Owner’s Manual JNSZ250DN

Parts Manual

READ THIS MANUAL CAREFULLY

IT CONTAINS IMPORTANT SAFETY INFORMATION.

MINIMUM
RECOMMENDED
OPERATOR AGE: **16**

FOR OFF-ROAD USE ONLY

This vehicle is designed and manufactured for off-road use only.

USA only:

It does not confirm to federal motor vehicle safety standards and operation on Public streets, roads, or highways is illegal

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Team Joyner USA

Joyner INTERNATIONAL

WORLDWIDE

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Liability Release of Joyner Recreational Vehicles

Warranty Disclosure

Warranty Parts Order Form

Service Record

Preventative Maintenance and Service Log

1. **Liability Release** needs to be signed by the dealer and purchaser then faxed back to Joyner at 480-813-6379
2. **Service Record** Form must be filled out and signed off by the dealer and the purchaser and faxed back to Joyner to activate warranty.
3. **Pre Delivery Inspection** is to be completed by a qualified technician. It must be initialed and signed off by the technician. At the same time, the consumer needs to initial off and confirm that each item of the 120 point check is operational.
4. **Customer Sign Off** must be initialed by customer after receiving PDI with dealership and confirming the vehicle is fully operational.
5. **Operator Maintenance** should be conducted by an Individual that has knowledge of vehicle and has completely read and understand the operator's manual.

Effective 3-15-08

All warranty claims must be processed through an authorized Joyner dealer. A copy of all documentation must be on file with Team Joyner USA, Inc.

Protect your vehicle and your safety. Follow the schedule listed within.

WWW.TEAMJOYNERUSA.COM

Toll Free 1-866-441-6363

After completing assembly and PDI Fax to 480-813-6379

•1510 W. Bell De Mar Dr. Tempe, AZ. 85283 • Phone: 480.813.6363 - Fax: 480.813.6379 •

Page

This release covers Joyner vehicles, dealers, and all affiliates of Castle Financial Corporation.

Liability Release of Joyner Recreational Vehicles

Please Initial and Sign

____ 1) Jumping the vehicle can cause serious damage to the drive train (axle, transmission, suspension)

____ 2) Injury or death can result from jumping vehicle. Do not jump.

____ 3) I understand that the roll bars are cosmetic and a roll over could cause death or serious injury. The seller is not liable for death or injury.

____ 4) I have inspected all machines for any cosmetic damage and found it/them to be satisfactory. I further understand that cosmetic damage is NOT covered by any factory warranties and unless noted here are deemed acceptable by me.

____ 5) Off-roading is dangerous. Death or injury could occur. The seller is not liable for injury or death.

____ 6) I understand all sales are final and that there is no right of rescission; no option for return or exchange for any vehicle purchased; and that the titled and registered machines were effectively purchased when I signed the title application.

____ 7) I understand the warranty is 90 days manufacturer defect only. Parts are covered but no labor.

____ 8) I understand that although some lending institutions do not require insurance, state law DOES require liability insurance and a driver's license. I also understand that none of the products offered by the dealer constitutes insurance and a separate policy would have to be purchased from an outside source to protect my purchase and fulfill state requirements.

____ 9) I have also been shown the VIN number for each machine and they match this form and all paperwork received.

____ 10) I understand that I have only 72 hours to notify the seller of any issues to the paperwork of the vehicle. After 72 hours it will be accepted by the purchaser.

____ 11) Off Road use only. Driving on paved roads can cause axle or transmission damage. Both tires turn equally, this is not a limited slip differential. Injury or death can occur from operating a non-DOT vehicle on public roads.

____ 12) Promise to pay- by signing this contract buyer agrees to pay Seller the "Total Due."

____ 13) Time of Essence- Time is the essence of this contract. Seller's acceptance of partial payments shall not in any manner modify the terms of t his contract and such acceptance shall not be construed as a waiver of any subsequent defaults on Buyer's part nor shall it waive the "time is of the essence" provision.

____ 14) Notice- Any notice required to be given to Buyer shall de deemed reasonable notification if (1) mailed by ordinary mail, postage prepaid, to Buyer's mailing address as shown on this contract or to Buyer's most recent address as shown by a "notice of change of address" on file with Seller, whether or not such notice is actually received by Buyer, or (2) if given in any other manner which results in Buyer's actual receipt of such notice.

____ 15) Bad Check- If Buyer pays Seller with a check that is dishonored or unpaid for any reason, Seller may, at Seller's sole option, terminate this contract and retake the vehicle, or make claims against Buyer on the check. In addition, Seller will charge a $25 returned check charge plus any actual charges assessed by Seller's financial institution resulting from such returned check.

____ 16) Attorney Fees – If it is necessary for Seller to take legal action to enforce any of Seller's rights under this contract, Buyer agrees to pay to the extent permitted by law, the Seller's reasonable attorneys' fees and court costs.

____ 17) General- This contract is governed by applicable federal law and the laws of the state of Arizona. Any provisions found to be invalid shall not invalidate the remainder hereof. Waiver of any default shall not constitute waiver or any subsequent default. All words used herein shall be construed to be of such gender and number as the circumstances require. The contract shall be binding upon Buyer's heirs, personal representatives, successors and assigns and shall inure to the benefit of Seller's successors and assigns. This contract constitutes the entire agreement between the parties with respect to the subject matter herein, and may not be altered or amended unless made in writing and duly executed by the seller.

____ 18) Cash Deposit- If Buyer fails or refuses to accept delivery of any Vehicle or product or fails to comply with this contract, Seller may keep any cash deposit as liquidated damages, to the extent not prohibited by law. The deposit may also be used to reimburse Seller for any expenses and losses Seller incurs or suffers as a result of Buyer's failure or refusal to accept delivery of the Vehicle or product or to comply with this contract. Such expenses and losses may include Seller's reasonable attorneys' fees.

____ 19) Non-Delivery- Seller is not liable for failure to deliver or for delay in delivering the Vehicle or other product where such failure or delay is due, in whole or in part, to any cause beyond Seller's control or without Seller's fault or negligence.

____ 20) Risk of Loss: Insurance- The risk of loss to the vehicle or any other items covered by this invoice passes to Buyer upon delivery of the vehicle or other goods to the Buyer at the address set forth on this invoice for shipment to Buyer or such other place of receipt designated by the Buyer. Buyer is responsible for maintaining its own theft and liability insurance coverage for the vehicle.

____ 21) Age- Buyer represents and warrants to Seller that buyer is over the age of majority and is fully competent to enter into this contract. Buyer acknowledges that Seller is relying on this representation in entering into and performing this contract.

____ 22) Limitation of Damages: It is understood and agreed that Seller's liability and Buyer's sole remedy, whether in contract, under any warranty, in tort (including negligence), in strict liability or otherwise shall not exceed the return of the amount of the purchase price paid by the Buyer, and under no circumstances shall Seller be liable for any special, incidental, punitive or consequential damages, including, but not limited to, property damage, damage to or loss of equipment, lost profits or revenue, costs of renting replacements and other additional expenses, even if Seller has been advised of the possibility of such damages.

____ 23) No liability for Buyer's negligence. Seller shall not be liable for any damages, losses of expenses as a result of Buyer's negligence, whether deemed active or passive and whether or not any such negligence is the sole cause of any such damage, loss or expense.

____ 24) Conditions of Sale

____ 25) It is the responsibility of the Buyer to insure the safety and safe operation of all items sold to Buyer.

____ 26) The mechanical fitness of the machine is the sole responsibility of the Buyer and operator.

____ 27) Buyer acknowledges that there are dangers and risks inherent in the operation and use of all off-road vehicles, including but not limited to the danger and risk of collision with natural and man-made objects and with other vehicles and recreational users. Buyer understands that personal injury, death, dismemberment, or property damage can occur from any type of operation of an off-road recreational vehicle. Buyer accepts and assumes full responsibility for all such dangers and risks and the possibility of personal injury, death, property damage, or loss resulting therefrom and from unsafe operation.

____ 28) It is highly recommended that the Buyer or operator of this vehicle: (i) wear a helmet and safety belts at all times during operation of the vehicle and (ii) attend a safety course in operating ATV's, Dirt Bikes, UTV's, or Dune Buggies.

Customer Signature____ Date__________

Address______________ City______________ State__________ Zip__________ Phone__________

Dealer Signature____ Date__________

Address______________ City______________ State__________ Zip__________ Phone__________

Vehicle______________________ VIN #______________________ Year______

•1510 W. Bell De Mar Dr. Tempe, AZ. 85283 • Phone: 480.813.6363 - Fax: 480.813.6379 •

Must be on file to order parts

Team Joyner USA Limited Manufacturer's Defect Warranty

Team Joyner USA herby warrants that new Joyner Off-Road Vehicle purchased from an authorized Joyner dealer worldwide including the United States, Middle East, Europe, Canada, Germany, Spain, or wherever Joyner recreational vehicles are sold by an authorized dealer will be free from defects in material and workmanship for the period of time stated herein, subject to certain stated limitations. Purchasing a Joyner vehicle from a non-authorized Joyner dealer will be without a warranty

The Period of Warranty for Joyner Off-Road Vehicles shall be ninety (90) days from the date of purchase. The warranty can be voided during the 90 days if found that you have violated any of the below requirements.

During the Period of the Warranty any authorized Joyner dealer will evaluate, repair or replace any part adjudged defective by Joyner due to faulty workmanship or material from the factory. Parts used in warranty repairs will be warranted for the balance of the product's warranty period. All parts replaced under warranty become property of Team Joyner USA. Warranty only covers defective parts, no labor is included. Consumer will pay Joyner dealer direct for any labor charges.

General Exclusions from this warranty that will void the entire warranty shall include any failures caused by:

a. Competition or racing use.
b. Installation of parts or accessories that is not qualitatively equivalent to genuine Joyner parts.
c. Abnormal strain, neglect, or abuse.
d. Lack of proper maintenance.
e. Accident or collision damage.
f. Modification to original parts.
g. Damage due to improper transportation.
h. Adjustments from operations.
i. Damage caused by exceeding travel of vehicle.
j. Altering the vehicle in any manner.
k. Placing additional seats.
l. Turbo chargers and super chargers.
m. Adding electrical devices that cause electrical failure.
n. Damage caused by debris; rocks, riverbed, trees, etc.
o. Damage caused by rollovers due to improper operation of vehicle.
p. Climbing beyond the capacity of the vehicle.
q. Operating differential lockers in excess speed of 20 mph.
r. Abuse and improper operations.
s. Increasing size of the tire or wheel from the Joyner standard tire and wheel package.
t. Towing an additional vehicle using a winch for other uses other than pulling the vehicle it is attached to.

Specific Exclusions from this warranty shall include parts replaced due to normal wear or routine maintenance, such as spark plugs, oil, oil filter, air filter, brake shoes, CV Joints, CV Boots, Universal Joints, Cables, water damage to electrical equipment, clutches pressure plates and transmission gear from neglect or miss shifting.

The Customer's Responsibility under this warranty shall be to:

1. Operate and maintain the off road vehicle as specified in the appropriate owner's manual;
2. Give notice to an authorized Joyner dealer of any all apparent defects within ten (10) days after delivery, and make the machine available at that time for inspection and repairs at such dealer's place of business.
3. To operate to the intent of the vehicle use
4. Not to travel in and out of water that is more than twelve (12) inches deep.
5. To not operate at any time in salt water.
6. Not to jump the machine in any manner.
7. To follow all local and state safety regulations.
8. Not to alter the vehicle in any manner.
9. Not to install any additional seating.
10. To check all bolts and nuts prior to any ride.
11. Properly clean and protect the cosmetics of the vehicle.

Additional Warranty Requirements:

1. An authorized Joyner dealer to perform a break in service at ten (10) hours or two hundred and fifty (250) miles which ever comes first. There must be a record that this has been conducted by an authorized dealer in order to obligate Joyner to use the warranty on the vehicles or parts.
2. A record of complete operator maintenance must be kept and at any time a Joyner dealer may request this record to qualify the repair under warranty.
3. All fluid must be changed per the operator's manual. On all transmission or engine failures, this record will be requested.
4. Pre-Delivery Inspection (PDI)
   On each Joyner vehicle a pre delivery inspection form is required. A Joyner dealer is required to perform his procedure with the consumer signing off on all items of the PDI form. It is the Joyner dealer's responsibility to ensure and sign off on the vehicle to its mechanical fitness and make sure all safety equipment is installed

correctly. The dealer, during their pre delivery inspection is required to use Tamper Proof paint in red, orange, or white to ensure all nuts and bolts are tightened to specifications. The form can be downloaded at www.teamjoynerusa.com or request them to be FedExed to you. It is also the consumer's responsibility that the dealer has performed this procedure. Consumers must, within ten (10) days after accepting the vehicle, notify Joyner at 1-866-441-6363 or email PDI@teamjoynerusa.com or fax to 480-813-6379 in writing that the dealer failed to properly deliver the vehicle to you on an authorized pre delivery inspection form. Failure to properly notify Joyner of this can Void the warranty or cause serious injury, death, dismemberment, or damage to the vehicle. Joyner is not responsible for the fitness of the vehicle or the safety of the vehicle if the PDI is not performed by the dealer.

Warranty Notification Procedures-
Joyner will only accept warranty claims on its prescribed form with an authorized dealer signing off that in fact the part should be covered under warranty. This from must be e-mailed or faxed in signed by a dealer. A current PDI form must be on file with Joyner with a dealer's signature and consumer signature accepting delivery of the vehicle order and agreeing to the mandatory liability releases. If dealer determines that the part is not under warranty, you have ten (10) days to dispute this in writing to dealer and Joyner. Consumers can not order warranty parts only authorized Joyner dealerships can.

Safety- You should acknowledge that you are entering a very hazardous sport and you could be injured, dismembered, or even loose your life. This could occur from operation failure to completely conduct operator's maintenance or failure to have your vehicle properly delivered to you on an authorized dealer Joyner PDI form. It is not the responsibility of Joyner or any of its affiliates to ensure your vehicle will not cause you to be injured, dismembered, or even loss of life. You, without any guaranty of warranty, enter into full awareness of the hazards. It is recommended that you wear proper protection to include Helmet, safety belt, safety netting over doorways and even hand and arm restraints to keep your full body inside the vehicle in case of a roll over. Joyner can not be responsible for any losses of life, limbs, or serious injury. It is recommended that you attend an off road safety course prior to operating this vehicle, or you have agreed to take all responsibilities of operator and passengers.

This warranty is not transferable

Emission Control System Warranty – Team Joyner USA also warrants to the ultimate purchaser and each subsequent purchaser of each 2006 and later model Joyner off road vehicles covered by this warranty that the vehicle is designed, built, and equipped so as to conform at the time of sale with all U.S. emissions standards applicable at the time of manufacture and that it is free from defects in materials and workmanship which would cause it not to meet these standards within the period listed immediately below. Failures other than those resulting from defects in material or workmanship which arise solely as a result of owner abuse and/or lack of proper maintenance are not covered by this warranty.

All models-thirty (30) months from the original purchase date.

If at anytime the emission related parts have been altered or removed, or the removal of the certificate that is fixed to the vehicle, the warranty will be null and void. This vehicle must conform to the regulations per EPA and CA Air Resource Board.

Team Joyner USA 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 Team Joyner USA 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 is 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.

Authorized Dealership

Team Joyner USA
1510 W. Bell De Mar Dr
Tempe, AZ 85242
1-866-441-6363

Name____________________
Address____________________
City, State, Zip____________________
Phone____________________
Signature____________________

Parts Order Form
Warranty Claim Form

www.teamjoynerusa.com

90 Day Manufacturer Defects Only

Fax# (480) 813-6379

Email: parts@teamjoynerusa.com

OFFICE USE ONLY

Parts Department

Date Received:_______________

Date Processed:_______________

Date Shipped:_______________

Order Complete

Yes ☐ No ☐

Invoiced to Factory

Yes ☐ No ☐

W/P- 3971

Order Date

____

Dealer:_______________________________________

Contact Name:_________________________________

Address:______________________________________

City:______________ **ST:**_______ **Zip:**____________

Phone:____

Customer Name:_______________________________

Address:______________________________________

City:______________ **ST:**_______ **Zip:**____________

Phone:____

SALE DATE	DELIVERY DATE	YEAR	MODEL	VIN#	COLOR

SYMPTOMS:____

QTY	ITEM #	PG. #	PART #	DESCRIPTION	COST	TOTAL	WARRANTY YES OR NO

Payment Method: Cash ☐ Check ☐ Visa ☐ Mastercard ☐ Discover ☐

Drivers License #__________________ST:_____EXP:________

Card#______________________________EXP:________ZIP:________CVC#________

I authorize Team Joyner USA to charge my credit card.

Signature:______________________Date:__________

SUBTOTAL:______________

TAX:______________

SHIPPING COST:______________

TOTAL:______________

SHIPPING IS NOT INCLUDED ON PARTS ORDERS

Shipping Method: Ground ☐ 2Day ☐ Overnight ☐ Rush Service $25 Fee ☐

Dealers Signature:__________________________ Date Submitted:__________

Print Name Sign

WE ONLY ACCEPT FAX OR EMAIL ORDERS FOR PARTS-NO PHONE ORDERS!

Exceeding the capability of the machine can cause damage and will not be covered under warranty. Abuse or misuse will not be covered under warranty. The 90 day manufacturers warranty is for defective parts only, not parts that become inoperative from use.

It is the purpose of this form to determine that the customer is qualified for warranty parts. Please note that the following parts are not covered under warranty and are considered as wear parts.

NO ORDERS WILL BE PROCESSED WITH INCOMPLETE INFORMATION

CLUTCH CABLE, THROTTLE CABLE, CLUTCH, BRAKE PADS, MUFFLERS, SHOCKS, LIGHT BULBS, DIRT IN FUEL TANK, DIRT IN CARBURETOR, DAMAGE FROM JUMPING OR EXCEEDING TRAVEL OF MACHINE,THERMOSTAT, TIRE S AND WHEELS, ELECTRICIAL PARTS SUCH AS: ALTERNATOR, VOLTAGE REGULATOR

OFFICE USE ONLY

APPROVED or DECLINED BY:_______________________________ DATE:______________

Yes ☐ No ☐ Yes ☐ No ☐ PRINT NAME SIGN

REMARKS:____

Operational Failure ☐ Out of Warranty Period ☐ Operational Ware ☐ Pictures Required/Retrieve Part ☐

PDI MUST BE ON FILE TO PROCESS

SERVICE RECORD

Fax to 480-813-6379

No warranty parts can be ordered if not on file

' authorized pre-paid service program at a participating dealership near you.

You can purchase the first year service programs that include 10, 40, 80, and 120 hour services. Inquire with your dealer. We recommend that you follow this service schedule to ensure safety and mechanical fitness of your Joyner recreational vehicle. Failure to have your vehicle serviced by an authorized service center or dealership can result in injury, death, or dismemberment.

Customer Name ______________________
Address ______________________
City ______________ State ______________ Zip ________
Email ______________________ Phone ______________

Vehicle Information
Model ______________ Year ________
Vin # ______________ Color ________

	Date	Sign off	Miles	Remarks
Assembly				
EPA and CARB stickers				
Pre Delivery Inspection				
Customer Sign Off				
10 hour or 250 miles				
40 hour or 250 miles				
40 hour or 500 miles				
80 hour or 750 miles				
120 hour or 1000 miles				

Dealership Information

Name	Phone	Date

Monthly checks

Date	Date	Date	Date	Date	Date

Selling Dealership
Dealership Name ______________________
Address ______________________
City ______________ **State** ________ **Zip** ____
Phone ______________________

This activates Warranty
Date of Purchase ______________________
Customer Signature ______________________
By signing you have agreed to all liability releases and understand warranty.

Preventative Maintenance and Service Log

120 Point Check	Dealership Responsibilities			Recommended Authorized Joyner Dealer or Service Center				Operators Responsibilities Also check prior to each ride			
	Assembly	Pre Delivery Inspection	Customer Initials	10 hour or 250 miles	40 hour or 500 miles	80 hours or 750 miles	120 hours or 1000 miles	Weekly	Monthly	Quarterly	Yearly
Engine											
1)Drive Belt				TA	TA	TA	TA		TA	TA	TA
2)Tighten Bolts On Engine				TA	TA	TA	TA	TA	TA	TA	TA
3)Engine Oil				RC	LF	LF	RC	LF	LF	LF	RC
4)Exhaust				TA	TA	TA	TA	TA	TA	TA	TA
5)Air Filter				RC	LF	LF	RC	LF	LF	LF	RC
6)Manifold Bolts				TA	TA	TA	TA			TA	TA
7)Pulley Bolts				TA	TA	TA	TA			TA	TA
8)Engine Mounts				TA	TA	TA	TA	TA	TA	TA	TA
9)Engine Breather Tube				IC	IC	IC	IC		IC		IC
10) Carburetor				TA	TA	TA	TA	TA	TA	TA	TA
11) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA
Transmission											
12) Transmission Fluid				RC	LF	LF	RC	LF	LF	LF	RC
13) Clutch Pedal				LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA
14) Clutch							RC				RC
15) Shifter				LF/TA	LF/TA	LF/TA	LF/TA			LF/TA	LF/TA
16) Transmission Function				IC	IC	IC	IC		IC	IC	IC
17) Clutch Mount				TA	TA	TA	TA		TA	TA	TA
18) Shifter Cables				LF/TA	LF/TA	LF/TA	LF/TA			LF/TA	LF/TA
19) Transmission Mounts				TA	TA	TA	TA		TA	TA	TA
20) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA
Ignition											
21) Coil				IC	IC	IC	IC	IC	IC	IC	IC
22) Distributor For Ignition				IC	IC	IC	IC	IC	IC	IC	IC
23) Plug Wires				IC	IC	IC	IC	IC	IC	IC	IC
24) Throttle Choke Cable				LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA
25) Idle				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
26) All Nuts And Bolts				IC	IC	IC	IC	IC	IC	IC	IC

IC= Inspect And Clean, TA: Tighten And Adjust If Needed, LF= Lubricate And Fill, RC= Replace Or Change

After completing make a copy for your records and fax to 480-813-6379

	Dealership Responsibilities			Recommended Authorized Joyner Dealer or Service Center				Operators Responsibilities Also check prior to each ride			
	Assembly	Pre Delivery Inspection	Customer Initials	10 hour or 250 miles	40 hour or 500 miles	80 hours or 750 miles	120 hours or 1000 miles	Weekly	Monthly	Quarterly	Yearly
Cooling System				IC/LF	IC/LF	IC/LF	RC	IC/LF	IC/LF	IC/LF	RC
27) Coolant Level											
28) Coolant Hose And Clamps				IC	IC	IC	IC	IC	IC	IC	IC
29) Radiator Mount Bolts				TA	TA	TA	TA	TA	TA	TA	TA
30) Radiator Cap				TA	TA	TA	TA	TA	TA	TA	TA
31) Fan				IC	IC	IC	RC	IC	IC	IC	RC
32) Hose Clamps				TA	TA	TA	TA	TA	TA	TA	TA
Fuel System											
33) Fuel Tank Cover				TA	TA	TA	TA	TA	TA	TA	TA
34) Breathe Hose And Joint				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
35) Fuel Hose				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	RC
36) Fuel Hose Clamps				TA	TA	TA	TA	TA	TA	TA	TA
37) Fuel Tank				IC	IC	IC	IC	IC	IC	IC	IC
38) Fuel Filter				IC	IC	RC	IC			IC	RC
39) Fuel Regulator				TA	TA	TA	TA	TA	TA	TA	TA
40) Fuel Pump				IC	IC	IC	RC		IC	IC	RC
Drive Train											
41) Axles				IC	IC	IC	IC	IC	IC	IC	IC
42) Cv Joint				IC	IC/LF	IC	RC			IC	RC
43) Drive Shaft				LF	LF	LF	LF		LF		LF
44) Cv Bouts				IC	IC	IC	RC	IC	IC	IC	RC
45) Spindle				TA	TA	TA	TA	TA	TA	TA	TA
46) Bearings				IC/LF	IC/LF	IC/LF	RC		IC	IC	RC
47) Castle Nuts				TA	TA	TA	TA	TA	TA	TA	TA
48) Cotter Pins				RC	RC	RC	RC	RC	RC	RC	RC
49) Differential Front				TA	TA	TA	TA	TA	TA	TA	TA
50) Differential Front Cable				TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF
51) Front Gear Oil				RC	LF	RC	LF	LF	LF	RC	RC

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	Dealership Responsibilities			Recommended Authorized Joyner Dealer or Service Center				Operators Responsibilities Also check prior to each ride			
	Assembly	Pre Delivery Inspection	Customer Initials	10 hour or 250 miles	40 hour or 500 miles	80 hours or 750 miles	120 hours or 1000 miles	Weekly	Monthly	Quarterly	Yearly
52) Differential Breather Tub Front				IC	IC	IC	IC	IC	IC	IC	IC
53) Differential Rear				TA	TA	TA	TA	TA	TA	TA	TA
54) Differential Rear Cable				TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF
55) Differential Breather Tub Rear				IC	IC	IC	IC	IC	IC	IC	IC
56) Rear Gear Oil				RC	LF	RC	LF	LF	LF	RC	RC
57) Axle Nuts				TA	TA	TA	TA	TA	TA	TA	TA
58) Wheel Studs Nuts				TA	TA	TA	TA	TA	TA	TA	TA
59) Ball Joint Bolts				TA	TA	TA	TA	TA	TA	TA	TA
60) 4x4 Lockers				IC/TA	IC/TA	IC/TA	IC/TA			IC/TA	IC/TA
Brakes											
61) Brake Pads				IC	IC	IC	RC	IC	IC	IC	RC
62) Brake Fluid Level				LF	LF	LF	RC	LF	LF	LF	RC
63) Rotors				IC	IC	IC	IC	IC	IC	IC	IC
64) Calipers				IC/TA	IC/TA	IC/TA	IC/TA	IC	IC/TA	IC/TA	IC/TA
65) Brake Lines				IC	IC	IC	IC	IC	IC	IC	IC
66) Master Cylinder				IC/TA	IC/TA	IC/TA	IC/TA	IC	IC/TA	IC/TA	IC/TA
67) Brake Pedal				LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA
68) Emergency Brake				IC	IC	IC	IC	IC	IC	IC	IC
69) Emergency Brake Cable				LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA
70) Emergency Brake Pads				IC	IC	IC	RC	IC	IC	IC	RC
71) Emergency Brake Fluid				LF	LF	LF	RC	LF	LF	LF	RC
72) Three Way Brake Valve				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
73) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA
74) Wire And Plugs				IC	IC	IC	IC	IC	IC	IC	IC
Electrical											
75) Battery				IC/LF	IC/LF	IC/LF	RC	IC/LF	IC/LF	IC/LF	RC
76) rnator				IC	IC	IC	IC	IC	IC	IC	IC
77) Starter				IC	IC	IC	IC	IC	IC	IC	IC

IC= Inspect And Clean, TA: Tighten And Adjust If Needed, LF= Lubricate And Fill, RC= Replace Or Change

Team Joyner USA	Dealership Responsibilities			Recommended Authorized Joyner Dealer or Service Center				Operators Responsibilities Also check prior to each ride			
	Assembly	Pre Delivery Inspection	Customer Initials	10 hour or 250 miles	40 hour or 500 miles	80 hours or 750 miles	120 hours or 1000 miles	Weekly	Monthly	Quarterly	Yearly
78) Connection				IC	IC	IC	IC	IC	IC	IC	IC
79) Voltage Regulator				IC	IC	IC	IC	IC	IC	IC	IC
80) Gauges				IC	IC	IC	IC	IC	IC	IC	IC
81) Lighting				IC	IC	IC	IC	IC	IC	IC	IC
82) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA
83) Horn				IC	IC	IC	IC	IC	IC	IC	IC
Suspension											
84) Tires				IC	IC	IC	IC	IC	IC	IC	IC
85) Tire Air Pressure				TA	TA	TA	TA	TA	TA	TA	TA
86) Wheels And Bearing				LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA	LF/TA
87) A-Arms				TA	TA	TA	TA	TA	TA	TA	TA
88) Swing Arms				TA	TA	TA	TA	TA	TA	TA	TA
89) Shocks Rear				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
90) Tighten Nuts On The Hub And Wheel				TA	TA	TA	TA	TA	TA	TA	TA
91) Shock Bolts				TA	TA	TA	TA	TA	TA	TA	TA
92) A-Arm Bolts				TA	TA	TA	TA	TA	TA	TA	TA
93) Tie Rod				TA	TA	TA	TA	TA	TA	TA	TA
94) Ball Joint				TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF
95) Hein Joints				TA	TA	TA	TA	TA	TA	TA	TA
96) Shocks Front				TA	TA	TA	TA	TA	TA	TA	TA
97) Nitrogen				TA	TA	TA	TA	TA	TA	TA	TA
98) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA
Steering											
99) Steering Wheel				TA	TA	TA	TA	TA	TA	TA	TA
100) Steering Box				TA/LF	TA/LF	TA/LF	TA/LF		TA/LF	TA/LF	TA/LF
101) Steering Rod Bolts				TA	TA	TA	TA	TA	TA	TA	TA
102) Ball Joints				TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF	TA/LF
103) Rod Ends				TA	TA	TA	TA	TA	TA	TA	TA
104) Hein Joint				TA	TA	TA	TA	TA	TA	TA	TA
105) All Nuts And Bolts				TA	TA	TA	TA	TA	TA	TA	TA

IC= Inspect And Clean, TA: Tighten And Adjust If Needed, LF= Lubricate And Fill, RC= Replace Or Change

	Dealership Responsibilities			Recommended Authorized Joyner Dealer or Service Center				Operators Responsibilities Also check prior to each ride			
	Assembly	Pre Delivery Inspection	Customer Initial	10 hour or 250 miles	40 hour or 500 miles	80 hours or 750 miles	120 hours or 1000 miles	Weekly	Monthly	Quarterly	Yearly
Chassis											
106) Welds				IC	IC	IC	IC	IC	IC	IC	IC
107) Roll Bar Connection				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
108) Floor Panels				TA	TA	TA	TA	TA	TA	TA	TA
109) Skid Plates				TA	TA	TA	TA	TA	TA	TA	TA
110) Winch Function				IC	IC	IC	IC	IC	IC	IC	IC
111) Winch Mount				TA	TA	TA	TA	TA	TA	TA	TA
112) Seat Belts				TA	TA	TA	TA	TA	TA	TA	TA
113) Seat Belt Mounts				TA	TA	TA	TA	TA	TA	TA	TA
Cosmetics											
114) Body Kits				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
115) Hood				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
116) Dump Bed				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
117) Safari Rack				IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA	IC/TA
118) Light Bar Rack				TA	TA	TA	TA	TA	TA	TA	TA
119) Dash Panel				TA	TA	TA	TA	TA	TA	TA	TA
120) Seats				TA	TA	TA	TA	TA	TA	TA	TA

IC= Inspect And Clean, TA: Tighten And Adjust If Needed, LF= Lubricate And Fill, RC= Replace Or Change

Warranty can be voided by Joyner or dealership if the proper maintenance and service has not been conducted

The service record must be faxed in when requesting warranty parts effective 2-15-08. No exceptions!!!!

Fax 480-813-6379

Release of liability required to be on file to order parts.
We reserve the right at any time to not sell or supply parts to the dealer or consumer for any reason.

OWNER'S MANUAL

FOREWORD

Thank you for choosing our Off highway recreational vehicle. We hope you will have fun with it. Before you start operate the Off highway recreational vehicle, please read through this Owner's Manual carefully as it contains important safety and maintenance information. Failure to follow the warnings contained in this manual can result in serious injuries.

Be sure to follow the recommended maintenance schedule and service your Off highway recreational vehicle accordingly. Preventive maintenance is extremely important to the longevity of your Off highway recreational vehicle.

We hope you will have a pleasant experience with our products and thanks again for choosing US.

A FEW WORDS ABOUT SAFETY

In order to keep everyone safe, you must take responsibility for the safe operation of your Off highway recreational vehicle.

To help you make informed decisions about safety, we have provided operating procedures and other information on labels and in this manual. This information alerts you to potential hazards that could hurt you or others.

It is not practical or possible to warn you about all hazards associated with operating or maintaining a Off highway recreational vehicle. You must use your own good judgment.

You will find important safety information in a variety of forms, including:

Safety Labels - On the Off highway recreational vehicle.

Safety Messages – Preceded by a safety alert symbol ⚠ and one of two signal words: WARNING, or CUATION.

These signal words mean:

⚠ WARNING

Physical harm may result from failure to adhere to the instructions that are described within the WARNING labels.

Safety Headings---It means Important Safety Reminders or Important Safety Precautions.

Safety Section --- It means Go- Off highway recreational vehicle Safety.

Instructions --- how to use this Go –Off highway recreational vehicle correctly and safely.

This entire manual is filled with important safety information----please read it carefully.

IMPORTANT SAFETY INFORMATION

Your off highway recreational vehicle will provide you with many years of service and pleasure. Providing you take responsibility for your own safety and understand the challenges you can meet while driving.

There is much that you can do to protect yourself when you drive. You'll find many helpful recommendations throughout this manual. The following are a few that we consider most important.

Follow the Age Recommendation

It is strongly recommended that no one under the age of 16 be permitted to drive this off highway recreational vehicle without adult supervision.

Always Wear a Helmet

It's a proven fact: helmets significantly reduce the number and severity of head injuries. Always wear an approved motorcycle helmet. We also recommend that you wear eye protection, sturdy boots, gloves, and other protective gear.

Drive Off-Road Only

Your off highway recreational vehicle is designed and manufactured for off-road use only. The tires are not made for pavement, and the off highway recreational vehicle does not have some features required for use on public roads.

Take Time to Learn & Practice

Even if you have derived other off highway recreational vehicle, take time to become familiar with how this off highway recreational vehicle works and handles. Practice in a safe area until you build your skills and get accustomed to this off highway recreational vehicle's size and weight.

Because many accidents involve inexperienced or untrained drives, we urge all drivers to take a training course approved by the off highway recreational vehicle Safety Institute. Check with your dealer for more information on training courses.

Be Alert for Off-Road Hazards

The terrain can present a variety of challenges when you drive off-road. Continually "read" the terrain for unexpected turns, drop-offs, rocks, ruts, and other hazards. Always keep your speed low enough to allow time to see and react to hazards.

Drive within Your Limits

Pushing limits is another major cause of off highway recreational vehicle accidents. Never drive beyond your personal abilities or faster than conditions warrant. Remember that alcohol, drugs, fatigue, and inattention can significantly reduce your ability to make good judgments and driver safely.

Don't Drink and drive

Alcohol and driving don’t mix. Even one drink can reduce your ability to respond to changing conditions, and your reaction time gets worse with every additional drink. So don’t drink and drive, and don’t let your friends drink and drive either.

Never run your Go- Off highway recreational vehicle indoors.

The exhaust from the engine contains a tasteless, odorless and poisonous gas called carbon monoxide.

Keep away from moving parts of the off highway recreational vehicle

The operator of the off highway recreational vehicle should never place their hands or other parts of their body near any moving part of the off highway recreational vehicle. Failure to adhere to this warning will cause physical harm to your body.

Skidding or Sliding

The terrain surface can be a major factor affecting turns, Skidding a turn is more likely to occur on slippery surfaces such as snow, ice, mud and loose gravel. If you skid on ice, you may lose all directional control. To avoid skidding on slippery terrain, keep you speed low and drive carefully.

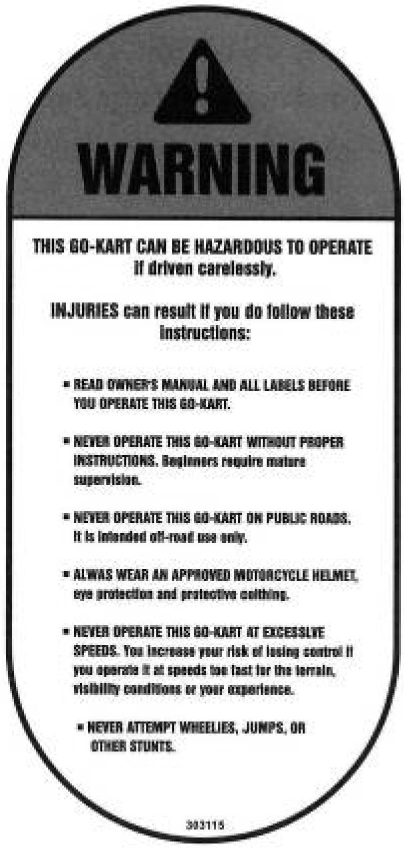
SAFETY LABELS

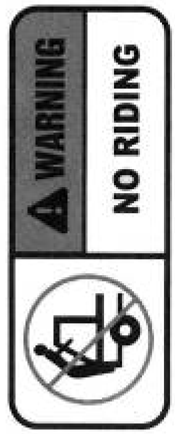
This section presents some of the most important information and recommendations to help you drive your off highway recreational vehicle safely, Please a few moments to read these pages.

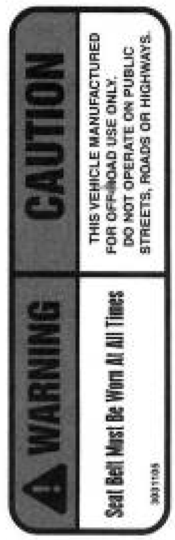
The labels are considered permanent parts of the off highway recreational vehicle. If a label comes off or becomes hard to read, contact your dealer for warning labels replacements.


WARNING
3031112
• Moving parts can crush and cut.
• Keep hands clear.
• Do not operate with guard removed.


WARNING
NO LONG HAIR
ALL HAIR MUST BE TIED UP AND SECURED AT OR ABOVE SHOULDER LENGTH.
ALL LOOSE CLOTHING MUST BE SECURED. ALL NECKLACES AND SCARVES MUST BE SECURED.


WARNING
THIS GO-KART CAN BE HAZARDOUS TO OPERATE if driven carelessly.
INJURIES can result if you do follow these instructions:
• READ OWNER'S MANUAL AND ALL LABELS BEFORE YOU OPERATE THIS GO-KART.
• NEVER OPERATE THIS GO-KART WITHOUT PROPER INSTRUCTIONS. Beginners require mature supervision.
• NEVER OPERATE THIS GO-KART ON PUBLIC ROADS. It is intended off-road use only.
• ALWAS WEAR AN APPROVED MOTORCYCLE HELMET, eye protection and protective colthing.
• NEVER OPERATE THIS GO-KART AT EXCESSLVE SPEEDS. You increase your risk of losing control if you operate it at speeds too fast for the terrain, visibility conditions or your experience.
• NEVER ATTEMPT WHEELIES, JUMPS, OR OTHER STUNTS.
303115


WARNING
NO RIDING


CAUTION
THIS VEHICLE MANUFACTURED FOR OFF-ROAD USE ONLY.
DO NOT OPERATE ON PUBLIC STREETS, ROADS OR HIGHWAYS.
WARNING
Seat Belt Must Be Worn At All Times


WARNING
Loss of control, collision,or getting caught in moving parts can result in serious injuries.
Adult supervison for under 16 years old
Wear a D.O.T. approved motorcycle helmet
Secure long hair and loose clothing
Wear protective eye wear and clothing
Keep arms, legs and feet inside kart
Do not use alcohol or drugs

⚠ WARNING

- **Never shift or engage the reverse lever when the off highway recreational vehicle is in motion.**
- **Only engage the shift lever when the off highway recreational vehicle is at a full stop.**
- **Give a slight throttle and release throttle, then engage shift.**
- **Only shift from neutral.**
- **The shift lever must be in neutral and parking lever pulled when leaving the off highway recreational vehicle.**

⚠ WARNING

- **Do not shift when pushing throttle.**
- **Gear damage can occur.**
- **Gears are not warranted from shifting in motion or over running while shifting.**

ARE YOU READY TO DRIVE?

Before each drive, you need to make sure you and your off highway recreational vehicle are both ready to drive. To help get you prepared, this section discusses how to evaluate your driving readiness, what items you should check on your Off highway recreational vehicle, and adjustments to make for your comfort, convenience, or safety.

Before you drive your off highway recreational vehicle for the first time, we urge you to:

- Read this owner's manual and the labels on your off highway recreational vehicle carefully.
- Make sure you understand all the safety messages.
- Know how to operate all the controls.
- Have adult present if under 16 years old.

Before each drive, be sure:

- You feel well and are in good physical and mental condition.
- You are wearing an approved motorcycle helmet (with chin strap tightened securely), eye protection, and other protective clothing.
- You don't have any alcohol or drugs in your system.

Protective Apparel

For your safety, we strongly recommend that you always wear an approved motorcycle helmet, eye protection, boots, gloves, long pants, and long-sleeved shirt or jacket whenever you drive.

Although complete protection is not possible, wearing proper gear can reduce the chance of injury when you drive.

The following suggestions will help you choose the proper driving gear.

Helmets and Eyes Protection

Your helmet is your most important piece of driving gear because it offers the best protection against head injuries. A helmet should fit your head comfortably and securely.

An open-face helmet offers some protection, but a full-face helmet offers more. Regardless of the style, look for a DOT (Department of Transportation) sticker in any helmet you buy. Always wear a face shield or goggles to protect your eyes and help your vision.

⚠ WARNING

Operating this Off highway recreational vehicle without wearing an approved motorcycle helmet, eye protection, and protective clothing could increase your chances of head and/or eye injury, possibly death in the event of severe accident.

Always wear approved motorcycle helmet that fits properly and wear eye protection (goggles or face shield), gloves, boots, long-sleeved shirt or jacket and long pants.

Additional Driving Gear

In addition to a helmet and eye protection, we also recommend:

- Sturdy off-road motorcycle boots to help protect your feet, ankles, and lower legs.
- Off-road motorcycle gloves to help protect your hands.
- Driving pants with knee and hip pads, a driving jersey with padded elbows, and chest/shoulder protector.

Drive Training

Developing your driving skills is an on-going process. Even if you have driven other off highway recreational vehicles, take time to become familiar with how this off highway recreational vehicle works and handles. To build skills, Practice driving the off highway recreational vehicle in a safe area, do not drive in rough terrain until you get accustomed to the off highway recreational vehicle's controls, and feel comfortable with its size and weight.

⚠ WARNING

Operating Off highway recreational vehicle without proper instruction could increase your risk of an accident, which could lead to serious injury or death.

⚠ WARNING

Attempt supporting with your hands to the ground when the Off highway recreational vehicle turning over could lead to serious injury or death.

Never support with your hands to ground when the Off highway recreational vehicle will turn over.

Age Recommendation

It is strongly recommended that no one under the age of 16 be permitted this off highway recreational vehicle without adult supervision.

⚠ WARNING

A child driving an Off highway recreational vehicle that is not recommended for his/her age could lose Off highway recreational vehicle control and result in severe injury or death.

A child under 16 should have adult supervision when operate on the Off highway recreational vehicle.

No Alcohol or Drugs

Alcohol, drugs and driving don’t mix. Even a small amount of alcohol can impair your ability to operate the off highway recreational vehicle safely. Likewise, drugs-even if prescribed by a physician-can be dangerous while operating the off highway recreational vehicle. Consult your doctor to be sure it is safe to operate a vehicle after taking medication.

⚠ WARNING

Operating this Off highway recreational vehicle after alcohol or drugs can seriously impaired your judgment, balance, perception, and judgment. This can result in serious injury or death.

Never consume alcohol or drugs before or while operating this Off highway recreational vehicle.

IS YOUR VEHICLE READY TO DRIVE?

Before each drive, it‘s important to inspect your Off highway recreational vehicle and make sure any problems are corrected. A pre-drive inspection is necessary, not only for safety, but also for comfort. Because having a breakdown, or even a flat tire, can be a major inconvenience.

If your off highway recreational vehicle has overturned or has been involved in a collision, do not drive it until your dealer has inspected your off highway recreational vehicle, There may be damages or other problems you cannot see.

⚠ WARNING

Improperly maintaining this Off highway recreational vehicle or failing to correct a problem before driving can cause a crash in which you can be seriously hurt even die.

Always perform a pre-drive inspection before every drive and correct each problem.

Pre-drive Inspection

Check the following items before riding the off highway recreational vehicle:

- Engine Oil

  Check the oil level add oil if needed. Check for leaks.
- Fuel

  Check the fuel level add fuel if needed. Also make sure the fuel fill cap is securely fastened. Check for leaks.
- Tires

  Use a tire gauge to check the air pressure. Adjust if needed. Also look for signs of damages or excessive wear.
- Nuts & Bolts

  Check the wheels to see that the axle nuts are tightened, Use a wrench to make sure all accessible nuts; bolts, and fasteners are tight.
- Under body & Exhaust System

  Check for and remove any dirt, vegetation or other debris that could be fire hazard or interfere with the proper operation of the off highway recreational vehicle.
- Air Cleaner Housing Drain Tube

Check for deposits in the drain tube. If necessary, clean the tube and check the air cleaner housing.

- Leaks, Loose Parts

Walk around you off highway recreational vehicle and look for anything that appears unusual, such as a leak or loose cable.

- Lights

Make sure the headlight; brake light and taillight are working properly.

- Throttle

Check the free play and adjust if needed. Press the throttle to make sure it moves smoothly without sticking, and snaps back automatically when it is released.

- Brakes

Press the brake pedal several times, check for proper brake pedal free play. Make sure there is no brake fluid leakage.

- Steering Wheel

Check that the wheels turn properly as you turn the steering wheel.

- Cable

Check the cable housing for wear. Check the fittings for looseness. Replace or tighten as needed.

- Tie rod

Check the tie rod housing for wear. Check the fittings for looseness. Replace or tighten as needed.

SAFE DRIVING PRECAUTIONS

Off-Road Use Only

You off highway recreational vehicle and its tires are designed and manufactured for off-road use only, not for pavement. Driving on pavement can affect handling and control. You should not drive your off highway recreational vehicle on pavement.

⚠ WARNING

Operating this Off highway recreational vehicle on paved surfaces may seriously affect handling and control of the Off highway recreational vehicle, and may cause the vehicle to go out of control.

Never operate the Off highway recreational vehicle on any paved surfaces, including sidewalks, driveways, parking lots and streets.

When driving off-road, also remember to always obey local off-road driving laws and regulations. Obtain permission to drive on private property. Avoid posted areas and obey "no trespassing" signs.

You should never drive your off highway recreational vehicle on public streets, roads or highways, even if they are not paved. Drivers of street vehicles may have difficulty seeing and avoiding you, which could lead to a collision. In many states it is illegal to operate off highway recreational vehicles on public streets, roads and highways.

⚠ WARNING

Operating this Off highway recreational vehicle on public streets, roads or highways can cause collision with other vehicle.

Never operate this Off highway recreational vehicle on any public streets, roads or highways, even dirt or gravel one.

Keep Hands and Feet on Controls

Always keep both hands on the steering wheel and both feet on the foot controls. When driving your off highway recreational vehicle. It is important to maintain your balance and to control of the off highway recreational vehicle. Removing hands or foot away from the controls can reduce your ability to react control of the off highway recreational vehicle.

⚠ WARNING

Removing hand from Steering wheel or feet from foot controls during operation can reduce your ability to control the Off highway recreational vehicle.

Always keep both hand on the steering wheel and both feet on the foot controls of you're Off highway recreational vehicle during operation.

Control Speed

Driving at excessive speed increases the chance of an accident. In choosing a proper speed, you need to consider the capability of your Off highway recreational vehicle, the terrain, visibility and other operating conditions, plus your own skills and experience.

⚠ WARNING

Operating this Off highway recreational vehicle at excessive speeds increases your changes of losing control of the Off highway recreational vehicle, which can result in an accident.

Always drive at a speed that is proper for you're Off highway recreational vehicle, the terrain, visibility and other operating conditions, and your experience.

Use Care on Unfamiliar or Rough Terrain

Before driving in a new area, always check the terrain thoroughly. Don't drive fast on unfamiliar terrain or when visibility is limited. (It's sometimes difficult to see obstructions like hidden rocks, bumps, or holes in time to react).

⚠ WARNING

Failure to use extra care when Operating this Off highway recreational vehicle on unfamiliar terrain could result in the Off highway recreational vehicle overturning or going out of control.

Go slowly and be extra careful when operating on unfamiliar terrain. Always be alert to changing terrain conditions when operating the Off highway recreational vehicle.

Never drive past the limit of visibility. Maintain a safe distance between your off highway recreational vehicle and other off-road vehicles. Always exercise caution and use extra care on rough, slippery and loose terrain.

⚠ WARNING

Failure to use extra care when operating on excessively rough, slippery or loose terrain could cause loss of traction or vehicle control, which could result in an accident, including an overturn.

Do not operate on excessively rough, slippery or loose terrain until you have learned and practiced the skills necessary to control the Off highway recreational vehicle on such terrain. Always be especially cautious on these kinds of terrain.

Do Not Perform Stunts

You should always operate your off highway recreational vehicle in a safe and reasonable manner. When driving, always keep all four wheels on the ground.

⚠ WARNING

Attempting wheelies and other stunts increases the chance of an accident, including an overturn.

Never attempt stunts, such as wheelies or jumps. Don’t try to show off.

SPECIFICATIONS

DIMENSIONS
Overall Length--98 in. (2500mm)
Overall Width -- 60 in. (1520mm)
Overall Height --- 62 in. (1570mm)
Wheelbase -- 77.5 in. (1970mm)
Front Track -- 51in. (1300mm)
Rear Track---50.8in. (1290mm)
Ground Clearance --- 11.8 in. (300mm)

ENGINE
Type ---liquid-cooled. 4-Stroke
Bore x Stroke -- 72mm×60mm
Displacement --- 244 cc
Corrected compression ratio -- 10:1
Carburetor --- KEI HIN: No. VE 14CEQKY
Output Power ---14.7hp/7000rpm
Maximum Torque --- 17.6 Nm /5500r/min
Starting-- Electric
Ignition --- C.D.I
Lubrication --- Force & Splash
Transmission -- Automatic (C.V.T system)
Spark Plug --- DPR7EA-9 (NGK)
Plug gap -- 0.6-0.7mm
Fuel type --- RQ90 (unleaded)
Lubricate oil --- SAE-10W/30

CAPACITIES
Maximum load -- 400lbs
Fuel tank --- 16.0L
Engine oil ---1000ml
Gear oil ---1000ml
Coolant ---1800ml
Starting --- <5s
Climbing -- 20°-25°
Battery --- 12V 9Ah
Head Light -- 12V 15W
Tail Light -- 12V 5W/10W/21W
Fuse -- 10A
Brake Track -- < 7m @ 20miles/h
Top speed -- 40 miles/h (or limited as customers require)

CHASSIS
Front, Rear brake -- Hydraulic disc, right foot control
Front tire --- 21×8-10
Rear tire --- 22×10-10
Front Suspension -- Independent Dual A-Arm
Rear Suspension --- Trailing Arm/Double Oil& Damped Shock
Restraint System -- Dual 4-point Harness
Final Drive Chain --- 10Ax62

TIRE PRESSURE
Front --- 42kpa 6.1psi
Rear -- 56kpa 8.1psi

WEIGHT
Net Weight ---350kg/ 771lbs

WARRANTY
Parts and workmanship -- 90 Days

OPERATION

A. Operation controls

WARNING-Do not attempts to start or operate the engine until completely familiar with the location and use of each control necessary to operate this vehicle. The operator must know how to stop this machine before starting and driving it.

a. Throttle

The right foot pedal is the throttle that controls the off highway recreational vehicle speed. As the engine speed increased above idle, the clutch automatically engages and moves the vehicle forward. Allow the throttle to return to the idle position at any time, and the clutch disengages. (See Fig. 1)

> **⚠ WARNING**
>
> Each time prior to starting the engine, check the throttle assembly to ensure that when pedal is pushed all the way forward the assembly is working smoothly and returns to idle when released. Do not operate if pedal or engine throttles linkage fail to return to idle. If unable to correct the problem through lubrication, adjustment or replacement of worn parts, contact your dealer for assistance.

b. Brake

The brake is located on the left side of the off highway recreational vehicle (See Fig. 1). Applying pressure to the pedal draws the brake caliper around the brake pump at the 4 wheels and slows or stops the off highway recreational vehicle.

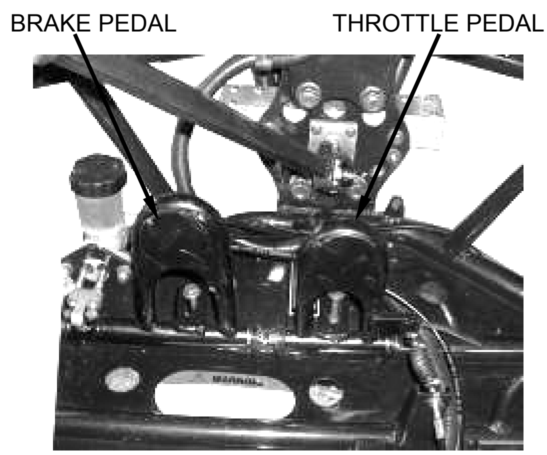


Figure 1

c. Start engine

Insert the key into key-switch, turn the key clockwise, and release the key when the engine starts. The engine will warm up for 5 minutes and the engine choke will close automatically and run at normal RPM (Warning: Don't crank starter more than 5 seconds at one time). (See Figure 2)

d. Run you Off highway recreational vehicle

Press the shift lever forwards to "L" position, the cart will move forwards at low speed, "H" position, high speed; "N" position, no speed; and "R" position the cart will move backwards.

(Note: if the shift can't engage, give a slight throttle, and then try it again)

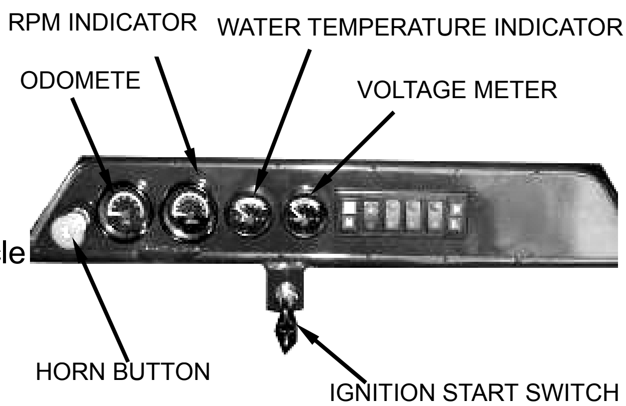


Figure 2

If the shift engages press down the throttle pedal slowly, the cart will accelerate.
(See Figure 2)

e. Operate lights

See figure 4, press down the button, the corresponding light will run. And if move the shift lever to “L” position, the “L” light will shine, “H” position, the “H” light, “N” position, the “N” light, and “R” position, the “R” light,

Figure 3

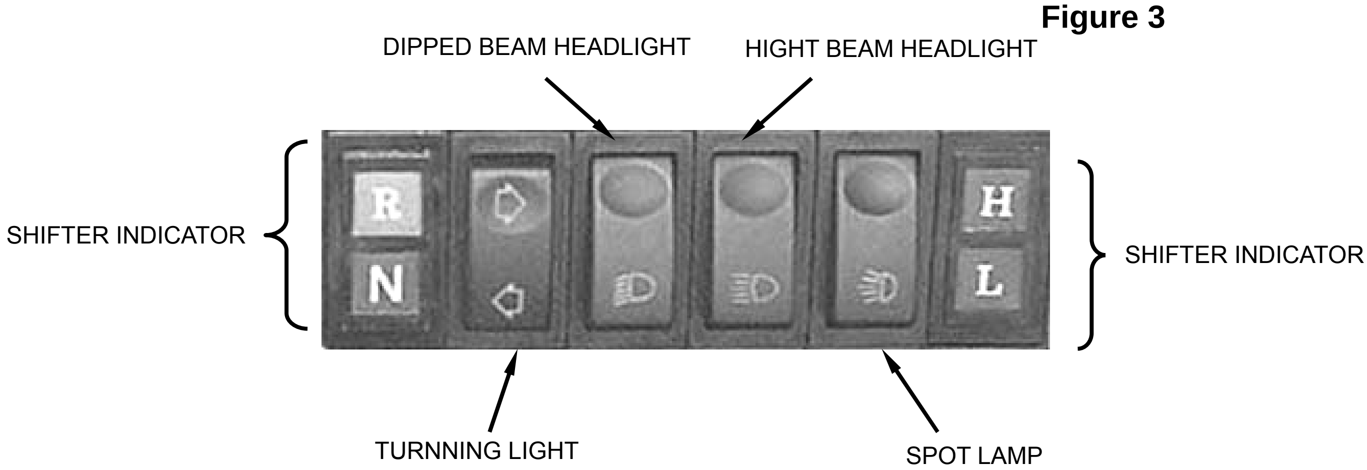


Figure 4

B. Pre-Drive Inspection

⚠ WARNING

Perform this pre-drive inspection every day before driving vehicle. If not performed, serious damage to the vehicle or personal injury may result.

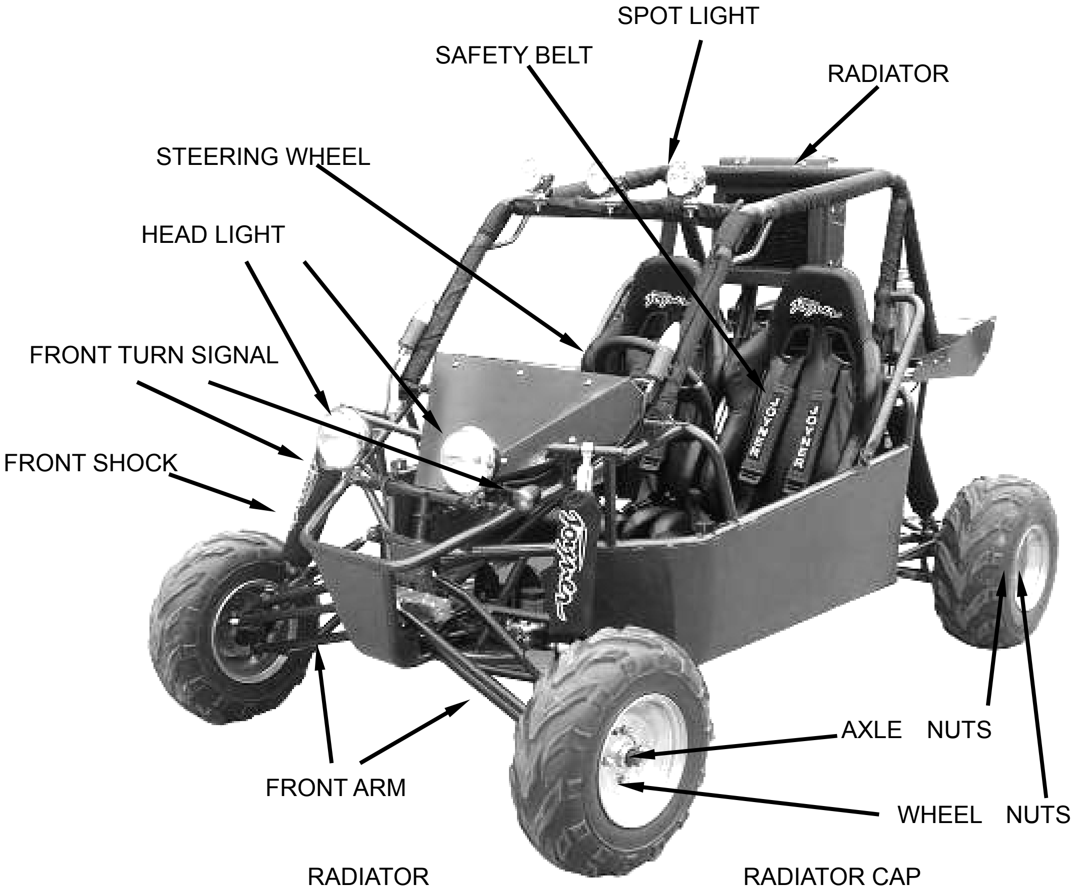
a. Check for Engine Oil Level. Check for leaks, add oil if required.
b. Check for Fuel Level. Add fuel as necessary and do not overfill. Check for leaks
c. Check for Brakes. Depress the rear brake pedal several times, and then check for proper brake pedal free play. Make sure there is no brake fluid leakage. Adjust if necessary.
d. Check Tires. Check tires condition and pressure. The pressure on both Front and Rear tire is 42kpa/6.1PSI and 56kpa/8.1PSI.
e. Check Drive Chain. Check for drive chain’s condition and tension. Lubricate if necessary.
f. Check Throttle. Check for smooth operation. Assure throttle “snaps” back to idle.
g. Check Engine Stop Button. Perform engine stop button test. Repair as necessary.
h. Check all Nuts, Bolts, and fasteners. Check wheels to see that all axle nuts and lug nuts are tightened properly. Check and tighten as necessary all other fasteners to specified condition.
i. Check Roll Cage Bar. Ensure all protective roll cage bar are in place before operating the off highway recreational vehicle.
j. Check Brake Light. Check for proper operation.
k. Check Wheels. Check for tightness of wheel nuts and axle nuts; check that axle nuts are secured by cotter pins.

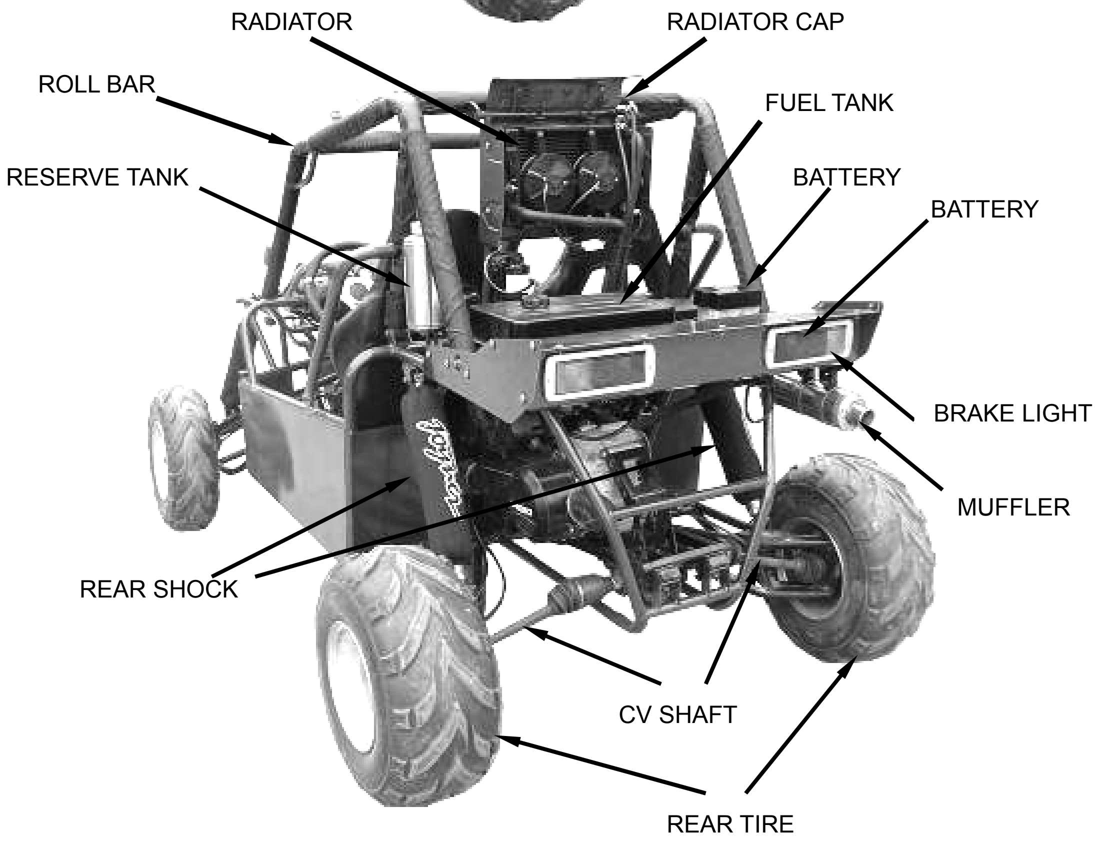
I. Check Steering. Check for free operation for any unusual looseness in any area.

⚠ WARNING

Always follow rules for safe operation and wear a helmet.

m. Component locations





C. Passengers

The vehicle allows for two riders only. Combine maximum weight of driver and the passenger should not exceed 180kg (400Ibs).

D. Seat Adjustment

The seat must always be securely fastened in the position which best affords the operator control of the foot pedals, steering wheel, and the remote stop button.

a. Pull seat adjustment handle upward to disengage seat slide.
b. Move seat to desired position.
c. Be sure seat adjustment handle snaps back into place and that seat is locked into position.

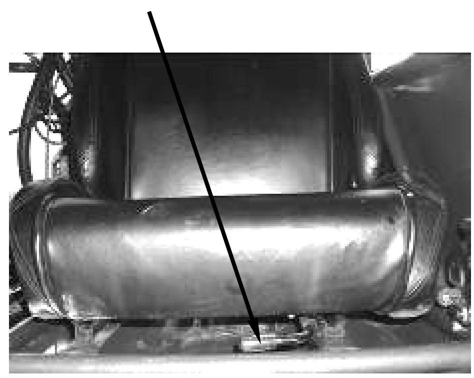


Figure 5

⚠ WARNING

Before attempting to adjust the seat ensures that engine of the Off highway recreational vehicle is stopped.

⚠ WARNING

Never operate this Off highway recreational vehicle when the provided seat is not securely fastened, to do so could result in a strong possibility of severe personal injury or loss of life. Before attempting to adjust the seat ensure the engine of the Off highway recreational vehicle is stopped.

E. Shift Adjustment

a. Press down the shift lever to the “L” position so that the unit can move forward at low speed, press the lever to “H” position so that the unit can move forward at high speed, Pull back the shift to “N” position so that the unit can’t move, pull back the lever to “R” so that the unit can move backward. (See Fig. 6)
b. Loosen lock nut, and remove the cotter pin and the plain washer. Rotate the joint, the shifter lever will rotate clockwise or counter clockwise, so you can adjust the lever in proper position

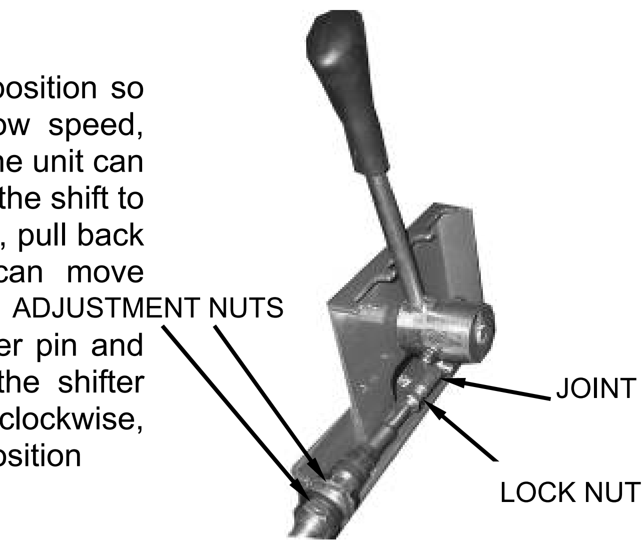


Figure 6

⚠ WARNING

Never engage the shift lever when the Off highway recreational vehicle is in motion
Only engage the shift lever when the off highway recreational vehicle is at a full stop
Give a slight throttle and loosen throttle, then engage shift from neutral to shift.
The shift lever must be on neutral and pull parking lever when leave the Off highway recreational vehicle

F. Parking Adjustment

Press down the reverse lever to the "F" position so that the unit can move forwards; pull back the lever to "P" so that the unit can park. (See Fig. 7) Adjust Nut #1; Make sure cable is not too tight or too loose. Adjust Nut #2 accordingly to adjustment of Nut #1. (See Figure 7)

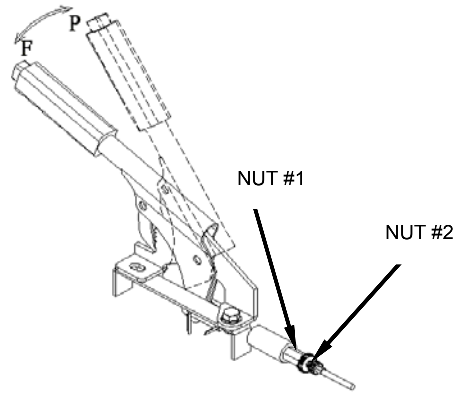


Figure 7

G. Starting And Operating Instructions

a. Before starting the engine, be sure that the driver is seated properly in the off highway recreational vehicle and tighten the seat belt.
b. Testing the Off highway recreational vehicle in an open place at the beginning to learn how to start, turn and stop.
c. Operate the Off highway recreational vehicle slowly until you are familiar with it.
d. The turning radius of this off highway recreational vehicle is small and agile, so the centrifugal force is very high when turning at high speed. Slow down to a more controllable speed when turning to prevent the off highway recreational vehicle from rolling over.
e. To prevent vehicle from rolling over, be sure to only turn the vehicle at a slow more controllable speed. Heel on the ramp of the main board when turning, Keep your leg rely on the foot pedal, you can feel the of highway recreational vehicle is stable because of the gravity is adjusted and won't roll over.

