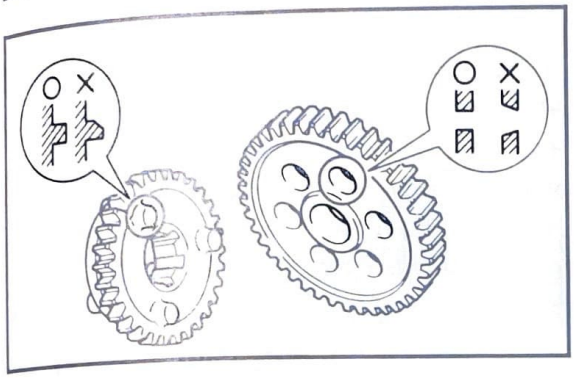


3. Inspect:
   - Shift cam grooves
     Wear/Damage/Scratches → Replace.
   - Shift cam segment
     Damage/Wear → Replace.

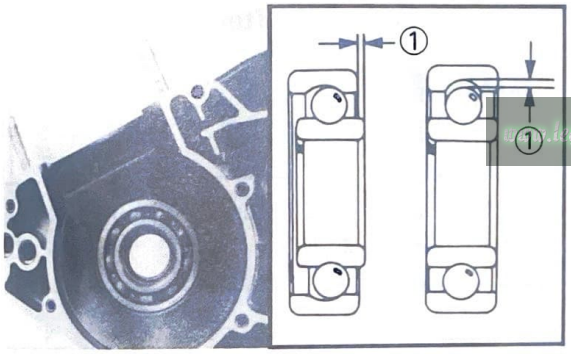


4. Measure:
   • Axle runout
   Out of specification → Replace.
   Use centering device and Dial Gauge (YU-03097).

Runout Limit: 0.01 mm (0.0004 in)



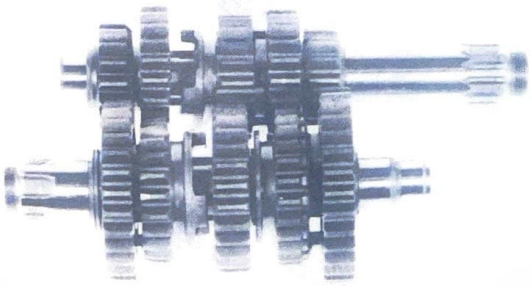
5. Inspect:
   • Gears
   Damage/Wear → Replace.
6. Inspect:
   • Mating dogs
   Cracks/Wear/Damage → Replace.



www.legends-yamaha-enduros.com

7. Inspect:
   • Bearing
   Pitting/Damage → Replace.

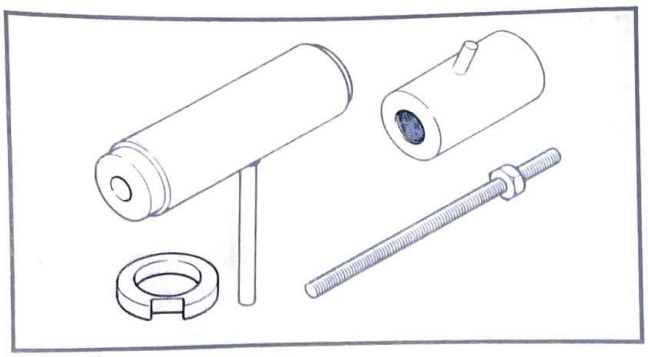
① Play



8. Check:
   • Pinion and wheel gears teeth
   Wear/Damage → Replace.

NOTE:

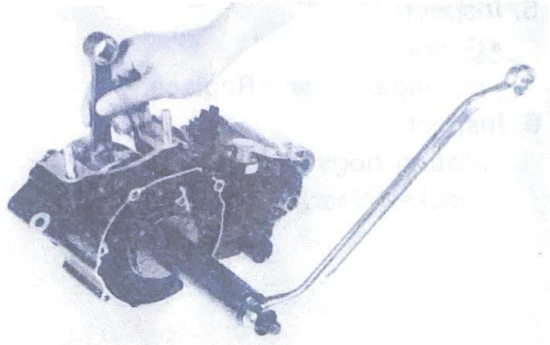
For a malfunctioning gear, replace both gears which are engaged with each other.



ASSEMBLY

Crankshaft

1. Attach:
   - Crankshaft Installing Tool (YU-90050, YU-90062)

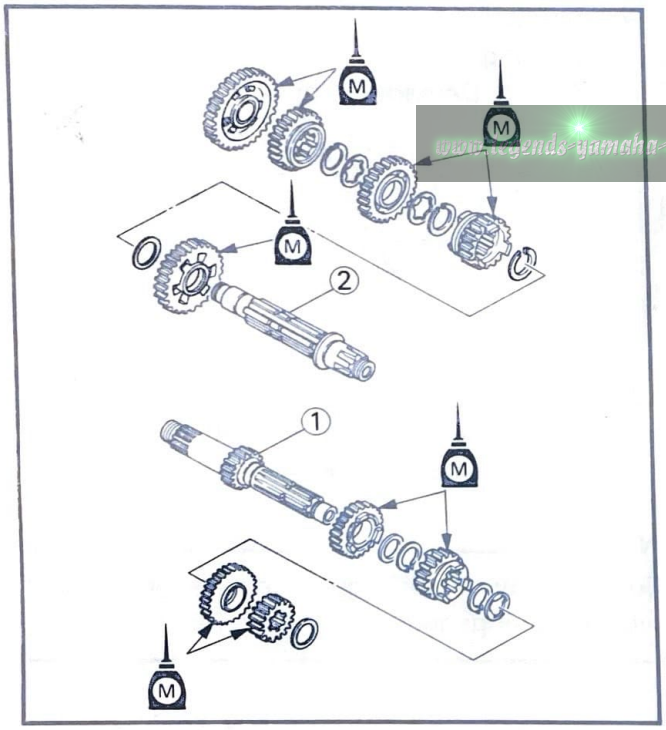


2. Install:
   - Crankshaft

NOTE:

Hold the connecting rod at top dead center with one hand while turning the nut of the Installing Tool with the other. Operate the Installing Tool until the crankshaft bottoms against the bearing.

Transmission and Shifter

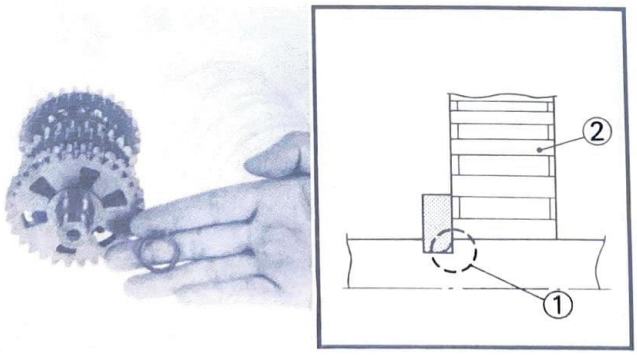


1. Install:
   - Main axle ①
   - Drive axle ②

www.legends-yamaha-enduros.com

NOTE:

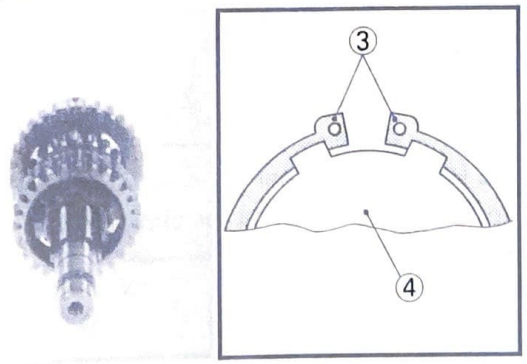
Apply the molybdenum disulfide oil onto the gears inner circumference.



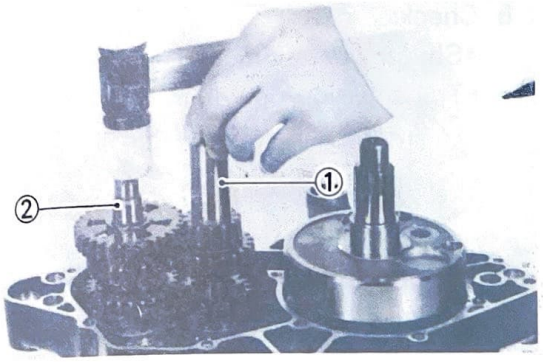
2. Install:
   - Circlip ①

NOTE:

- Be sure the circlip sharp-edged corner ① is positioned opposite side to the washer and gear ②.
- Use new circlip.



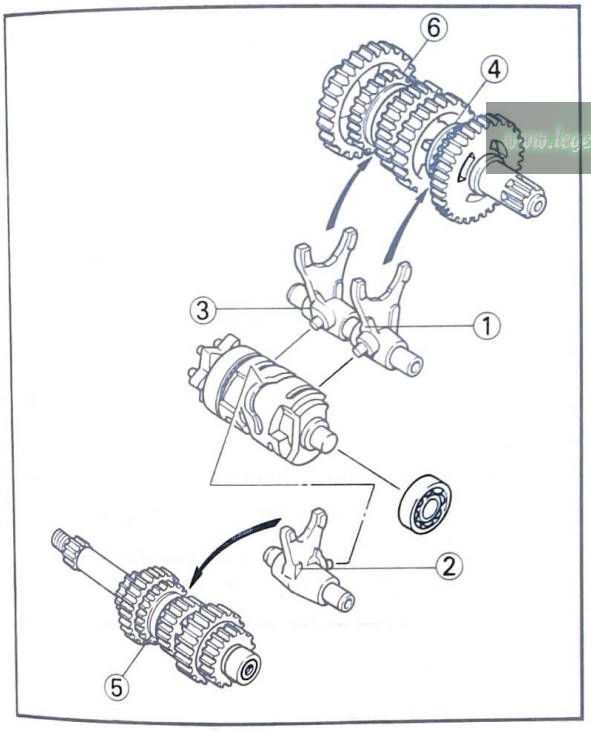
• Be sure the circlip end ③ is positioned at axle spline groove ④.



4. Install:
   • Drive axle ① and main axle ② assembly

NOTE:

When install the drive axle into the crankcase, pay careful attention to the crankcase oil seal lip. It is recommended to set a suitable O-ring into the drive axle groove.

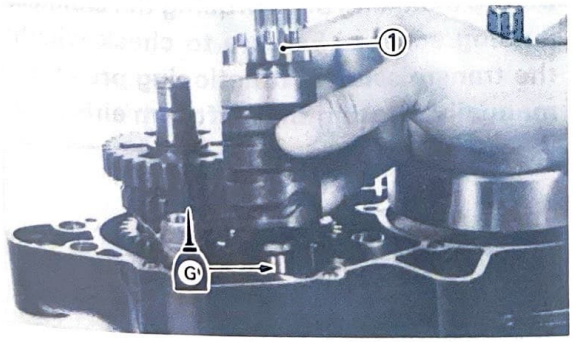


5. Install:
   • Shift fork #1 ①
   • Shift fork #2 ②
   • Shift fork #3 ③

www.legends-yamaha-enduro.com

NOTE:

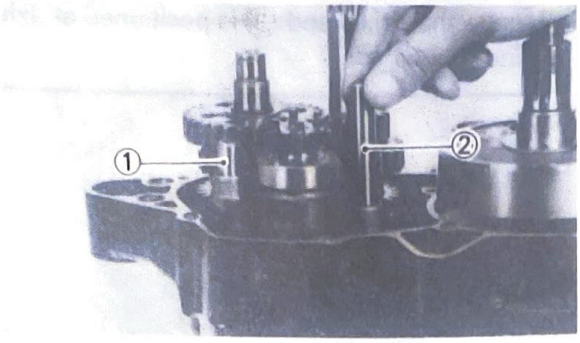
- Mesh the shift fork #2 ② with the 3rd pinion gear ⑤ and #3 ③ with the 4th wheel gear ⑥ on the drive axle.
- Mesh the shift fork #1 ① with the 5th wheel gear ④ gear on the main axle.
- Install the shift forks with the embossed number should face downward.



6. Install:
   • Shift cam ①

NOTE:

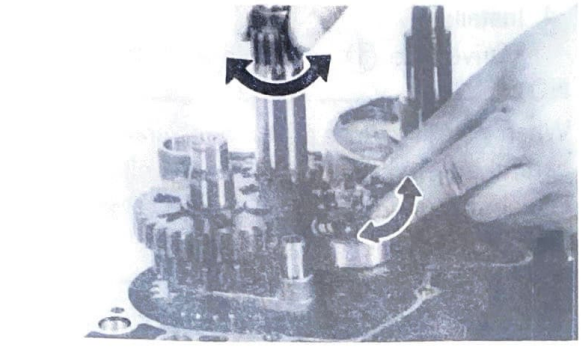
Apply the transmission oil onto the shift cam.



7. Install:
   - Guide bar (Long) ①
   - Guide bar (Short) ②

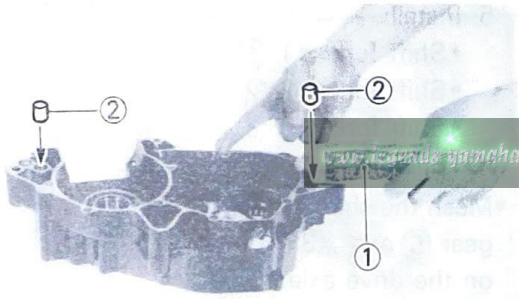
NOTE:

Be sure the long bar ① is inserted into the shift forks #1 and #3 and the short one ② into #2.



8. Check:
   - Shifter operation
   - Transmission operation

   Unsmooth operation → Repair.

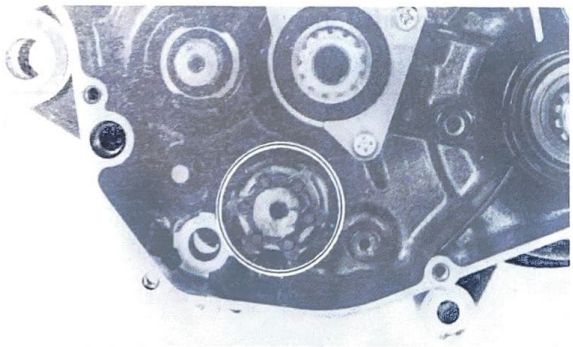


9. Apply:
   - Yamabond No. 4® (ACC-11001-30-00) ①

   To the mating surfaces of both case halves.

10. Install:
    - Dowel pins ②

www.leganes-yamaha-enduros.es



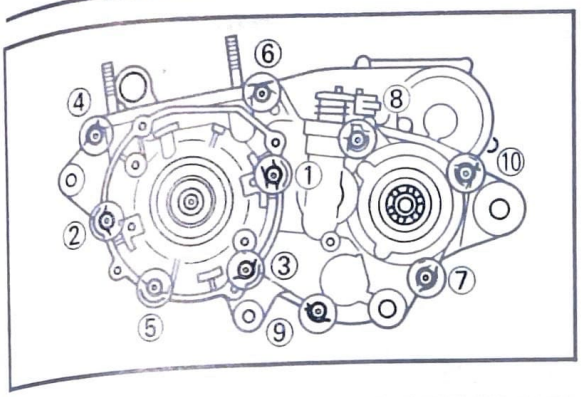
11. Fit the right crankcase onto the left case. Tap lightly on the case with a soft hammer.

NOTE:

Turn the shift cam to the position shown in the figure so that it does not contact the crankcase when installing the crankcase.

CAUTION:

Before installing and torquing the crankcase holding screws, be sure to check whether the transmission is functioning properly by manually rotating the shift cam either way.

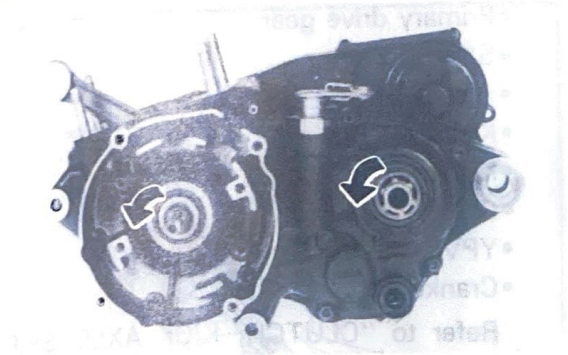


12. Tighten:
    - Screw (Crankcase)

NOTE:

Tighten the crankcase tightening screws in stage, using a crisscross pattern.

	Screws (Crankcase): **12 Nm (1.2 m•kg, 8.7 ft•lb)**

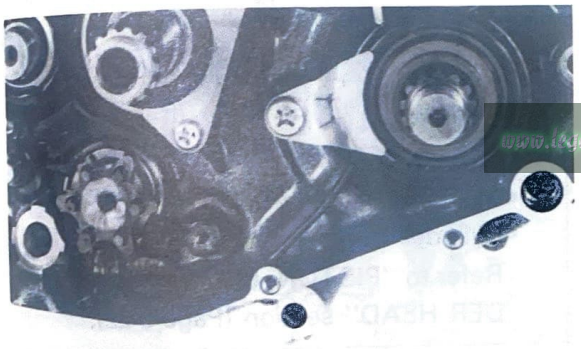


13. Remove:
    - Bond

    Forced out on-the cylinder mating surface.
14. Apply:
    - 2-stroke oil

    To the crank pin, bearing and oil delivery hole.
15. Check:
    - Crankshaft and transmission operation

    Unsmooth operation→Repair.



16. Install:
    - Oil seal holder

www.leyendas-yamaha-enduros.com

	Screws (Oil Seal Holder): **16 Nm (1.6 m•kg, 11 ft•lb)**

INSTALLATION

1. Install:
   - Stator
   - CDI magneto

   Refer to "CDI MAGNETO" section (Page 3-43).

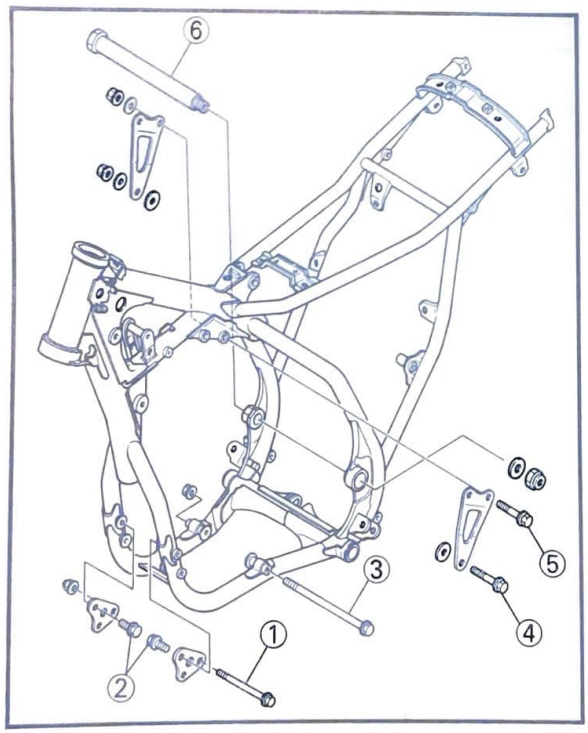
2. Install:
   - Primary drive gear
   - Stopper lever
   - Shifter
   - Kick idle gear
   - Kick axle
   - Clutch
   - YPVS governor gear
   - Crankcase cover (Left)

   Refer to "CLUTCH, KICK AXLE, SHIFT SHAFT AND PRIMARY DRIVE GEAR" section (Page 3-35).

3. Install:
   - Piston
   - Cylinder
   - Cylinder head

   Refer to "PISTON, CYLINDER and CYLINDER HEAD" section (Page 3-22).

www.legends-yamaha-enduros.com

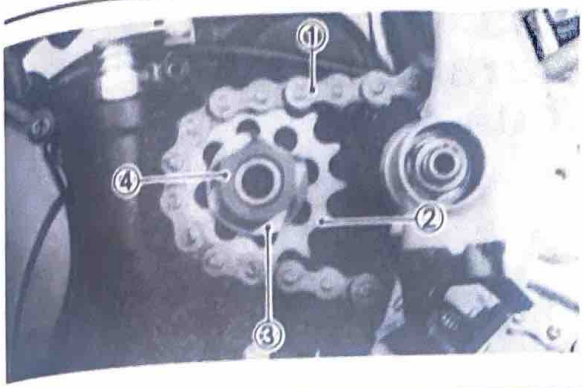


REMOUNTING ENGINE

Reverse engine removal steps. Pay close attention to installation of following steps.

1. Tighten:
   - Engine mounting bolts

Bolt (Frame-Front Engine Stay) ①:
32 Nm (3.2 m•kg, 23 ft•lb)
Bolt (Engine-Front Engine Stay) ②:
32 Nm (3.2 m•kg, 23 ft•lb)
Bolt (Engine (Lower)-Frame) ③:
32 Nm (3.2 m•kg, 23 ft•lb)
Bolt (Engine-Upper Engine Stay) ④:
65 Nm (6.5 m•kg, 47 ft•lb)
Bolt (Frame-Upper Engine Stay) ⑤:
32 Nm (3.2 m•kg, 23 ft•lb)
Pivot Shaft ⑥:
85 Nm (8.5 m•kg, 61 ft•lb)



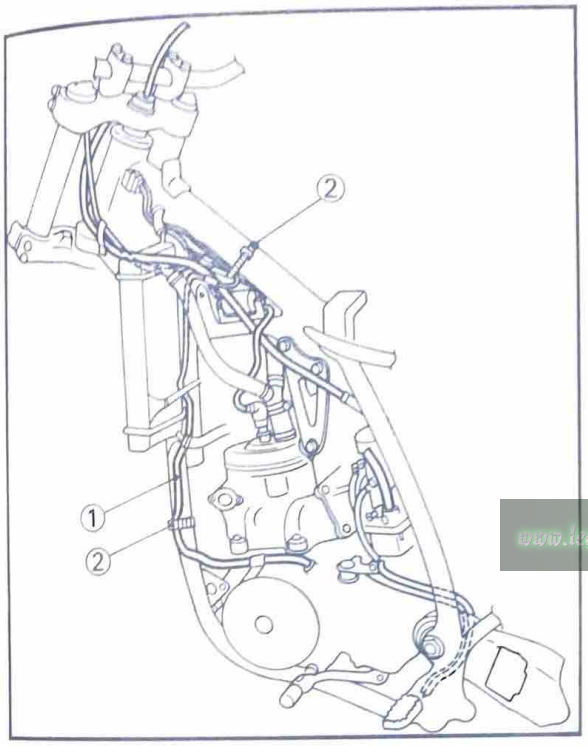
2. Install:
   - Drive chain ①
   - Drive sproket ②
   - Lock washer ③
   - Locknut ④
3. Tighten:
   - Locknut ④

	Locknut (Drive Sprocket): 75 Nm (7.5 m•kg, 54 ft•lb)

4. Bend the lock masher tab to lock the locknut.
5. Connect:
   - CDI magneto lead ①

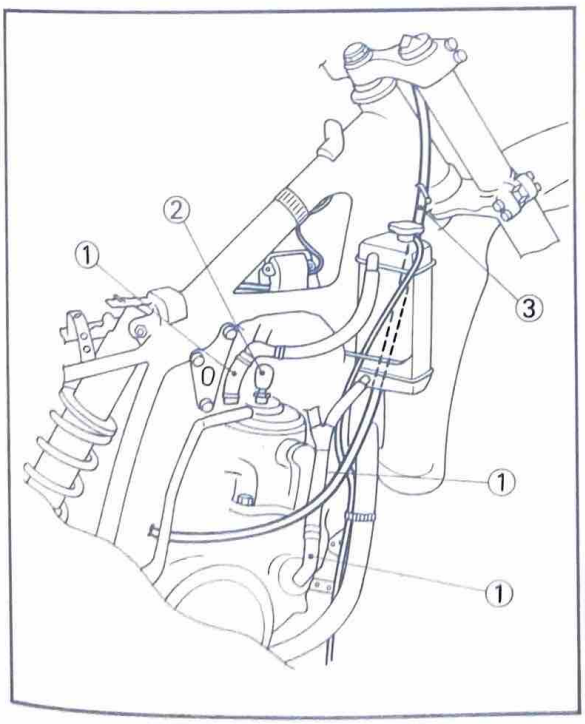
NOTE:

Pass the CDI magneto lead ① as shown.



② Band

www.legends-yamaha-enduros.com



6. Connect:
   - Radiator hases ①
   - Plug cap ②
   - Chutch cable ③

NOTE:

Pass the hoses, cables and lead as shown.

www.legends-yamaha-enduros.com

CHAPTER 4
COOLING SYSTEM MAINTENANCE AND REPAIR

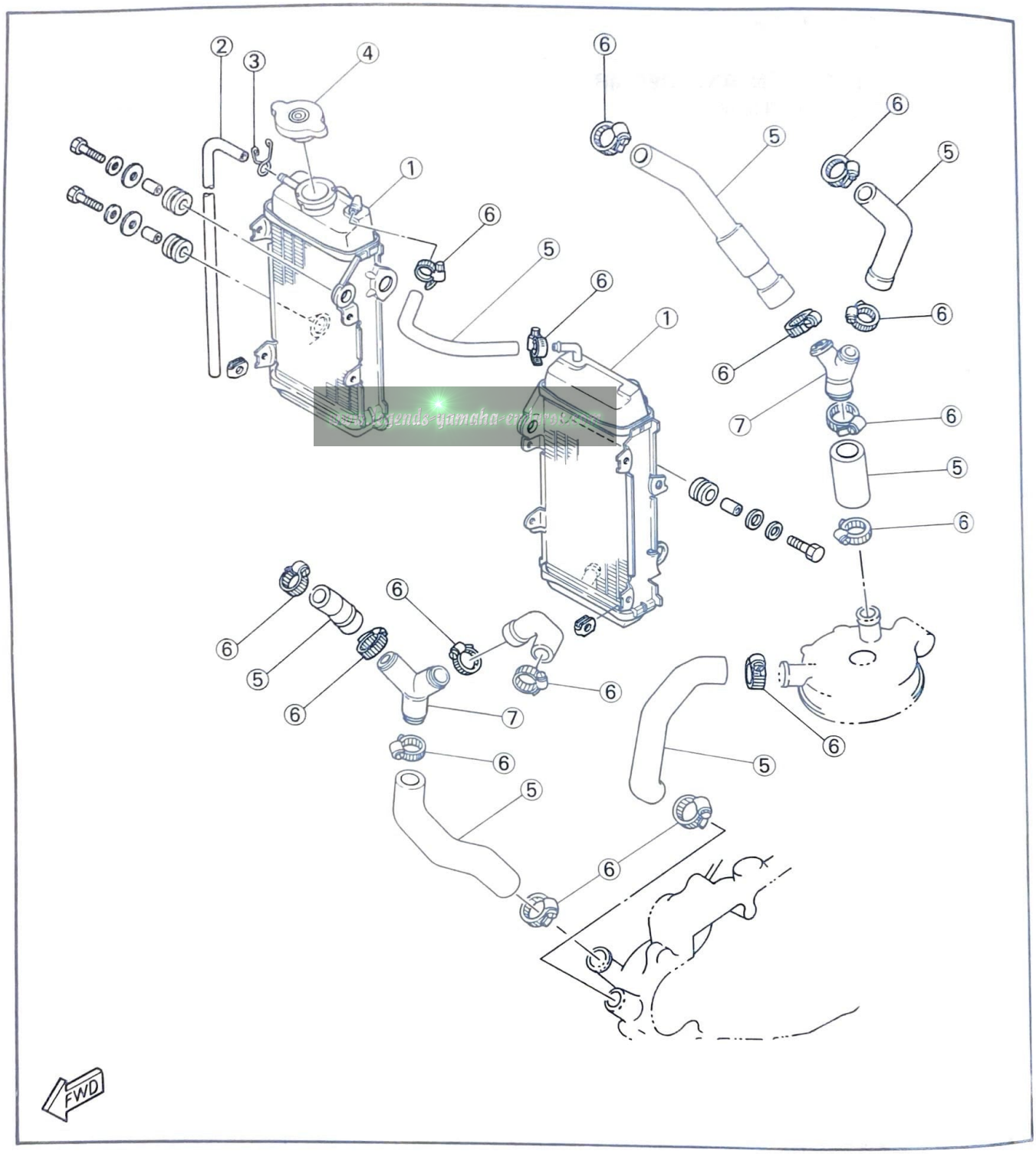
RADIATOR 4-1
REMOVAL 4-2
INSPECTION AND REPAIR 4-3
INSTALLATION 4-3

WATER PUMP 4-4
REMOVAL 4-5
INSPECTION AND REPAIR 4-6
INSTALLATION 4-6

www.legende-yamaha-enduros.com

RADIATOR

① Radiator assembly (Left and right)
② Breather hose
③ Clip
④ Radiator cap
⑤ Radiator hose
⑥ Hose clamp
⑦ Hose joint



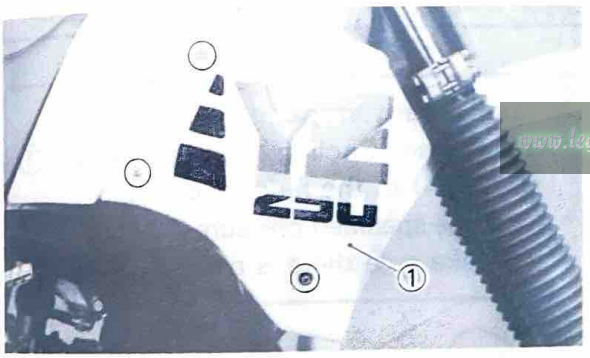
REMOVAL

1. Drain:
   - Coolant

   Refer to "CHAPTER 2 — COOLANT REPLACEMENT" section.

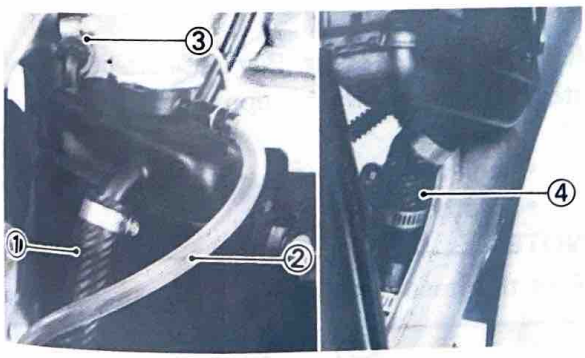
WARNING:

Do not remove the radiator cap when the engine and radiator are hot. Scalding hot fluid and steam may be blown out under pressure, which could cause serious injury. When the engine has cooled, open the radiator cap by the following procedure:
Remove the radiator cover by removing the screw. Place a thick rag, like a towel, over the radiator cap, slowly rotate the cap counterclockwise to the detent. This procedure allows any residual pressure to escape. When the hissing sound has stopped, press down on the cap while turning counterclockwise and remove it.

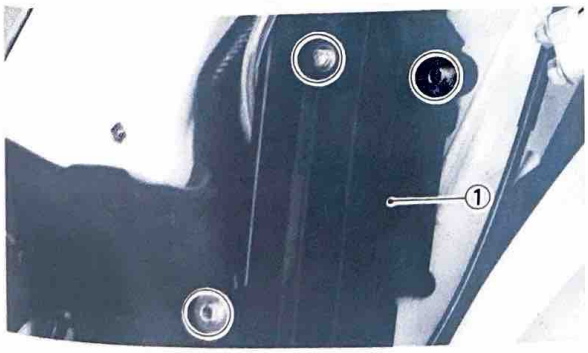


2. Remove:
   - Radiator cover ①

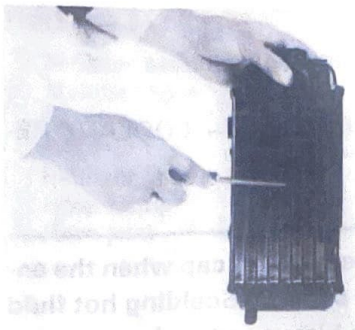
www.legends-yamaha.com



3. Disconnect:
   - Radiator hose ①, ③, ④
   - Breather hose ②



4. Remove:
   - Radiator ①

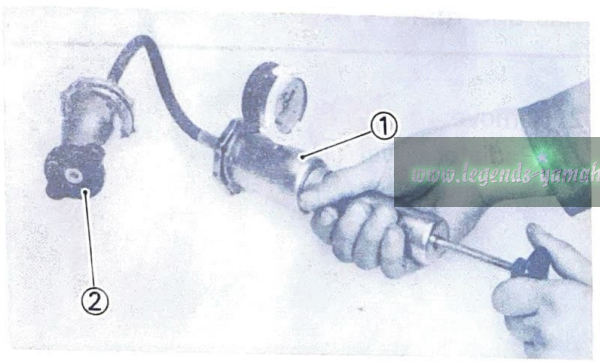


INSPECTION AND REPAIR

1. Inspect:
   - Radiator core
     Obstruction → Blow out with compressed air through rear or the radiator.
     Flattend fin → Repair/replace.

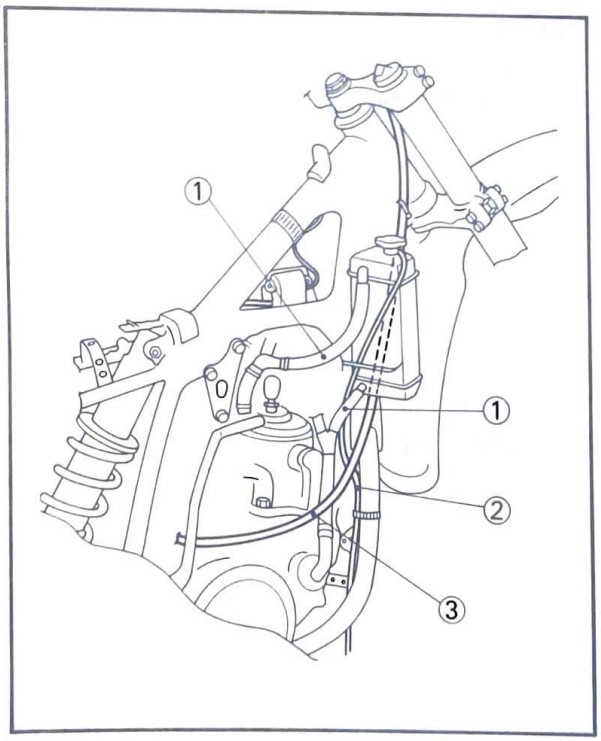
2. Inspect:
   - Radiator hoses
     Crack/Damage → Replace.
3. Measure:
   - Valve opening pressure
     Valve opens at pressure below the specified valve or defective → Replace.

Valve Opening Pressure:
108 kPa (1.1 kg/cm^2, 15.6 psi)



Measurement steps:
- Attach the Cooling System Tester ① (YU-33984) to the radiator cap ②.
- Apply the specified pressure for 10 seconds, and make sure there is no pressure drop.

www.legends-yamaha-enduro.com



INSTALLATION

Reverse removal steps. Pay close attention to installation of following steps.