H. Foot brake adjustment

a. Loosen the thin nut M8
b. Rotate the pushing bar to make space proper.
c. Tighten thin nut M8.
d. With the same way to adjust another pair.

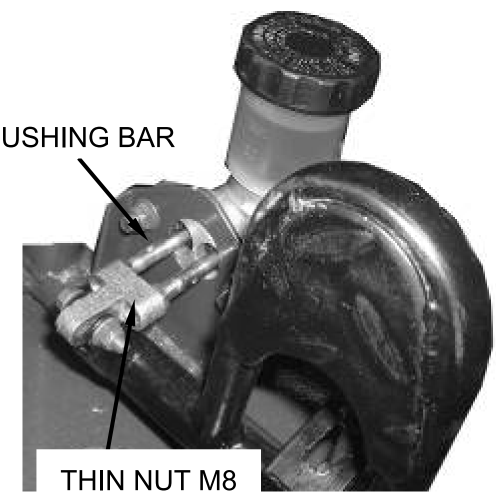


Figure 8

SERVICE INSTRUCTION

A. Air Filter.
Clean every 80 running hours. If the vehicle is operated under extremely dusty condition, we suggest cleaning after every use and replace more often.

a. Remove cleaner cover 1.
b. Remove air cleaner filter core (See Fig. 9)
c. Check the filter paper, if the filter paper is dusty, please clean with pressure air or replace with a new one

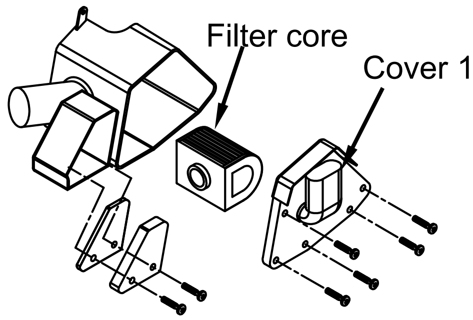


Figure 9

B. Engine Lubrication
You must change the oil in the crankcase after the [illegible] of operating of your new engine and after 10 hours of use thereafter. That will insure proper lubrication of internal parts and prevent costly repairs due to excessive wear.

⚠ WARNING

Never operate this Off highway recreational vehicle when the provided seat is not securely fastened, to do so could result in a strong possibility of severe personal injury or loss of life.

a. Remove fill plug located on bottom of engine (See Fig. 10). Tip Off highway recreational vehicle backwards slightly by blocking up the front end and drain oil into suitable container.
b. Replace fill plug and tighten securely. Place Off highway recreational vehicle in a level position.
c. Refill crankcase (approximately 1000 ml/1qt) to top of filler neck with SAE 10W/30 oil. Use same grade of oil as used originally.
d. Check oil level before each use of dart or after each 10 hours of operation. Add oil to bring up to proper lever. Do not mix various grades of oil.

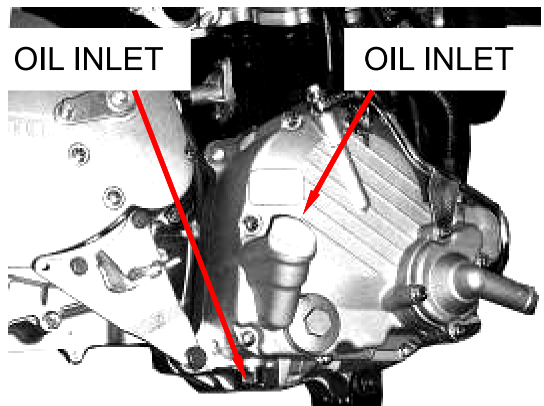


Figure 10

C. Engine Coolant
You should check the coolant for lack. If lack, you should refill coolant (approximately 1800 ml) into the radiator or reserve coolant. The lack of coolant will cause engine overheat. This can cause engine damage.

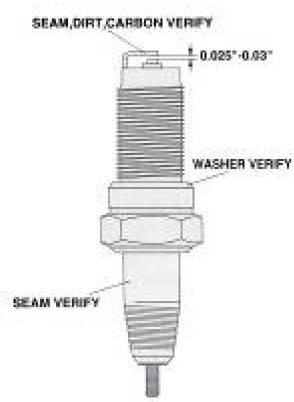


Figure 11

D. Spark Plug
a. Remove the spark plug and inspect it
(Use a spark plug wrench) The electrodes should be kept clean and free of carbon. The presence of carbon or excess oil

will greatly reduce proper engine performance. If possible, check the spark plug gap (area between electrodes) using a wire feeler gauge. This specification is 0.025”~0.030”. (See Fig. 11)

b. Before installing spark plug coat threads lightly with graphite grease if possible, to ensure easy removal next time the spark plug needs inspection.

c. It is advisable to replace the spark plug at least once a year to insure easy starting and good engine performance.

E. Carburetor Adjustment

Never make unnecessary adjustments. The factory recommended settings are correct for most applications. It’s not necessary to disassemble the screw unless the carburetor needs to be replaced. Prepare a 50r/w tachometer before adjustment.

a. Warm up the engine (5~10min)
b. Tighten the airscrew gentle. Back out 2-3/8 turns counter clockwise.
c. Connect the tachometer; adjust the throttle to limit the idle speed. The standard value is (1500RPM).
d. Turn the airscrew slowly and observe the RPM of the engine, stop adjusting as the RPM reaches the top speed.
e. Adjust the screw and adjust the idle speed to an ideal value.
f. Repeat step d and e until the rotate speed of engine stables.

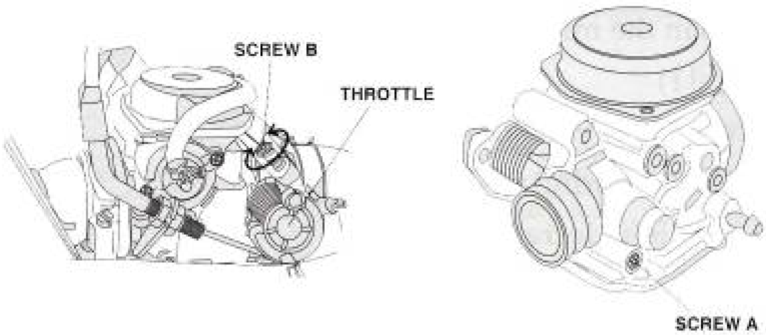


Figure 12

F. Cleaning Instructions

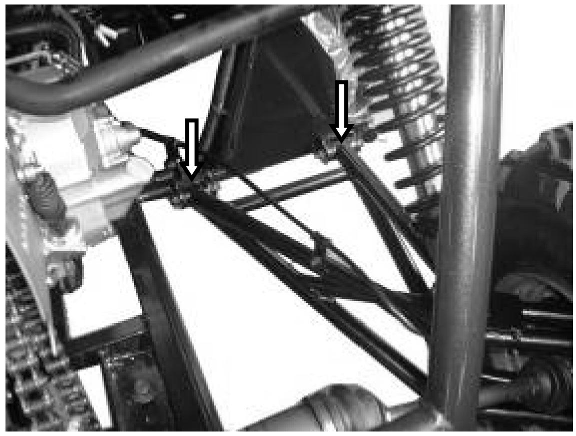
Keep your off highway recreational vehicle clean. With a clean rag, wipe off and dirt and oil from around controls. Wipe off any spilled fuel and oil. Keep the engine clean off foreign object and be sure to check that air intake fan is free off debris for proper cooling.

G. Off highway recreational vehicle Lubrication

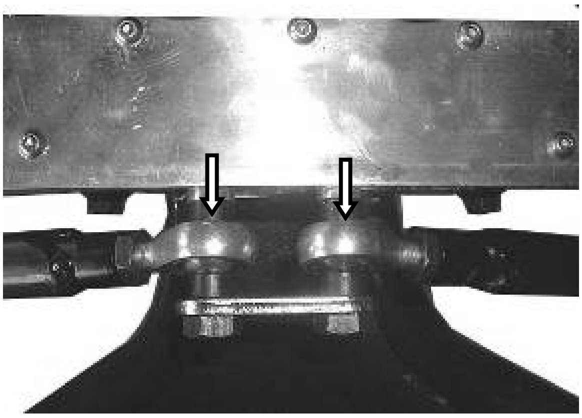
Lubricate vehicle every 90 days of use, Apply several drops of lithium grease in arrow-pointed points in the following picture.

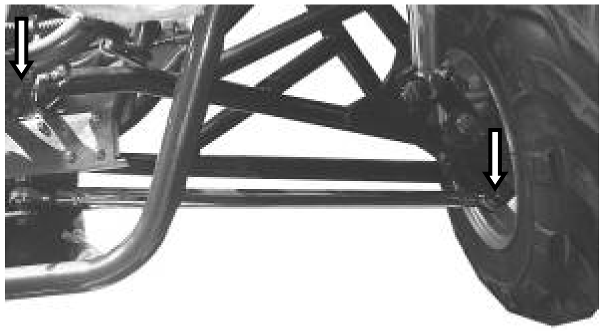
Front arm

Rear arm

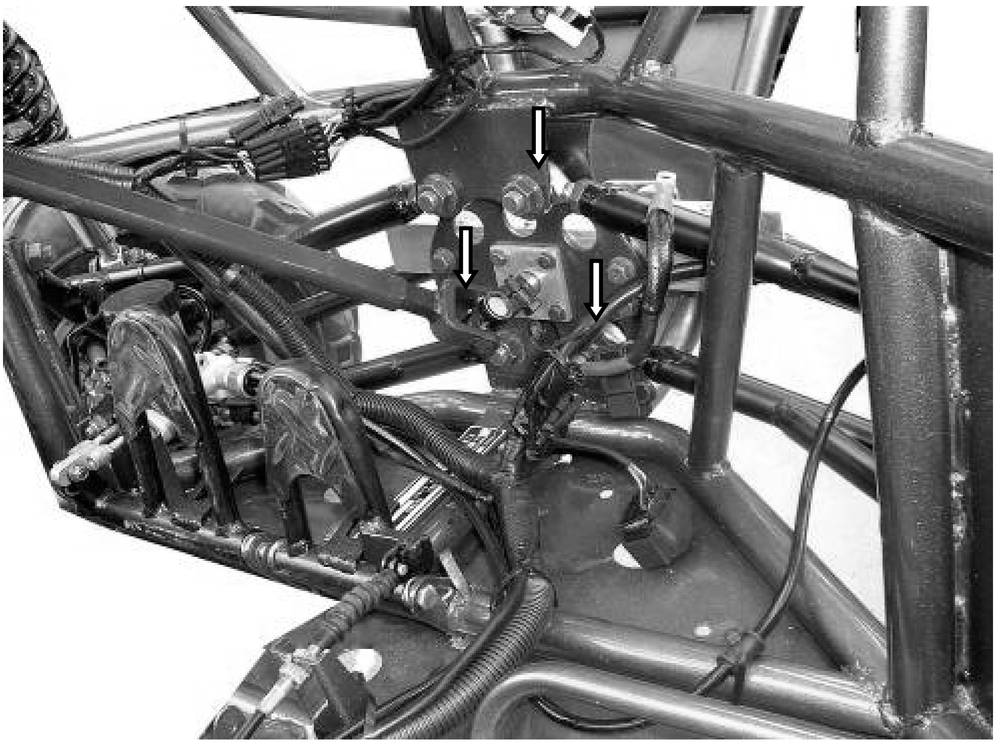


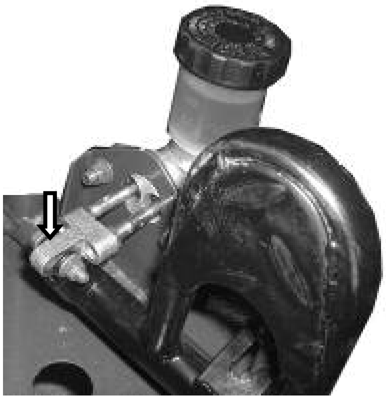
Tie rod





Steering shaft & Arm

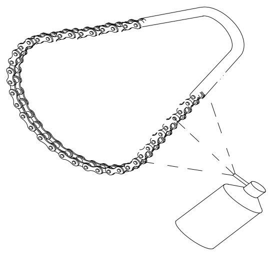




H. Chain Lubrication

I.

To increase chain life, it should be Lubricated with a spray or Chain lubricant.



J. Chain Adjustment

Check the chain adjustment after first two hours of use. Readjust if it has more than 1/2” flex. (See figure 13)

a. Loosen NUT #1, and NUT #2.

b. Rotate BOLT #1, the BEARING BLOCK will move forwards or backwards, so the chain will become loose and tight. Repeat this procedure until chain is at proper tension.

c. Tighten all of the nuts.

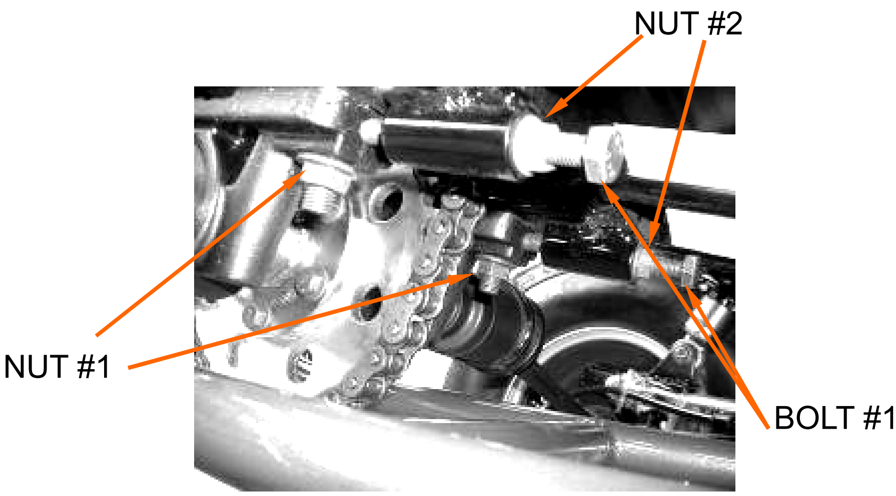


Figure 13

J. Adjustment of Front and Rear Shock

There are five adjustable positions on each Front shock. The default position is in the first set by manufacture (See Fig.14)

Use a round nut wrench as you adjust the front shock, the tension of shock spring will increase as you screw to left, decrease as you screw to the right.

There is screw on the rear shock; use shock wrench as you adjust the rear shock, the tension of shock spring will increase as you screw to right, decrease as you screw to left. (See Fig.15)

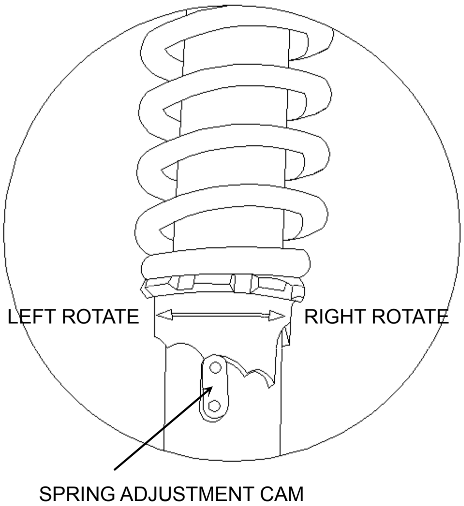


Figure 14

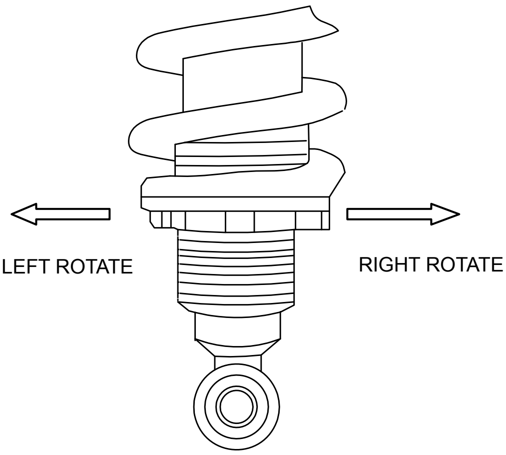


Figure 15

K. Storage Instruction

In the event you're off highway recreational vehicle is not to be operated for periods in excess of 30 days or at the end of each driving season prepare for storage as follows:

a. Drain fuel tank and carburetor by allowing engine to run out of fuel, or use a fuel stabilizer.
b. Lubricate engine cylinder by removing the spark plug and pour one ounce of clean lubricating oil through the spark plug hole into the cylinder. Crank the engine slowly to spread oil and replace spark plug.
c. Do not save or store gasoline over winter. Using old gasoline, which has deteriorated from storage, will cause hard starting and affect engine performance.

⚠ WARNING

Do not drain fuel while engine is hot. Be sure to move Off highway recreational vehicle outside before draining fuel.

REPAIR

ENGINE REPAIR

Units' translation form

Item	Example	Unit conversion
Pressure	200kpa(2.00kgf/cm^2) 33kpa(250mmHg)	1kgf/cm^2=98.0665kpa 1kpa=1000pa 1mmHg=133.322pa=0.133322kpa
Torque	18N·m(1.8kga·m)	1kgf·m=9.80665N·M
Volume	419ml	1ml=1cm^3=1cc 1L=1000cm^3
Force	12N(1.2kgf)	1kgf=9.80665N

Explanation for symbols in manual

WARNING

That dangerous items，need to pay special attention. Or it will cause accident even death.

, **Caution**

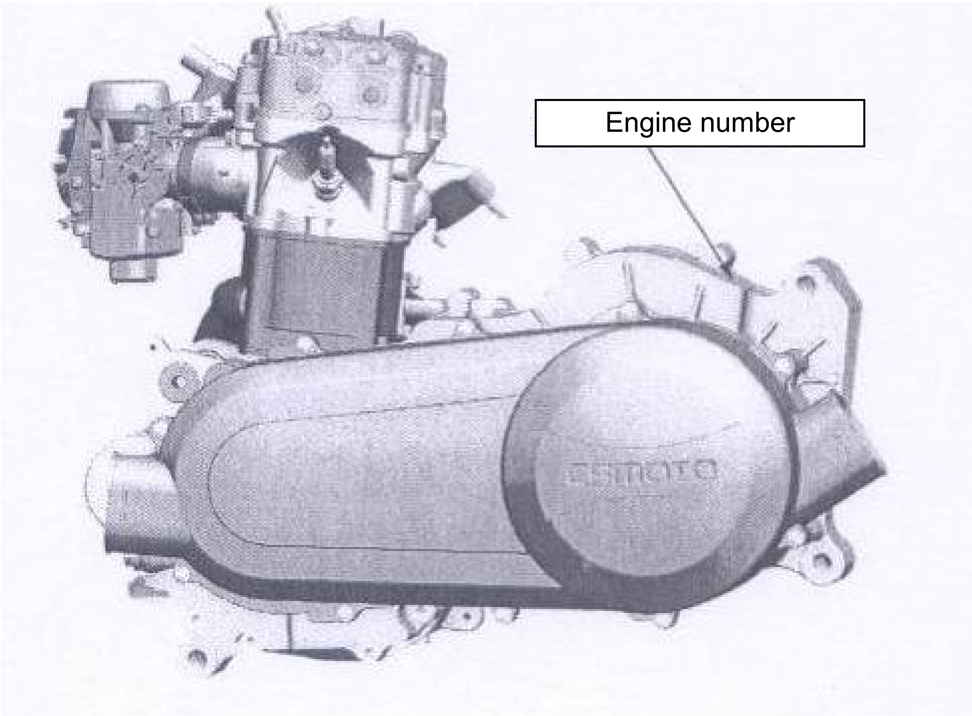
Important item need to pay some attention, otherwise, the engine will be damaged and stop running.

CAUTION: , **Note**

General notes and tips.

INFORMATION ABOUT REPAIR

Engine number location



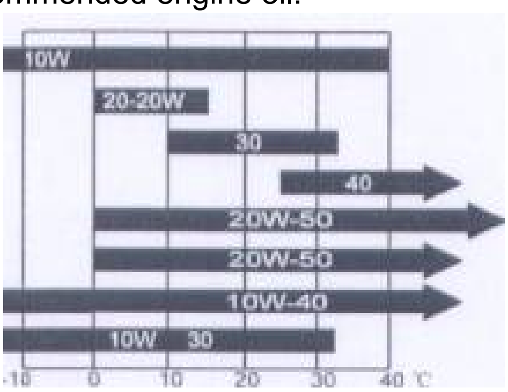
Specification table

No.	Item			specification
1	Engine Model			172MM-C
2	Displacement			$244.3CM^3$
3	Types of fuel			RQ-90
4	Starting			electric
5	Type			Single-cylinder, four-stroke water-cooled, vertical
6	Bore × Stroke			72mm×60mm
7	Compression pressure			1470kpa-600rpm
8	The maximum power			11kw/7000rpm
9	Maximum torque			17.6N • m/5500rpm
10	Distribution phase	Intake valve	Open	BTDC0°（1mm）
			Closed	ABDC30°（1mm）
		Exhaust Valve	Open	BBDC35°（1mm）
			Closed	BTDC5°（1mm）
11	Unladen stability minimum rpm			1500±150rpm
12	Lubrication system	Lubrication type		Pressure/ Splashing
		Pump type		Rotor
		Lubricating oil filter type		Metal strainer full-flow filtration

		Lubrication capacity		1.0L		
13	Cooling			Compulsory		
14	Fuel system	Air Filters		Foam plastic fitter core		
		Carburetor		KEIHNCV30		
15	Electric System al	Ignition way		C.D.I Electronic ignition		
		Ignition time		10°BTDC 1500rpm		
		Spark Plug		DPR7EA-9(NGK)		
		Electrode gap		0.8-0.9mm		
16	Power transmission system	Clutch type		Dry-foot block automatic centrifugal		
		Transmission Type		CVT＋Gearbox		
		Continuously variable rate		0.9-2.2		
		Gears		High	Low	reverse
		Gear box rate	Primary	1.57	3.15	2.2
			secondary	2.25	2.25	2.25
17	Power output		Sprocket output			

Inspection parameters table

Lubrication device

Item		Standards	Limit
Engine oil capacity	When the replace oil	0.8l	-
	Full capacity	1.0l	-
Recommended engine oil:  (Temperature)		• 4-stroke motorcycle specified oil AE-10W-40、20W-50d to use a substitute oil, follow the following items: •API classification: SF,SE • SAE specification: Choose one from the left illustration according temperature.	
oil pump rotor	Gap between rotors of Inside and outside	0.15mm	0.20mm
	Oil pump Gap	0.15~0.23mm	0.25mm
	Face Gap	0.05~0.10mm	0.12mm

Cylinder Head、Valve

Item			Standards	Limit
Cylinder compression pressure			1470kpa-600rpm	
Valve Clearance	IN		0.10mm	
	EX		0.10mm	
Planeness of the surface Cylinder Head connect			0.02mm	0.05mm
Camshaft	Height of cam top	IN	31.60-31.72mm	31.52mm
		EX	31.60-31.72mm	31.52mm
Valve Rocker	Rocker inner diameter	IN/EX	12.000-12.018mm	12.1mm
	Rocker outer diameter	IN/EX	11.973-11.984mm	11.91mm
Valve, Valve guide sleeve	Valve shaft diameter	IN	4.975-4.990mm	4.90mm
		EX	4.955-4.970mm	4.90mm
	Valve guide sleeve inner diameter	IN	5.000-5.012mm	5.03mm
		EX	5.000-5.012mm	5.03mm
	Gap between valve shaft and valve guide sleeve	IN	0.010-0.037mm	0.08mm
		EX	0.030-0.057mm	0.10mm
	Depth of the hole in valve guide sleeve seat	IN/EX	12/12mm	
	Valve seat width in contact	IN/EX	1.1mm	1.8mm
Valve Spring	Free length(outer spring/ Inner spring)	IN/EX	40.0/30.5mm	36.0/27.5mm

CVT

Item		Standard	Limit
Transmission driving pulley	Transmission mobile-disc-unite hole inner diameter	27.000-27.033mm	27.06mm
	Driving wheel disc sleeve outer diameter	26.959-26.980mm	26.94mm
	Centrifugal roller unite outer diameter	22.94-23mm	22.4mm
Belt width		24.2±0.5mm	22.5mm
Clutch Driven pulley	Friction plate thickness		1.5mm
	inner diameter of clutch outer wheel disc	153-153.15mm	153.8mm
	free length of clutch spring	135.0mm	127.0mm
	Outer diameter of driven wheel disc bushing	39.95-39.975mm	39.94mm
	Inner diameter of mobile driven wheel disc	40.0-40.025mm	40.06mm

Speech reducing mechanism

Item		Standards
Volume of oil	When replacing	0.75l(fill to neck)
	When disassembling	0.85l(fill to neck)
Recommended oil		SAE10W-40/SF Grade

Starting motor

Item		Standards	Limit the use of
Starting motors	Brush length	10mm	7mm

Crankshaft、Pistons、Cylinder

Item			Standards (Units mm)	Limit (Units mm)
Crankshaft	Connecting rod tip	Axial clearance	0.10-0.35	0.6mm
		Radial clearance	0.013-0.025mm	0.05mm
	Crankshaft run-out tolerance		0.02mm	0.10mm
Pistons	Pistons installation direction		“IN” point to intake valve	
	Pistons diameter		71.96-71.98mm	71.9mm
	Pistons pin hole diameter		17.002-17.008mm	17.03mm
	Piston Pin diameter		16.994-17mm	16.98mm
	Clearance between cylinder and piston		17.006-17.024mm	17.04mm
	Clearance between piston and piston pin		0.03-0.05mm	0.15mm
	Clearance between piston pin and connecting rod		0.002-0.014mm	0.04mm

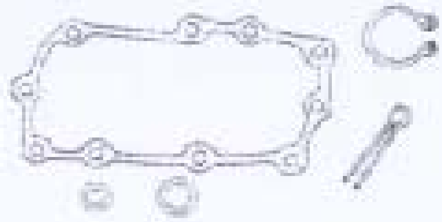
	Piston pin and linkage between the gap		0.006-0.030mm	0.06mm
	Clearance between Piston Ring and piston ring groove	Piston Ring(1)	0.015-005mm	0.09mm
		Piston Ring(2)	0.015-005mm	0.09mm
	Piston Ring cut gap	Piston Ring(1)	0.15-0.30mm	0.05mm
		Piston Ring(2)	0.10-0.25mm	0.05mm
		Oil ring	0.2-0.7mm	
	Piston Ring installation direction		mark upward	
Cylinder	Diameter		72-72.019mm	72.1mm
	Planeness of upper surface			0.05mm
	Roundness		0.002mm	0.05mm
	Cylindricity		0.005mm	0.05mm

Battery、charge devices

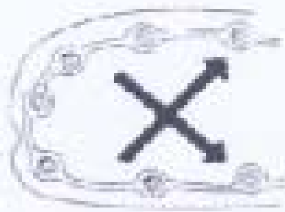
Item		Standards
AC Magneto	Type	Permanent Magnet AC
	Output	Three-phase AC
	Charging coil resistance(20℃)	02.-03 Ω
Rectifier type		Three-phase ring rectifying, SCR

Attention

■Washer、”O” ring、cotter pin and spring washer need to be replaced with a new on after disassembly.



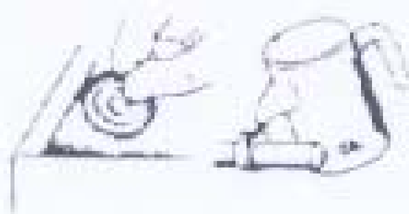
■before tightening bolt, nut and screw, rotate the hardware several rounds and make sure screws can match well, then tighten the hardware from big to small, from inside to outside and with the specified torque.



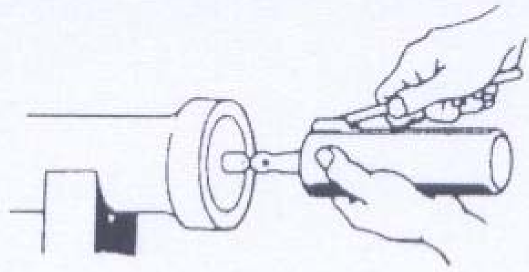
■only CF parts, or recommended part， grease and oil

■always use special tools and general tools when necessary.

■before measure and check the parts taken off, make sure it is clean, and apply some oil before install back.

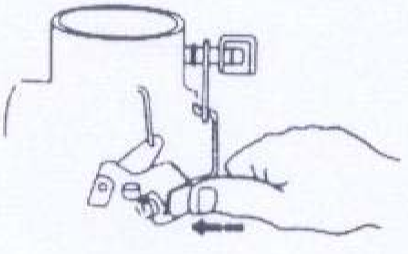


■must smear or inject specified grease or oil on the
special points.



■check every tightened points and all

the mobile parts after assembly.



Engine torque table

Hardware specification	Torque required	Where is the hard ware
Nut M14×1.5	78N • M	Fixing transmission
Nut M12×1.25	49N • M	Fixing clutch
Nut M16×1	103N • M	Fixing flywheel
Cap-Nut M8	30N • M	Matching the stud fastening cylinder
Cylinder stud	30N • M	Fixing crankcase assembly
Filter net cover	20N • M	Right-covered Lvyou
Bolt M5×16	10N • M	Right case filter hole
Inner hex bolt M8×18	30N • M	Fixing clutch
Reamed boltsM12×1.25	20N • M	Fixing oil pipe
M7×1(left)	12N • M	Coolant pump impeller
Bolt M8	10N • M	Oil pipe reamed bolt
Bolt M8	10N • M	Exhaust pipe bolt
M8×1	10N • M	Tension spring seat bolt
M12×1.5	18N • M	Spark Plug
Bolt M12×1.5	20N • M	Oil outlet bolt
Screw M4×12	5N • M	Oil stop plate on gearbox cover
Bolt M5×10	8N • M	Seal pressure plate on gearbox
Bolt M12×1.5	20N • M	oil outlet plug bolt on gearbox
M20×1.5	20N • M	Oil inlet plug bolt on gearbox
Round Nut M22×1	85N • M	Fix driving bevel gear
BoltM12×20	40N • M	Fix driven bevel gear
Hollow bolt M14×1.5	18N • M	Fix gear-shift stopping ball

Torque table for the other bolts and nuts

specification	Torque N • m(k g f • m)	specification	Torque N • m(k g f • m)
5mm Bolt、 Nut	5(0.5)	5mm Screw	4(0.4)
6mm Bolt、 Nut	10(1.0)	6mm Screw	9(0.9)
8mm Bolt、 Nut	22(2.2)	6mm SH Flanged bolts	10(1.0)
10mm Bolt、 Nut	34(3.5)	6mm Flanged bolts、nuts	12(1.2)
12mm Bolt、 Nut	54(5.5)	8mm Flanged bolts、nuts	26(2.7)
		10mm Flanged bolts、nuts	39(4.0)

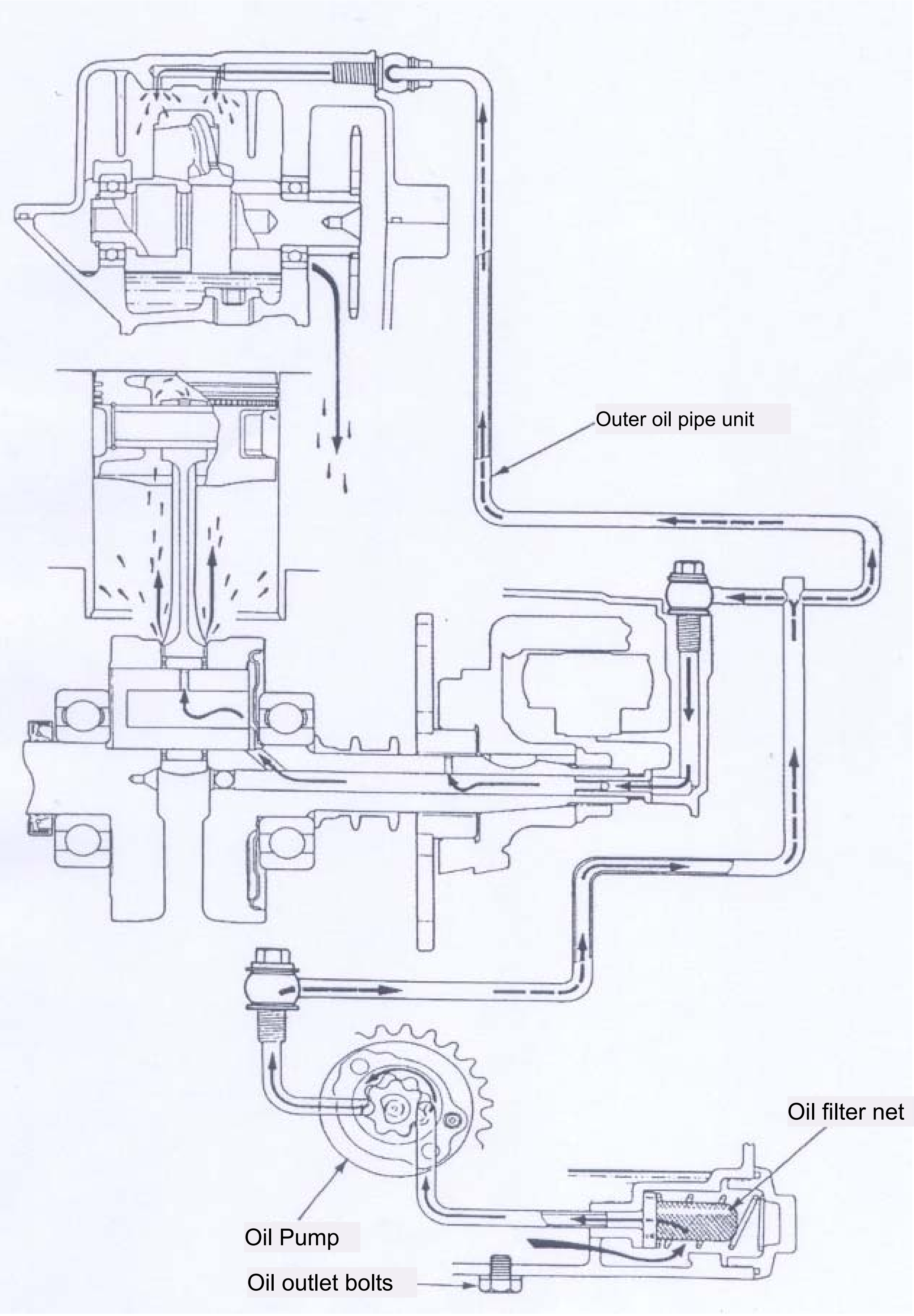
172MM-B 、 172MM-c Special tools

No.	Tools name	Specification	Used for	Remarks	chapter
1	Bearing-removed tool	12mm	Bearing 6201	Work with8,9	9
2	Bearing-removed tool	15mm	Bearing 6202	Work with8,9	4,9
4	Bearing-removed tool	17mm	Bearing 6303	Work with8,9	9
5	Bearing-removed tool	20mm	Bearing 6304	Work with8,9	9
6	Bearing-removed tool	22mm	bearing on the left of main shaft	Work with8,9	9
7	Bearing-removed tool	25mm	Bearing 6305	Work with8,9	9
8	Handle for bearing removed-tool				4,9
9	Balance block for bearing removed tool				4,9
10	Bearing guide	12mm	Bearing 6201	Work with16	9
11	Bearing guide	15mm	Bearing 6202	Work with16	9
12	Bearing guide	17mm	Bearing 6303	Work with16	9
13	Bearing guide	20mm	Bearing 6304	Work with16	9
14	Bearing guide	22mm	bearing on the left of main shaft	Work with16	9
15	Bearing guide	25mm	Bearing 6305	Work with16	9
16	Handle for bearing-pushed tool				9
17	hook wrench	34~36mm	Round nut		9
18	Punch		Riveting		9
19	Water-Seal-removed tool		Water Seal static ring		4
20	Bearing tools 28×30mm		pushing oil seal on water pump		4
21	Valve Guide Reamer		Processing valve guide		6
22	Valve Guide-removed tool		Removing valve guide		6
23	Belt wheel support		Stopping belt to run		8
24	Clutch spring compressor		Assembling or disassembling driven pulley		8
25	Flywheel-removed tool		Disassembling flywheel		10
26	Fixing-nut wrench		Assembling or disassembling driven pulley		8

Grease, seal glue, threads glue

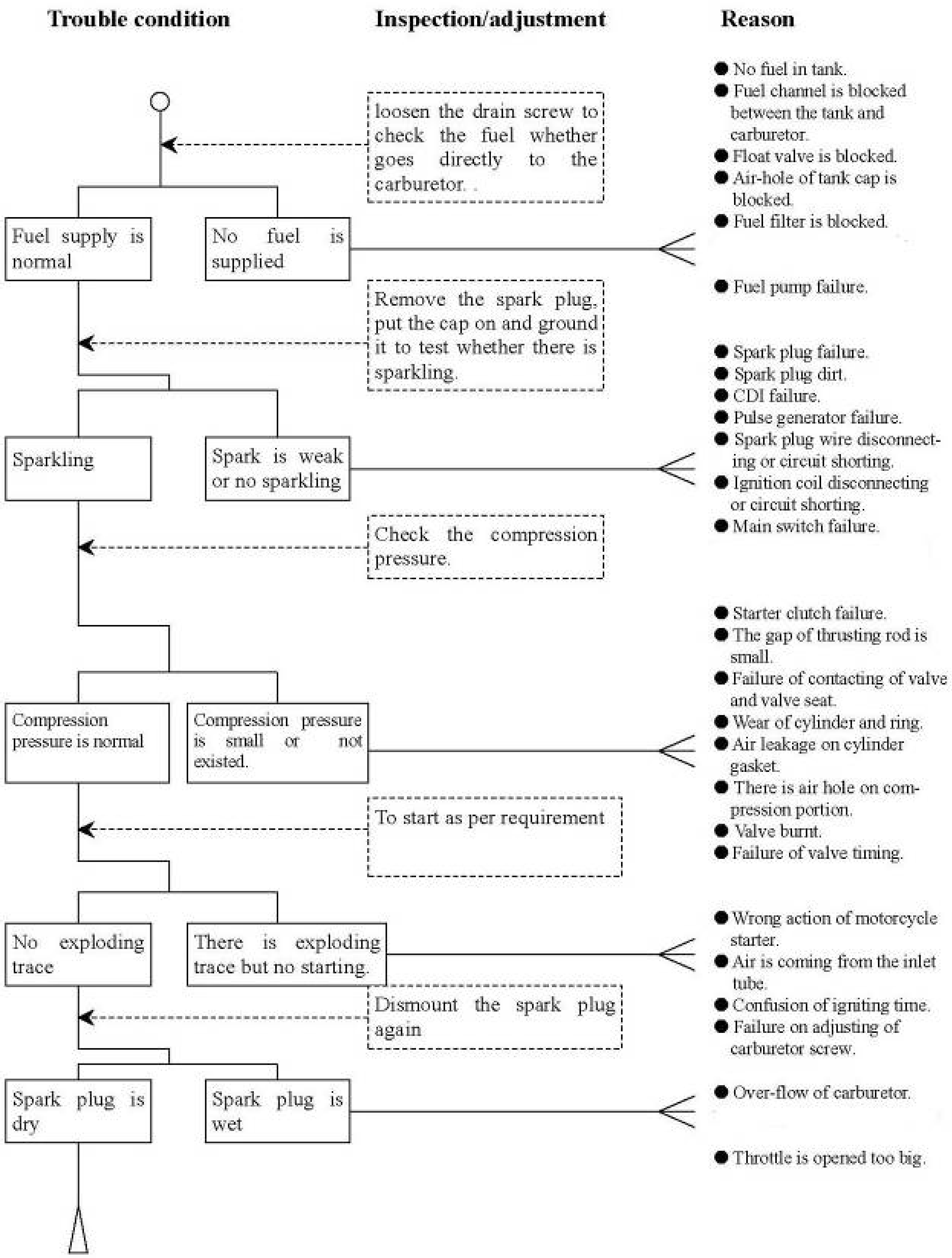
Appling point	Attention	type
coolant temperature sensor threads of timing sprocket fixing screw		threads locking glue
Driven wheel ball bearings(690IUU) Driven wheel needle roller bearings Driven round of movable round action-driven groove	5.0-5.5g(don’t smear to the driven- belt working-surface)	Multi-purpose grease
O-ring sealing surface seal lip		
Combination of speed reducer		Plane sealant

Engine oil pathway



Troubleshooting

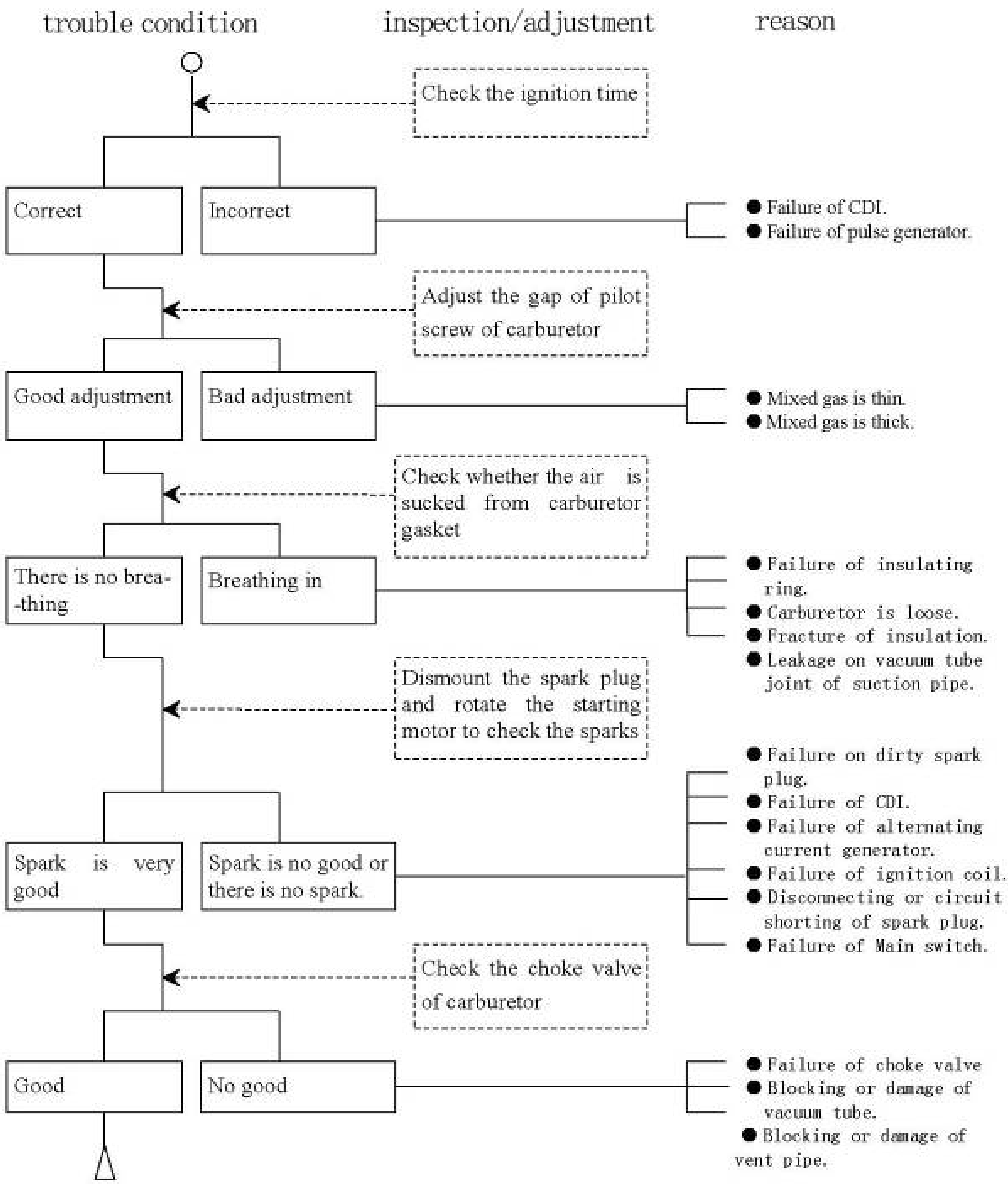
Failure or difficult starting



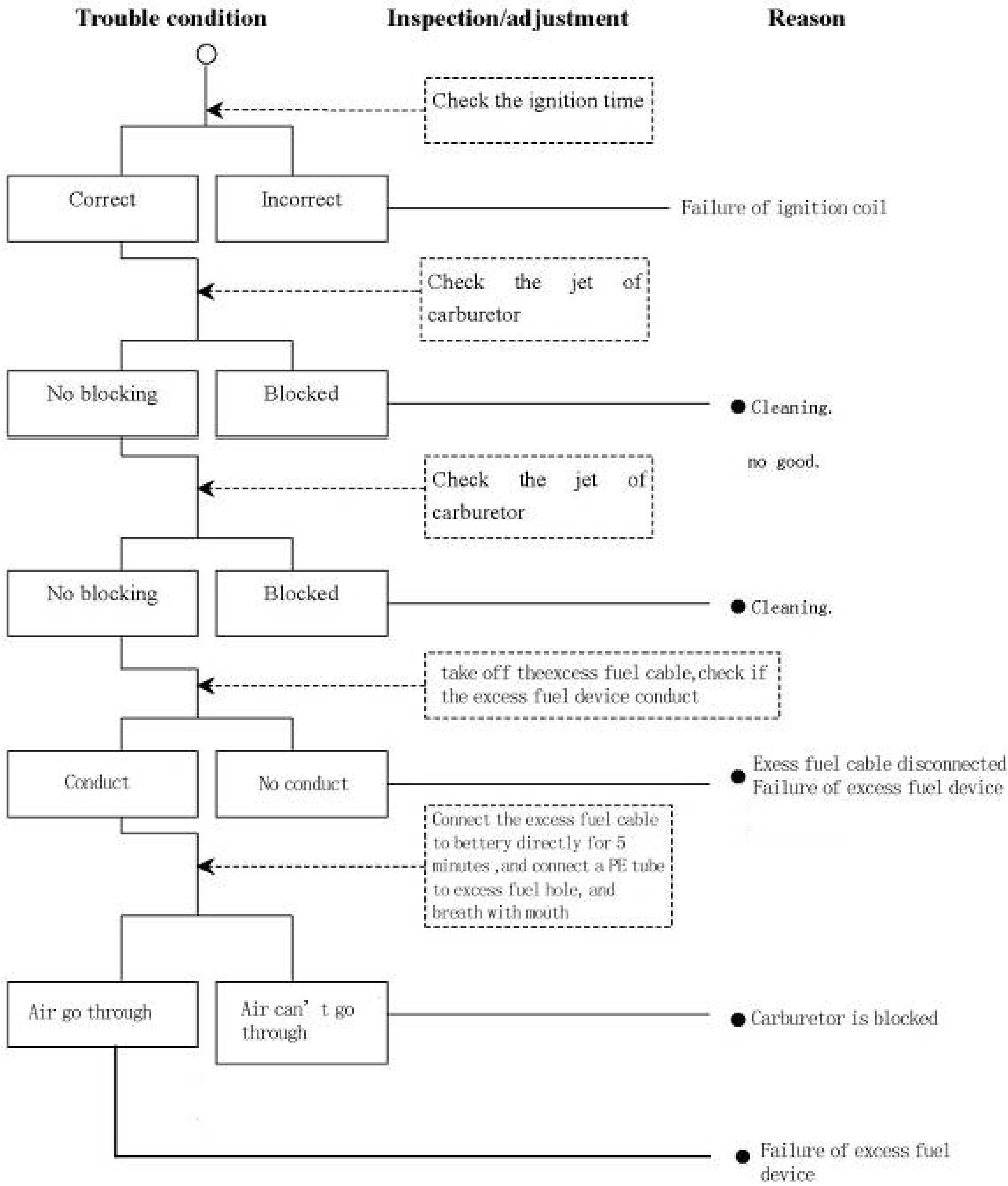
Un-normal running (lack of speed or torque)

Inspection/adjustment	Trouble condition	Trouble condition	Reason
Let the engine running with a higher speed	Revolution is increased	Lack of revolu- -tion	● Air filter is blocked. ● Gasoline flowing condition is no goo (blocked). ● Breather hole of tank cap is blocked. ● Muffler is blocked. ● Carburetor vacuum piston diaphragm broken. ● Failure of fuel cock.
Check the ignition time	Ignition time is correct	Ignition time is incorrect	● Failure of CDI. ● Failure of pulse generator.
valve gap adjusting	Gap is correct	Gap is incorrect	● Failure of gap adjustment of valve clearance. ● Valve seat is worn. (stem extruded)
Compression pressure measuring	Compressing is normal	Compression pr- -essure is low	● Failure of valve seat contacting. ● Cylinder and piston ring are worn. ● Air leakage of cylinder gasket. ● Failure of valve timing.
Check whether the carburetor is blocked	No blocking	Blocked	● Failure of fuel filter ● Failure of clearing.
Check whether the carburetor is blocked	There is no dirt or blocking	There is dirt or color is changed	● Failure of clearing . ● The calorific value is not suitable.
Dismount the oil level gauge to check the oil	Oil amount is correct	Oil amount is not correct	● Oil is too much. ● Lack of oil. ● Oil is not changed.
loosen the oilpipe bolt of sylinderhead to check the lubrication	Lubrication is good	Lubrication is bad	● Oil tube is blocked. ● Lack of output of oil pump.
Check the over-heating of engine	There is no over-heat	Over-heated	● Lack of radiator liquid. ● Failure of thermostat. ● Piston and cylinder are worn. ● Mixed gas is thin. ● Gasoline is no good. ● Combustion chamber is carbonized. ● Advanced igniting.
Accelerating or speed- -ing up	No exploding	There is explod- -ing	● Combustion chamber is carbonized. ● gasoline is no good. ● Clutch is sliding. ● Mixed gas is thin. ● Advanced ignition.

Idle speed or low speed not steadly



Mide speed,high speed not steadly



INSPECTION, ADJUSTMENT AND MAINTENANCE

Item \ Period		Hour	20h running in	Every 40h	Every 80h	Remark
		Month	1	3	6	
Engine body	Match condition, non-normal sound		I	I	I	
	exhaust condition		I	I	I	no blue or black gas
	valve gap		I	I	I	In:0.08～0.12 Out:0.08～0.12
	idle speed		I	I	I	1500±150RPM
spark plug			I	I	I	No carbon, gas between poles:0.8～0.9mm
			Replace every 6000km			
Air filter			C	C	C	
Fuel pipes on carburetor			-	-	-	Replace every 4 years
Driving belt			-	I	R	
Lubrication	Dirty, quantity		I	I	I	
	leakage		I	I	I	
	oil filter		I	-	I	
	oil replacement		R	-	R	
Cooling	Coolant quantity		I	I	I	
	Coolant pipe		I	I	I	
	Opening pressure of radiator valve		I	I	I	
	Coolant replacement		every 2 years			
transmission	leakage,quantity				I	replace every one year
Clutch	If work				I	

I: inspection; C: clean; R: replacement

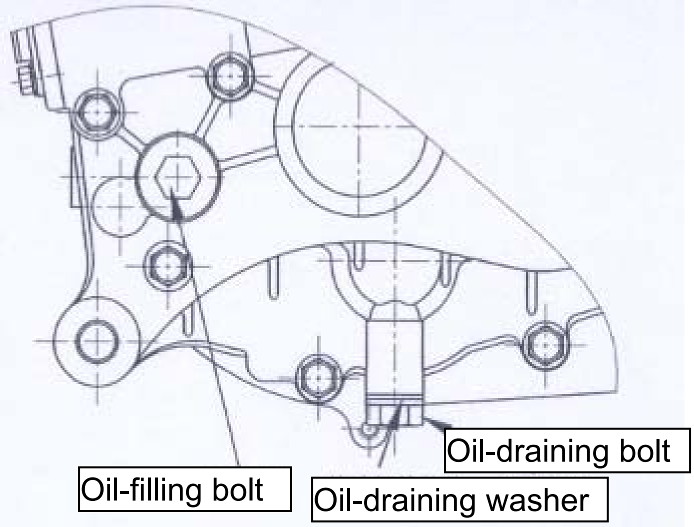
CAUTION:

The period in the table above is for normal condition; shorten the period if the using condition is dirtier.

Check the quantity of gearbox oil

To check the oil level. Put the engine or vehicle on a flat floor, turn off the engine, and take off the oil-filling bolt, fill the specified oil until the oil lever get up to the lip. If lack of oil, fill the specified oil with the same way.

Specified oil: SAE10W-40, SE-API;



CAUTION:

Before put the oil-filling bolt back, make Sure the seal washer is not damaged.

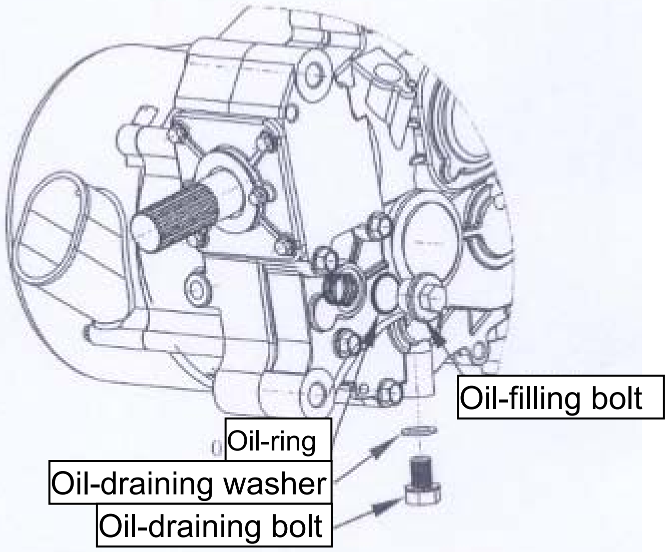
Replace the oil in gearbox

1. Remove the oil-filling bolt
2. To drain oil in the gearbox, Remove the oil-draining bolt.
3. Put back the oil-draining bolt.
4. Fill in the gear box with specified oil

Specified oil: SAE10W-40, SE-API

Oil capacity: 0.75L

5. Install the oil-filling bolt back.
6. Start engine, check if leak and quantity.

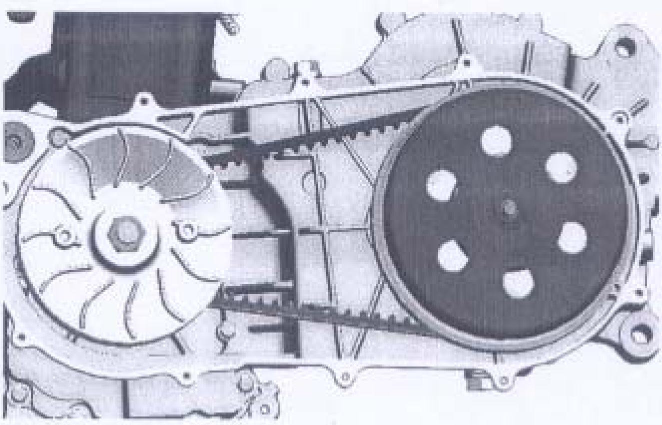


CAUTION:

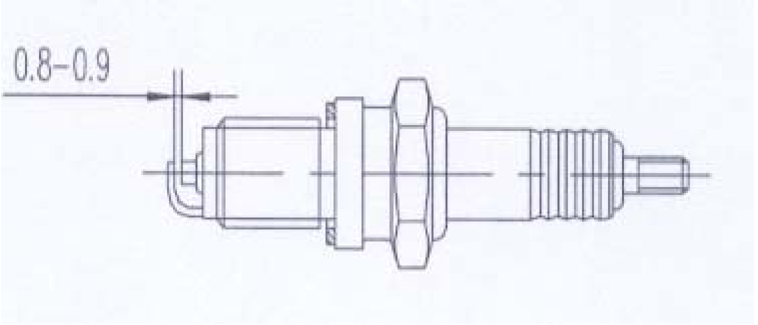
Make sure all the O-ring and seal-washer are not damaged.

Driving belt pulley and driven belt pulley

1. Take of left side cover.
2. Check the wear condition on the driving belt pulley and driven belt pulley.
3. If wore out, measure the depth of wearing. (Refer to related instruction)



Spark plug



1. Removing the spark plug.
2. Check the spark plug if damage, dirty or sediment.
3. If dirt or sediment, clean with spark plug cleaning tool or cleaning brush.

Adjust the gap of spark plug if necessary

Specified gap of spark plug

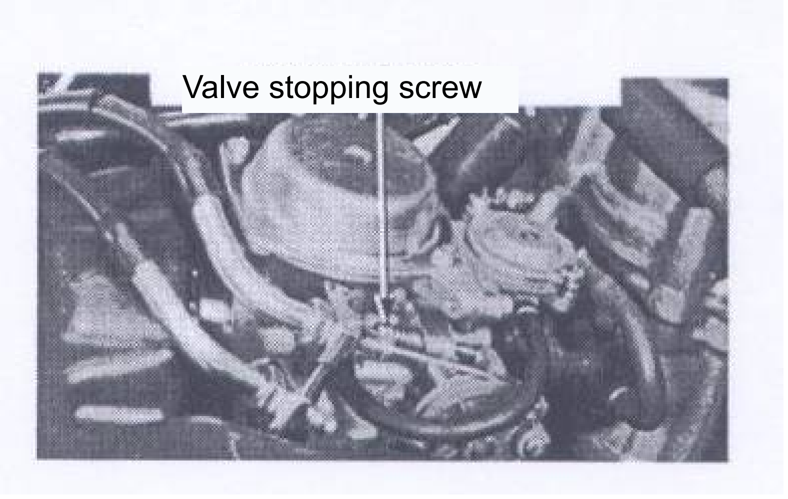
DPR7EA-9NGK 0.8-0.9

To install spark plugs, rotate the spark plug with hand until can't rotate anymore. Then fasten the spark plug with spark plug sleeve.

Torque:18N • m

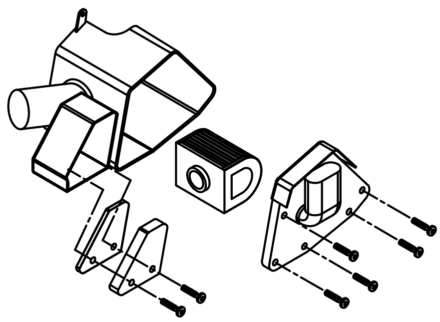
Idle adjustment

⚠



- Adjust the idle speed after the engine warm up.
- if the carburetor was repaired, adjust the idle speed after adjust air-regulating screw.
- According the related requirement, do the following operation:
  Worm up engine
  Connect RPM indicator.
- Rotate valve stopping screw clockwise or count-clockwise until the RPM indicator display 1500± 150rpm
- If the idle speed is not steady or the RPM change after operate the throttle pedal, just adjust air regulating screw according third chapter.

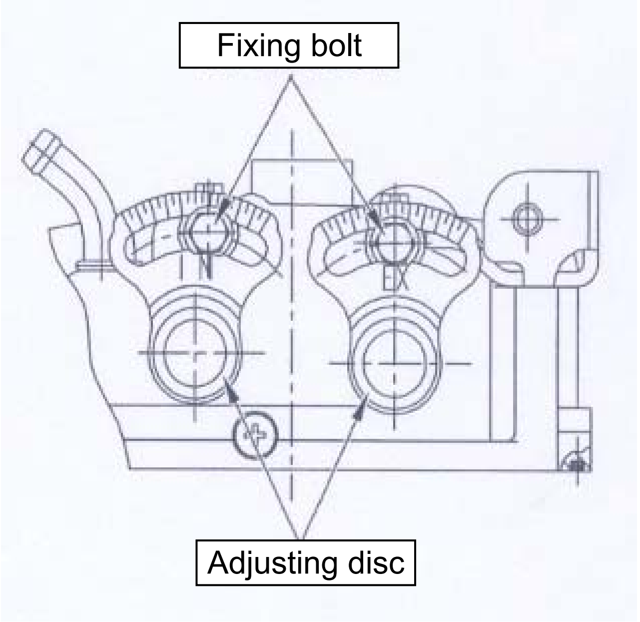
The maintenance for air filter



1. Take off the air filter unite.
2. Disassembly 5 self-taping screws from air filter unite, and take off the left cover.
3. Remove cleaner cover.
4. Remove air cleaner filter core .
5. Check the filter paper, if the filter paper is dusty, please clean with compressed air or replace with a new one

If the vehicle is operated under extremely dusty condition, we suggest cleaning after every use and replace more often.

Valve clearance inspecting and adjustment



CAUTION:

Do this operation when the engine temperature is under 35℃.

1. Take off left side cover assy.
2. Take off inspecting-cover from right cover.
3. Turn the belt pulley from right to left until align the top-dead-center mark on the magneto with the mark beside inspecting-hole, so the piston stay on the top dead center.
4. Loosen the bolts fixing adjusting-disc.
5. Turn the adjusting-disc with the marks “IN”, and “EX” respectively, make rockers contact with valve rod, then reverse one scale.
6. Tighten the bolts to fix adjusting-disc tightly, and put all the parts back.

Cylinder pressure inspection

1. Pull off the high-voltage cap.
2. Unbolt spark plug.
3. Connect the pressure indicator to the screw hole which holding spark plug.
4. Open throttle fully.
5. Start the engine and read the display on the pressure indicator

Standard pressure: 1470kpa~600rpm

Special tool: pressure indicator.

If the pressure is lower, check the following items:

- Air leakage between air valve and air valve seat.
- Failure of valve gas.
- Damage of cylinder-cover seal-washer.
- Wearing out of piston rings.
- Wearing of piston and cylinder.

If the pressure is higher, check the following items:

- Accumulating carbon on both the top of piston and cylinder cover.

CAUTION:

Don’t hold the start-key more than 5 seconds, the battery will run out.

Inspection of oil quantity

1. Put the engine on a level ground.
2. Keep the engine running for 2~3 minutes, 2~3 minutes later after stopping the engine, and check the oil lever.
3. Insert the oil dipstick, if the oil lever is below the lower limit, Fill in the specified oil until the lever catch up upper limit.
4. Replace the oil if the oil is polluted heavy.

Replacement of oil and oil filter cleaning

1. After warm up the engine, take off dipstick, and unbolt oil-draining bolt, drain the oil.
2. Take off the spring and filter-screen.
3. Clean the filter-screen
   Torque:20N • m

CAUTION:

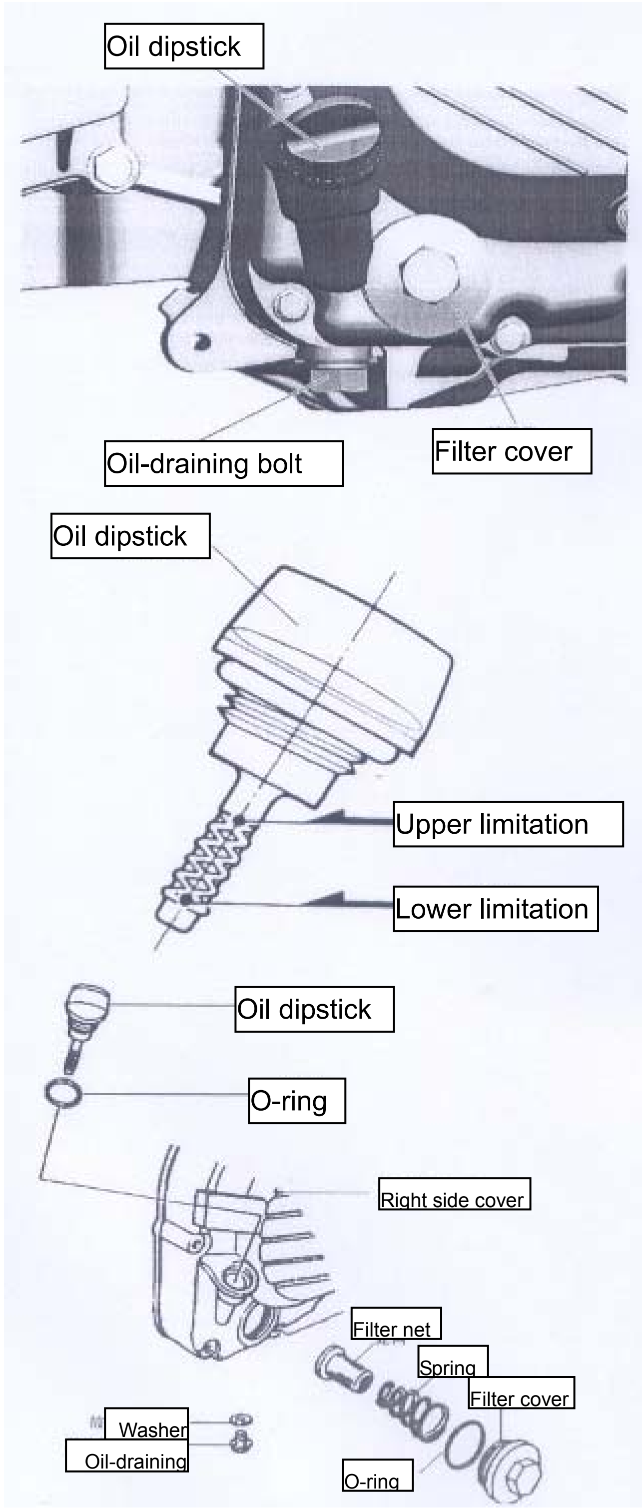
The open of the filter-screen should head toward inside.

4. Clean the oil-draining bolt and washer, and put them back with the standard torque.

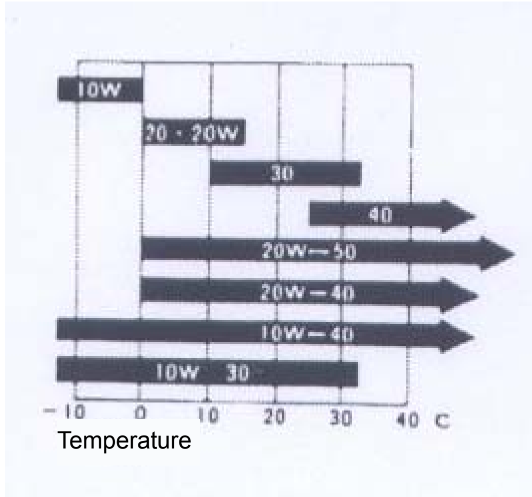
Torque:20N • m

CAUTION:

Change the O-ring or the washer if damaged



5. fill in the specified oil.
Oil capacity: 0.8 L
Recommended oil:
SAE10W-40 or SAE20W-50
API: SE or SF (or pick one type of oil from right illustration according the weather temperature)



Fuel system

CAUTION:

When using gasoline, must be careful to fire,

- Pay attention to the working position of O-ring, replace with a new one when put back.
- Drain all the fuel in the floating-house by loosening the fuel-draining screw before operation.
- Don't disassembly the enriching-device.
- To close the enriching-valve earlier after the engine already warming-up, a heating-tube is put on the carburetor to heat enriching mechanism.

Specifications

Chock diameter	30mm
Model	CV30
Reversing rounds of the air-adjusting screw	2.5 rounds
Idle Speed	1500±150rpm

Tools

General tool
Float ruler

Trouble shooting

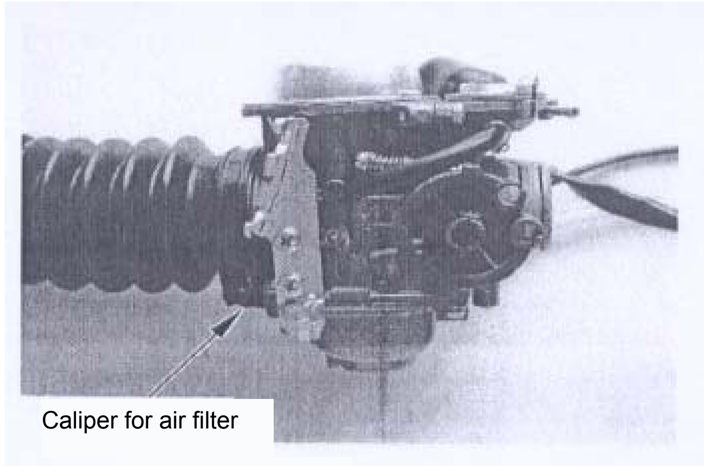
Can't start	**Open the throttle fully, no output, engine stop**
● No fuel in fuel tank ● Fuel path is blocked ● Too much fuel in cylinder ● Air filter is blocked ● Fuel is dirty	● Vacuum diaphragm broken. ● Suction pressure channel blocked ● Failure of fuel pump
Idle speed not steady ● Failure of adjustment ● Too thick gas-mixture ● Too thin gas-mixture ● Air filter blocked ● air leakage on carburetor support ● failure of air cutting valve ● suction pressure tube broken	**Thin gas mixture** ● fuel holes blocked ● vent hole on the fuel tank blocked ● fuel filter blocked ● fuel tube broken, damaged, blocked ● failure of float valve action ● low fuel lever
	Thick gas mixture ● enriching valve keep open ● failure of float valve action ● high fuel lever ● wrong position of enriching-valve plate groove

Disassembly carburetor

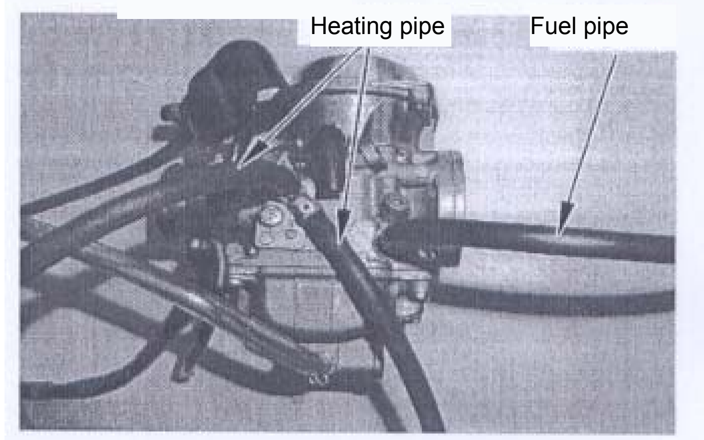
1. Take off all the related parts.
2. Loosen the air filter clip.
3. Loosen the screw, take off the air filter.

CAUTION:

Do not take off screws.



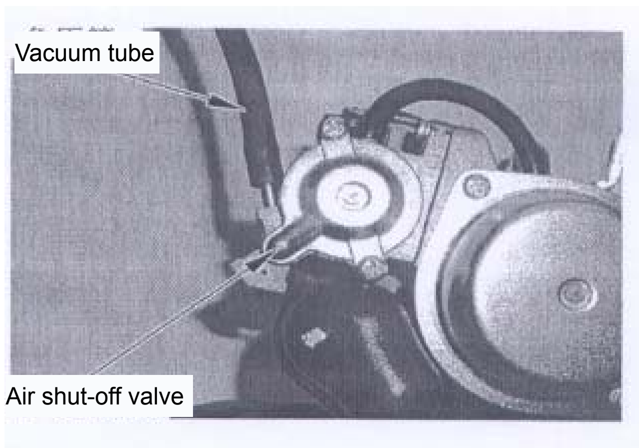
4. Pull off the heating-tube from carburetor,



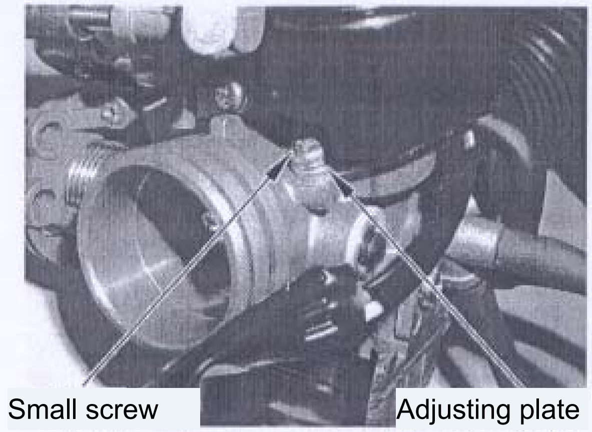
5. Pull off the vacuum tube from air-cut-valve. Loosen the clip fixing carburetor, take off the carburetor from engine.

CAUTION:

Insure the carburetor clean all the time.



6. Remove the 2 screws which fix enriching-mechanism, take off the enriching-mechanism.

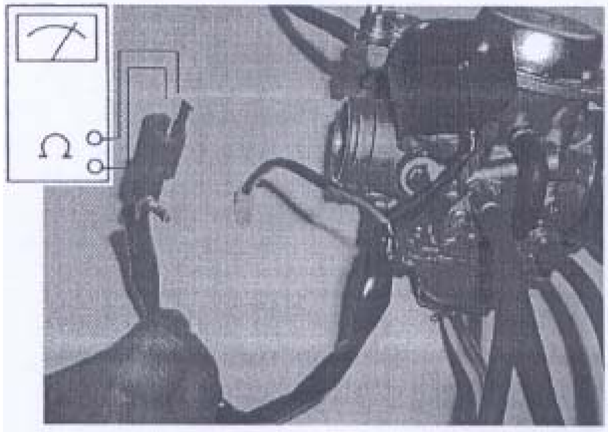


CAUTION:

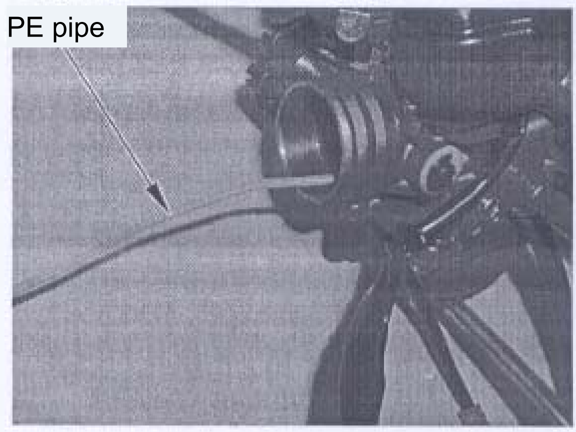
Pay attention to protect the valve anytime.

Inspection on fuel enriching mechanism

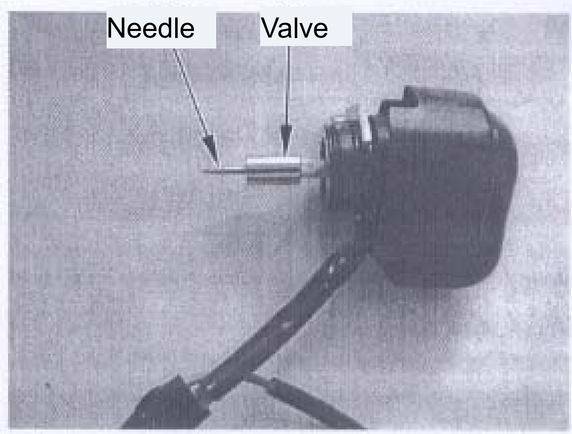
Check the fuel enriching mechanism to see conduction
resistance: 10Ω (the engine stopped for more than10 minutes)
if failure of conduction, replace with a new fuel enriching mechanism.



Connect a PE tube to the enriching jet hole, and connect the yellow cable on the enriching mechanism to the positive pole of battery “+”, green cable to the negative pole. And keep it for 5 minutes. Then breathe the PE tube, going through means good. Cut the cables you connected just now, do the breathing work again after 30 minutes of cutting, going through means good.



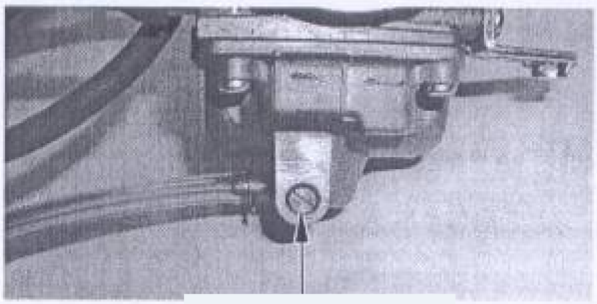
Check the valve and enriching-needle on the enriching-mechanism to see if scratched, wore out and damaged, if one of them happen, change the fuel enriching mechanism.



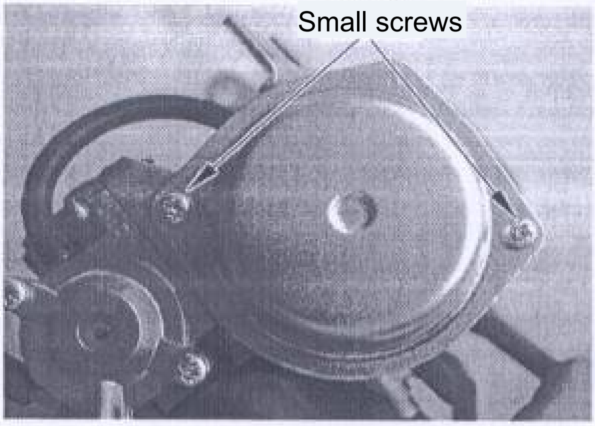
Vacuum chamber

Disassembly

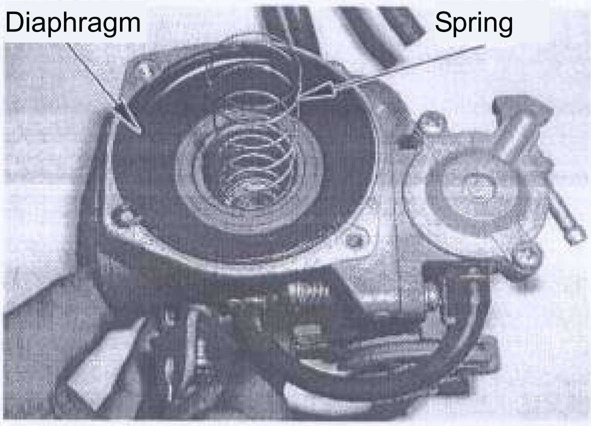
Loosen the fuel-draining bolt; drain the fuel in the vacuum chamber.



Remove the 2 small screws; open the cover of vacuum chamber.



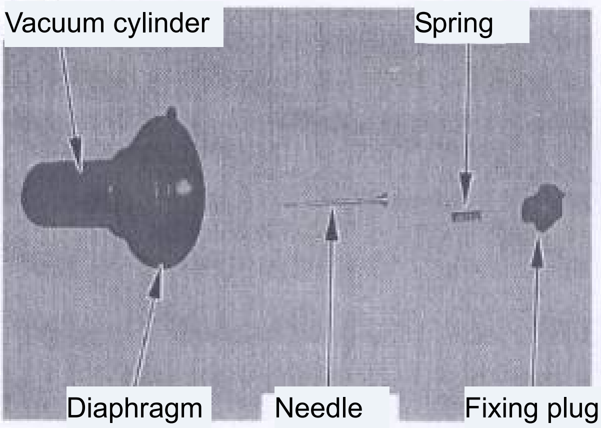
Take off spring and vacuum piston.



Take off the fuel controlling needle seat.
Take off the spring and needle.

CAUTION:

Pay attention to protect the vacuum diaphragm

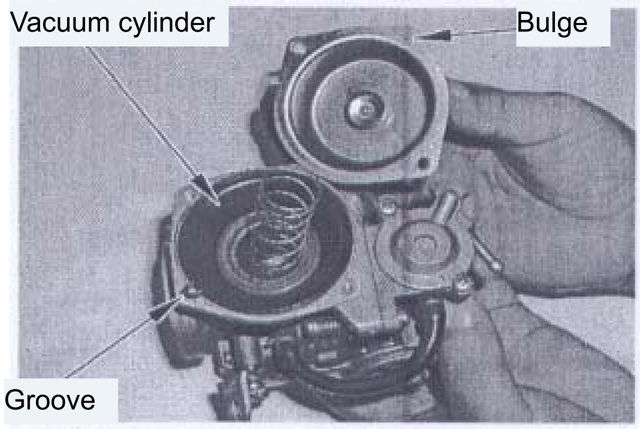


Inspection on vacuum piston

Check the needle to see if worn out, damaged.

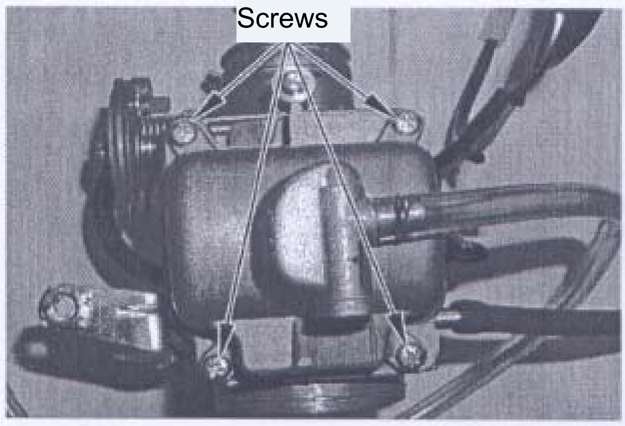
Check the vacuum diaphragm to see if damaged, aged, cracked.

Assembly
Assemble all the parts by reversing the steps of disassembly.
Support the bottom of vacuum piston to keep it fully open, make sure the vacuum diaphragm go in to the groove of carburetor. Then put back the spring following the right figure.

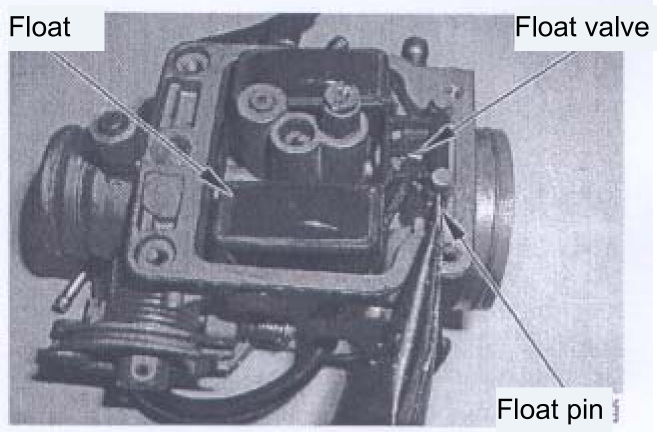


CAUTION:

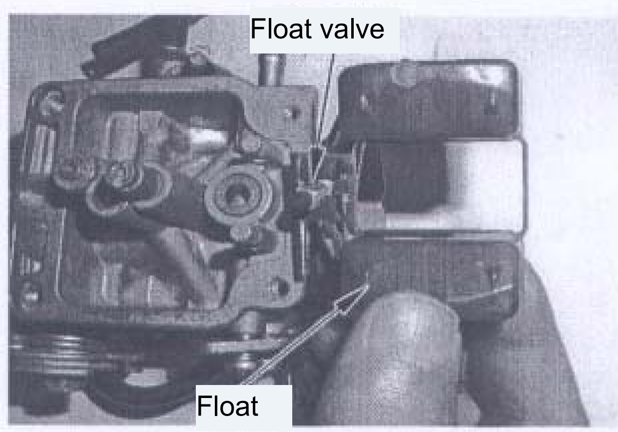
Protect the vacuum diaphragm from damage.
Support the vacuum piston until fasten the 2 screws on cover.



Float chamber
Remove the 4 screws, take off the float chamber.

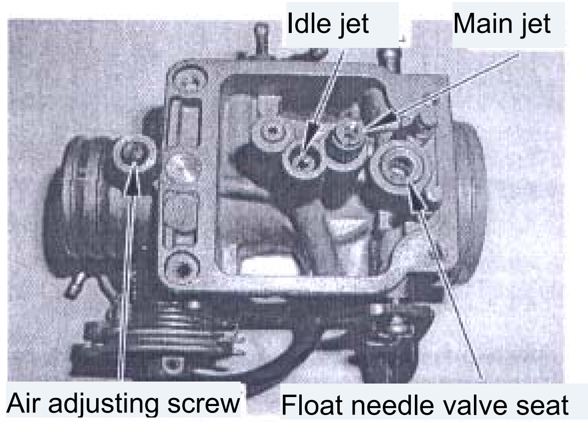


Take out of float pin, remove float and float valve



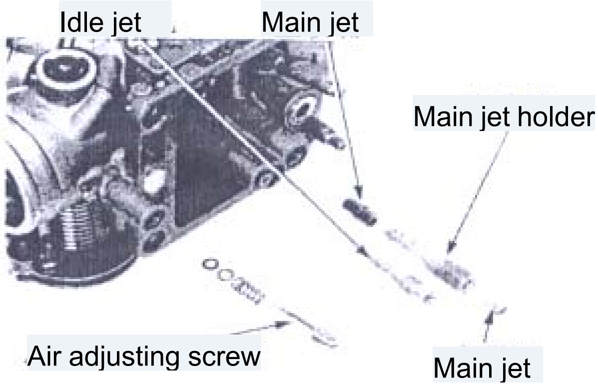
Check float valve
Check the contact plane of float valve to see if wore.

Take off the main jet, idling jet, air regulating screw.

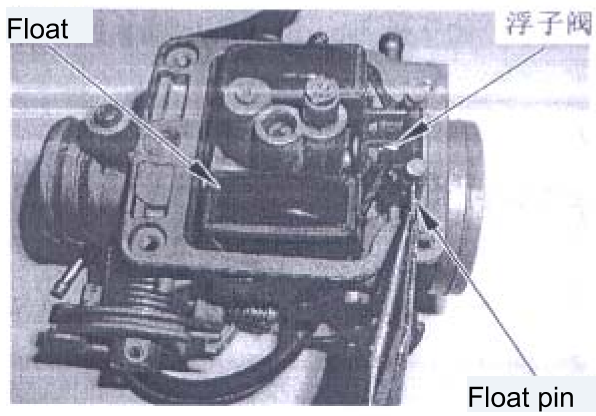


CAUTION:

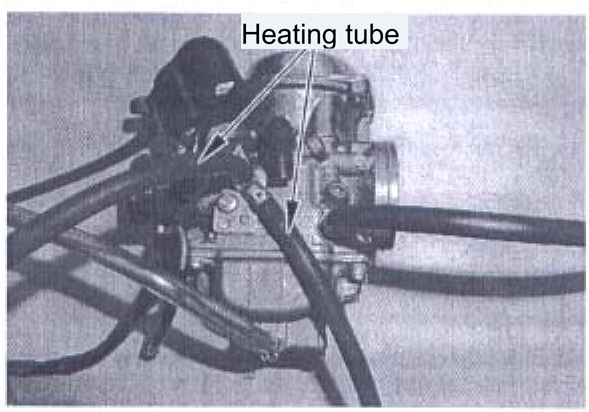
Don't damage jets, screws.
Remember the rounds you rotate the screws to take off. If fasten the screws too much, then contacting plane maybe damaged..



Clean the jets in fresh washing liquid.
Blow the pathway of the fuel with compressed air.
Do cleaning after the disassembly of vacuum chamber.



Assembly
Put back main jet, idling jet, air controlling screws for idle speed.



Put back float needle valve, float, float pin, then install carburetor-heating tube

Check fuel lever

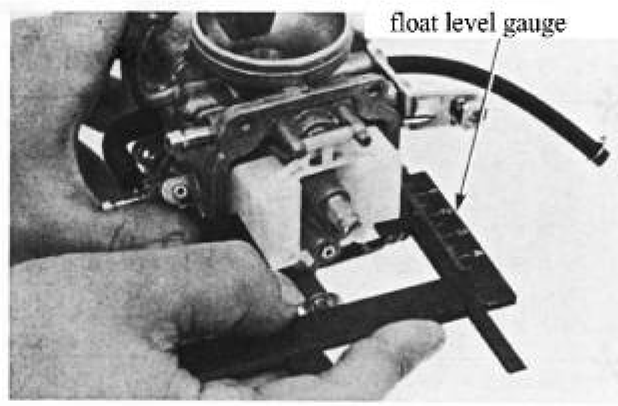
Check the oil lever near the main jet. (By seeing the height of float)

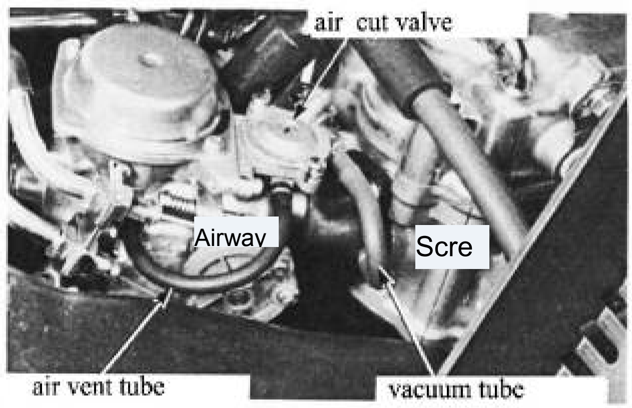
Oil lever:18.5±1.0mm

General tools: Float ruler.

Confirm the action of float is normal, and then install the float chamber.

If the fuel lever is out of the limitation, replace with a new float.





Ari cutting valve

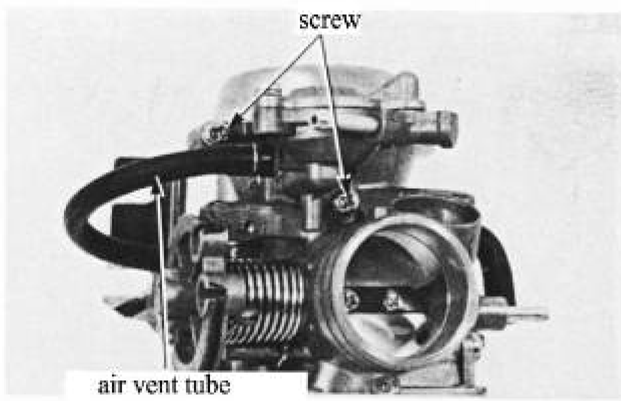
CAUTION:

The valve can be checked on the vehicle.

1. Pull off the suction tube and vent tube.
2. Connect the vacuum pump to the hole connect to suction tube.
3. Connect the pressure pump to the hole connected to the vent tube.
4. Turn on the suction pump.

Standard pressure: 380mmHg

If there is no air going through the vent tube under suction pressure, and air going through after taking off the suction pressure, that means the valve is normal.



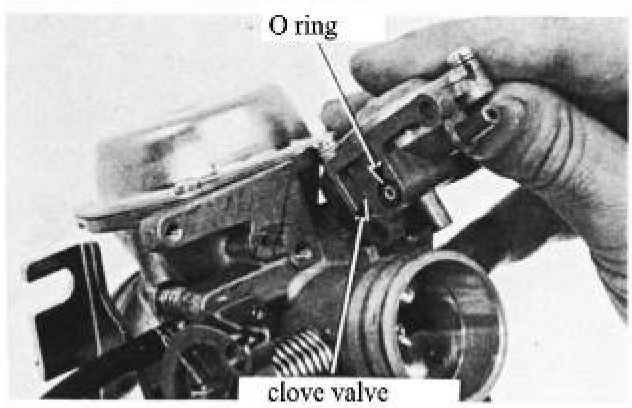
Replace “O”-ring

1. Take off the carburetor
2. Pull the vent tube from air cutting valve.
3. Remove the 2 screws, and take off the air cutting valve.
4. Take off the “O”-ring.
5. Put a new O-ring back, and then install the valve to the carburetor, then fasten the small screws.
6. Tighten the clip fixing air cleaner

Do the following adjustment

Throttle adjustment;

idle speed adjustment.



Adjustment of Air-regulating screw for idle speed

Make the adjustments after the engine warm up.

1. Disassemble the related parts.
2. Connect a RPM meter.
3. Screw the air-regulating screw to the end and reverse 2.5 rounds.

Standard reversing round: 2.5 rounds.

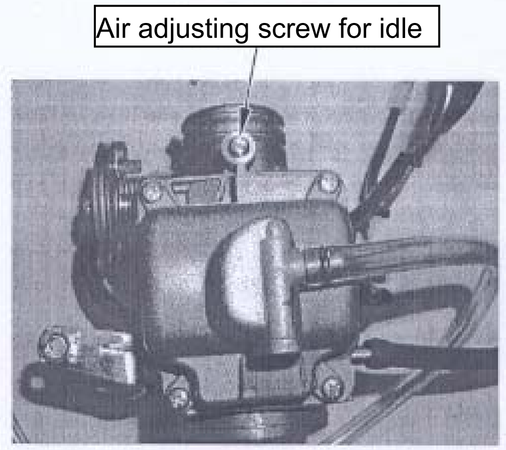
4. After the engine warm up, adjust the idle speed adjusting screw to get the standard RPM.

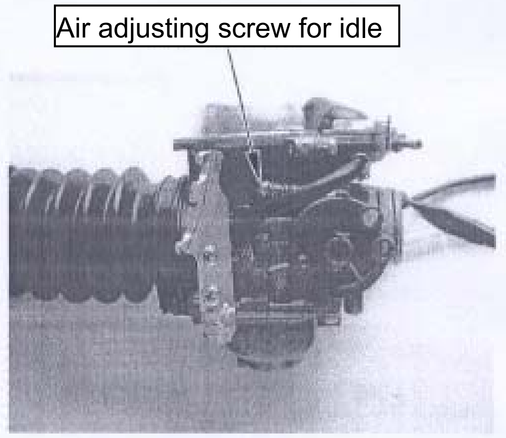
Standard RPM: 1500±100rpm.

5. Accelerate from idle speed to make sure if the acceleration is steady. On the other hand, make sure the deceleration is steady by decelerating to the idle speed, after return to the idle speed, check if the RPM change.

If necessary, adjust the air-regulating screw as following steps.

1) Rotate the adjusting screw clockwise or count clockwise until find a point near the standard reversing rounds where the idle speed is highest.
2) Rotate the idle speed adjusting screw to find a required RPM.
3) Repeat step 1, and 2.
4) Accelerate slowly, make sure the speed changes smoothly and the idle speed doesn't fluctuate.
5) If the idle speed fluctuate, repeat steps1~4.





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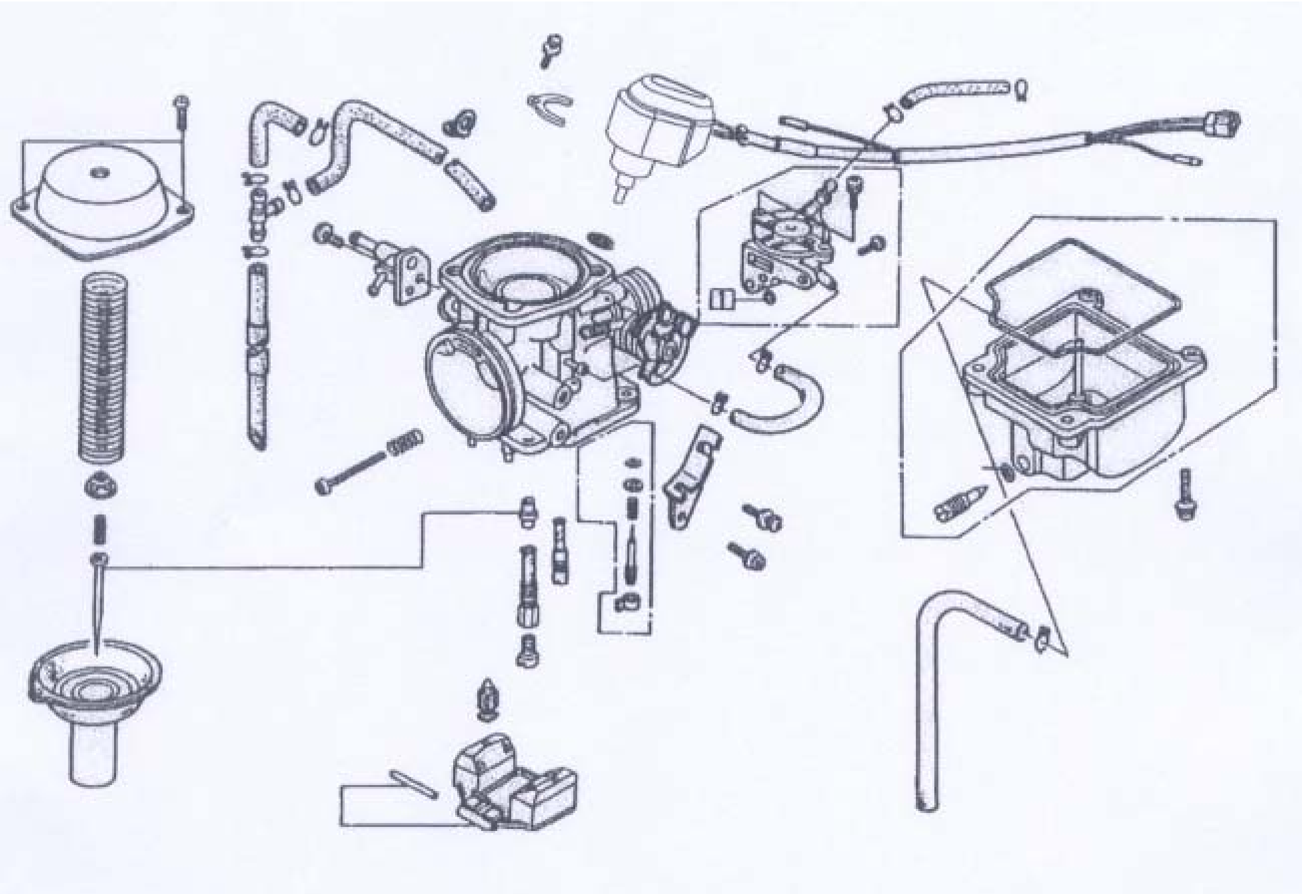
Carburetor



COOLING SYSTEM

Maintenance and repair information

Precautions for operation

> ● **Conduct operation under the cooling condition.**
> ● **Don' t open the cover of radiator because when the temperature of cooling liquid is over 100℃ , if you open the cover of radiator, the pressure of liquid will drop and the liquid will boil very quickly, this is very dangerous.**

● The cooling liquid is supplemented in reserve water tank. Don't open the cover of radiator except that the cooling liquid is supplemented after disassembling of cooling device and discharging of cooling liquid.
● The cooling device can be repaired on the motorcycle.
● The cooling liquid should be cleaned down with water soon if it sticks on painted surface, otherwise the painted surface will be damaged.
● Check the connection parts and sealing parts for leakage using a tester for radiator cover after checking or repairing.
● See the chapter 20 for check of the fan motor, thermal switch and thermal sensor.

Reference standards for maintenance and repair

Item		Normal value	Limit for use
Safe pressure of radiator cover		0.9kg/cm^2	Over 0.75kg/cm^2 or 1.05kg/cm^2
Temp. for thermostat valve opening	Start open	71±1.5℃	
	Full open	80℃	
	Full open (95℃)	3.5-4.5 mm	
Boiling temp. for radiator liquid (mix. ratio 50%)	Atmosphere pressure	107.7℃	
	0.9kg/cm^2, pressure increases	125.6℃	

CAUTION: ;

Please use the recommended cooling liquid when supplementing (If it is original liquid, it should be diluted for use.)

Don't mix the cooling liquid with other brand of cooling liquid for use.

The cooling liquid is poison, it can't be drunk.

A tolerance of -5¡æ will be needed for minimum temp. at the place used.

Torque for tightening

Water pump impeller	1.0-1.4 kg-m(left turning)
Oil pipe bolts	0.8-1.2 kg-m
Oil- controlling bolt	1.8-2.2 kg-m
Thermal sensor	0.8-1.2 kg-m

Troubleshooting

Water temperature increasing:

>lNot proper water thermometer or thermal sensor
>Not proper radiator cover
>Not proper thermostat
>Not enough cooling liquid
>Water hose or piping system blocked
>Radiator fan blocked
>Radiator blocked
>Not proper water pump
>Short circuit of wire harness

No increasing or un-proper increasing of water temperature:

>Not proper water thermometer or thermal sensor
>Not proper thermostat
>Wire harness broken

Water leakage:

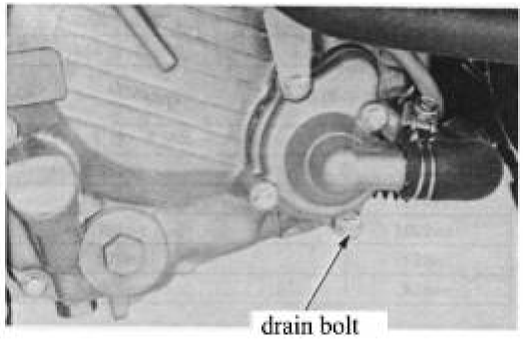
>Not proper mechanical sealing
>Not proper sealing due to aged o-ring
>Water hose damaging or aging

Replacement of cooling liquid

CAUTION:

Remove the radiator cover after confirming that the cooling liquid has cooled thoroughly.

Remove the cover for repair.
Remove the radiator cover.
Remove the water-draining bolt, drain the cooling liquid.
Install the drain bolt.
Fill cooling liquid until the liquid reach the entrance edge of radiator cover.

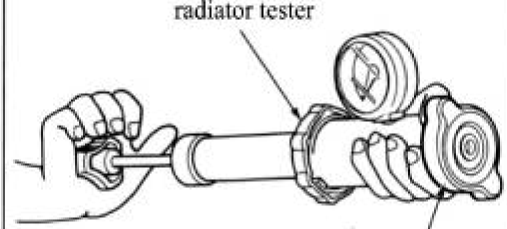


Fill the cooling liquid in reservoir.

Evacuate the air according to following points:

. Put the gear in neutal position, start engine and press throttle several times.
. Confirm that no burble is found at the entrance of radiator cover and the level of liquid is stable.
.Stop engine ,fill colant untill the the lever catch up the edge of the entrance.
. Install the radiator cover.
. Confirm the liquid volume of reserve water tank.

Inspection of radiator cover



CAUTION:

The radiator cover can be removed only after confirming that the radiator liquid has cooledthoroughly.

Push the handle of the testor untill the indicator point to 100, hold it for 10 seconds, make sure the needle doesn't get out of 15 kpa, or replace the cover.

CAUTION:

The water should be applied on the sealingsurface firstly when install the radiator cover on radiator tester.

The valve pressure of radiator cover: 0.9 ± 0.15 kg/ cm^2

Pressure testing of radiator

Install the radiator tester on radiator, increase the rotating speed of the pump. Confirm if it keeps 6 seconds within fixed pressure.

Specified pressure: 0.9±0.15 kg/cm²

Confirm that no any leakage in hose and other connecting parts.

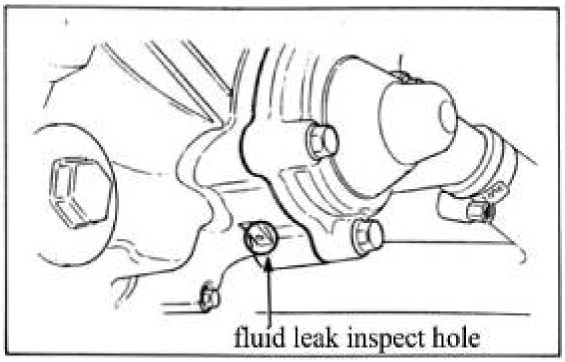
CAUTION:

> Don't make the pressure exceed specified value. Too high pressure will damage the radiator and connecting parts.

Water pump

Check of mechanical sealing

If the cooling liquid leakage is found at the liquid leakage check hole of the lower part of right crank-case cover, that means , the mechanical sealing of the water pump is not good. Remove the right crank-case cover,replace the mechanical seal.



Removal of water pump impeller

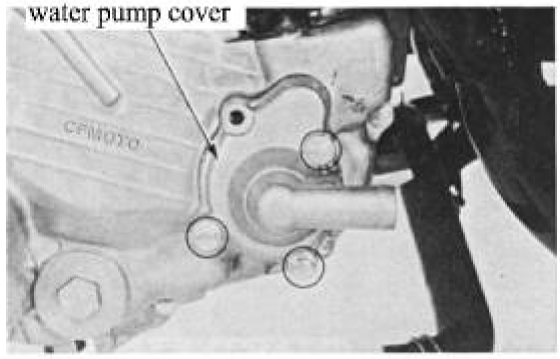
Discharge the cooling liquid.

Discharge the engine oil.

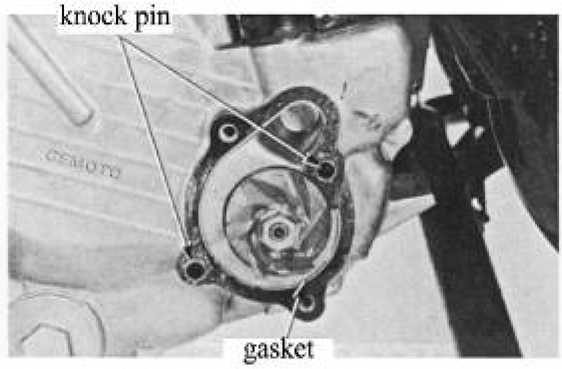
Remove the oil pipe.

Remove the hose from the water pump.

Loosen 3 bolts, remove the water pump cover.



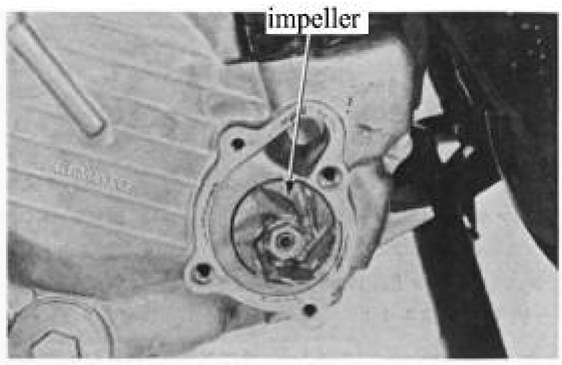
Remove the gasket and 2 knock pins.



Remove the water pump impeller.

Caution

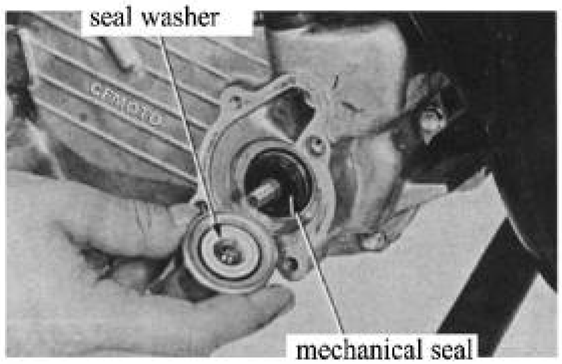
The impeller is left rotation.



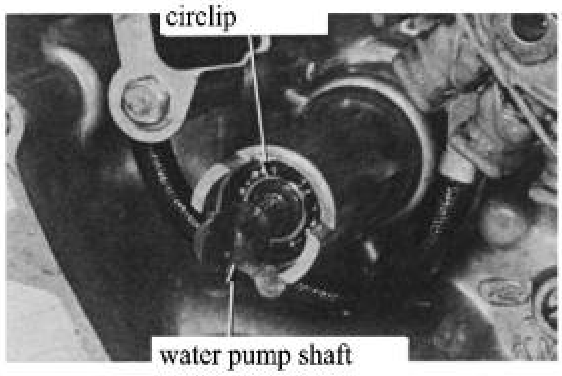
Check the mechanical seal and gasket for damage of wear.

Note

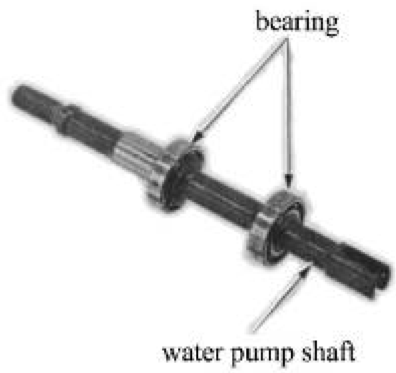
> The mechanical seal and gasket should be replaced together.



Removal of water pump shaft
Remove the right crankcase cover.
Remove the circlip from right crankcase cover.
Remove the water pump shaft.

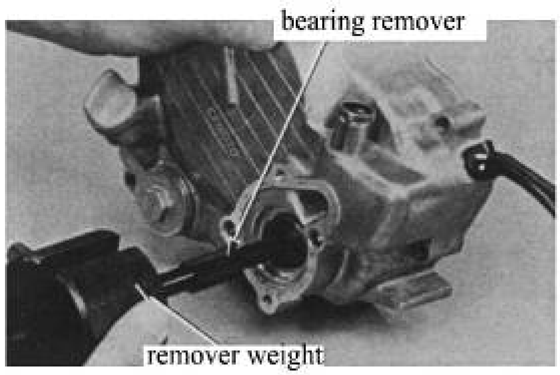


Check the bearing of water pump shaft, if there is wearing or damaging replace it.



Replacement of mechanical seal

Remove the mechanical seal from right crankcase cover using the bearing remover.
Remove the oil seal.



Special tools

Bearing remover assembly	15 mm	07936-KC10000
Bearing remover	15 mm	07936-KC10500
(Shaft for removing	15 mm)	07936-KC10100
(Remover head	15 mm)	07936-KC10200
Balance block for removing		07741-0010201

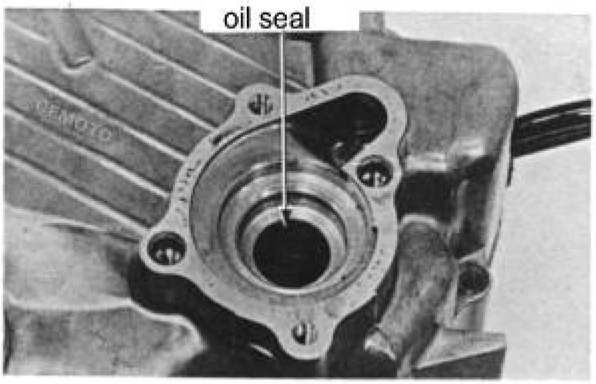
Make the new oil seal surface with mark towards outside, knock the new oil seal in right crankcase cover.

Special tool

Bearing remover 28 x 30 mm 07946-1870100

General tool

Driver handle A 07749-0010000



Knock the new mechanical seal in right crankcase cover.

Caution

> Apply the sealing compound on the joint part between the mechanical seal and right crankcase cover before knock the new mechanical seal in.

Special tool

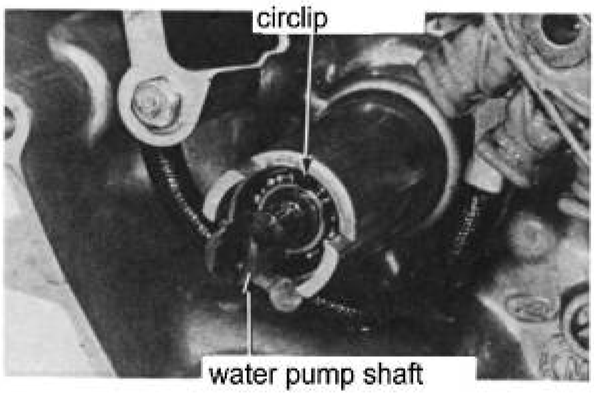
Driver for mechanical seal 07945-4150400

General tool

Driver handle A 07749-0010000

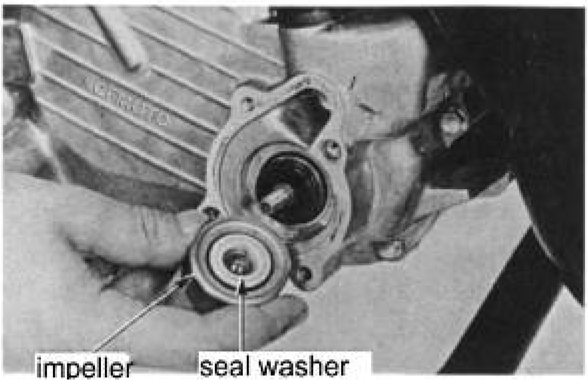
Installation of water pump shaft

Install the water pump shaft on right crankcase.
Install the circlip.
Install the right crankcase cover.



Installation of water pump impeller

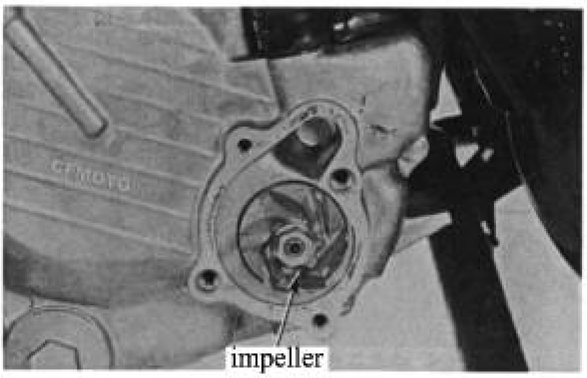
Install a new sealing washer on impeller when replace the mechanical seal.



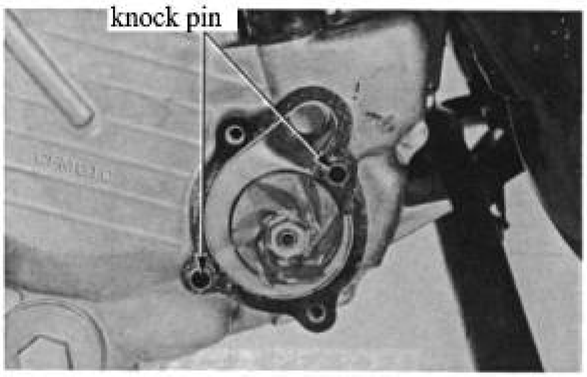
Fix the impeller on water pump shaft.
Torque: 12N*m

Caution

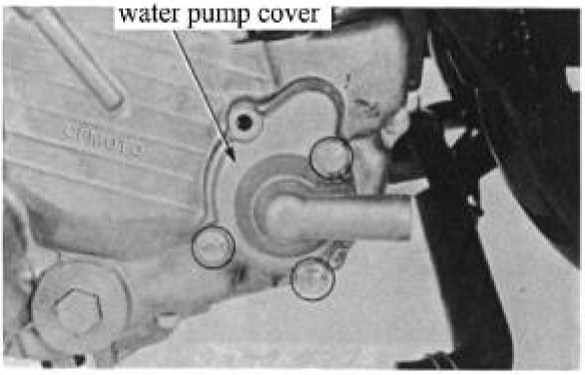
The water pump impeller is left rotation.



Install two knock pins and new washer.



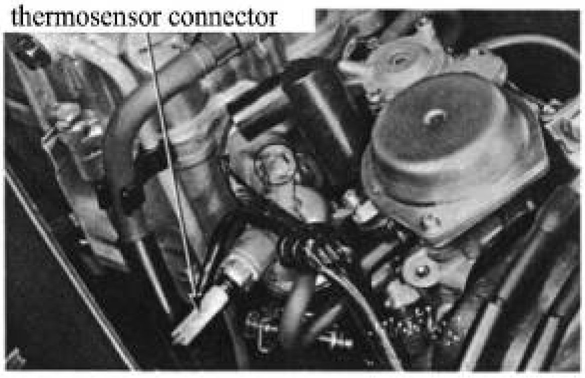
Install the water pump cover with 3 bolts.
Connect oil pipe.
Connect water hose.
Fill in engine oil.
Fill in radiator liquid.
Torque:
Oil pipe bolts 8 mm 10 N*m
12 mm 20N*m



Thermostat

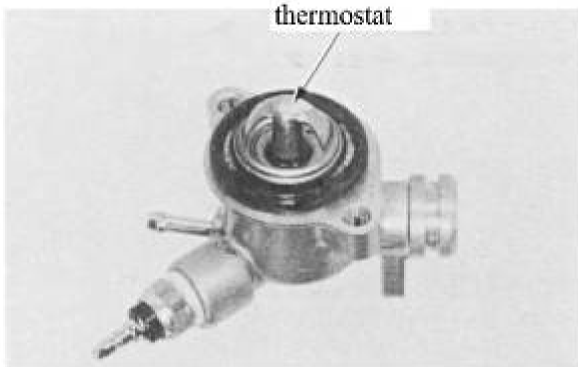
Removal

Remove the seat.
Remove the thermo-sensor connector.
Discharge the cooling liquid.
Loosen the bolts, remove the thermostat casing from the cylinder cover.



Loosen two bolts, remove the casing cover of thermostat.
Remove the o-ring from the thermostat casing.

Remove the thermostat from the casing.



Inspection

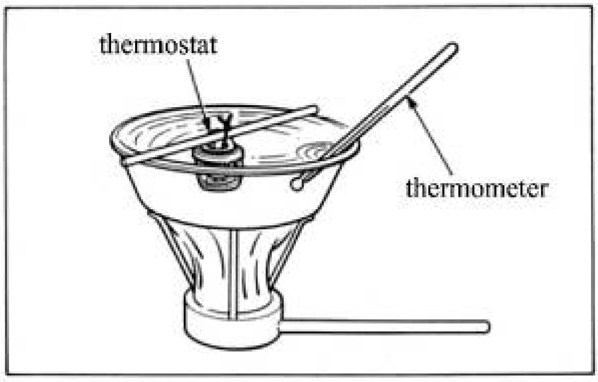
Put the thermostat in testing container, increase the water temperature gradually, conduct the temperature test of valve open.

Specification of thermostat

Beginning temp. when valve is opened	71 ± 1.5℃
Temp. when valve is fully opened	80℃
Increased level when valve is fully opened	3.4- 4.5 mm

Note

.Don't let thermostat contact with container directly.
.The thermostat should be replaced provided the valve opens a little at normal temperature.
.Test about 5 minutes at 80 ~ 83℃, then measure the increased level.

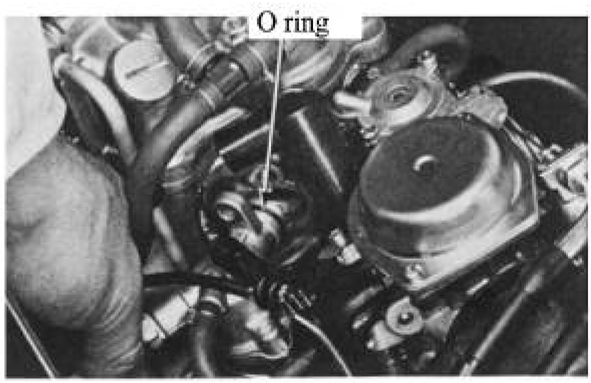


Installation

Install according to opposite order for removing.

Note

Replace the o-ring of thermostat casing with a new one, apply grease.
Fill in cooling liquid, evacuate air.



Fill coolant, and then squeeze air.

Termosensor

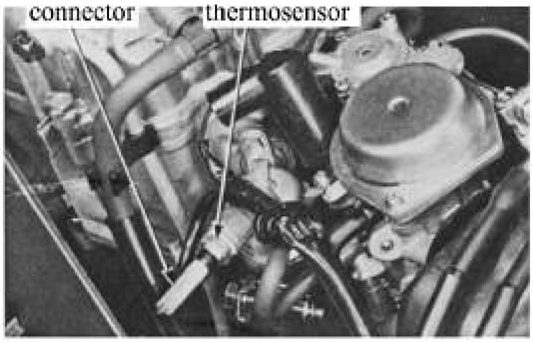
Removing

Remove the seat.

Discharge the cooling liquid.

Remove the thermosensor connector.

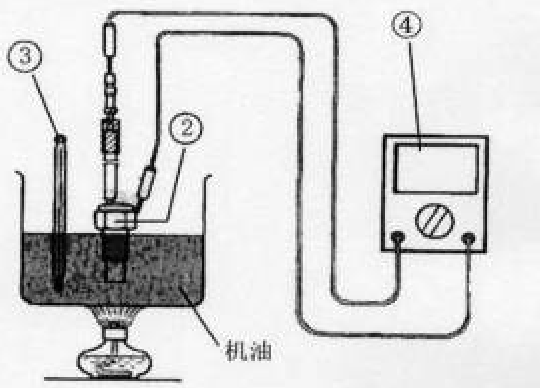
Remove the thermosensor.



- Measure the resistence of the thermosensor following the right figure.
  1, Put the thermosensor in a container full of oil,and put a alcohol lamp under the container.
  Tool: mutimeter, temperature gauge.
- Heat the oil slowly, watch illustation of the mutimeter and temperature.

Correspondence between temperature and resistence

Temp (℃)	50	80	100	120
Resi (Ω)	154±16	52±4	27±3	16±2



Installing

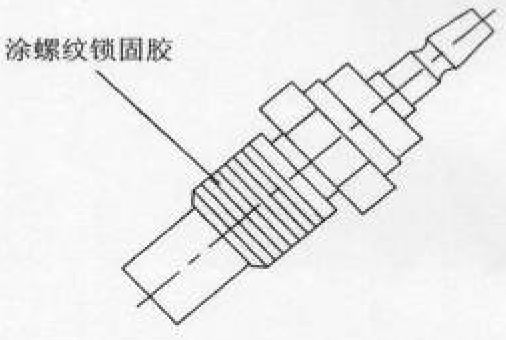
Apply the thread fixed glue on thermosensor thread, then install the thermosensor on thermostat casing.

Torque: 10 N＊M

Connect the thermosensor wire.

Fill in the cooling liquid.

Install the seat.



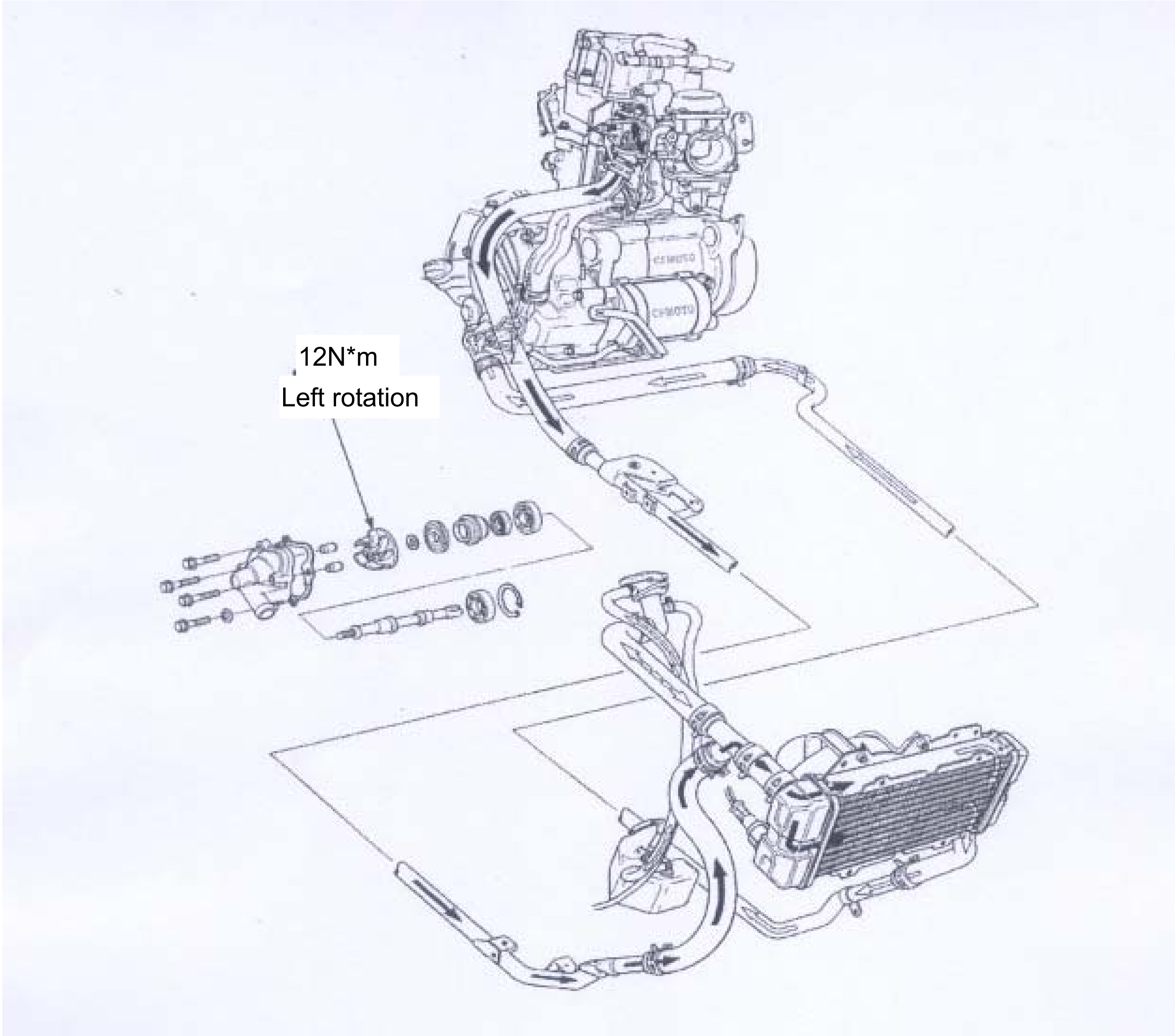
CAUTION:

Never make anything hit thermosensor to avodi thermosensor to be damaged.

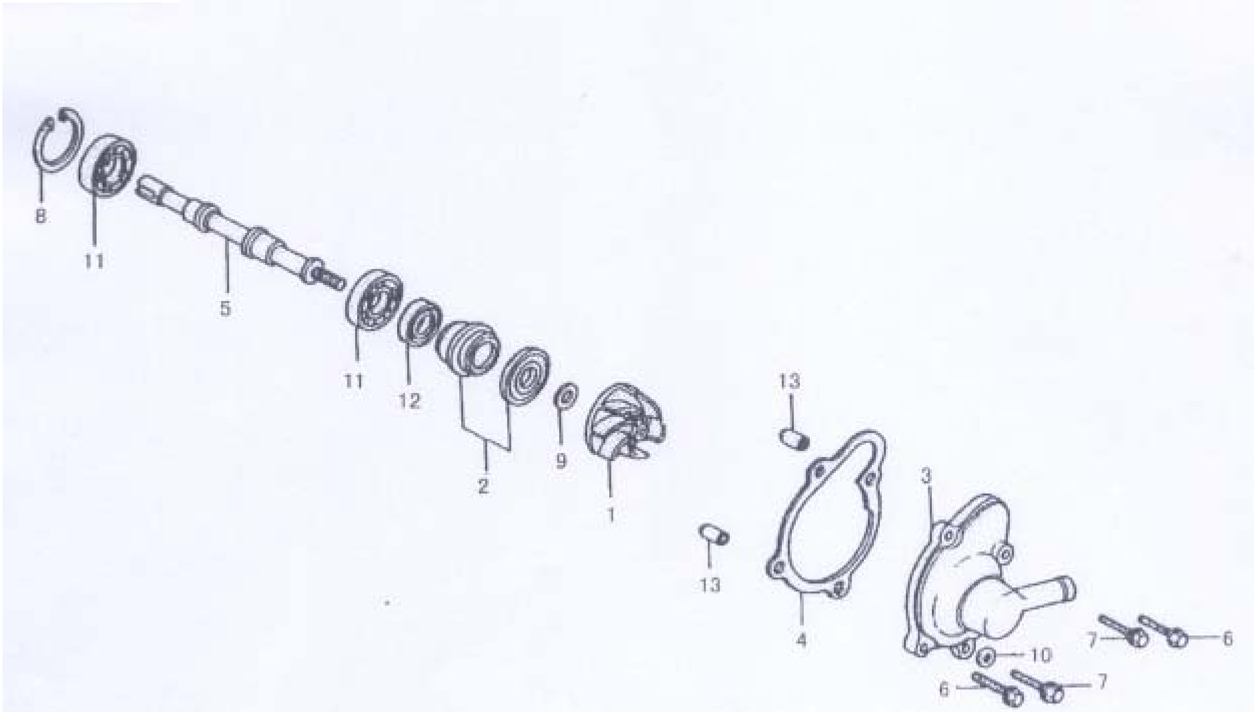
Never make thermosensor come in touch with container.

connect the cable to thermosensor.

After thermosensor set up, check the quantity of coolant, add coolant if neccessory.



Water pump



CRANK CASE

Maintenance information

Precautions for operation

. This chapter is used to describe the disassembling of crankcase and operations relative to crankshaft. Conduct these operations after removing the engine from the frame.

. Remove the following parts before disassembling the crankcase.

Cylinder head
Cylinder, piston
Drive pulley assembly, driven pulley assembly
Magneto, starter motor driven gear
Carburetor, air cleanner case
Rear wheel, hanger
Starter motor

Reference for maintenance

Item		Normal value	Limit for use
Crankshaft	Side clearance of connection rod big end	0.05-0.04	0.6
	Axial clearance of Connection rod big end	0-0.008	0.05
	Swing	——	0.10

Torque for tightening

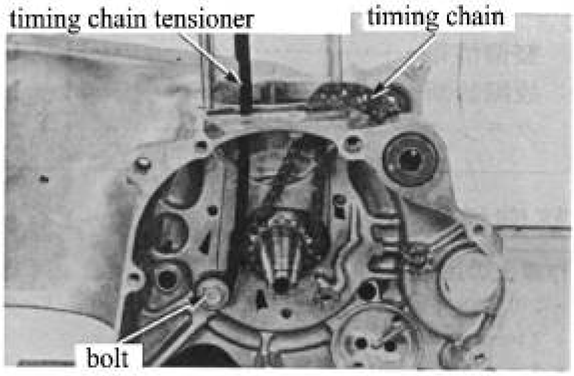
Crankcase bolts 10 N*m
Cylinder stud bolts 30 N*m

Trouble shooting

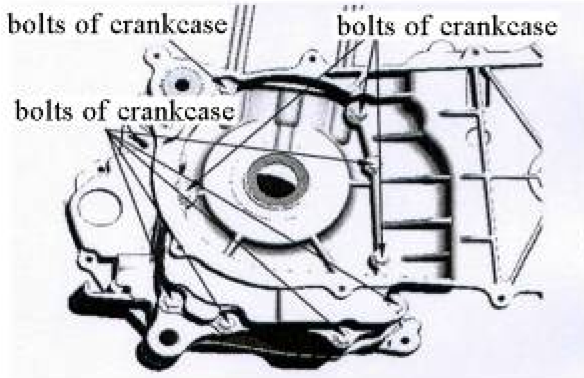
Engine noise

. Bearing loose
. Connection rod journal bush loose
. Piston pin and piston pin hole loose

Disassembling of crankcase
Loosen the bolts, remove the timing chain tensioner.
Remove the timing chain.



Remove 9 bolts of crankcase and heat-insulating material.

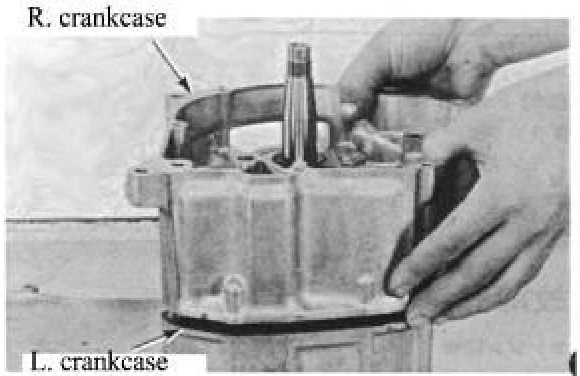


Put the left crankcase downwards, remove the right crankcase.

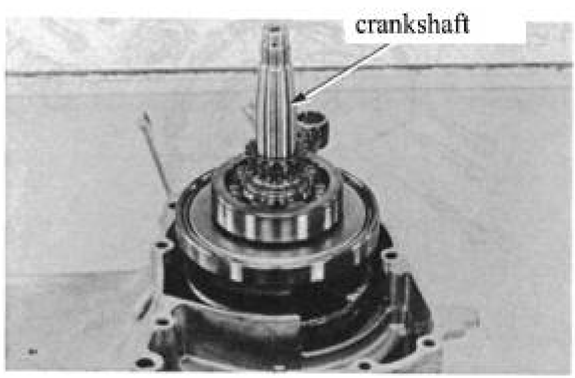
Caution

Don't prize the surface of cylinder gasket.

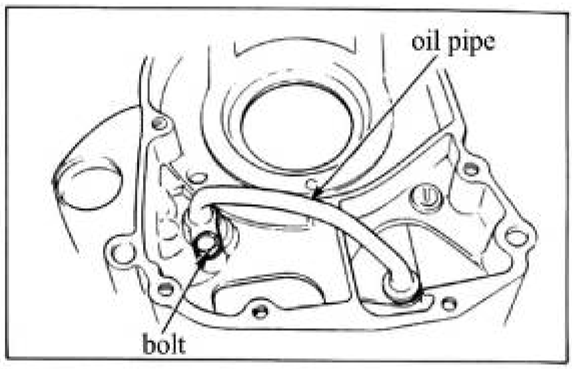
Remove the cylinder gasket and knock pin.



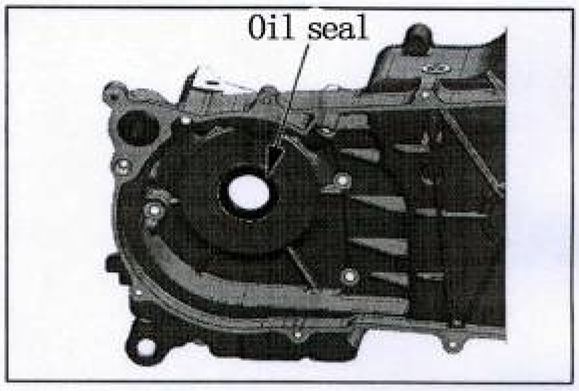
Remove the crankshaft from left crankcase.



Loosen the bolts, remove the oil pipe from the right crankcase.

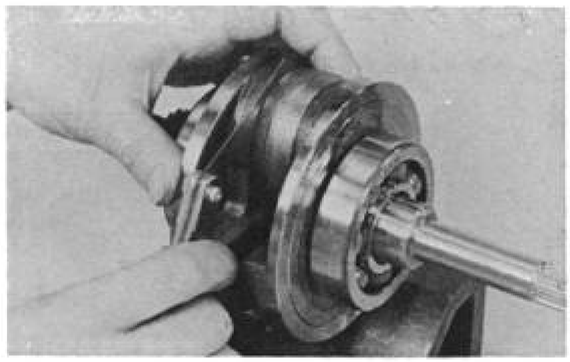


Remove the oil seal from the left crankcase.