1. Connect:
   - Radiator hoses ①
   - Breather hose ②

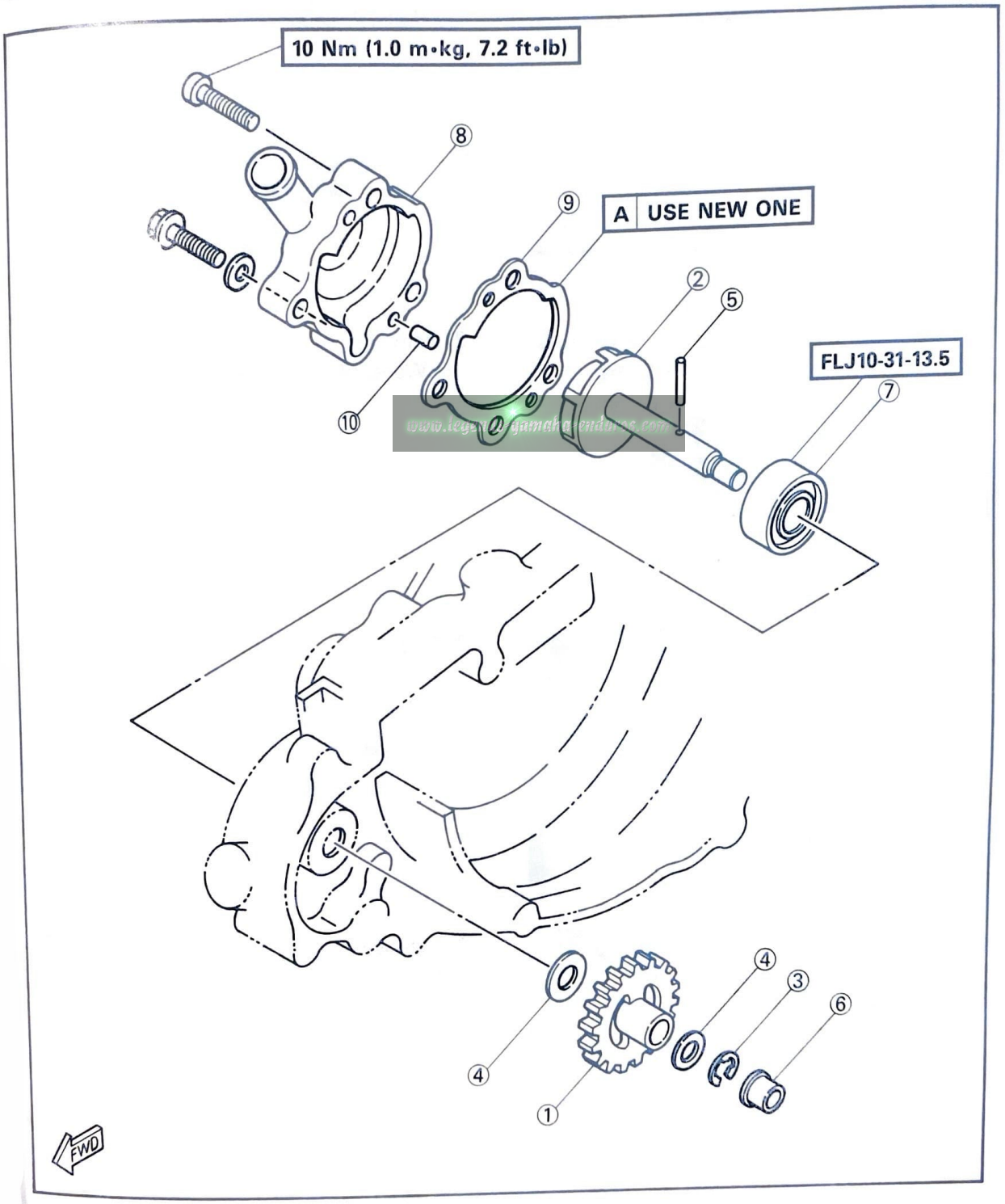
NOTE:

Pass the hoses and cable as shown.

③ Clutch cable

WATER PUMP

① Water pump driven gear
② Impeller shaft
③ Circlip
④ Plain washer
⑤ Pin
⑥ Bush
⑦ Oil seal
⑧ Water pump cover
⑨ Gasket
⑩ Pin



REMOVAL

NOTE:

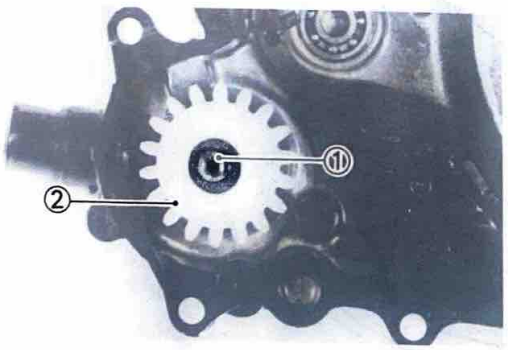
It is not necessary to disassemble the water pump, unless there is no abnormarity such as excessive change in coolant level, discoloration of coolant, or milky transmission oil.

1. Remove:
   - Crankcase cover (Left)

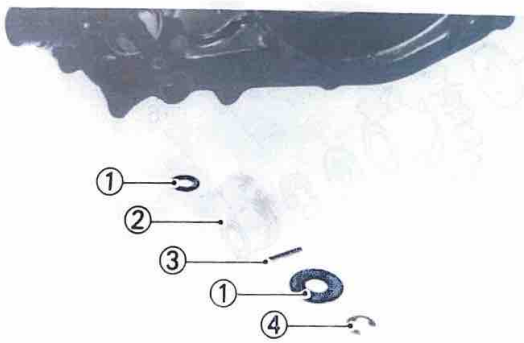
   Refer to "REMOVAL-CRANKCASE COVER (LEFT)" section (Page 3-30).

www.legends-yamaha-enduros.com

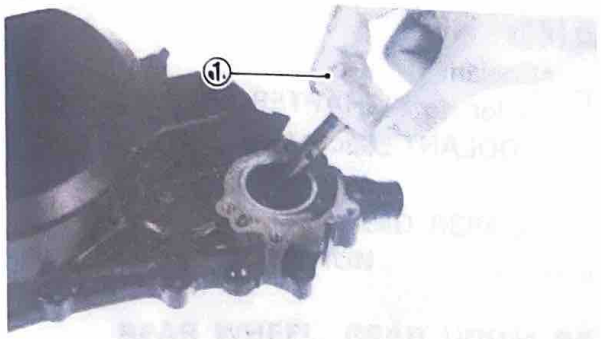
2. Remove:
   - Water pump cover ①



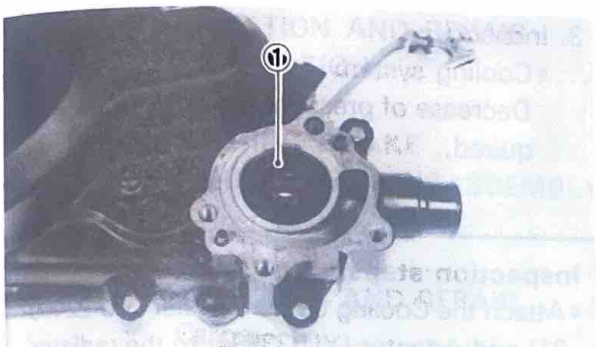
3. Remove:
   - Circlip ①
   - Impeller shaft ②



4. Remove:
   - Plain washer ①
   - Water pump driven gear ②
   - Pin ③
   - Circlip ④



5. Remove:
   • Impeller shaft ①



INSPECTION AND REPAIR

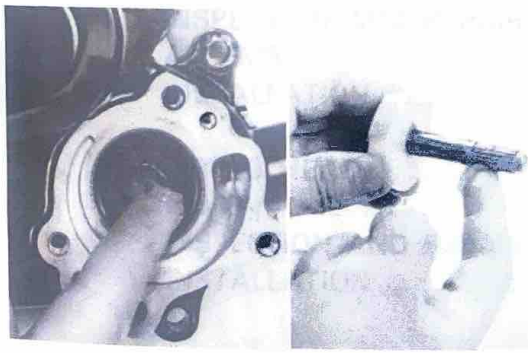
1. Inspect:
   • Oil seal ①
   Wear/Damage → Replace.

NOTE:

Install the oil seal with the "WATER SIDE" mark on the outside.

2. Inspect:
   • Impeller shaft
   Bend/Wear Damage → Replace.

www.legends-yamaha-enduros.com



INSTALLATION

Reverse removal steps. Pay close attention to installation of following steps.

1. Install:
   • Impeller shaft

NOTE:

- Take care so that the oil seal lip is not damaged or the spring does not slip off its position.
- When installing the impeller shaft, apply a grease to oil seal and impeller shaft. And install the shaft while turning it.

2. Fill:
   - Coolant

   Refer to "CHAPTER1-FUEL, OIL AND COOLANT" section.

3. Inspect:
   - Cooling system

   Decrease of pressure (leaks)→Repair as required.

Inspection steps:
- Attach the Cooling System Tester (YU-22460-01) and Adapter (YU-33984) to the radiator.
- Apply 108 kpa (1.1 kg/cm^2, 16 lb/in^2) pressure.
- Measure the indicated pressure with gauge.

www.legends-yamaha-enduros.com

CHAPTER 5
CHASSIS

FRONT WHEEL 5-1
REMOVAL 5-2
INSPECTION AND REPAIR 5-2
INSTALLATION 5-3

REAR WHEEL, REAR DRUM BRAKE AND SPROCKETS 5-5
REMOVAL 5-6
INSPECTION AND REPAIR 5-7
INSTALLATION 5-8

FRONT DISC BRAKE 5-10
REMOVAL AND DISASSEMBLY 5-11
Caliper 5-11
Master Cylinder 5-11
INSPECTION AND REPAIR 5-12
Caliper 5-12
Master Cylinder 5-13
Brake Disc and Brake Hose 5-13
ASSEMBLY AND INSTALLATION 5-14
Master Cylinder 5-14
Caliper 5-15
AIR BLEEDING 5-17

FRONT FORK 5-18
HANDLING NOTE 5-19
REMOVAL 5-19
DISASSEMBLY 5-20
INSPECTION AND REPAIR 5-21
ASSEMBLY 5-22
INSTALLATION 5-25

STEERING HEAD 5-27
REMOVAL 5-28
INSPECTION AND REPAIR 5-29
INSTALLATION 5-29

www.legende-yamaha-enduros.com

REAR SHOCK ABSORBER 5-32
HANDLING NOTES 5-33
NOTES ON DISPOSAL (YAMAHA DEALERS ONLY) 5-34
BRAKE ACTUATED SUSPENSION SYSTEM (B.A.S.S.) 5-34
B.A.S.S. CONTROL CABLE ADJUSTMENT 5-34
REMOVAL 5-35
DISASSEMBLY 5-36
INSPECTION AND REPAIR 5-36
ASSEMBLY AND INSTALLATION 5-37

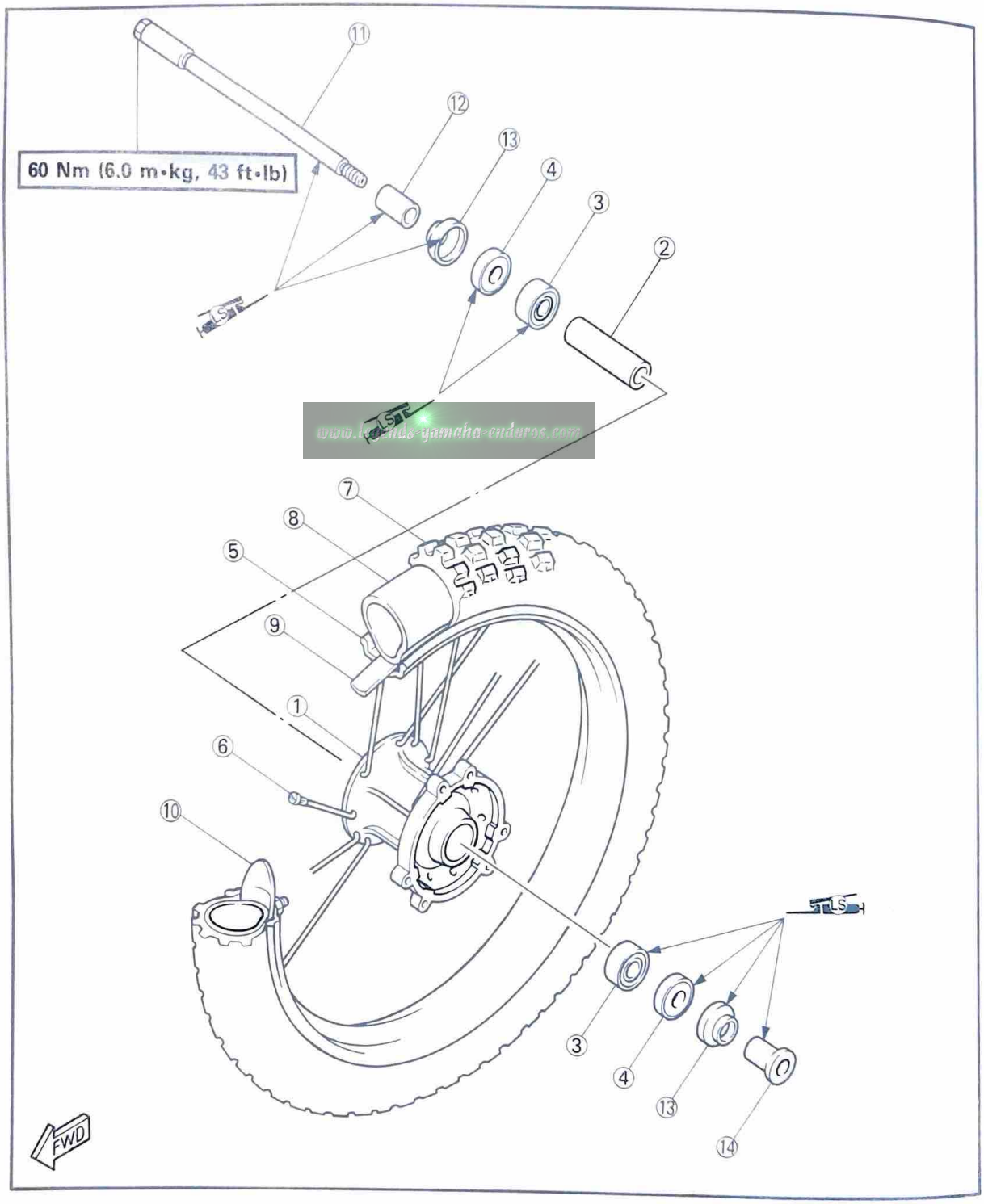
SWINGARM 5-39
SWINGARM FREE PLAY AND MOVEMENT INSPECTION 5-40
REMOVAL 5-40
DISASSEMBLY 5-41
INSPECTION AND REPAIR 5-42
SWINGARM SIDE CLEARANCE INSPECTION AND ADJUSTMENT 5-44
ASSEMBLY 5-45
INSTALLATION 5-47

www.legends-yamaha-enduros.com

www.legends-yamaha-enduros.com

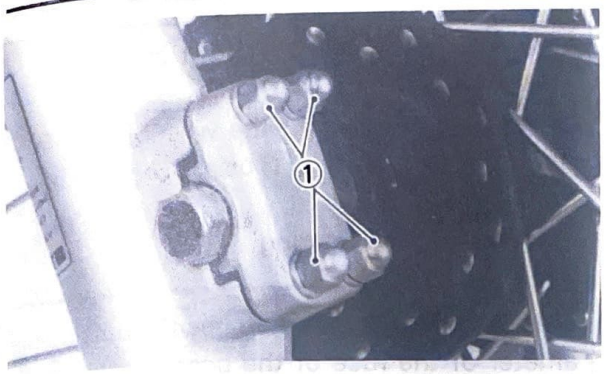
FRONT WHEEL

① Front hub
② Spacer
③ Bearing
④ Dust seal
⑤ Front wheel rim
⑥ Spoke
⑦ Tire
⑧ Tube (Front)
⑨ Rim band
⑩ Beed spacer
⑪ Front wheel axle
⑫ Collar (Right)
⑬ Hub cover
⑭ Collar (Left)



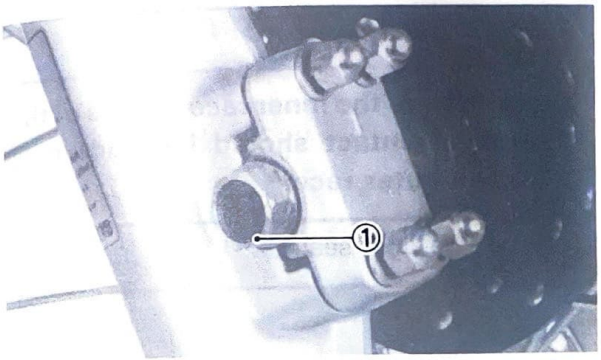
www.forums-yamaha-enduros.com

5

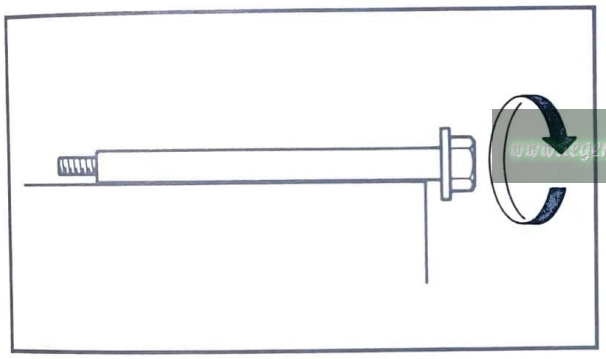


REMOVAL

1. Elevate the front wheel by placing a suitable stand under the engine.
2. Loosen:
   - Nut (Axle holder) ①



3. Remove:
   - Front wheel axle ①
   - Front wheel
   - Collar (Left and right)



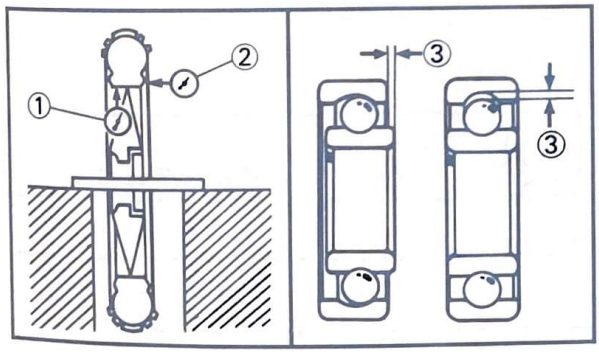
INSPECTION AND REPAIR

1. Eliminate any corrosion from parts.
2. Inspect:
   - Front wheel axle
     Roll the axle on a flat surface.
     Bends→Replace.

www.legends-yamaha-enduros.com

WARNING:

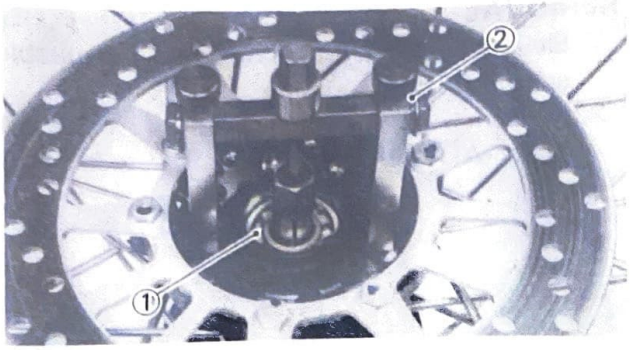
Do not attempt to straighten a bent axle.

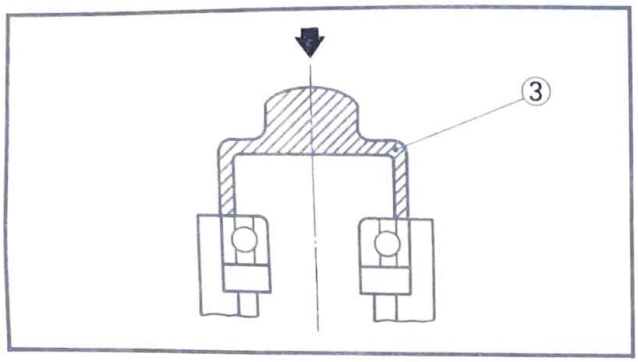


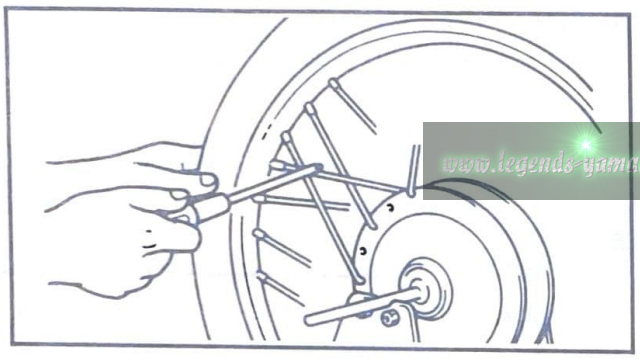
3. Inspect:
   - Wheel
     Cracks/Bends/Warpage→Replace.
4. Measure:
   - Wheel runout
     Over specified limit→Inspect Loose Spoke or inspect bearing play ③.

Rim Runout Limits:
Radial ①: 2.0 mm (0.08 in)
Lateral ②: 2.0 mm (0.08 in)

5. Inspect:
   - Bearing play ③
     Exists Replace.
     Pitting damage







Wheel bearing replacement steps:
- Remove the dust seal.
- Clean the out side of the wheel hub.
- Remove the bearing ① using a general bearing puller ②.
- Install the new bearing.

NOTE:

Use a socket ③ that matches the outside diameter of the race of the bearing.

CAUTION:

Do not strike the inner race of balls of the bearing. Contact should be made only with the outer race.

- Install the dust seal.

6. Check:
   - Loose spokes

   Turn the wheel and tap the spokes with a screwdriver.

NOTE:

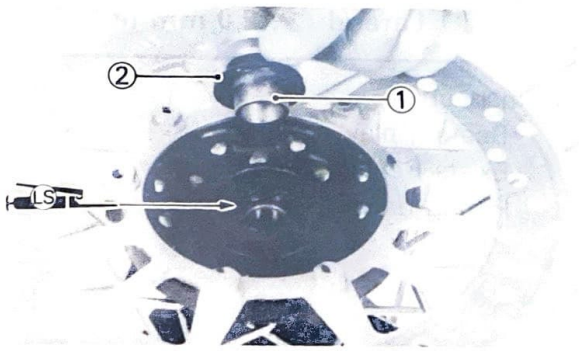
A tight spoke will emit a clear, ringing tone; a loose spoke will sound flat.

7. Tighten:
   - Loose spokes

Spoke:
6 Nm (0.6 m•kg, 4.3 ft•lb)

NOTE:

Check the wheel runout after tightening spoke.



INSTALLATION

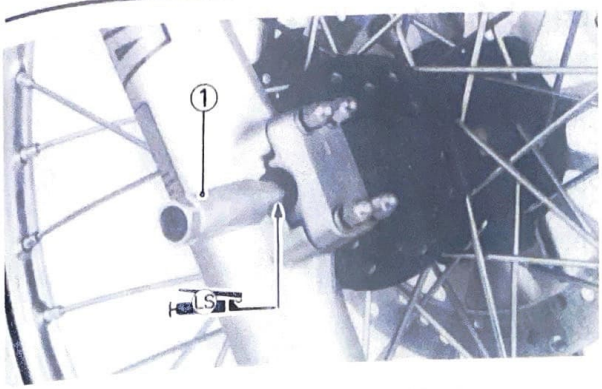
Reverse the "REMOVAL" steps. Pay close attention to installation of following steps.

1. Install:
   - Collar ①
   - Hub cover ②

NOTE:

Apply the lithium soap base grease onto the dust seal.

www.legends-yamaha-enduros.com



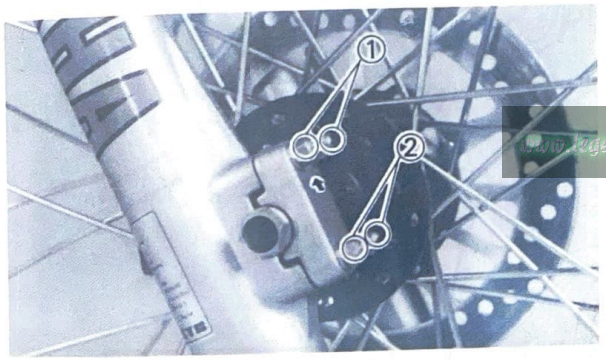
2. Install:
   • Front wheel axle ①

NOTE:

Apply the lithium soap base grease onto the front wheel axle.

3. Tighten
   • Front wheel axle

Front Wheel Axle:
60 Nm (6.0 m•kg, 43 ft•lb)



4. Tighten:
   • Nut (Axle holder)

NOTE:

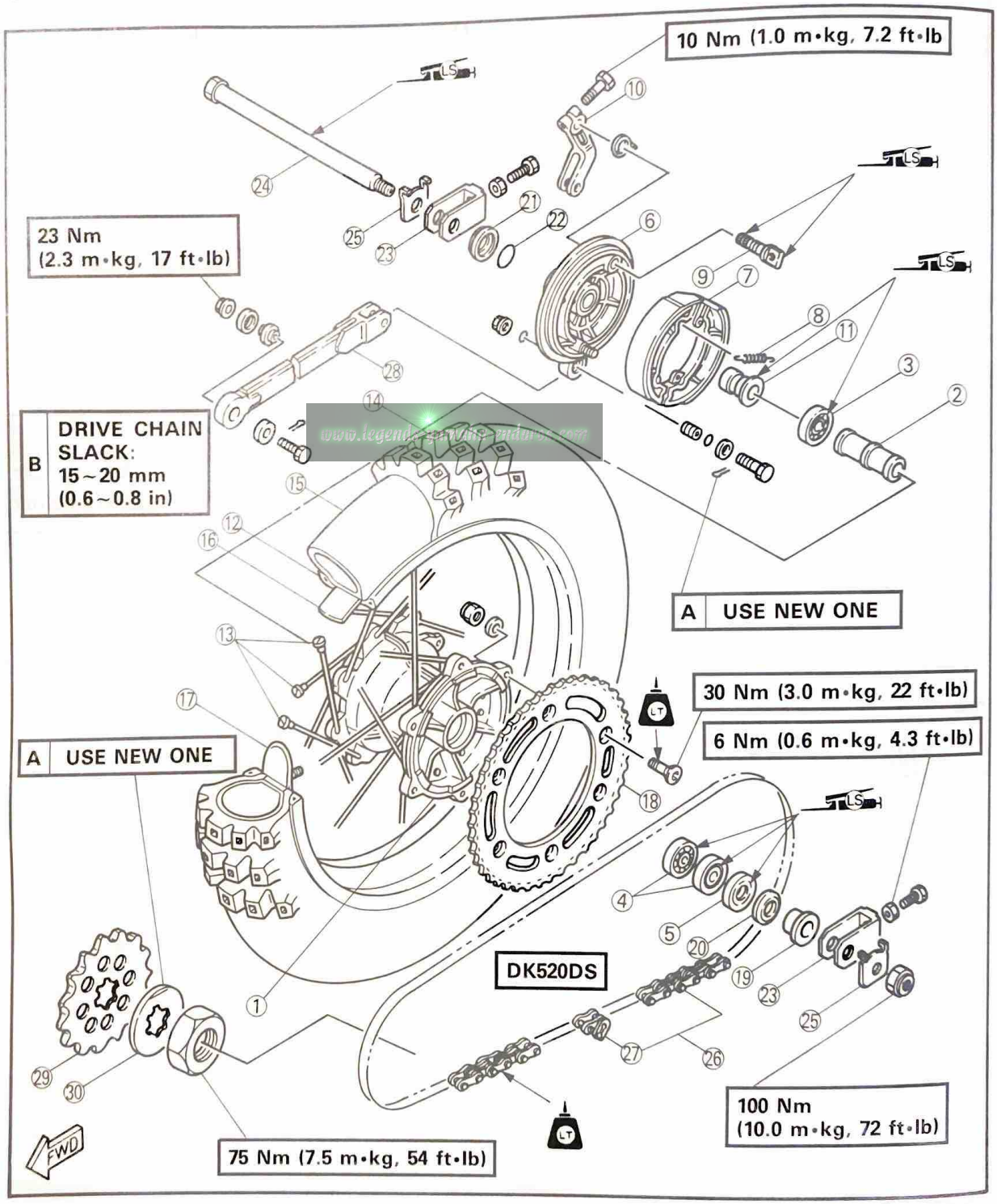
• Face the arrow mark upward.
• When tightening the axle holder nuts, first, tighten the nuts on the upper side of axle holder.

① 1st
② 2nd

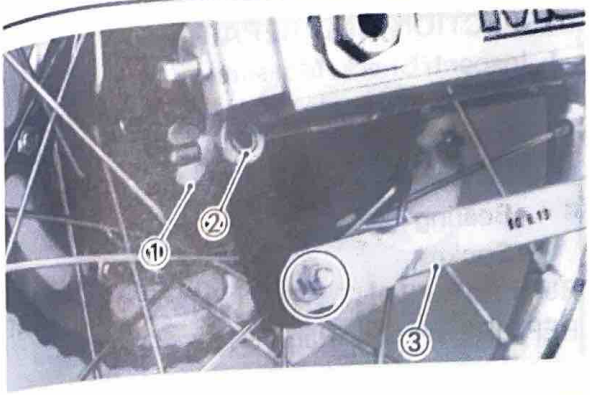
5

REAR WHEEL, REAR DRUM BRAKE AND SPROCKETS

① Rear hub
② Spacer
③ Bearing
④ Bearing
⑤ Dust seal
⑥ Rear brake shoe plate
⑦ Brake shoe
⑧ Spring
⑨ Brake camshaft
⑩ Brake cam lever
⑪ Collar
⑫ Rear wheel rim
⑬ Spoke
⑭ Tire
⑮ Tube
⑯ Rim band
⑰ Bead spacer
⑱ Driven sprocket
⑲ Collar
⑳ Wheel hub cover
㉑ Plate cover
㉒ O-ring
㉓ Chain puller
㉔ Rear wheel axle
㉕ Special washer
㉖ Drive chain
㉗ Chain joint
㉘ Tension bar
㉙ Drive sprocket
㉚ Lock washer

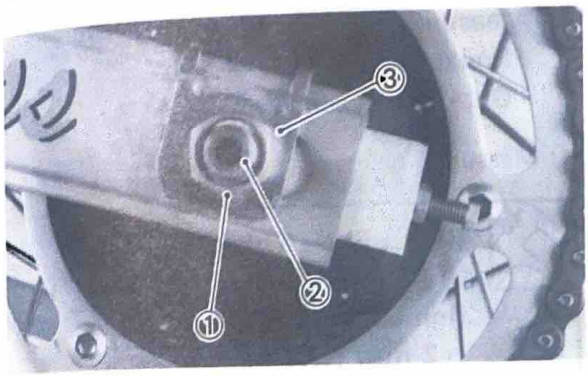


www.legendsservice-enduro.com

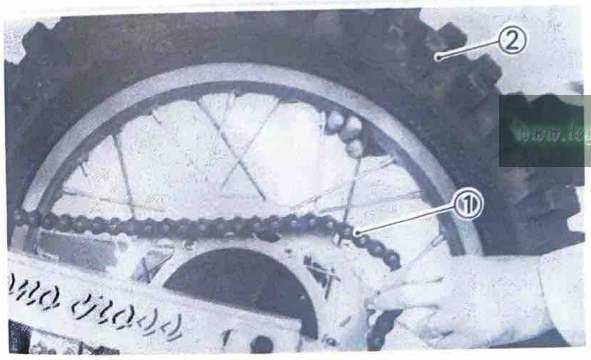


REMOVAL

1. Loosen:
   - Nut (Rear wheel axle)
2. Elevate the rear wheel by placing the suitable stand under the engine.
3. Remove:
   - Rear brake adjuster ①
   - Pin ②
   - Tension bar ③

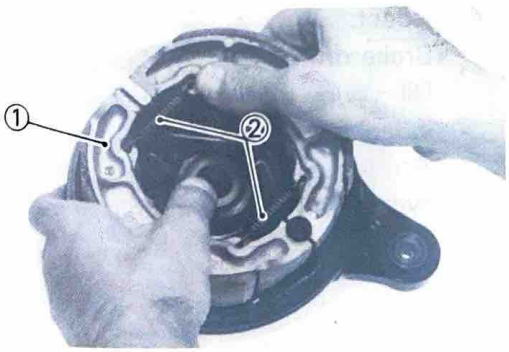


4. Remove:
   - Nut (Rear wheel axle) ①
   - Rear wheel axle ②
   - Special washers ③

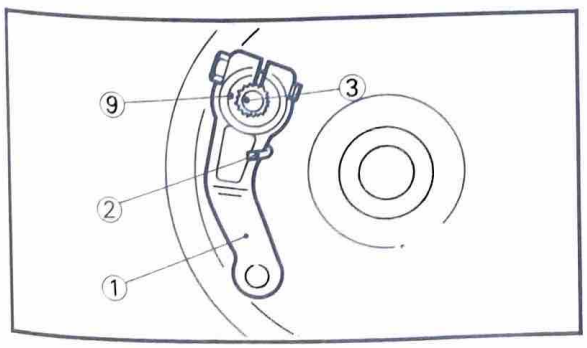


5. Remove:
   - Drive chain ①
     Push the rear wheel forward.
   - Rear wheel ②

www.legends-yamaha.com



6. Remove:
   - Brake shoes ①
   - Springs ②
   - Collar



7. Remove:
   - Brake cam lever ①
   - Return spring ②
   - Brake cam shaft ③

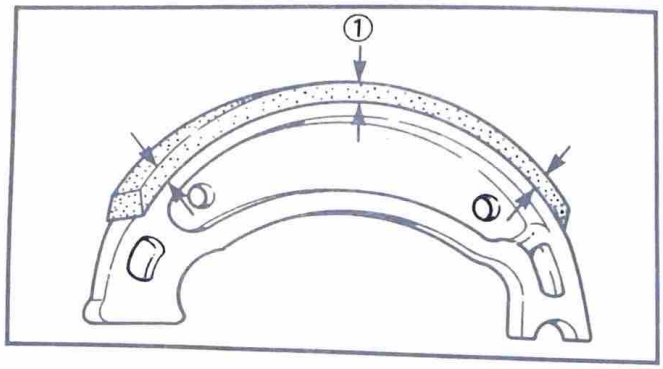
NOTE:

When removing the brake cam lever from the shaft, put match mark ⓐ on the brake cam lever.

INSPECTION AND REPAIR

1. Inspect/Check/Measure:
   - Rear wheel axle
   - Wheel
   - Wheel runout
   - Bearing
   - Spokes

Refer to "FRONT WHEEL-INSPECTION AND REPAIR" section (Page 5-2).

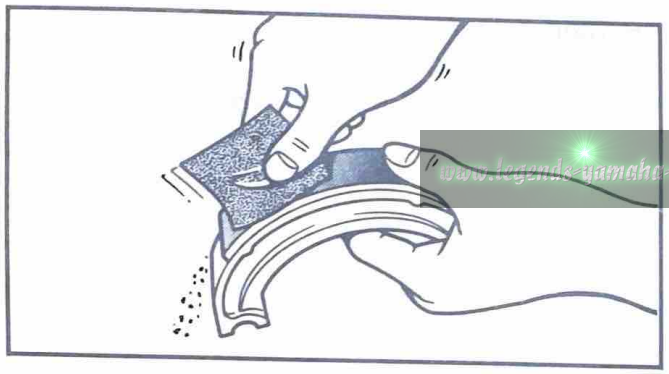


2. Measure:
   - Brake shoes (Thickness)

   Out of specification → Replace.

① Measuring point

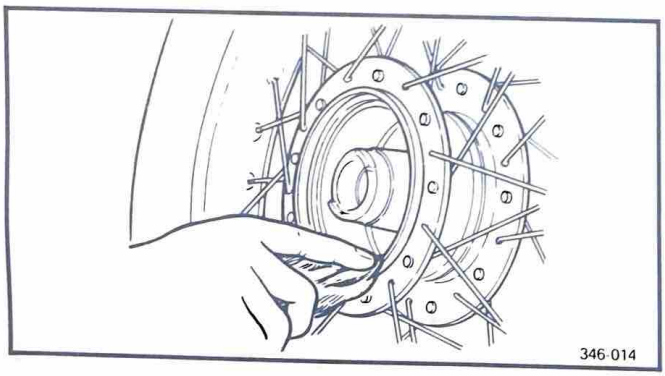
Brake Shoe Thickness:
4 mm (0.16 in)
Replacement Limit:
2 mm (0.08 in)



3. Inspect:
   - Brake shoes

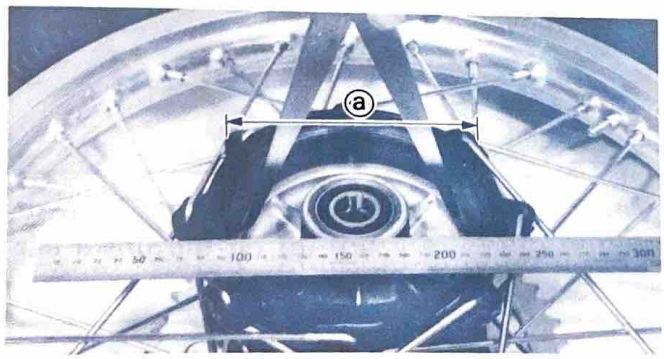
   Glazed parts → Sand with coarse sandpaper.

www.legende-yamaha-enduros.com



4. Inspect:
   - Brake drum (Inner surface)

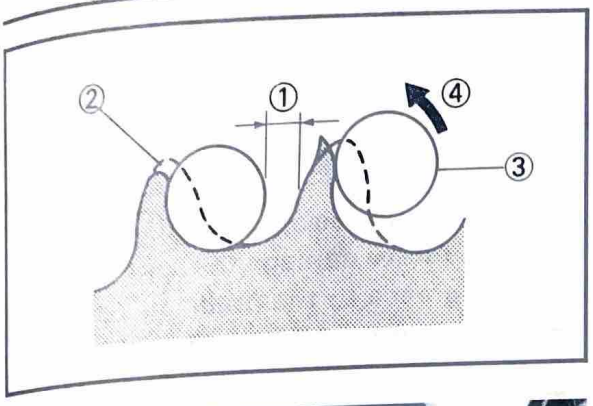
   Oil → Wipe off brake drum with rag soaked in lacquer thinner or solvent.
   Scratches → Polish brake drum lightly and evenly with emery cloth.



5. Measure:
   - Brake drum inside diameter ⓐ

   Out of specification → Replace.

Brake Drum Wear Limit:
131 mm (5.16 in)



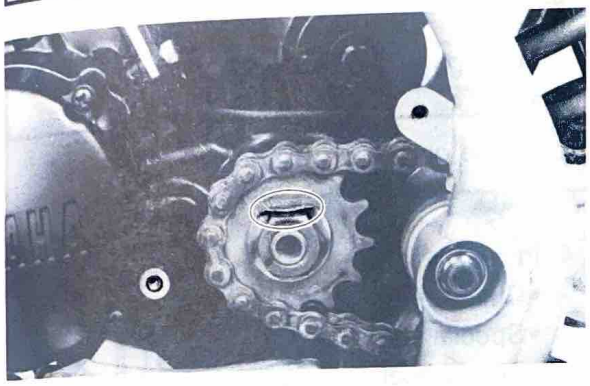
6. Inspect:
   - Drive sprocket
   - Driven sprocket

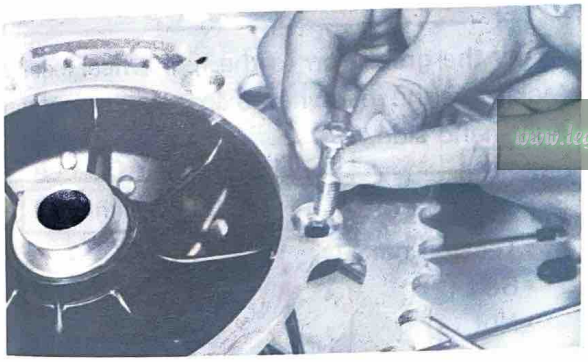
   More than 1/4 teeth ① wear→Replace sprocket.
   Bent teeth→Replace sprocket.

② Correct
③ Roller
④ Slip off

NOTE:

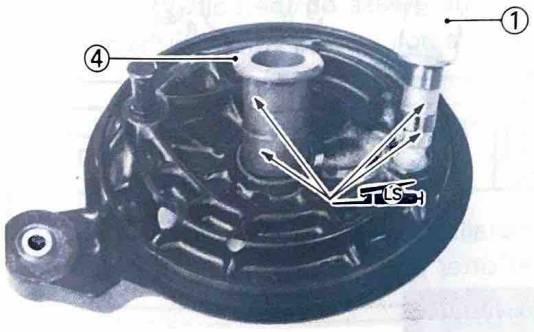
When replacing the drive sprocket, always use a new lock washer. After tightening the sprocket nut to the specification, be sure to lock it with the lock washer.

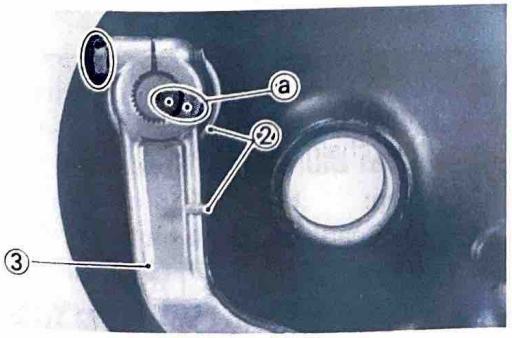




Nut (Drive Sprocket):
75 Nm (7.5 m•kg, 54 ft•lb)
Bolt (Driven Sprocket):
30 Nm (3.0 m•kg, 22 ft•lb)
LOCTITE®

www.legends-yamaha-enduros.com





INSTALLATION

Reverse removal steps. Pay close attention to installation of following points.

1. Install:
   - Brake camshaft ①
   - Spring ②
   - Brake cam lever ③
   - Collar ④

NOTE:

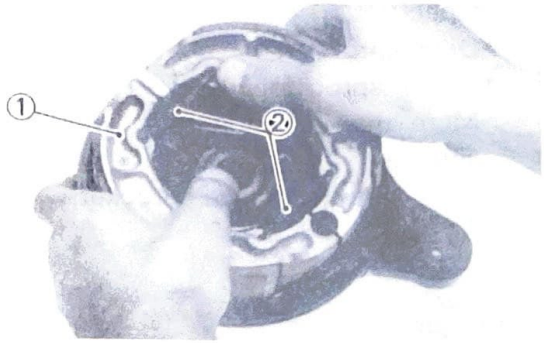
- Apply the grease on to the brake cam shaft ① and collar ③ lightly.
- Align the punch marks ⓐ.

CAUTION:

Wipe off the excess grease.

Bolt (Brake Cam Lever):
10 Nm (1.0 m•kg, 7.2 ft•lb)

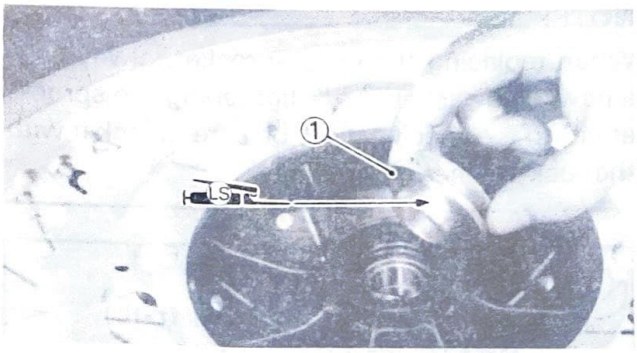
5



2. Install:
   - Brake shoes ①
   - Springs ②

CAUTION:

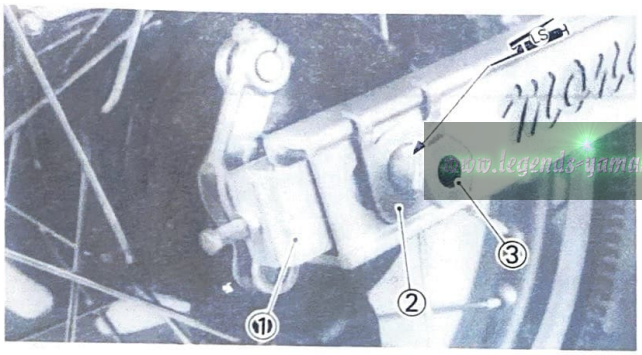
When installing the spring and brake shoe, take care not to damage the spring and not to apply grease to the brake shoes.



3. Install:
   - Wheel collar ①

NOTE:

Apply the grease on to the collar.



4. Install:
   - Chain pullers ①
   - Special washers ②
   - Rear wheel axle ③

NOTE:

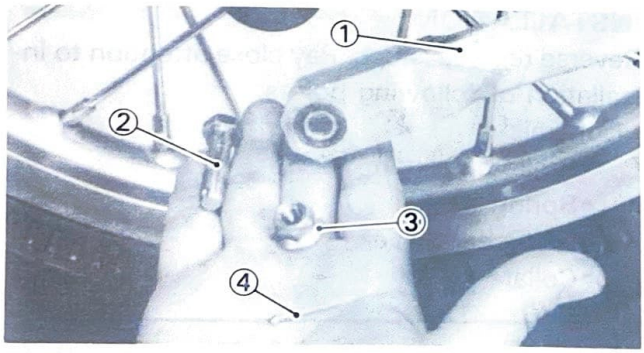
- Apply the grease on to the rear wheel axle.
- Make sure the rear wheel axle is inserted on the right-hand side.

www.legends-yamaha-enduros.com

5. Install:
   - Tension bar ①
   - Bolt ②
   - Nut ③

NOTE:

- Apply the grease on the bolt ②.
- Insert the bolt toward you from the other side.



Nut (Tension Bar):
23 Nm (2.3 m•kg, 17 ft•lb)

6. Install:
   - Cotter pin ④

WARNING:

Use new cotter pin.

7. Adjust:
   - Rear brake pedal free play.
   - Drive chain slack

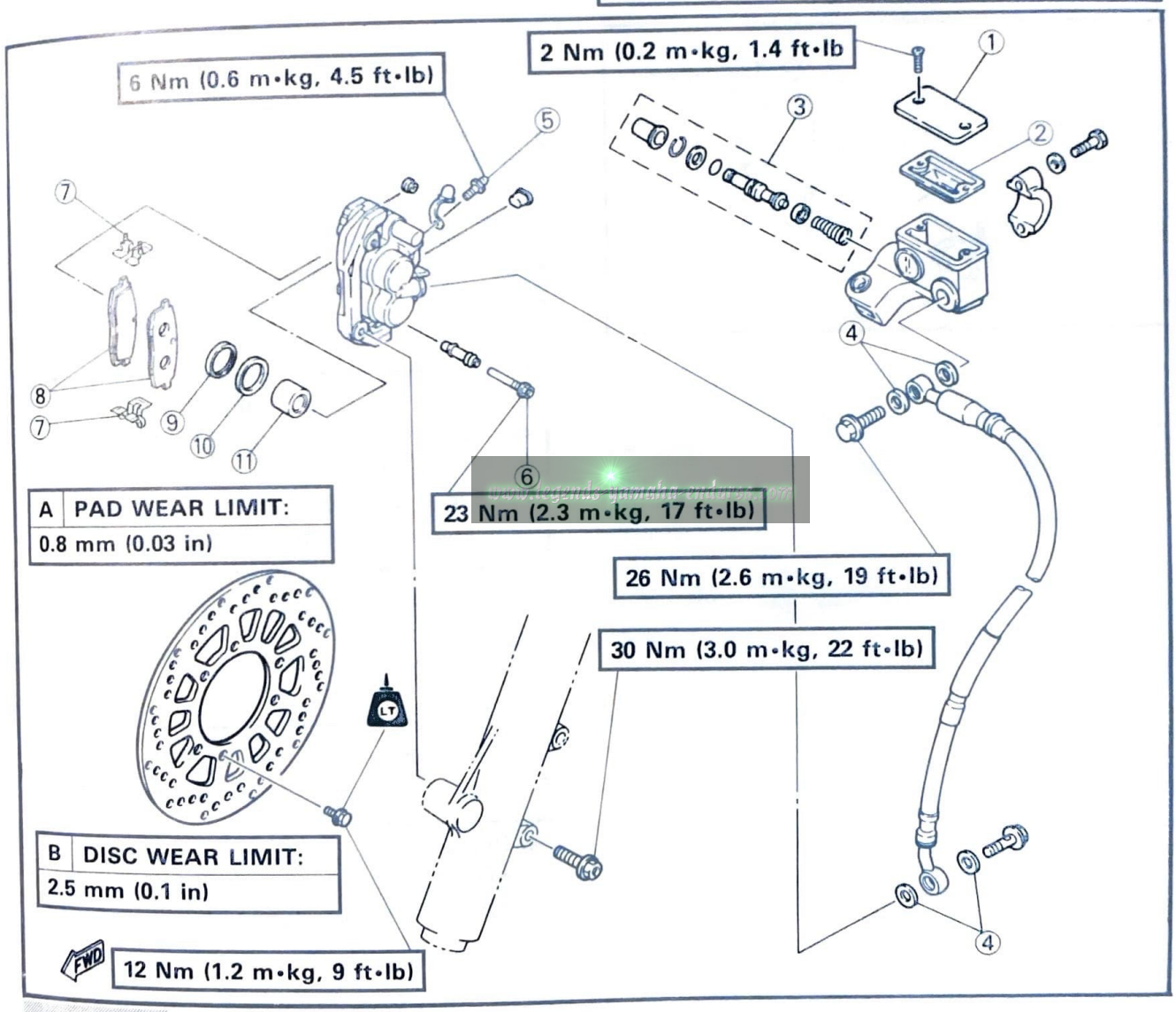
8. Tighten:
   - Nut (Rear wheel axle)

Nut (Rear Wheel Axle):
100 Nm (10.0 m•kg, 72 ft•lb)

FRONT DISC BRAKE

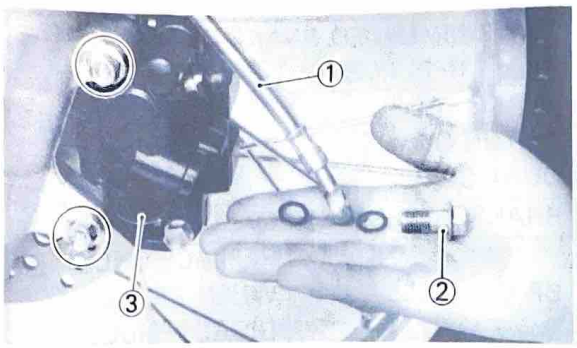
① Cap
② Master cylinder cap
③ Master cylinder kit
④ Copper washer
⑤ Bleed screw
⑥ Caliper bolt
⑦ Pad spring (Upper and lower)
⑧ Pad
⑨ Dust seal
⑩ Piston seal
⑪ Piston

RECOMMENDED BRAKE COMPONENT REPLACEMENT SCHEDULE	
BRAKE PADS	AS REQUIRED
PISTON SEAL, DUST SEAL	EVERY 2 YEARS
BRAKE HOSES	EVERY 4 YEARS
BRAKE FLUID	REPLACE ONLY WHEN BRAKES DISASSEMBLED



CAUTION:

Disc brake components rarely require disassembly. DO NOT:
- **Disassembly components unless absolutely necessary.**
- **Use solvents on internal brake component.**
- **Use contaminated brake fluid for cleaning. Use only clean brake fluid.**
- **Allow brake fluid to come in contact with the eyes otherwise eye injury may occur.**
- **Allow brake fluid to contact painted surfaces or plastic parts otherwise damage may occur.**
- **Disconnect any hydraulic connection otherwise the entire system must be disassembled, drained, cleaned, and then properly filled and bled after reassembly.**

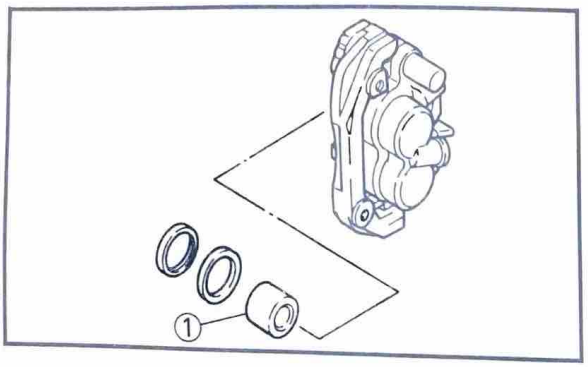


REMOVAL AND DISASSEMBLY

Caliper

1. Place the container under the brake hose ① end.
2. Remove:
   - Brake hose ①
   - Union bolt ②
   - Caliper ③

   Drain the old fluid.



3. Remove:
   - Piston ①

   Use compressed air and proceed carefully.

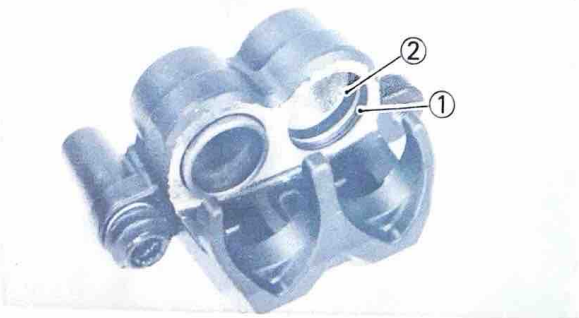
WARNING:

- Cover piston with rag and use extreme caution when expelling piston from cylinder.
- Never attempt to pry out piston.

Caliper piston removal steps:
- Insert a piece of wooden block ① into the caliper to lock one caliper.
- Carefully force the piston out of the caliper cylinder with compressed air.

www.legends-yamaha-enduro.com

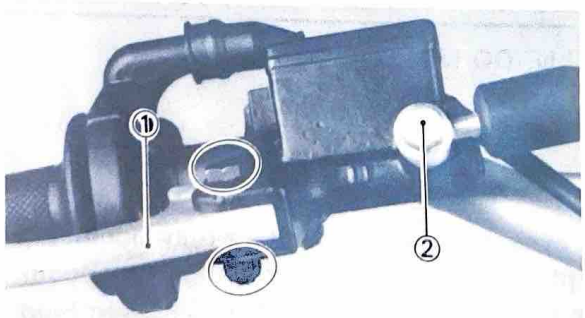
5



NOTE:

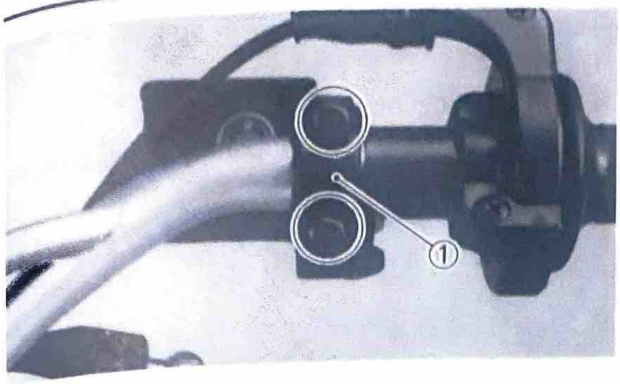
In the first place, remove one piston and inspect. After inserting the piston, remove remaining one.

4. Remove:
   - Dust seal ①
   - Piston seal ②

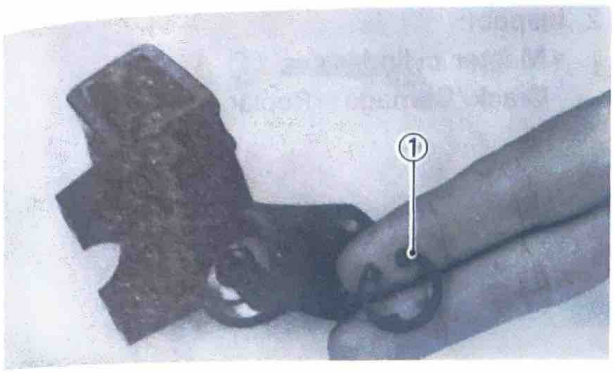


Master Cylinder

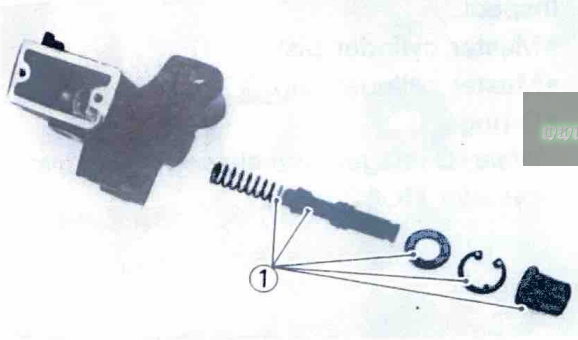
1. Remove:
   - Front brake lever ①
   - Union bolt ②
   - Copper washer



2. Remove:
   - Master cylinder bracket ①
   - Master cylinder



3. Remove:
   - Master cylinder boot
   - Circlip ①



4. Remove:
   - Master cylinder kit ①

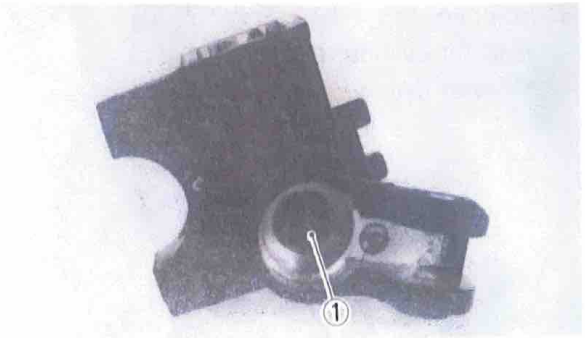
www.legends-yamaha-enduros.com

INSPECTION AND REPAIR

Caliper

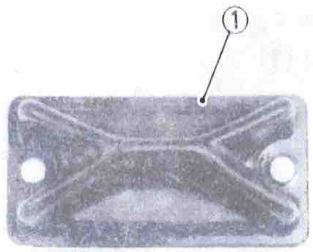
1. Inspect:
   - Caliper cylinder ①
     Wear/Scratches → Replace caliper assembly.

2. Inspect:
   - Caliper piston ①
     Wear/Scratches → Replace caliper assembly.
   - Dust seal ②
   - Piston seal ③
     Damage → Replace.

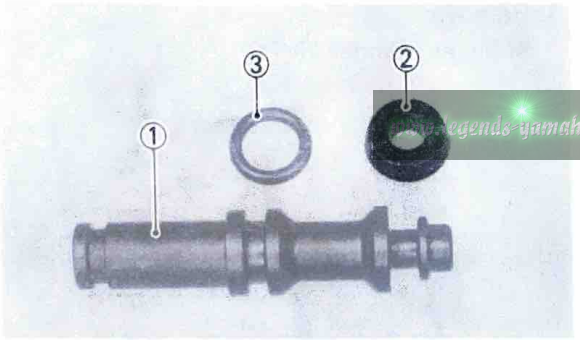


Master Cylinder

1. Inspect:
   - Master cylinder body ①
     Wear/Scratches→Replace master cylinder assembly.
     Stains→Clean.
     Use new brake bluid.



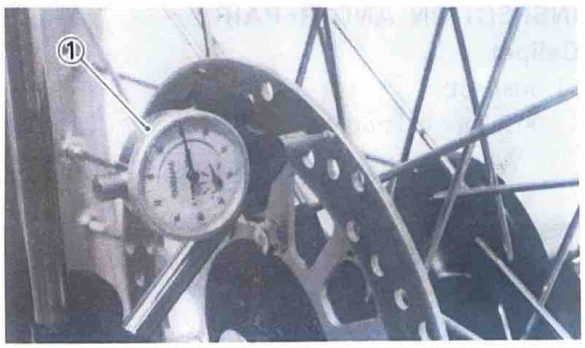
2. Inspect:
   - Master cylinder cap ①
     Crack/Damage→Replace



3. Inspect:
   - Master cylinder piston ①
   - Master cylinder cup ②
   - O-ring ③
     Wear/Damage/Scratches→Replace master cylinder kit.

www.legends-yamaha-enduro.com

5

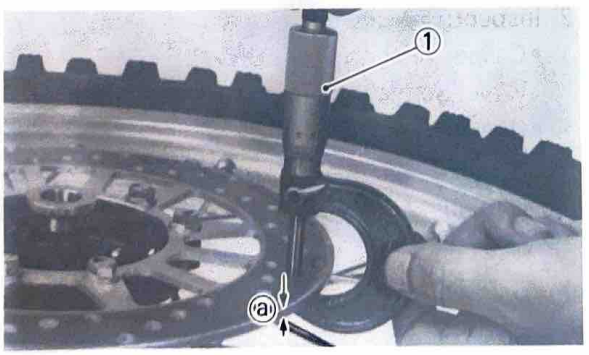


Brake Disc and Brake Hose

1. Measure:
   - Brake disc deflection
     Out of specification→Inspect wheel runout.
     If wheel runout is in good condition, replace.

Maximum Deflection:
0.15 mm (0.006 in)

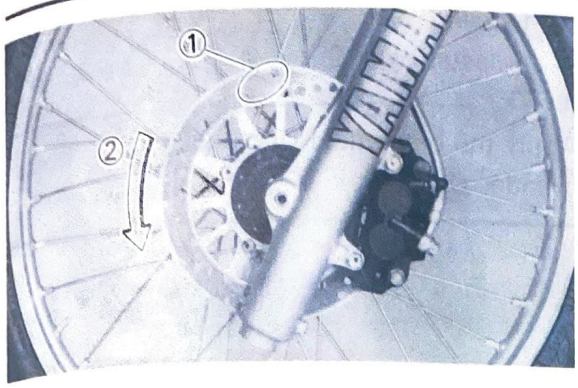
① Dial gauge



2. Measure:
   - Brake disc thickness ⓐ
     Out of specification→Replace.

Minimum Brake Disc Thickness:
2.5 mm (0.10 in)

① Micrometer



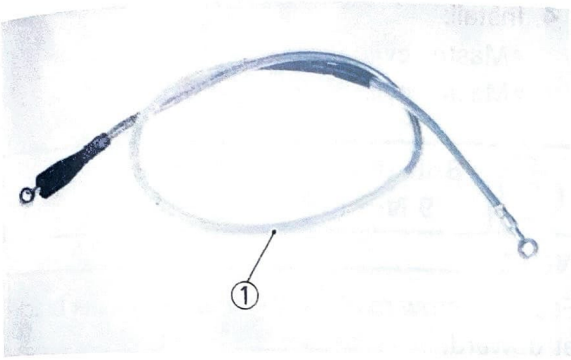
NOTE:

- When installing the brake disc, the slots ① on the disc should be positioned as shown.
- When reinstallating the brake disc, use new mounting bolts and apply LOCTITE® onto the bolt thread.

Bolts (Brake Disc):
12 Nm (1.2 m•kg, 8 ft•lb)

② Rotating direction

3. Inspect:
   - Brake hose ①
     Crack/Damage→Replace.



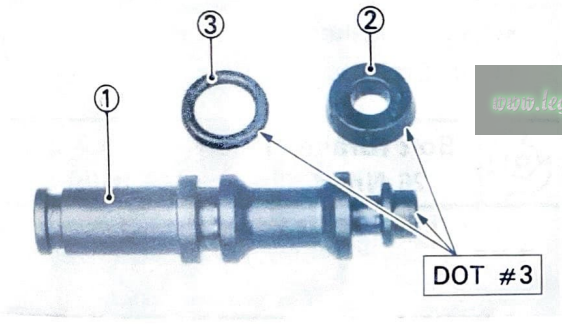
ASSEMBLY AND INSTALLATION

Master Cylinder

1. Install:
   - Master cylinder piston ①
   - Master cylinder cup ②
   - O-ring ③

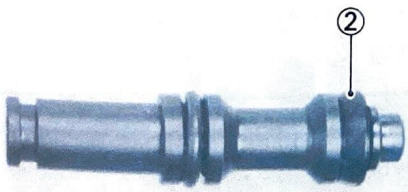
NOTE:

Apply the brake fluid DOT #3.

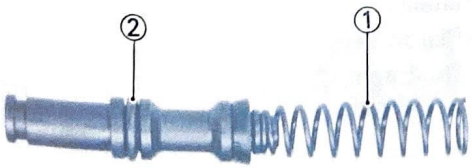


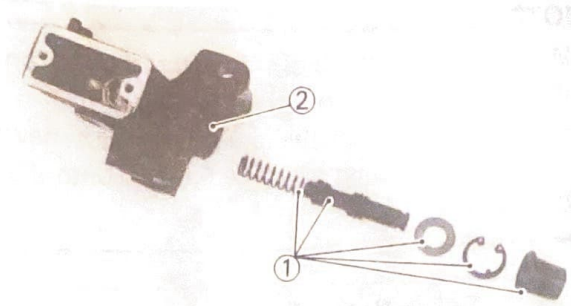
NOTE:

Master cylinder cup ② should be installed as shown.



2. Install:
   - Spring ①
     To master cylinder piston ② as shown.

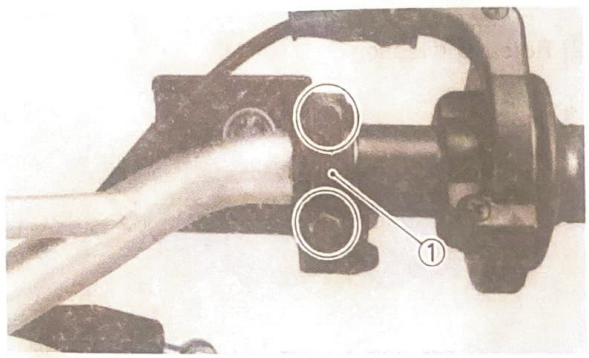




3. Install:
   - Master cylinder kit ①

NOTE:

Apply the brake fluid DOT #3 onto the master cylinder ②



4. Install:
   - Master cylinder
   - Master cylinder bracket ①

Bolt (Master Cylinder Bracket): 9 Nm (0.9 m•kg, 6.5 ft•lb)

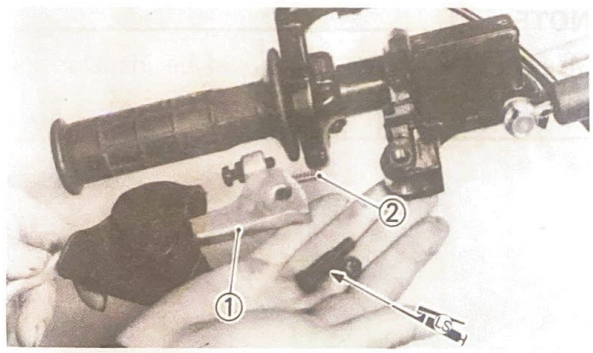
NOTE:

Face the arrow mark on the master cylinder bracket upward.

5. Install:
   - Copper washer ①
   - Bolt (Brake hose) ②

Bolt (Brake Hose): 26 Nm (2.6 m•kg, 19 ft•lb)

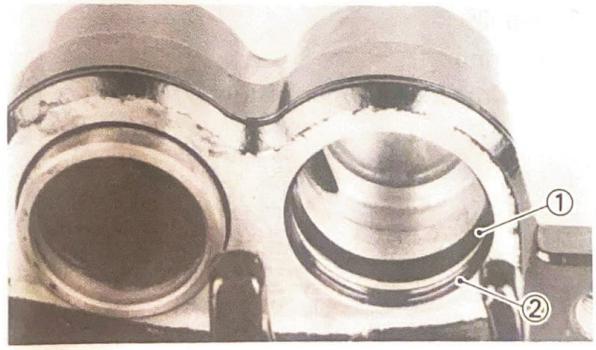
www.leyende-yamaha-enduro.com



6. Install:
   - Brake lever ①
   - Spring ②

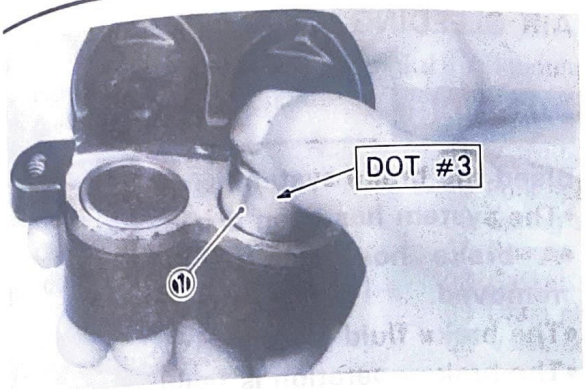
NOTE:

Apply the lithium soap base grease onto the bolt (brake lever).