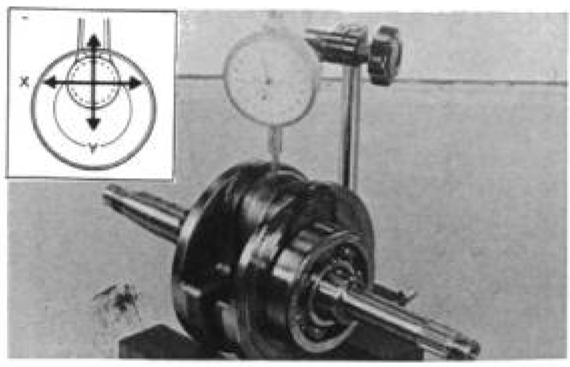


Crankshaft

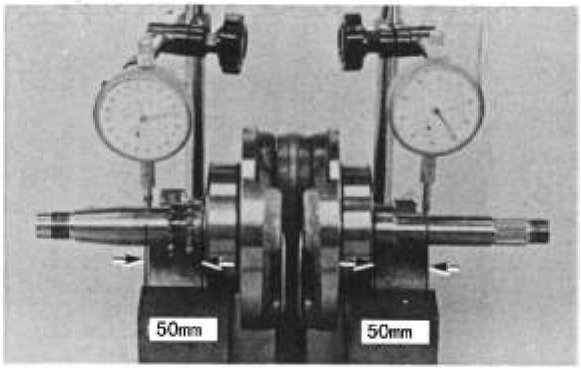
Measure the side clearance of connection rod big end.
Limit for use: Replace it if it is over 0.6 mm.



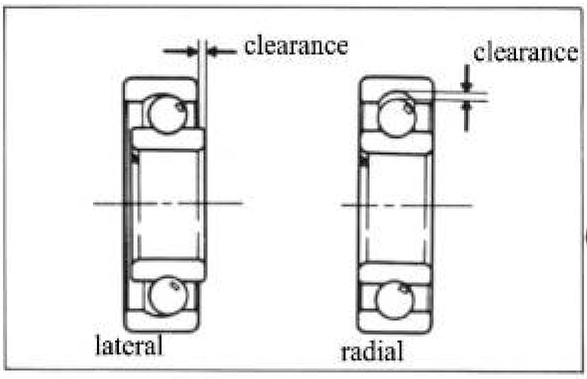
Measure the clearances in X and Y directions on the shaft end faces of connection rod big end.
Limit for use: Replace it if it is over 0.05 mm.



Measure the vibration and swing of crankshaft.
Limit for use　Replace it if it is over 0.10 mm.



Rotate the journal bush of crankcase drive shaft , check if there is abnormal sound or clearance. Replace the crankcase assembly if the abnormal sound or clearance is found.



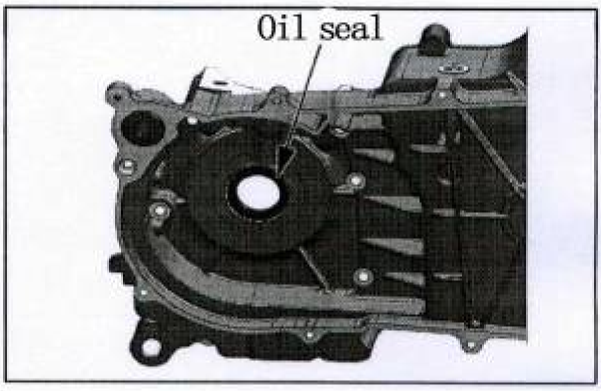
Assembling of crankcase

Clean the joint face of crankcase.

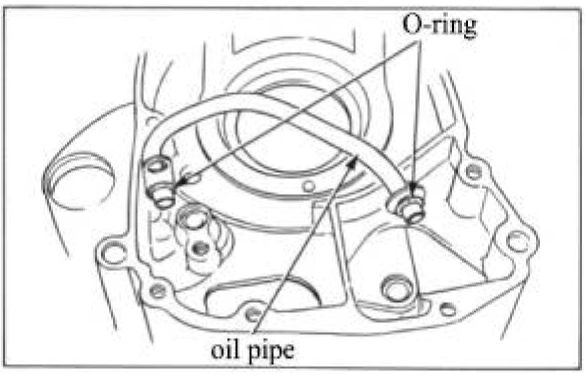
Caution

Take care, don't damage the joint face of crankcase

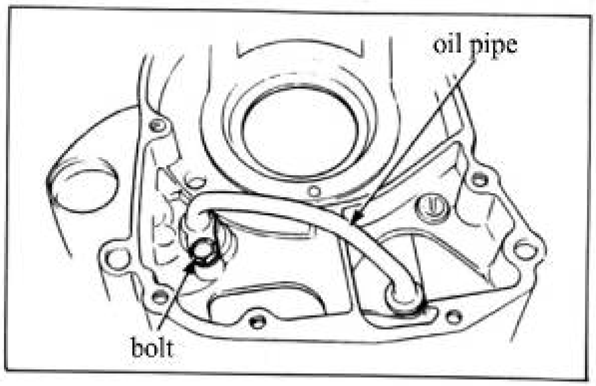
Install a new o-ring on left crankcase.



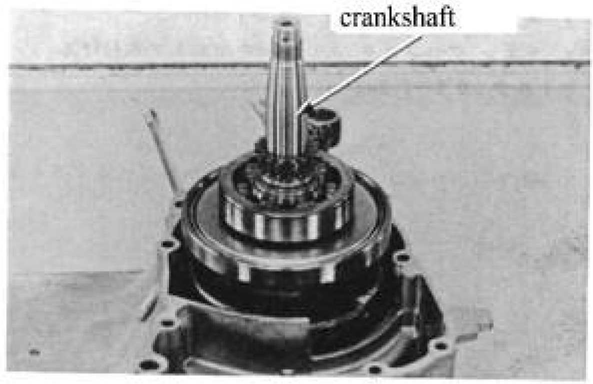
Clean the oil pipe, install new o-rings on two ends.



Install oil pipe on right crankcase and tighten it with bolt.



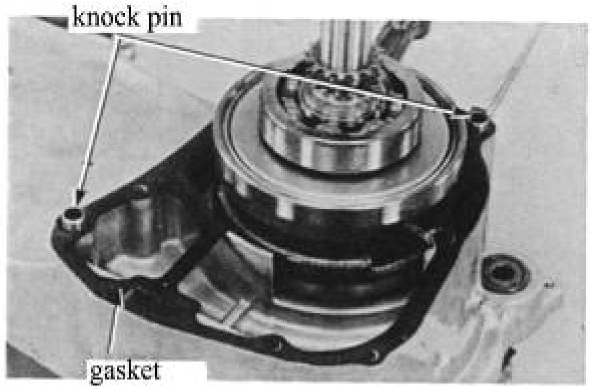
Install the crankshaft on left crankcase.



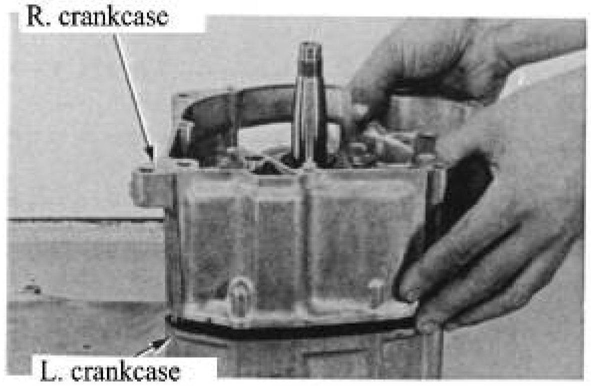
Caution

Take care, don't damage the oil seal.

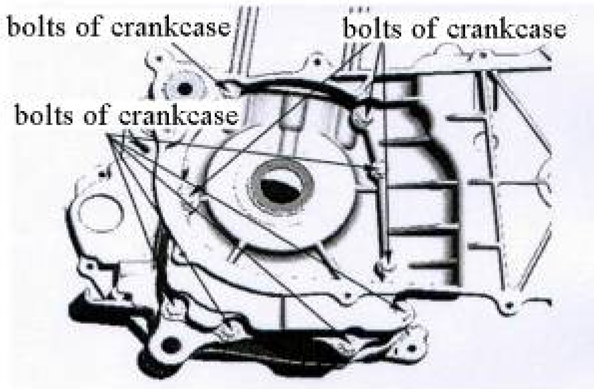
Install the knock pin and new cylinder gasket on left crankcase.



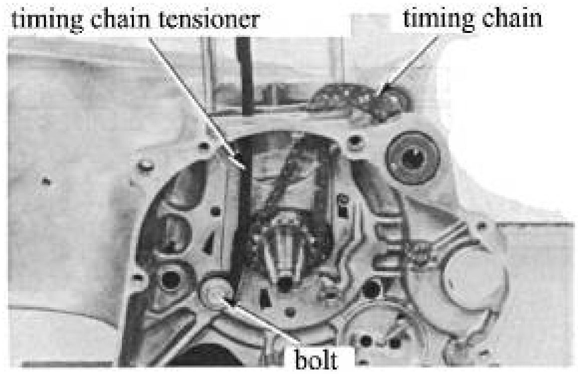
Put the left crankcase downwards, assembly the right crankcase.



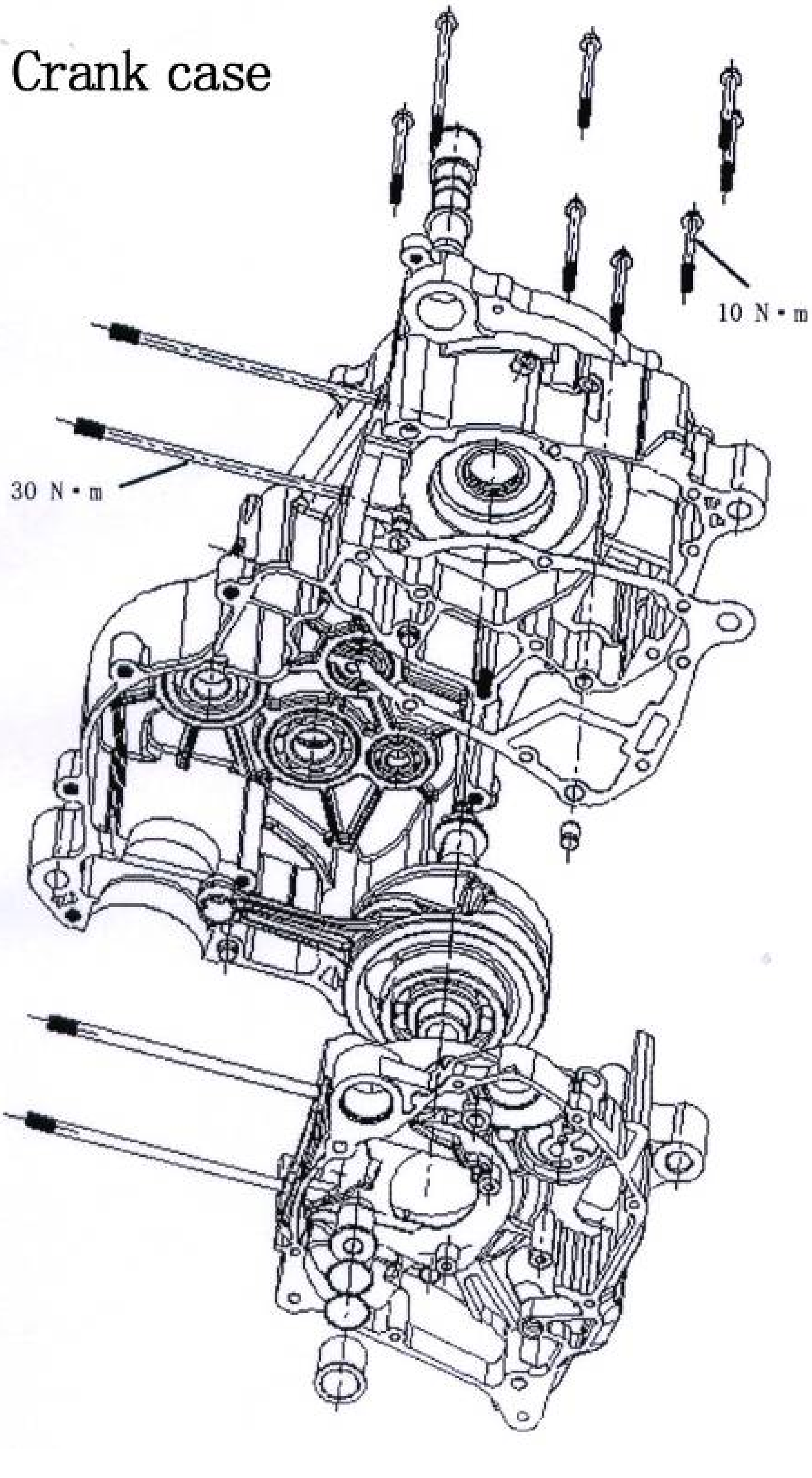
Install the heat -insulating material.
Tighten the crankcase with 9 bolts.
Torque: 10N*m



Install the timing chain.
Install the timing chain tensioner with bolts.
Torque: 10N*m



Crank case



CYLINDER AND CYLINDER VALVE

Precautions for operation

. A new cylinder gasket should be used when the cylinder head is installed. Confirm if the knock pin is installed properly.

Reference for maintenance

Item		Normal value	Limit for use
Deformation of cylinder head		——	0.05
Contact width of valve seat		1.1	1.8
Ext. dia. of valve stem	IN	4.975-4.990	4.90
	EX	4.955-4.970	4.90
Int. dia. of valve guide		5.000-5.012	5.03
Clearance between valve and valve guide	IN	0.010-0.037	0.08
	EX	0.030-0.057	0.10
Free length of valve spring	IN	30.5	27.5
	EX	40.0	36.0
Height of cam		31.60 -31.72	31.52
Rocker arm int. dia.		12.000-12.018	12.10
Rocker arm shaft ext. dia.		11.973-11.984	11.91

Torque for tightening

Detail information

Tools

Special tools
Valve guide reamer
Valve guide driver（5.0 mm）

General tools

Valve spring compressor
Valve guide driver

Valve seat cutter

Cutter holder (5 mm)
Seat cutter (29.0 mm) 45° EX
Seat cutter (33.0 mm) 45° IN
Flat cutter (30.0 mm) 32° EX
Flat cutter (33.0 mm) 32° IN

Trouble shooting

The cylinder head doesn't rotate well. The trouble can be found by means of measuring the compression pressure or sound from engine upper part.

low or unstable compression pressure

. Valve
- No proper adjustment of rocker arm shaft
- Sintering or bending of valve
- Damaging of valve spring
- No proper timing of valve
- No proper sealing of valve seat

. Valve clearance
- Leakage of cylinder gasket
- Deformation or crack of cylinder head

. No proper cylinder and piston
_ Wearing of cylinder.
_Wearing of piston rings.
_Sticking of piston ring.

Too high compression pressure

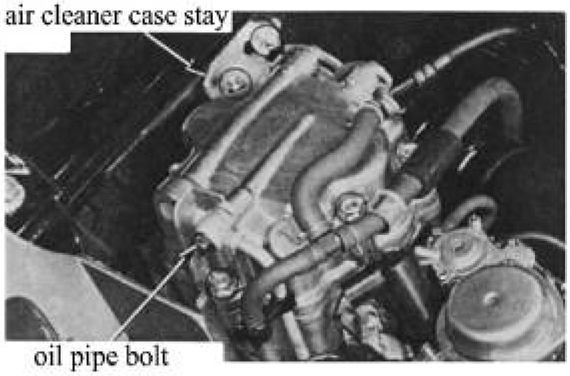
. Carbon-deposit of piston combustion chamber

Noise

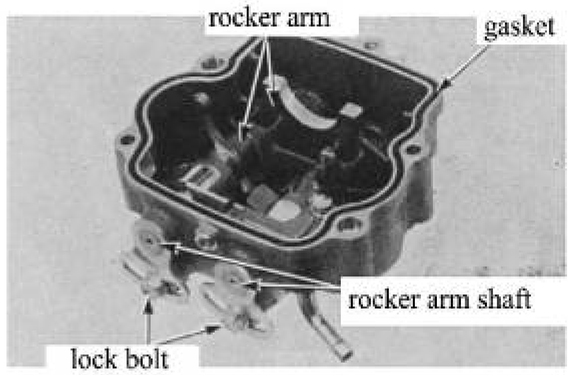
. No proper adjustment of rocker arm shaft
. Sintering of valve, or damaging of valve spring and low elasticity
. Damaging and wearing of rocker arm and rocker arm shaft

Removal of cylinder head cover

Remove the valve sear.
Remove the oil pipe bolt and copper gasket from cylinder head cover.



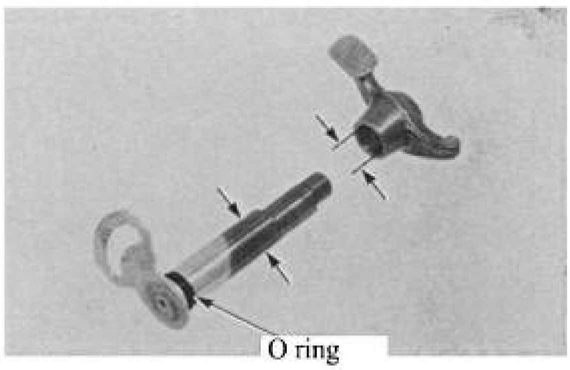
Remove the lock bolt from air cleanner case.
Remove 5 bolts of cylinder head cover, remove the air cleanner and cylinder head cover.
Remove the knock pin from the cylinder head.



Disassembling of cylinder head cover
Remove the o-ring from the cylinder head cover.
Loosen the retaining bolt for tappet adjuster, take out the rocker arm shaft, remove the rocker arm.

Inspection

Rocker arm
Check the rocker arm for damaging or wearing.
Measure the internal diameter.
Limit for use:
Replace it if it is over 12.10 mm.



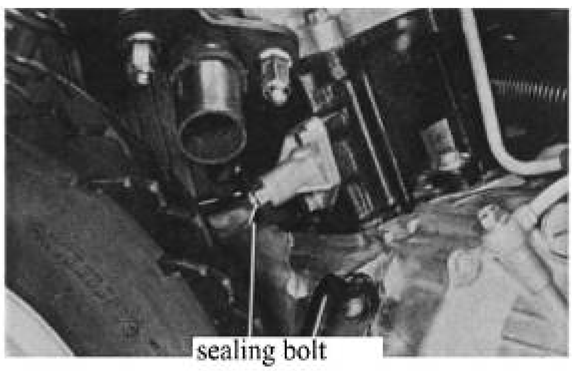
Caution

If the rocker arm is worn or damaged, the cam surface of camshaft should be checked for wearing or damaging.

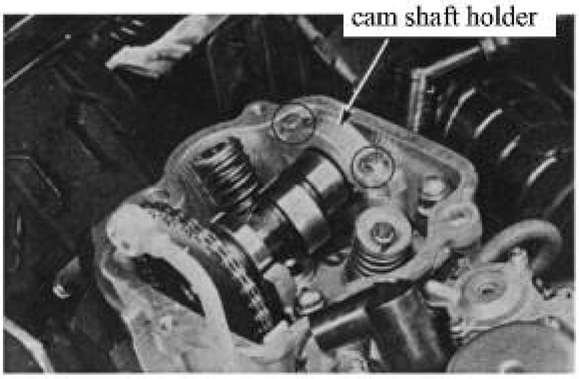
Rocker arm shaft
Check the rocker arm shaft for wearing or damaging.
Measure the external diameter.
Limit for use:
Replace it if it is under 11.91 mm.
Check the o-ring. Replace it if it is damaged.

Removal of camshaft

Remove the exhaust pipe and muffler.
Remove the sealing bolt for timing chain adjustment and spring.



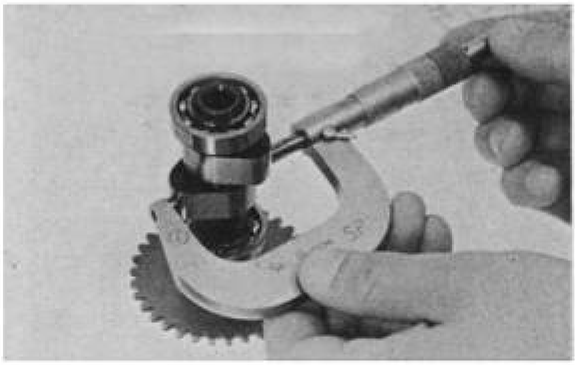
Loosen 2 bolts, remove the spring seat of camshaft. Remove the chain from sprocket.Remove the camshaft.



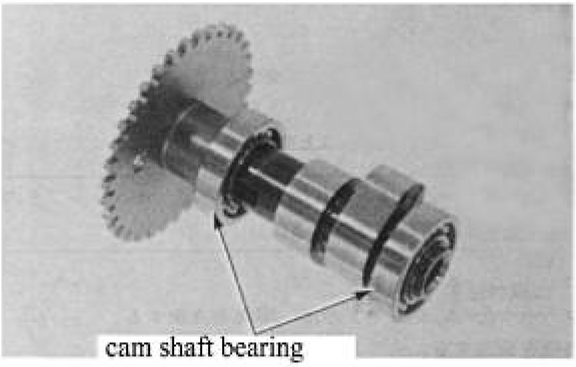
Note

In order to avoid the timing chain to fall into cylinder, it should be hanged with a steel wire.

Inspection of camshaft

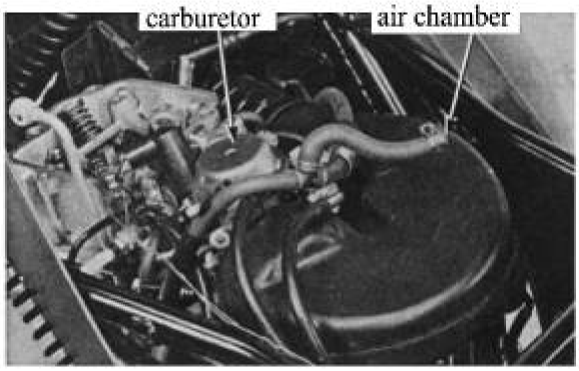


Check the scrape of cam surface and height of cam.
Limit for use:
Replace it if it is under 31.52 mm.



Check the camshaft bearing. If there is any loose or damage on it , replace the camshaft assembly.

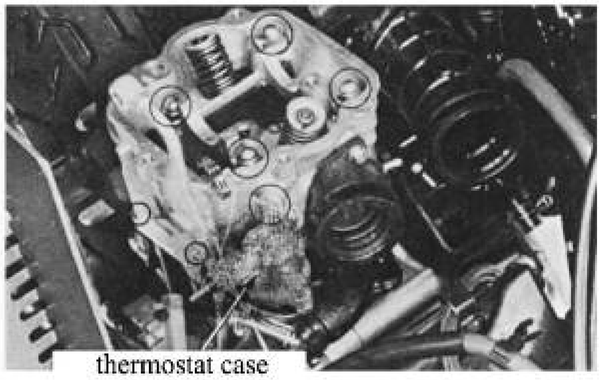
Removal of cylinder head



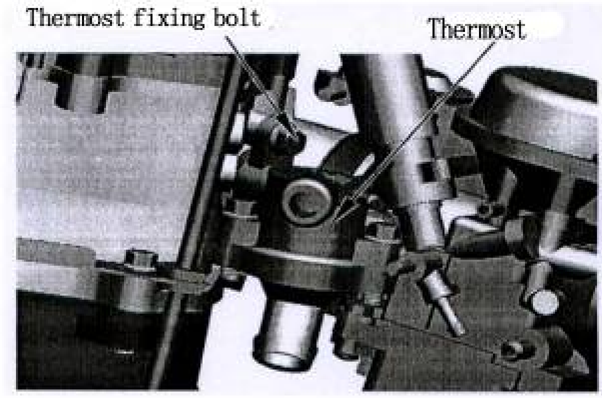
Remove the air chamber and carburetor.

Draining of cooling liquid

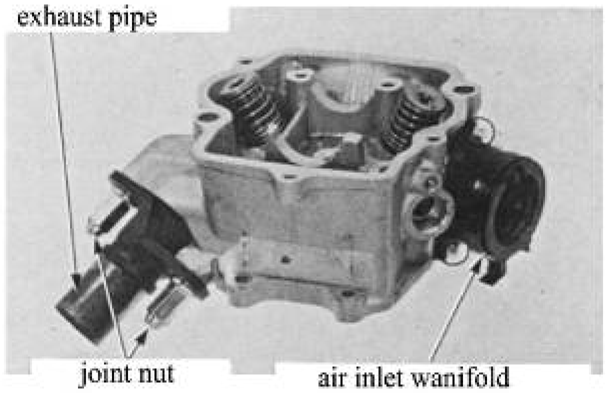
Remove the bolt of thermostat case, remove the thermostat case from the cylinder head.
Remove the retaining bolt for oil pipe support and the bolt on cylinder head base.
Remove 4 nuts of cylinder head cover and 4 copper gaskets.



Remove the cylinder head gasket and locating pins.



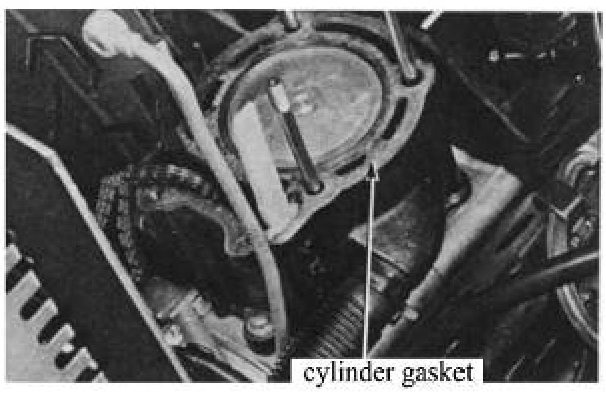
Remove 2 connection nuts for exhaust pipe,
Remove the exhaust pipe from cylinder head.
Loosen 2 bolts and remove the heat insulator of carburetor.



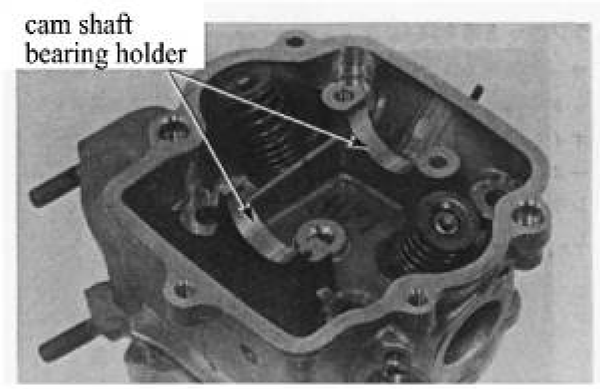
Take out the cylinder gasket material on cylinder.

Caution

. Take care, don't damage the surface of cylinder gasket.
. The cylinder gasket material should not be fallen into engine and piping system.



Check the camshaft bearing seat for wearing or damaging.



Disassembling of cylinder head

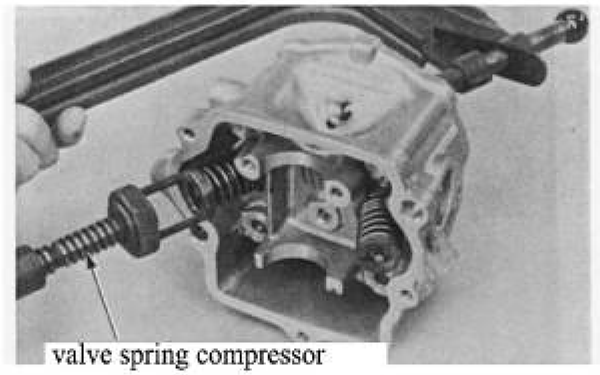
Remove the valve pin, protecting ring, valve spring, valve seat, valve stem seal and valve.

Note

. Don't tighten the compressor too tight.
. The parts of side IN and side EX should be separated after being disassembled.

Special tool

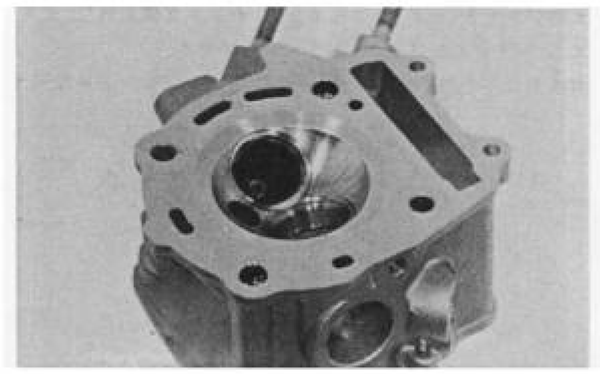
Valve spring compressor



Remove the carbon-deposit from combustion chamber. Remove the gasket material stuck on surface of cylinder head cover.

Note

Take care, don't damage the surface of cylinder. It is easy to remove in gasoline.



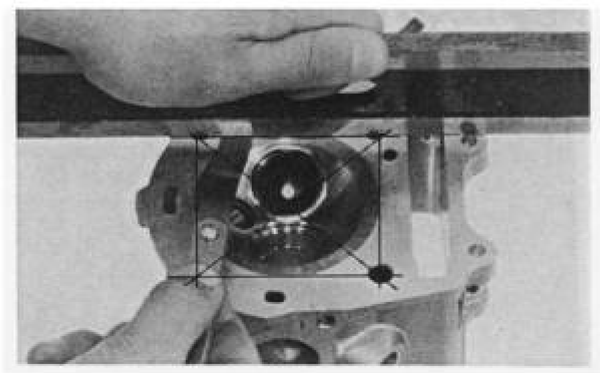
Inspection

Cylinder head

Check the cracks round the spark plug hole and valve hole.
Check the deformation of cylinder head using a right-angle rule and a filler.

Limit for use:

Replace or dress it if it is more than 0.05mm.

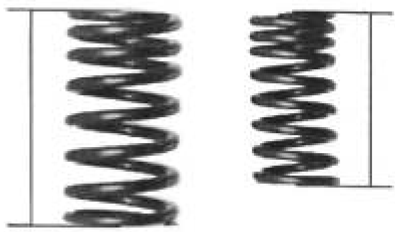


Valve spring

Measure the free lengths of internal and external springs.

Limit for use:

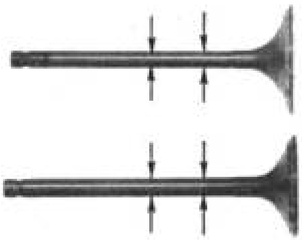
Replace the internal spring if it is under 27.6 mm.
Replace the external spring if it is under 36.1 mm.

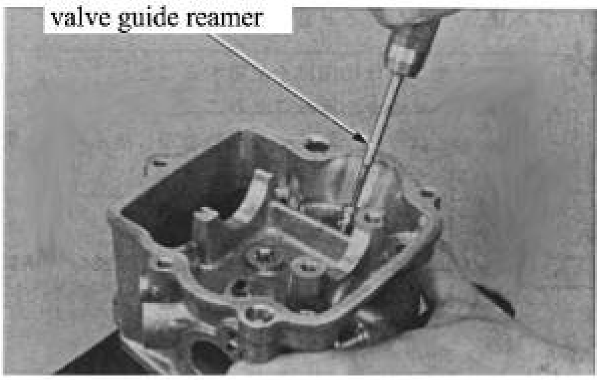


Valve and valve guide

Check the bending, burning and scrape, as well as the wearing of valve stem end.
Put the valve into valve guide, check if it moves stably.
Measure the external diameter of valve stem.
Limit for use:

Replace it if it is under 4.90 mm.





Use a reamer to pass through the valve guide to remove the carbon-deposit.
Special tool:
Valve guide reamer

Caution

Make the reamer rotate always to right.Don't insert or draw the reamer when the reamer doesn't rotate.

Measure the internal diameters of valve guide tubes.

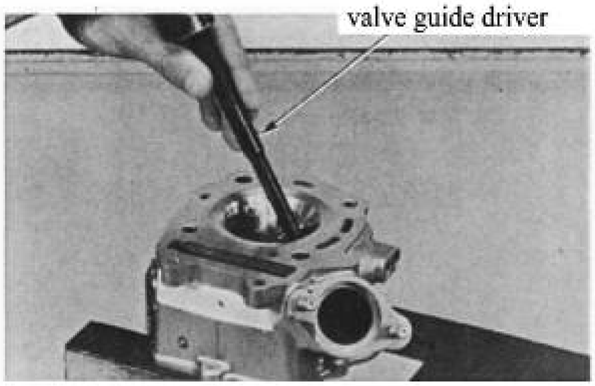
Limit for use:

Replace it if it is over 5.03 mm.

Calculate the clearance between valve stem and valve guide.
The clearance between valve stem and valve guide is valve guide int. dia. minus valve stem ext. dia. value.
Limit for use:
For IN : Replace it if it is over 0.08 mm.
For EX: Replace it if it is over 0.10mm.
Replace the valve guide with a new one When the clearance exceeds the use limit.At this time ,the use limit should be calculated.If it is within the use limit, only replace the valve guide tube. The valve seat maybe needs to be dressed according to the condition of replaced valve guide.

Replacement of valve guide

Knock out the valve guide.



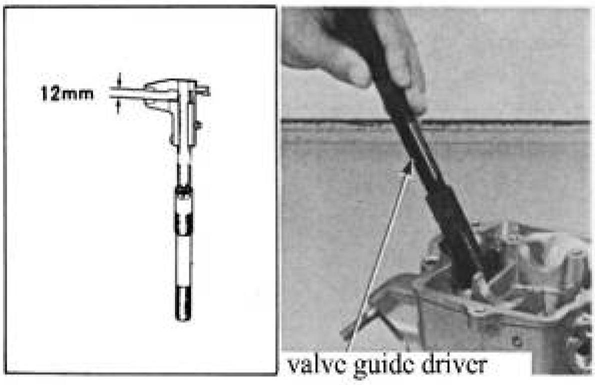
Note

Take care, don't damage the cylinder head.

Special tool:Driver of valve guide (5.0 mm)

07942-MA60000

Adjust the driver for valve guide, make the driving height of valve guide reach 12 mm.
Knock the valve guide in.

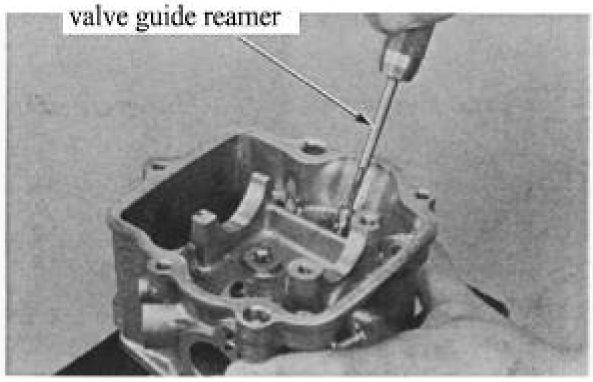


Note

.Confirm that the valve guide is not damaged after it is knocked in.
.Take care, don't damage the surface of cylinder head when the valve guide is knocked in.

General tool:Valve guide driver 07743-0020000

Use a reamer to process the valve guide after it is knocked in.



Caution

. The cutting oil should be used when processing with reamer.
. Only let reamer rotate to right.
. Don't make the reamer insert in valve guide or draw out of it when the reamer doesn't rotate.

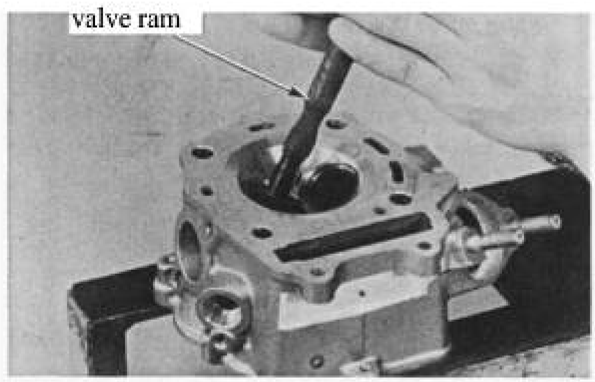
Clean the cylinder head and remove the cutting chips.

Special tool:

Reamer for valve guide 07984-MA60000

Inspection and dressing of valve seat

Inspection of valve seat

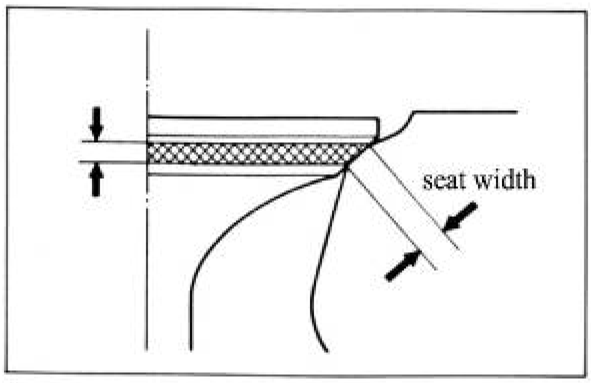


Remove the carbon-deposit of cylinder head combustion chamber and valve.
Apply a layer of thin mechanic's bluing dye on contact surface of valve uniformly.
Make the valve slide using a valve ram.
Remove the valve and check the contact surface of valve.
Replace the valve if the contact surface of valve become rough or has serious wearing.

Inspection of valve seat contact width

Limit for use: Dress it if it is over 1.8 mm.

A valve seat cutter should be used to dress if the contact width is not uniform,too wide or too narrow.



Valve seat cutter

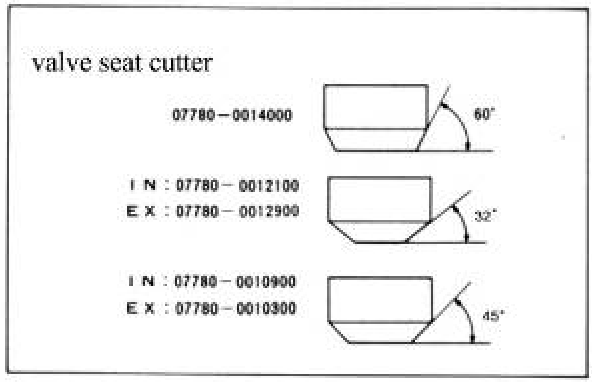
Please refer to the instruction of valve seat cutter for details.

4-5 kg of power should be used to press on valve seat cutter when dressing.

Rotate the cutter chuck while conduct grinding.

Note

Apply the engine oil on cutter chuck to make the chips fall down when grinding.

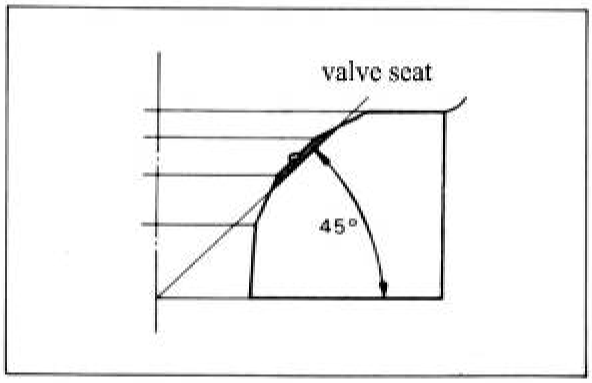


Dressing of valve seat

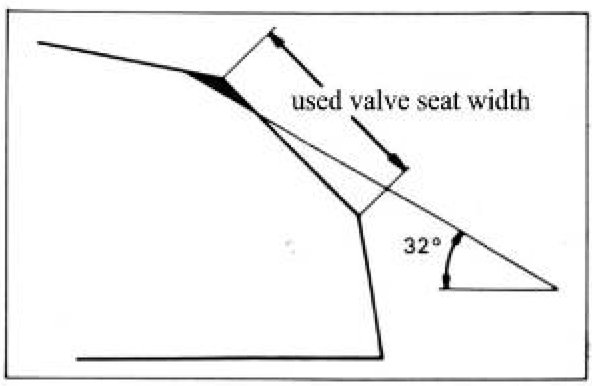
Use a valve seat face cutter chuck with 45° to conduct grinding, until the rough surface and needle hole are removed.

Note

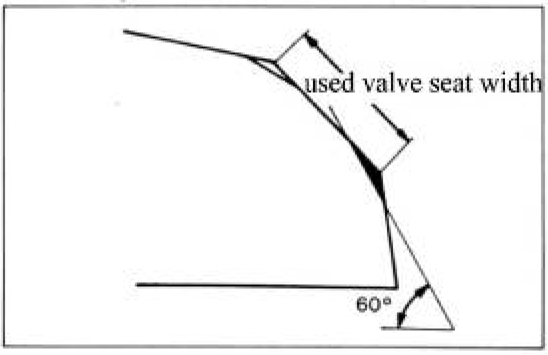
Take care, don’t grind excessively.



Use the cutter chuck with 32° to perform plane grinding.



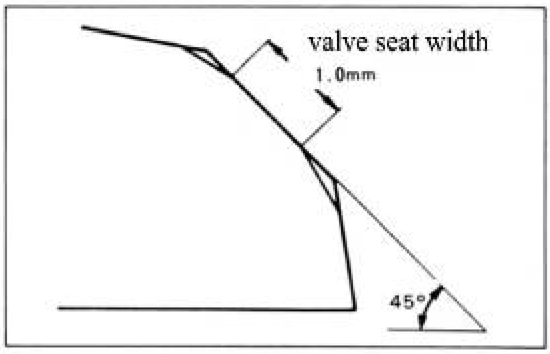
Use the cutter chuck with 60° to conduct surface grinding.



Use the cutter chuck with 45° to carry out the dressing of valve seat until the normal width of valve seat face is reached.

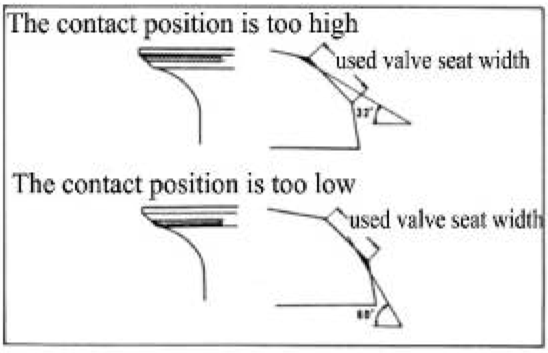
Contact width

Normal value: 1 mm

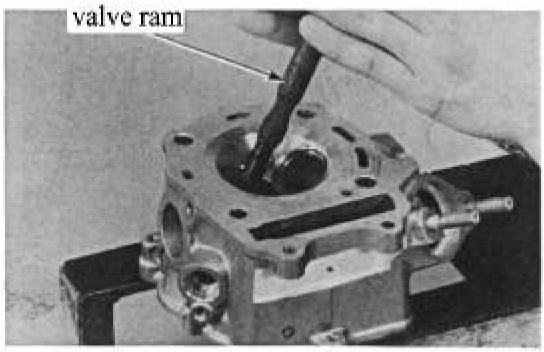


Use a cutter chuck with 32° to grind plane if the contact position is too high.
Use a cutter chuck with 60° to grind plane If the contact position is too low.

Use the cutter chuck with 45° and adjust to normal contact width.



Apply the polishing paste on contact surface uniformly after dressing.
Use a valve ram or coordinating device of valve to conduct coordinating and grinding.
Clean cylinder and valve after grinding.



ⓘ Caution

. Pressing the valve on the valve seat powerfully to conduct rotating and grinding will cause the damage, so a light pressing will be needed.
. Take care, don't make the polishing paste fall in the gap between valve stem and valve guide tube.

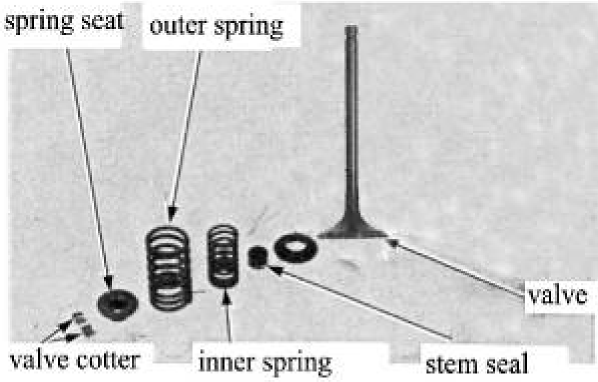
Use the bluing dye to confirm that the valve seat surface contacts with the center of valve contact surface uniformly after dressing.

Assembling of cylinder head

Install the spring seat and valve stem seal.

Note

Replace with new one after remove the valve stem seal.



Apply a few of engine oil on valve stem, then insert in valve guide.

Install the valve pin using the valve spring compressor and accessory.

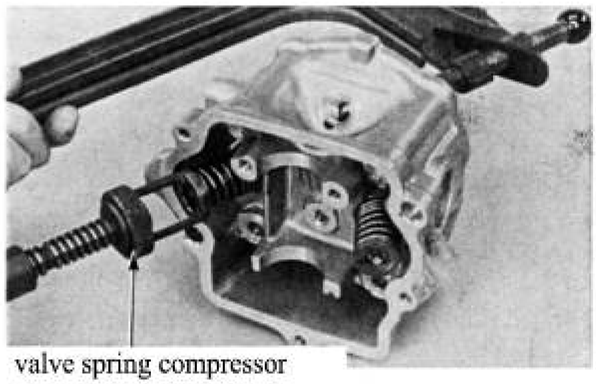
Caution

. The valve spring compressor should not be installed too tight.

. Make the small thread pitch surface of valve spring face to the side of cylinder head to install.

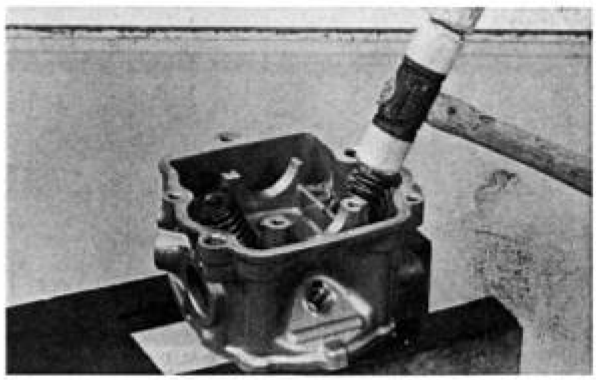
General tool:

Valve spring compressor 07757-0010000



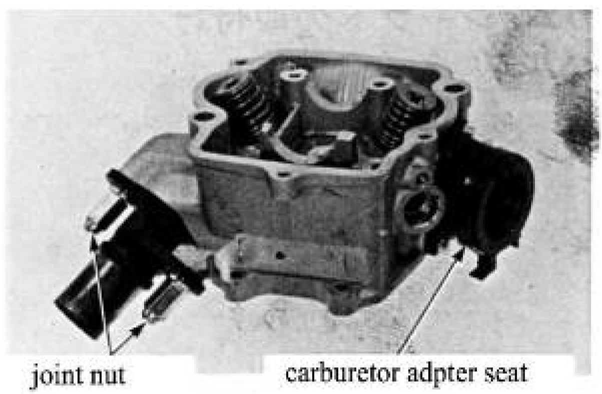
Use a rubber hammer to knock the top of valve stem 2-3 times slightly to make the valve and valve pin fit well.

Take care, don't damage the valve.



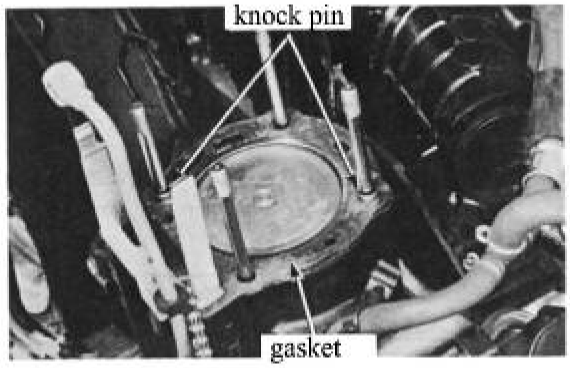
Install the exhaust pipe on cylinder head, tighten the joint nuts.

Install the carburetor adapter seat on cylinder head with 2 bolts.



Installing of cylinder head

Install the knock pin and new cylinder gasket on cylinder head.



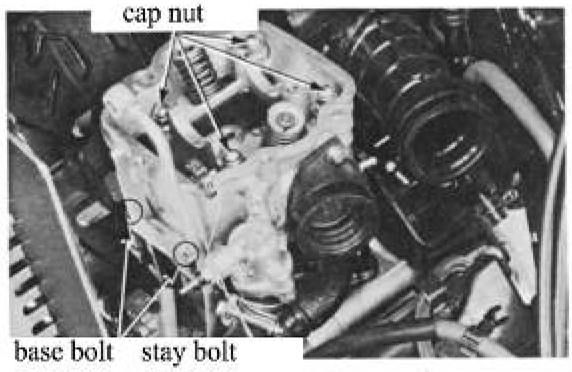
Installing of cylinder head

Install and tighten 4 copper gaskets and 4 cylinder caver nuts.

Torque:

Note

Tighten the nuts of cylinder head cover in 2-3 times and in diagonal direction.

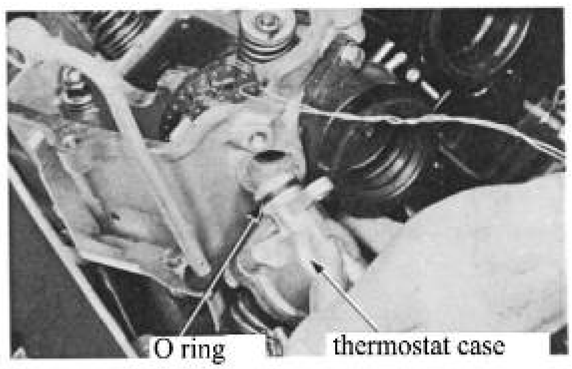


Install the bolts of cylinder head base, oil pipe stay and oil pipe stay bolt.

Install a new o-ring on thermostat case.

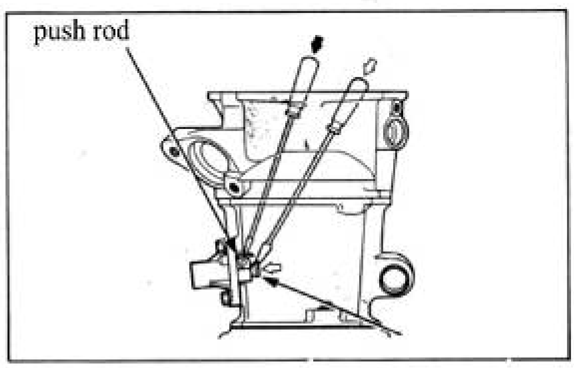
Install the thermostat case on cylinder head and tighten the bolts.

Install the carburetor.

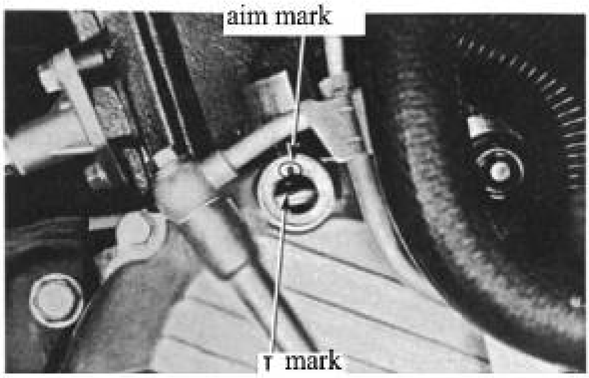


Installing of camshaft/valve timing

Push the jaw of cam chain adjuster, press the push rod to bottom.

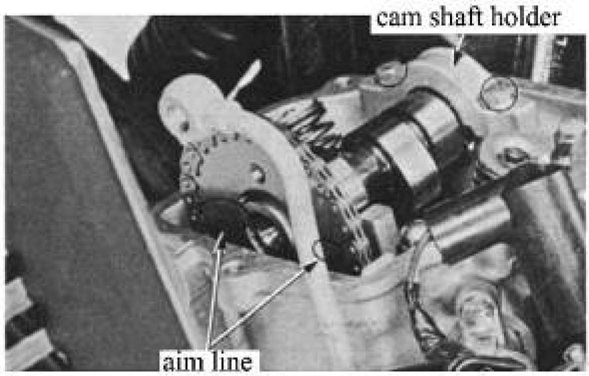


Remove the timing hole cover from right crankcase cover.
Remove the left crankcase cover
Rotate the drive belt wheel counter clockwise and make the "T" mark of the flying wheel coincide with the alignment mark of right crankcase cover.



Put the IN and EX cam of camshaft downwards, then install the camshaft onto cylinder head cover. Confirm if the aim line of cam sprocket aligns with the line on cylinder head cover. Install the cam chain on the cam sprocket.
Install the camshaft bearing seat,tighten bolts.

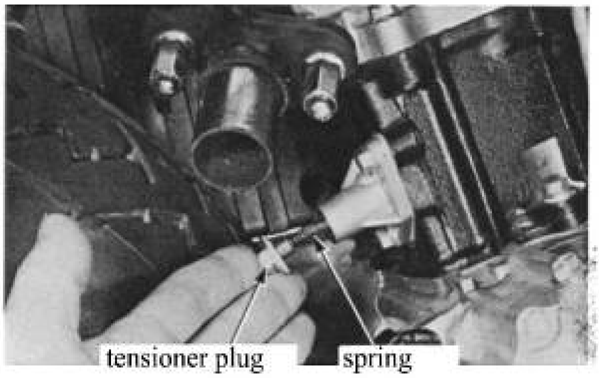
Torque: 10N*m



Install the spring and sealing washer of cam chain adjuster.Install the sealing parts.

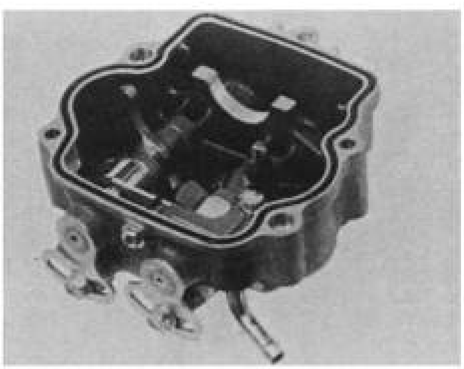
Torque: 10N*m

Install left crankcase cover and timing hole cover.
Install the exhaust muffler.



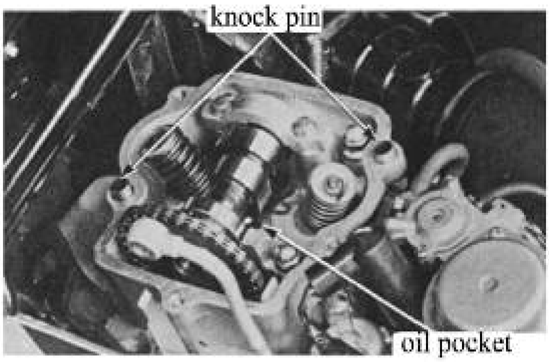
Assembling of cylinder head cover

Install the new o- ring on the rocker arm shaft.
Apply the engine oil on the rocker arm and shaft, then install them to cylinder cover.
Install the retaining bolt of the tappet adjuster temporarily.



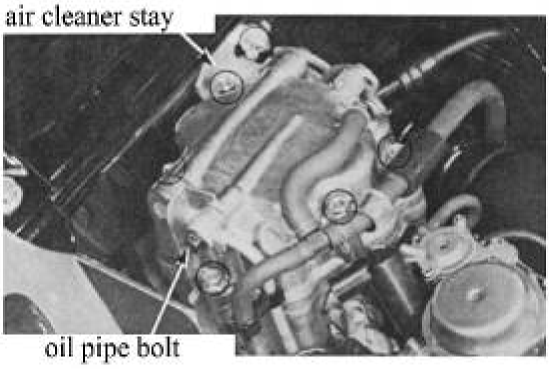
Installation of cylinder head cover

Fill the engine oil in full oil bag of the cylinder head cover.
Install two knock pins on cylinder cover.
Install rubber sealing washer in the slot of cylinder head cover, then install the cylinder head cover.



Tighten the air cleanner stay and five bolts of cylinder head cover.

Torque: 10N*m



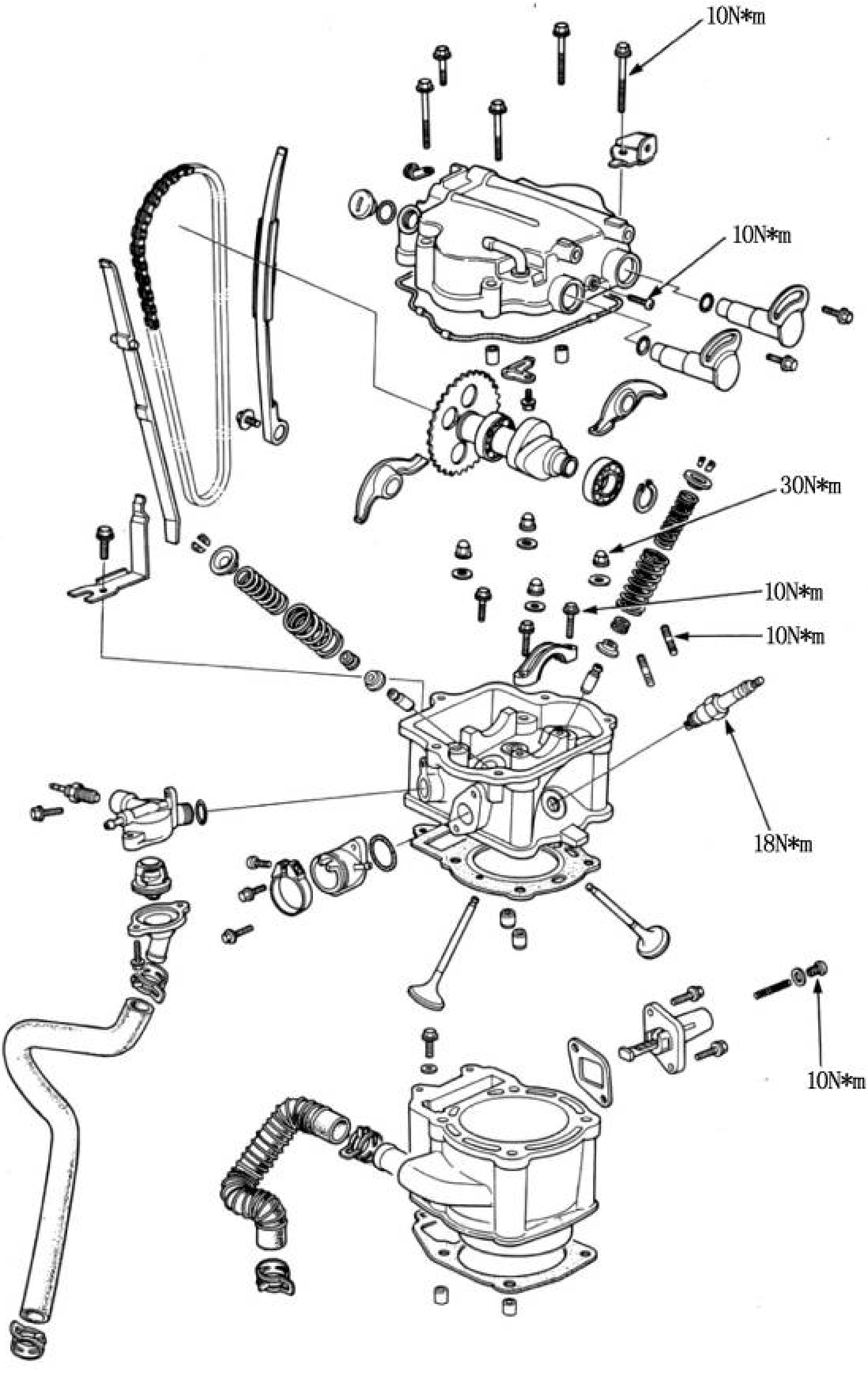
Note

.Tighten the air cleanner stay onto the cylinder head cover using the bolts on left-rear sides. .Tighten bolts in diagonal direction with two or three times.

Tighten the air cleanner case onto the stay with bolts.
Install the oil pipe on the cylinder head cover using the oil pipe bolts and copper washer.

Torque: 10N*m

Adjustment of tappet
Adjustment of valve clearance
Installation of seals



10N*m
10N*m
30N*m
10N*m
10N*m
18N*m
10N*m

CYLINDER, PISTON

Maintenance and repair information

Operation precautions:
.Use a new cylinder gasket and confirm if the knock pin is installed properly when install the cylinder.

Reference for maintenance

Item			Normal value	Limit for use
Cylinder	bore		72.000-72.010	72.10
	Upper deformation		--------------	0.05
	circularity		--------------	0.05
	Cylintricity		--------------	0.05
Piston,Piston ring, piston pin	Ring slot and ring clearance	First ring/ second ring		0.09
	Piston ring close clearance	First ring/ Second ring	0.15-0.30/0.10-0.25	0.50
		Oil(side rack)	0.2-0.7	---------
	External dia. of piston		71.960-71.980	71.90
	Bore of piston pin hole		17.002-17.008	17. 03
	Bore of connection rod small end		17. 006-17. 024	17. 04
	External dia. of piston pin hole		16.994-17.000	16. 98
	Clearance of cylinder and piston		0. 03-0. 05	0. 15
	Clearance of piston and piston pin		0. 002-0. 014	0. 04
	clearance of piston pin and the hole on connection rod small end		0. 006-0. 030	0. 06

Trouble shooting

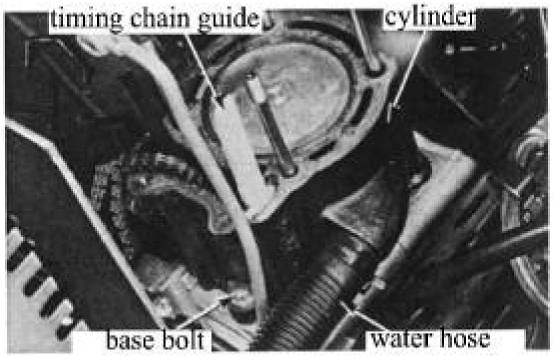
Low compression pressure
. Wear of cylinder , piston, and piston ring

Smoking from muffler (Caused by oil)
. Wear of cylinder and piston
. Not proper installation of piston and piston ring
. Damage of piston and cylinder

Overheat
. carbon-deposit of combustion chamber and piston ring

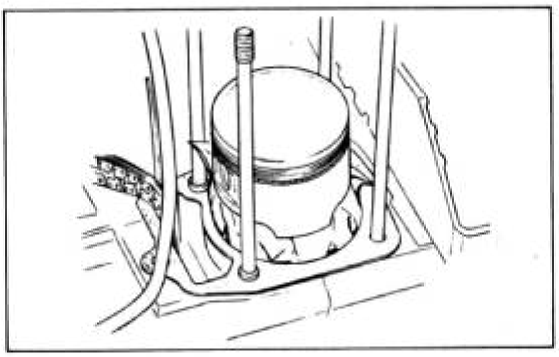
Detonation, abnormal sound
. wear of piston and cylinder
. carbon-deposit
.wear of piston, piston pin and connection rod small end.
. wear of piston and piston ring

Removal of cylinder



Remove the cylinder head. (>chapter 6)
Remove the water hose connector from the cylinder.
Remove the timing chain guide.
Loosen the bolts on cylinder base, remove the cylinder

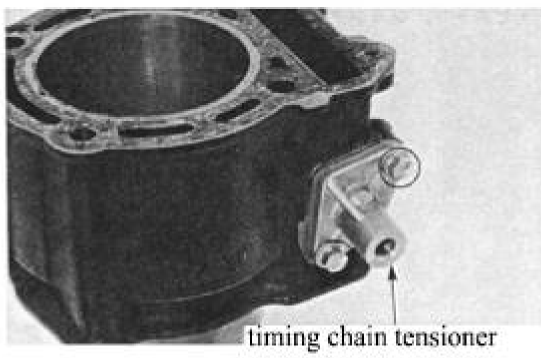
Remove the cylinder gasket and knock pins.



Remove the cylinder gasket material stuck on crankcase.

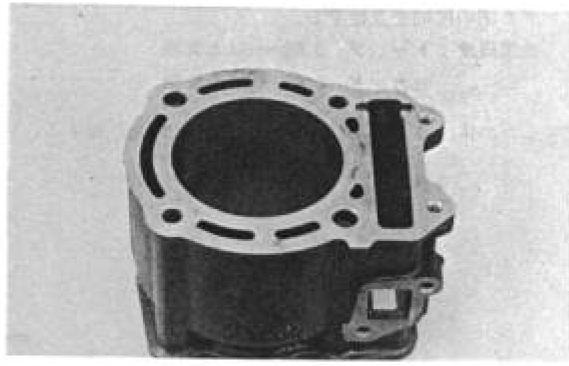
Caution

Take care don't let foreign matter enter crankcase.



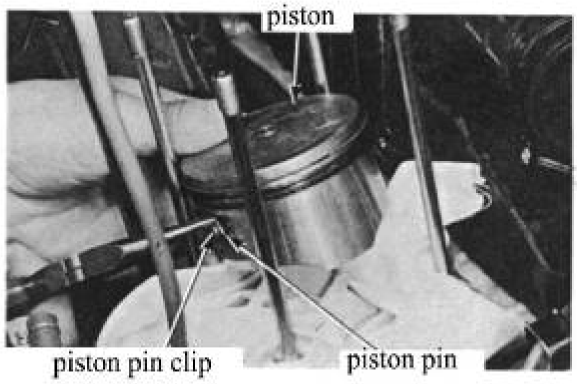
Remove the timing chain adjuster base and cylinder gasket.

Remove the cylinder gasket material stuck on the cylinder.



Removal of piston

Remove the piston pin circlip.



Caution

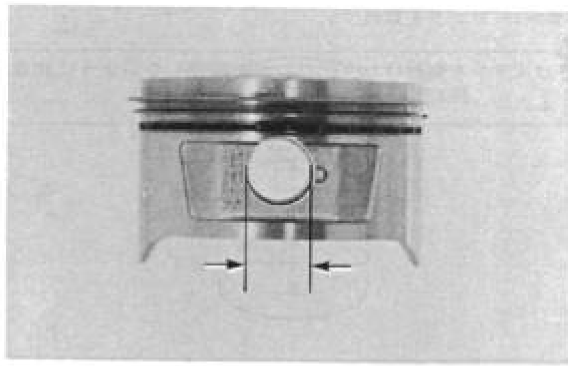
Take care, don't make the circlip fall in case.

Draw the piston pin and remove the piston.

Inspection of piston, piston pin and piston ring

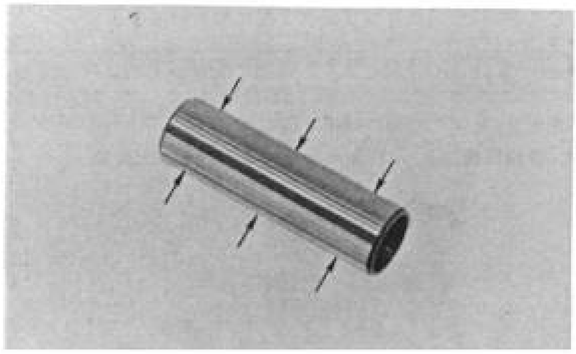
Measure the bore of the piston pin hole.

Limit for use: Replace if it is over 17.0 mm



Measure the external dia. of piston pin.

Limit for use: Replace if it is under 16.98 mm.