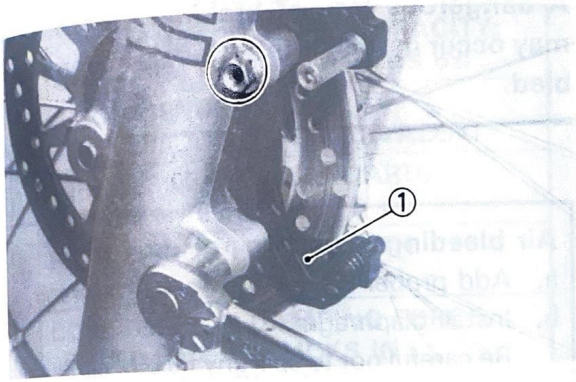


Caliper

1. Install:
   - Piston seal ①
   - Dust seal ②

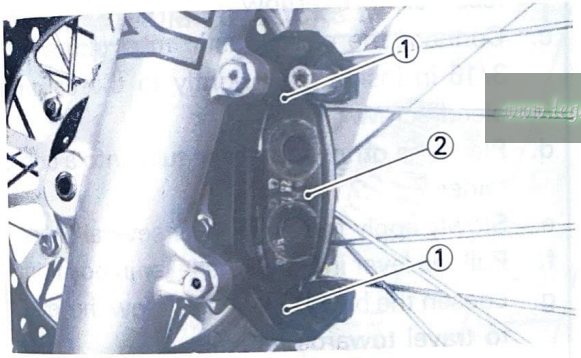


2. Install:
   • Caliper piston ①



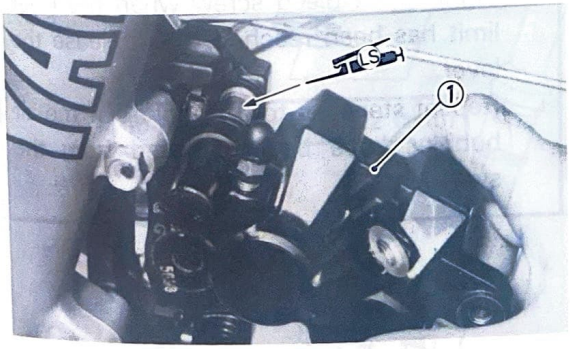
3. Install:
   • Caliper bracket ①

	Bolt (Caliper Bracket): **30 Nm (3.0 m•kg, 22 ft•lb)**



4. Install:
   • Pad support ①
   • Brake pads ②

www.legends-yamaha-enduros.com



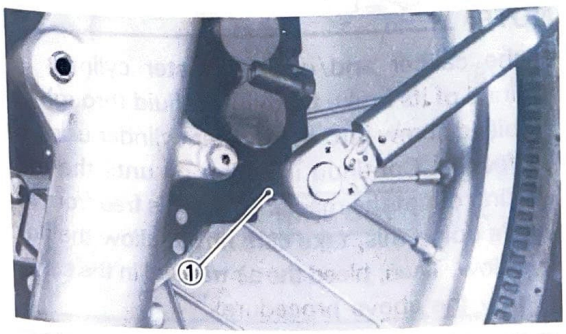
5. Install:
   • Caliper ①

NOTE:

Apply the grease onto the caliper shaft.

CAUTION:

- **Take care not to allow the brake pads to be smeared by grease.**
- **Wipe off any unnecessary grease that comes out of place.**



6. Install:
   • Bolt (Caliper support) ①

	Bolt (Caliper Support): **23 Nm (2.3 m•kg, 17 ft•lb)**

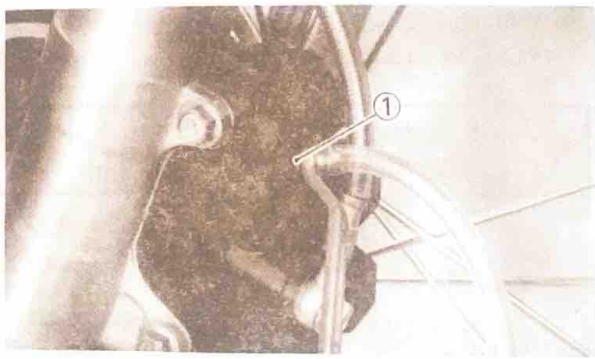
5

AIR BLEEDING

WARNING:

Bleed the brake system if:
- **The system has been disassembled.**
- **A brake hose has been loosened or removed.**
- **The brake fluid is very low.**
- **The brake operation is faulty.**

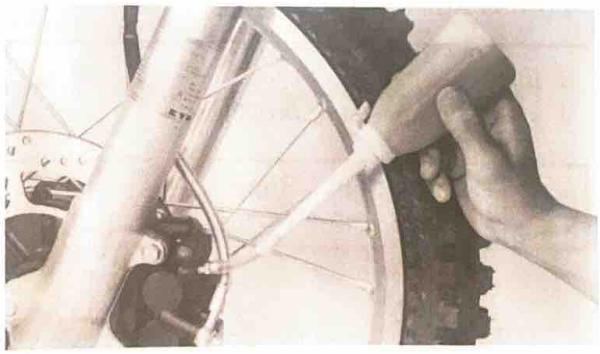
A dangerous loss of braking performance may occur if the brake system is not properly bled.



Air bleeding steps:

a. Add proper brake fluid to the reservoir.
b. Install diaphragm.
   Be careful not to spill any fluid or allow the reservoir to overflow.
c. Connect the clear plastic tube (4.5 mm, 3/16 in inside dia.) tightly to the caliper bleed screw ①.
d. Place the other end of the tube into a container.
e. Slowly apply the brake lever several times.
f. Pull the lever in. Hold the lever in position.
g. Loosen the bleed screw and allow the lever to travel towards its limit.
h. Tighten the bleed screw when the lever limit has been reached; then release the lever.
i. Repeat steps (e) to (h) until all of the air bubbles have been removed from the system.

www.legends-yamaha-enduro



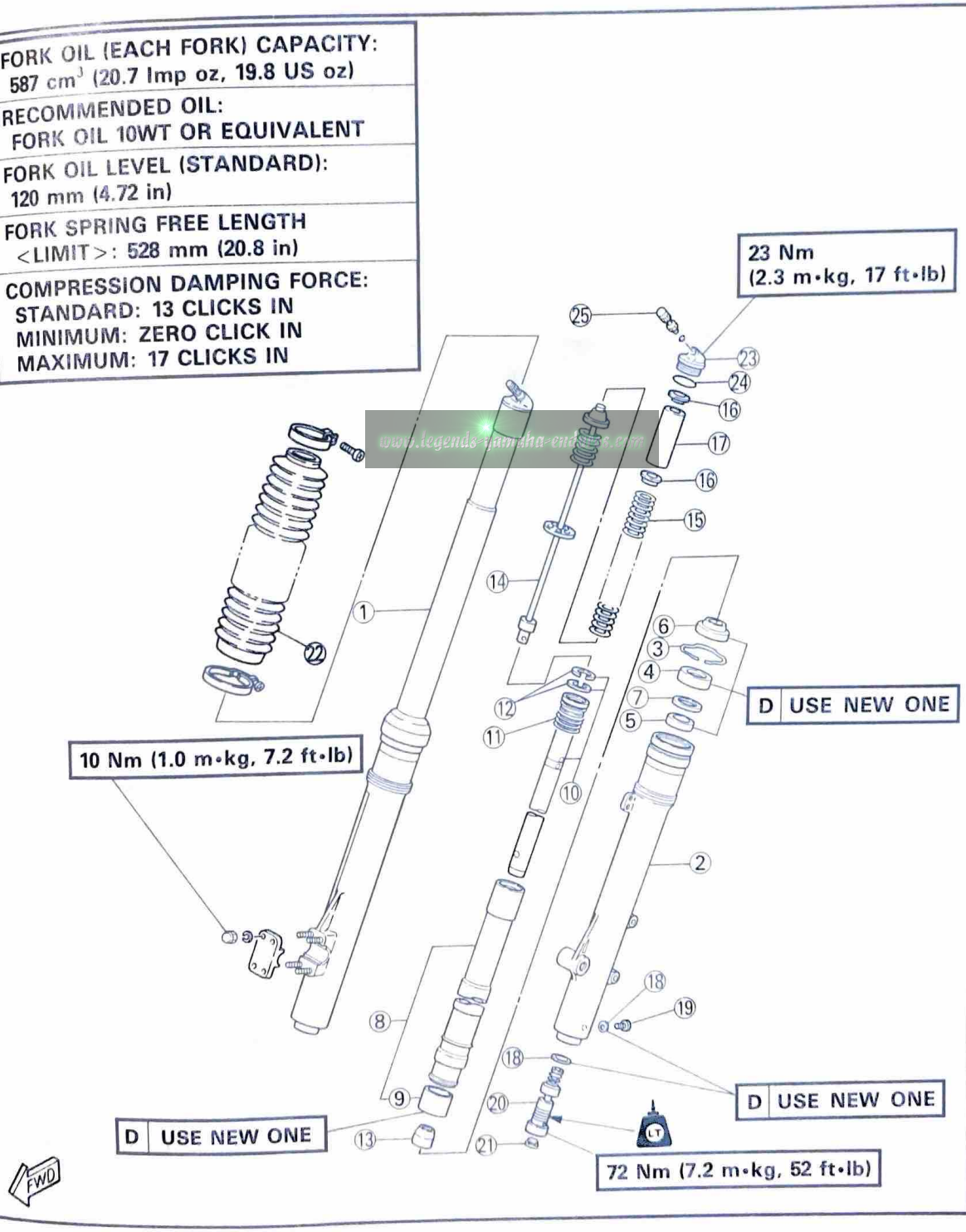
NOTE:

If the caliper and/or the master cylinder are drained of its brake fluid, inject fluid through the air bleed screw into the master cylinder using an oil feeder. Continue injecting oil until the fluid coming out at the master cylinder is free from air. While doing this, take care not to allow the fluid overflow. Then, bleed the air trapped in the caliper top by the above procedure.

FRONT FORK

① Front fork assembly (Left and right)
② Outer tube (Left and right)
③ Retaining clip
④ Oil seal
⑤ Guide bush
⑥ Oil seal cover
⑦ Oil seal washer
⑧ Inner tube
⑨ Slide bush
⑩ Damper rod assembly
⑪ Rebound spring
⑫ Piston ring
⑬ Oil lock piece
⑭ Variable damper assembly
⑮ Fork spring
⑯ Spacer
⑰ Spacer
⑱ Gasket
⑲ Drain plug
⑳ Valve complete
㉑ Plug
㉒ Front fork boot
㉓ Cap bolt
㉔ O-ring
㉕ Air valve

A	FORK OIL (EACH FORK) CAPACITY: 587 cm³ (20.7 Imp oz, 19.8 US oz) RECOMMENDED OIL: FORK OIL 10WT OR EQUIVALENT FORK OIL LEVEL (STANDARD): 120 mm (4.72 in)
B	FORK SPRING FREE LENGTH <LIMIT>: 528 mm (20.8 in)
C	COMPRESSION DAMPING FORCE: STANDARD: 13 CLICKS IN MINIMUM: ZERO CLICK IN MAXIMUM: 17 CLICKS IN



www.legends-yamaha-enduros.com

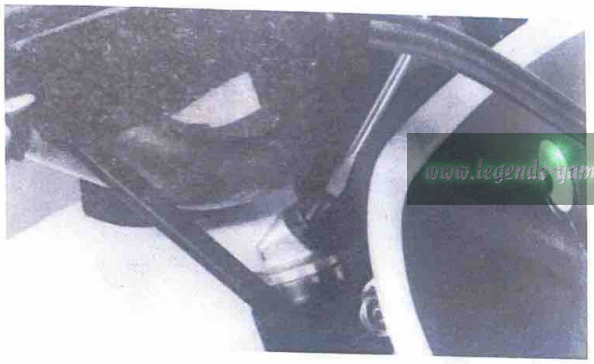
5

HANDLING NOTE

1. When disassembling both left fork and right fork, put the marks, R and L, on the tops of cap bolts and spring seat so you will not be confused when reinstalling the front forks.

CAUTION:

To prevent an accidental explosion of air, the following instructions should be observed:
- **Use only air or nitrogen for filling. Never use any other gas. An explosion may result.**
- **Never throw the front fork into fire.**
- **Before removing the cap bolts or front forks, be sure to extract the air from the air chamber completely.**



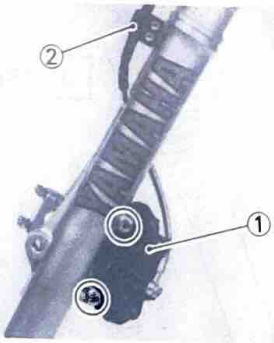
www.legends-yamaha-enduros.com

REMOVAL

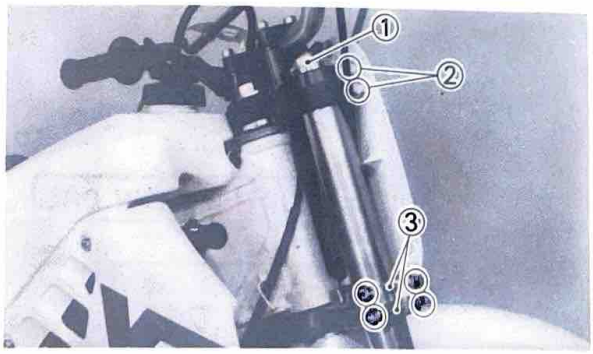
1. Elevate the front wheel by placing the suitable stand under the engine.
2. Remove:
   - Front wheel
3. Remove:
   - Air valve cap

NOTE:

Keep the valve open by pressing it for several seconds to bleed the air.



4. Remove:
   - Caliper ①
   - Guide (Brake hose) ②

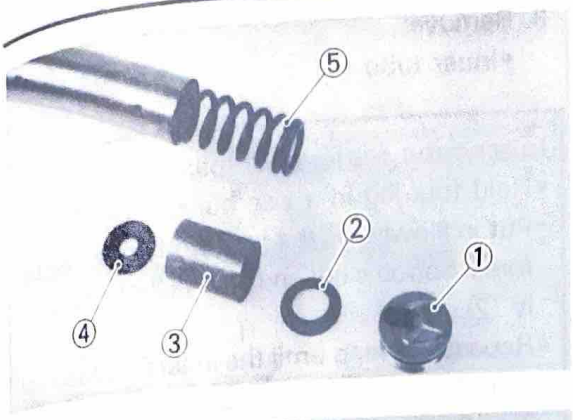


5. Loosen:
   - Cap bolt ①
   - Pinch bolt (Upper) ②
   - Pinch bolt (Lower) ③

CAUTION:

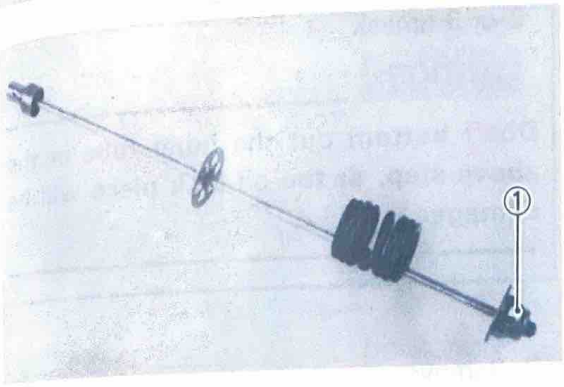
Support the fork before loosening the pinch bolts.

6. Remove:
   - Front fork assembly



DISASSEMBLY

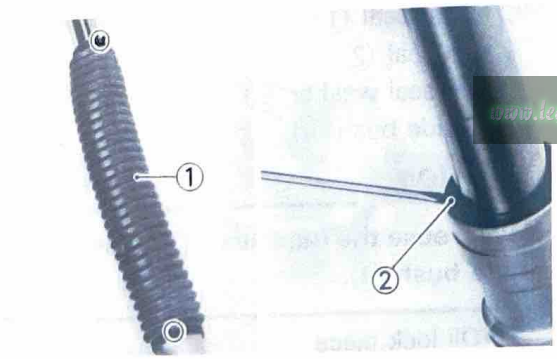
1. Remove:
   - Cap bolt ①
   - Spring seat ②
   - Spacer ③
   - Spring seat ④
   - Fork spring ⑤
2. Drain:
   - Fork oil



3. Remove
   - Variable damper assembly ①

CAUTION:

Do not disassemble the variable damper assembly.



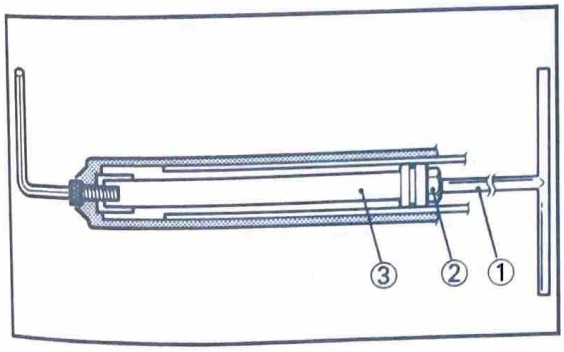
4. Remove:
   - Front fork boot ①
   - Retaining clip ②

   Using slotted-head screwdriver.

www.legends-yamaha-enduros.com

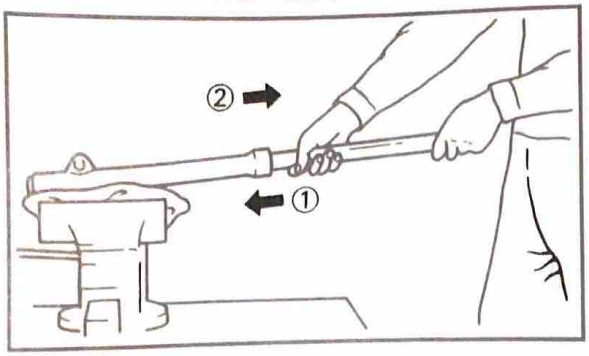
CAUTION:

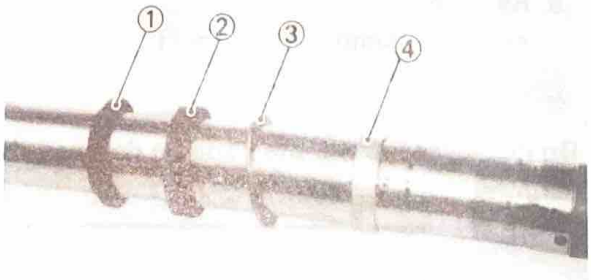
Take care not to scratch the inner tube.



Remove:
- Damper rod assembly ③
- Valve complete ④

  Using the T-handle ① (YM-01326) and Fork Cylinder Holder (YM-33962) ② to lock the damper rod ③.
- Rebound spring ⑤





6. Remove:
   - Inner tube

Inner tube removal steps:
- Hold fork leg in a vise horizontally.
- Put in slowly ① the inner fork tube just before it bottoms out and then pull it back quickly ②.
- Repeat this step until the inner fork tube can be pulled out from the outer fork tube (usual 2 or 3 times).

CAUTION:

Don't bottom out the inner tube in the above step, or the oil lock piece will be damaged.

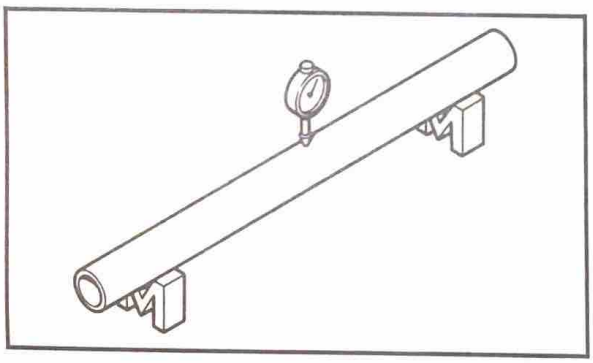
7. Remove:
   - Dust seal ①
   - Oil seal ②
   - Oil seal washer ③
   - Guide bush ④

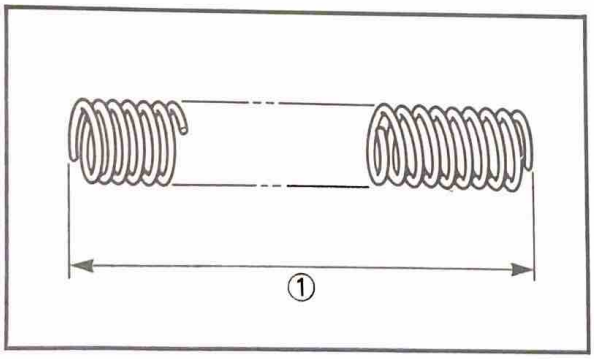
www.legends-yamaha-enduro.com

CAUTION:

Never reuse the dust seal ①, oil seal ② and guide bush ④.

   - Oil lock piece





INSPECTION AND REPAIR

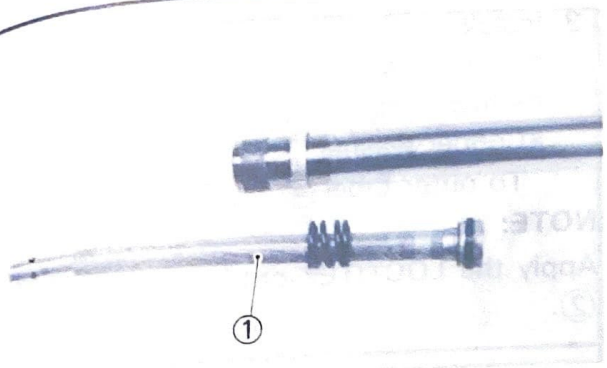
1. Inspect:
   - Inner tube/Outer fork tube
     Severe scratches/Bends→Replace.
     Damaged oil lock valve→Replace.

WARNING:

Do not attempt to straighten a bent inner and outer tube as this may dangerously weaken the tube.

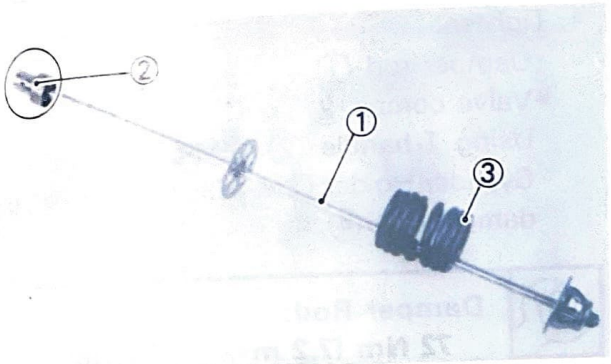
2. Inspect:
   - Fork spring ①
     Over specified limit→Replace.

Fork Spring Free Length Limit:
528 mm (20.8 in)



3. Inspect:
   - Damper rod ①

   Worn damper rod seal→Replace.
   Contamination→Wash and blow out all passages.

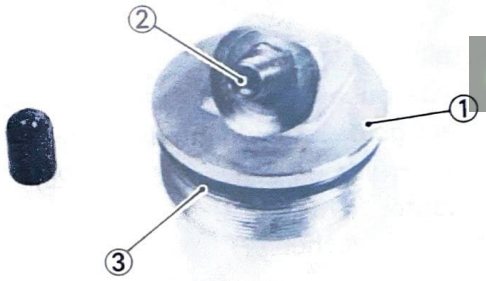


4. Inspect:
   - Variable damper rod ①

   Bend/Damage→Replace variable damper assembly.
   - Variable damper valve ②

   Wear/Damage→Replace variable damper assembly.
   - Variable damper spring ③

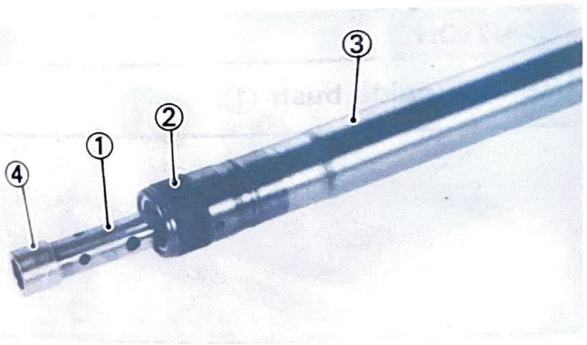
   Fatigue/Damage→Replace variable damper assembly



5. Inspect:
   - Cap bolt ①
   - Air valve ②
   - O-ring ③

   Damage→Replace.

www.legends-yamaha.com



ASSEMBLY

NOTE:

- Be sure all components are clean before assembly.
- Always install a new oil seal, dust seal, guide bush and slide bush. Do not re-use them.

1. Install:
   - Damper rod ①
   - Slide bush ②

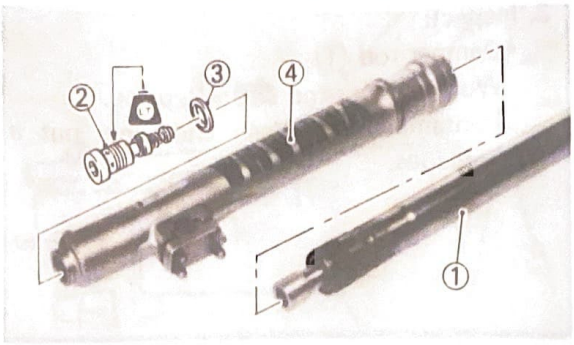
   To inner tube ③.

NOTE:

Never hold the inner tube ③ in a vertical position, or the cylinder complete will slide down, thus damaging the valve in the inner tube. Be sure to hold the inner tube tilted.

2. Install:
   - Oil lock piece ④

   To damper rod as shown.

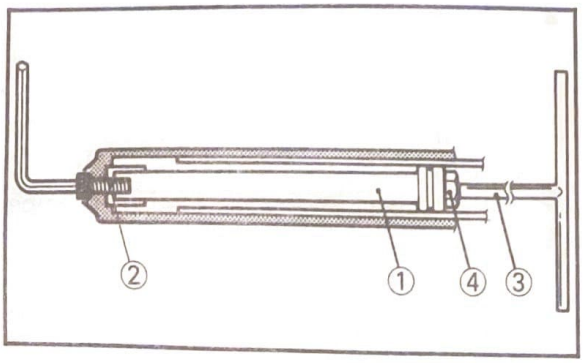


3. Install:
   - Inner tube ①
   - Valve complete ②
   - Copper washer ③

   To outer tube ④.

NOTE:

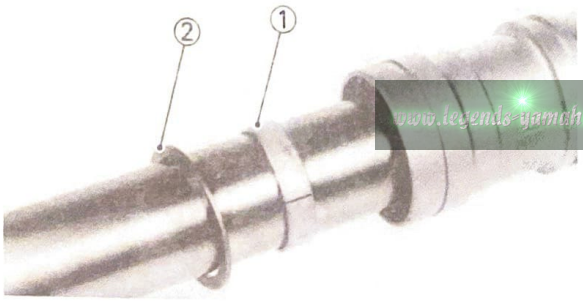
Apply the LOCTITE® onto the valve complete ②.



4. Tighten:
   - Damper rod ①
   - Valve comp. ②

   Using T-handle ③ (YM-01326) and Fork Cylinder Holder (YM-33962) ② to lock the damper rod ④.

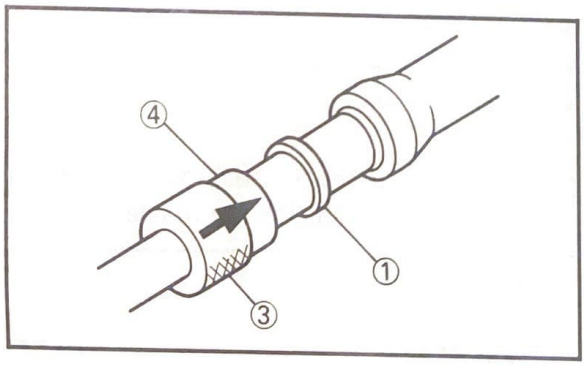
Damper Rod:
72 Nm (7.2 m•kg, 52 ft•lb)
LOCTITE®



www.legends-yamaha-enduros.com

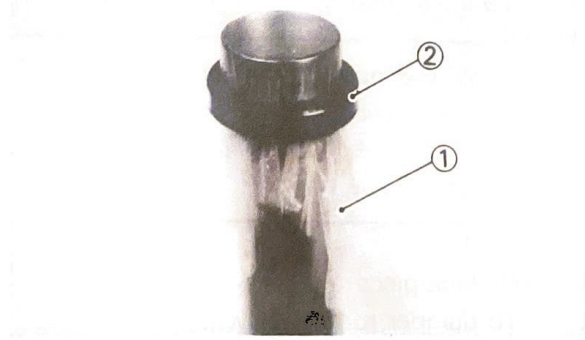
5. Install:
   - Guide bush ①

   Press guide bushing into the outer fork tube with Fork Seal Driver (YM-08020) ③ and Adapter (YM-33963) ④.
   - Oil seal washer ②



CAUTION:

Use new guide bush ①.



6. Install:
   - Oil seal ②

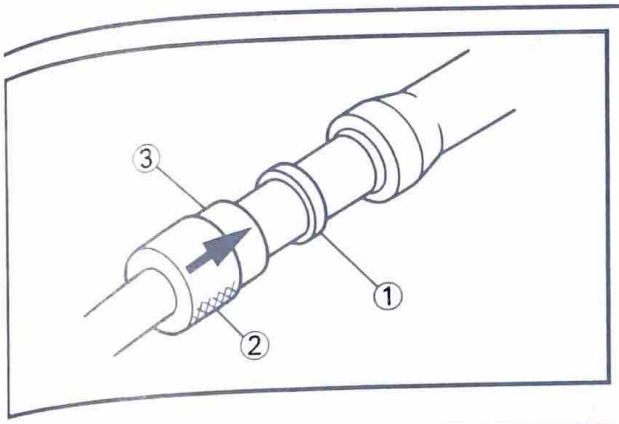
   Using vinyl seat ①.

NOTE:

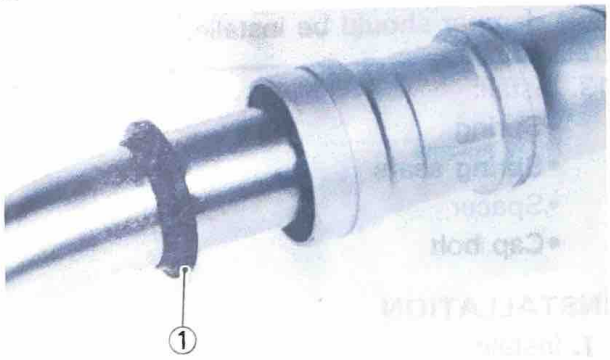
Apply the fork oil onto the vinyl seat ① and oil seal.

CAUTION:

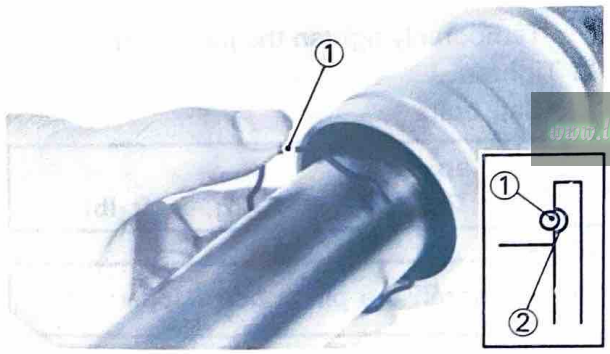
- **Be sure oil seal numbered side face upward.**
- **Use new oil seal.**



7. Install:
   - Fork oil seal ①
   Press fork oil seal into the outer fork tube with Fork Seal Driver ② (YM-08020) and Adapter (YM-33963) ③.



8. Install:
   - Oil seal cover ①

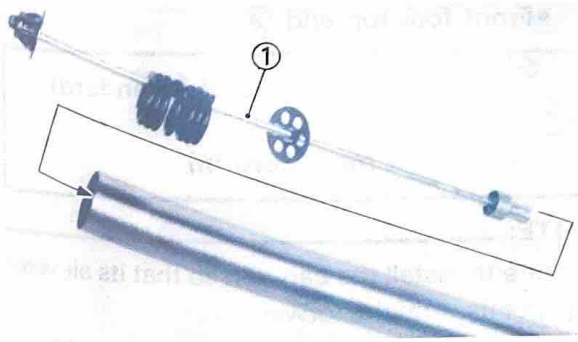


9. Install:
   - Retaining clip ①

NOTE:

Fit the retaining clip ① correctly in the groove ② in the outer tube.

   - Front fork boot



10. Install:
    - Variable damper ①
11. Fill:
    - Front fork

Oil Capacity (Standard):
587 cm³ (20.7 Imp oz, 19.8 US oz)
Recommended Oil:
Fork Oil 10WT or equivalent

NOTE:

After filling, pump the forks slowly up and down to distribute the oil.

12. Measure:
    - Fork oil level
      Refer to "CHAPTER 2 — FRONT FORK OIL REPLACEMENT" section. (Page 2-24)

Front Fork Oil Level (Standard):
120 mm (4.72 in)

NOTE:

When measuring the front fork oil level, the variable damper should be installed.

13. Install:
    - Spring
    - Spring seats
    - Spacer
    - Cap bolt

INSTALLATION

1. Install:
    - Front fork(s)
      Temporarily tighten the pinch bolts (Lower).
2. Tighten:
    - Cap bolts

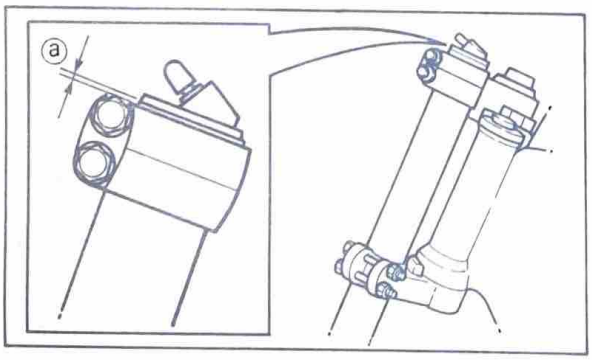
www.legends-yamaha-enduro.com

Cap Bolt:
23 Nm (2.3 m•kg, 17 ft•lb)

NOTE:

Do not tighten the pinch bolt (Upper) yet.

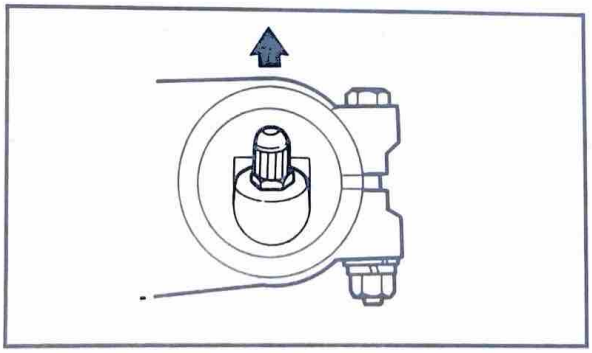
3. Adjust:
    - Front fork top end ⓐ



Front Fork Top End (Standard)
ⓐ:
Zero mm (Zero in)

NOTE:

Be sure to install the cap bolt so that its air valve top points straight forward.