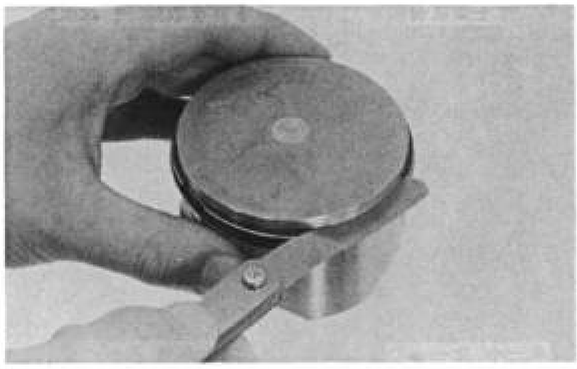
calculate the clearance between piston and piston pin.

Limit for use: Replace if it is over 0.04 mm.

Check the clearance of piston ring and ring slot.

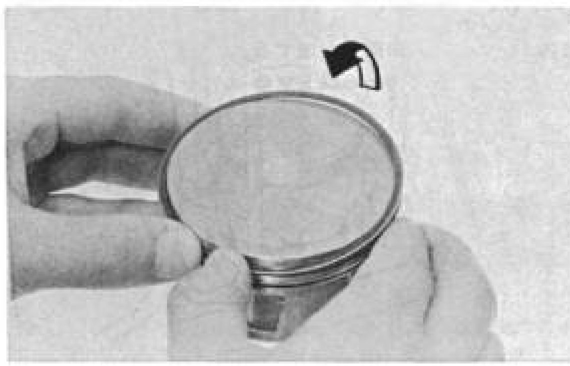
Limit for use:
First ring Replace if it is over 0.09 mm.
Second ring Replace if it is over 0.09 mm

Check the damage of piston ,wear of ring slot and side crack.

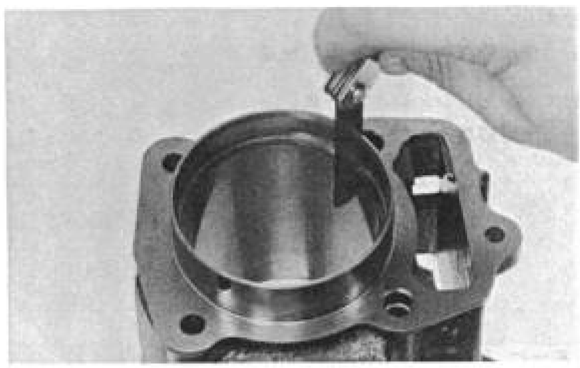


Measure the bore of connection rod small end.
Limit for use: Replace if it is over 17.04 mm.

Remove the piston ring.
Take care, don't damage the piston and piston ring.



Install the piston rings on the low part of cylinder.
Press the piston rings into cylinder from piston head.
Measure the close clearance of piston ring.
Limit for use:
First and second rings: Replace if it is over 0.50 mm.



Measure the external dia. of piston at 14 mm calculated from the low end of piston skirt in a direction of 90 relative to piston pin.

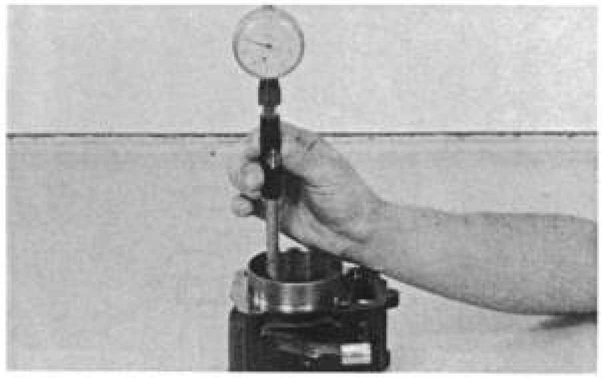
Limit for use: Replace if it is under 71.900 mm.

Inspection of cylinder

Inspect the wear and damage of internal surface of the cylinder.

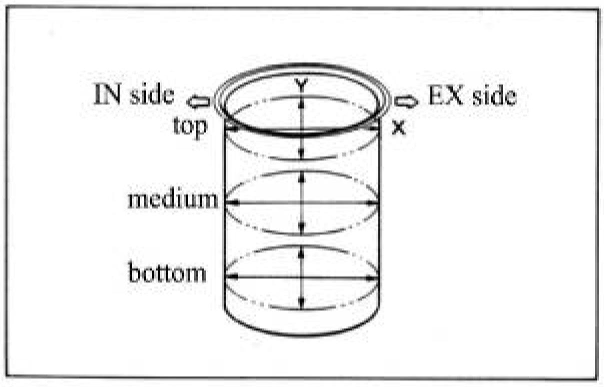
Measure the bore values of cylinder at top, median and bottom in the direction of piston pin and its right angle(X-Y direction), and record them . Take the maximum as the bore value of the cylinder.

Limit for use: Correct or replace if it is over 72. 10 mm.



Calculate the clearance between cylinder and piston. Take maximum as clearance value.

Limit for use: Correct or replace if it is over 0.15 mm.



Calculate the circularity (difference between the X direction and Y direction) and cylintricity (difference of top, median and bottom bore values in X or Y direction).

Take the maximum as their value.

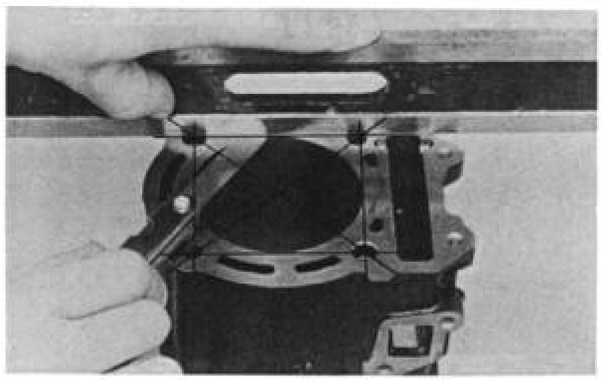
Limit for use:

Circularity: Correct or replace if it is over 0.05 mm.

Cylintricity: Correct or replace if it is over 0.05 mm.

Check the deformation of top surface of Cylinder.

Limit for use: Correct or replace if it is over 0.05 mm.

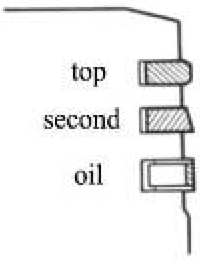


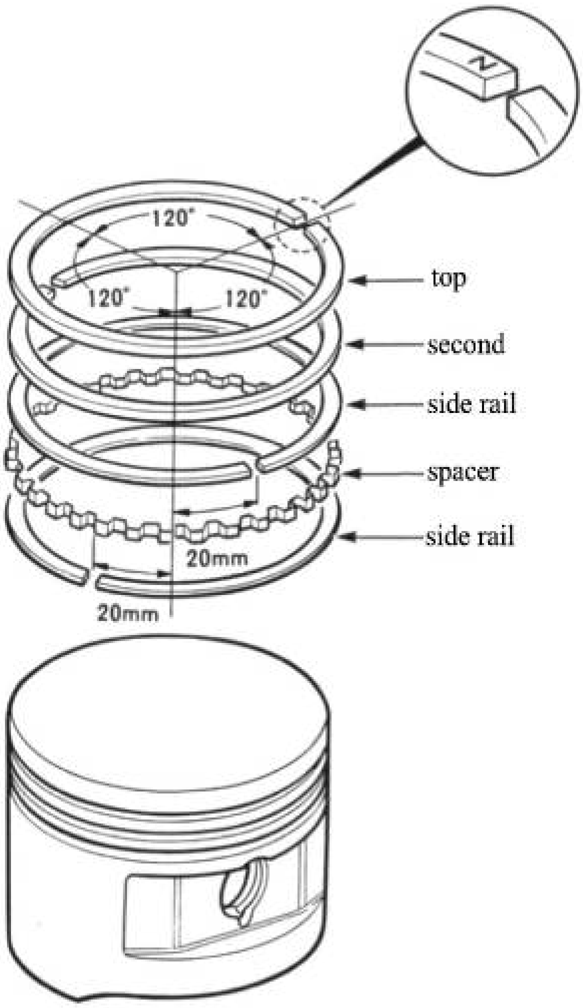
Installation of piston ring

Install the piston ring onto piston.
Apply the oil on piston rings.

Caution

. Take care, don't damage piston and piston ring.
. Put the piston ring surface with mark upwards.
. Confirm that the piston ring can rotate freely after installing.



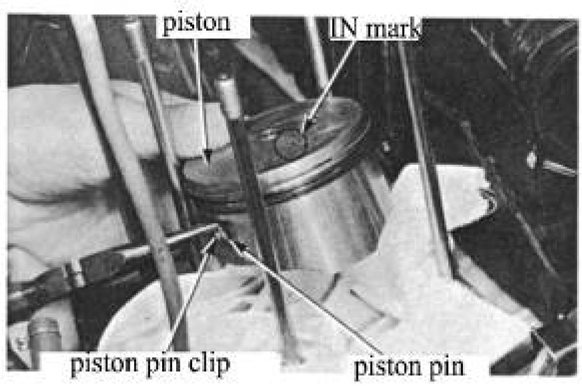


Installation of piston

Install the piston, piston pin and circlip.

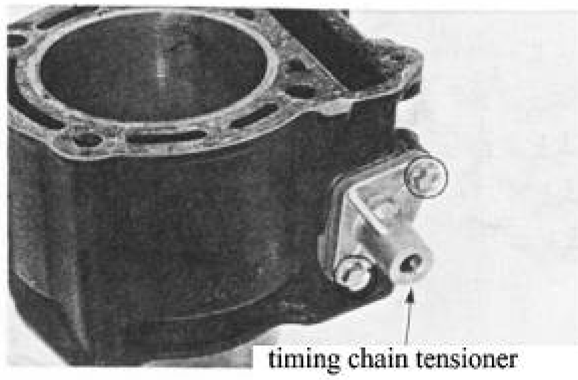
Note

. Make the mark "IN" be toward the entrance side.
. In order to prevent the piston pin , circlip, etc. falling in crankcase, please block with cotton.

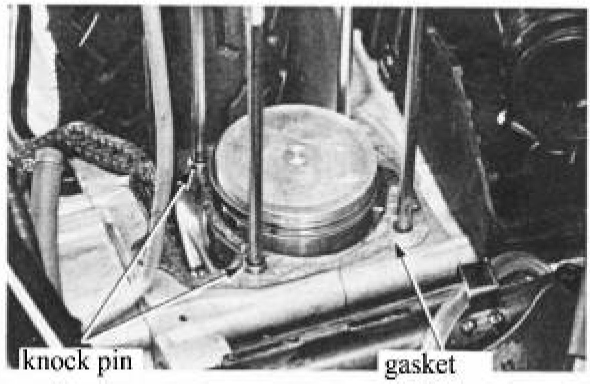


Installation of cylinder

Install the base of cam chain adjuster on cylinder using a new cylinder gasket.



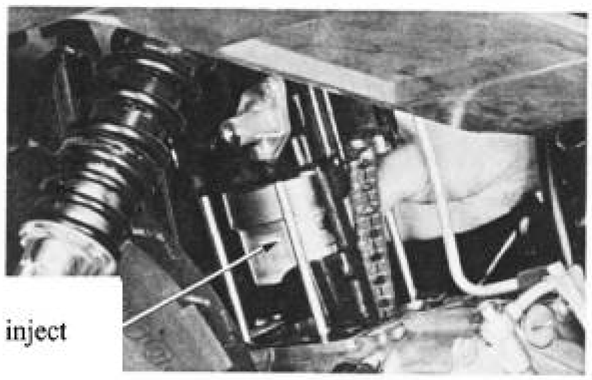
Install the knock pin and new cylinder gasket.



Apply clean engine oil on internal surface of cylinder, piston and piston ring.
Compress the piston ring while installing the cylinder onto piston, and install on crankcase.

Note

Take care, don't damage the piston and piston ring.
Take care to making the close position of piston ring keep clear of piston pin direction and other right angle direction, in three equal part position of 120°.

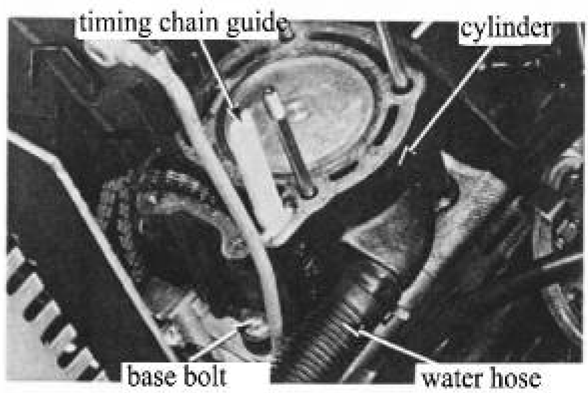


Install the cylinder base bolts and sealing gasket.
Fit the water hose to cylinder.
Install the cam chain guide.

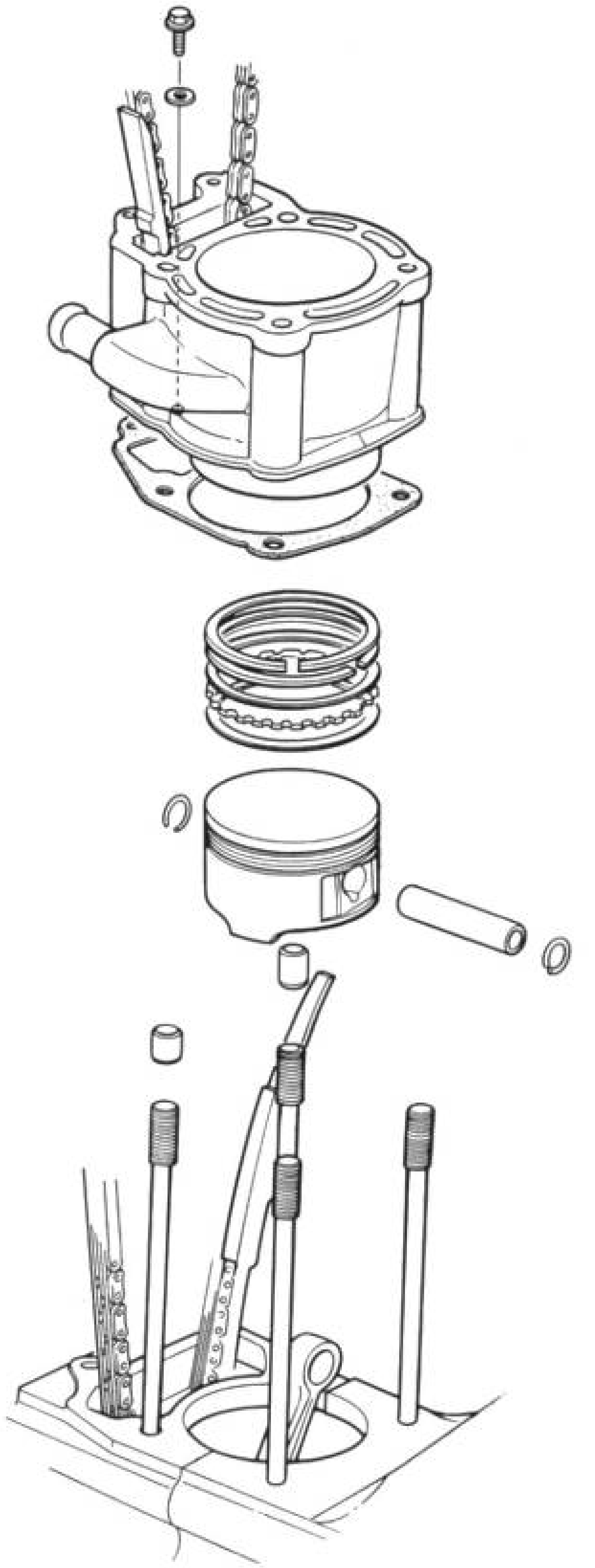
Note

Confirm that the low end of cam chain guide inlays in slot of right crankcase.

Install the cylinder head.
Tighten the bolts of cylinder base.



Cylinder, Piston



CTV

Precautions for operation

. The maintenance and repair of drive pulley , transmission , clutch and driven pulley can be done on motorcycle.

. Take care, don't let oil or grease stick on surfaces of drive belt, drive pulley and driven pulley.

Reference for maintenance

Item	Normal value (mm)	Limit for use (mm)
Movable drive pulley bush bore	27.000～27.033	27.06
Drive pulley thimble ext. dia.	26.959～26.980	26.94
Width of drive belt	24.2	22.5
Thickness of clutch friction plate		1.5
Bore of clutch separating device	153～153.15	153.8
Free length of driven pulley spring	135.0	127.0
Ext. dia. 0f driven pulley assembly	39.95～39.975	39.94
Bore of movable drive pulley	40.000～40.025	40.06
Ext. dia. of weight roller	22.94～23	22.4
Drive pulley/driven pulley wear	--------	0.2

Torque for tightening

Detail information

Tools

Special tools

Wrench for lock nut
Clutch spring compressor
Drive pulley holder
Driver handle

general tools

Remover handle A
Bearing remover 32 x 35 mm
Removal controller 15 mm
Removal controller 22 mm
Extension device

Trouble shooting

The engine can be started but can't run.

. The belt is worn or damaged .
. The ramp plate is damaged.
. The friction plate of clutch is worn or damaged.

The engine shuts down or accelerates suddenly when starting and accelerating

. The spring of clutch centrifugal block breaks.

The max. speed can't be reached due to lack of output power

. The belt is worn.
. The driven pulley bearing is concave.
. The weight roller is worn.
. The driven pulley doesn't work well.

Left cover

Removal

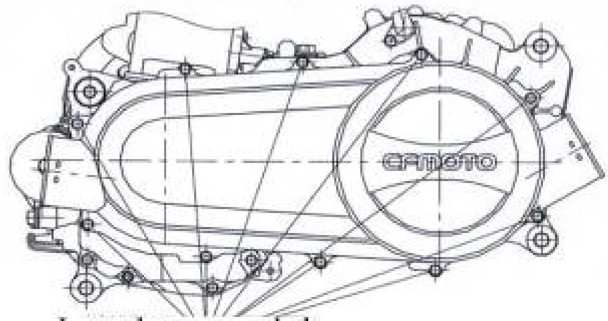
Remove the left-rear cover. (>12-2)

Loosen the bolt, then remove the clamp of brake cable from left cover.

Remove the air cleanner clip of drive belt.

Loosen two bolts of left cover and remove the left cover.

Take out the knock pin.

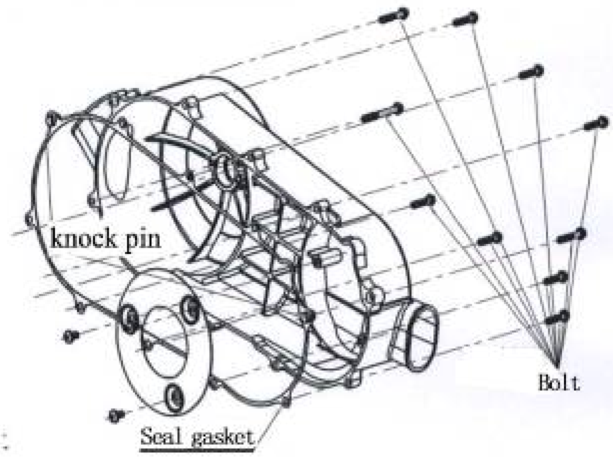


L. crankcase cover bolt

Remove the rubber seal from left cover.

Inspect the rubber seal for damage or aging,replace it with a new one if necessary.

Loosen the small screw, remove the air guide from the left cover.



Installation

Conduct installation according to opposite order of removal.

Torque: 0.8-1.2 kg-m

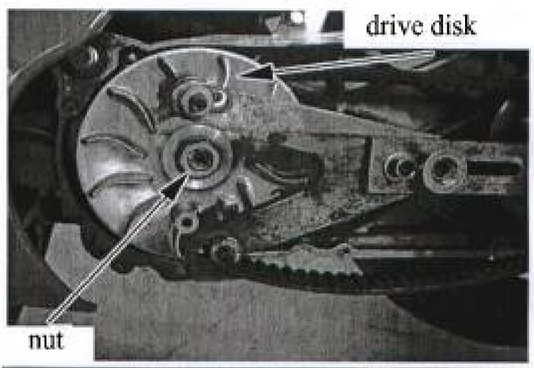
Drive belt

Removal

Remove left cover.

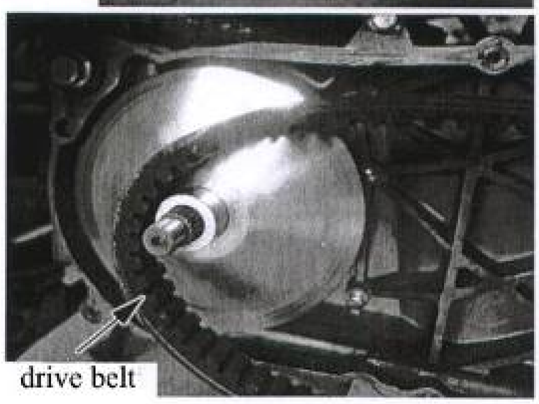
Hold the drive pulley using the drive pulley holder, loosen the nut of drive pulley.

Special tool:Drive pulley holder 07923-KM10000



Remove the washer and drive pulley.

Remove the drive belt.



Inspection

Inspect the belt for crack, insert gear for falling off, cotton cloth for peeling off and abnormal wear.
Measure the width of drive belt.

Limit for use: Replace if it is under 22.5 mm.

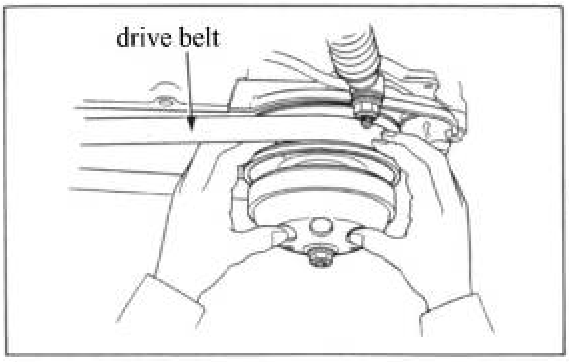
Note

Use genuine parts when replacing.

Installation

Rotate movable driven pulley on right while compress it, press the drive belt onto driven pulley.
Press the drive belt onto the dist thimble of movable drive pulley, install the drive pulley.
Install the washer, drive pulley nut.Use the disk seat to keep the condition while tighten the nut.

Torque: 78N*m



Note

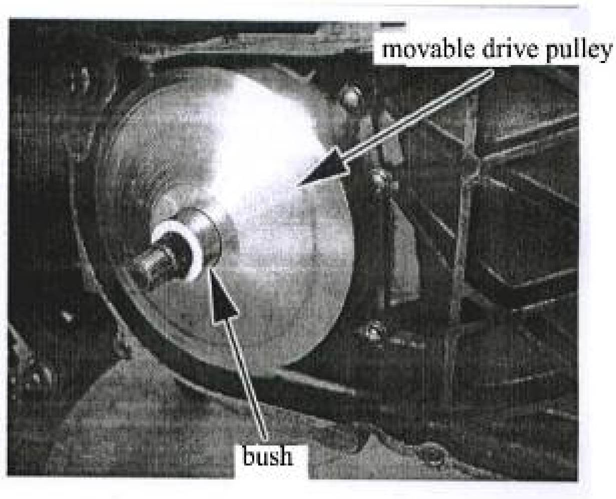
Confirm that the drive belt is not inserted in and the arrow can match the direction of running.

Install the left cover.

Drive pulley

Removal

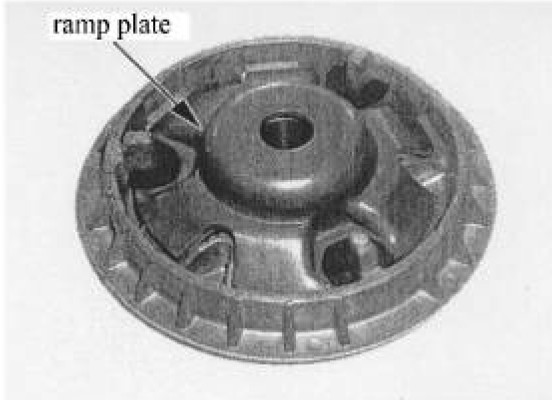
Remove left cover and drive belt
Remove the movable drive pulley.



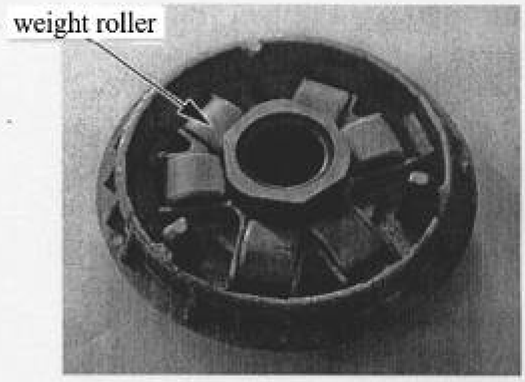
Disassembling

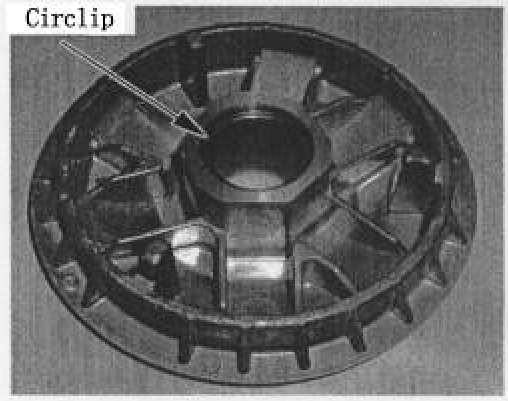
Remove the bush.

Remove the ramp plate and O-ring.

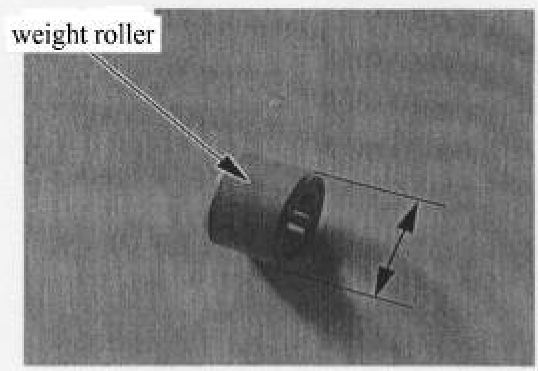


Remove the weight roller.



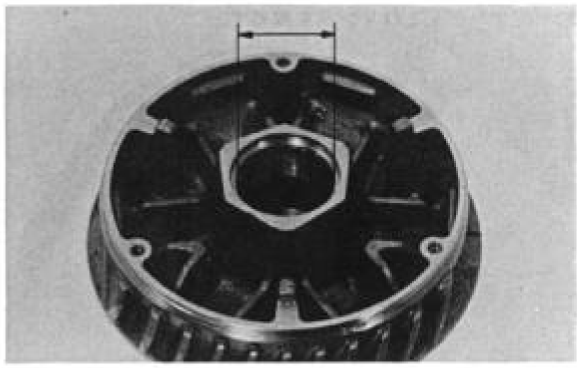


Inspection
Inspect the pulley sealing gasket for wear and damage, replace it with a new one if necessary.

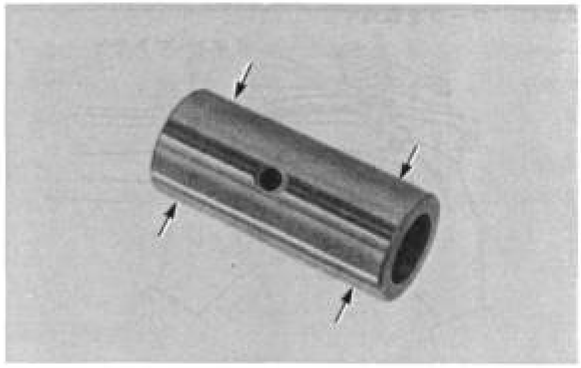


Inspect the weight roller for wear, scrape and damage.
Measure the external dia. of weight roller.
Limit for use: Replace if it is under 23.4 mm.

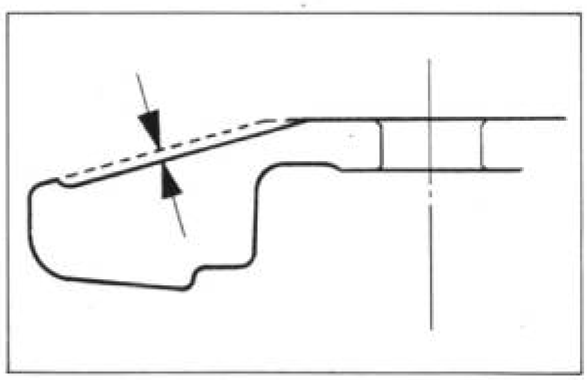
Measure the collar of movable drive pulley.
Limit for use: Replace if it is over 27.06 mm.



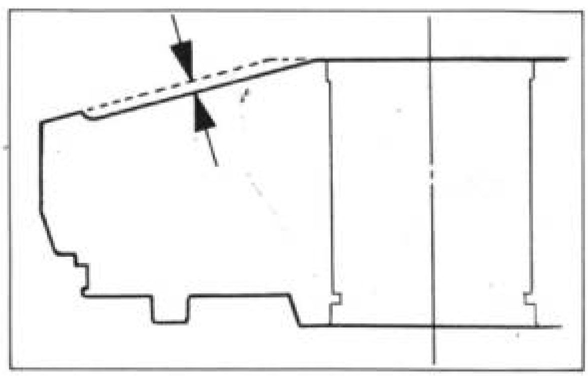
Inspect the drive pulley thimble for damage or wear.
Measure the external dia. of slide disk between thimble and drive pulley.
Limit for use:Replace if it is under 26.94 mm.



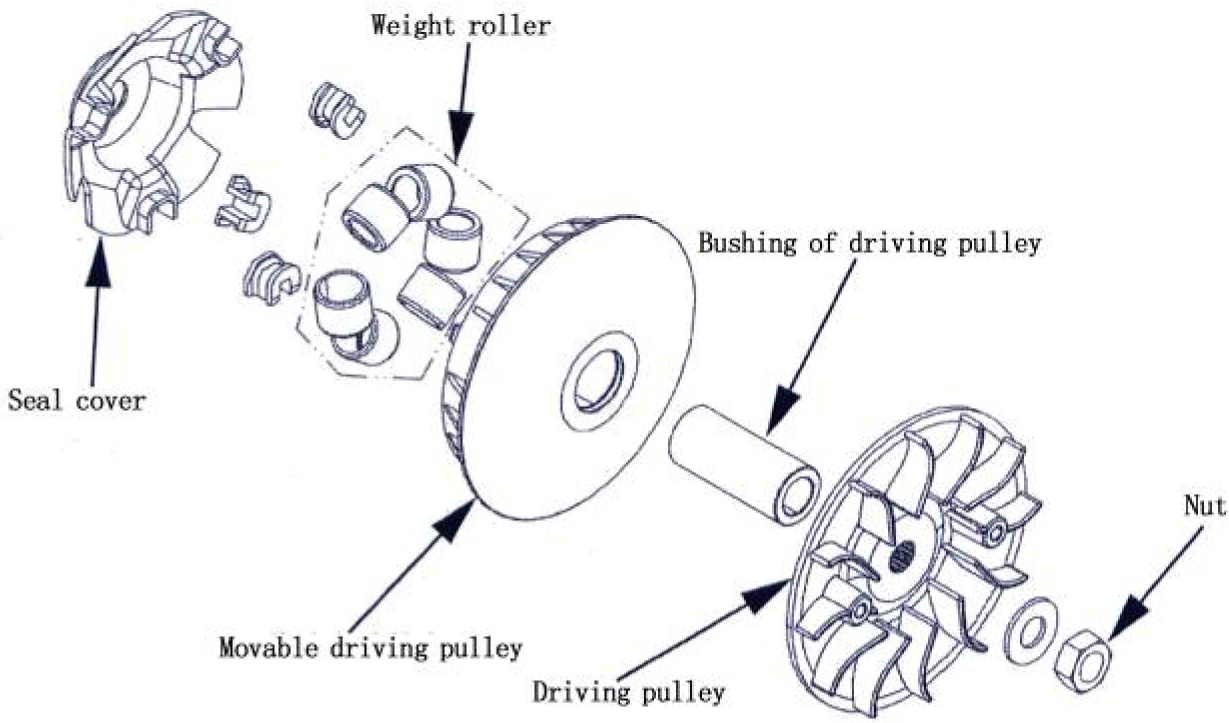
Inspect the drive pulley for wear or damage.
Measure drive pulley for wear depth.
Limit for use:Replace if it is over 0.04 mm.



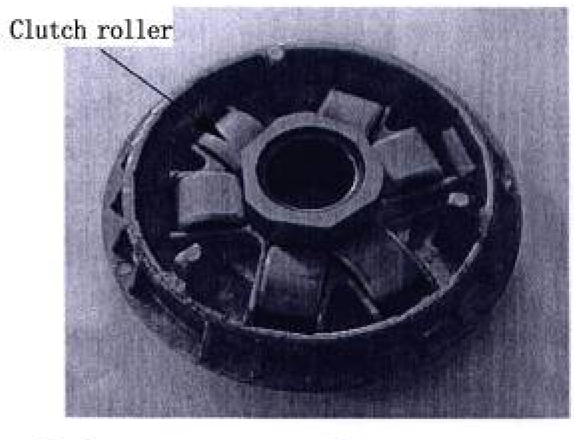
Inspect the movable drive pulley for wear or damage.
Measure the wear depth of movable drive pulley.
Limit for use: Replace if it is over 0.04 mm.



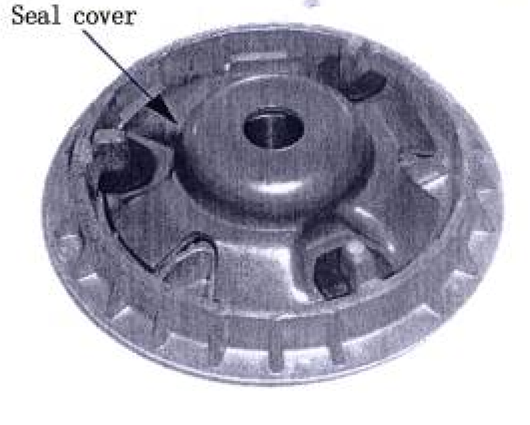
Assembling



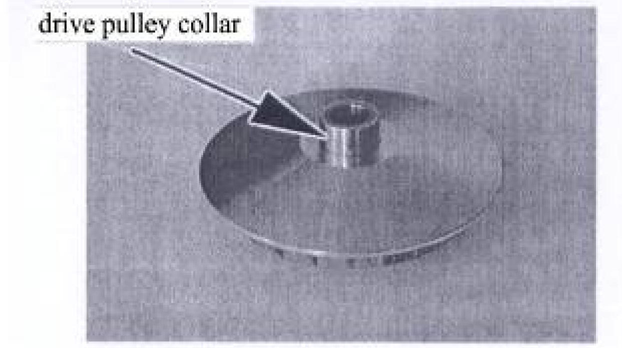
Apply grease in movable drive pulley,insert the weight roller.

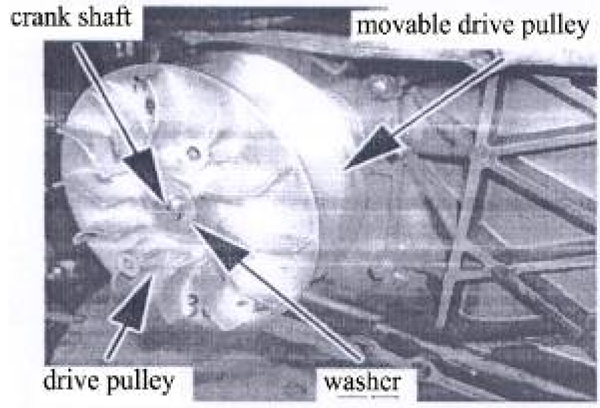


Install Seal cover.



Put the driving pulley bushing in movable driving pulley.



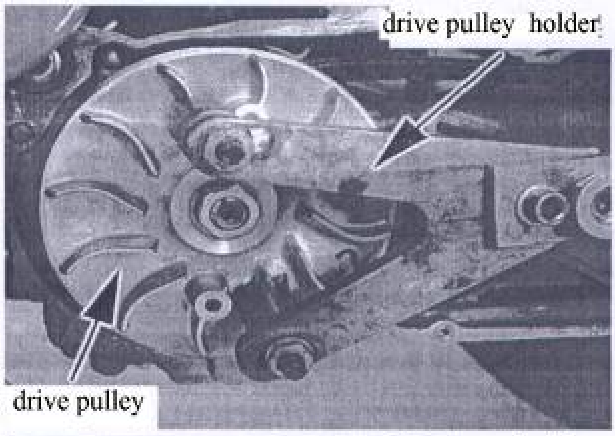


Installing

Install movable drive pulley onto crankshaft .

Install the belt.

Install drive pulley onto crankcase, then install the washer.



Press on the pulley and tighten the nuts.

Torque: 78 N*m

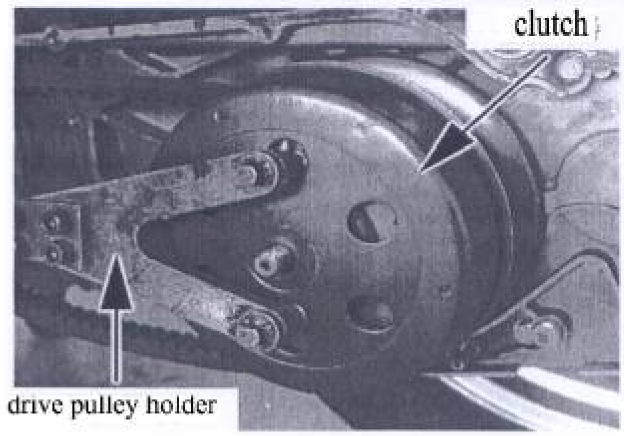
Special tool:
Drive pulley holder

Caution

Don't make the engine oil, grease, etc. stick on belt and pulley.

Confirm the drive belt is not stuck .

Clutch, driven pulley



Removal

Remove the left cover.

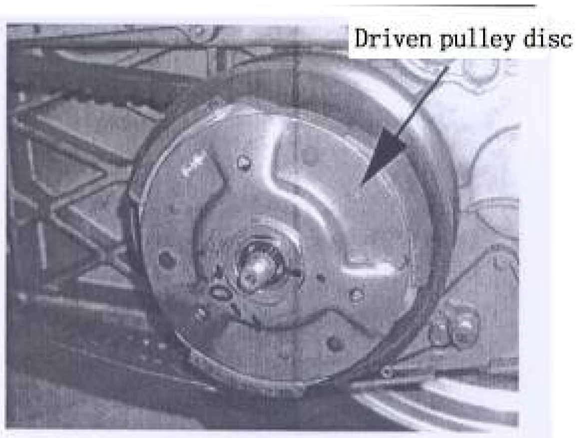
Remove drive pulley and drive belt.

Hold the outer pulley of clutch, and remove the Nut of outer pulley.

Special tool:
Drive pulley holder

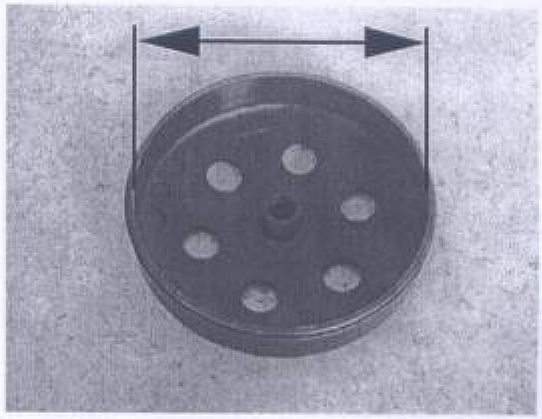
Take off the outer pulley.

Remove the driven pulley of clutch.
Remove the belt from the Driven pulley.

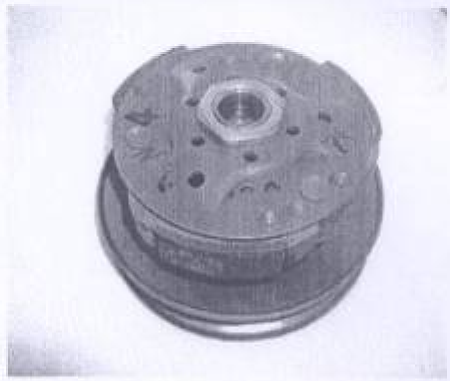


Inspection

Inspect the separating device of clutch for wear or damage.
Measure the bore of separating device.
Limit for use: Replace if it is over 153.8 mm .

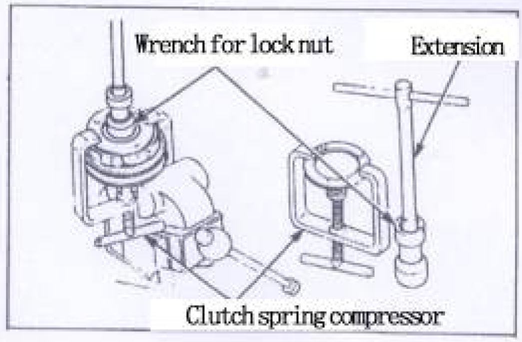


Inspect the clutch brake shoes for wear or damage.
Measure the thickness of friction plate.
Limit for use:Replace if it is under 1.5 mm.



Disassembling

As shown on the figure, install the clutch/driven pulley on spring compressor of clutch, compress the driven pulley spring.



Caution

In order to avoid the damage of driven pulley,don't press the spring too tight.

Special tools:
Clutch spring compressor

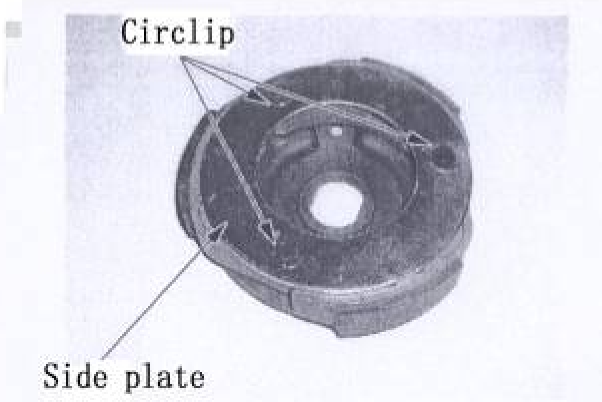
Use a vice to hold the compressor,Remove the lock nut.
Special tool:
Wrench for nut-lock
General tool:Extension device

Loose the compressor, disassemble the clutch and driven pulley.

Remove the circlip and side disk,disassemble the clutch.

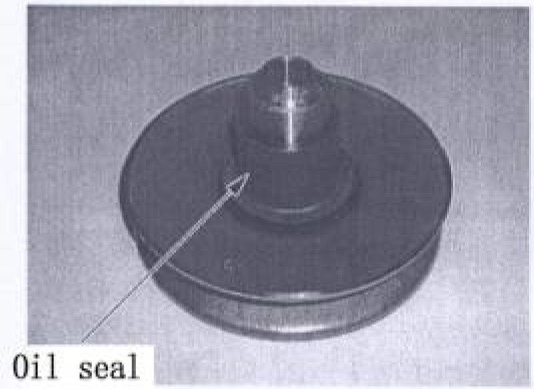
Caution

Take care , don't make the greases tick on friction plate of centrifugal shoe.

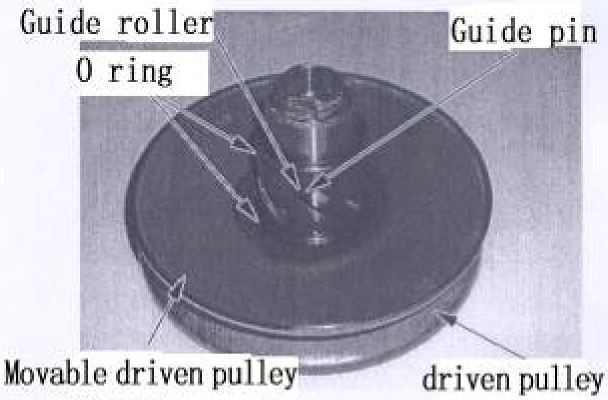


Disassembling of driven pulley

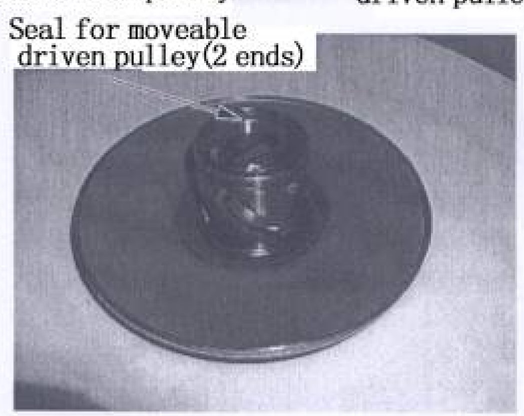
Remove the seal.



Draw the guide pin and remove the guide roller.
Remove the movable driven pulley from the driven pulley.
Remove the O-ring from movable driven pulley.



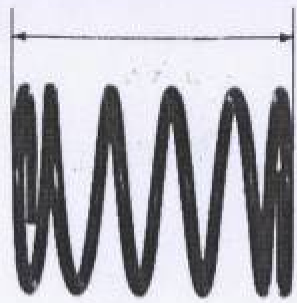
Remove the oil seal from the movable driven pulley.



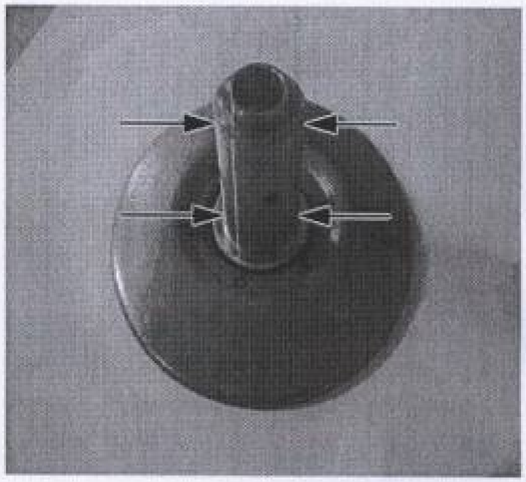
Inspection

Measure the free length of the driven pulley spring.
Limit for use:Replace if it is under 127㎜.

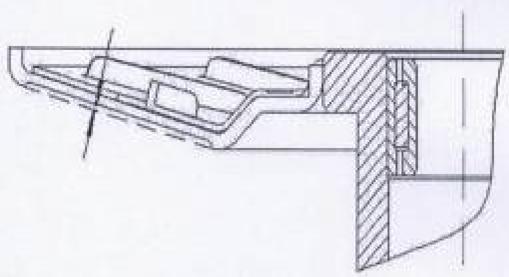
Inspect the driven pulley spring for damage or lack of elasticity. Replace the spring if necessary.



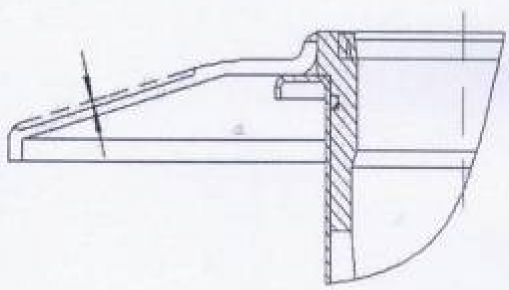
Inspect the driven pulley for damage or scrape.
Measure the external diameter of driven pulley.
Limit for use:Replace it if it is under 39.94 mm.
Inspect the bearing of driven pulley for loosing.
Replace with a new one if there is abnormal sound or loosing condition on bearing.



Measure the wear depth of driven pulley.
Limit for use:Replace if it is over 0.2 mm.

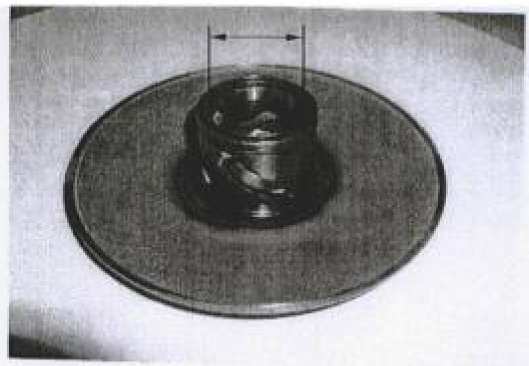


Measure the wear depth of movable driven pulley.
Limit for use: Replace if it is over 0.2 mm.

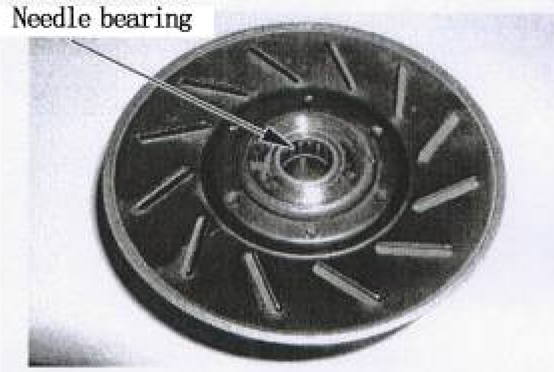


Inspect the movable driven pulley for wearing and damage.
Measure the bore.
Limit for use:Replace if it is over 40.06 mm.

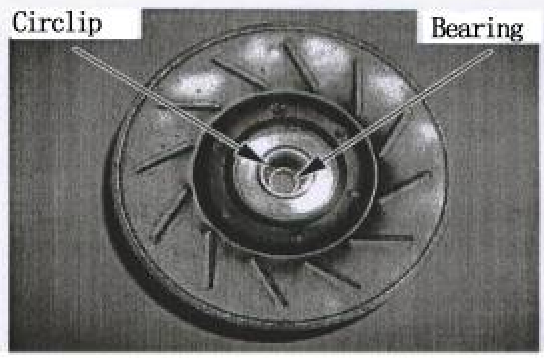
Inspect the guide slot for step wear.



Replacement of driven pulley bearing



Knock the needle bearing out of the driven pulley.
Replace the removed bearing with a new one.

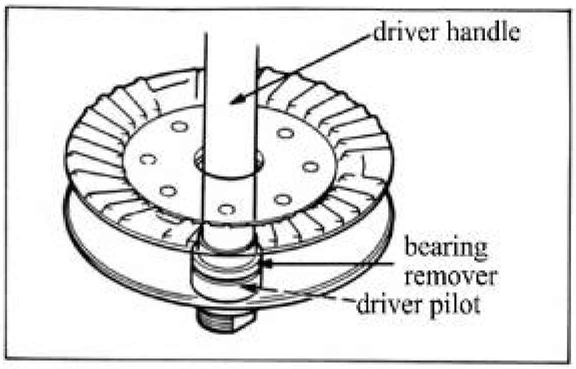


Remove the snap ring, knock the outside bearing out of the driven face.
Replace the removed bearing with a new one.

Apply the grease on outside bearing.

Special tool: Driver handle

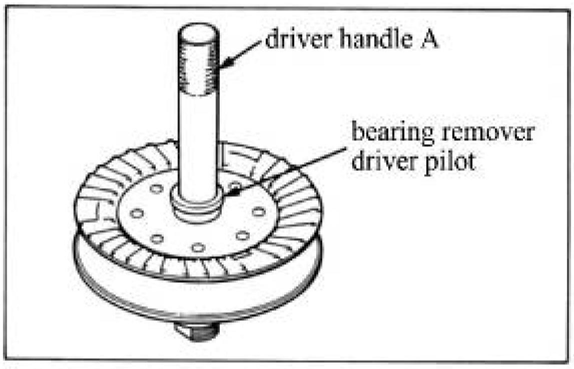
General tools:
Bearing remover
Driver guide



Install the snap ring.
Apply the grease on the bore of driven surface.

Note

Apply 11-13g of grease on whole circle uniformly. **Specified grease:** Mobile greas: XHP222

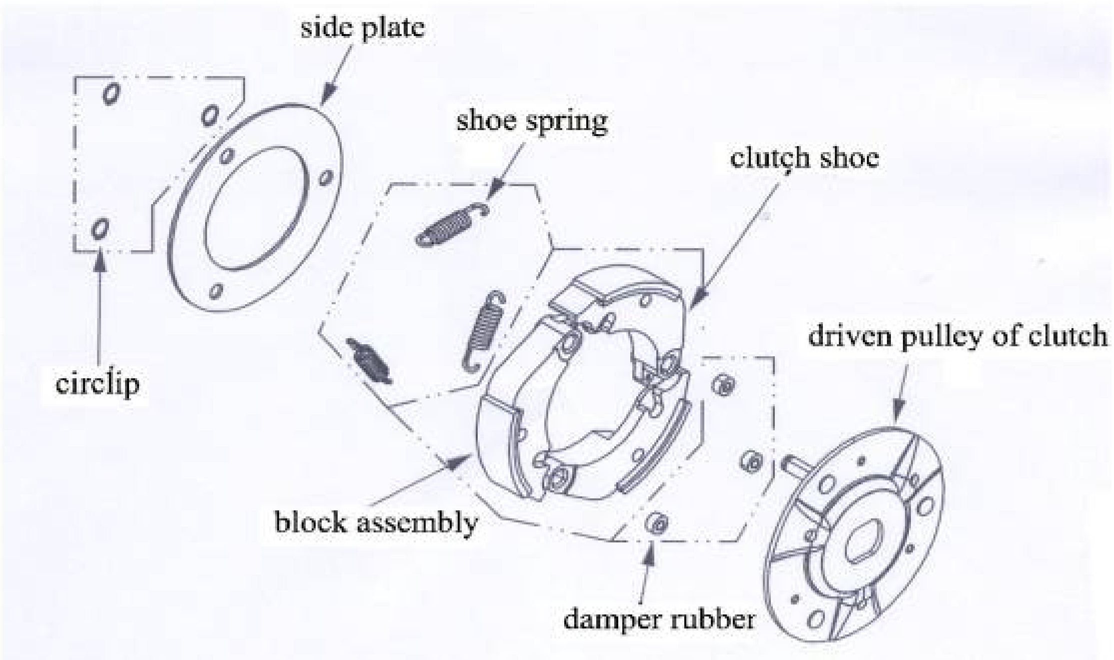


Press the needle bearing in its position with punching machine.

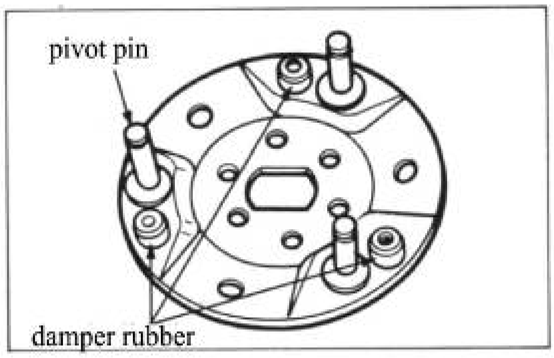
General tools:
Driver handle A
Bearing remover
Driver guide

Apply the grease on the slot of seal and install it on needle bearing.

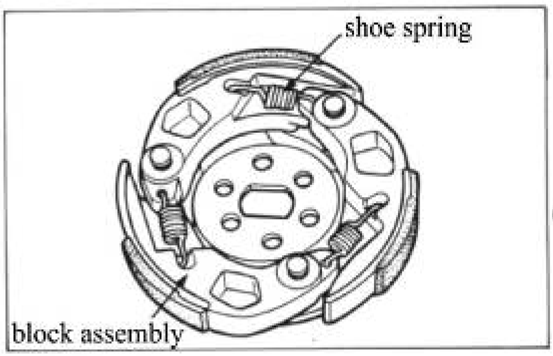
Assembling of clutch



Install the damping rubber gasket onto drive shaft plate pivot.

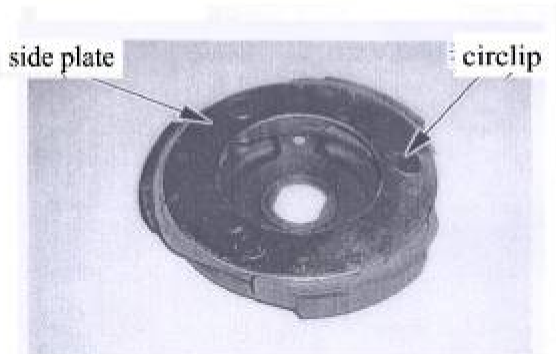


Install the centrifugal block on drive shaft plate, then install brake shoe spring on centrifugal block.

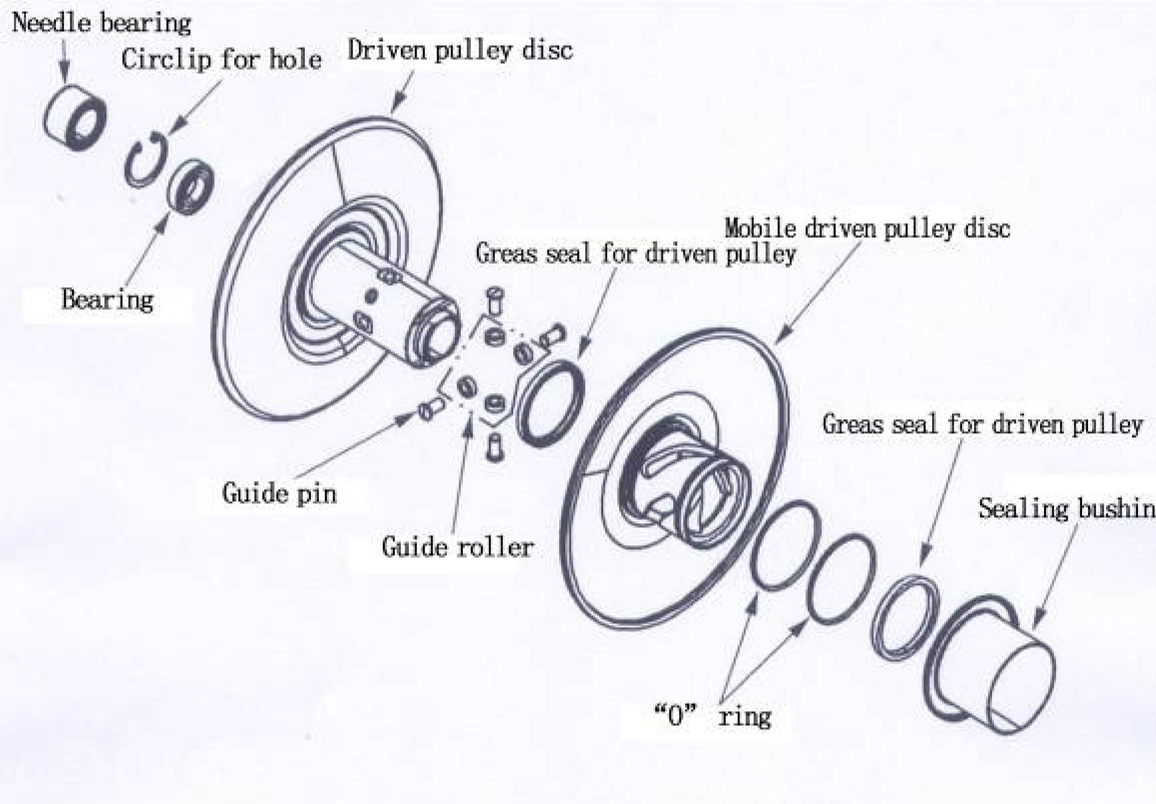


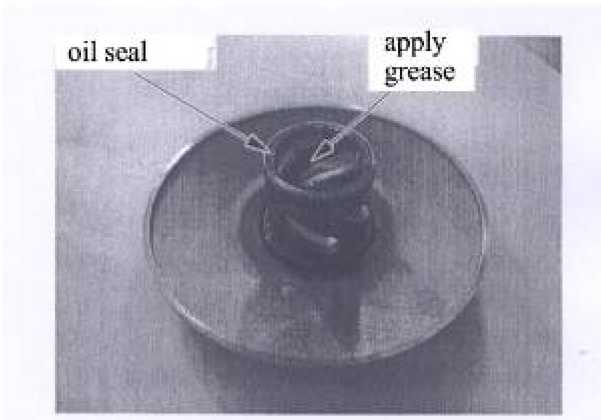
Install the side disk and fix it with circlip. Keep the cut of 3 circlips pointing to inside

Caution:
Replace the clutch unit wholly if the clutch need to be replaced due to wearing or damage.



Assembling of driven pulley

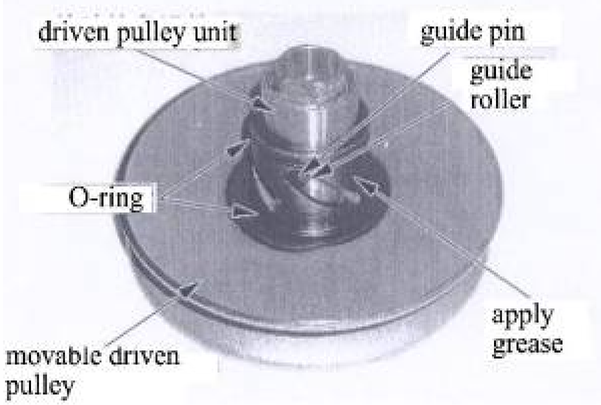




Clean the pulley surface.
Install the oil seal on movable driven pulley.
Apply a few grease on O-ring,install it on movable driven pulley.
Apply grease on the bore of movable driven pulley and guide roller.
Apply 4-5g of grease on whole circle uniformly.

Note

Specified grease: Mobile gresa:XHP222

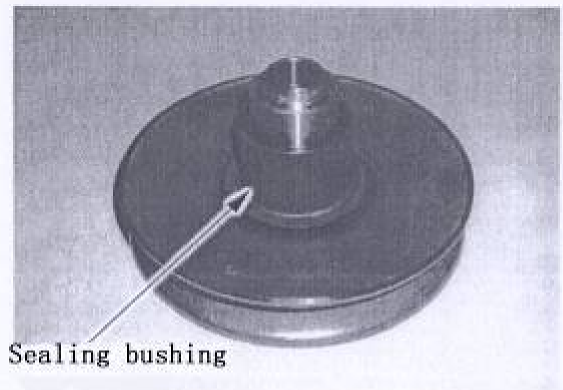


Install the movable driven face on driven pulley.
Apply grease on guide roller and guide pin and then install them in holes of driven pulley.

Install the sealing thimble.
Wipe the overflowed grease.

Note

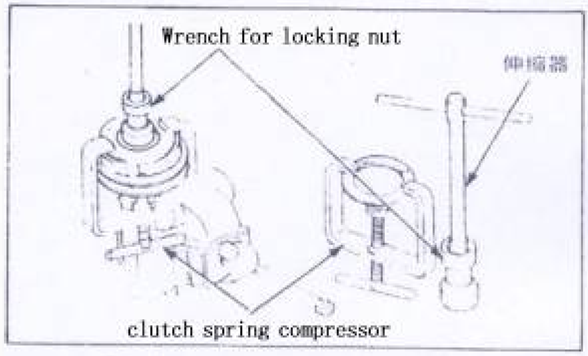
The grease stuck on driven pulley should be cleaned away.



Install the driven pulley spring and clutch on driven pulley, then conduct adjustment using a clutch spring compressor.

Note

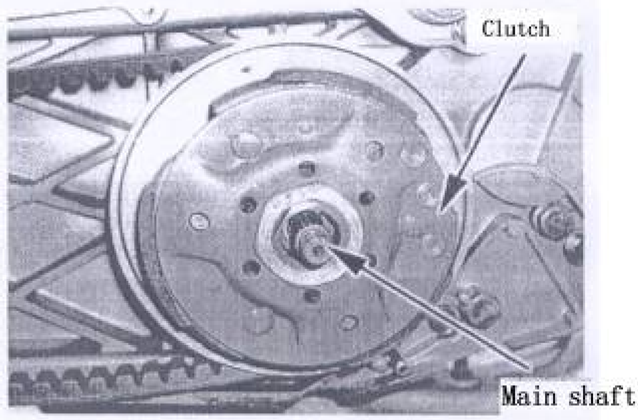
Make the n otch on driven pulley coin cid e with the notch on drive shaft plate.



Compress driven face spring using a compressor, install the retaining screw of clutch. As shown on the figure, fix the compressor with a vice, and tighten the nuts of clutch.
Torque: 69 N*m

Special tools:
Spring compressor of clutch
Wrench

General tool :
Extension device

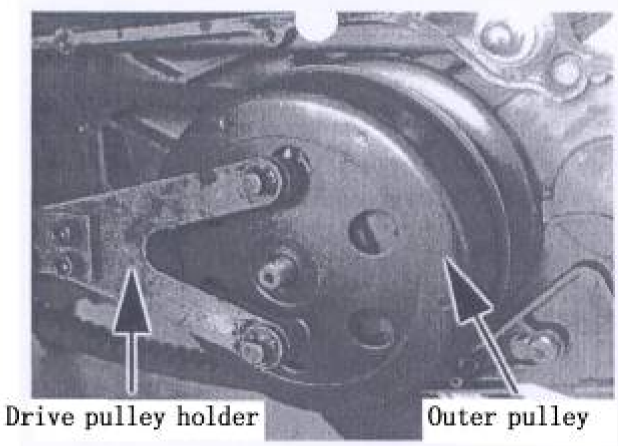


Installation
Install the clutch and driven pulley onto main shaft.

Note

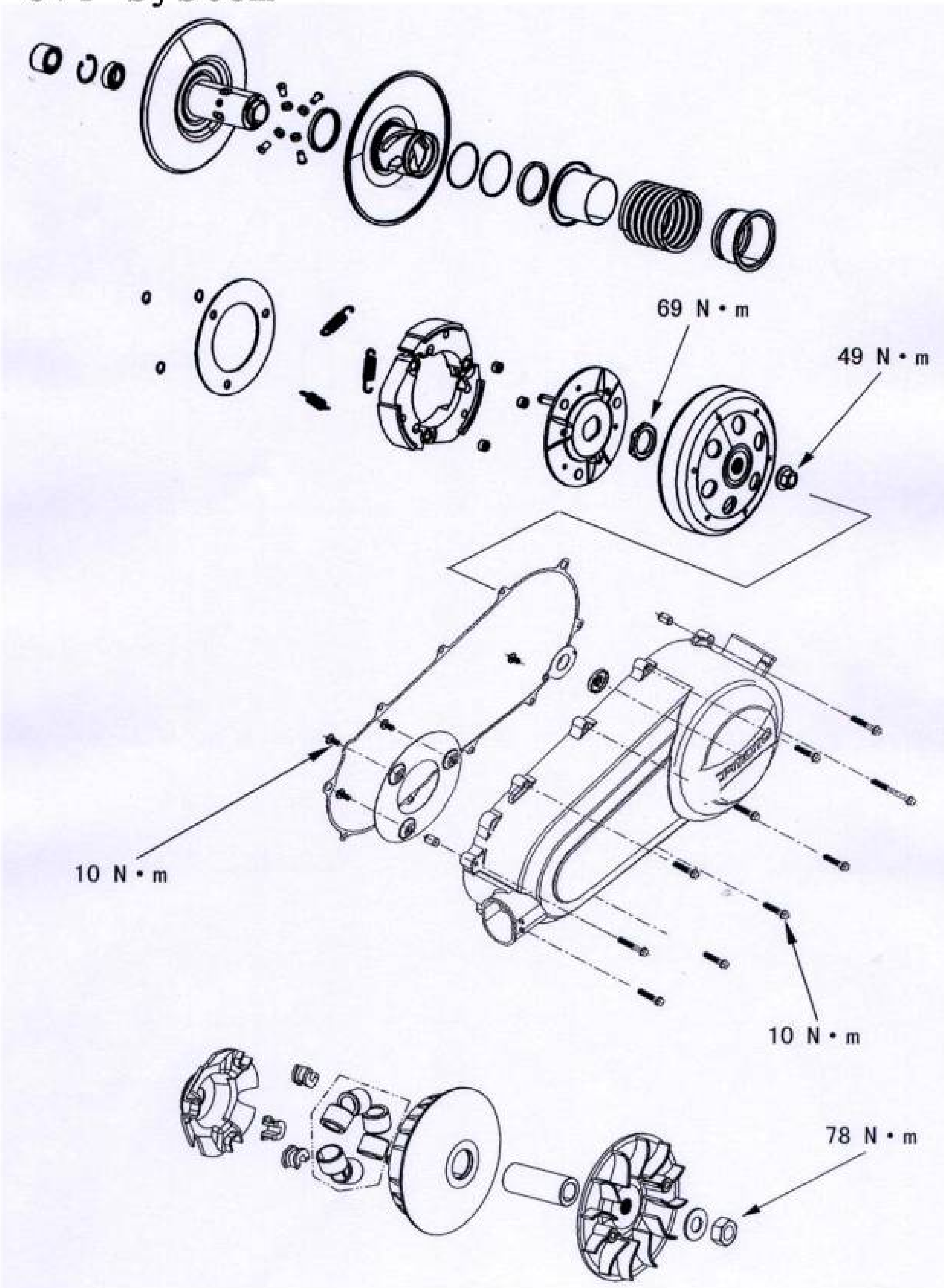
The g ease stuck on drive shaft should be cleaned away.

Install the outer pulley
Make the outer pulley of clutch remain in its condition using a drive pulley holder, tighten the nuts of outer pulley
Torque: 69 N*m



Special tool: Drive pulley holder
Install driving pulley, waher,
and nut, then tighten according
specified torque.
install left side cover.

CVT system



GEARBOX， GEAR SHIFT MECHANISM

Precaution

Recommended oil: 4 Stroke motorcycle SAE10W-30 or 4 trip motorcycle SAE20W-50.

API classification SE or SF-class engine oil (chose the type of oil according the figure on page)

Oil capacity: 0.85 L (when disassembly)

0.70 L (when replacement)

Torque

Gearbox bolts

M5	5 N*m	M6	10 N*m
M 8	22 N*m	Draining bolt	20 N*m
Filling bolt	20 N*m	Round bolt fixing driving angel gear	85 N*m
Round bolt fixing driven angel gear	40 N*m		

Tools

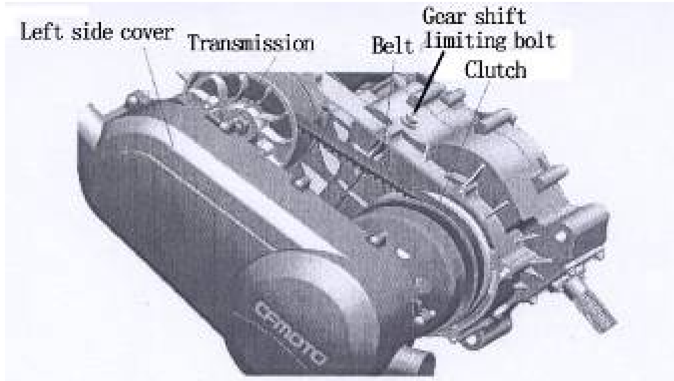
No.	Tool	specification	use	Remarks
1	Bearing-remover	12mm	Remove bearing 6201	Work with 8,9
2	Bearing-remover	15mm	Remove bearing 6202	Work with 8,9
4	Bearing-remover	17mm	Remove bearing 6303	Work with 8,9
5	Bearing-remover	20mm	Remove bearing 6304	Work with 8,9
6	Bearing-remover	22mm	Remove the bearing on the left of main shaft	Work with 8,9
7	Bearing-remover	25mm	Remove bearing 6305	Work with 8,9
8	Bearing-remover handle			
9	Balance block of Bearing-remover			
10	Guide for press bearing	12mm	Assembly bearing 6201	Work with 16
11	Guide for pressing bearing	15mm	Assembly bearing 6202	Work with 16
12	Guide for pressing bearing	17mm	Assembly bearing 6303	Work with 16
13	Guide for pressing bearing	20mm	Assembly bearing 6304	Work with 16
14	Guide for pressing bearing	22mm	assembly the bearing on the left of main shaft	Work with 16
15	Guide for press bearing	25mm	Assembly bearing 6305	Work with 16
16	Handle for pressing bearing			
17	Hook wrench	34mm-36mm	Remove or assembly round nut	
18	Punch		Riveting	

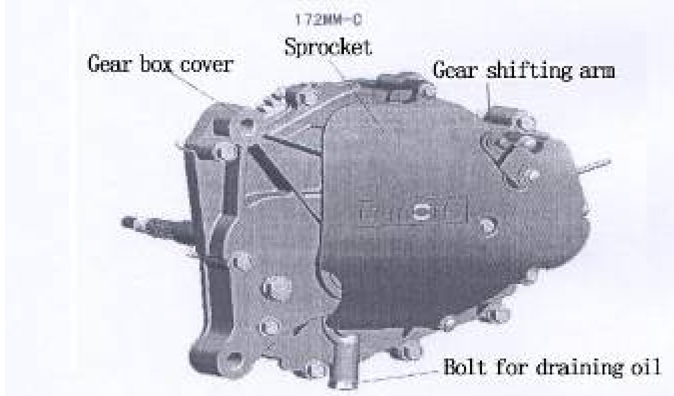
Trouble shooting

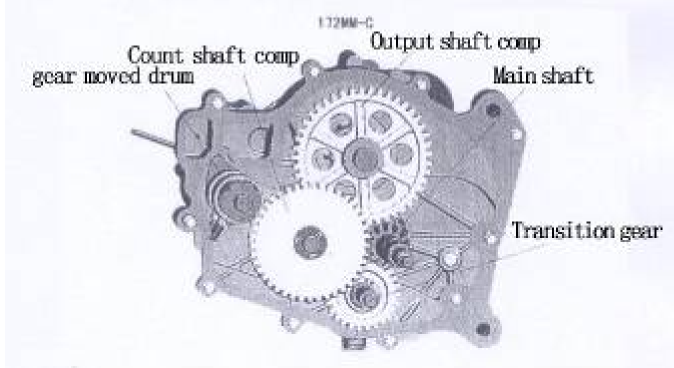
<table>
<tr>
<td>Engine can run vehicle can’t move
• Damage of gearbox
• Failure of gear-shifting mechamism</td>
<td>Gear position display don’t work, gear jump.
• Failure of connector to gear position display
• Failure of connection between chip and display.
• Failure of gear-shifting limitation.</td>
</tr>
<tr>
<td>Abnormal sound when moving
• Wearing, sintering on gears, damage on the surface of gears.
• Wearing, loosening on bearings
• Wrong clearance of angel gears</td>
<td>Leaking of oil
• Over-quantity of oil.
• Wearing or damage of oil seal.</td>
</tr>
</table>

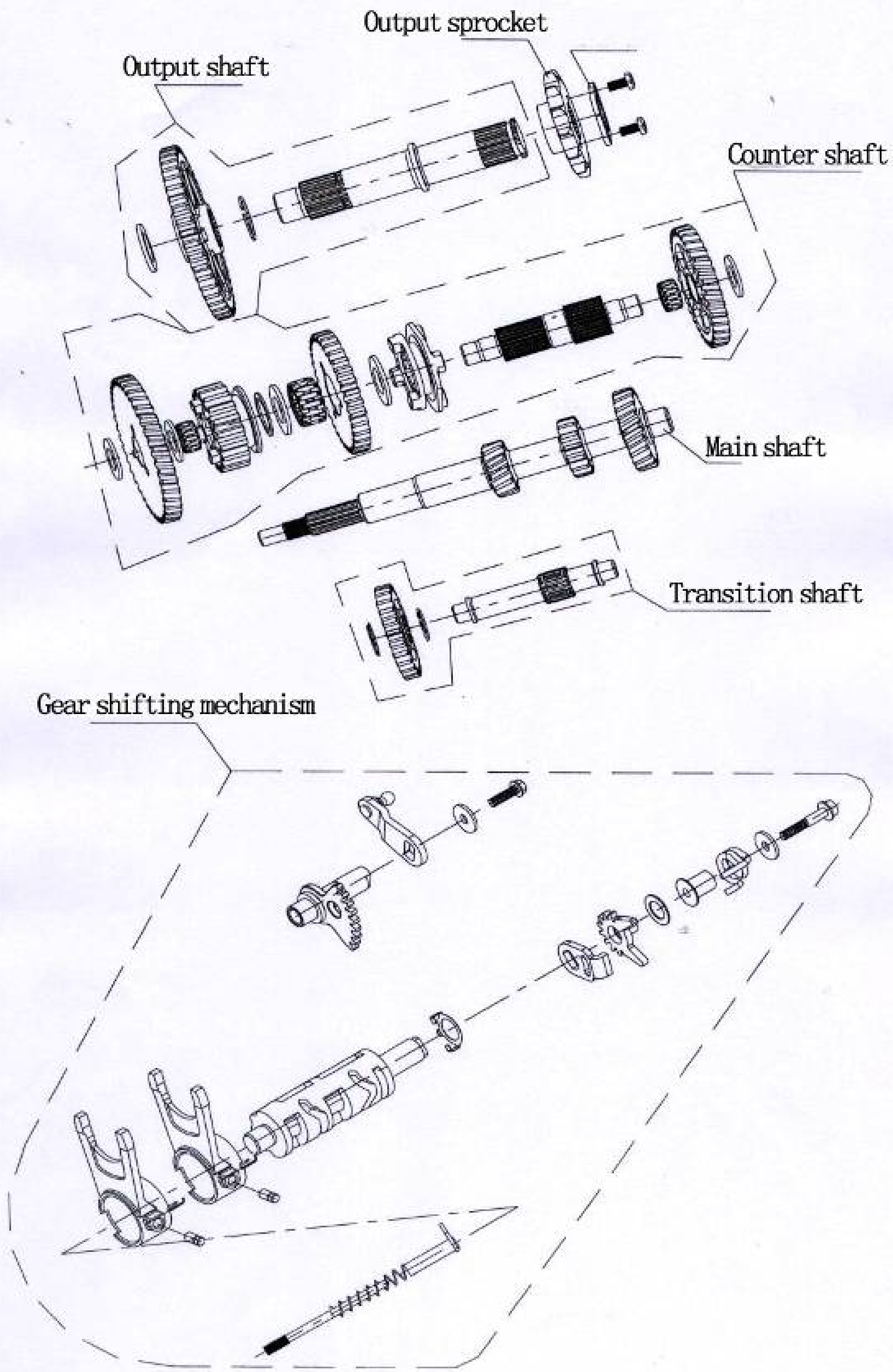
Disassembly

1. Remove left side cover.
2. Remove transmission, clutch ,belt.
3. Unscrew the draining bolt to drain the oil.
4. Remove gear shifting arm.
5. Unscrew the gear shift limiting bolt.
6. Unscrew the bolt fixing sprocket cover, and remove the sprocket cover, driving sector gear and driven sector gear and so on.
7. Unscrew the bolt fixing the pressing-sprocket plate, and take off sprocket.
8. Unscrew the bolt fixing gear box cover, and take off the gear box cover.
9. Take off the main shaft comp, counter shaft comp, transition shaft comp, output shaft comp and gear-moved drum assy.



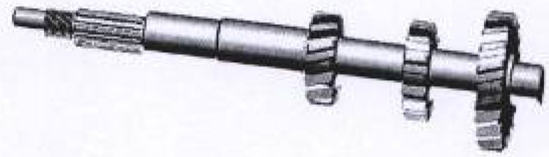





Output sprocket
Output shaft
Counter shaft
Main shaft
Transition shaft
Gear shifting mechanism

Inspection

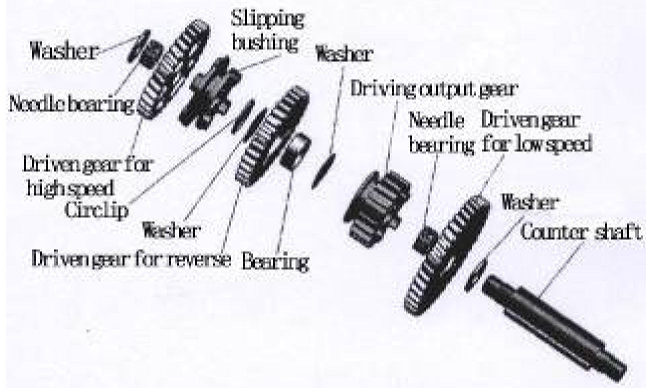
Check the surface of input main shaft to see if turn to blue, pitting, damage, wearing. Replace with a new one if any of the situations happen.



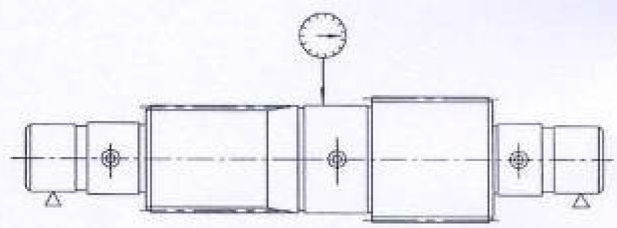
Replace the seals with a new one after being removed anyway.

Check if wearing or damage on counter shaft

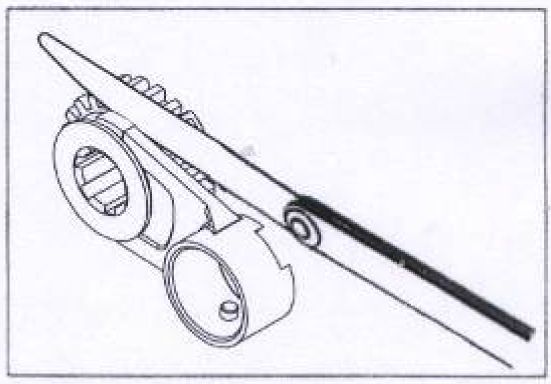
1. Beak down the counter shaft according the right figure.



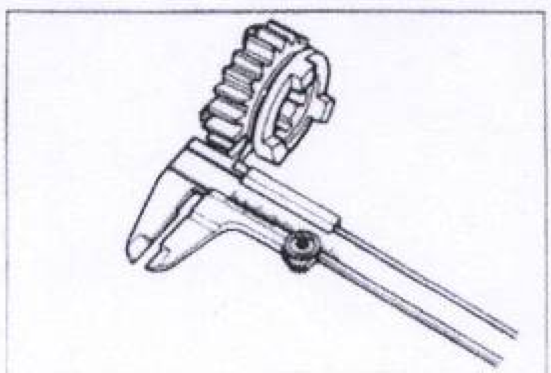
2. Measure the run out tolerance of the counter shaft with a dial indicator, replace with a new on if the tolerance is more than 0.03mm.
3. Check the surfaces of the gears to see if turn to blue, pitting, damage, over wearing, replace with a new one if any of them happen.



4. Check the clearance between shifting fork and gear: as the right figure, measure the clearance with a feeler. Replace shifting fork or gear if the clearance is more than 0.05mm.
   Standard clearance : 0.1～0.3mm



5. Measure the width of the groove for shifting fork with a slide caliper.

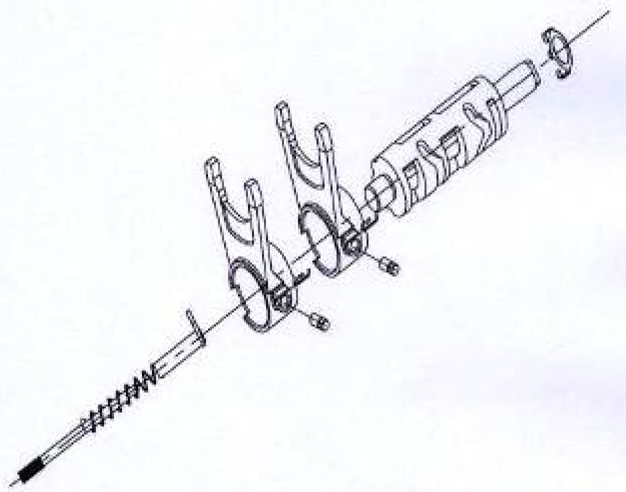


Inspection on gear-shift drum assembly

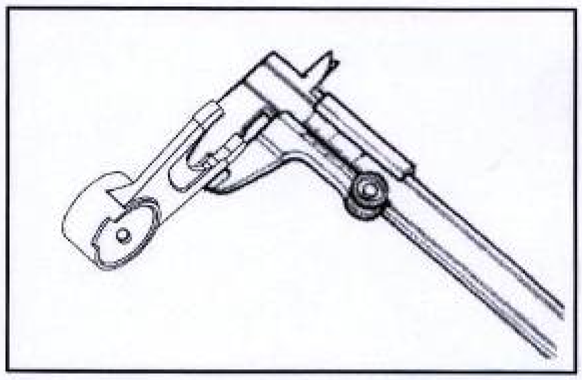
1. Break down the assembly according the right figure.

2. Check the drum, forks, fork pins to see if pitting, damage, wearing out. If that, replace with a new one.

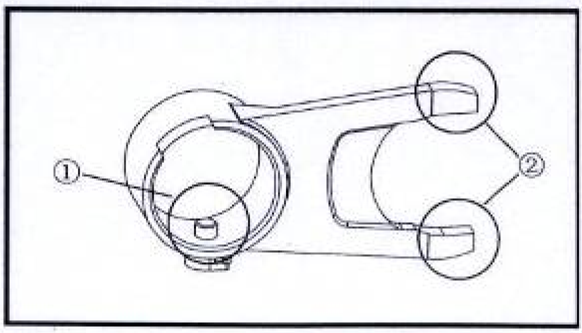
3. Check to see if contacting chip deform, lack of the elastic force, if that, replace with a new one.



4. Measure the thickness of the shifting-fork. the standard thickness: 5.90～6.00mm.



5. Check these areas pointed by ① and ② to see if damage, bend. If that, replace with a new one.

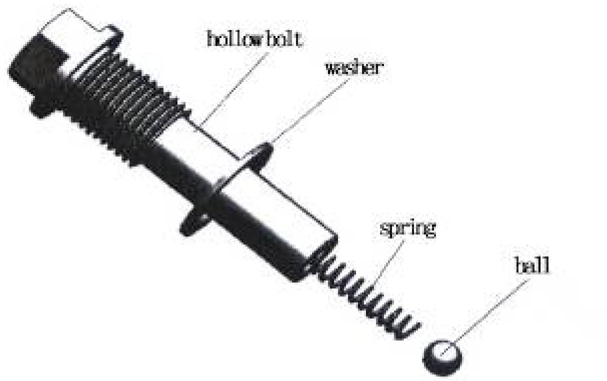


Check the transition shaft to see if wearing out, damaged.

1. Break down the output driving shaft Comp.
2. Check to see if turning blue, pitting, damage, wearing out, if that, replace the part with a new one.
   Tool: circlip pliers

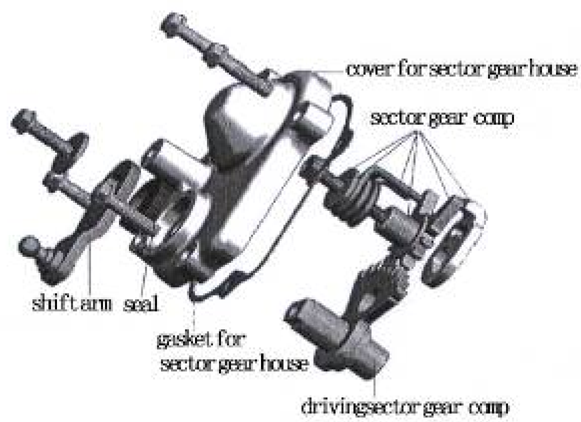
Inspection on gear-shifting limiting bolt

1. Break down the limiting bolt Comp.
2. Check the wearing and damage on the ball, if any of them happen, replace a new ball.



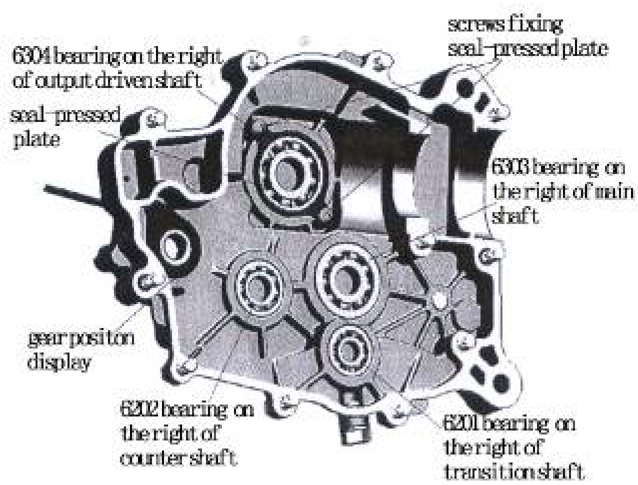
Check the wearing and damage on gear-shifting sector gear Comp.

1. Break down the Comp as the right figure.
2. Whenever remove the seal and the gasket, replace with a new one when put them back., at the same time, clean the surfaces going to be in contact. To be careful not to damage or scratch the surfaces.
3. Check the surfaces on gears and shaft to see if pitting, damage, wearing out. Replace with a new one if any of them is found.



Check the gearbox cover to see if damaged, wearing out.

1. Check the bearing to see if it works well, if not, replace with a new one.
2. Check the points of contact on gears-display to see if rust, if that polish the surface with sandpapering.
3. Always use a bearing- remover when replacing bearing.



Bearing remover

Bearing remover unit 15:

- Bearing-remover 15
- Bearing-remover handle
- Balance block of Bearing-remover

Bearing remover unit 17:

- Bearing-remover 17
- Bearing-remover handle
- Balance block of Bearing-remover

Bearing remover unit 20:

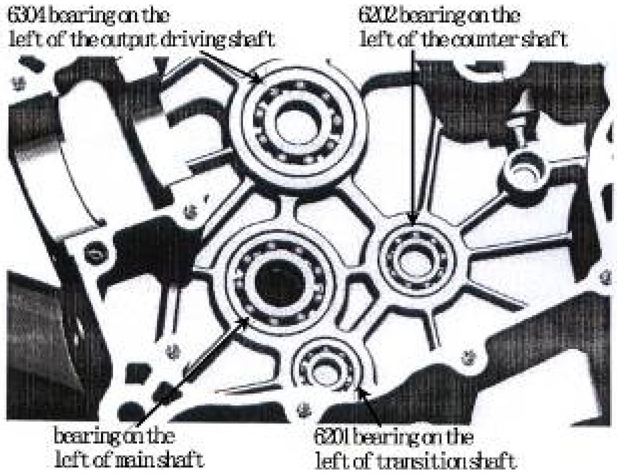
- Bearing-remover 20
- Bearing-remover handle
- Balance block of Bearing-remover

Bearing remover unit 12:

- Bearing-remover 12
- Bearing-remover handle
- Balance block of Bearing-remover

Check the bearings on the left case of gearbox

1. Check the bearing to see if it works well, if not, replace with a new one.
2. Always use a bearing- remover when replacing bearing.



Bearing remover

Bearing remover unit 15:

- Bearing-remover 15
- Bearing-remover handle
- Balance block of Bearing-remover

Bearing remover unit 22:

- Bearing-remover 22
- Bearing-remover handle
- Balance block of Bearing-remover

Bearing remover unit 20:

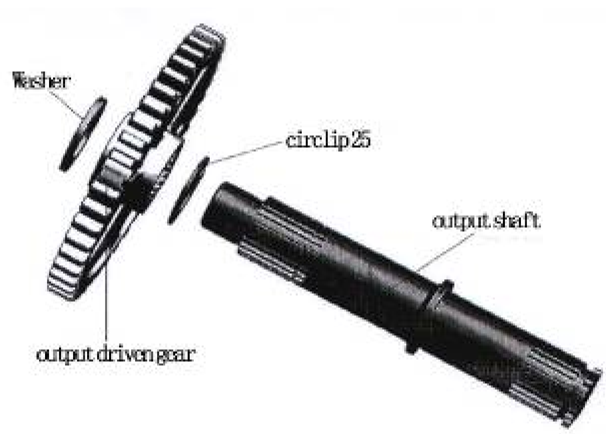
- Bearing-remover 20
- Bearing-remover handle
- Balance block of Bearing-remover

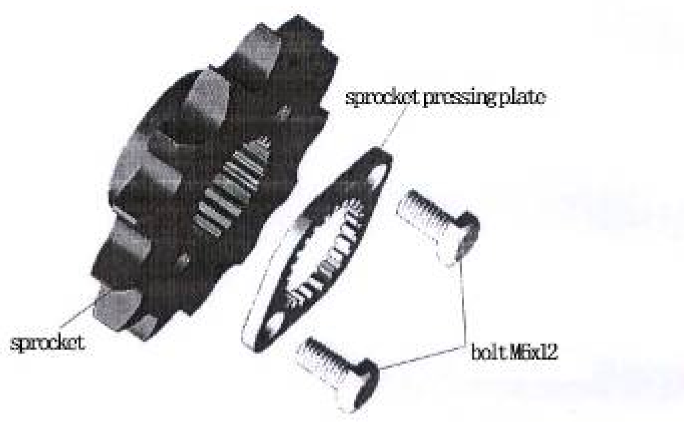
Bearing remover unit 12:

- Bearing-remover 12
- Bearing-remover handle
- Balance block of Bearing-remover

Inspection on output shaft Comp

1. Break down the output shaft Comp as the right figure.
2. Check to see if turning blue, pitting, damage, wearing out, if that, replaces the part with a new one.



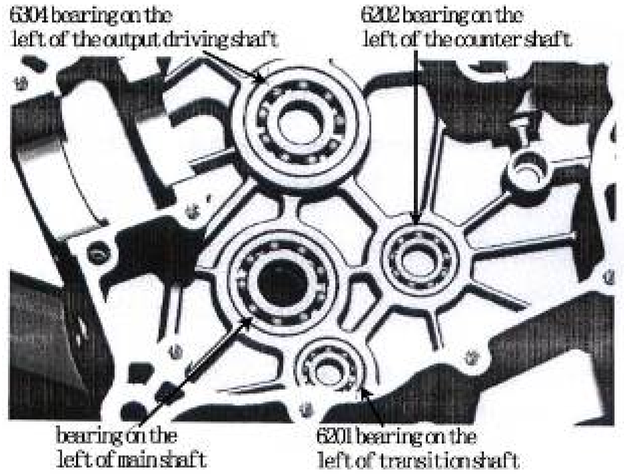


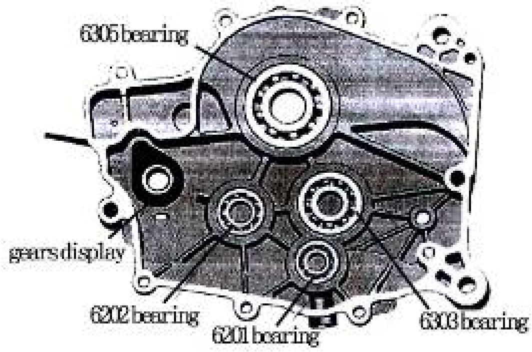
Assembly

1. The order of the assembly is contrary to the disassembly. Pay attention to the following tips:
1) Clean parts before installment.
2) Confirm there are no scratches on the surface of part.
3) Apply the engine oil to the movable parts.
4) Apply the grease to the sealing parts, such as: seals, O rings.
5) Replace with a new one after the pats like oil seal, O ring are removed.
2. If the bearings in the left case and gearbox cover need to be replaced. Pay attention to the following cautions:
1) Apply engine oil to the cylinders of bearing and case hole.
2) Always use a special tool to push down the bearing.

Special tools:

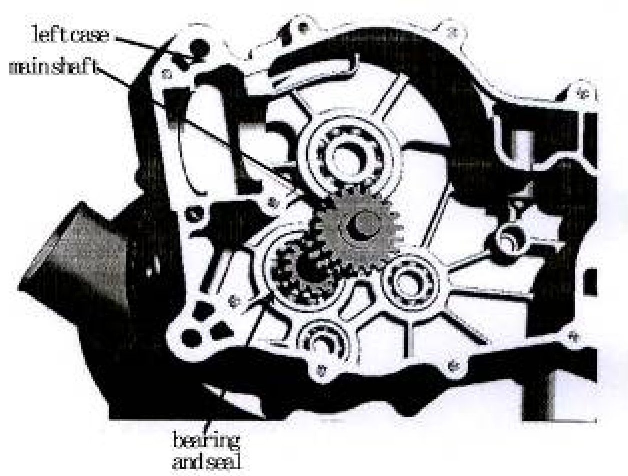
Guide for press bearing 25mm
Guide for pressing bearing 15mm
Guide for pressing bearing 12mm
Guide for pressing bearing 22mm
Guide for press bearing 17mm
Handle for pressing bearing





3. Install main shaft

1) Apply engine oil on the surfaces which main shaft and bearing contact in.
2) Put the main shaft on to the left case.



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<td>

4. Assembly output shaft Comp.

1) Put the gear (2) on to the output shaft after put the circlip (3) on to the output shaft(4), and put the washer (1) on to the output shaft(4),

2) Put the parts (5, 6, and 7) on to the output shaft after the gear box cover is put back.

General tool:

Shaft circlip pliers

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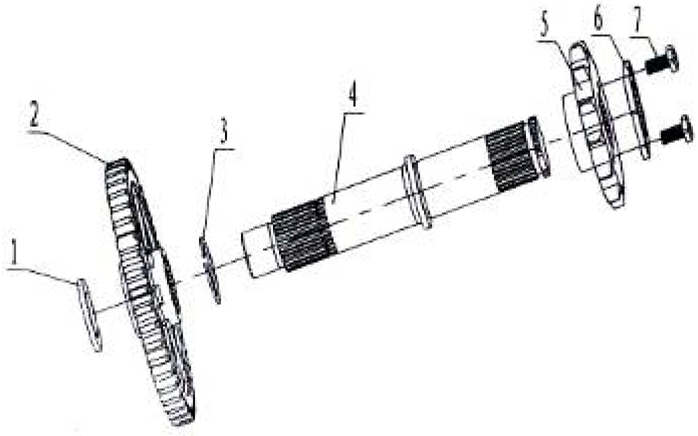


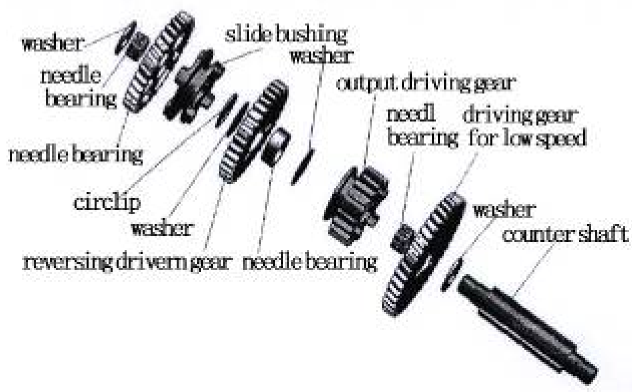
</td>
</tr>
</table>

5. **Assembly counter shaft Comp**.

1) Put all the parts on to the counter shaft in a contrary order of disassembly.
2) Apply engine oil on every needle bearing.
3) After assembly, check to see if the driven gear, reverse driven gear, low speed driven gear can run freely.

General tool:

Shaft circlip pliers

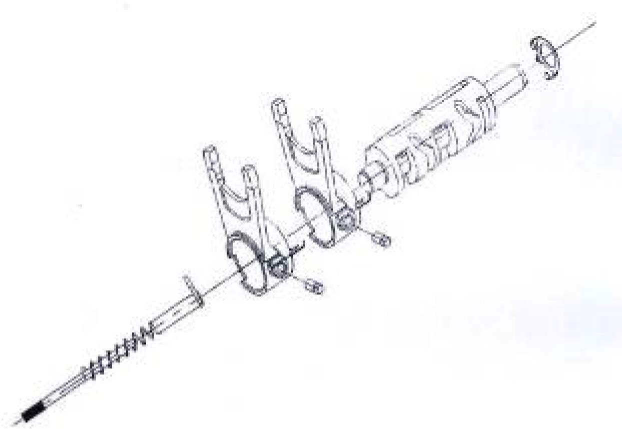


6. **Assembly gear shift drum unit.**

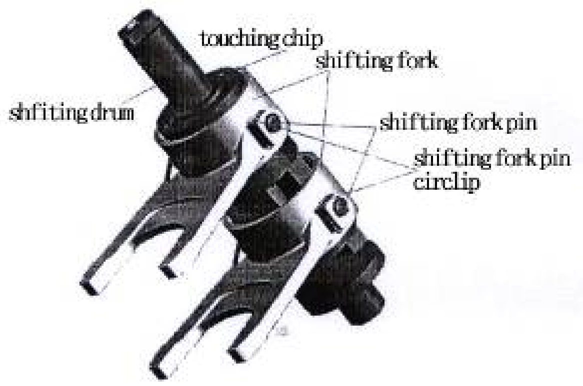
1) Put all the parts on to gear shift drum with contrary order of disassembly.
2) Apply engine oil in the holes in shift forks and pin holes
3) If the touch-chip of gear position display or the circlips of shift forks deform, replace with a new one.
4) After assembly, turn the forks to make sure that they can run smoothly.

General tool:

Nipper pliers, flat screwdriver



7.

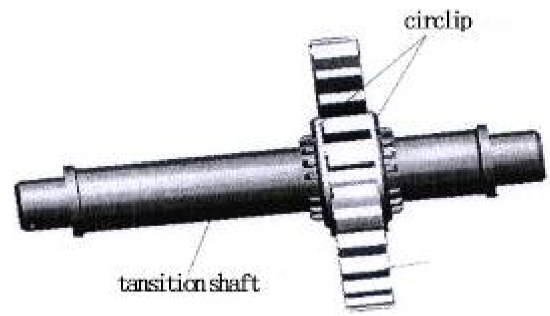


8. **Assembly transition shaft Comp**

Assemblies the transition shaft comp with reversing the order of disassembly.

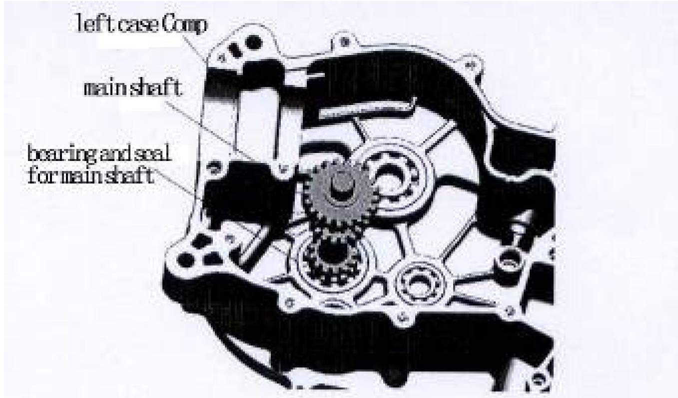
General tool:

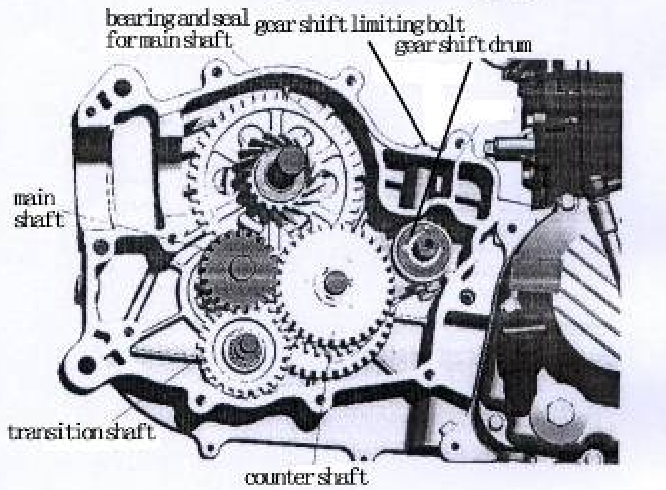
Shaft circlip pliers

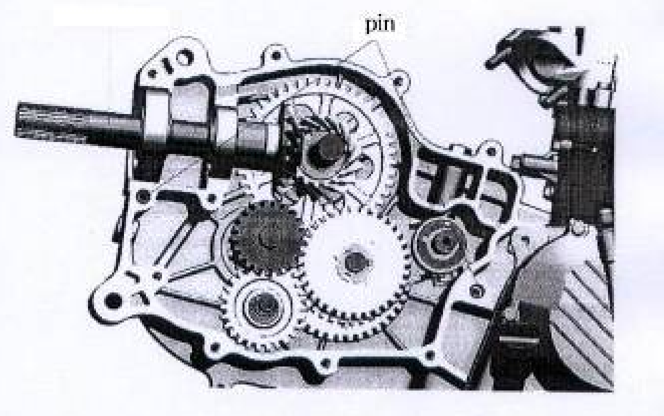


9. Assembly

1) Apply engine oil on the matching surfaces on both main shaft and bearing, then install the main shaft in to left case.
2) Assemble counter shaft Comp and gear shift drum Comp well, Make sure the gear shifting forks go into the groove on slide bushing on counter shaft.
3) Put the assembly assembled by last step in to the related holes in left case.
4) Put the output driving shaft Comp and transition shaft Comp in to the related holes in the left case.
5) Apply engine oil on the gear’s surfaces, matching surfaces and bearing.
6) Turn the output shaft with your left hand while turn the gear shift drum with your right hand, check to see if shift gears easily and smoothly, and the gears can engage each other fully.
7) Smear the seal glue on to the surfaces is going to be touched with gasket uniformly.
8) Knock down pins.(2pieces, 10x14).







9) Put on gasket.
10) Assemble the gear box cover Comp, install the parts 5,6,7 in to the related holes respectively.
Torque: 22 N*m

11) Install output sprocket, pressing plate, bolts.
Torque: 10N*m
12) Turn the gear shifting drum to the natural position, put on driving sector gear Comp , driven sector gear Comp and sprocket.

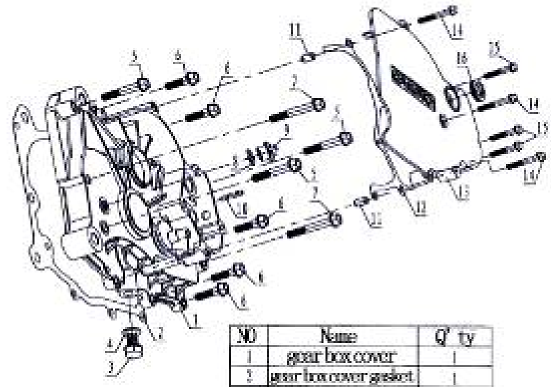
CAUTION:

Align the marks on both driving sector gear and driven sector gear.

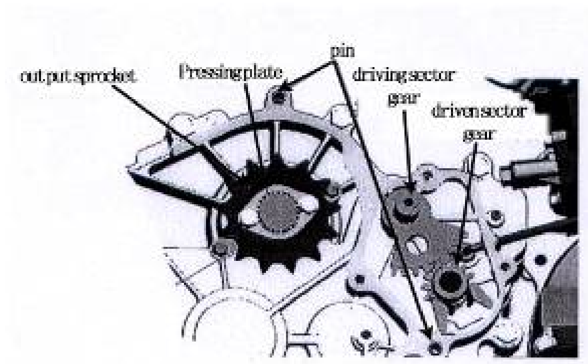
13) Install sprocket pin and sprocket cover.
   a. Put the knock pin (11, 2pcs) in to the holes in the sprocket cover.
   b. Put on sprocket and sprocket cover.
   c. Put the parts 14,15 into the related holes.
   Torque: 10N*m.
   d. Install the part 16, use a special tool to push the seal down, and smear some grease on the lip of seal.
14) Put the draining bolt (4) with washer (3) into the related hole.
Torque: 20N*m
15) Install seal, sector gear house cover, gear shifting arm Comp.
Torque for bolt of M6: 10N*m.

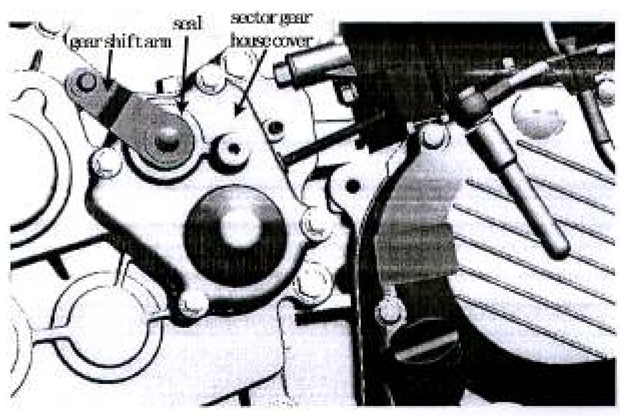
CAUTION:

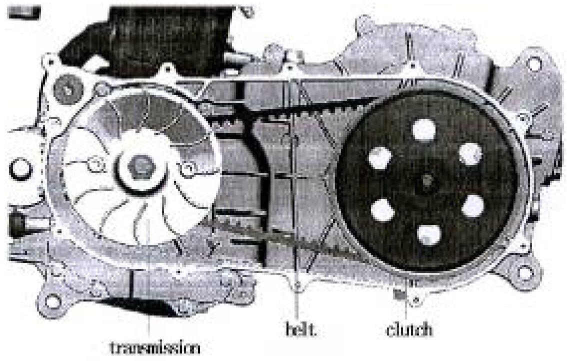
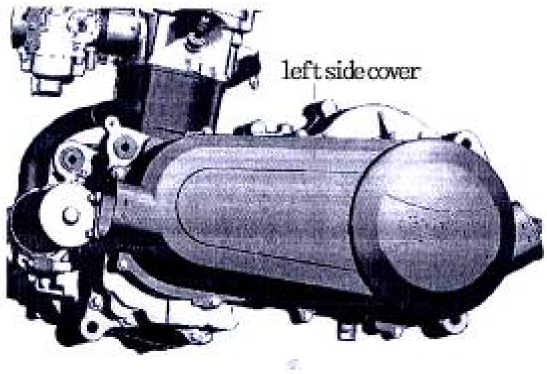
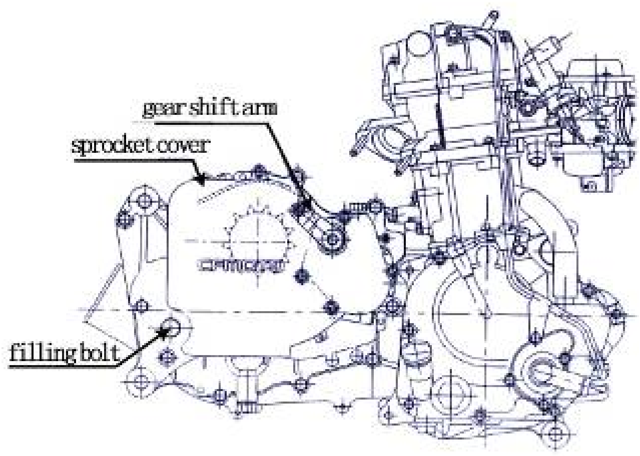
Smear some grease on the lip of seal.



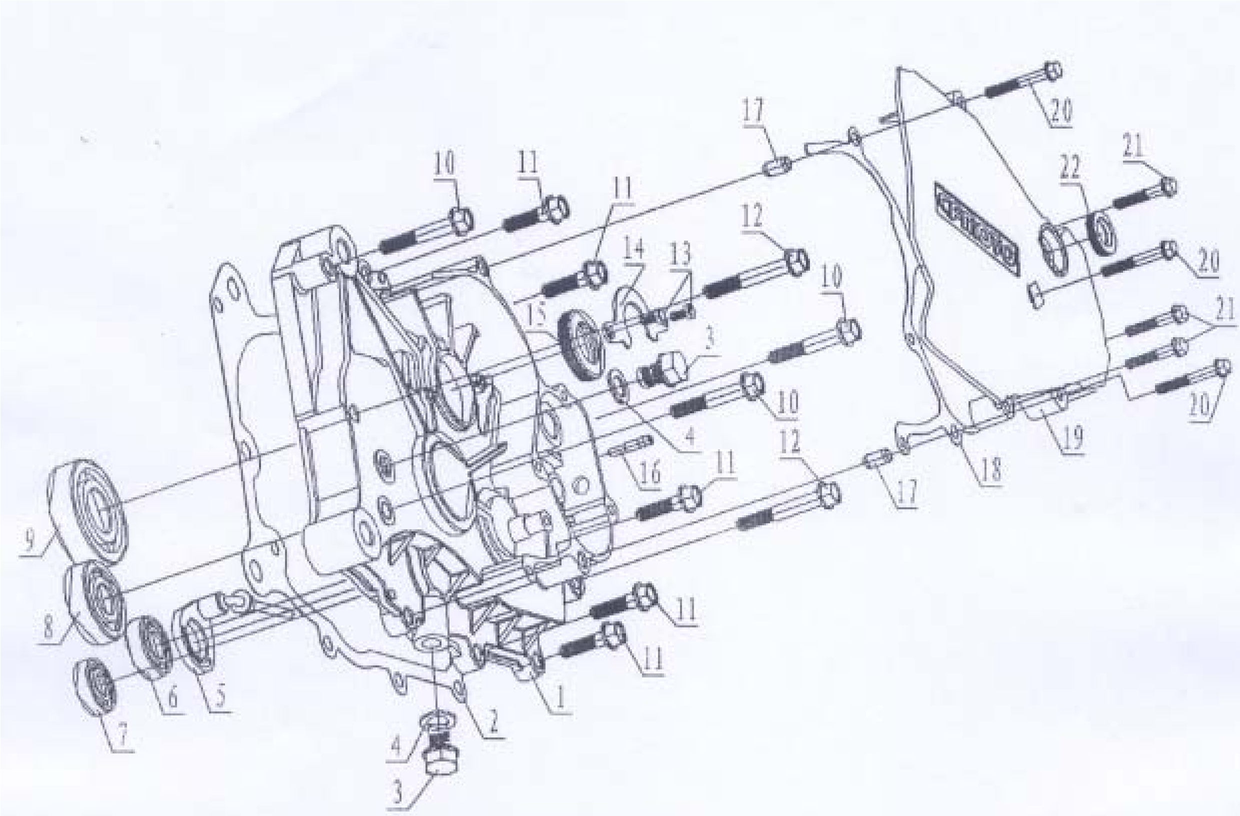
NO	Name	Q'ty
1	gear box cover	1
2	gear box cover gasket	1
3	gear box gasket.	1
4	draining bolt.M12x1.5	1
5	washer 12	2
6	bolt.M18x18	5
7	bolt.M18x30	2
8	bolt.M18x35	1
9	O ring, 19x2.5	1
10	filling bolt.M12x1.5x12	1
11	vent.connector	2
12	pin 8x14	1
13	sprocket cover gasket	1
14	bolt	3
15	bolt M6x32	3
16	seal SD 15x25x5	1



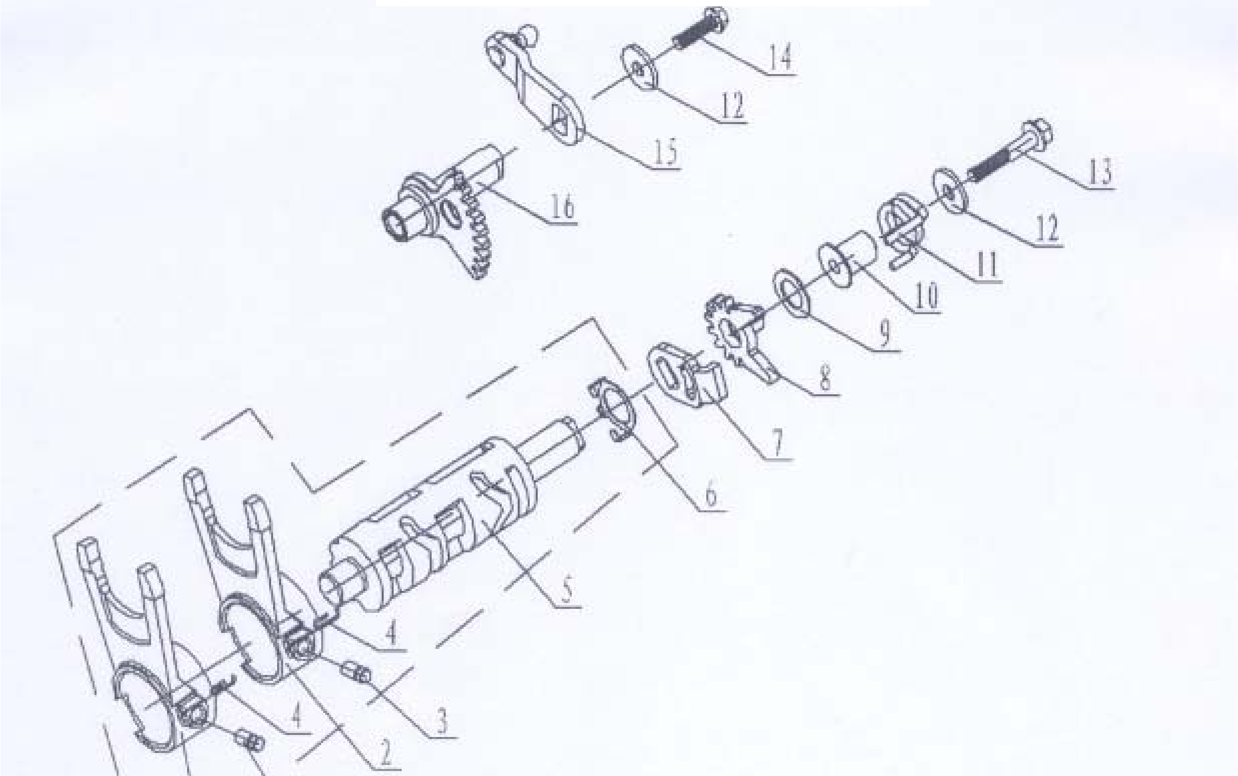


16) Install seal of main shaft, transmission, clutch and belt. Torque: Nut of clutch: 49N*m Nut of transmission: 78N*m	
17) Install left cover.	
18) Fill oil through the fill bolt hole, and then screw the filling bolt. **CAUTION:** Put the engine into a horizontal position. Fill in the oil specified for 4 strokes motor. Fill in the oil to the neck of filling bolt hole. After fill in oil, install O-ring and screw the filling bolt.	

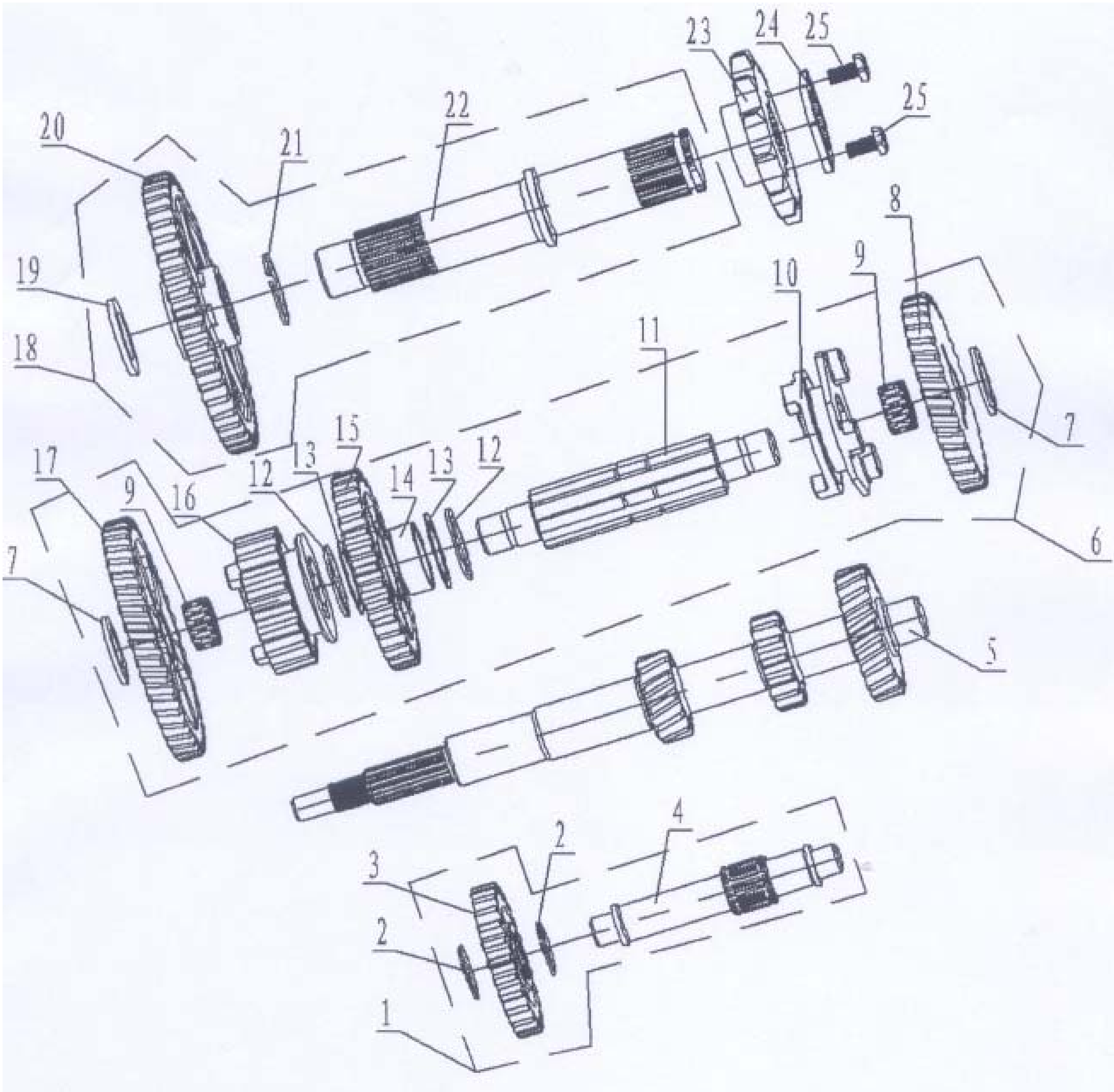
Gear box cover



Gear shifting mechanism



Speed reducing gear



MAGNETO, STARTER, CLUTCH AND OIL PUMP

Precaution for operation

. The operation can be conducted on magneto, start clutch and engine oil pump under the condition of the engine with load.
. Please to see the chapter 17 for the inspecting of magneto.
. Take care, don't make the foreign matter fall into the inside of the engine when remove the right crankcase cover.
. The engine oil pump should be replaced with a new set when it reaches the life time.

Reference for maintenance and repair

Item		Normal value	Limit for use
Starting motor driven gear	int. dia.	22.026-22.045	22.10
	ext. dia.	42.175-42.2	42.15
Int. dia. of start clutch separator		58.897-58.927	58.96
Oil pump	Clearance of impeller tip	0.15	0.20
	Clearance between pump body and outer impeller	0.15-0.20	0.25
	Clearance between impeller and pump body	0.04-0.09	0.12

Torque for tightening

Flying wheel nuts	10.5-11.5 kg-m (apply MoO_2 grease)	
Oil pipe bolt	8 mm	10 N*m
	12 mm	20 N*m
Start clutch bolts	30 N*m	(apply thread fixative)

Tools:

Special tool
Flying wheel remover
General tool
Flying wheel stay

Trouble shooting

. Trouble shooting of magneto
. Trouble shooting of starter motor

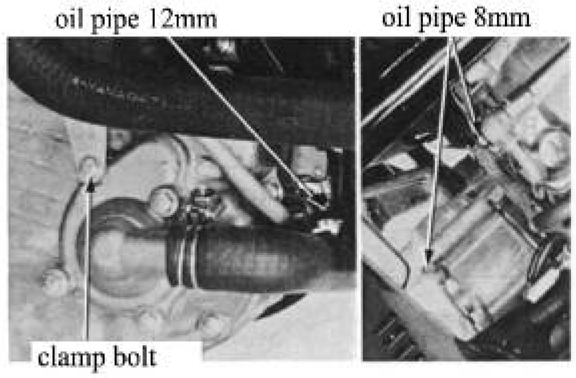
Too low oil level
. Natural consumption of oil
. Oil leakage
. Piston ring worn
. Valve guide or valve seat worn
· Failure of seal for valve rod

No proper lubricating of oil
. Too low oil level
. Oil filter, oil passage or oil pipe blocked
. Oil pump damaged

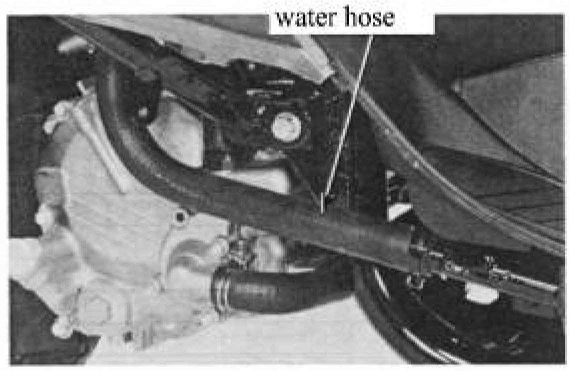
Oil polluted
. Oil is not changed
. Cylinder gasket damaged
. Piston ring worn

Removal of right crankcase cover

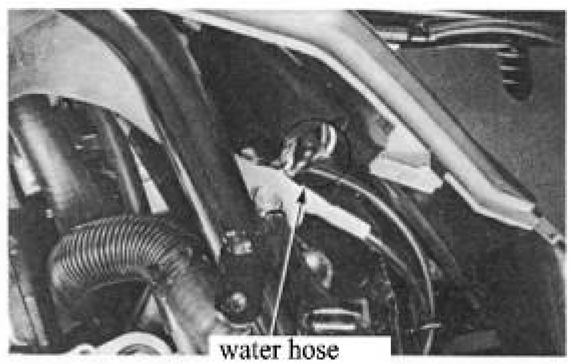
Remove the right-rear cover.
Drain the cooling liquid.
Drain the engine oil.
Loosen two bolts for retaining the pipe, two 8 mm oil pipe bolts, and one 12 mm oil pipe bolt, remove the oil pipe.



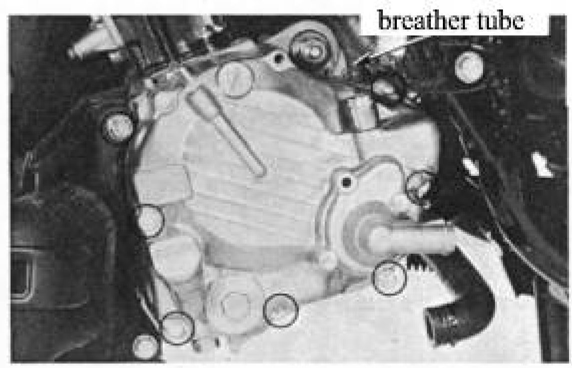
Remove the water hose from the water pump and right crankcase cover.



Cutoff the pickup coil, magneto connector and connection of socket.

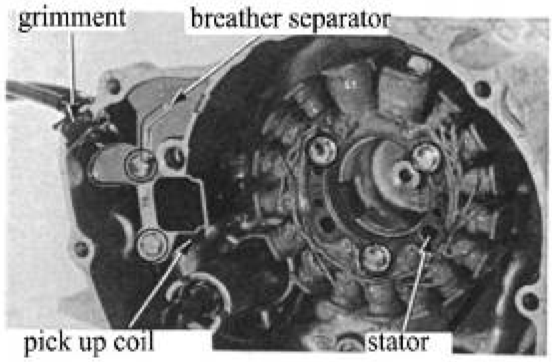


Remove the breather pipe of crankcase from right crankcase cover. Loosen 7 bolts of right crankcase cover, remove the right crankcase cover.
Remove the cylinder gasket and knock pin.

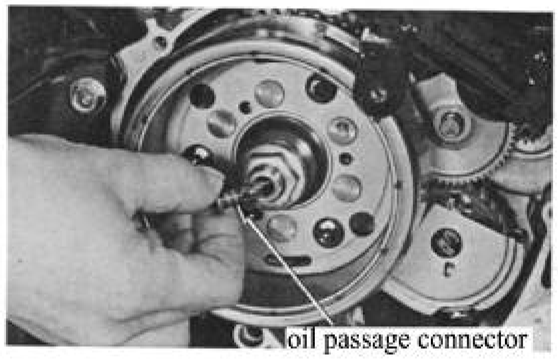


Removal of stator and pickup coil

Loosen two bolts, remove the crankcase breather separator and pickup coil.
Loosen 3 bolts for retaining stator, remove the stator from right crankcase cover.
Remove the wire- protecting ring from right crank-case cover.



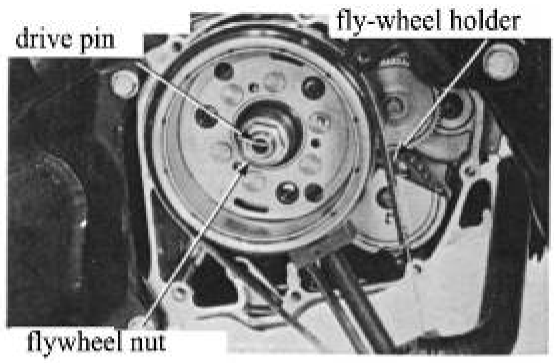
Removal of flying wheel
Remove the oil passage connector from crankshaft.



Hold the flying wheel with a flying wheel holder, remove the flying wheel nuts and washer.
Remove the cylindrical pin of oil passage connector from crankshaft.

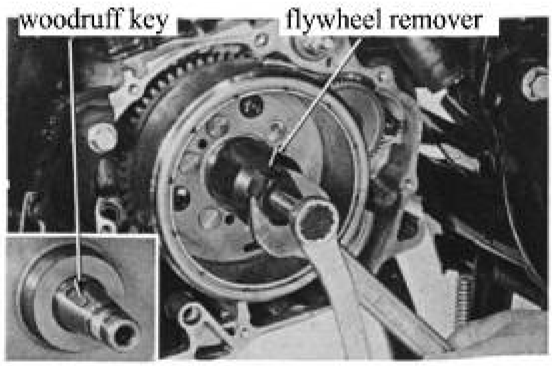
Note

Take care, don't make the pin fall into crankcase.



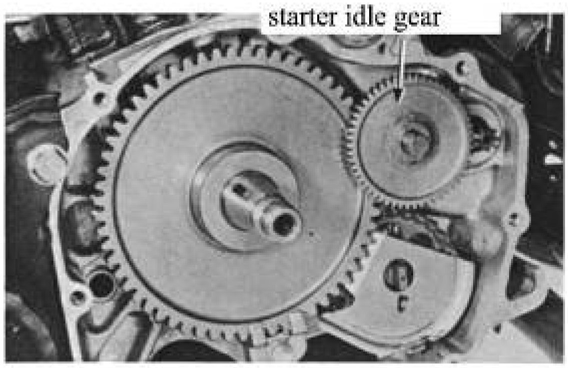
General tool:
Flying wheel holder

Remove the flying wheel with a flying wheel remover.
Remove the woodruff key from the crankshaft.
Special tool:
Flying wheel remover

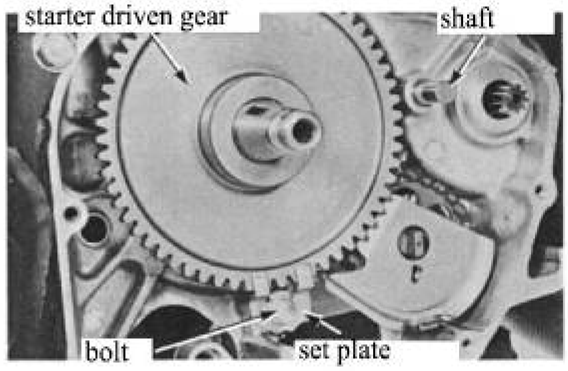


One way clutch

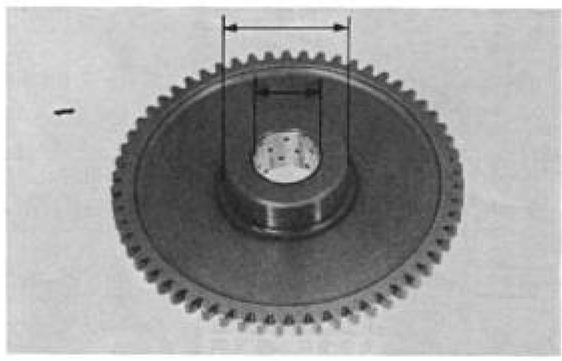
Removal
Remove the starter idle gear.



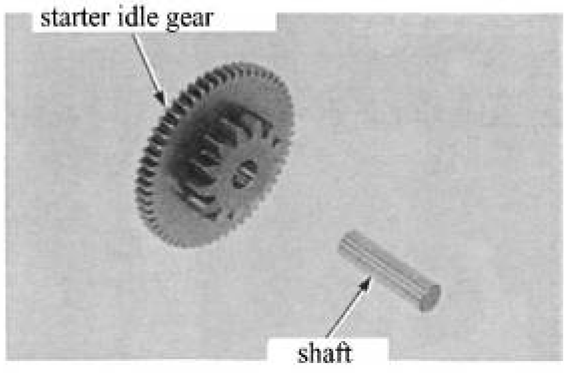
Remove the starter idle gear shaft.
Loosen the bolt, remove the set plate.
Remove the starter driven gear.



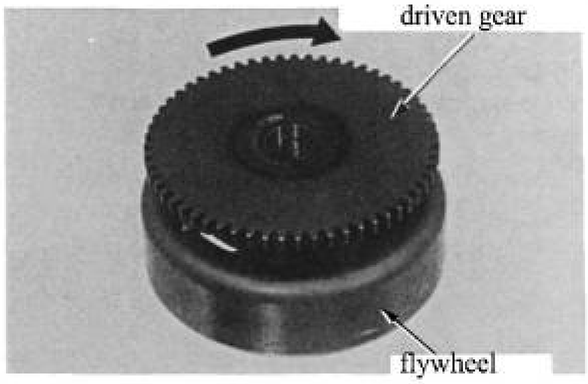
Inspect
Inspect the starter driven gear for wearing or damaging.
Measure the internal and external diameters of starter driven gear.
Limit for use:
Internal dia.: Replace it if it is over 22.10 mm.
External dia.: Replace it if it is under 42.15 mm.



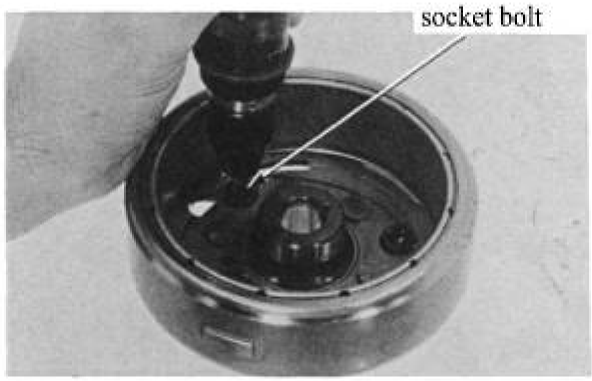
Inspect the starter idle gear and its shaft for wearing and damaging.



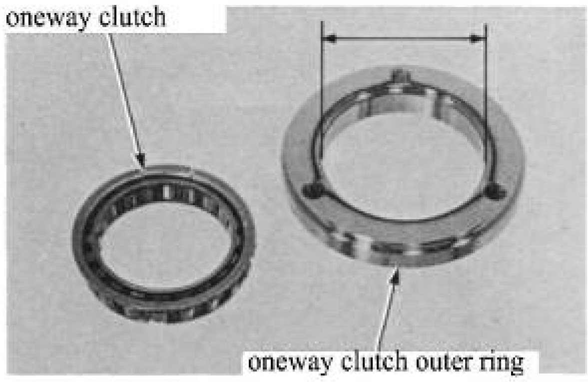
As shown on the figure, install the driven gear of starter on one- way clutch, inspect the operation of start clutch.
Press on the flying wheel, if the driven gear of the starter only rotates in clockwise direction,It is good.