4. Tighten:
    - Pinch bolts (Upper)
    - Pinch bolts (Lower)

Pinch Bolt (Upper):
23 Nm (2.3 m•kg, 17 ft•lb)
Pinch Bolt (Lower):
23 Nm (2.3 m•kg, 17 ft•lb)

4. Adjust:
   - Front fork air pressure
     Refer to "CHAPTER 2. FRONT FORK ADJUSTMENT" section.

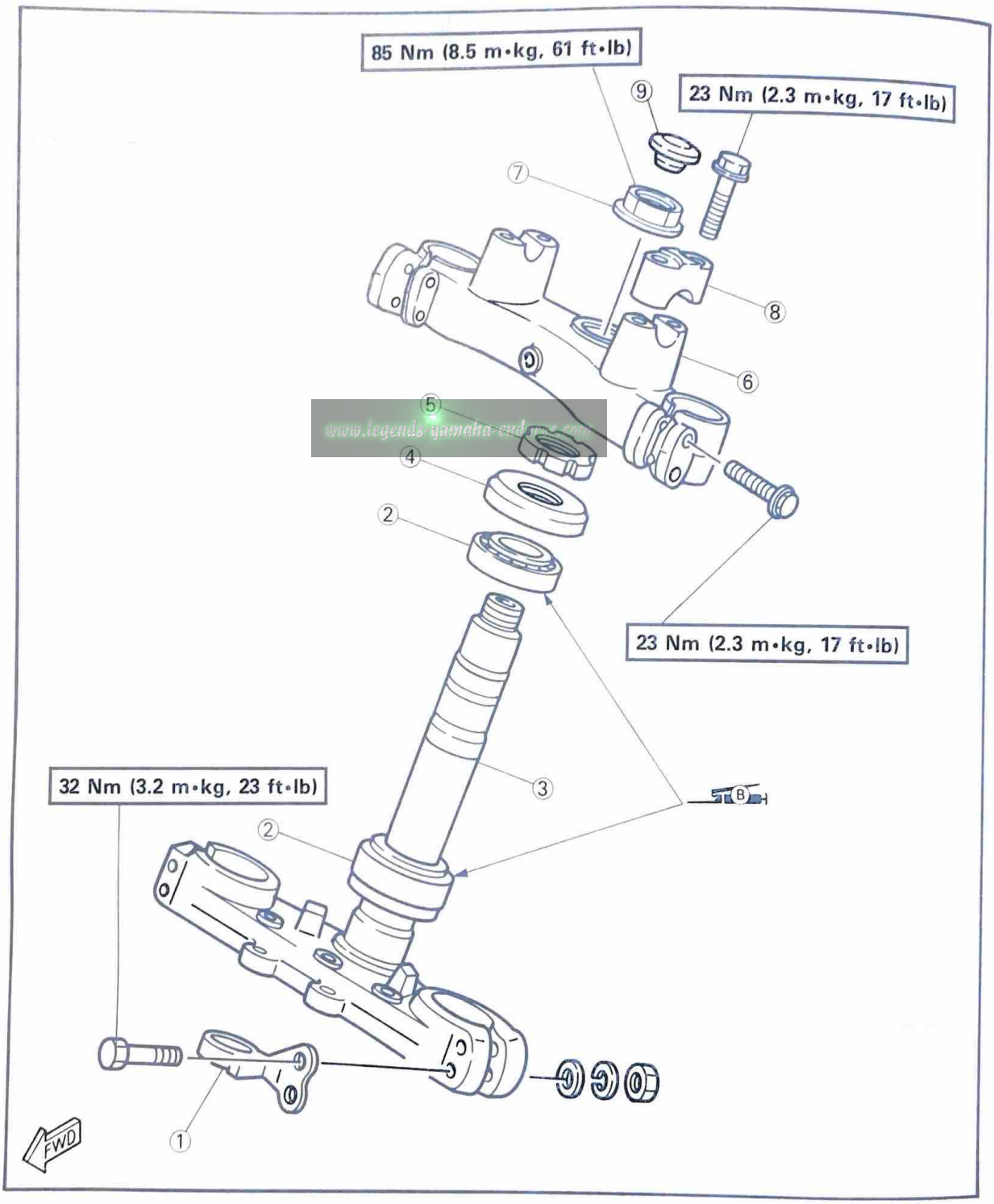
Front Fork Air Pressure:
Zero kPa (Zero kg/cm^2, Zero psi)

5. Install:
   - Air valve cap
   - Front wheel
   - Brake caliper
     Refer to "FRONT WHEEL and FRONT DISC BRAKE" section.

www.legends-yamaha-enduros.com

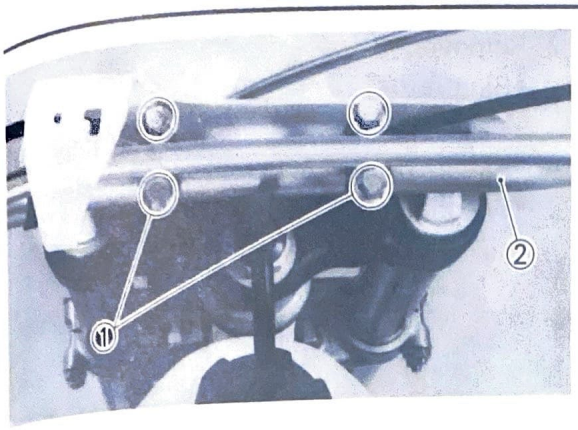
STEERING HEAD

① Brake hose guide
② Bearing (Upper and lower)
③ Steering stem
④ Bearing cover
⑤ Ring nut
⑥ Handle crown
⑦ Steering stem nut
⑧ Upper handlebar holder
⑨ Cap



www.legends-yamaha-enduro.com

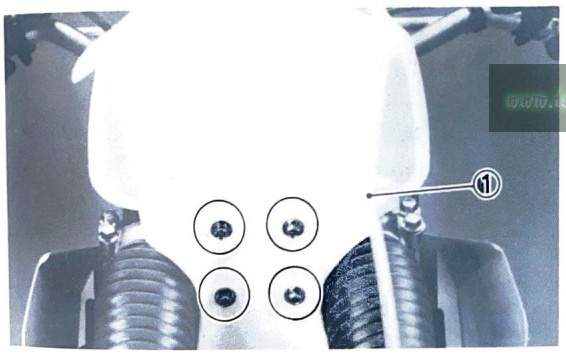
5



REMOVAL

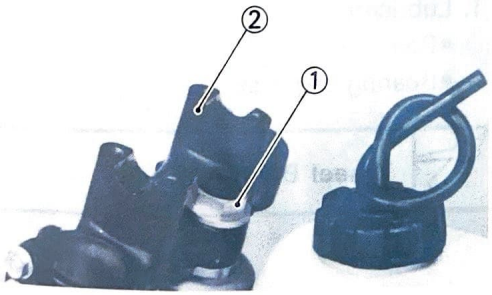
1. Elevate the front wheel by bracing the suitable stand under the engine.
2. Remove:
   - Upper handlebar holder ①
   - Handlebar ②
3. Remove:
   - Front wheel
   - Caliper
   - Brake hose holder
   - Front fork (Left and right)

   Refer to "FRONT WHEEL" (Page 5-1) and "FRONT FORK" (Page 5-18) section.

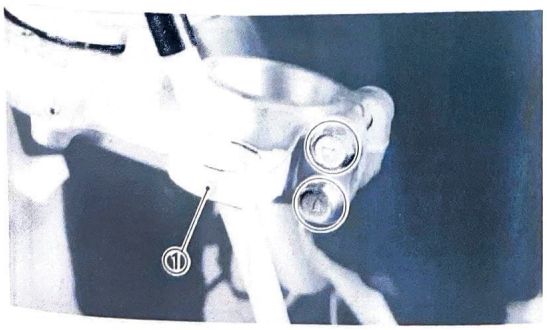


www.legends-yamaha-enduros.com

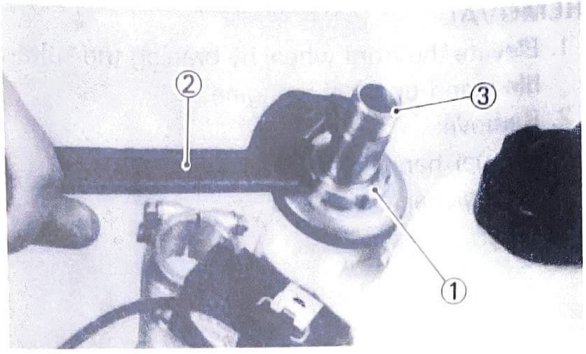
4. Remove:
   - Front fender ①



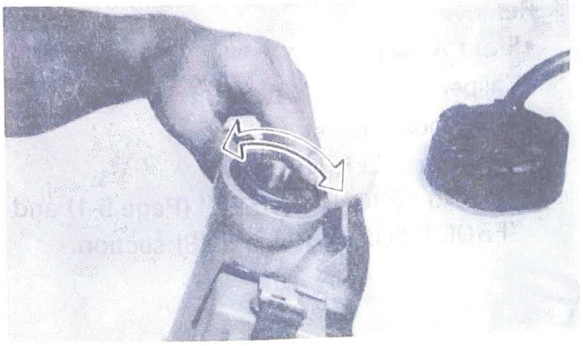
5. Remove:
   - Steering stem nut ①
   - Handle crown ②



6. Remove:
   - Brake hose guide ①



7. Remove:
   - Ring nut ①
     Use Steering Nut Wrench (YU-01268) ②.
     Remove while holding the steering stem ③.
   - Bearing cover

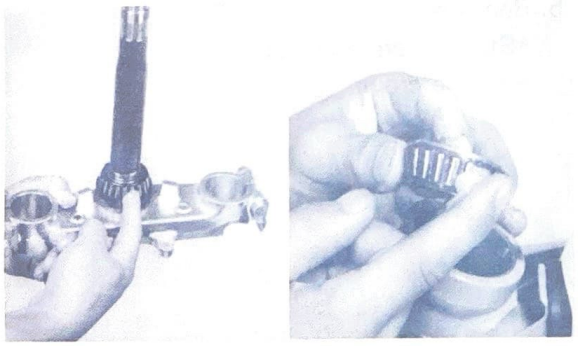


INSPECTION AND REPAIR

1. Wash the bearings in solvent.
2. Inspect:
   - Bearing (Upper and lower)
     Pitting/Damage→Replace races and bearing.
     Install the bearings in the races. Spin the bearings by hand. If the bearings hang up or are not smooth in their operation in the races, replace bearings and races.

www.legends-yamaha-enduros.com

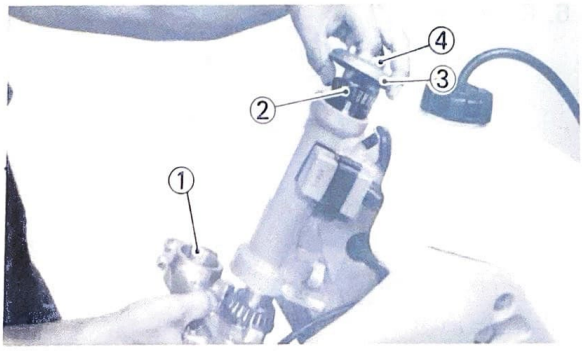
5



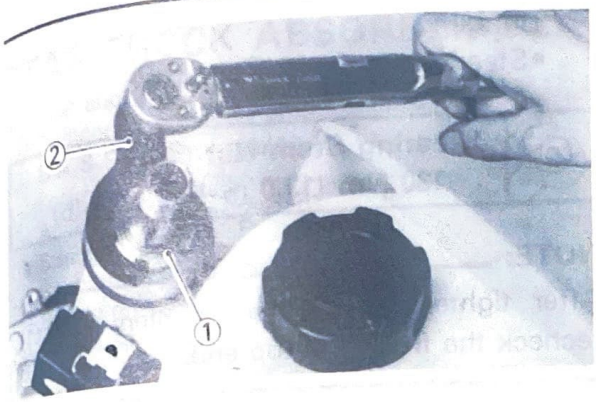
INSTALLATION

1. Lubricate:
   - Bearings
   - Bearing cover seal

Wheel Bearing Grease



2. Install:
   - Steering stem ①
   - Upper bearing ②
   - Bearing cover ③
   - Ring nut ④



3. Tighten:
   - Ring nut ①
     Using the Ring Nut Wrench (YU-33975) ② and Torque Wrench.

Ring nut tightening steps:
NOTE:
Set the Torque Wrench to the Ring Nut Wrench so that they form a right angle.

- Tighten the ring nut ① using the Ring Nut Wrench.

Ring Nut (Initial Tightening):
38 Nm (3.8 m•kg, 27 ft•lb)

- Loosen the ring nut ② completely and retighten it to specification.

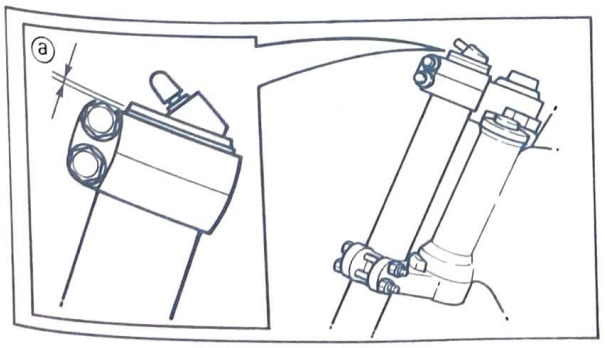
WARNING:
Do not over-tightening.

www.legendeyamaha-enduros.com

Ring Nut (Final Tightening):
10 Nm (1.0 m•kg, 7.2 ft•lb)

- Check the steering stem by turning it lock to lock. If there is any binding, remove the steering stem assembly and inspect the steering bearings.

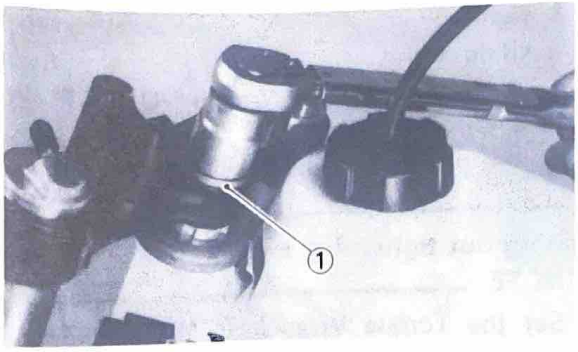
5

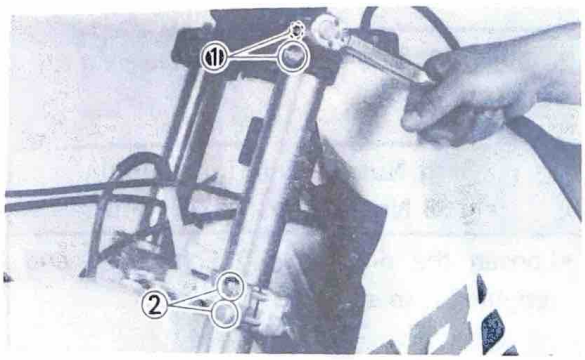


4. Install:
   - Front forks (Left and right)
5. Adjust:
   - Front fork top end ⓐ

Front Fork Top End (Standard)
ⓐ:
Zero mm (Zero in)

NOTE:
Temporarily install at the lower pinch bolt end to keep at position.





7. Tighten:
   - Steering stem nut ①

Steering Stem Nut ①: 130 Nm (13.0 m•kg, 94 ft•lb)

NOTE:

After tightening the steering stem nut ①, recheck the front fork top end.

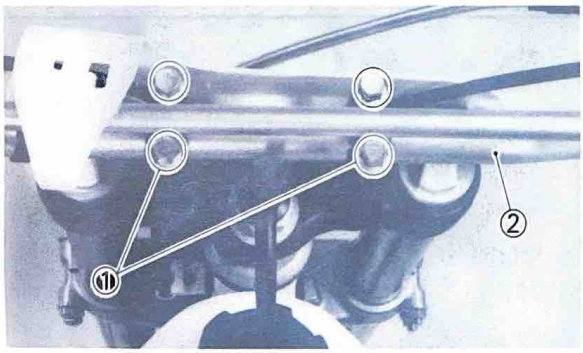
8. Tighten:
   - Pinch bolts (Upper) ①
   - Pinch bolts (Lower) ②

Pinch Bolt (Upper) ①: 23 Nm (2.3 m•kg, 17 ft•lb) Pinch Bolt (Lower) ②: 32 Nm (3.2 m•kg, 23 ft•lb)

9. Install:
   - Front fender
   - Caliper
   - Brake hose holder
   - Front wheel

www.legends-yamaha-enduros.com

5



10. Install:
    - Handlebar ②
    - Upper handlebar holder ①

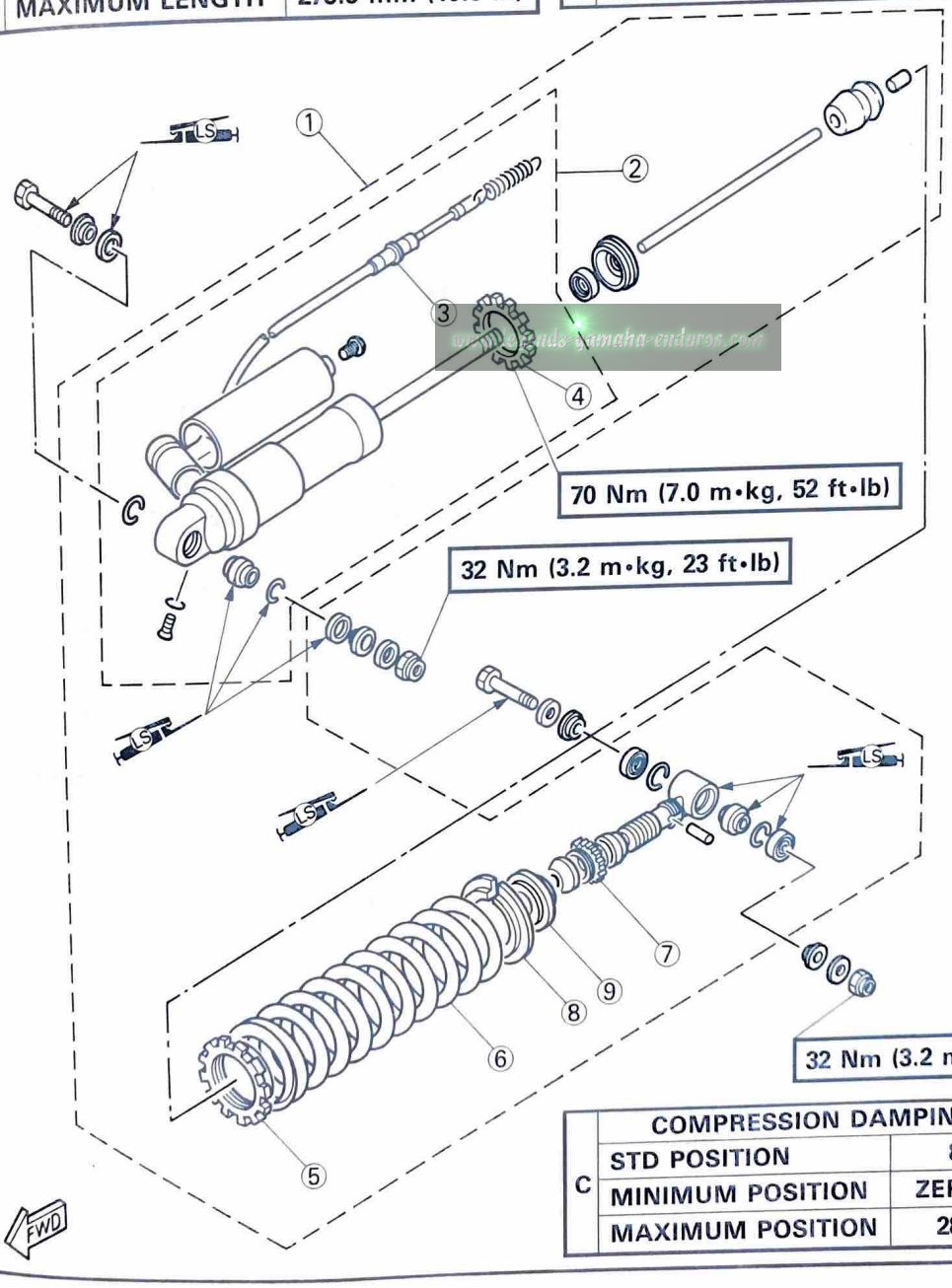
Bolt (Upper Handlebar Holder): 23 Nm (2.3 m•kg, 17 ft•lb)

REAR SHOCK ABSORBER

① Rear shock absorber assembly
② Damper assembly
③ B.A.S.S. control cable
④ Locknut
⑤ Adjuster (Spring preload)
⑥ Spring
⑦ Rebound damping adjuster
⑧ Spring retainer
⑨ Spring seat

A	SPRING PRELOAD	
	STANDARD LENGTH	270 mm (10.6 in)
	MINIMUM LENGTH	251 mm (9.9 in)
	MAXIMUM LENGTH	273.5 mm (10.8 in)

B	REBOUND DAMPING FORCE	
	STD POSITION	14 CLICKS OUT
	MINIMUM POSITION	25 CLICKS OUT
	MAXIMUM POSITION	ZERO CLICK OUT



C	COMPRESSION DAMPING FORCE	
	STD POSITION	8 CLICKS IN
	MINIMUM POSITION	ZERO CLICK IN
	MAXIMUM POSITION	28 CLICKS IN

5

REAR SHOCK ABSORBER

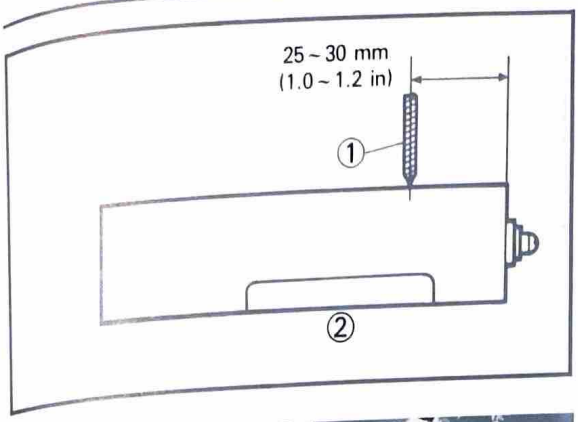
HANDLING NOTES

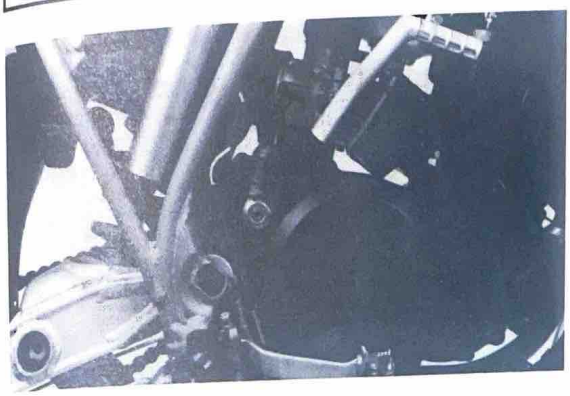
WARNING:

This shock absorber is provided with a separate type tank filled with high-pressure nitrogen gas. To prevent the danger of explosion, read and understand the following information before handling the shock absorber.
The manufacturer can not be held responsible for property damage or personal injury that may result from improper handling.

1. Never tamper or attempt to disassemble the cylinder or the tank and never loosen the nuts ①; otherwise, oil will spurt from the cylinder due to the high pressure in the nitrogen gas tank.
2. Never throw the shock absorber into an open flame or other high heat. The shock absorber may explode as a result of nitrogen gas expansion and/or damage to the hose.
3. Be careful not to damage any part of the gas tank. A damaged gas tank will impair the damping performance or cause a malfunction.
4. Take care not to scratch the contact surface of the piston rod with the cylinder; or oil could leak out.
5. Never attempt to remove the plug at the bottom of the nitrogen gas tank. It is very dangerous to remove the plug.
6. When scrapping the shock absorber, follow the instructions on disposal.

www.legends-yamaha-enduro.com





NOTES ON DISPOSAL (YAMAHA DEALERS ONLY)

Before disposing the shock absorber, be sure to extract the nitrogen gas. To do so, drill a 2 or 3 mm (0.08 ~ 0.12 in) hole ① through the tank at a position 25 ~ 30 mm (1.0 ~ 1.2 in) from the bottom end of the tank. At this time, wear eye protection ② to prevent eye damage from escaping gas and/or metal chips.

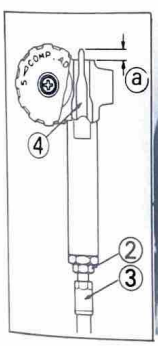
WARNING:

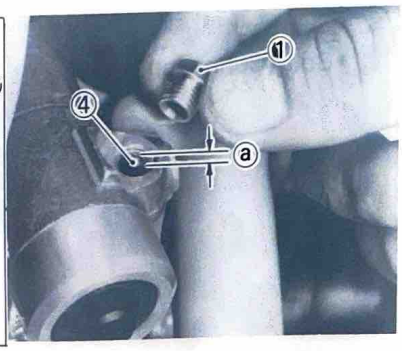
To dispose of a damaged or worn-out shock absorber, take the unit to your Yamaha dealer for this disposal procedure.

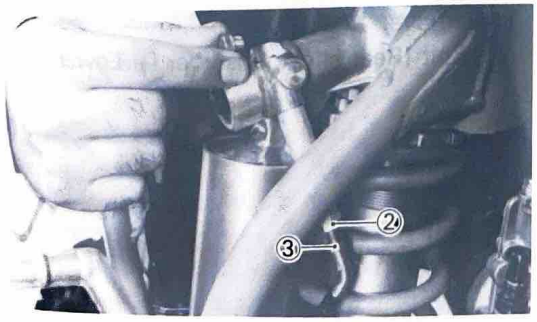
BRAKE ACTUATED SUSPENSION SYSTEM (B.A.S.S.)

www.legends-yamaha-enduro.com

This system is so designed that when the rear brake pedal is depressed, the compression damping force of the rear suspension can be reduced. Thanks to this system, the hopping of the rear wheel on rough terrain can be controlled to ensure safe braking.







B.A.S.S. CONTROL CABLE ADJUSTMENT

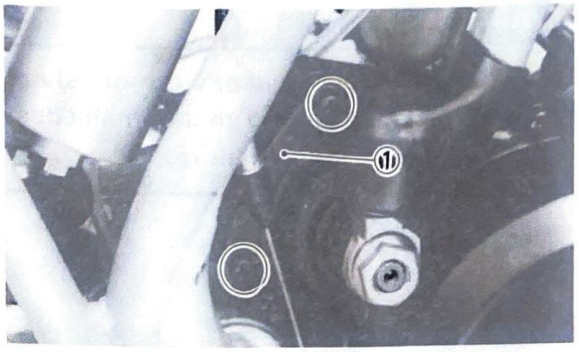
1. Adjust:
   - Control cable

Control cable adjustment steps:

1. Set the brake pedal height within 0 ± 10 mm (0 ± 0.4 in) from the footrest top and ajust the brake pedal play to 10 ~ 20 mm (0.4 ~ 0.8 in). The adjustments are required to allow the interlocking mechanism to operate properly.
2. Remove the cap ① on top of the housing and loosen the locknut ②.
3. Turn the adjuster ③ so that the top end of the rod in the housing projects out 1.5 mm (0.06 in) ⓐ.
4. Make sure the rod ④ moves the moment that the brake pedal is depressed.

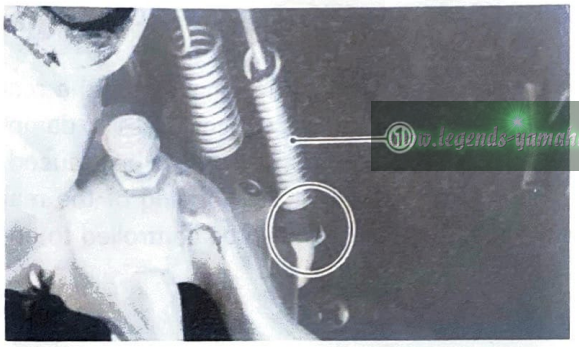
5. Install the cap carefully so that no mud or water enters the housing.

Locknut ②:
5 Nm (0.5 m•kg, 3.6 ft•lb)
Cap ①:
6 Nm (0.6 m•kg, 4.3 ft•lb)



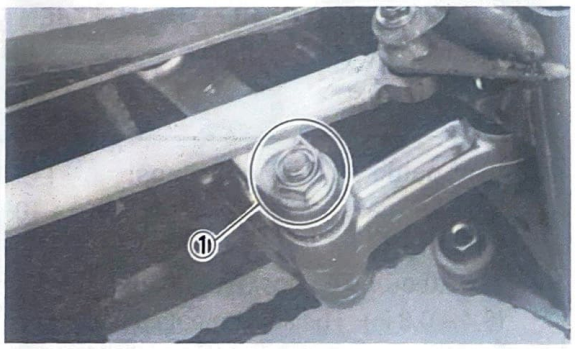
REMOVAL

1. Elevate the rear wheel by placing the suitable stand under the engine.
2. Remove:
   - B.A.S.S. control cable holder ①

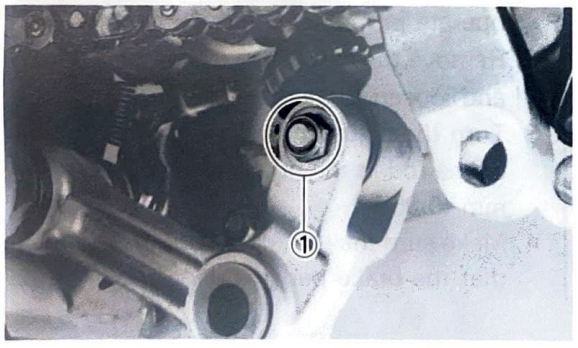


3. Unhook:
   - Spring (B.A.S.S. control cable) ①

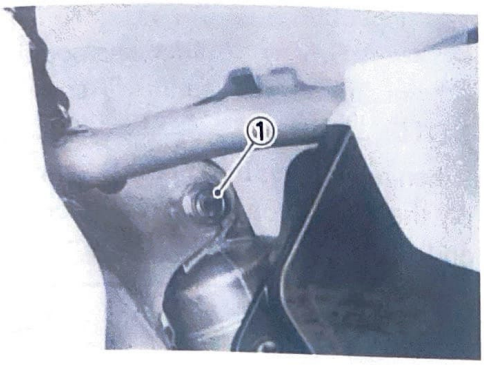
www.legends-yamaha-enduros.com



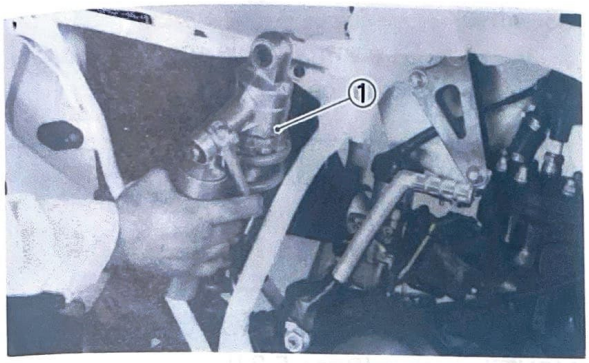
4. Remove:
   - Bolt (Connecting rod) ①



5. Remove:
   - Bolt (Rear shock absorber — Lower) ①

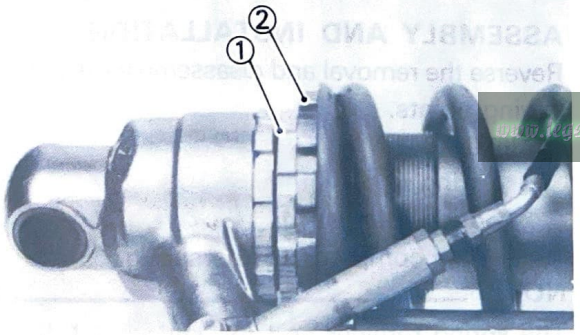


6. Remove:
   • Bolt (Rear shock absorber — Upper) ①



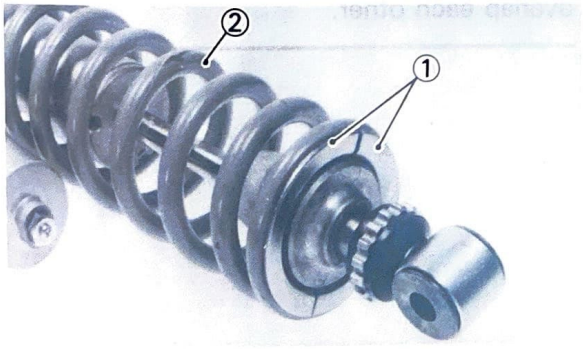
7. Remove:
   • Rear shock absorber assembly ①
   From as shown place.

DISASSEMBLY



1. Loosen:
   • Locknuts ①
   • Adjuster ②

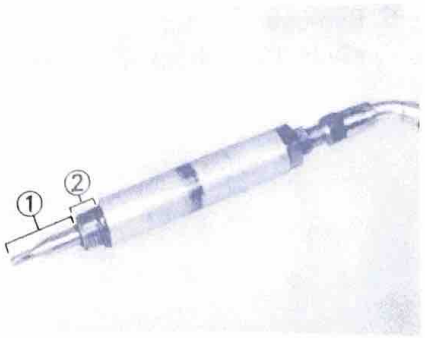
www.legends-yamaha.com



2. Remove:
   • Spring retainer ①
   • Spring ②

INSPECTION AND REPAIR

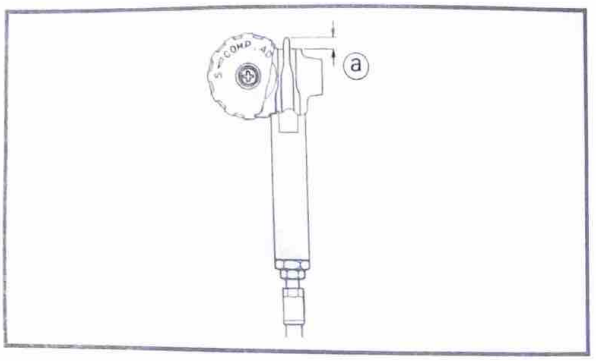
1. Inspect:
   • Shock absorber rod
   Bends/Damage → Replace damper assembly.
   • Shock absorber
   Oil leaks → Replace damper assembly.
   Gas leaks → Replace damper assembly.
   • Spring
   Fatigue → Replace spring.
   Move spring up and down.



2. Inspect:
   • B.A.S.S. control cable smooth movement
     unsmooth movement → Repair or replace.

NOTE:

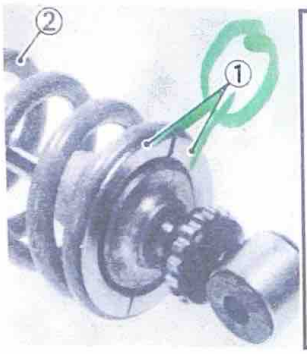
When reinstalling the B.A.S.S. control cable, apply the lithium soap base grease onto the rod ① and apply the LOCTITE® onto the thread ②.

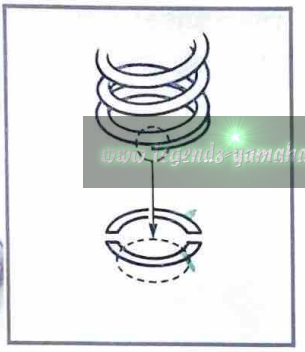


3. Check:
   • B.A.S.S. control cable rod top end ⓐ
     Out of specification → Adjust

B.A.S.S. Control Cable Rod Top End ⓐ:
1.5 mm (0.06 in)

Refer to "B.A.S.S. CONTROL CABLE ADJUSTMENT" section (Page 5-34).





www.legends-yamaha-enduro.com

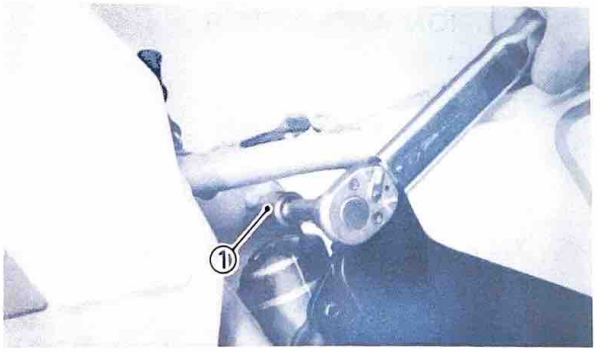
ASSEMBLY AND INSTALLATION

Reverse the removal and disassembly steps by following points.