Disassembling
Loosen three 6 mm concave head bolts, remove the start clutch and its separating device.

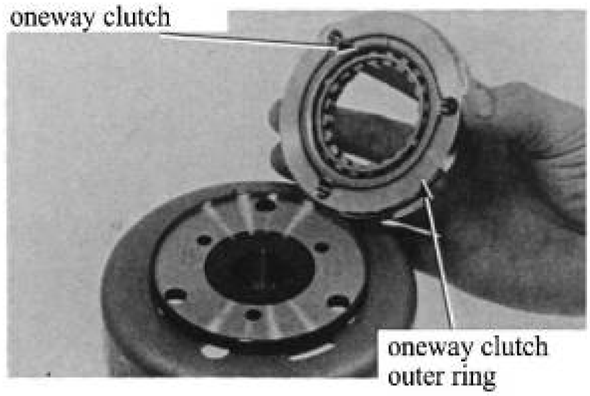


Inspect the start clutch and its separating device for wearing and damaging.
Measure the internal diameter of start clutch separating device.
Limit for use:Replace it if it is over 58.89 mm.



Install the start clutch on start clutch separating device.
Install the start clutch unit on flying wheel,tighten 6 mm concave head bolt.
Torque: 30N*m

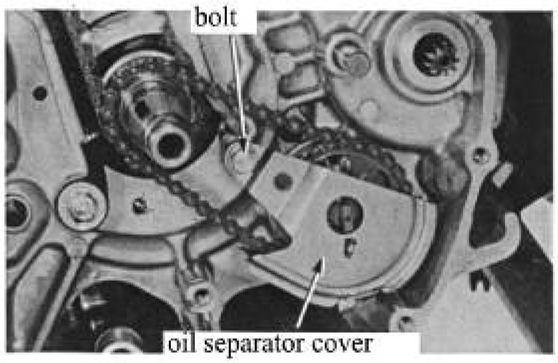
Apply the lockbond on thread of concave head bolt.



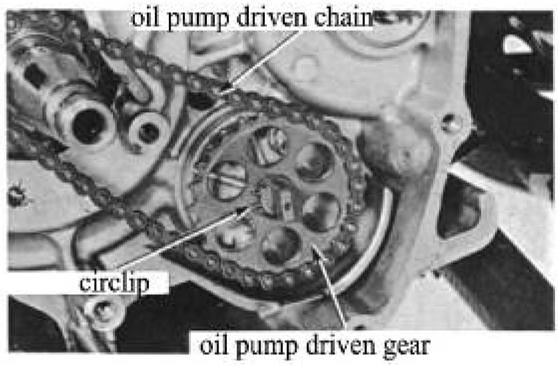
Oil pump

Removing

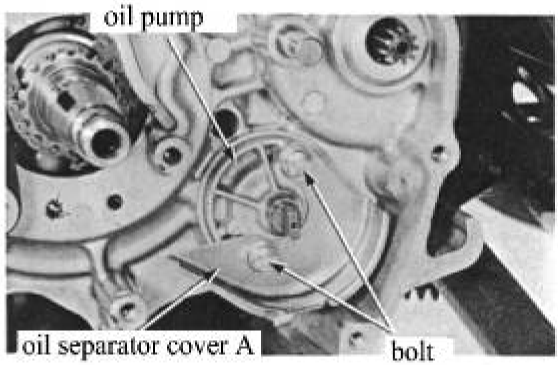
Loosen the bolts, remove the oil separator cover.



Take out the circlip for shaft, remove the driven gear of oil pump and chain.

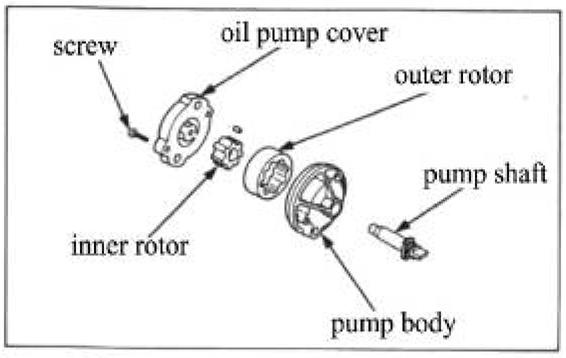


Loosen 2 bolts, remove the oil pump separator cover A and oil pump.



Disassembling

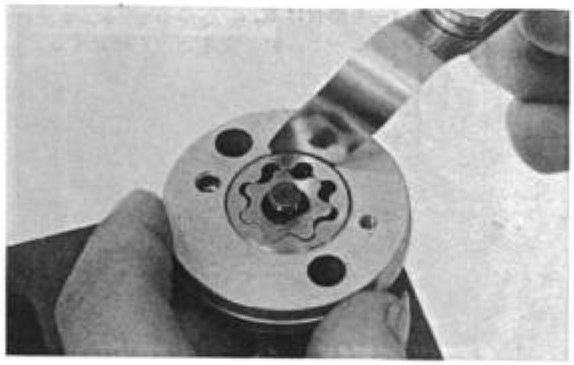
Loosen the small screws, disassemble the oil pump.



Inspection

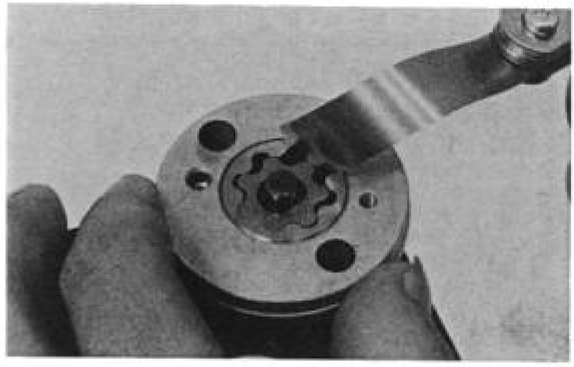
Inspect the clearance between oil pump body and external rotor.

Limit for use:Replace it if it is over 0.25 mm.



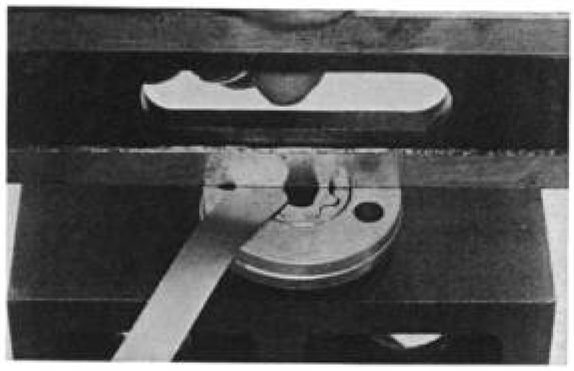
Inspect the clearance between the addendum of internal rotor and tooth root of external rotor.

Limit for use:Replace it if it is over 0.20 mm.



Inspect the clearance between oil pump body and end faces of external rotor and internal rotor.

Limit for use: Replace it if it is over 0.12 mm.



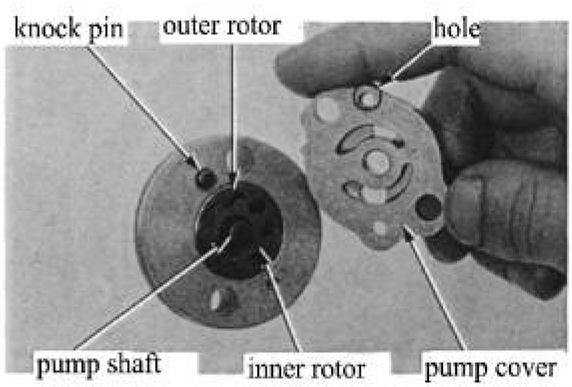
Assembling

Install the ext. and int. rotors, and oil pump shaft on pump body.

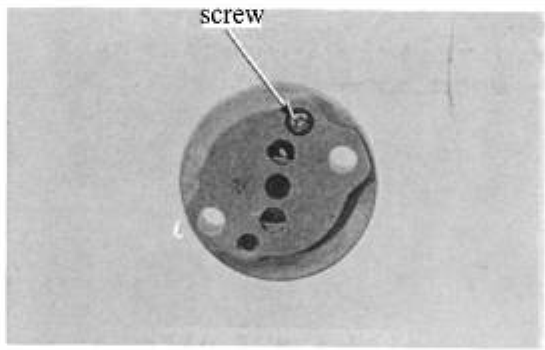
Make the notch of oil pump shaft coincide with internal rotor.

Install the knock pin.

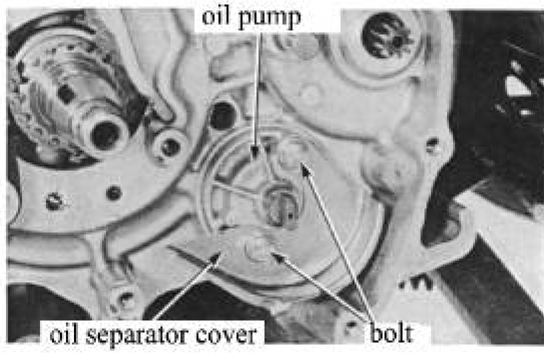
Make the hole of oil pump cover align with knock pin, install the cover.



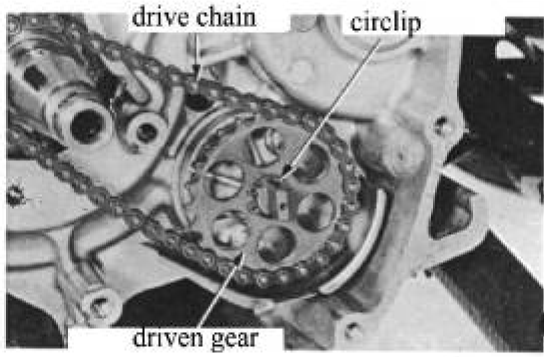
Tighten the oil pump shaft with small screw.
Confirm that the oil pump shaft can rotate freely after tightening.



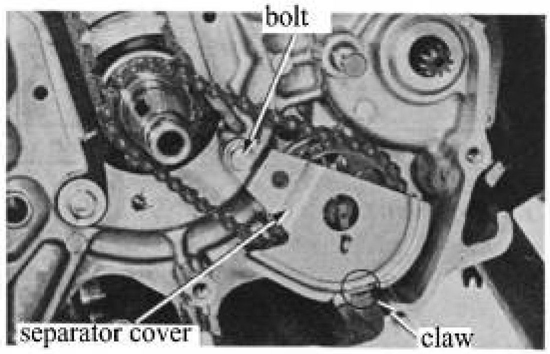
Installing
Install the oil pump and oil separator cover on right crankcase, tighten with two bolts.
Confirm that the oil pump shaft can rotate freely.



Install the oil pump chain and driven gear,fix the sprocket with circlip.

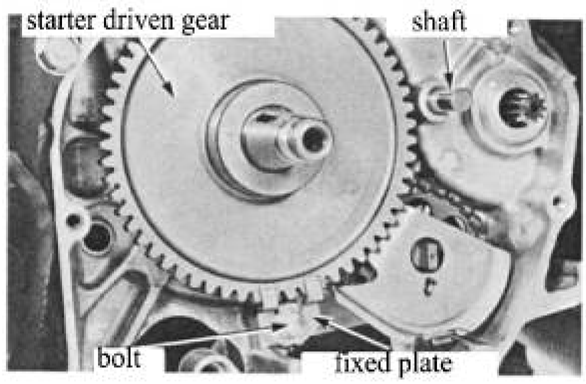


Make the hole of oil separator cover coincide with the claw of oil separator cover A. Install the oil separator cover and tighten the bolts.



Installation of flying wheel

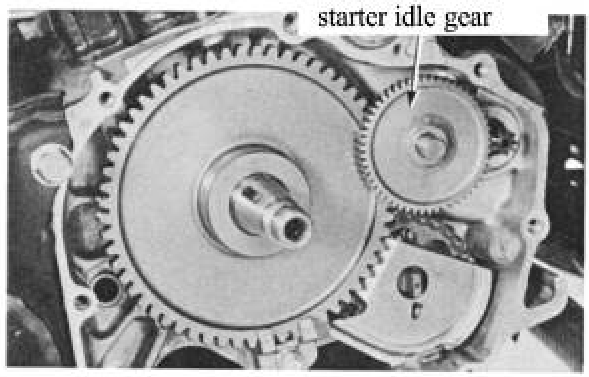
Install the driven gear of starter motor on crankshaft. Install the fixed plate and tighten the bolts.



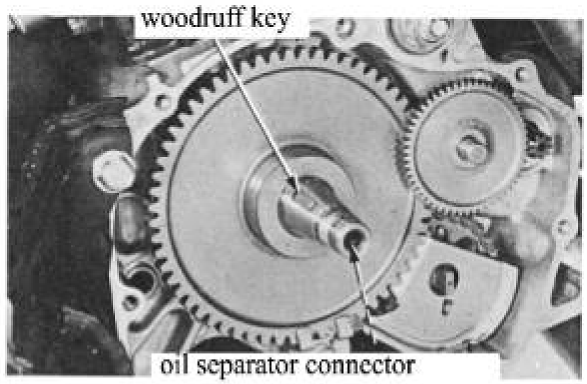
Note

> Confirm that the driven gear of starter motor can rotates freely.

Install the starter idle gear shaft.



Install the starter idle gear on the idle gear shaft.

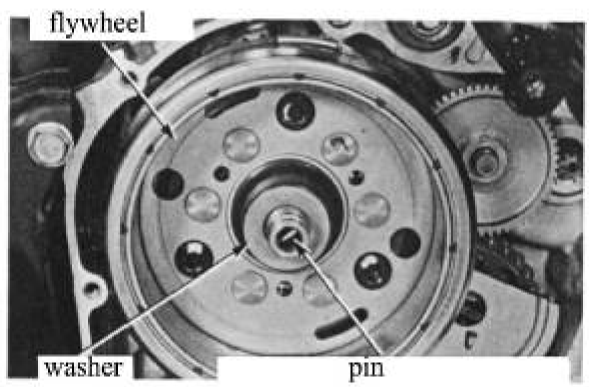


Confirm that the cone part of crankshaft doesn’t stick dust etc..

Note

> Confirm that the cone part of crankshaft doesn’t stick oil and etc.. If there is any oil on it , remove them.

Install the woodruff key in the slot of crankshaft.



Make the woodruff key of crankshaft coincide with the keyway of flying wheel, install the flying wheel on crankshaft.

Caution

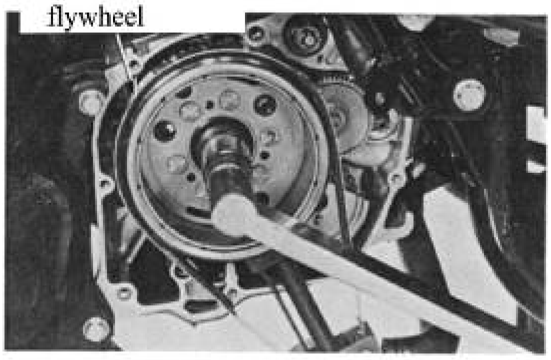
> Confirm that there is not any foreign matter stuck on inside of flying wheel before installing.

Apply oil on washer, install the washer on crankshaft. Install the pin of oil passage connector in the hole of crankshaft.

Note

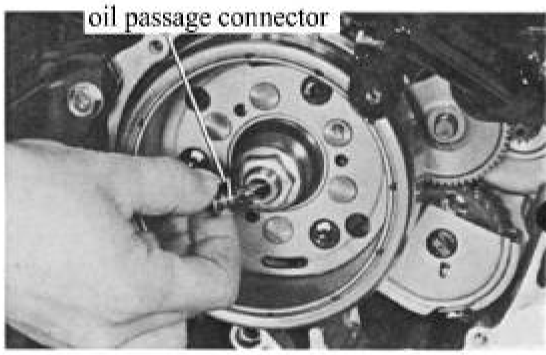
> Take care, don’t make the pin fall in the crankcase.

Apply the MoS_2 grease on the flying wheel nuts and crankshaft thread, install the flying wheel nuts on crankshaft.
Retain the flying wheel with a flying wheel holder, tighten the flying wheel nuts.
Torque: 103 N*m



General tool:
Flying wheel holder

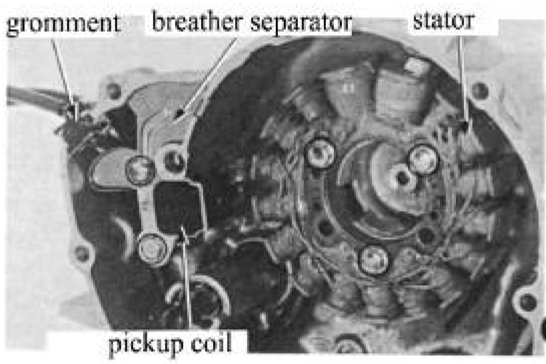
Install the oil passage connector and spring on crankshaft.



Note

Make the slot of oil passage connector coincide with pin.

Installing of stator and pickup coil

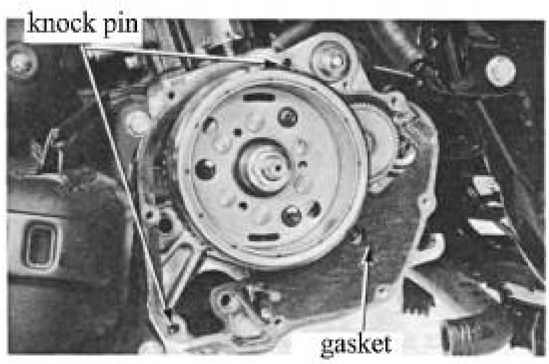


Install the stator on right crankcase cover,tighten 3 bolts.
Install the pickup coil and separator with 2 bolts.
Install the wire- protecting ring in the slot of right crankcase cover.

Note

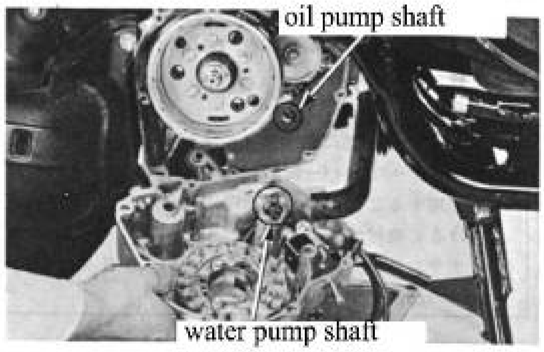
The stator wire should pass the low side of pickup coil lead. As shown on the figure, these parator should be installed on right crankcase cover.

Installing of right crankcase cover

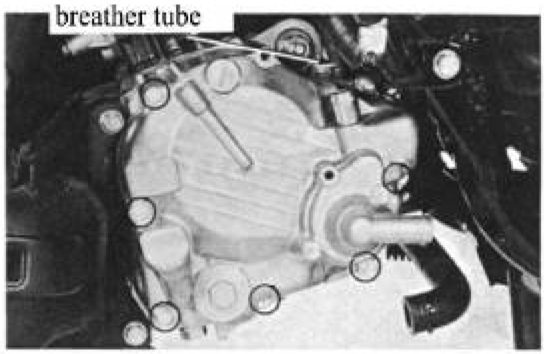


Install the knock pin and new cylinder gasket on right crankcase.

Make the slot of water pump shaft coincide with oil pump shaft, install the right crankcase cover.

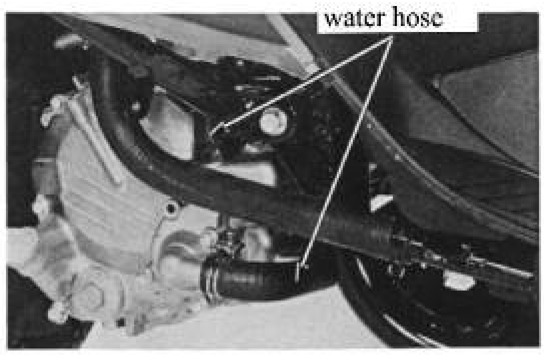


Install and tighten the bolts of right crankcase cover. Connect the breather tube of crankcase to right crank-case cover.



Connect the pickup coil, stator wire coupler and plug.

Connect the water pump hose to water pump and right crankcase cover.



Confirm that the oil pipe is not blocked.

Fix the pipe connector on cylinder head cover, righ side cover, right crankcase with 2 bolts of M8,1 bolt of M12 and 3 copper washer respectively

Warning

> . The black oil pipe bolts should be used on the side of cylinder cover, the silver oil pipe bolts should be used on the side of right crankcase cover. The bolts with different colors shouldn't be installed incorrectly otherwise the burning maybe occur because the oil passages are different.
>
> . Make the copper gasket claw of right crankcase coincide with the convex part of right crankcase.

Install the oil pipe stay bolts on right crankcase cover and water pump.

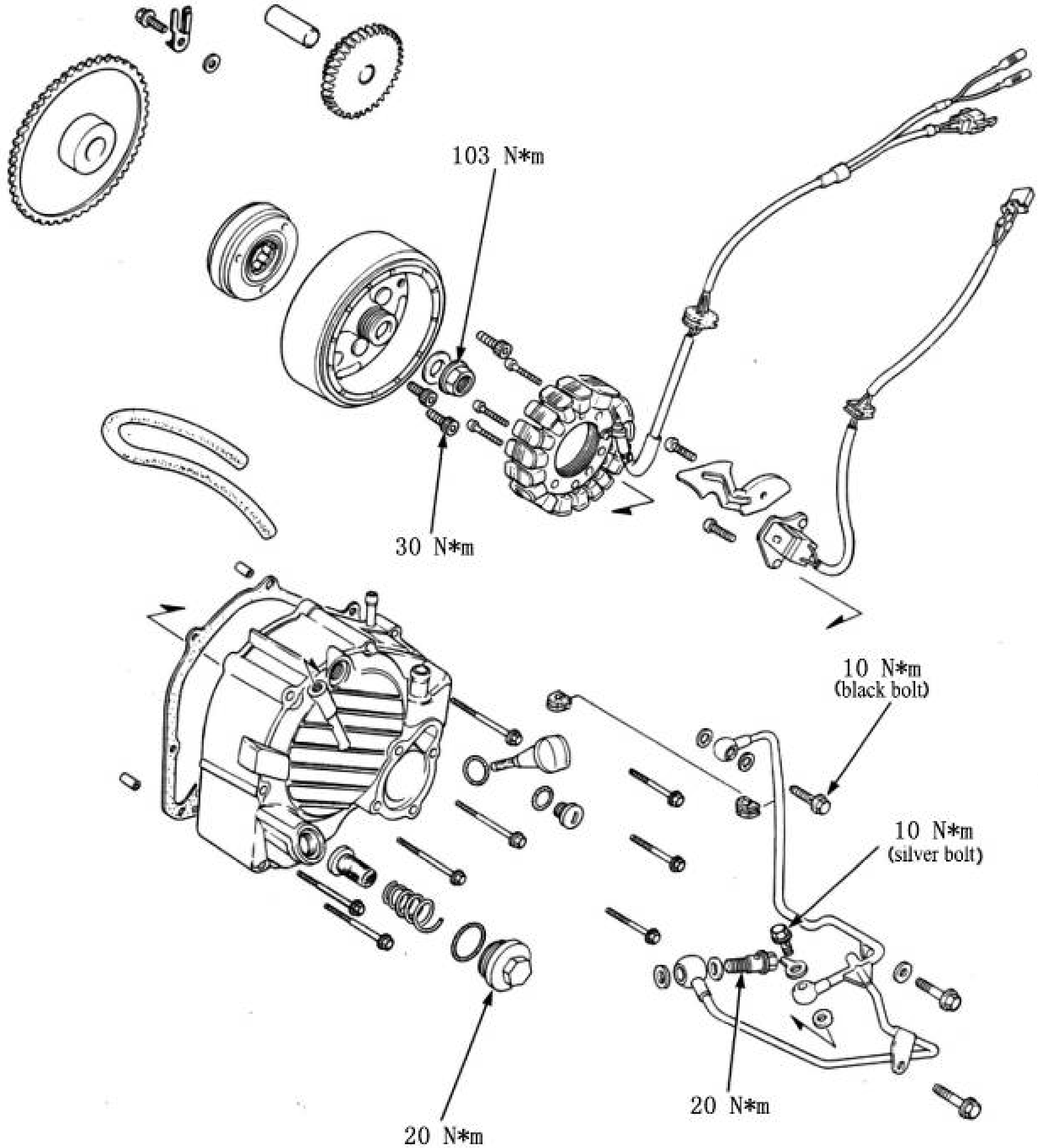
Tighten the oil pipe bolts.

Torque:

Oil pipe bolt: 8 mm 10 N*m
12 mm 20 N*m

Tighten 2 oil pipe stay bolts.

MAGNETO,START CLUTCH AND OIL PUMP



CHASSIS REPAIR

A. Front Wheel Replacement

Do not disassemble the castle nuts when you replace the front wheels.
It is only necessary to tighten the nuts so that the wheel turns freely on the axle with minimum end play. (See Fig. 16) Tighten the nuts after replacing the wheels.

Castle nuts
Torque: 180±5 N.M
Wheel nuts
Torque: 70±5 N.M

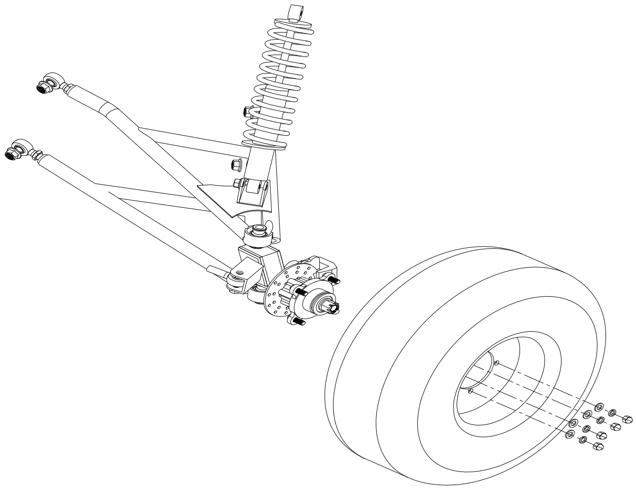


Figure 16

B. Rear Wheel Replacement

Do not disassemble the castle nuts when you replace the rear wheels.
It is only necessary to tighten the nuts so that the wheel turns freely on the axle with minimum endplay. (See Fig. 17) Tighten the nuts and put on the cotter Pin after replacing the wheels.

Castle nuts
Torque: 180±5 N.M
Wheel nuts
Torque: 70±5 N.M

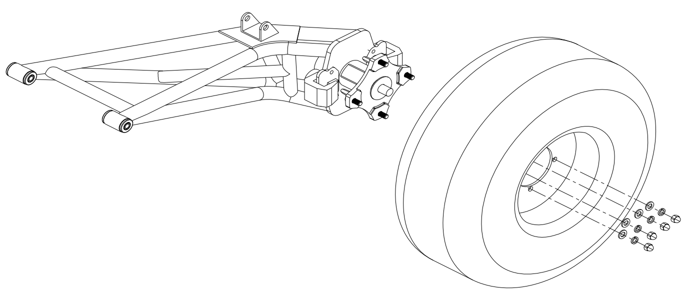
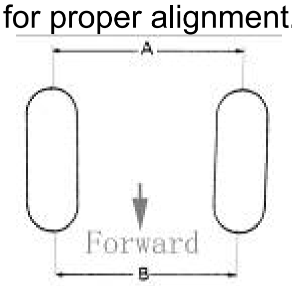


Figure 17

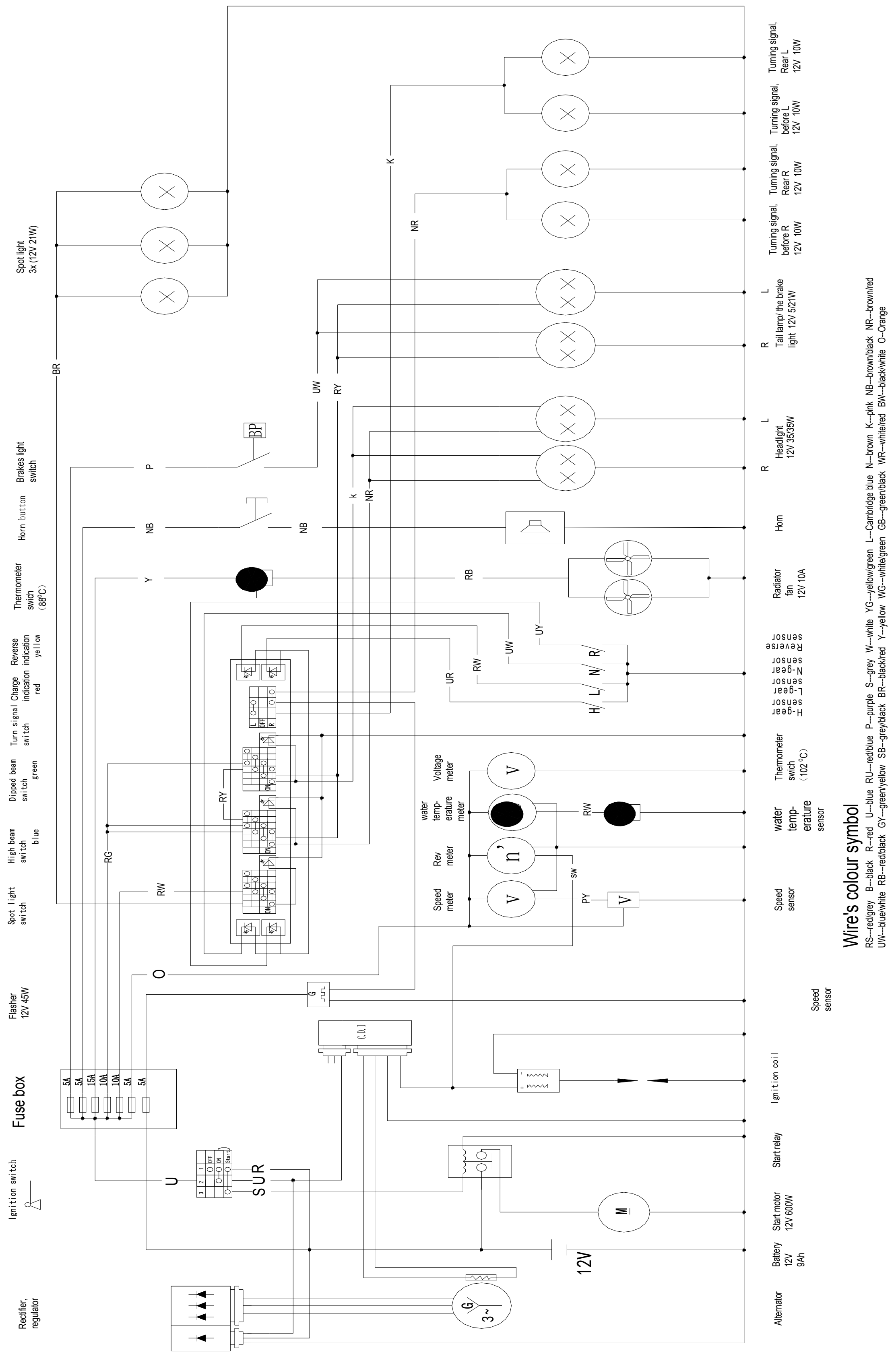
C. Front Wheel Alignment

a. The front wheels should be "toe-in" from 1/8" to 1/4". To check for alignment, measure distance A and B between the centerline (CL) of the wheels. The proper toe-in dimension A should be 1/8"-1/4" greater than dimension B.

b. To adjust the alignments, loose the lock nuts on both sides of Front Tie Rods. To make Dimension B smaller, scare the rod to the left. Adjust the rod to right direction to make Dimension B larger. After adjusted to desired length, tighten the lock nut against the rod end. Recheck the dimensions for proper alignment.

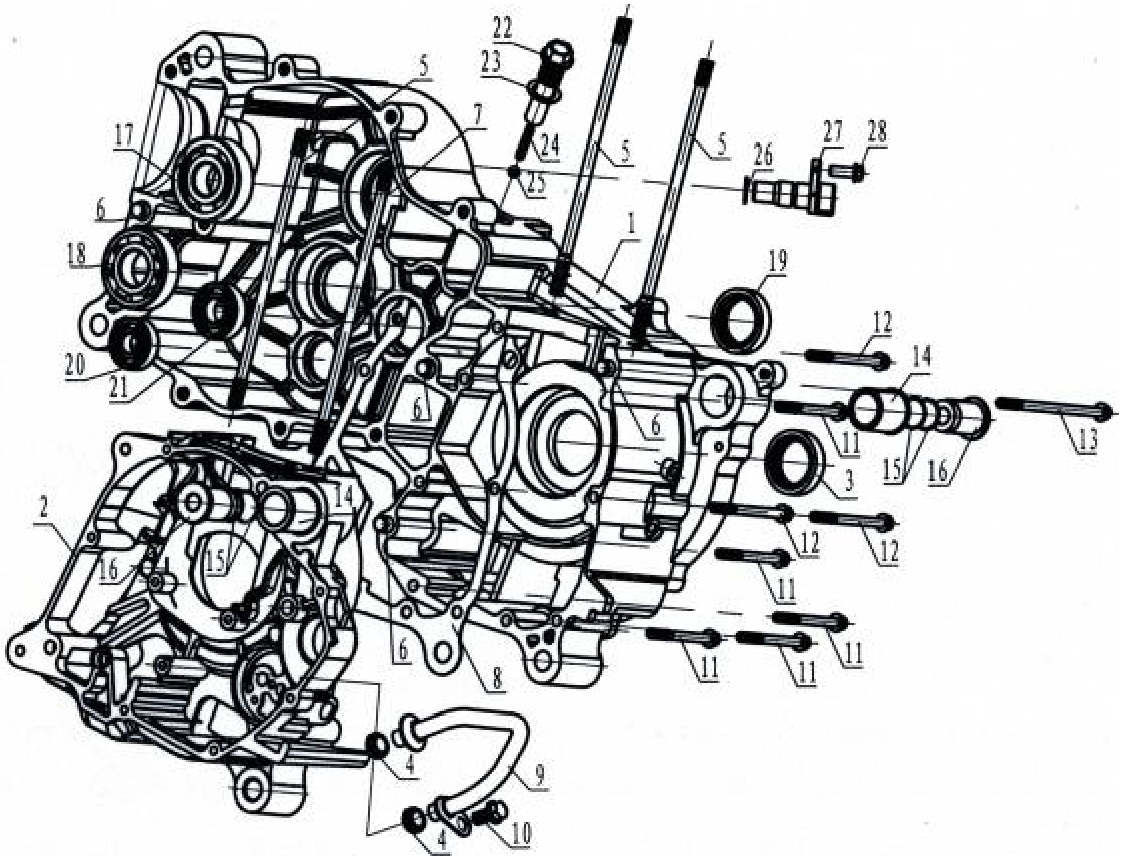


WIRING DIAGRAM



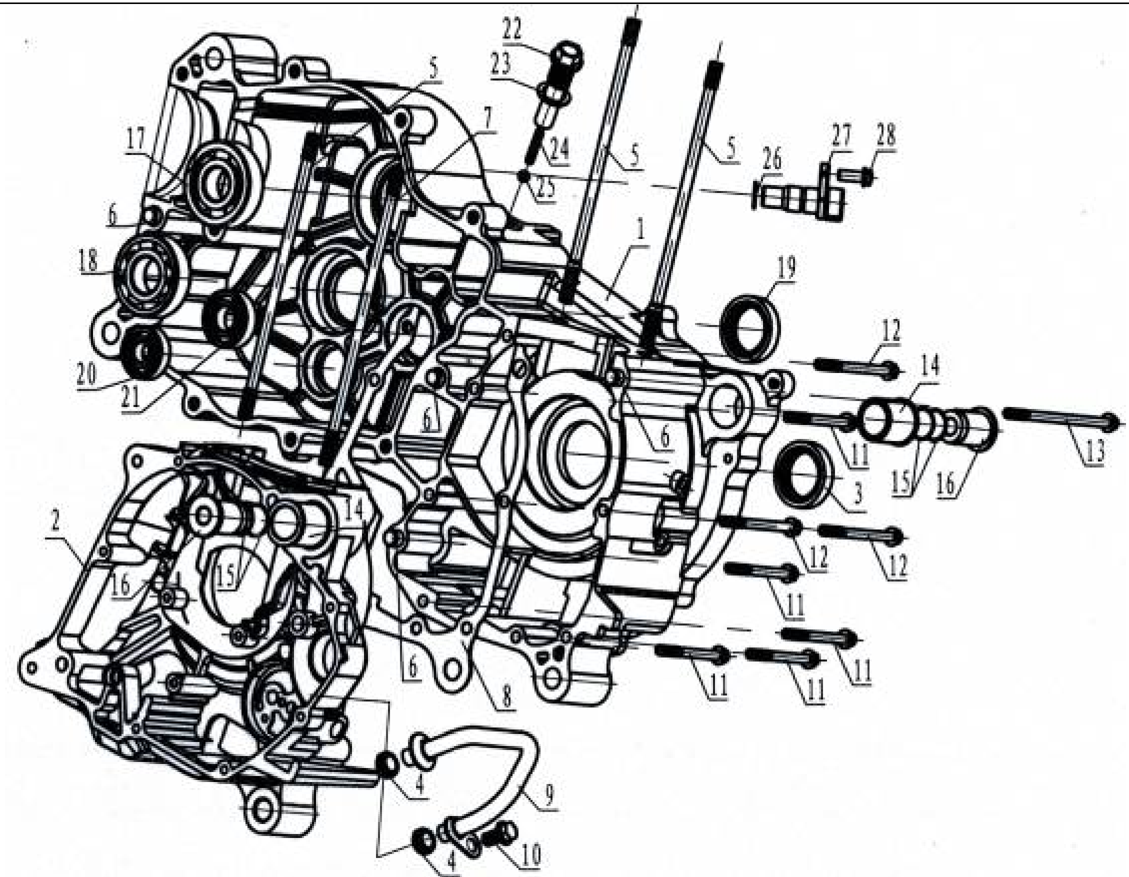
PARTS MANUAL

1、CRANKCASE ASSY.



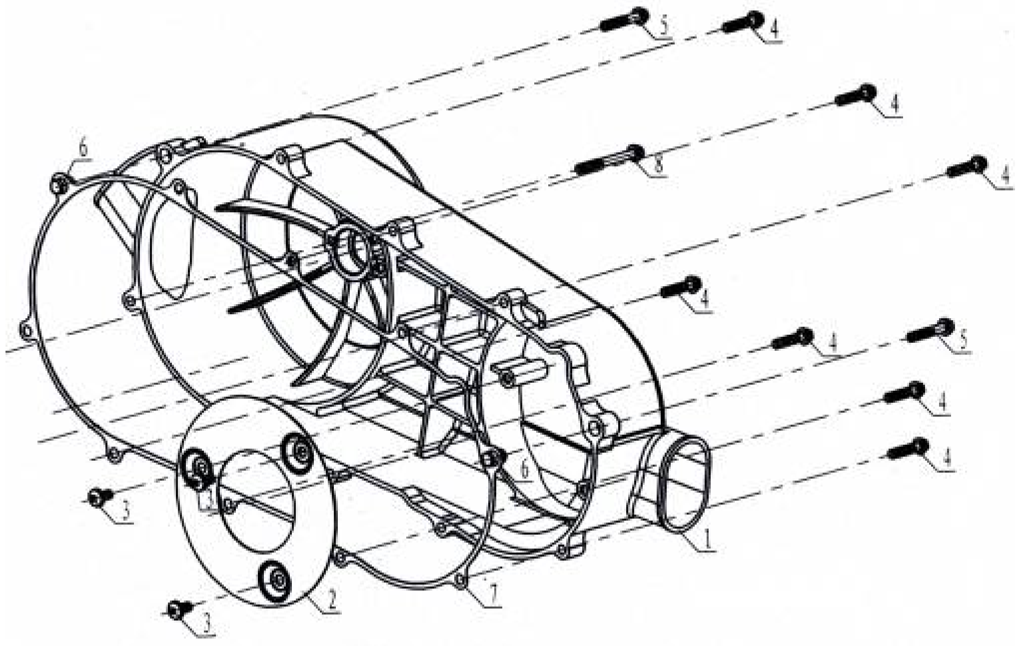
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-C-011100	172MM-C-011100	LEFT CRANK CASE ASSY	1
2	02.DLJ.172MM-C-011200	172MM-C-011200	RIGHT CRANK CASE ASSY	1
3	02.DLJ.172MM-011001	172MM-011001	SEAL 28X40X8	1
4	02.DLJ.172MM-011002	172MM-011002	INNER OIL PIPE SEAL RING	2
5	02.DLJ.172MM-011004	172MM-011004	CYLINGDER STUD A	3
6	02.DLJ.152MI-021005	152MI-021005	LOCATING PIN Φ10x14	4
7	02.DLJ.172MM-011005	172MM-011005	CYLINGDER STUD B	1
8	02.DLJ.172MM-B-011006	172MM-B-011006	CRANK CASE SEAL WASHER	1
9	02.DLJ.172MM-011400	172MM-011400	INNER OIL PIPE	1
10	02.DLJ.152MI-021019	152MI-021019	BOLT M6X12	1
11	02.DLJ.152MI-011017	152MI-011017	BOLT M6X60	5
12	02.DLJ.1P52MI-011018	1P52MI-011018	BOLT M6X70	3
13	02.DLJ.1P52MI-A-011006	1P52MI-A-011006	BOLT M6X105	1
14	02.DLJ.152MI-011010	152MI-011010	OUTER SLEEVE.EAR	2
15	02.DLJ.152MI-011008	152MI-011008	"O" RING FOR SEAL	4
16	02.DLJ.152MI-011009	152MI-011009	INNER SLEEVE.EAR	2
17	02.DLJ.GB/T 276-1994 6304	GB/T 276-1994 6304	BEARING 6304	1

1、CRANKCASE ASSY.



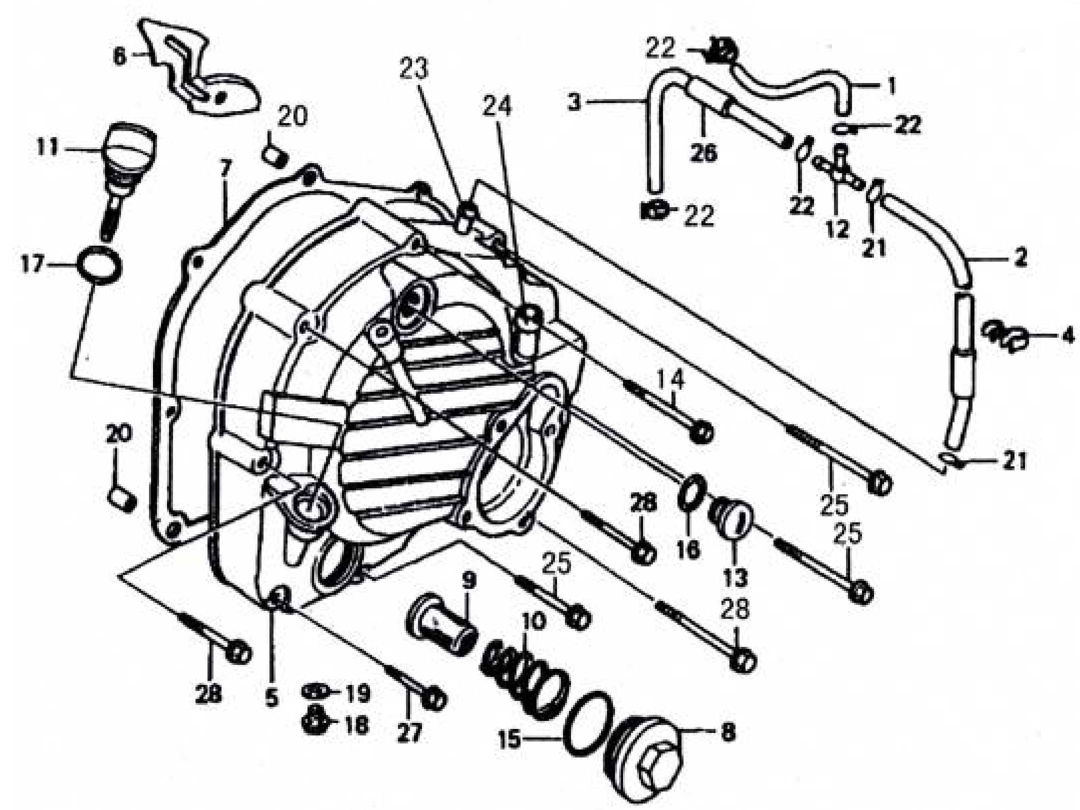
No.	ERP CODE	P/N	ENGLISH	Qty
18	02.DLJ.172MM-060002	172MM-060002	BALL BEARING 22X50X14	1
19	02.DLJ.GB/T 9877-1988 FB33X35X5	GB/T 9877-1988 FB33X35X5	OIL SEAL FB 33X35X5	1
20	02.DLJ.GB/T 276-1994 6201	GB/T 276-1994 6201	BEARING 6201	1
21	02.DLJ.GB/T 276-1994 6202-RS	GB/T 276-1994 6202-RS	BEARING 6202-RS	1
22	02.DLJ.172MM-B-068001	172MM-B-068001	HOLLOW BOLT M14X1.5	1
23	02.DLJ.CF188-068002	CF188-068002	WASHER 14.4X22X1	1
24	02.DLJ.CF188-068003	CF188-068003	SPACER SPRING	1
25	02.DLJ.GB/T308-1989 3/8	GB/T308-1989 3/8	STEEL BALL	1
26	02.DLJ.152MI-130004	152MI-130004	"O" RING FOR SEAL13.5X1.4	1
	02.DLJ.172MM-B-011300	172MM-B-011300	ODOMETER SENSOR	1
27	02.DLJ.172MM-B-011400	172MM-B-011400	SEAL CAP	1
28	02.DLJ.152MI-023010	152MI-023010	BOLT M6X20	1

2、SIDE COVER ASSY.L



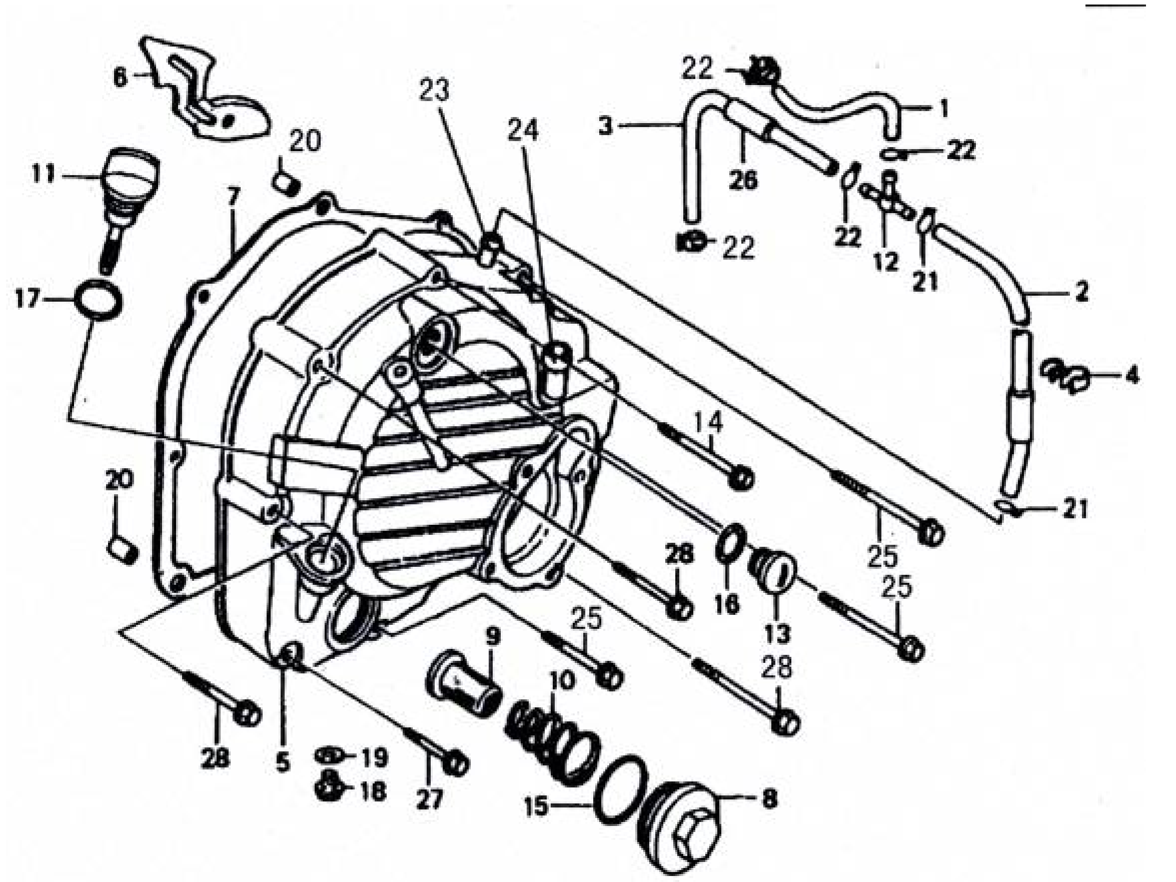
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-B-012001	172MM-B-012001	LEFT SIDE COVER	1
2	02.DLJ.172MM-B-012002	172MM-B-012002	AIR DAMPER	1
3	02.DLJ.GB/T818-2000 M6X12	GB/T818-2000 M6X12	SCREW	3
4	02.DLJ.172MM-B-012005	172MM-B-012005	BOLT	7
5	02.DLJ.152MI-013008	152MI-013008	BOLT	2
6	02.DLJ.152MI-021005	152MI-021005	LOCATING PIN Φ10x14	2
7	02.DLJ.172MM-B-012003	172MM-B-012003	LEFT SIDE COVER SEAL WASHER	1
8	02.DLJ.152MI-021018	152MI-021018	BOLT	1

3、RIGHT COVER ASSY



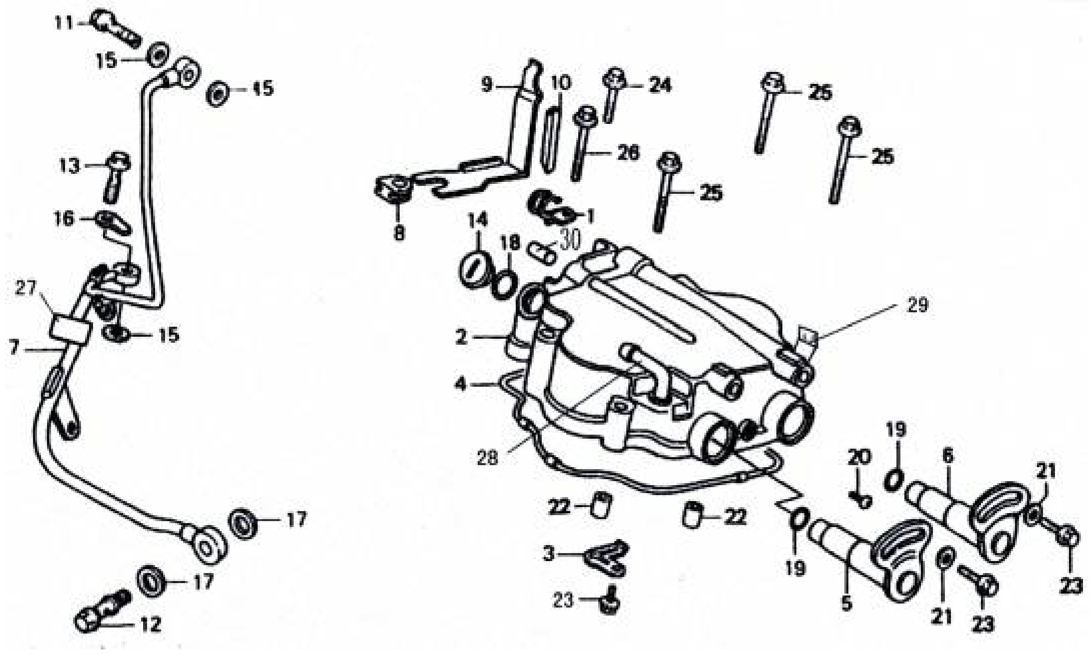
No	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-013013	172MM-013013	CYLINDER HEAD COVER AIR PIPE	1
2	02.DLJ.172MM-013100	172MM-013100	RIGHT SIDE COVER BREATH PIPE	1
3	02.DLJ.172MM-013015	172MM-013015	AIR FILTER BREATH PIPE	1
4	02.DLJ.172MM-013016	172MM-013016	BREATH PIPE CLAMP	1
5	02.DLJ.172MM-013002	172MM-013002	RIGHT SIDE COVER	1
6	02.DLJ.172MM-013008	172MM-013008	CABLE PRESS PLATE	1
7	02.DLJ.172MM-013012	172MM-013012	RIGHT SIDE COVER SEAL WASHER	1
8	02.DLJ.172MM-013007	172MM-013007	OIL FILTER CAP	1
9	02.DLJ.152MI-013100	152MI-013100	OIL FILTER CORE	1
10	02.DLJ.172MM-013006	172MM-013006	SPRING	1
11	02.DLJ.172MM-013001	172MM-013001	ENGINE OIL METER	1
12	02.DLJ.172MM-013019	172MM-013019	3-WAY	1
13	02.DLJ.152MI-021008	152MI-021008	UPPER OBSERVATION HOLE CAP	1
14	02.DLJ.172MM-013031	172MM-013031	BOLT	1
15	02.DLJ.172MM-013028	172MM-013028	"O" RING 30X3.35	1
16	02.DLJ.152MI-021009	152MI-021009	SEAL RING.CAP	1
17	02.DLJ.172MM-013030	172MM-013030	"O" RING 18X3.35	1
18	02.DLJ.172MM-013005	172MM-013005	OUTLET BOLT	1
19	02.DLJ.152MI-021014	152MI-021014	WASHER 12	1

3、RIGHT COVER ASSY



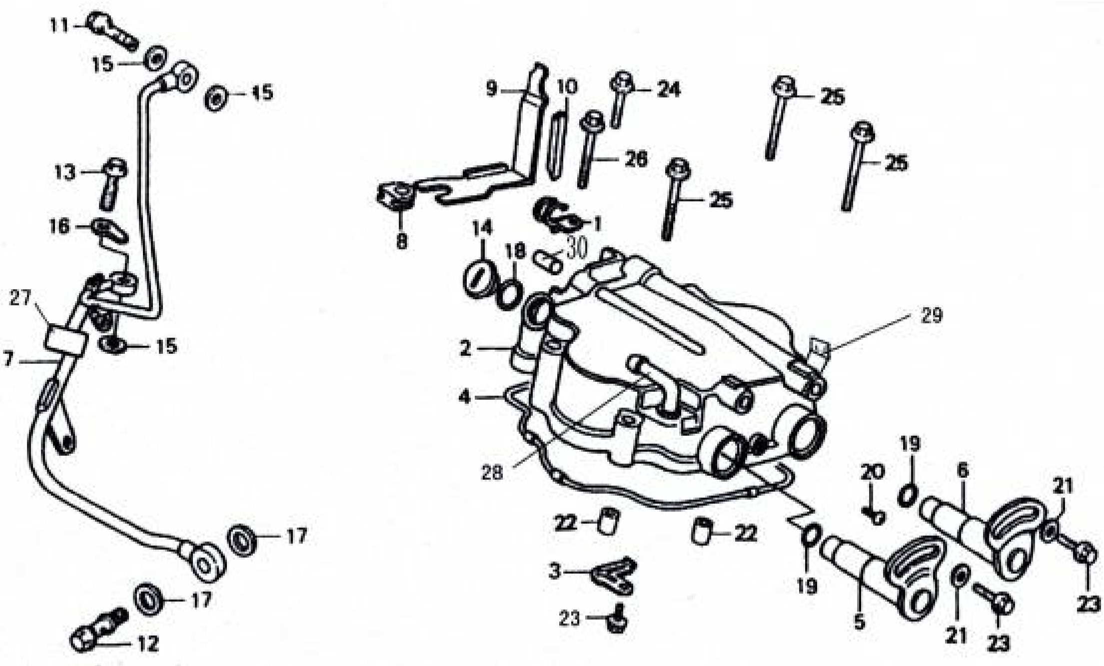
No.	ERP CODE	P/N	ENGLISH	Qty
20	02.DLJ.152MI-08008	152MI-08008	LOCATING PIN Φ8x14	2
21	02.DLJ.QC/T621-1999-A10	QC/T621-1999-A10	CLAMP 12	2
22	02.DLJ.QC/T621-1999-A12	QC/T621-1999-A12	CLAMP 10	4
23	02.DLJ.172MM-013010	172MM-013010	BREATH FAUCET	1
24	02.DLJ.172MM-013009	172MM-013009	WATER OUTLET FAUCET	1
25	02.DLJ.152MI-013009	152MI-013009	BOLT M6X40	3
26	02.DLJ.172MM-013026	172MM-013026	PROTECTION PIPE	1
27	02.DLJ.152MI-071007	152MI-071007	BOLT M6X28	1
28	02.DLJ.1P52MI-011018	1P52MI-011018	BOLT M6X70	3

4、CYLINGDER HEAD CASEING ASSY



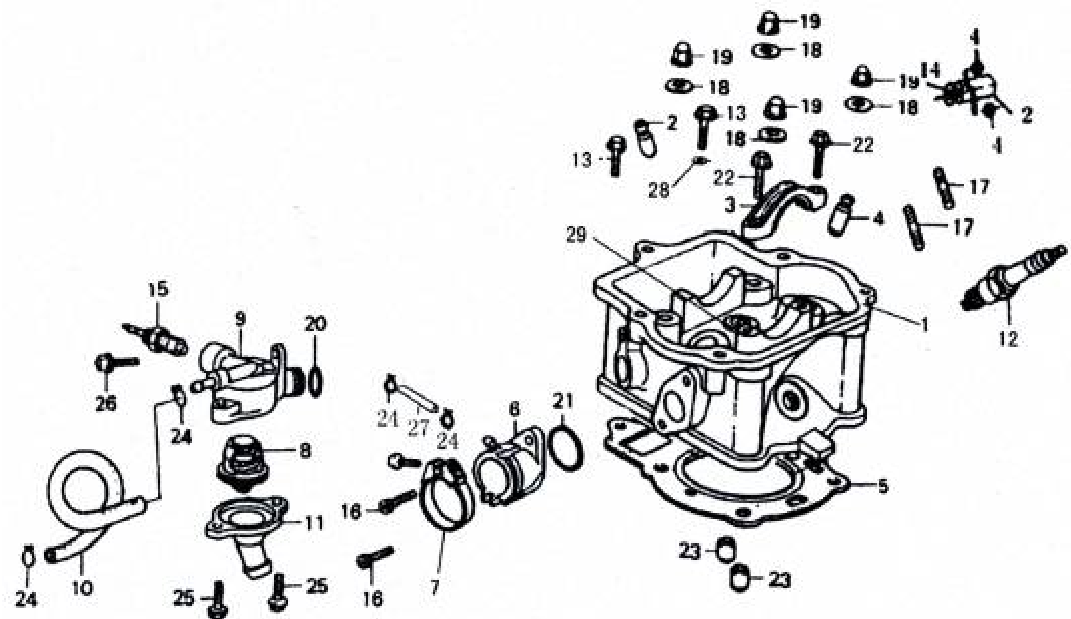
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-021009	172MM-021009	OIL PIPE CLAMP	1
2	02.DLJ.172MM-021001	172MM-021001	CYLINDER HEAD COVER	1
3	02.DLJ.172MM-021006	172MM-021006	STOP PLATE	1
4	02.DLJ.152MI-021011	152MI-021011	SEAL WASHER.	1
5	02.DLJ.172MM-021100	172MM-021100	SWING ARM.INLET AXIS	1
6	02.DLJ.172MM-021200	172MM-021200	SWING ARM.OUTLET AXIS	1
7	02.DLJ.172MM-021400	172MM-021400	OUTER ENGINE OIL PIPE	1
8	02.DLJ.152MI-021001	152MI-021001	OIL PIPE RUBBER RING	1
9	02.DLJ.172MM-021431	172MM-021431	OIL PIPE MOUNT	1
10	02.DLJ.152MI-021003	152MI-021003	SHOCK ABSORBER RUBBER STRIP	1
11	02.DLJ.152MI-021004	152MI-021004	REAMED BOLT A M8X25	1
12	02.DLJ.152MI-021015	152MI-021015	REAMED BOLT M12X1.25	1
13	02.DLJ.152MI-021013	152MI-021013	REAMED BOLT M8X25	1
14	02.DLJ.152MI-021008	152MI-021008	UPPER OBSERVATION HOLE CAP	1
15	02.DLJ.152MI-021016	152MI-021016	WASHER 8	3
16	02.DLJ.152MI-021012	152MI-021012	EAR WASHER	1
17	02.DLJ.152MI-021014	152MI-021014	WASHER 12	2
18	02.DLJ.152MI-021009	152MI-021009	UPPER OBSERVATION HOLE SEAL	1
19	02.DLJ.152MI-021010	152MI-021010	SWING ARM AXIS SEAL RING	2
20	02.DLJ.GB/T818-2000-M5X16-D·Cr	GB/T818-2000-M5X16-D·Cr	CRUCIFORM SLOT SCREW	1
21	02.DLJ.GB/T848-85-6-D·Cr	GB/T848-85-6-D·Cr	SMALL WASHER	2
22	02.DLJ.152MI-021005	152MI-021005	LOCATION PIN Φ10X14	2
23	02.DLJ.GB/T9074,17-1988 M6X12	GB/T9074.17-1988	BOLT M6X12	3

4、CYLINGDER HEAD CASEING ASSY



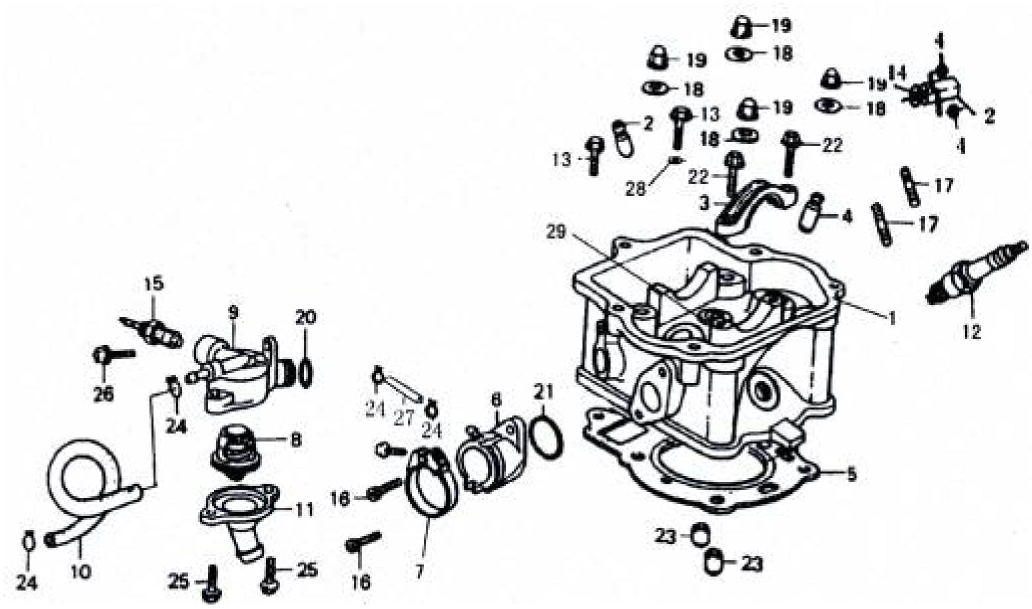
No.	ERP CODE	P/N	ENGLISH	Qty
24	02.DLJ.BOLTM6X25	BOLTM6X25	BOLT M6X25	1
25	02.DLJ.152MI-013010	152MI-013010	BOLT M6X50	3
26	02.DLJ.152MI-021018	152MI-021018	BOLT M6X55	1
27	02.DLJ.172MM-021404	172MM-021404	SHOCK ABSORBER SLEEVE	1
28	02.DLJ.172MM-021002	172MM-021002	BREATH PIPE FAUCET	1
29	02.DLJ.172MM-021300	172MM-021300	AIR FILTER MOUNT	1
30	02.DLJ.172MM-021008	172MM-021008	BLOCKING	1

5、CYLINGDER HEAD ASSY



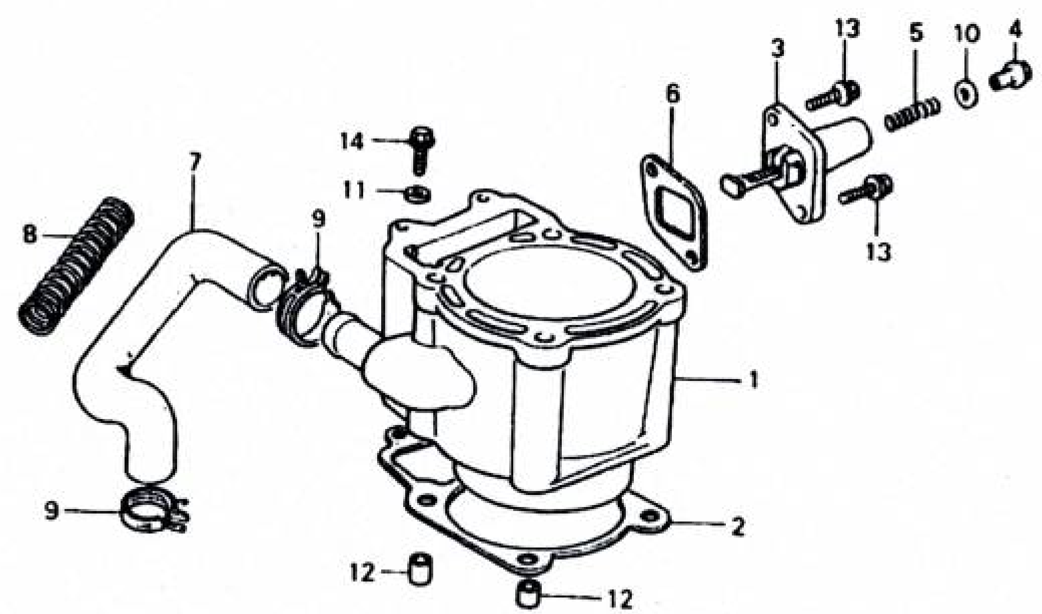
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-022100	172MM-022100	CYLINDER HEAD	1
2	02.DLJ.172MM-022700	172MM-022700	EXHAUST FLANGE	1
3	02.DLJ.152MI-022014	152MI-022014	BEARING COVE.CAM AXIS	1
4	02.DLJ.172MM-022008	172MM-022008	EXHAUST NUT	2
5	02.DLJ.172MM-022010	172MM-022010	CYLINDER HEAD SEAL WASHER	1
6	02.DLJ.172MM-022900	172MM-022900	CARBURETOR SEAT UNIT	1
7	02.DLJ.172MM-022500	172MM-022500	AIR INLET PIPE CLAMP UNIT	1
8	02.DLJ.152MI-022810	152MI-022810	THERMOSTAT	1
9	02.DLJ.152MI-022803	152MI-022803	UPPER THERMOSTAT SHELL	1
10	02.DLJ.152MI-022021	152MI-022021	CARBURETOR RUBBER PIPE1	1
11	02.DLJ.172MM-022601	172MM-022601	LOWER THERMOSTAT SHELL	1
12	02.DLJ.172MM-022400	172MM-022400	SPARK PLUG	1
13	02.DLJ.152MI-021017	152MI-021017	BOLT M6X25	2
14	02.DLJ.172MM-022800	172MM-022800	BREATH SEAL WASHER	1
15	02.DLJ.152MI-022600	152MI-022600	WATER TEMP SENSOR	1
16	02.DLJ.GB/T6191-1986-M6X18-D·Cr	GB/T6191-1986-M6X18-D·Cr	SOCKET HEAD SCREW	2
17	02.DLJ.172MM-022007	172MM-022007	DOUBLE-SCREW BOLT	2
18	02.DLJ.152MI-022012	152MI-022012	WASHER 8	4
19	02.DLJ.152MI-022013	152MI-022013	CAP NUT M8	4
20	02.DLJ.152MI-022804	152MI-022804	"O" RING 14.8X1.9	1
21	02.DLJ.172MM-022009	172MM-022009	"O" RING 31X2	1
22	02.DLJ.152MI-022020	152MI-022020	BOLT M6X22	2
23	02.DLJ.152MI-021005	152MI-021005	LOCATION PIN Φ10X14	2