1. Install:
   • Spring ②
   • Spring retainer ①
     While compressing the spring.

NOTE:

The spring retainer and the spring end do not overlap each other.

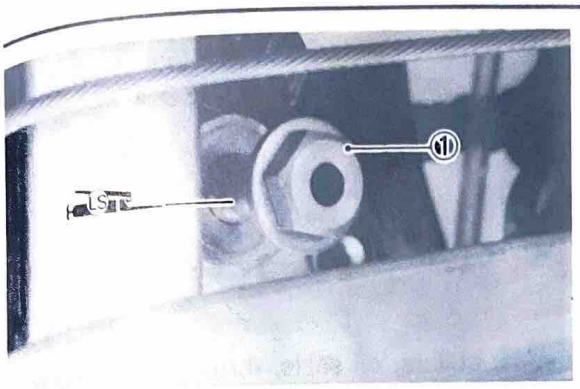


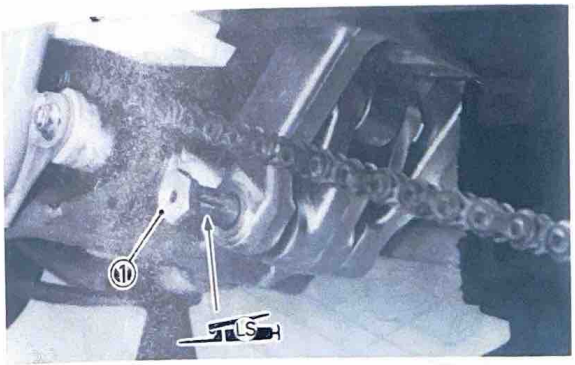
2. Tighten:
   • Bolt (Rear shock absorber — Upper) ①

Bolt (Rear Shock Absorber — Upper)
32 Nm (3.2 m•kg, 23 ft•lb)

NOTE:

Apply the lithium soap base grease onto the bolt body.





3. Tighten:
   - Bolt (Rear shock absorber — Lower) ①

Bolt (Rear Shock Absorber — Lower) ①:
32 Nm (3.2 m•kg, 23 ft•lb)

NOTE:
Apply the lithium soap base grease onto the bolt.

4. Tighten:
   - Bolt (Connecting rod) ①

Bolt (Connecting Rod) ①:
60 Nm (6.0 m•kg, 43 ft•lb)

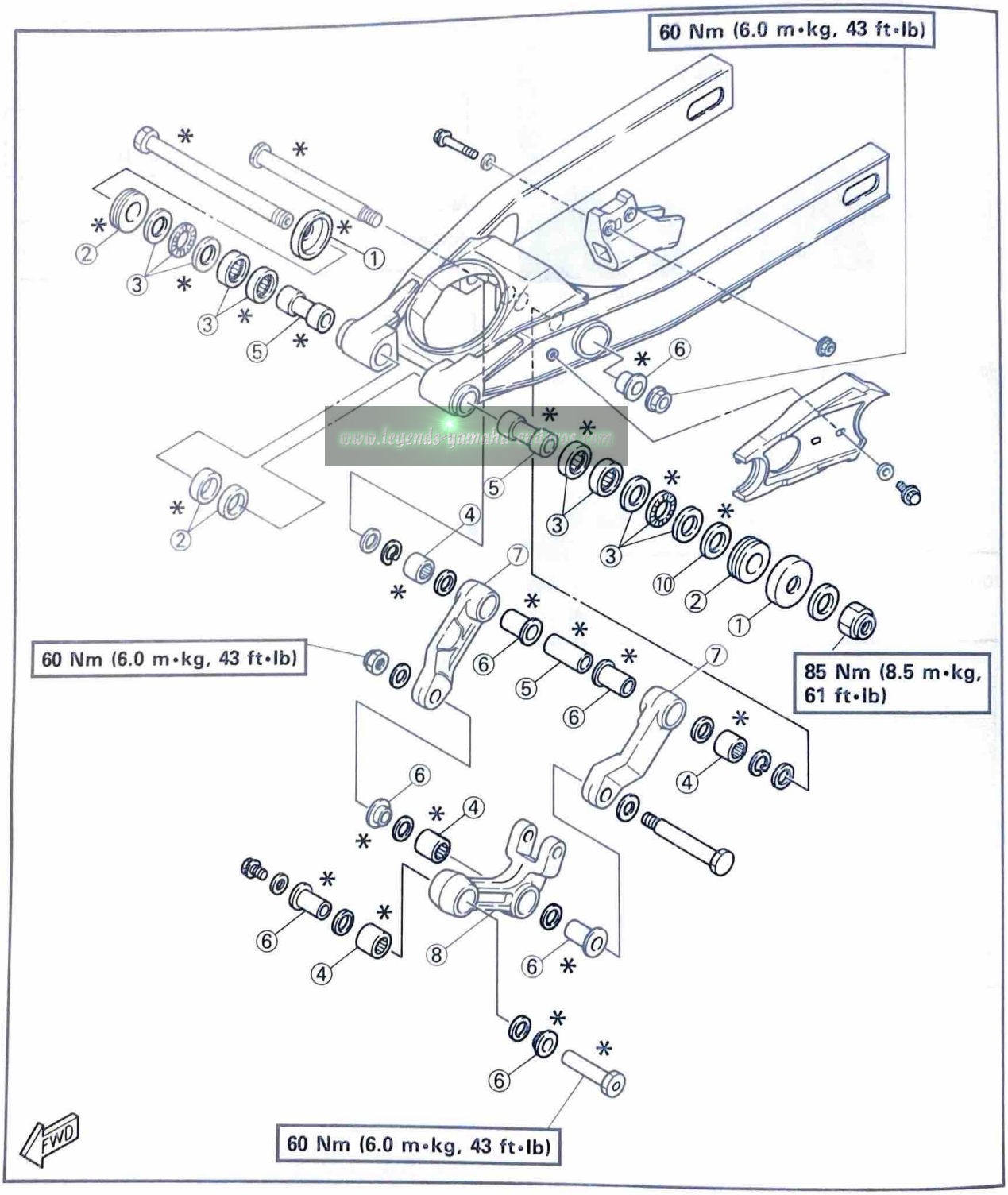
NOTE:
Apply the lithium soap base grease onto the bolt.

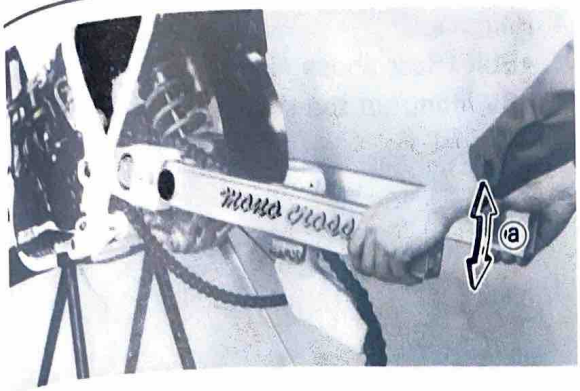
www.legends-yamaha-enduros.com

SWINGARM

① Thrust cover
② Oil seal
③ Bearing
④ Needle bearing set
⑤ Solid bush
⑥ Collar
⑦ Connecting rod
⑧ Relay arm
⑨ Swingarm
⑩ Shim 0.3 mm (0.012 in)
Refer to page 5-44.

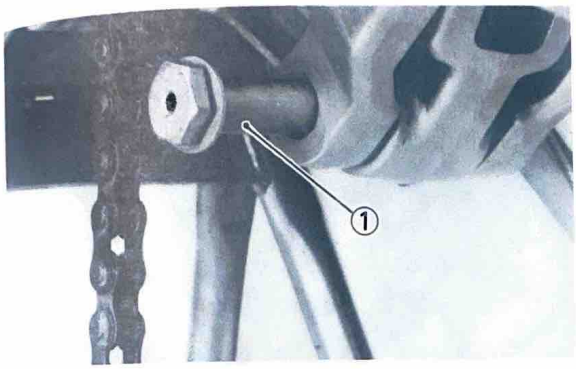
✻ Apply lithium soap base grease to all bearings, bushes, collars, oil seals, thrust covers and shafts.



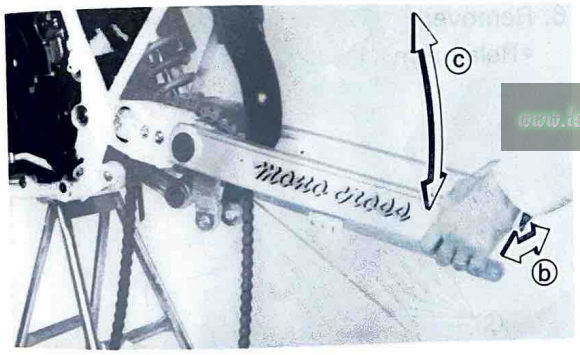


SWINGARM FREE PLAY AND MOVEMENT INSPECTION

1. Remove:
   - Rear wheel
2. Check:
   - Swingarm radial play ⓐ
     Exist play→Check bearings, solid bushes and collars.



3. Remove:
   - Bolt (Connecting rod) ①

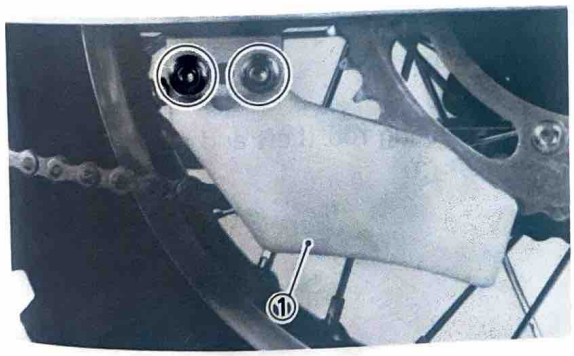


4. Check:
   - Swingarm side play ⓑ
     Exist play→Check bearings, solid bushes and collars.
   - Swingarm up and down movement ⓒ
     Tighteness/Binding/Rough spots→Grease or replace bearings, solid bushes and collars.

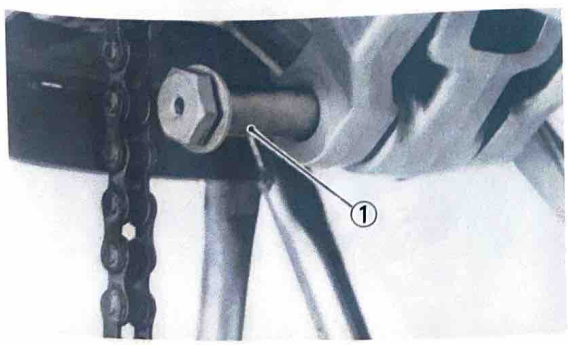
www.legends-yamaha.com

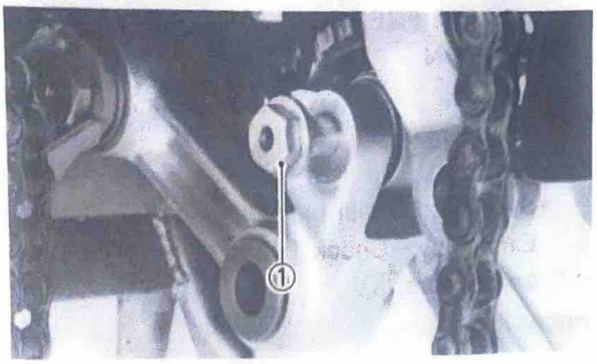
REMOVAL

1. Elevate the rear wheel by placing the suitable stand under the engine.
2. Remove:
   - Chain support ①
   - Rear wheel



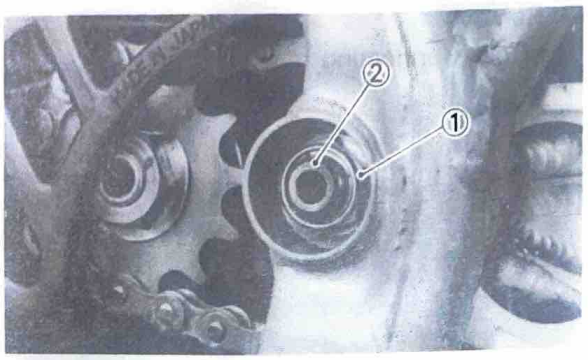
3. Remove:
   - Bolt (Connecting rod) ①





4. Remove:
   - Bolt (Rear shock absorber — Lower) ①

   By lifting up the swingarm.



5. Remove:
   - Nut (Pivot shaft) ①
   - Pivot shaft ②
   - Swingarm

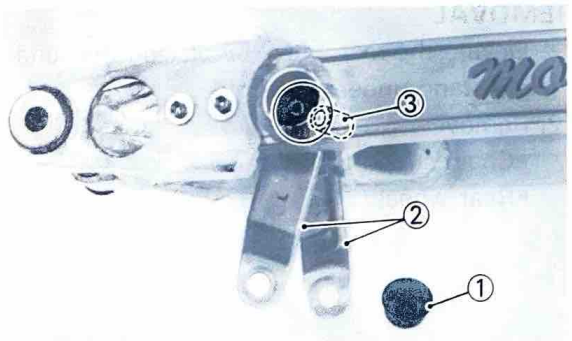
6. Remove:
   - Relay arm ①

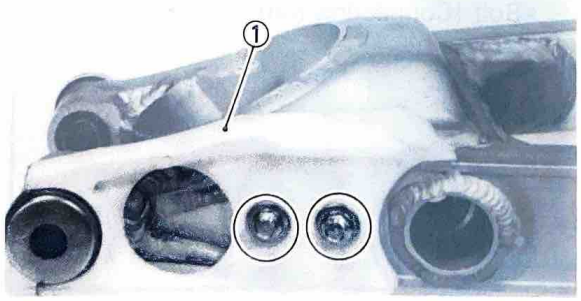
www.legends-yamaha-enduros.com

5

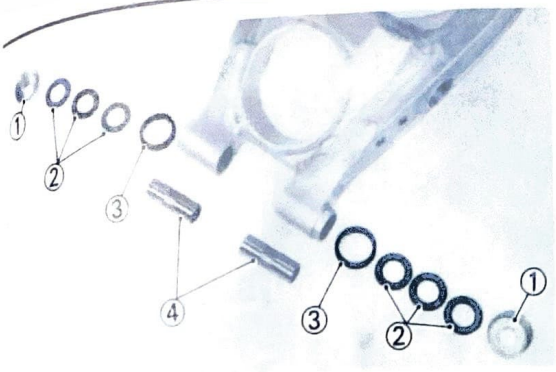
DISASSEMBLY

1. Remove:
   - Cap ①
   - Connecting rod (Left and right) ②
   - Collar ③

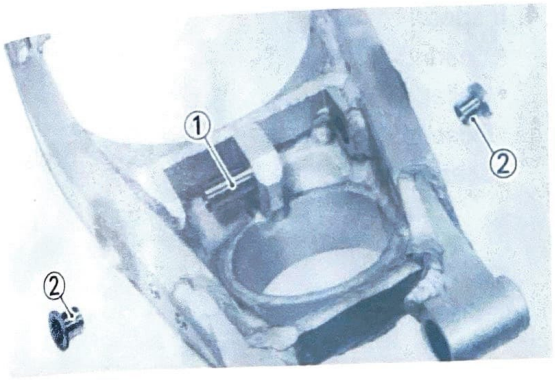




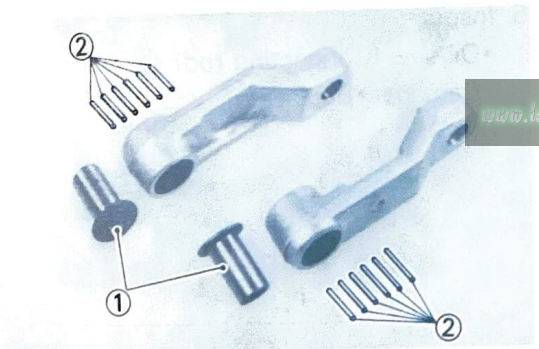
2. Remove:
   - Chain guide ①



3. Remove:
   - Thrust cover ①
   - Bearing ②
   - Oil seal ③
   - Solid bush ④



4. Remove:
   - Solid bush ①
   - Collar ②



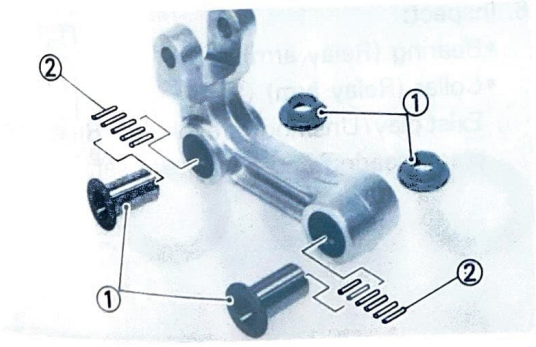
5. Remove:
   - Collar ①
   - Needle bearings ②

   From connecting rod (Left and right).

www.legends-yamaha-enduros.com

NOTE:

Take care not to lose the needle bearings ② (Left: 28 pieces, Right: 28 pieces).

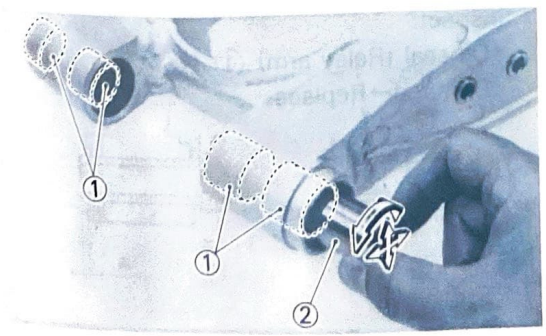


6. Remove:
   - Collar ①
   - Needle bearings ②

   From relay arm.

NOTE:

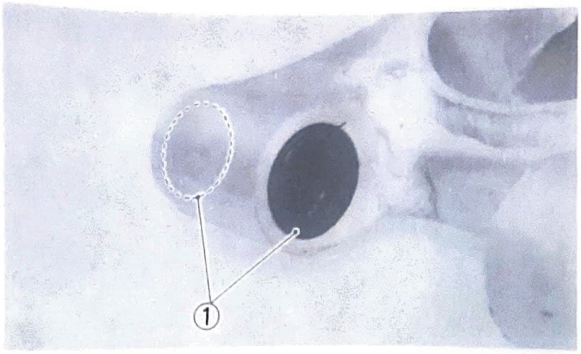
Take care not to lose the needle bearings ② (Front: 28 pieces, Rear: 28 pieces).



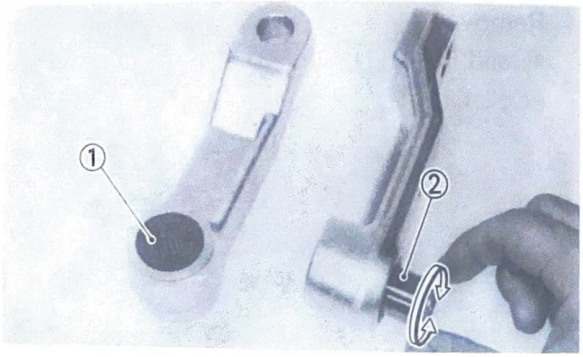
INSPECTION AND REPAIR

1. Wash the bearings, bushes, collars, and thrust covers in a solvent.
2. Inspect:
   - Bearing (Swingarm) ①
   - Solid bush (Swingarm) ②

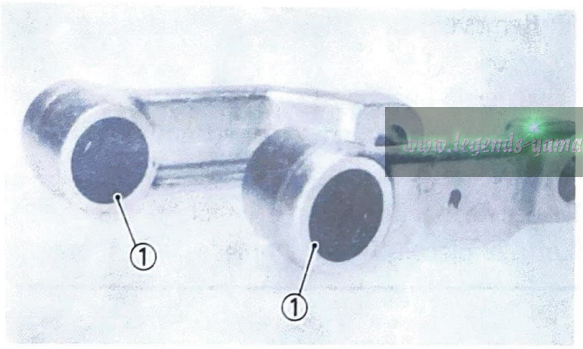
   Play/Unsmooth revolution/Rust→Replace bearing and solid bush as a set.



3. Inspect:
   • Oil seal ①
   Damage → Replace.

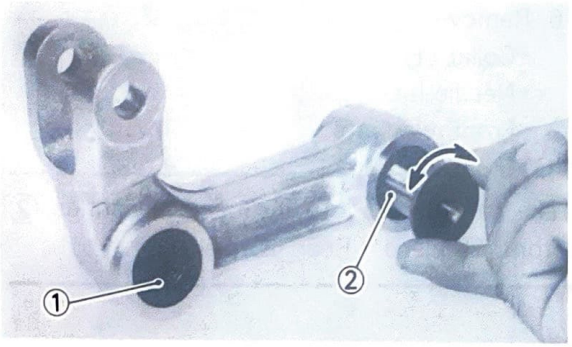


4. Inspect:
   • Bearing (Connecting rod) ①
   • Collar (Connecting rod) ②
   Exist play/Unsmooth revolution → Replace bearing and collar as a set.

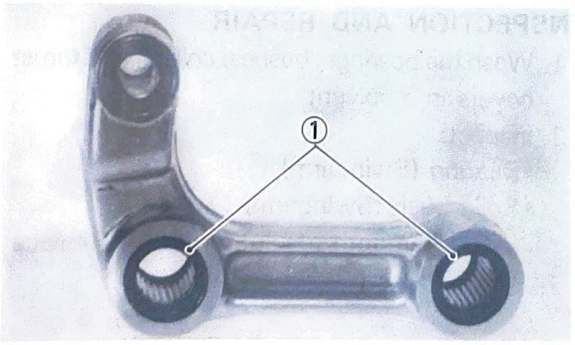


www.legends-yamaha-enduros.com

5. Inspect:
   • Oil seal (Connecting rod) ①
   Damage → Replace.

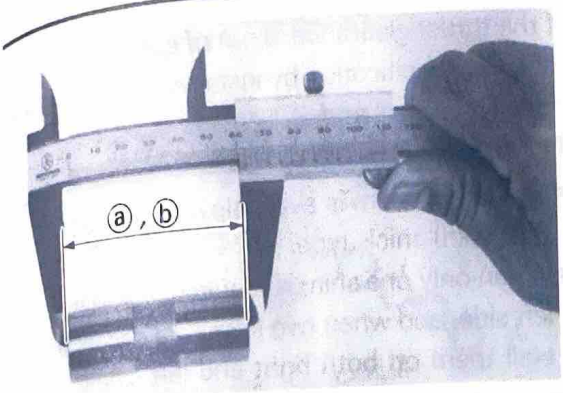


6. Inspect:
   • Bearing (Relay arm) ①
   • Collar (Relay arm) ②
   Exist play/Unsmooth revolution/Rust → Replace bearing and collar as a set.

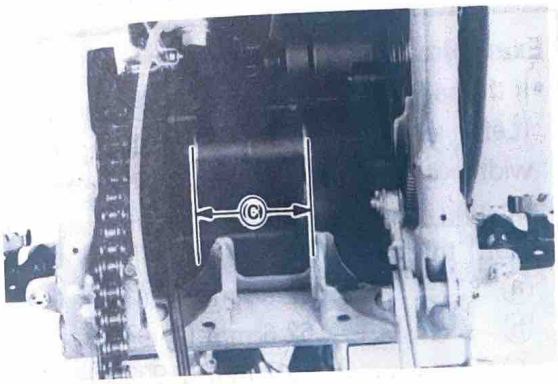


7. Inspect:
   • Oil seal (Relay arm) ①
   Damage → Replace.

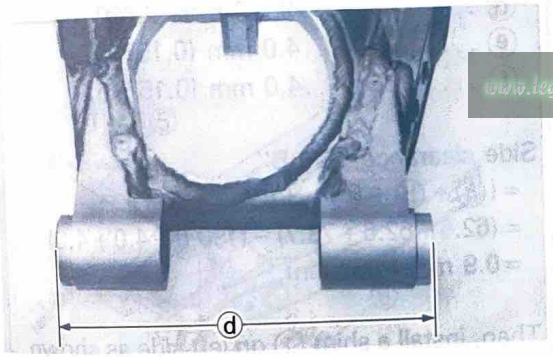
SWINGARM SIDE CLEARANCE INSPECTION AND ADJUSTMENT



1. Measure:
   - Solid bush (Right) length ⓐ
   - Solid bush (Left) length ⓑ



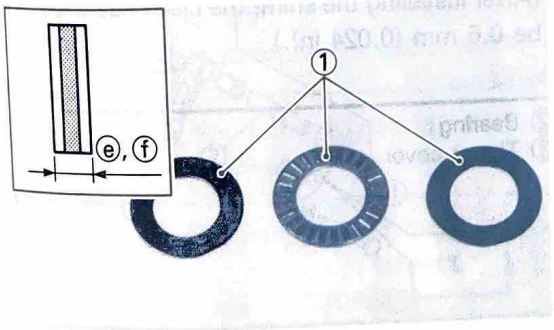
2. Measure:
   - Engine mounting boss width ⓒ



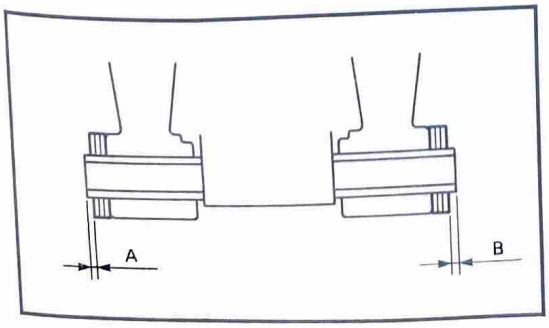
3. Measure:
   - Swingarm head pipe length ⓓ

www.legends-yamaha.com

① Bearing



4. Measure:
   - Bearing (Right) thickness ⓔ
   - Bearing (Left) thickness ⓕ



5. Calculate:
   - Swingarm side clearance "A + B"

   Out of specification → Adjust side clearance using shim.

   By using formula given below.

"A + B" = (ⓐ + ⓑ + ⓒ) − (ⓓ + ⓔ + ⓕ)

Side Clearance "A + B"
0.4 ~ 0.7 mm (0.016 ~ 0.028 in)

If the thrust clearance is out of specification, adjust it to specification by installing the adjust shim at positions, A and B.

NOTE:

- The adjust shim is available only in the 0.3 mm (0.012 in) thick type.
- When only one shim is required, install it on the left side, and when two shims are necessary, install them on both right and left sides.

Example:

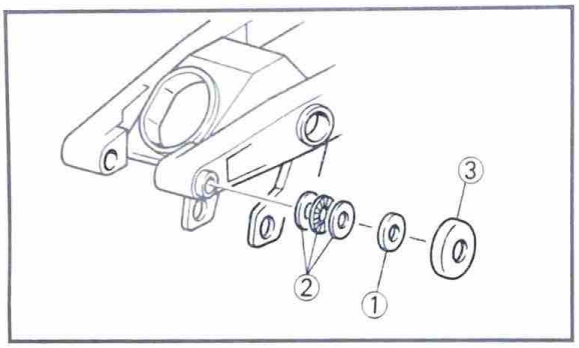
- If the solid bush (Right) length ⓐ, solid bush (Left) length ⓑ, engine mounting boss width ⓒ, swingarm head pipe length ⓓ, Bearing (Right) thickness ⓔ and bearing (Left) thickness ⓕ are below.

ⓐ .....62.6 mm (2.464 in)
ⓑ .....62.6 mm (2.464 in)
ⓒ .....73.7 mm (2.902 in)
ⓓ .....190.0 mm (7.480 in)
ⓔ .....4.0 mm (0.157 in)
ⓕ .....4.0 mm (0.157 in)

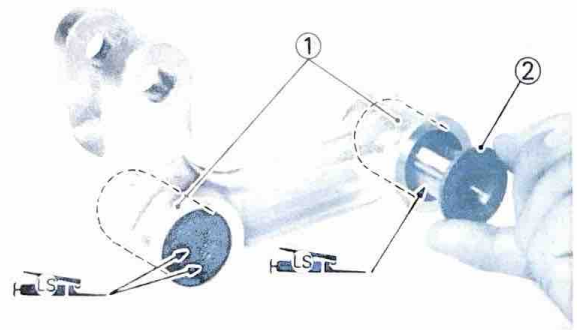
www.legends-yamaha-enduros.com

Side clearance "A + B"
= (ⓐ + ⓑ + ⓒ) − (ⓓ + ⓔ + ⓕ)
= (62.6 + 62.6 + 73.7) − (190.0 + 4.0 + 4.0)
= 0.9 mm (0.036 in)

Then, install a shim ① on left side as shown.
(After installing the shim, the clearance should be 0.6 mm (0.024 in).)



② Bearing
③ Thrust cover



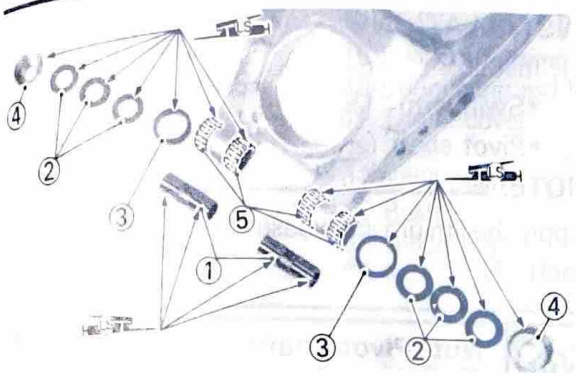
ASSEMBLY

1. Install:
   - Needle bearing (Front and rear) ①
   - Collars ②

   To relay arm.

NOTE:

Apply the grease onto the needle bearings, collars and oil seals.

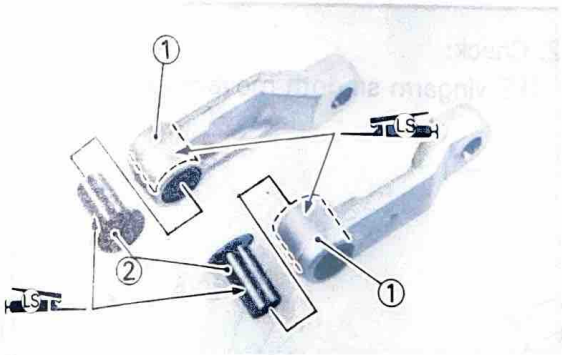


2. Install:
   - Solid bush ①
   - Bearings ②
   - Oil seal ③
   - Thrust cover ④

   To swingarm.

NOTE:

Apply the grease onto the swingarm pivot bearings ⑤, solid bushes ①, bearings ② and oil seals ③.

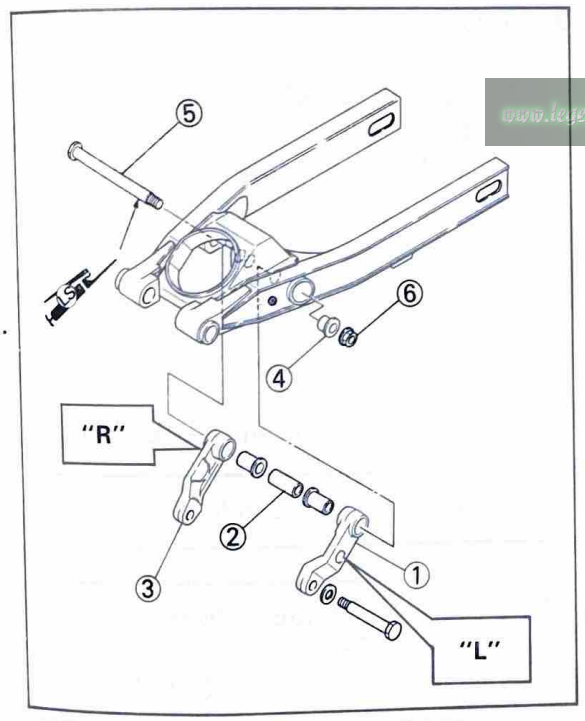


3. Install:
   - Needle bearings ①
   - Collar ②

   To connecting rod (Left and right).

NOTE:

Apply the grease onto the needle bearings ① and collars ②.

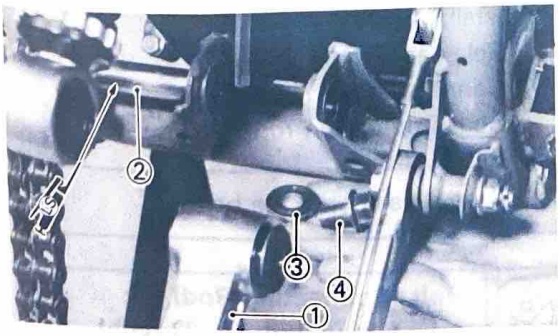


4. Install:
   - Chain guide
   - Connecting rod (Left) ①
   - Collar ②
   - Connecting rod (Right) ③
   - Collar (Left and right) ④
   - Bolt (Connecting rod) ⑤
   - Nut (Connecting rod) ⑥

NOTE:

- Apply the grease onto the bolt (connecting rod) ⑤.
- Install the connecting rod with the "R" mark on the right side and the one with the "L" mark on the left side. Be sure that the end having the "R" or "L" mark faces outward.

Bolt (Connecting Rod) ④: 60 Nm (6.0 m•kg, 43 ft•lb)

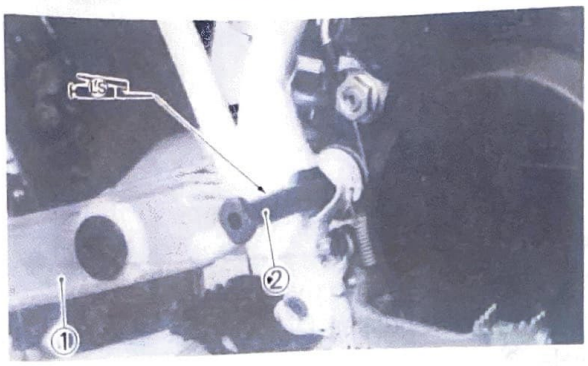


5. Install:
   - Relay arm ①
   - Union nut ②
   - Plain washer ③
   - Bolt (Relay arm) ④

NOTE:

Apply the grease onto the union nut ②.

www.legends-yamaha-enduro.com



INSTALLATION

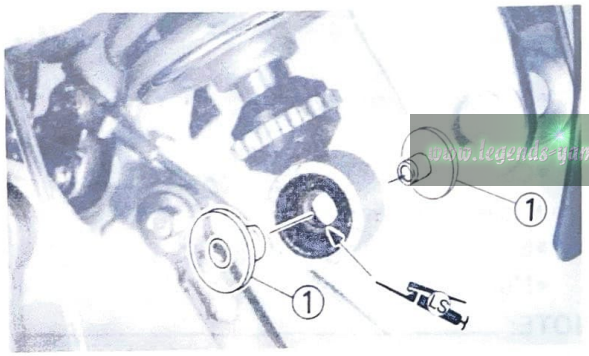
1. Install:
   - Swingarm ①
   - Pivot shaft ②

NOTE:

Apply the lithium soap base grease onto the pivot shaft ②.

Nut (Pivot Shaft):
85 Nm (8.5 m•kg, 61 ft•lb)

2. Check:
   - Swingarm smooth movement.

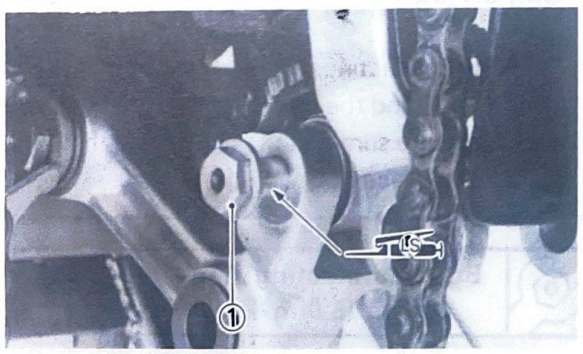


3. Apply:
   - Grease

   Onto the rear shock absorber.
4. Install:
   - Collar (Rear shock absorber) ①

www.legends-yamaha-enduro.com

5

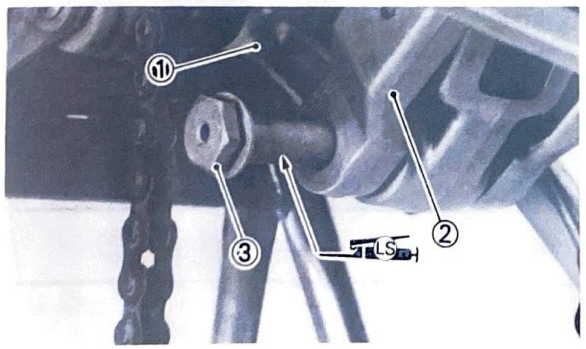


5. Install:
   - Bolt (Rear shock absorber — Lower) ①

NOTE:

Apply the grease onto the bolt ①.

Bolt (Rear Shock Absorber — Lower) ①:
32 Nm (3.2 m•kg, 23 ft•lb)



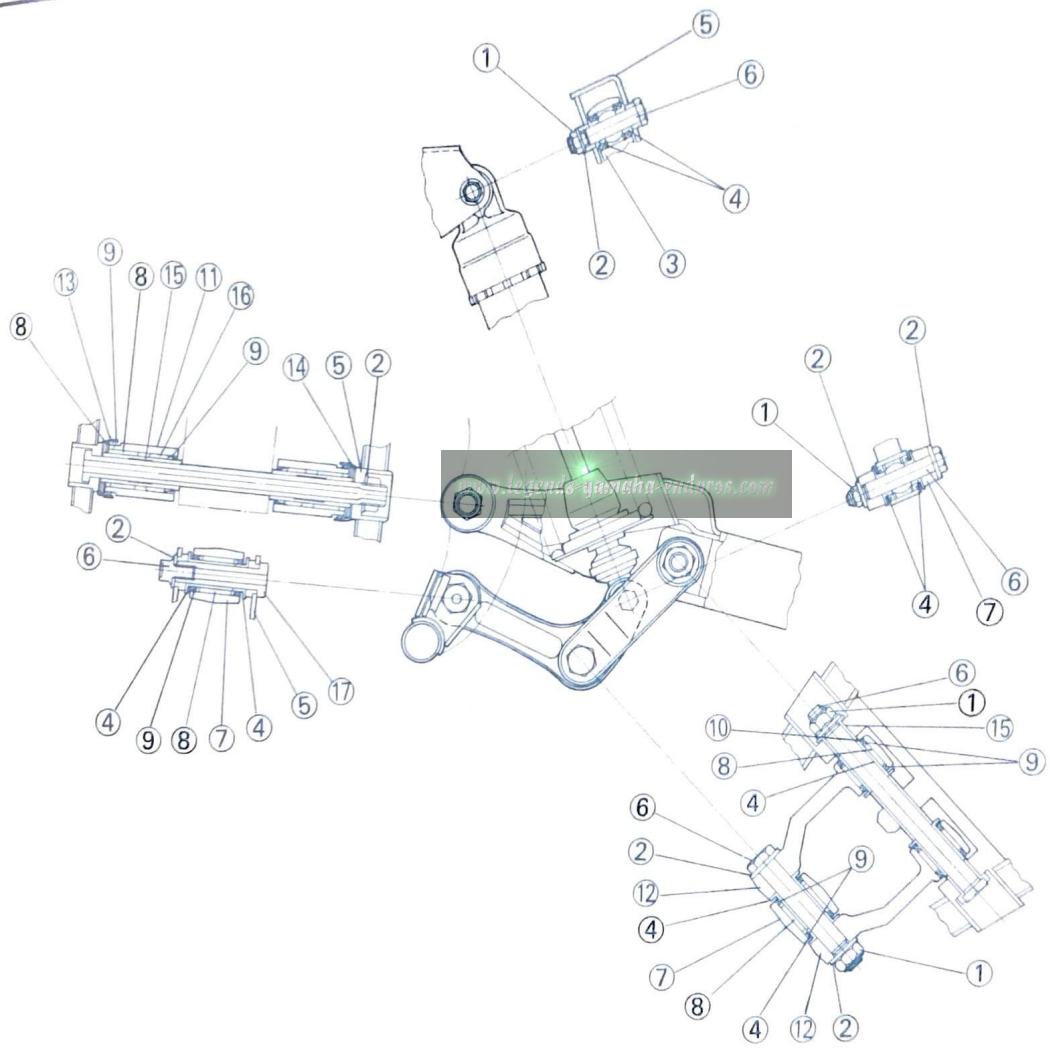
6. Install:
   - Relay arm ①
   - Connecting rod ②
   - Bolt (Connecting rod) ③

NOTE:

Apply the grease onto the bolt ③.

Bolt (Connecting Rod) ③:
60 Nm (6.0 m•kg, 23 ft•lb)

① Self-locking nut
② Plane washer
③ Rear shock absorber
④ Collar
⑤ Frame
⑥ Bolt
⑦ Relay arm
⑧ Bearing
⑨ Oil seal
⑩ Circlip
⑪ Swingarm complete
⑫ Connecting rod
⑬ Thrust cover
⑭ Shim
⑮ Solid bush
⑯ Bush
⑰ Union nut
⑱ Nut



www.leyenda-yamaha-enduros.com

www.legends-yamaha-enduros.com

CHAPTER 6
ELECTRICAL

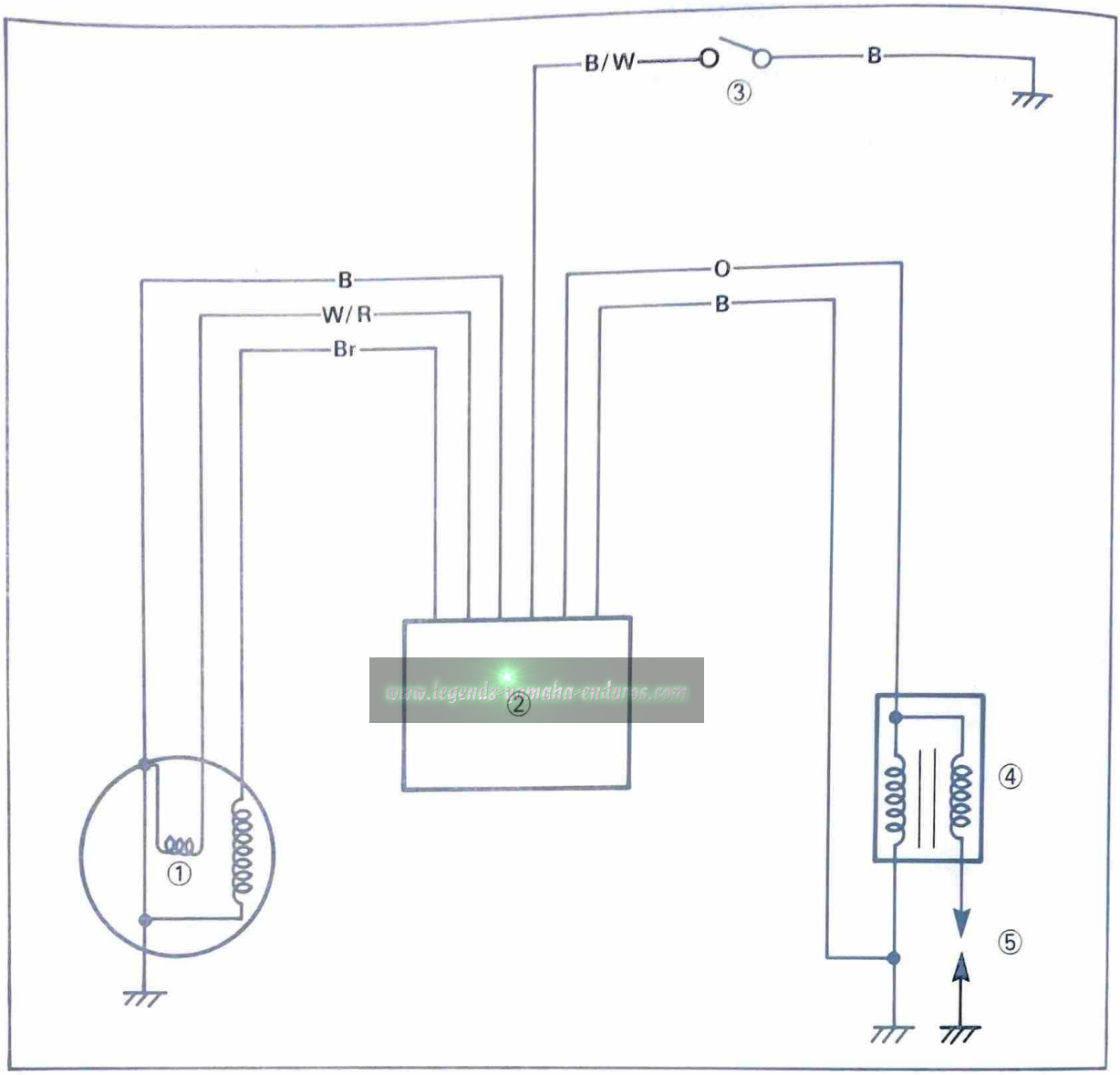
YZ250T CIRCUIT DIAGRAM 6-1

ELECTRICAL COMPONENTS 6-2

IGNITION SYSTEM 6-3
TROUBLESHOOTING 6-3

www.legends-yamaha-enduros.com

YZ250T CIRCUIT DIAGRAM



www.legends-yamaha-enduros.com

① CDI magneto
② CDI unit
③ "ENGINE STOP" button
④ Ignition coil
⑤ Spark plug

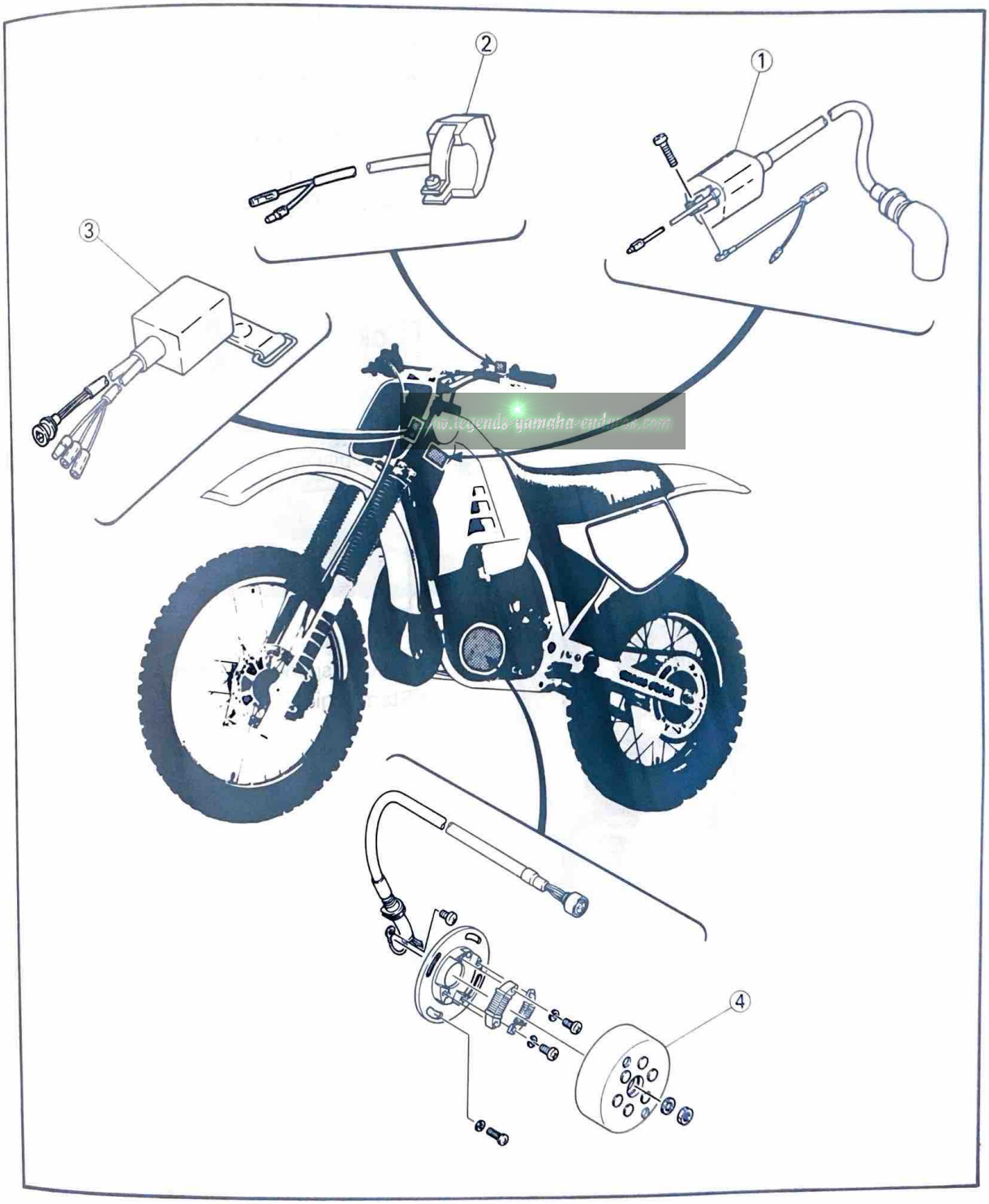
COLOR CODE

Br	Brown
O	Orange
B	Black
B/W	Black/White
W/R	White/Red

ELECTRICAL COMPONENTS

① Ignition coil
② "ENGINE STOP" button
③ CDI unit
④ CDI magneto

SPECIFICATIONS	RESISTANCE
IGNITION COIL:	
PRIMARY	0.20 ~ 0.24Ω
SECONDARY	4.0 ~ 4.8kΩ
PICKUP COIL	170 ~ 230Ω
SOURCE COIL	131 ~ 178Ω



www.leyenda-yamaha-enduro.com

IGNITION SYSTEM

TROUBLESHOOTING

IF IGNITION SYSTEM SHOULD BECOME INOPERATIVE (NO SPARK OR INTERMITTENT SPARK).

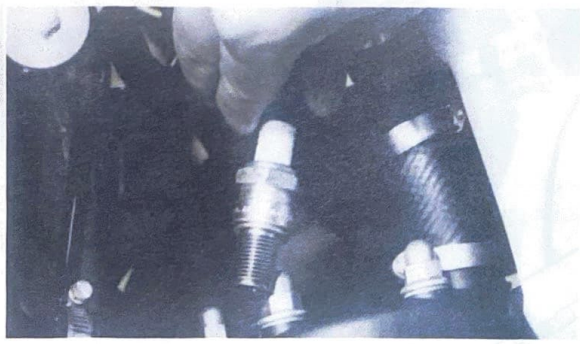
1. Spark plug inspection
   - Remove spark plug.
   - Clean spark plug with spark plug cleaner, if necessary.
   - Inspect electrode, insulator and plug gap. Refer to "CHAPTER 2 — SPARK PLUG IN-INSPECTION" section.

OK

No good

Replace or regap spark plug.

www.legends-yamaha-enduros.com

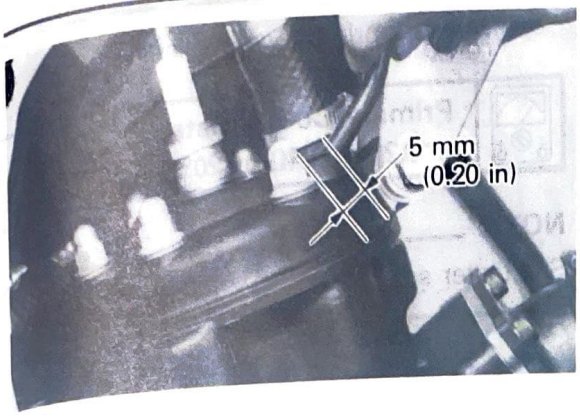


2. Spark test
   - Ground spark plug to cylinder.
   - Start engine.

No spark

Spark

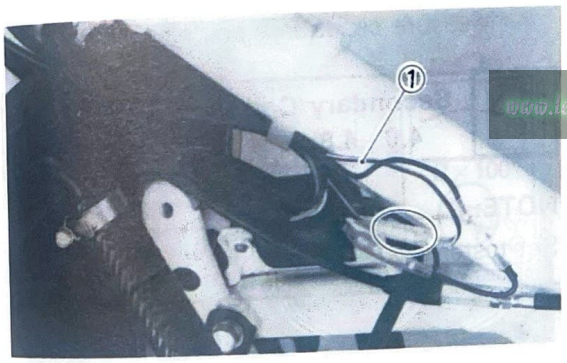
Check ignition timing.
Refer to "CHAPTER 2 — IGNITION TIMING ADJUSTMENT" section.



3. Spark gap test
   - Remove spark plug cap.
   - Hold spark plug lead 5 mm (0.2 in) from cylinder head.
   - Start engine.

No spark → Spark

Spark plug cap is faulty, replace it.

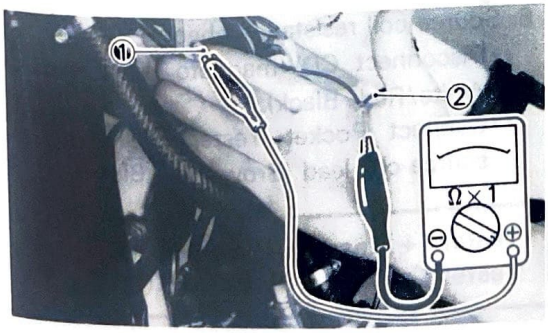


4. "ENGINE STOP" button conduct check
   - Disconnect "ENGINE STOP" button lead ① (Black/White).
   - Start engine.

www.legends-yamaha-enduros.com

Engine does not start. → Engine starts.

"ENGINE STOP" button is faulty, replace it.



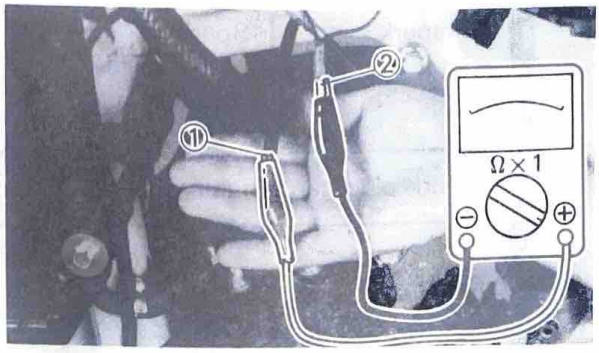
5. Ignition coil resistance check
   - Disconnect ignition coil lead (Orange) and spark plug lead.
   - Connect Pocket Tester (YU-03112) to ignition coil lead.

Tester (+) lead→Orange lead ①
Tester (−) lead→Black lead ②

• Measure primary coil resistance.

Primary Coil Resistance:
0.20 ~ 0.24Ω at 20°C (68°F)

NOTE:
Set tester selector to "Ω × 1" position.



• Connect Pocket Tester (YU-03112) to ignition coil lead and spark plug lead.

Tester (−) lead → Orange lead ②
Tester (+) lead → Spark plug lead ①

• Measure secondary coil resistance.

Secondary Coil Resistance:
4.0 ~ 4.8kΩ at 20°C (68°F)

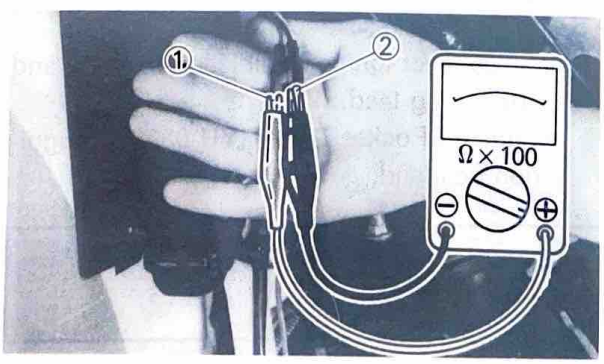
www.legends-yamaha-enthusiasts.com

NOTE:
Set tester selector to "Ω × 1K" position.

Both resistances meet specifications.

Out of specification.

Ignition coil is faulty, replace it.



6. Source coil resistance check
   • Disconnect CDI magneto leads (Brown, White/Red, Black).
   • Connect Pocket Tester (YU-03112) to source coil lead (Brown and Black).

Tester (+) lead → Brown lead ①
Tester (−) lead → Black lead ②

• Measure source coil resistance.

Source Coil resistance:
131 ~ 178Ω at 20°C (68°F)

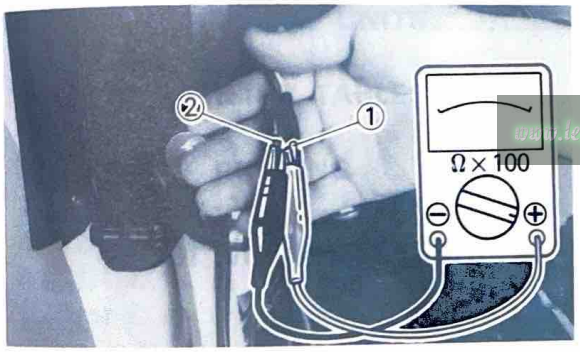
NOTE:
Set tester selector to "Ω × 100" position.

Resistance meets specification.

Out of specification.

Source coil is faulty, replace it.

7. Pick-up coil resistance check
   • Disconnect CDI magneto leads (Brown, White/Red, Black).
   • Connect Pocket Tester (YU-03112) to Pick-up Coil leads (White/Red, Black).



Tester (+) lead → White/Red lead ①
Tester (−) lead → Black lead ②

• Measure pick-up coil resistance.

Pick-up Coil Resistance:
170 ~ 230Ω at 20°C (68°F)

NOTE:
Set tester selector to "Ω × 100" position.

Resistance meets specification.

Out of specification.

Pick-up coil is faulty, replace it.

8. Check entire ignition system for connections.
   Refer to "WIRING DIAGRAM" section.

OK

Poor connection.

Correct.

CDI unit is faulty, replace it.

www.legends-yamaha-enduros.com

CHAPTER 7
APPENDICES

SETTING CHARTS 7-1

TROUBLESHOOTING GUIDE 7-4
ENGINE IS HARD TO START OR DOES NOT START 7-4
POOR HIGH SPEED PERFORMANCE 7-5
OVERHEAT 7-6
LOW COOLANT LEVEL 7-6
TRANSMISSION AND SHIFTER 7-7
CLUTCH 7-7
CHASSIS 7-8

SPECIFICATIONS 7-9
GENERAL SPECIFICATIONS 7-9
MAINTENANCE SPECIFICATIONS 7-11

GENERAL TORQUE SPECIFICATIONS 7-18

DEFINITION OF UNITS 7-18

CONVERSION TABLES 7-19

CABLE ROUTING 7-20

YZ250T WIRING DIAGRAM 7-21

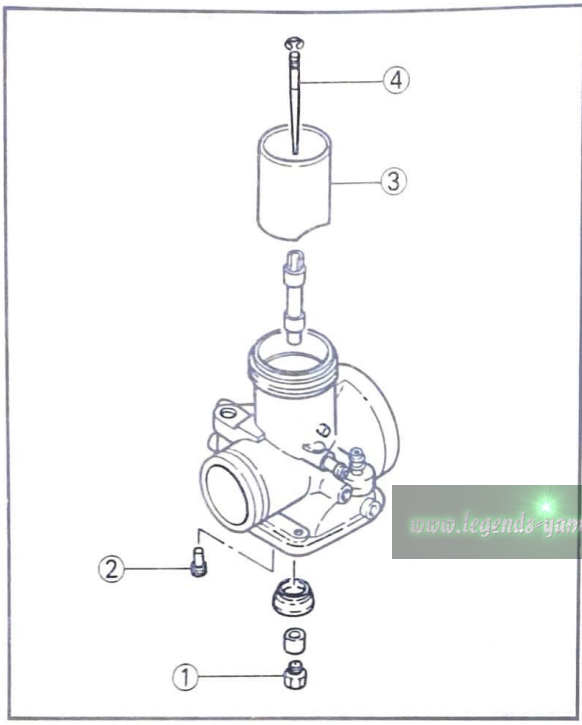
www.legends-yamaha-enduros.com

APPENDICES

SETTING CHARTS

NOTE:

For details of machine setting, refer to the Race Preparation and Tuning Manual. It is advisable to take a note of the standard setting data and specified range of adjustment.



www.legends-yamaha-enduros.com

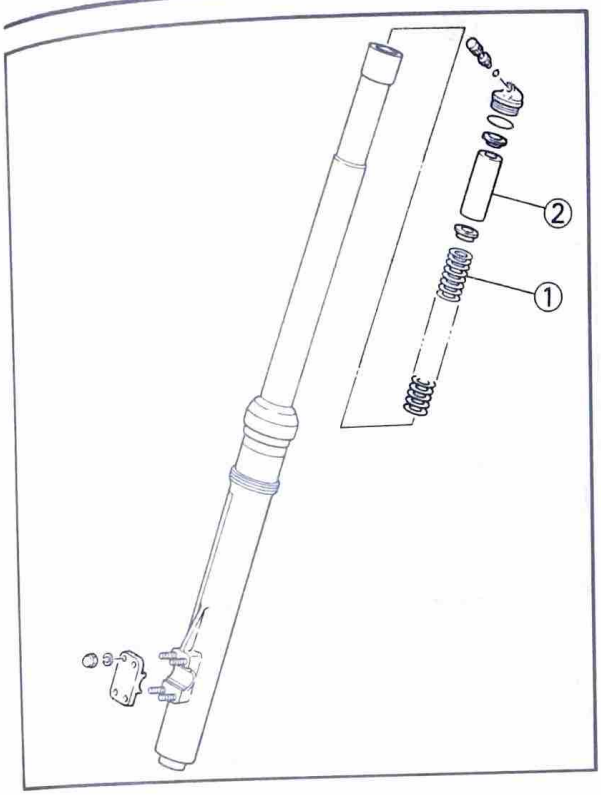
CARBURETOR

Part name	Size	Part number
Main Jet ①	#330	137-14143-66
	#340	137-14143-68
(STD)	#350	137-14143-70
	#360	137-14143-72
	#370	137-14143-74
	#380	137-14143-76
Pilot Jet ②	#25	193-14112-25
(STD)	#30	193-14112-30
	#35	193-14112-35
	#40	193-14112-40
	#45	193-14112-45
Throttle Valve ③	2.5	2X8-14112-25
	3.0	2X8-14112-30
(STD)	3.5	2X8-14112-35
	4.0	2X8-14112-40
	4.5	2X8-14112-45
Needle Jet ④	Q-2	510-14141-52
(STD)	Q-4	510-14141-54
	Q-6	510-14141-56

NOTE:

Refer to CHAPTER 3 — CARBURETOR AND REED VALVE" section.

7



FRONT FORK

Front Fork Spring

Type	Spring rate (kg/mm)	Part number	I.D. mark	Spacer
STD	0.375	2HH-23141-LO	—	STD
SOFT	0.350	2HG-23141-LO	—	SOFT
HARD	0.400	2HH-23141-20	2 slits	HARD

Spacer

Type	Spacer length	Part number
STD	57 mm (2.24 in)	2HH-23318-LO
SOFT	90 mm (3.54 in)	1LV-23318-10
HARD	50 mm (1.97 in)	5X6-23318-LO

① Front fork spring
② Spacer

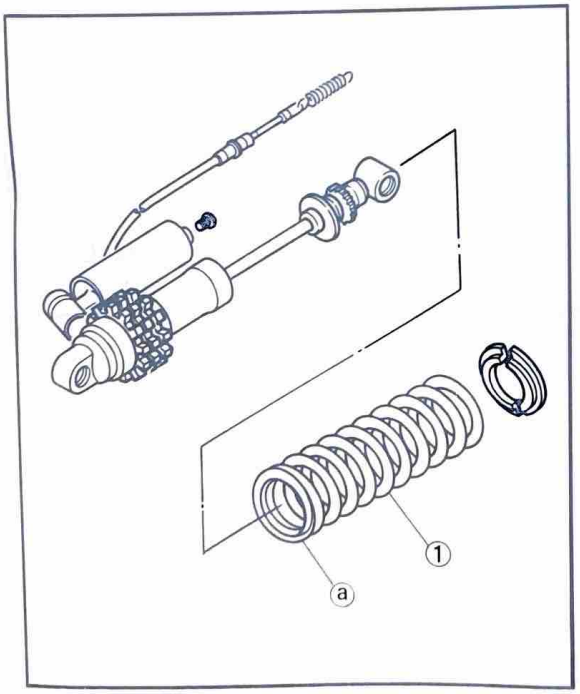
NOTE:

Refer to "CHAPTER 5 — FRONT FORK" section.

CAUTION:

Always use both the front fork spring and the corresponding spacer if either is to be changed in setting.

www.legends-yamaha-enduros.com



REAR SHOCK ABSORBER

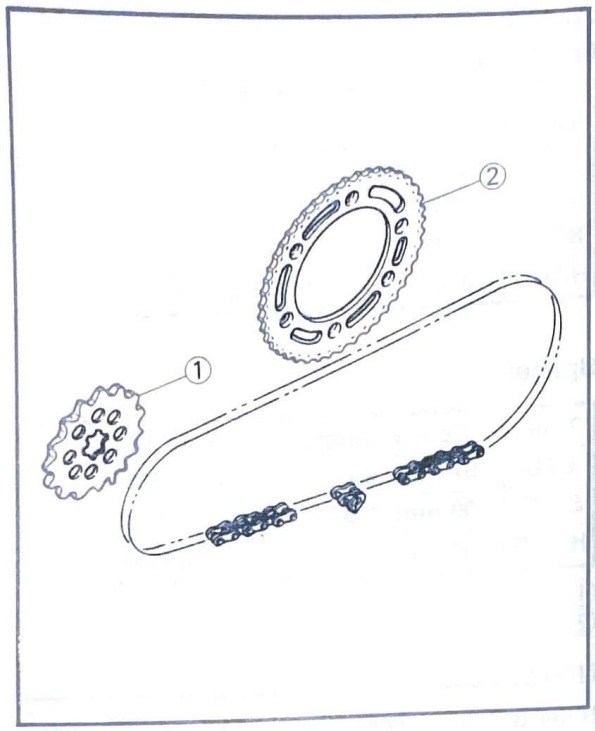
Type	Spring rate (kg/mm)	Part number	I.D.
STD	5.25	1LV-22212-10	Black—White
SOFT	5.00	2HH-22212-10	Black—Pink
HARD	5.50	1LV-22212-00	Black—Blue

① Rear shock spring

NOTE:

Refer to "CHAPTER 5 — REAR SHOCK ABSORBER" section (Page 5-32).

ⓐ I.D. Color



DRIVE AND DRIVEN SPROCKETS

Part name	Size	Part number
Drive Sprocket (STD)	13T	23X-17461-30
	14T	23X-17461-40
	15T	23X-17461-50
Driven Sprocket (STD)	44T	39W-25444-01
	45T	39W-25445-00
	46T	39W-25446-00
	48T	39W-25448-00
	49T	2HH-25449-00
	50T	39W-25450-00
	52T	39W-25452-00

① Drive sprocket
② Driven sprocket

NOTE:

Refer to "CHAPTER 5 — REAR WHEEL, REAR DRUM BRAKE AND SPROCKETS" section (Page 5-5).

www.legends-yamaha-enduros.com

TROUBLESHOOTING GUIDE

ENGINE IS HARD TO START OR DOES NOT START.

Ignition System	
Possible Cause	Remedy
1. Spark plug is wet.	• Clean or replace
2. Ignition coil is faulty.	• Replace
3. CDI unit is faulty.	• Replace
4. CDI magneto is faulty (Pickup coil, source coil)	• Replace
5. Ignition timing is incorrect.	• Adjust
6. Wire is broken, shorted or disconnected.	• Repair, replace or connect
7. Engine stop switch is shorted.	• Repair or replace

Compression System	
Possible Cause	Remedy
1. Piston rings are sticking or worn.	• Replace
2. Cylinder or piston is worn or scratched.	• Repair or replace
3. Compression leaks passing cylinder head gasket (Head is distorted.)	• Replace (or repair)
4. Crankshaft side oil seal is faulty.	• Replace
5. Air leaks through crankcase sealing surfaces.	• Repair

www.legends-yamaha-enduros.com

Air/Fuel System	
Possible Cause	Remedy
1. Carburetor pilot jet is clogged.	• Clean
2. Fuel petcock or pipe is clogged.	• Clean
3. Float valve is faulty. (Float height is too high or too low.)	• Replace (remove gasoline from crankcase)
4. Reed valve is broken or deformed.	• Replace
5. Fuel tank filler cap or carburetor breather pipe is clogged.	• Clean
6. Air screw is improperly adjusted.	• Adjust
7. Fuel is deteriorated.	• Replace
8. Oil gas mixing ratio is incorrect.	• Replace
9. Air leakes through carburetor joints.	• Retighten or replace gasket

POOR HIGH SPEED PERFORMANCE

Ignition System	
Possible Cause	Remedy
1. Spark plug is dirty or plug gap is too narrow.	• Clean, repair or replace.
2. CDI unit is faulty.	• Replace
3. CDI magneto is faulty.	• Replace
4. Ignition coil is faulty.	• Replace
5. Ignition timing is incorrect.	• Adjust
6. Loose wire connection.	• Repair
Compression System	
Possible Cause	Remedy
1. Piston rings are sticking or worn.	• Replace
2. Cylinder or piston is worn or scratched.	• Repair or replace
3. Compression leakage through crankcase sealing surfaces or crankshaft side oil seal.	• Repair or replace
4. Carbon deposits in combustion chamber (Piston, Cylinder head).	• Decarbonize
5. Power valve malfunctions	• Repair or replace
Air/Fuel System	
Possible Cause	Remedy
1. Clogged carburetor jets.	• Clean
2. Improperly adjusted main jet (High speed)	• Adjust
3. Improperly adjusted jet needle (Medium speed)	• Adjust
4. Incorrect fuel level	• Adjust
5. Dirty or clogged air cleaner element	• Clean
6. Clogged fuel tank filler cap or carburetor breather pipe.	• Clean
7. Clogged fuel petcock or kinked fuel pipe.	• Clean or repair
8. Deteriorated fuel.	• Replace
9. Improper oil-gas mixing ratio	• Replace
10. Cracked or broken exhaust pipe (Leakage of exhaust gases).	• Replace

www.legends-yamaha-enduros.com

OVERHEAT

Possible Cause	Remedy
1. Incorrect air-fuel mixture	• Adjust
2. Air leaks through carburetor joint.	• Repair or replace
3. Incorrect ignition timing	• Adjust
4. Carbon builds up in cylinder head or on piston head.	• Decarbonize
5. Improper spark plug heat range (too hot)	• Replace
6. Fuel is deteriorated or oil-gas mixing ratio is incorrect.	• Replace
7. Coolant of inferior quality.	• Replace with specified type
8. Coolant level is low.	• Add upto specified line
9. Water pump is faulty.	• Repair or replace
10. Cooling passage is clogged.	• Clean passage
11. Radiator is clogged.	• Clean radiator

LOW COOLANT LEVEL

Possible Cause	Remedy
1. Radiator is leaky.	• Repair or replace
2. Hose is damaged or joint is loose.	• Replace hose or retighten joint
3. Water pump cover is leaky.	• Repair or replace
4. Cylinder head gasket is faulty.	• Replace

www.legendgarden.com

7

TRANSMISSION AND SHIFTER

Trouble	Possible Cause	Remedy
Gears slip off	1. Gear dogs are worn. 2. Shift forks are bent. (burnt or worn) 3. Shift cam stopper spring is fatigued.	• Replace • Replace • Replace
Gear shifts skipping over the next.	1. Shift cam stopper spring is fatigued. 2. Shift forks are bent. (burnt or worn)	• Replace • Replace
Gear does not select	1. Shift cam is worn. (broken) 2. Change shaft is bent. 3. Shift arm spring is broken. 4. Gears are broken.	• Replace • Replace • Replace • Removal (Replace)
Shift pedal does not return.	1. Shift return spring is broken. 2. Shift shaft is bent.	• Replace • Replace

CLUTCH

Trouble	Possible Cause	Remedy
Clutch slips	1. Friction plate is worn. 2. Clutch plate is worn. 3. Clutch spring is fatigued. 4. Pressure plate is deformed. 5. Clutch play is too small. 6. Clutch adjustment is incorrect. 7. Match marks of clutch boss and pressure plate does not aligned.	• Replace • Replace • Replace • Replace • Adjust • Adjust • Reassemble
Clutch drags	1. Clutch plate is worped. 2. Clutch lock nut is loosen. 3. Friction plate is broken. 4. Clutch play is too much. 5. Oil viscosity is incorrect.	• Replace • Replace • Replace • Adjust • Replace

www.legend-yamaha-motos.com

CHASSIS

Steering head is loose

Possible Cause	Remedy
1. Roller is worn. 2. Steering nut is loose.	• Replace • Retighten

Wheels have excessive run-out

Possible Cause	Remedy
1. Bearing is worn. 2. Rim has dent. 3. Spokes are loose (or broken). 4. Axle nut is loose.	• Replace • Repair or replace • Retighten or replace • Retighten

Brakes

Trouble	Possible Cause	Remedy
Faulty	1. Brake pad or shoes are worn. 2. Brake is improperly adjusted. 3. Brake drum contains water. 4. Brake disc, pad or lining is greasy.	• Replace • Adjust • Clean • Degrease or replace
Not return smoothly	1. Wire is starved for oil. 2. Camshaft is starved for grease. 3. Return spring or brake shoe spring is broken. 4. Brake pedal axle is starved for grease.	• Grease or replace • Grease • Replace • Grease

www.legends-yamaha-enduros.com

Frame and Swingarm

Possible Cause	Remedy
1. Frame is cracked. 2. Rear arm is bent. 3. Rear arm is cracked. 4. Bushing is worn. 5. Bushing lacks oil.	• Weld, reinforce or replace • Repair or replace • Replace • Replace • Lubricate

SPECIFICATIONS

I. GENERAL SPECIFICATIONS

Model	YZ250T
Model Code Number	2HH
Vehicle Identification Number	JYA2HH00*HA000101
Engine Starting Number	2HH-000101
Dimensions: Overall Length Overall Width Overall Height Seat Height Wheelbase Minimum Ground Clearance	 2,170 mm (85.4 in) 850 mm (33.5 in) 1,230 mm (48.4 in) 955 mm (37.6 in) 1,470 mm (57.9 in) 340 mm (13.4 in)
Basic Weight: With Oil and Full Fuel Tank	 106 kg (234 lb)
Engine: Engine Type Cylinder Arrangement Displacement Bore × Stroke Compression Ratio Starting System	 Liquid cooled 2-stroke, gasoline Single cylinder, forward inclined 246 cm^3 68 × 68 mm (2.677 × 2.677 in) 8.54 ~ 10.12 : 1 Kick starter
Lubrication System	Premix (24 : 1) (Yamalube R) Premix (20 : 1) (Castrol R30) (Castrol A545) (Castrol A747)
Oil Type or Grade (2-Cycle): Transmission Oil Periodic Oil Change Total Amount	 Yamalube 4 or SAE 10W30 type SE motor oil 0.85 L (0.75 Imp qt, 0.90 US qt) 0.90 L (0.79 Imp qt, 0.95 US qt)
Radiator Capacity (Including All Routes)	1.0 L (0.88 Imp qt, 1.06 US qt)
Air Filter	Wet type element
Fuel: Type Tank Capacity	 Premium gasoline with an octane rating of at least 90 8.0 L (1.76 Imp gal, 2.11 US gal)
Carburetor: Type/Manufacturer	 VM38SS/MIKUNI
Spark plug: Type/Manufacturer Gap	 N-86, N-86G, N-2G, N-2C/CHAMPION, B8EG, B8EGV/NGK 0.5 ~ 0.6 mm (0.020 ~ 0.024 in)

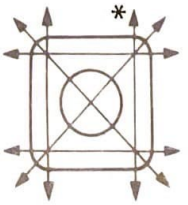
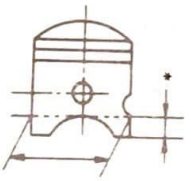
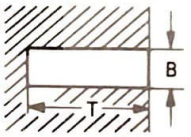
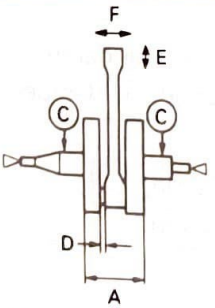
www.legends-garage.com

Model	YZ250T
Clutch Type	Wet, multiple-disc
Transmission:	
Primary Reduction System	Spur gear
Primary Reduction Ratio	64/23 (2.783)
Secondary Reduction System	Chain drive
Secondary Reduction Ratio	49/14 (3.500)
Transmission Type	Constant mesh, 5-speed
Operation	Left foot operation
Gear Ratio 1st	30/14 (2.142)
2nd	28/16 (1.750)
3rd	24/17 (1.412)
4th	20/17 (1.176)
5th	22/22 (1.000)
Chassis:	
Frame Type	Semi double cradle
Caster Angle	28°
Trail	119 mm (4.69 in)
Tire:	
Type	With tube
Size (F)	*1: 80/100-21-4PR
Size (R)	*2: 110/100-18-4PR
Tire Pressure (Front and Rear)	98 kPa (1.0 kg/cm^2, 14 psi)
Brake:	
Front Brake Type	Single disc
Operation	Right hand operation
Rear Brake Type	Drum brake
Operation	Right foot operation
Suspension:	
Front Suspension	Telescopic fork (Pneumo-mechanical)
Rear Suspension	Swingarm (New monocross suspension)
Shock Absorber:	
Front Shock Absorber	Air, coil spring, oil damper
Rear Shock Absorber	Gas, coil spring, oil damper
Wheel Travel:	
Front Wheel Travel	305 mm (12.0 in)
Rear Wheel Travel	320 mm (12.6 in)
Electrical:	
Ignition System	CDI Magneto

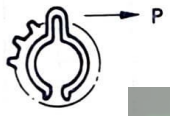
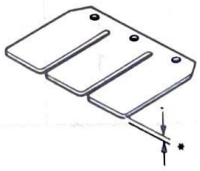
*1: 80/100-21 is a new tire size indication. This is actually the same as 90/90-21 and 3.00-21.
*2 110/100-18 is a new tire size indication. This is actually the same as 4.25-18.

II. MAINTENANCE SPECIFICATIONS

Engine

Model	YZ250T
Cylinder Head: Warp Limit 	<0.03 mm (0.0012 in)> *Lines indicate straightedge measurement.
Cylinder: Bore Size Wear Limit Taper Limit Out of Round Limit	 68.00 ~ 68.02 mm (2.677 ~ 2.678 in) 68.1 mm (2.681 in) <0.05 mm (0.0020 in)> <0.01 mm (0.0004 in)>
Piston: Piston Size/ Measuring Point* Piston Clearance <Limit> Oversize 1st 2nd 3rd Piston Offset 	 67.994 ~ 68.000 mm (2.675 ~ 2.677 in)/ 31 mm (1.22 in) 0.070 ~ 0.075 mm (0.0028 ~ 0.0030 in) <0.1 mm (0.004 in)> 68.25 mm (2.69 in) 68.50 mm (2.70 in) 68.75 mm (2.71 in) 1.5 mm (0.06 in), EX-side
Piston Ring: Sectional Sketch  End Gap (Installed)/<Limit> Side Clearance (Installed)/<Limit>	 Plain B = 1.0 mm (0.04 in) T = 2.9 mm (0.11 in) 0.55 ~ 0.70 mm (0.022 ~ 0.028 in)/ <0.9 mm (0.035 in)> 0.04 ~ 0.08 mm (0.0016 ~ 0.0031 in)/ <0.1 mm (0.004 in)>
Crandkshaft: Crank Width "A" Run Out Limit "C" Connecting Rod Big End Side Clearance "D" Small End Free Play "F" <Limit> 	 61.95 ~ 62.00 mm (2.439 ~ 2.441 in) <0.03 mm (0.0012 in)> 0.25 ~ 0.75 mm (0.01 ~ 0.03 in) 0.4 ~ 1.0 mm (0.016 ~ 0.039 in) <2.0 mm (0.08 in)>

www.legends-yamaha.com

Model	YZ250T
Clutch:	
Friction Plate Thickness/Quantity	3.0 mm (0.12 in) × 7
<Wear Limit>	<2.7 mm (0.11 in)>
Clutch Plate Thickness/Quantity	1.6 mm (0.063 in) × 6
<Warp Limit>	<0.05 mm (0.002 in)>
Clutch Spring Free Length/Quantity	38.3 mm (1.51 in) × 6
<Limit>	<36.3 mm (1.43 in)>
Clutch Housing Thrust Clearance	0.17 ~ 0.23 mm (0.0067 ~ 0.0091 in)
Clutch Housing Radial Clearance	0.03 ~ 0.55 mm (0.0012 ~ 0.0217 in)
Clutch Release Method	Inner push, cam push
Push Rod Bending Limit	0.2 mm (0.008 in)
Transmission:	
Main Axle Deflection Limit	<0.01 mm (0.0004 in)>
Drive Axle Deflection Limit	<0.01 mm (0.0004 in)>
Shifter:	
Shifting Type	Guide bar
Guide Bar Bending Limit	<0.05 mm (0.0020 in)>
Kick Starter Type	Kick and mesh type
Kick Clip Friction Force 	P = 0.8 ~ 1.2 kg (1.8 ~ 2.6 lb)
Air Filter Oil Grade (Oiled Filter)	Foam-air-filter oil
Carburetor:	
Type/Manufacturer	VM38SS/MIKUNI
I.D. Mark	52HH00
Main Jet (M.J.)	#350
Main Air Jet (M.A.J.)	φ2.5
Jet Needle-clip Position (J.N.)	6F16-2
Needle Jet (N.J.)	Q-4
Cutaway (C.A.)	3.5
Pilot Jet (P.J.)	#30
Pilot Air Screw (P.A.S.)	2
Valve Seat Size (V.S.)	φ3.5
Starter Jet (G.S.)	#90
Float Height (F.H.)	26.0 ~ 28.0 mm (1.02 ~ 1.10 in)
Fuel Level (F.L.)	3 ~ 5 mm (0.12 ~ 0.20 in)
Reed Valve:	
Thickness* 	0.42 mm (0.017 in)
Valve Stopper Height	8.4 ~ 8.8 mm (0.33 ~ 0.35 in)
Valve Bending Limit	0.6 mm (0.024 in)
Cooling:	
Radiator Core Size:	
Width	123 mm (4.84 in)
Height	273 mm (10.7 in)
Thickness	32 mm (1.26 in)
Radiator Cap Opening Pressure	108 kPa (1.1 kg/cm^2, 15.6 psi)

www.legends-yamaha-enduros.com

SPECIFICATIONS

Model	YZ250S
Coolant Capacity (Total)	1.0 L (0.88 Imp qt, 1.06 US qt)
Water Pump: Type	Single-Suction Centrifugal Pump

Tightening Torque	Thread Size	Q'ty	Nm	m•kg	ft•lb
Spark plug	M14×1.25	1	20	2.0	14
Cylinder head: Nut	M 8×1.25	6	30	3.0	22
Stud bolt	M 8×1.25	6	13	1.3	9.4
Coolant drain bolt	M 6×1.0	2	10	1.0	7.2
Cylinder: Nut	M10×1.25	4	35	3.5	25
Stud bolt	M10×1.25	4	13	1.3	9.4
Power valve:	M 5×0.8	1	6	0.6	4.3
Holder	M 5×0.8	2	5	0.5	3.6
Thrust plate	M 5×0.8	1	5	0.5	3.6
Lever-Push rod	M 5×0.8	1	5	0.5	3.6
Push rod-Power valve	M 5×0.8	1	5	0.5	3.6
Governor fork-Push rod	M 5×0.8	2	5	0.5	3.6
Housing	M 5×0.8	4	5	0.5	3.6
Water pump housing	M 6×1.0	3	10	1.0	7.2
Intake manifold	M 6×1.0	6	12	1.2	8.7
Reed valve	M 3×0.8	8	1	0.1	0.7
Crankcase	M 6×1.0	10	12	1.2	8.7
Crankcase cover	M 6×1.0	11	10	1.0	7.2
Magneto cover	M 6×1.0	4	10	1.0	7.2
Chain case cover	M 6×1.0	2	10	1.0	7.2
Bearing cover plate	M 6×1.0	4	10	1.0	7.2
Holder	M 8×1.25	1	16	1.6	11
Plate	M 6×1.0	1	10	1.0	7
Oil drain bolt	M12×1.5	1	20	2.0	14
Kickstarter lever	M12×1.0	1	60	6.0	42
Primary drive gear	M18×1.0	1	115	11.5	85
Clutch	M20×1.0	1	75	7.5	54
Push lever	M 6×1.0	1	10	1.0	7.2
Clutch spring	M 6×1.0	6	10	1.0	7.2
Drive sprocket	M20×1.0	1	75	7.5	54
Shift pedal	M 6×1.0	1	10	1.0	7.2
Stopper lever	M 6×1.0	1	15	1.5	11
Magneto rotor	M10×1.25	1	38	3.8	27
Stator	M 6×1.0	2	8	0.8	5.8

www.legende-yamaha-enduros.com

Chassis

Model	YZ250T
Steering System:	
Steering Bearing Type	Taper roller bearing
Front Suspension	
Front Fork Travel	305 mm (12.0 in)
Fork Spring Free Length	532 mm (20.9 in)
Spacer Length	57 mm (2.24 in)
Spring Rate, STD/I.D. mark	K = 3.7 N/mm (0.375 kg/mm, 21.0 lb/in)/—
Optional Spring/Spacer	
Oil Capacity	587 cm^3 (20.7 Imp oz, 19.8 US oz)
Oil Level	120 mm (4.72 in) <108 ~ 165 mm (4.25 ~ 6.50 in)> (From top of inner tube fully compressed without spring.)
Oil Grade	Fork oil 10 wt or equivalent
Enclosed Ari Pressure	Zero kPa (Zero kg/cm^3, Zero psi)
Enclosed Air Pressure <Min. ~ Max.>	Zero kPa (Zero kg/cm^3, Zero psi) <Zero ~ 98 kPa (Zero ~ 1.0 kg/cm^2, Zero ~ 14.2 psi)>
Inner Tube Outer Diameter	43 mm (1.7 in)
Front fork Top End	Zero mm (Zero in)
Rear Suspension:	
Shock Absorber Travel	115.5 mm (4.55 in)
Spring Free Length	278 mm (10.9 in)
Fitting Length <Min. ~ Max.>	270 mm (10.6 in) <251 ~ 273.5 mm (9.88 ~ 10.77 in)>
Spring Rate, STD/I.D. color	K = 51.4 N/mm (5.25 kg/mm, 294 lb/in)/ (Black—White)
Optional Spring	
Enclosed Gas Pressure (S.T.D.) <Min. ~ Max.>	980 kPa (10 kg/cm^2, 142 psi) <686 ~ 1,275 kPa (7 ~ 13 kg/cm^2, 100 ~ 185 psi)>
Rear Arm:	
Swingarm Free Play Limit	
End	<1 mm (0.04 in)>
Side	<0.3 mm (0.012 in)>

www.legends-yamaha-enduros.com

SPECIFICATIONS

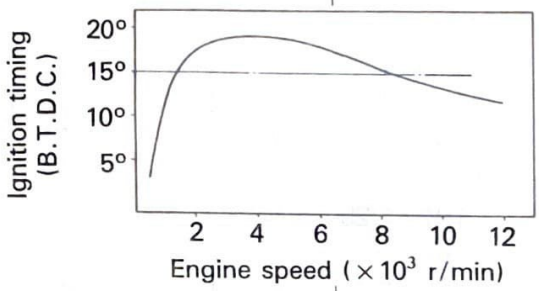
Model	YZ250T
Wheel:	
Front wheel Type	Spoke wheel
Rear Wheel Type	Spoke wheel
Front Rim Size/Material	1.60×21/Aluminum
Rear Rim Size/Material	2.15×18/Aluminum
Rim Runout Limit	
Vertical	<2.0 mm (0.08 in)>
Lateral	<2.0 mm (0.08 in)>
Drive Chain:	
Type/Manufacture	DK520DS/DAIDO
Number of Links	113 links + Joint
Chain slack	15~20 mm (0.6~0.8 in)
Front Disc Brake:	
Disc Outside Dia. × Thickness	220×3.0 mm (8.66×0.12 in)
Pad Thickness	4.0 mm (0.16 in)
<Limit>	<0.8 mm (0.03 in)>
Master Cylinder Inside Dia.	11.0 mm (0.433 in)
Caliper Cylinder Inside Dia.	27.0 mm (1.061 in)×2
Brake Fluid Type	DOT #3
Rear Drum Brake:	
Type	Leading and trailing
Drum Inside Dia	130 mm (5.12 in)
<Limit>	<131 mm (5.16 in)>
Lining Thickness	4 mm (0.16 in)
<Limit>	<2 mm (0.08 in)>
Shoe Spring Free Length	36.5 mm (1.44 in)
Brake Lever & Brake Pedal:	
Brake Lever Free Play	10~20 mm (0.4~0.8 in) (at lever end)
Brake Pedal Free Play/Position	20~30 mm (0.8~1.2 in)/Zero mm (Zero in) (Vertical height below footrest top)
Clutch Lever Free Play/Position	2~3 mm (0.08~0.12 in)/at lever pivot

www.legends-yamaha.com

Tightening Torque:	Thread Size	Q'ty	Nm	m•kg	ft•lb
Front wheel axle	M14×1.5	1	60	6.0	43
Axle holder	M 6×1.0	4	10	1.0	7.2
Handle crown: Inner tube	M 8×1.25	4	23	2.3	17
Steering shaft	M22×1.0	1	85	8.5	61
Handle holder	M 8×1.25	4	23	2.3	17
Steering ring nut	M25×1.0	1	10	1.0	7.2
Damper rod holding bolt	M18×1.0	2	72	7.2	52
Cap bolt (Front fork)	M40×1.0	2	23	2.3	17
Drain screw (Front fork)	M 4×0.7	2	1	0.1	0.7
Brake disc	M 6×1.0	6	12	1.2	9
Caliper bolt	M 8×1.25	1	23	2.3	17
Caliper bracket	M 8×1.25	2	30	3.0	22
Brake hose	M10×1.25	2	26	2.6	19
Bleed screw	M 7×1.0	1	6	0.6	4.3
Engine mount: Front, Frame	M 8×1.25	4	32	3.2	23
Front, Engine	M 8×1.25	1	32	3.2	23
Lower	M 8×1.25	1	32	3.2	23
Rear, Upper	M 8×1.25	2	32	3.2	23
Rear, Engine	M10×1.25	1	65	6.5	47
Rear wheel axle	M18×1.5	1	100	10	72
Sprocket wheel and Hub	M 8×1.25	6	30	3.0	22
Rear shock and Frame	M10×1.25	1	32	3.2	23
Pivot shaft	M16×1.5	1	85	8.5	61
Tension bar: Brake shoe plate	M 8×1.25	1	23	2.3	17
Frame	M 8×1.25	1	29	2.9	21
Brake cam lever	M 6×1.0	1	10	1.0	7.2
Relay arm: Frame	M10×1.25	1	60	6.0	43
Rear shock	M10×1.25	1	32	3.2	23
Connecting rod	M14×1.5	1	60	6.0	43
Connecting rod-Swingarm	M14×1.5	1	60	6.0	43

www.lavenderyamaha-enduros.com

C. Electrical

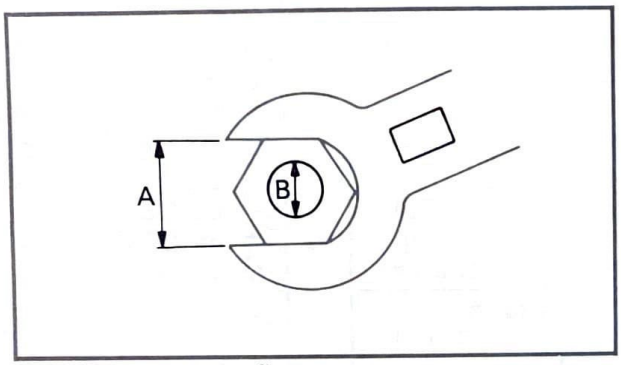
Model	YZ250T
Ignition System:	
Ignition Timing (B.T.D.C.)	15°/8,500 rpm
	1.4 ~ 1.6 mm (0.055 ~ 0.063 in)
Advancer Type	Electrical
	
CDI	
Magneto-Model/Manufacturer	FP5130/KOKUSAN DENKI
Source Coil Resistance (Color)	131 ~ 178Ω at 20°C (68°F) (Brown-Black)
Pickup Coil Resistance (Color)	170 ~ 230Ω at 20°C (68°F) (White/Red-Black)
CDI Unit-Model/Manufacturer	1585/KOKUSAN DENKI
Ignition Coil:	
—Model/Manufacturer	CM61-29/HITACHI
Minimum Spark Gap	10kV or more at 500 r/min
	15kV or less at 8,000 r/min
	6 mm (0.24 in) at 1,500
Primary Winding Resistance	0.20 ~ 0.24Ω at 20°C (68°F)
Secondary Winding Resistance	4.0 ~ 4.8kΩ at 20°C (68°F)

www.legends-yamaha-enduros.com

GENERAL TORQUE SPECIFICATIONS

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

A (Nut)	B (Bolt)	TORQUE SPECIFICATION		
		Nm	m•kg	ft•lb
10 mm	6 mm	6	0.6	4.5
12 mm	8 mm	15	1.5	11.0
14 mm	10 mm	30	3.0	22.0
17 mm	12 mm	55	5.5	40.0
19 mm	14 mm	85	8.5	61.0
22 mm	16 mm	130	13.0	94.0



A: Distance across flats
B: Outside thread diameter

www.legends-yamaha-enduros.com

DEFINITION OF UNITS

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

CONVERSION TABLES

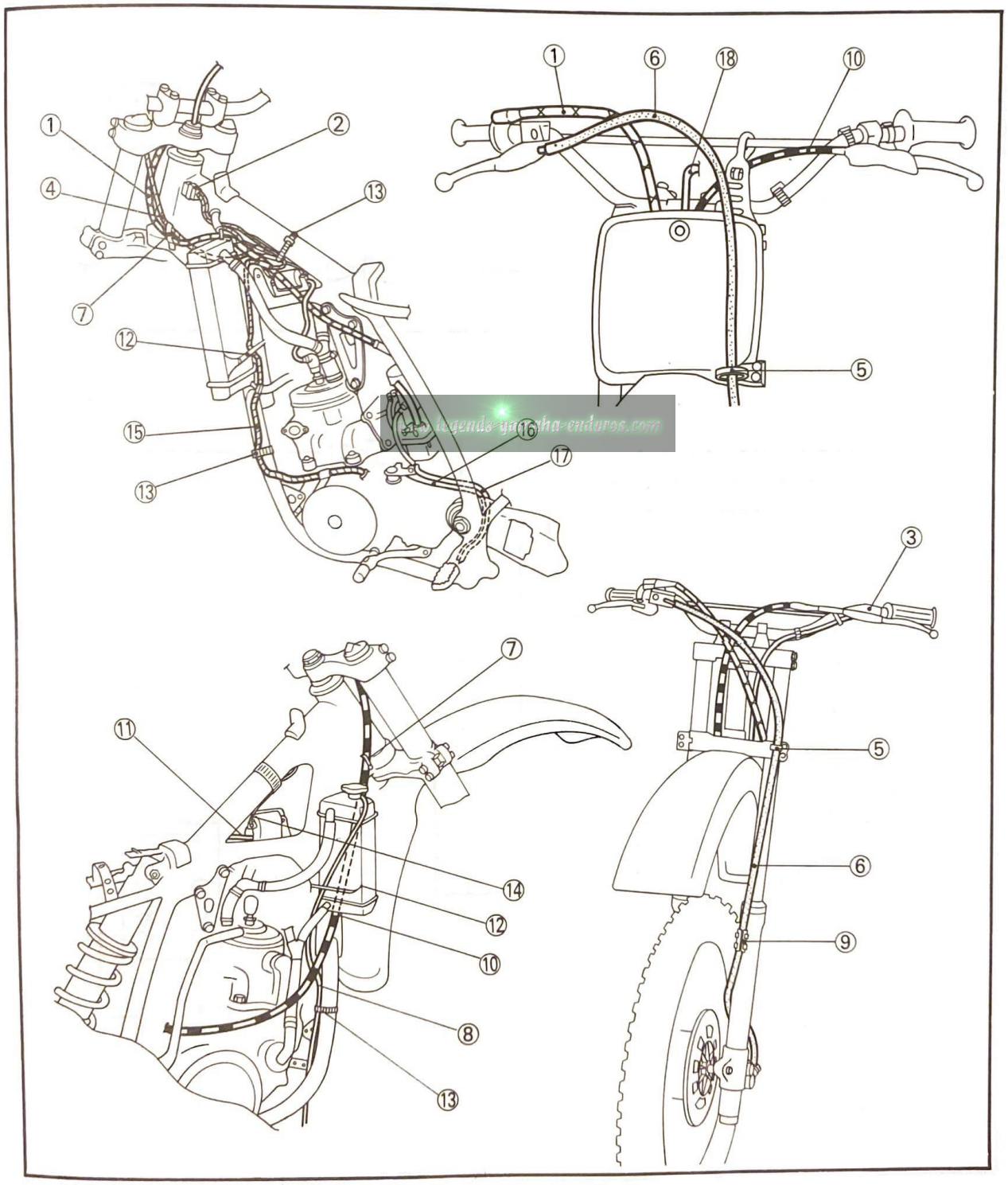
METRIC TO INCH SYSTEM			
	KNOWN	MULTIPLIER	RESULT
TORQUE	m•kg	7.233	ft•lb
	m•kg	86.80	in•lb
	cm•kg	0.0723	ft•lb
	cm•kg	0.8680	in•lb
WT.	kg	2.205	lb
	g	0.03527	oz
FLOW/ DISTANCE	km/ℓ	2.352	mpg
	km/hr	0.6214	mph
	km	0.6214	mi
	m	3.281	ft
	m	1.094	yd
	cm	0.3937	in
	mm	0.03937	in
VOL./ CAPACITY	cc (cm^3)	0.03382	oz (US liq)
	cc (cm^3)	0.06102	cu. in
	ℓ (liter)	2.1134	pt (US liq)
	ℓ (liter)	1.057	qt (US liq)
	ℓ (liter)	0.2642	gal (US liq)
MISC.	kg/mm	56.007	lb/in
	kg/cm^2	14.2234	psi (lb/in^2)
	Centigrade (°C)	9/5(°C) + 32	Fahrenheit (°F)

INCH TO METRIC SYSTEM			
	KNOWN	MULTIPLIER	RESULT
TORUQE	ft•lb	0.13826	m•kg
	in•lb	0.01152	m•kg
	ft•lb	13.831	cm•kg
	in•lb	1.1521	cm•kg
WT.	lb	0.4535	kg
	oz	28.352	g
FLOW/ DISTANCE	mpg	0.4252	km/ℓ
	mph	1.609	km/hr
	mi	1.609	km
	ft	0.3048	m
	yd	0.9141	m
	in	2.54	cm
	in	25.4	mm
VOL./ CAPACITY	oz (US liq)	29.57	cc (cm^3)
	cu. in	16.387	cc (cm^3)
	pt (US liq)	0.4732	ℓ (liter)
	qt (US liq)	0.9461	ℓ (liter)
	gal (US liq)	3.785	ℓ (liter)
MISC.	lb/in	0.017855	kg/mm
	psi (lb/in^2)	0.07031	kg/cm^2
	Fahrenheit (°F)	5/9(°F − 32)	Centigrade (°C)

www.legends-yamaha-enduros.com

CABLE ROUTING DIAGRAM

① Throttle cable
② CDI unit
③ "ENGINE STOP" button
④ "ENGINE STOP" button lead
⑤ Cable guide
⑥ Brake hose
⑦ Guide
⑧ Radiator breather hose
⑨ Clamp
⑩ Clutch cable
⑪ High tension lead
⑫ Radiator guard
⑬ Band
⑭ Earth lead
⑮ CDI unit lead
⑯ Transmission breather hose
⑰ Carburetor breather hose
⑱ Fuel tank breather hose



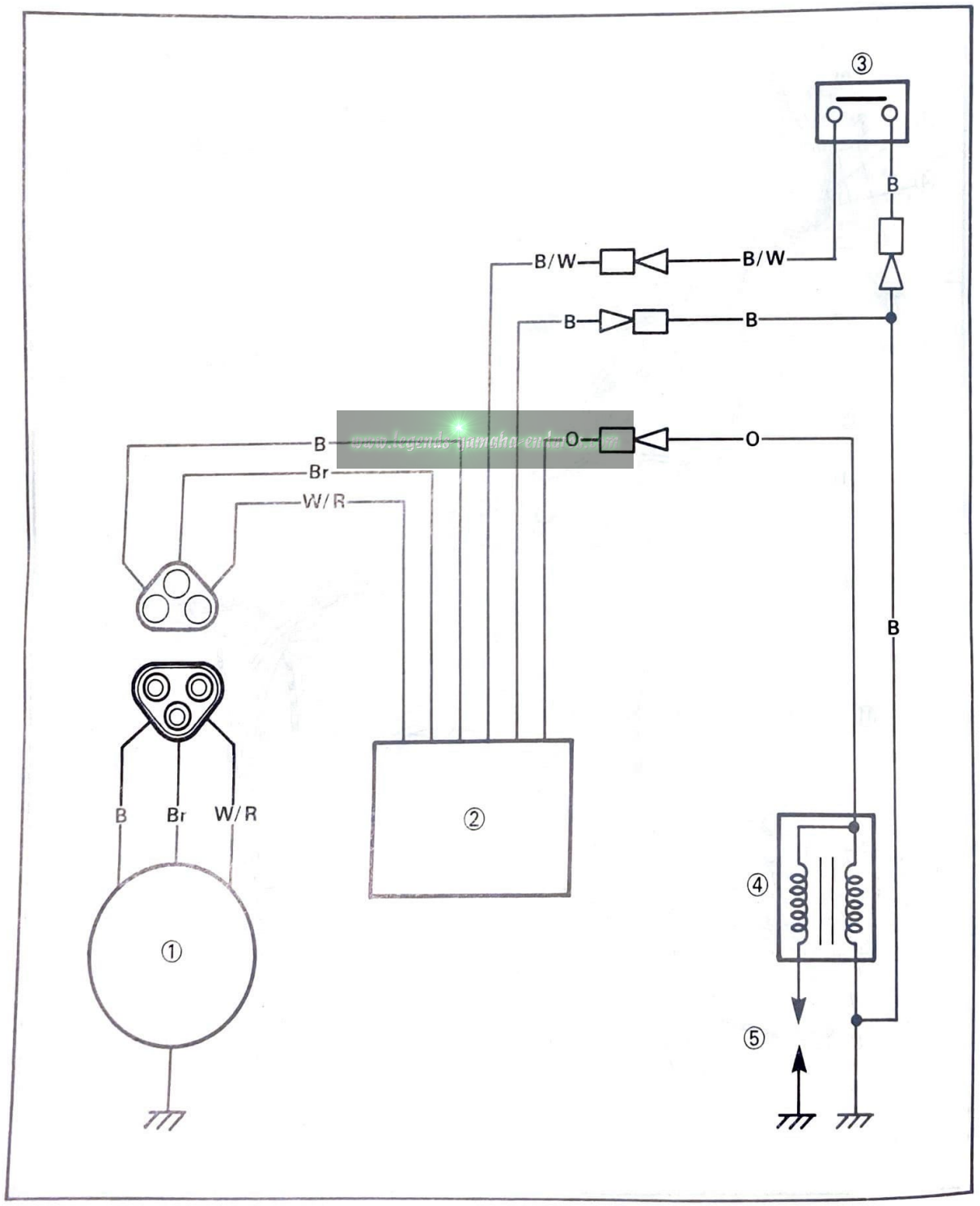
legends-yamaha-enduros.com

YZ250T WIRING DIAGRAM

① CDI magneto
② CDI unit
③ "ENGINE STOP" button
④ Ignition coil
⑤ Spark plug

COLOR CODE

Br . . . . . Brown
O . . . . . Orange
B . . . . . Black
B/W . . . Black/White
W/R . . . . . White/Red



www.legends-yamaha-enduro.com

www.legends-yamaha-enduros.com

YAMAHA MOTOR CO.,LTD.
IWATA, JAPAN

PRINTED IN JAPAN
86·7—3.5×1 B
(E)