5、CYLINGDER HEAD ASSY



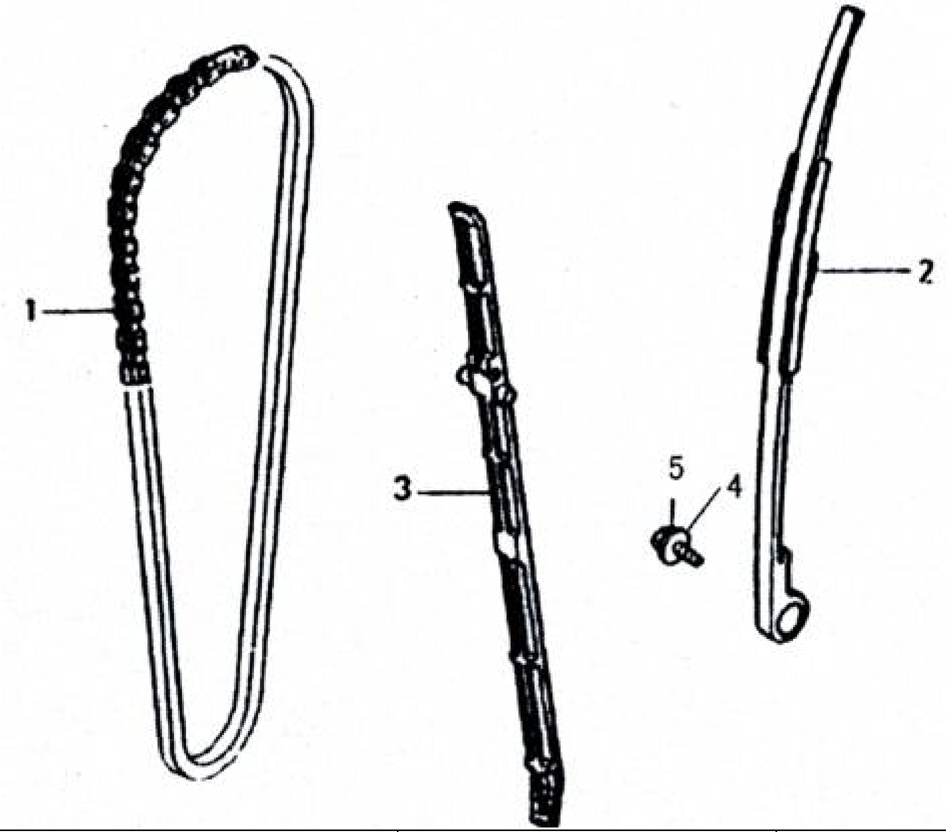
No.	ERP CODE	P/N	ENGLISH	Qty
24	02.DLJ.QC/T621-1999-A6,5	QC/T621-1999-A6.5	STEEL RING CLAMP	2
25	02.DLJ.152MI-090005	152MI-090005	BOLT M6X16	2
26	02.DLJ.152MI-023008	152MI-023008	BOLT M6X18	1
27	02.DLJ.152MI-022017	152MI-022017	CARBURETORS BREATHE PIPE.	1
28	02.DLJ.GB/T848-85-6-D·Cr	GB/T848-85-6-D·Cr	SMALL WASHER	1
29	02.DLJ.152MI-022021	152MI-022021	SCREW BLOCKAGE	1

6、CYLINGER BODY ASSY



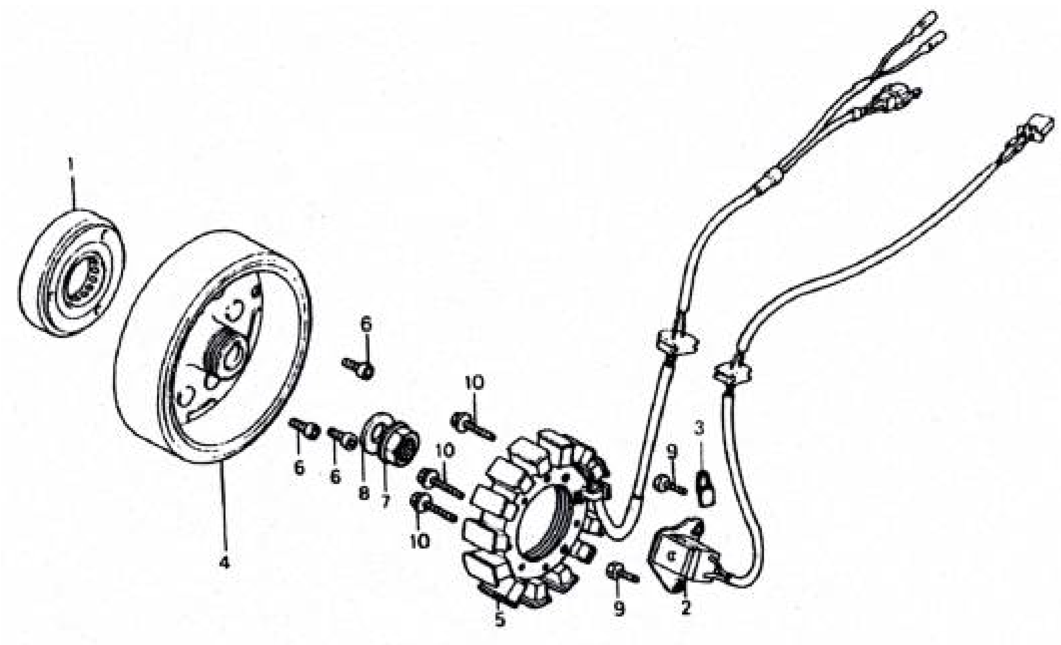
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-023100	172MM-023100	CYLINDER	1
2	02.DLJ.172MM-023002	172MM-023002	CYLINDER SEAL WASHER	1
3	02.DLJ.152MI-023300	152MI-023300	TENSIONER UNIT	1
4	02.DLJ.152MI-023307	152MI-023307	SPRING SEAT BOLT	1
5	02.DLJ.152MI-023306	152MI-023306	TENSIONER SPRING	1
6	02.DLJ.152MI-023004	152MI-023004	TENSIONER SEAL WASHER	1
7	02.DLJ.172MM-023007	172MM-023007	WATER INLET RUBBER PIPE	1
8	02.DLJ.172MM-023009	172MM-023009	WATER PIPE JACKET	1
9	02.DLJ.QC/T621-1999-B24	QC/T621-1999-B24	STEEL BAND CLAMP	2
10	02.DLJ.152MI-023305	152MI-023305	WASHER 8.5	1
11	02.DLJ.GB/T848-85-6-D·ZN	GB/T848-85-6-D·ZN	SMALL WASHER	1
12	02.DLJ.152MI-021005	152MI-021005	LOCATION PIN Φ10X14	2
13	02.DLJ.152MI-023008	152MI-023008	BOLT M6X18	2
14	02.DLJ.152MI-080013	152MI-080013	BOLT M6X22	1

7、TIMING CHAIN



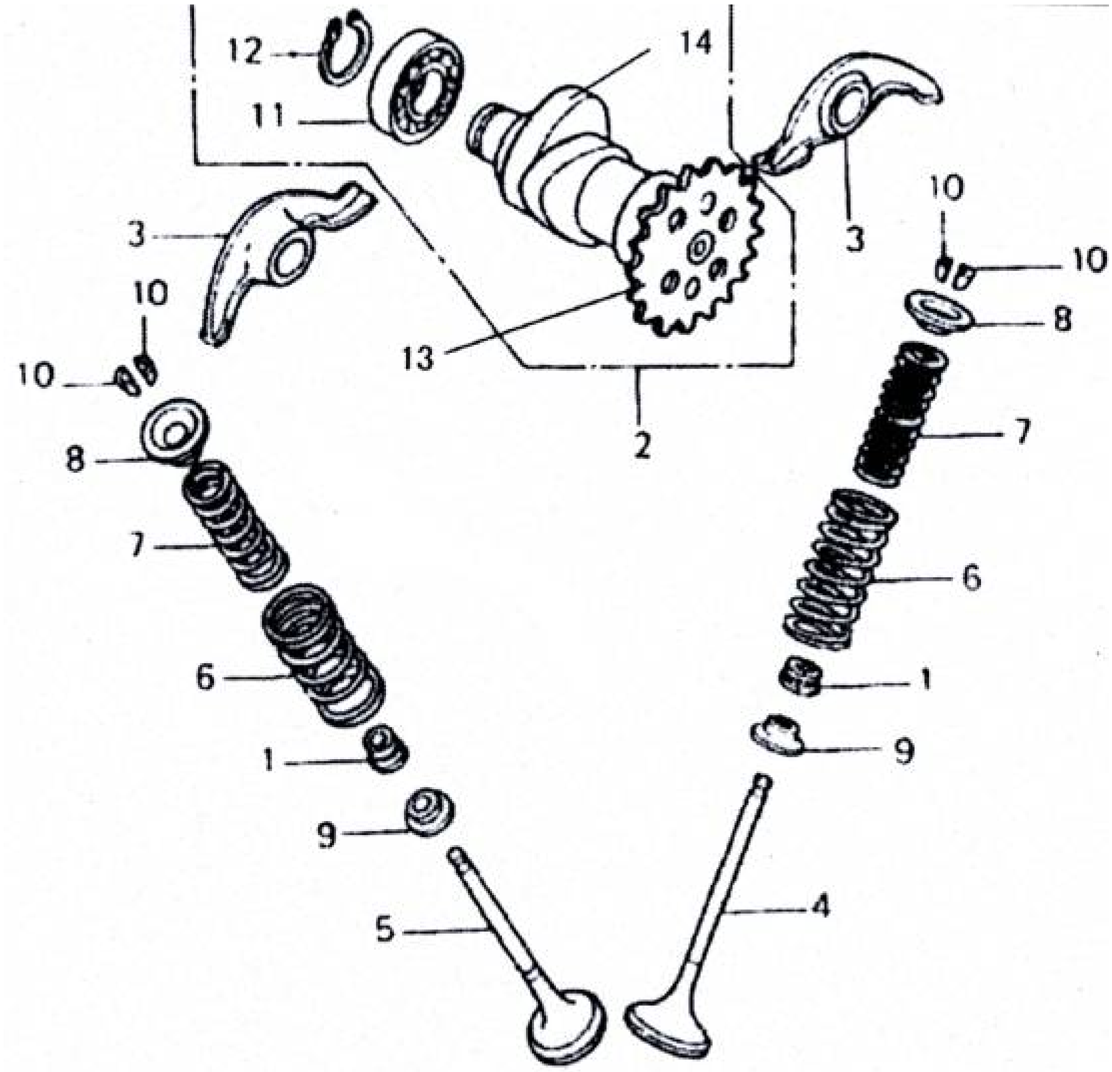
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-022200	172MM-022200	CHAIN UNIT	1
2	02.DLJ.172MM-023200	172MM-023200	TENSION PLATE	1
3	02.DLJ.172MM-023001	172MM-023001	CHAIN GUIDE PLATE	1
4	02.DLJ.GB96-85-6-D·Zn	GB96-85-6-D·Zn	BIG WASHER	1
5	02.DLJ.GB/T5781-2000-M6X12-D·Zn	GB/T5781-2000-M6X12-D·Zn	BOLT	1

8、MAGNETOR ASSY



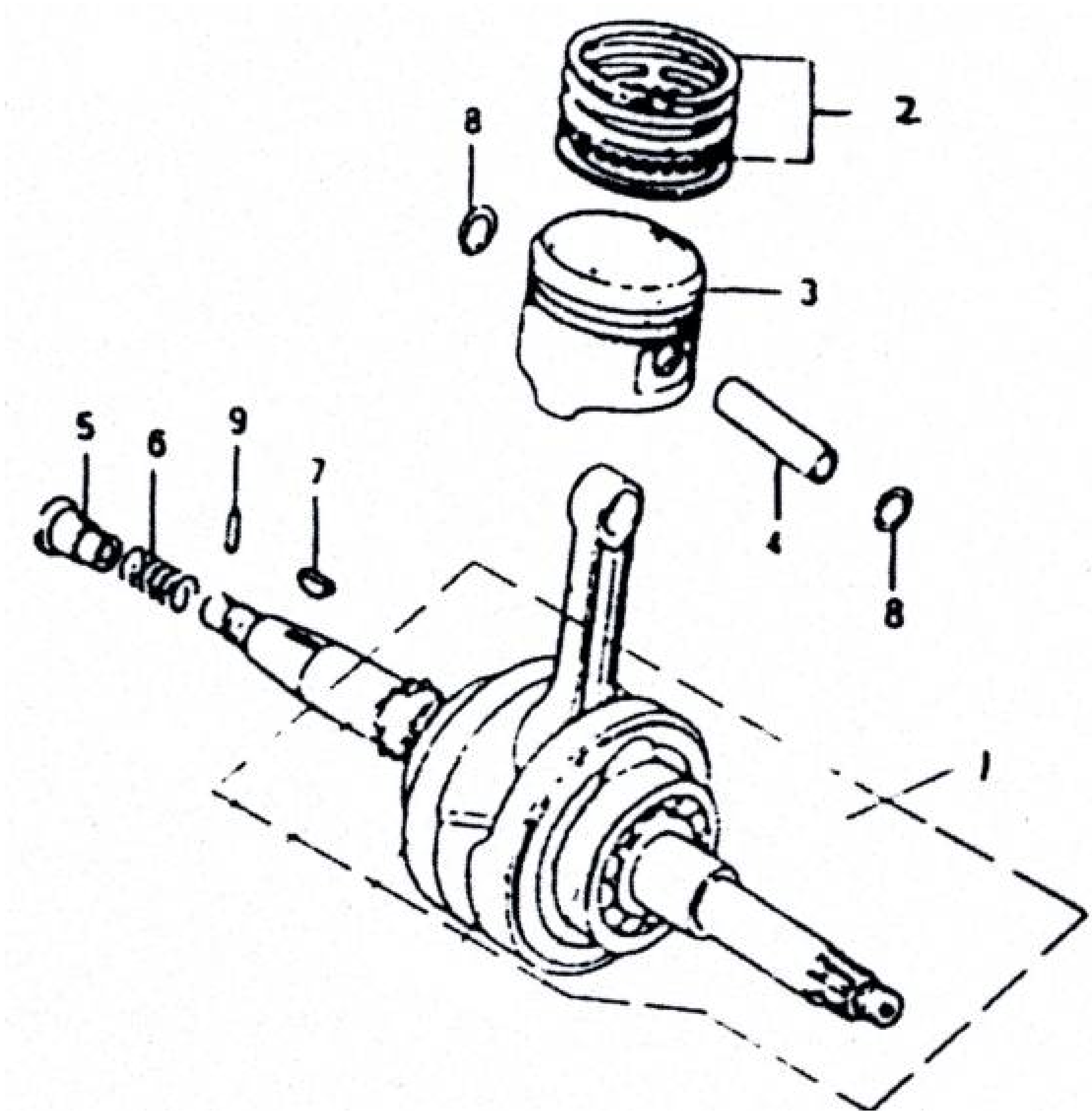
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-094000	172MM-094000	FREE-WHEELING CLUTCH	1
2	02.DLJ.172MM-033000	172MM-033000	TRIGGER COIL	1
3	02.DLJ.172MM-013008	172MM-013008	CABLE PRESS BAND	1
4	02.DLJ.172MM-031000	172MM-031000	FREE-WHEELING	1
5	02.DLJ.172MM-032000	172MM-032000	STATOR UNIT	1
6	02.DLJ.GB/T70,1-2000-M8X18	GB/T70.1-2000-M8X18	SOCKET HEAD SCREW	3
7	02.DLJ.172MM-040001	172MM-040001	NUT M16X1	1
8	02.DLJ.172MM-040002	172MM-040002	WASHER16.3X30X2	1
9	02.DLJ.152MI-030002	152MI-030002	BOLT M5X16	2
10	02.DLJ.152MI-060002	152MI-060002	BOLT M6X30	3

9、ADMISSION MACHANISM



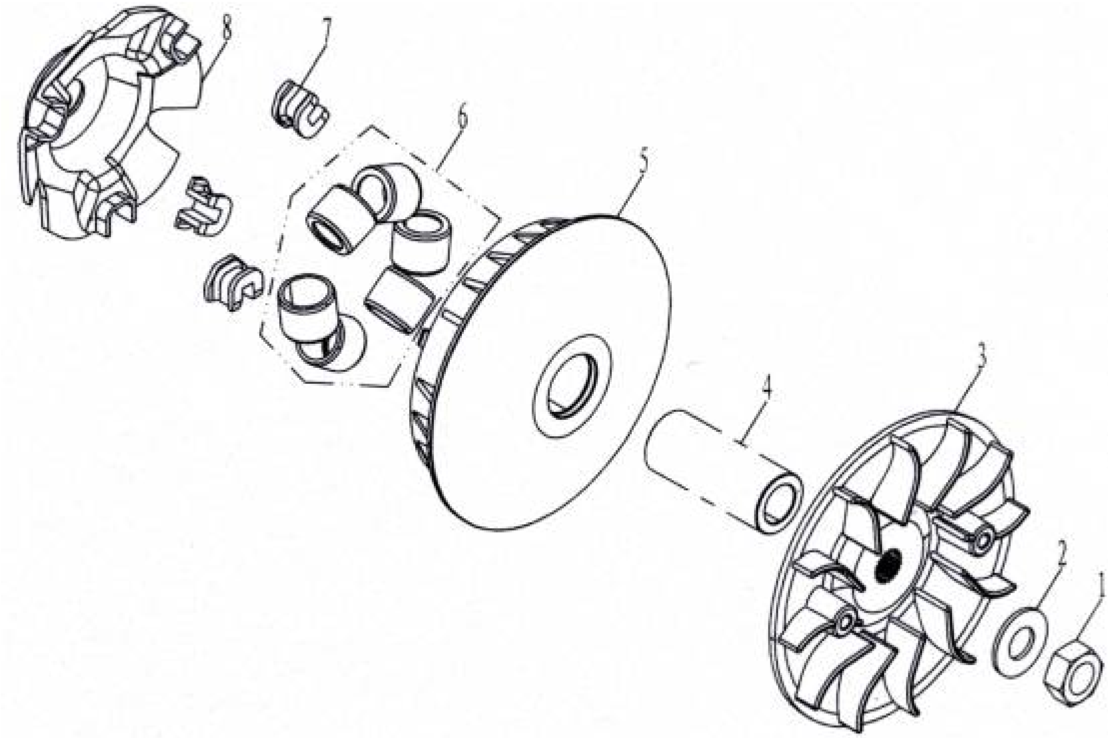
No.	ERP CODE	P/N	ENGLISH	Qty
1	152MI-022500	152MI-022500	VALVE ROD SEAL	2
2	172MM-022300	172MM-022300	CAM UNIT	1
3	152MI-021007	152MI-021007	SWING ARM	2
4	172MM-022001	172MM-022001	INTAKE VALVE	1
5	172MM-022005	172MM-022005	EXHAUST VALVE	1
6	172MM-022002	172MM-022002	OUTTER VALVE SPRING	2
7	172MM-022003	172MM-022003	INNER VALVE SPRING	2
8	152MI-022005	152MI-022005	VALVE SPRING PAN	2
9	152MI-022001	152MI-022001	VALVE SPRING SEAT	2
10	152MI-022006	152MI-022006	VALVE CLAMP	4
11	NTN: 16002	NTN: 16002	BALL BEARING	2
12	GB894.A-1-86-15	GB894.A-1-86-15	RETAINER RING AXIS	1
13	172MM-022310	172MM-022310	CHAIN PULLY	1
14	152MI-022500	172MM-022301	CAM AXIS	1

10、CRANK LINK LEVER & PISTON



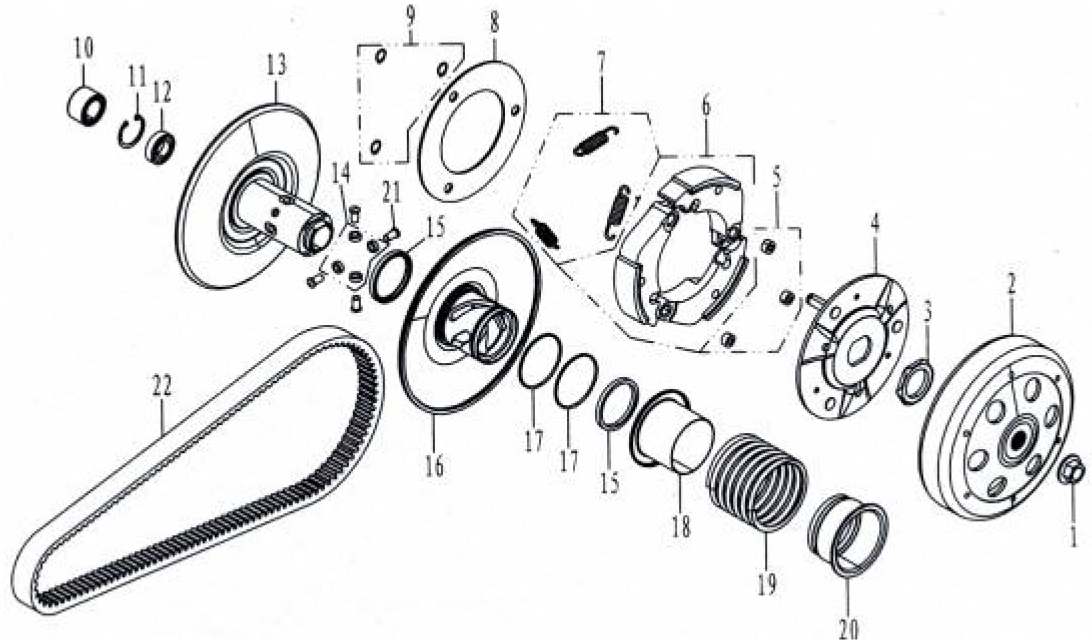
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-A-041000	172MM-A-041000	CRANK LINK UNIT	1
2	02.DLJ.172MM-040008	172MM-040008	PISTON RING	1
	02.DLJ.172MM-040009	172MM-040009	PISTON RING	1
	02.DLJ.172MM-042000	172MM-042000	OIL RING	1
3	02.DLJ.172MM-040005	172MM-040005	PISTON	1
4	02.DLJ.172MM-040007	172MM-040007	PISTON PIN	1
5	02.DLJ.152MI-040011	152MI-040011	OIL CHANNEL JOINT	1
6	02.DLJ.152MI-040010	152MI-040010	JOINT SPRING	1
7	02.DLJ.152MI-040006	152MI-040006	WOODRUFF KEY	1
8	02.DLJ.172MM-040006	172MM-040006	PISTON PIN STOP RING	2
9	02.DLJ.GB/T119-2000-2X14	GB/T119-2000-2X14	PIN	1

11、SPEED CHANGER.



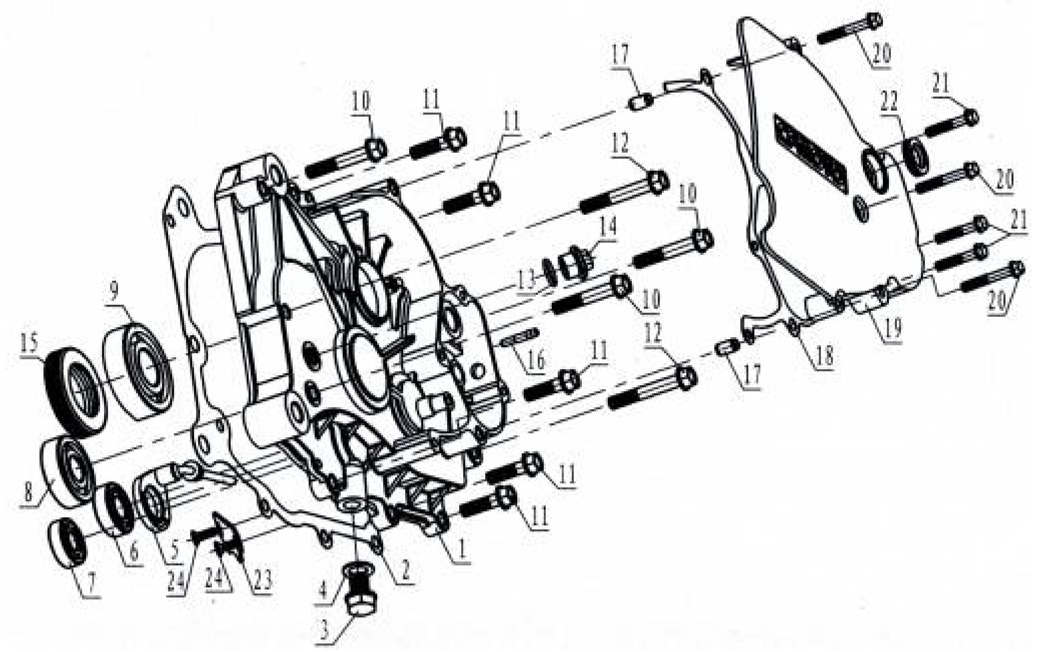
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-021007	172MM-021007	NUT M14X1.5	1
2	02.DLJ.172MM-021006	172MM-021006	WASHER14.5X30.2	1
3	02.DLJ.172MM-A-051005	172MM-A-051005	DRIVE WHEEL PAN	1
4	02.DLJ.172MM-A-051003	172MM-A-051003	DRIVE WHEEL PAN SLEEVE	1
5	02.DLJ.172MM-A-051100	172MM-A-051100	MOVABLE DRIVE PAN	1
6	02.DLJ.172MM-A-051200	172MM-A-051200	OFFCENTER ROLLER	6
7	02.DLJ.172MM-A-051004	172MM-A-051004	SLIDING BLOCK	3
8	02.DLJ.172MM-A-051002	172MM-A-051002	PUSH PAN	1

12、CLUTCH ASSY



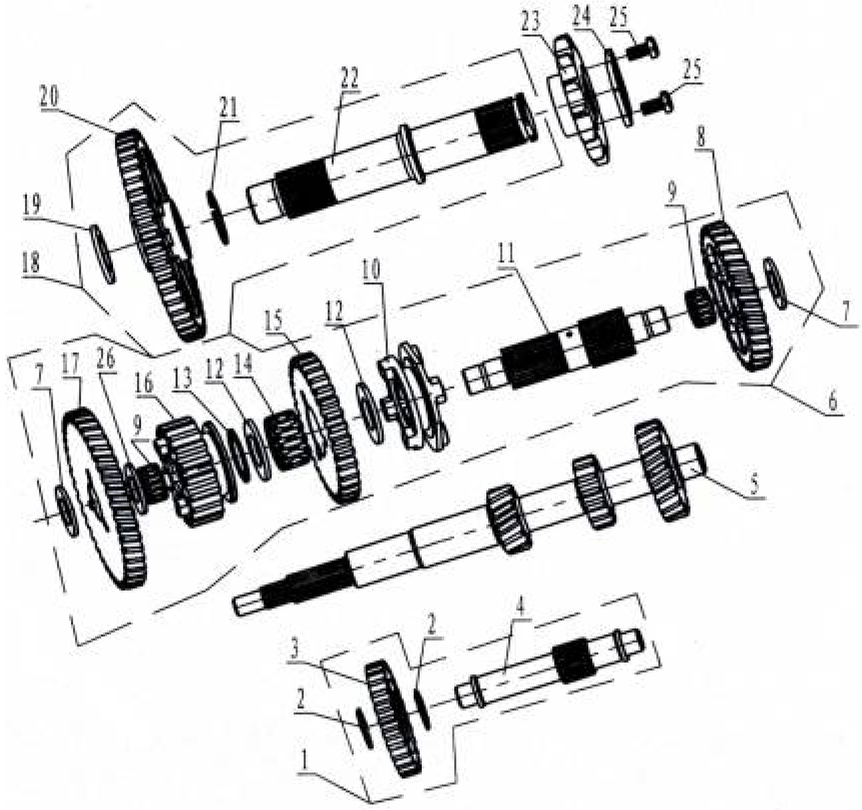
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-052008	172MM-052008	BOLT M12X1.25	1
2	02.DLJ.172MM-A-052500	172MM-A-052500	OUTTER WHEEL DISC	1
3	02.DLJ.172MM-052005	172MM-052005	THIN NUT M30X1	1
4	02.DLJ.172MM-A-052400	172MM-A-052400	DRIVE PAN UNIT	1
5	02.DLJ.172MM-A-052200	172MM-A-052200	DAMPING RUBBER BLOCK	3
6	02.DLJ.172MM-A-052600	172MM-A-052600	CLUTCH BLOCK	3
7	02.DLJ.172MM-A-052006	172MM-A-052006	RELEASE SPRING	3
8	02.DLJ.172MM-A-052003	172MM-A-052003	SIDE PAN	1
9	02.DLJ.GB/T896-1986-9	GB/T896-1986-9	SPLIT WASHER	3
10	02.DLJ.172MM-052310	172MM-052310	NEEDLE BEARING	1
11	02.DLJ.GB/T893,1-1986-28	GB/T893.1-1986-28	HOLE RETAINER RING	1
12	02.DLJ.GB/T278-1989-1060902	GB/T278-1989-1060902	BEARING	1
13	02.DLJ.172MM-A-052300	172MM-A-052300	DRIVEN PAN UNIT	1
14	02.DLJ.172MM-A-052001	172MM-A-052001	GALLOWS ROLL	4
15	02.DLJ.172MM-A-052104	172MM-A-052104	DRIVEN PAN GREASE SEAL	2
16	02.DLJ.172MM-A-052100	172MM-A-052100	MOVABLE DRIVEN PAN	1
17	02.DLJ.GB/T3452,1-1992-46,2X1,8	GB/T3452.1-1992-46.2X1.8	"O" SEAL RING	2
18	02.DLJ.172MM-A-052007	172MM-A-052007	SEAL BUSHING	1
19	02.DLJ.172MM-A-052004	172MM-A-052004	CLUTCH SPING	1
20	02.DLJ.172MM-A-052009	172MM-A-052009	SLEEVE	1
21	02.DLJ.172MM-A-052002	172MM-A-052002	GUIDE PIN	4
22	02.DLJ.172MM-B-053000	172MM-B-053000	COG BELT	1

13、GEARBOX COVER ASSY



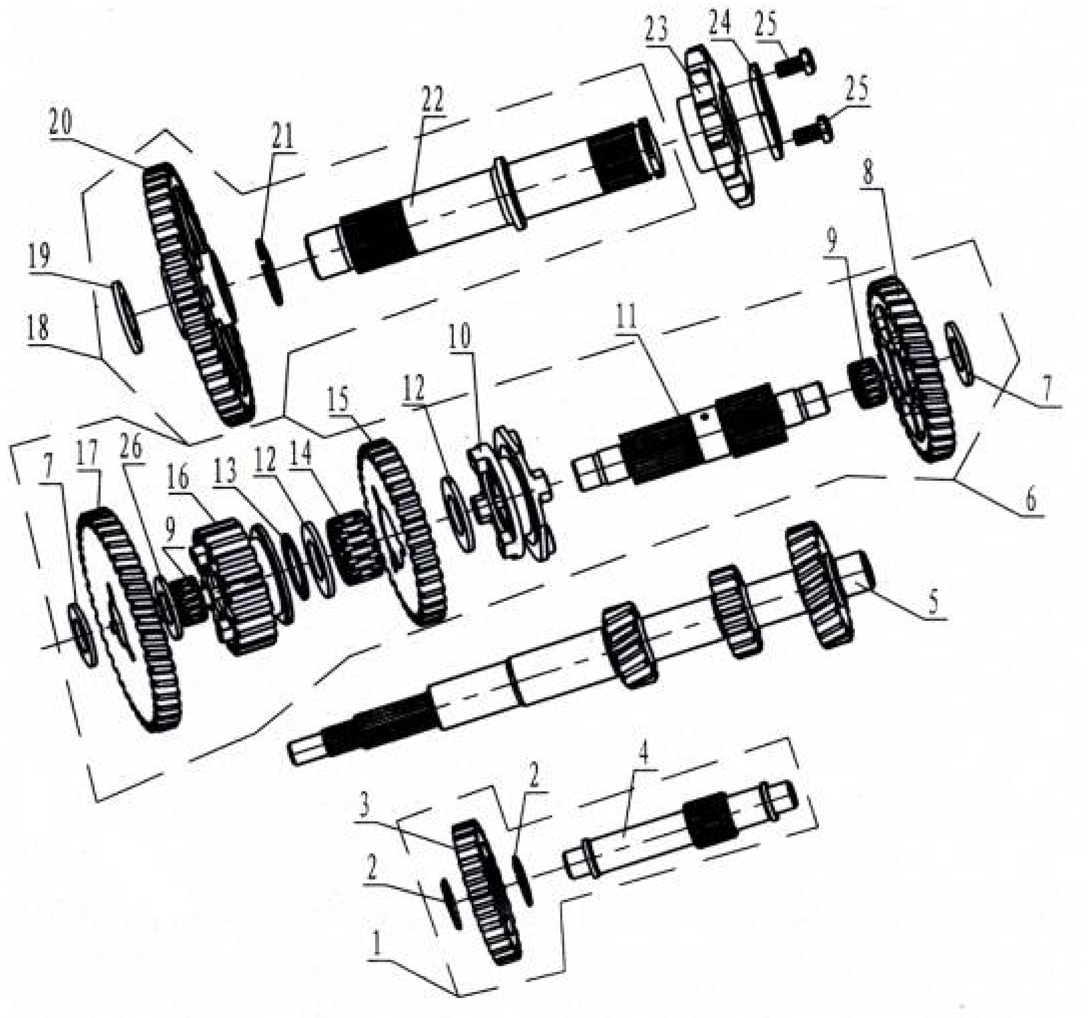
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-C-060001	172MM-C-060001	GEARBOX COVER	1
2	02.DLJ.172MM-C-060002	172MM-C-060002	GEAR BOX PAPER WASHER	1
3	02.DLJ.172MM-013005	172MM-013005	BOLT M12X1.5.OIL OUTLET	1
4	02.DLJ.152MI-021014	152MI-021014	WASHER12	1
5	02.DLJ.172MM-B-069000	172MM-B-069000	SHIFT DISPLAY SWITCH	1
6	02.DLJ.GB/T 276-1994 6202-RS	GB/T 276-1994 6202-RS	BALL BEARING	1
7	02.DLJ.GB/T 276-1994 6201	GB/T 276-1994 6201	BALL BEARING	1
8	02.DLJ.GB/T 276-1994 6203	GB/T 276-1994 6203	BALL BEARING	1
9	02.DLJ.GB/T 276-1994 6305-RS	GB/T 276-1994 6305-RS	BALL BEARING	1
10	02.DLJ.172MM-B-011107	172MM-B-011107	BOLT M8X48	3
11	02.DLJ.172MM-B-011111	172MM-B-011111	BOLT M8X30	5
12	02.DLJ.1P52MI-A-011007	1P52MI-A-011007	BOLT M8X55	2
13	02.DLJ.CF188-332004	CF188-332004	"O" RING 19X2.5	1
14	02.DLJ.CF188-332003	CF188-332003	OIL INLET BOLT	1
15	02.DLJ.172MM-C-060003	172MM-C-060003	OIL SEAL 32X62X7	1
16	02.DLJ.CF188-310028	CF188-310028	AIR PIPE JOINT	1
17	02.DLJ.152MI-080008	152MI-080008	LOCATION PIN Φ8X14	2
18	02.DLJ.172MM-C-060007	172MM-C-060007	PAPER WASHER.	1
19	02.DLJ.172MM-C-060006	172MM-C-060006	CHAIN PULLY COVER	1
20	02.DLJ.GB5787-86 M6X40-D·Cr	GB5787-86 M6X40-D·Cr	BOLT	3
21	02.DLJ.152MI-080012	152MI-080012	BOLT M6X32	3
22	02.DLJ.CF188-065002	CF188-065002	OIL SEAL SD 15X25X5	1
23	02.DLJ.172MM-B-011113	172MM-B-011113	OIL STOP CHIP	1
24	02.DLJ.GB/T 819-2000	GB/T 819-2000	SCREW M4X12	2

14、TRANSMISSION GEAR ASSY



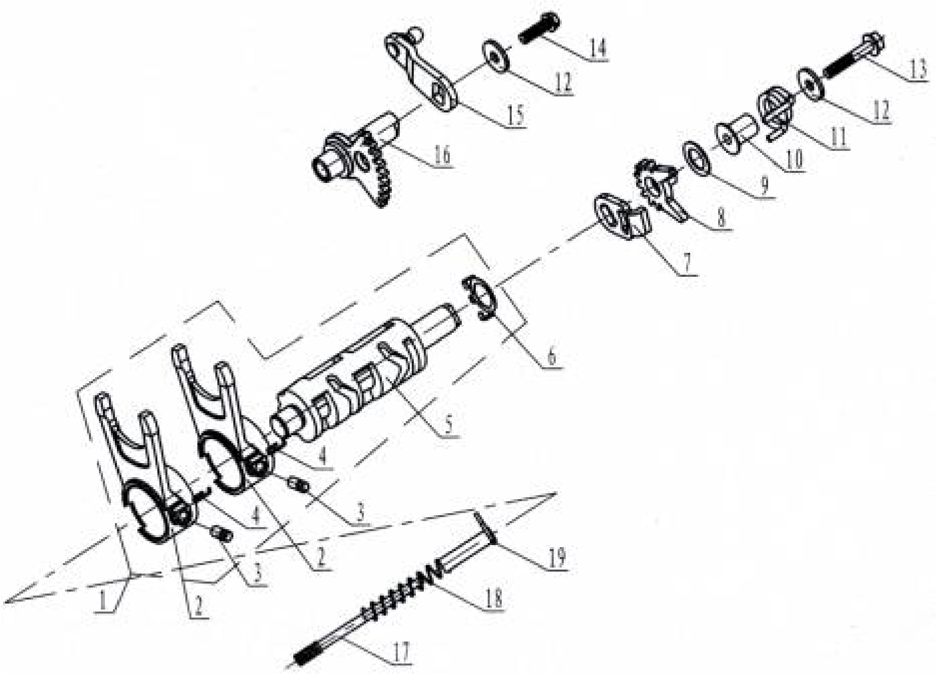
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-B-067000	172MM-B-067000	TRANSITION GEARS ASSY	1
2	02.DLJ.GB/T894,1-1986 20	GB/T894.1-1986 20	RETAINER RING	2
3	02.DLJ.172MM-B-067000	172MM-B-067000	TRANSITION GEAR	1
4	02.DLJ.172MM-B-067001	172MM-B-067001	TRANSITON GEAR-AXIS	1
5	02.DLJ.172MM-B-060001	172MM-B-060001	MAIN AXIS	1
6	02.DLJ.172MM-B-062000	172MM-B-062000	SECONDARY AXIS ASSY	1
7	02.DLJ.172MM-B-062006	172MM-B-062006	WASHER.15X28X2	2
8	02.DLJ.172MM-B-062002	172MM-B-062002	HIGH SPEED DRIVING GEAR	1
9	02.DLJ.NTN:K16X20X10	NTN: K16X20X10	NEEDLE BEARING	2
10	02.DLJ.172MM-B-062009	172MM-B-062009	SHIFT SLIDING SLEEVE	1
11	02.DLJ.172MM-B-062001	172MM-B-062001	SECONDARY AXIS	1
12	02.DLJ.172MM-B-062007	172MM-B-062007	WASHER 24X33X2	2
13	02.DLJ.GB/T894,1-86-24	GB/T894.1-86-24	CIRCLIP.AXIS	1
14	02.DLJ.K24X28X10	K24X28X10	NEEDLE BEARING	1
15	02.DLJ.172MM-B-062003	172MM-B-062003	REVERSE DRIVEN GEAR	1
16	02.DLJ.172MM-B-062005	172MM-B-062005	OUTPUT DRIVEN GEAR	1
17	02.DLJ.172MM-B-062004	172MM-B-062004	LOW SPEED DRIVEN GEAR	1
18	02.DLJ.172MM-C-063000	172MM-C-063000	OUTPUT AXIS ASSY	1
19	02.DLJ.172MM-C-063002	172MM-C-063002	WASHER 20X32X2.5	1
20	02.DLJ.172MM-C-063005	172MM-C-063005	OUTPUT DRIVEN GEAR	1

14、TRANSMISSION GEAR ASSY



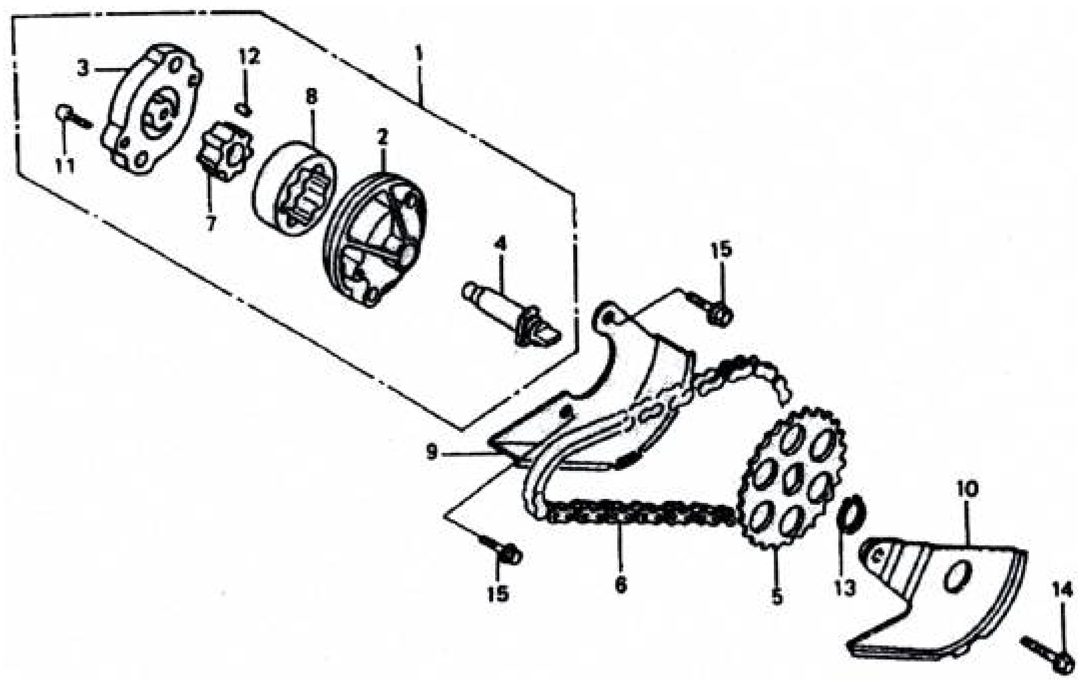
No.	ERP CODE	P/N	ENGLISH	Qty
21	02.DLJ.CF188-061007	CF188-061007	RETAINER RING.AXIS 25	1
22	02.DLJ.172MM-C-063001	172MM-C-063001	OUTPUT AXIS	1
23	02.DN250.07.000005A	DN250.07.00.00.05A	CHAIN PULLEY	2
24	02.DN250.07.000006	DN250.07.00.00.06	CHAIN PULLEY PRESS PLATE	1
25	02.DLJ.172MM-C-063009	172MM-C-063009	BOTL M6X12	1
26	02.DLJ.172MM-B-062008	172MM-B-062008	WASHER 16X28X2	1

15、GEAR SHIFT MACHANISM



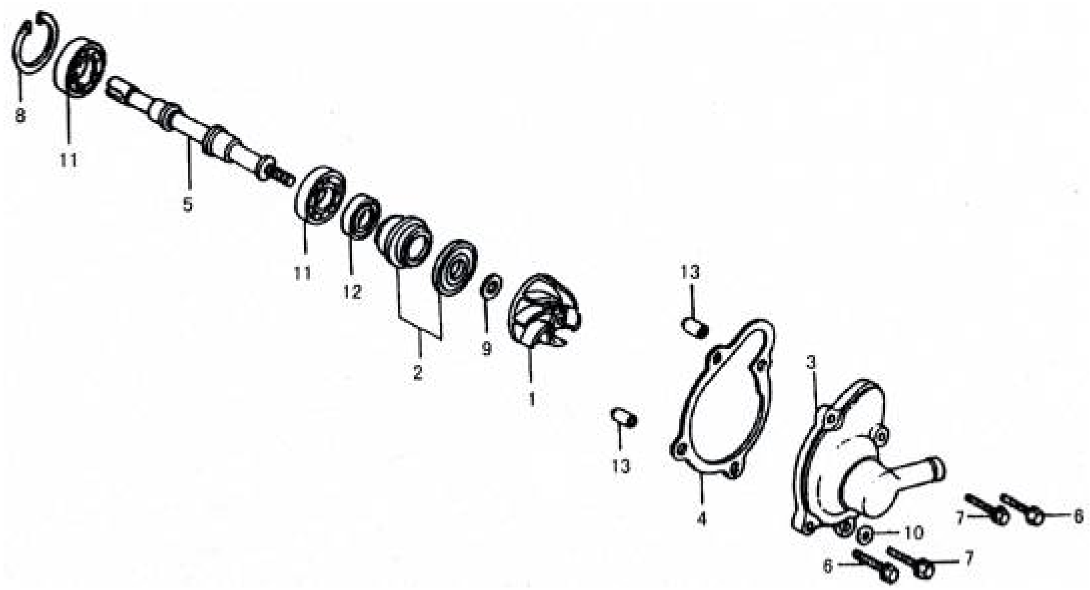
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-B-066000	172MM-B-066000	SHIFT DRUM ASSY	1
2	02.DLJ.172MM-B-066002	172MM-B-066002	SHIFT YOKE	2
3	02.DLJ.172MM-B-066003	172MM-B-066003	SHIFT YOKE PIN	2
4	02.DLJ.172MM-B-066004	172MM-B-066004	SHIFT YOKE PIN SNAP RING	2
5	02.DLJ.172MM-B-066001	172MM-B-066001	SHIFT DRUM	1
6	02.DLJ.172MM-B-066005	172MM-B-066005	SPEED DISPLAY TOUCH CHIP	1
7	02.DLJ.CF188-065201	CF188-065201	DRIVEN SECTOR GEAR WASHER	1
8	02.DLJ.CF188-065203	CF188-065203	DRIVING SHIFT SECTION GEAR	1
9	02.DLJ.CF188-065204	CF188-065204	WASHER 13.5X22X1	1
10	02.DLJ.CF188-065202	CF188-065202	DRIVING SHIFT SECTOR GEAR AXIS	1
11	02.DLJ.CF188-065204	CF188-065204	DRIVEN SECTOR GEAR SPRING	1
12	02.DLJ.CF188-065206	CF188-065206	WASHER 6.6X20X2	2
13	02.DLJ.151MI-013008	151MI-013008	BOLT M6X35	1
14	02.DLJ.151MI-023010	151MI-023010	BOLT M6X20	1
16	02.DLJ.172MM-C-065100	172MM-C-065100	DRIVE SHIFT SECTOR GEAR COMP	1
17	02.DLJ.172MM-B-066007	172MM-B-066007	SHIFT AXIS	1
18	02.DLJ.172MM-B-066009	172MM-B-066009	SHIFT PRESS SPRING	1
19	02.DLJ.172MM-B-066008	172MM-B-066008	SHIFT PRESS BUSHING	1

16、ENGINE OIL PUMP ASSY



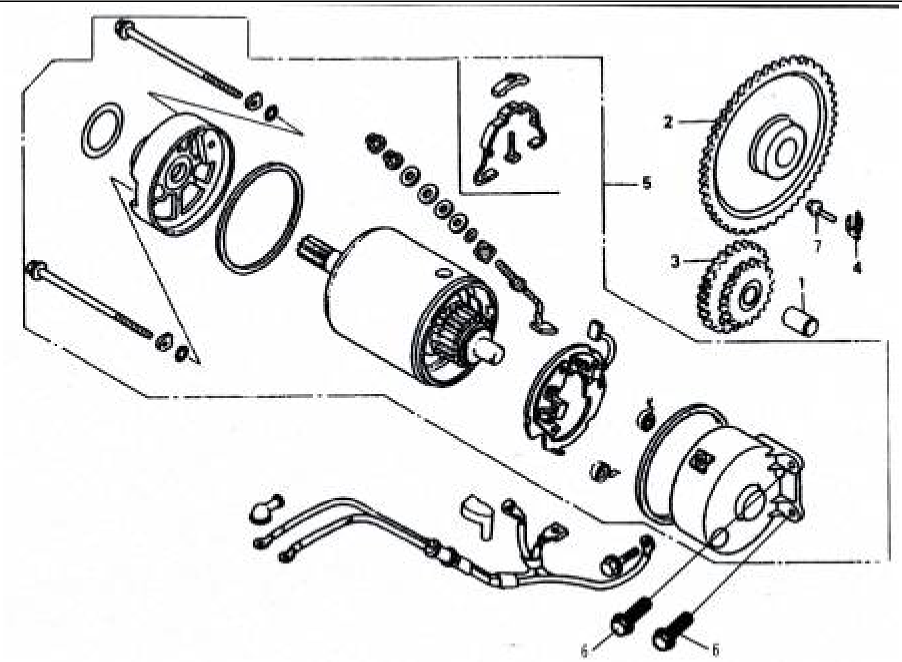
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.151MI-071000	151MI-071000	OIL PUMP ASSY	1
2	02.DLJ.151MI-071002	151MI-071002	OIL PUMP BODY	1
3	02.DLJ.151MI-071003	151MI-071003	OIL PUMP COVER	1
4	02.DLJ.151MI-071001	151MI-071001	OIL PUMP AXIS	1
5	02.DLJ.151MI-071001	151MI-071001	OIL PUMP CHAIN PULLEY	1
6	02.DLJ.151MI-073000	151MI-073000	CHAIN.OIL PUMP	1
7	02.DLJ.151MI-071004	151MI-071004	INNER ROTOR.OIL PUMP	1
8	02.DLJ.151MI-071005	151MI-071005	OUTTER ROTOR.OIL PUMP	1
9	02.DLJ.151MI-070002	151MI-070002	OIL PUMP SPACER PLATE A	1
10	02.DLJ.151MI-072000	151MI-072000	OIL PUMP SPACER PLATE B	1
11	02.DLJ.GB878-85-M3X12	GB878-85-M3X12	SCREW	1
12	02.DLJ.151MI-071006	151MI-071006	LOCATION PIN 4X6.5	1
13	02.DLJ.GB894,1-86-10	GB894.1-86-10	RETAINER RING.AXIS	1
14	02.DLJ.151MI-021019	151MI-021019	BOLT M6X12	1
15	02.DLJ.151MI-070003	151MI-070003	BOLT M6X28	2

17、COOLANT PUMP ASSY



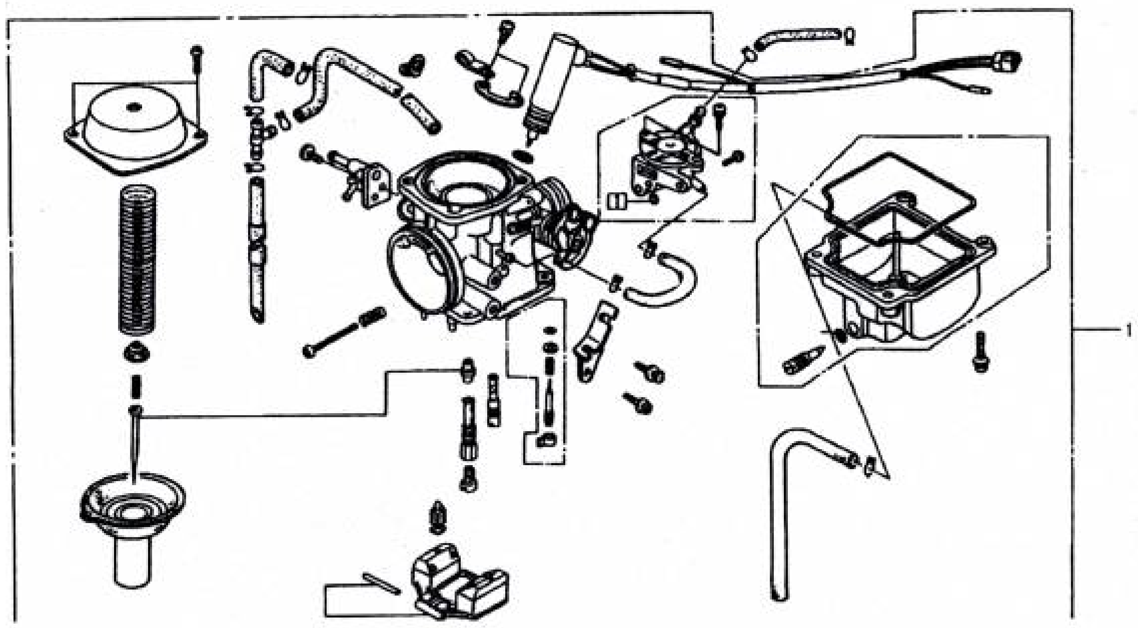
No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-080004	172MM-080004	WATER PUMP IMPELLER	1
2	02.DLJ.152MI-081000	152MI-081000	WATER SEAL ASSY	1
3	02.DLJ.172MM-080003	172MM-080003	WATER PUMP COVER	1
4	02.DLJ.172MM-080002	172MM-080002	COVER SEAL WASHER	1
5	02.DLJ.172MM-080001	172MM-080001	WATER PUMP AXIS	1
6	02.DLJ.152MI-013009	152MI-013009	BOLT M6X40	2
7	02.DLJ.152MI-021017	152MI-021017	BOLT M6X25	2
8	02.DLJ.GB/T893,1-1986-19	GB/T893.1-1986-19	HOLE RETAINER RING	1
9	02.DLJ.152MI-080007	152MI-080007	WASHER.7.5X13X1.2	1
10	02.DLJ.152MI-080011	152MI-080011	WASHER.6X12X1	1
11	02.DLJ.NTN:6800	NTN: 6800	NEEDLE BEARING	2
12	02.DLJ.172MM-080005	172MM-080005	GREASE SEAL 10X20X5	1
13	02.DLJ.152MI-080008	152MI-080008	LOCATION PIN Φ8X14	2

18、ELECTRIC STARTER ASSY



No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-090001	172MM-090001	DUPLICATE GEAR AXIS.	1
2	02.DLJ.172MM-092000	172MM-092000	DRIVEN GEAR COMP	1
3	02.DLJ.172MM-091000	172MM-091000	DUPLICATE GEAR COMP	1
4	02.DLJ.172MM-090007	172MM-090007	MOUNTING PLATE	1
5	02.DLJ.172MM-093000	172MM-093000	STARTER COMP	1
6	02.DLJ.152MI-080013	152MI-080013	BOLT M6X22	2
7	02.DLJ.172MM-090008	172MM-090008	BOLT M6X14	1

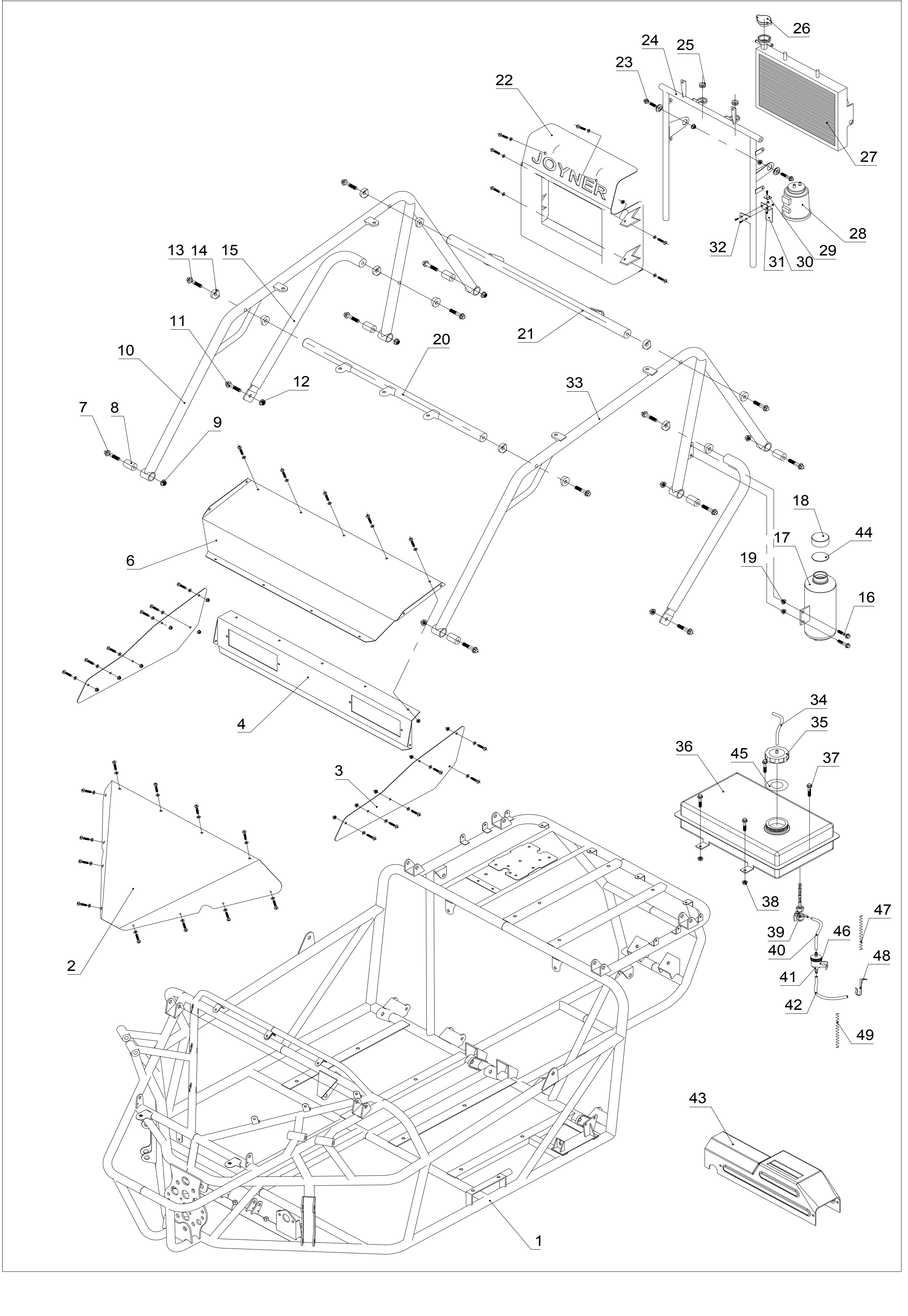
19、CARBURETOR ASSY



No.	ERP CODE	P/N	ENGLISH	Qty
1	02.DLJ.172MM-100000	172MM-100000	CARBURETOR ASSY	1

20、FRAME & FUEL TANK & RADIATOR

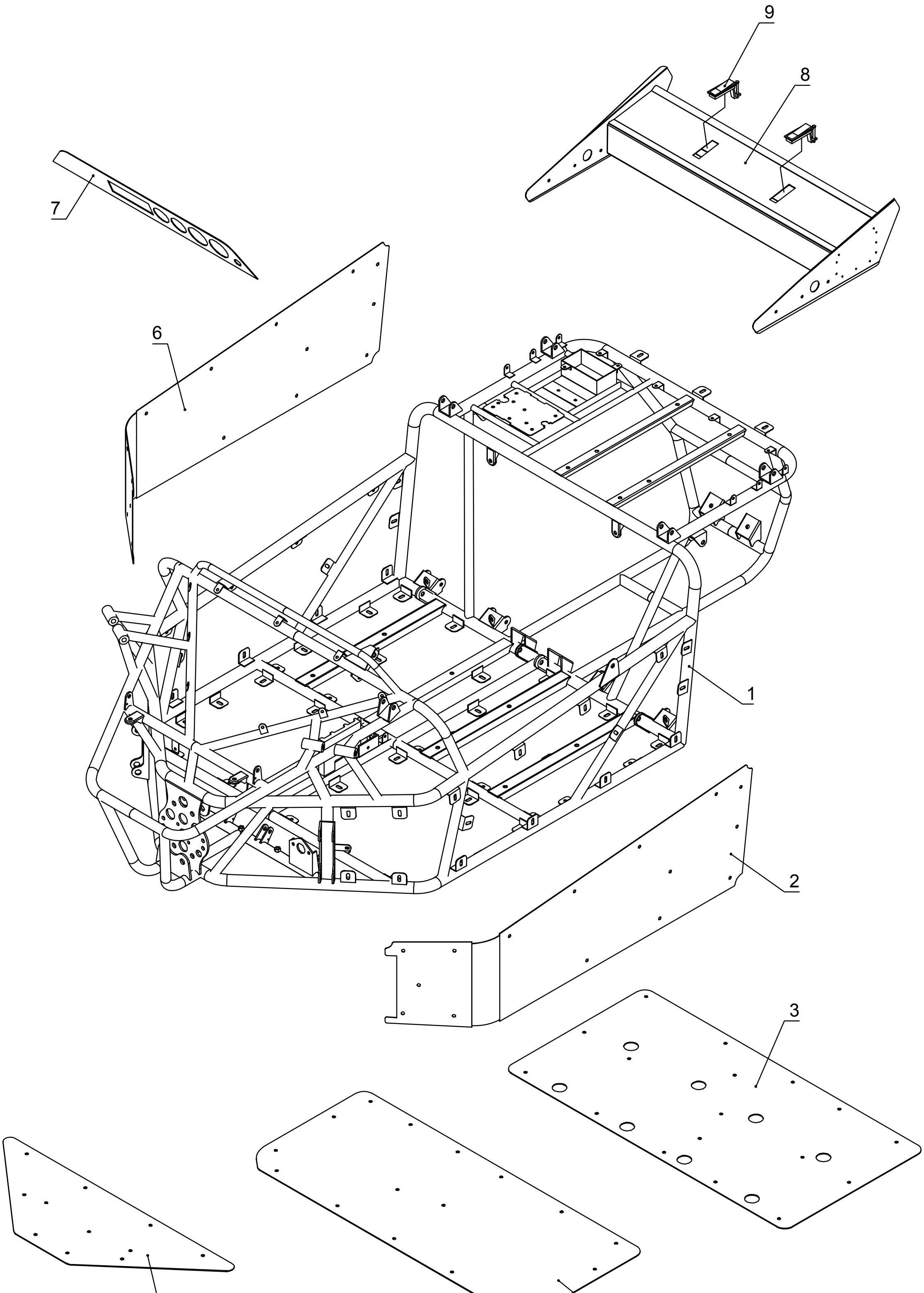
20 FRAME&FUEL TANK&RADIATOR



20 FRAME&FUEL TANK&RADIATOR

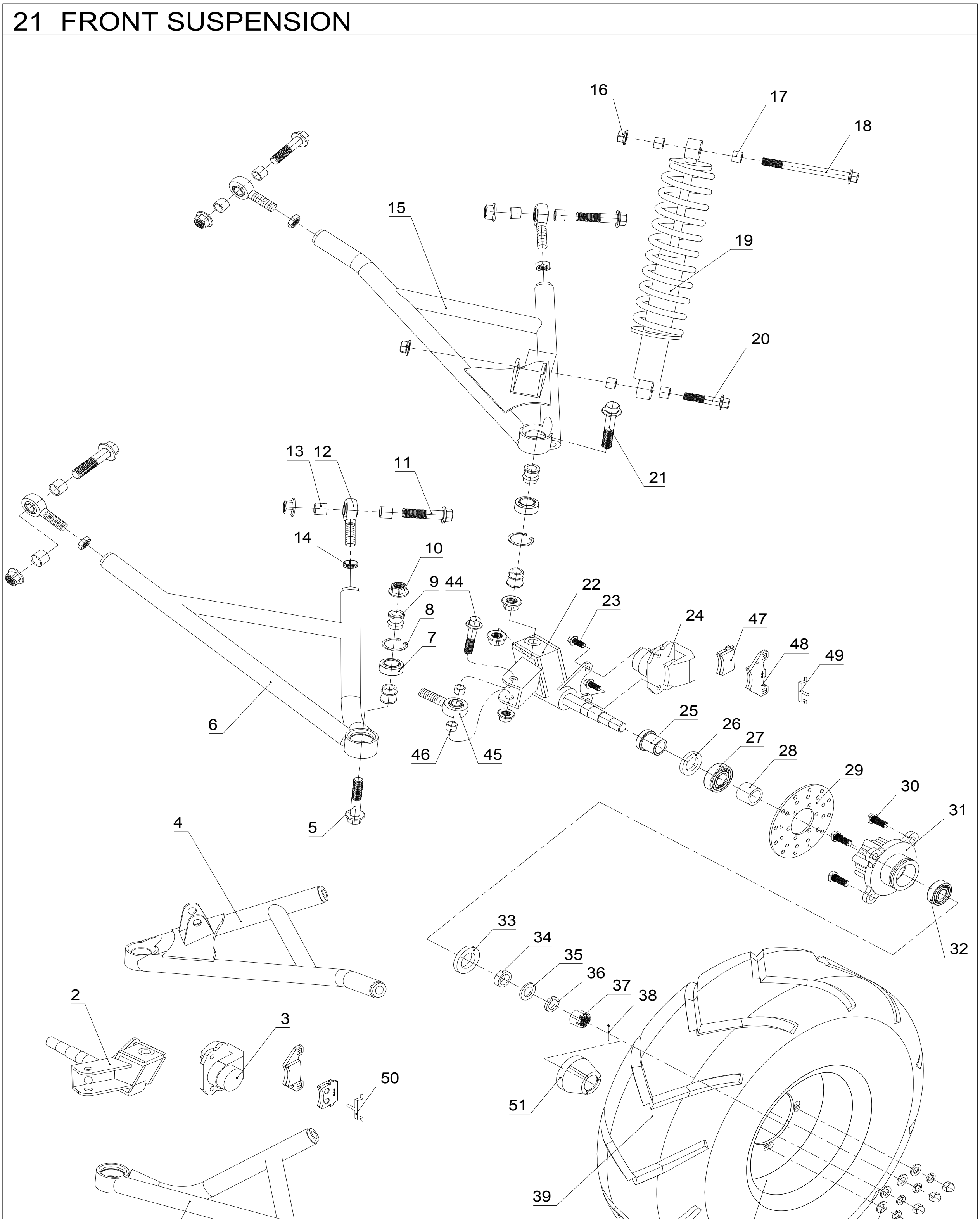
NO.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DN250.01.0100	DN250.01.01.00.00	MAIN FRAM (OPTION)	1
2	02.DN250.01.02.0006	DN250.01.02.00.06	COVER.FR	1
3	02.DN250.01.02.0004	DN250.01.02.00.04	LEFT SPORT WING(OPTION)	2
4	02.DN250.01.02.0004	DN250.01.02.00.04	LOWER SPORT WING(OPTION)	1
6	02.DN250.01.02.0002	DN250.01.02.00.02	UPPER SPORT WING(OPTION)	1
7	03.01.5787-M12X1,25X65/05	5787-M12x1.25x65	FLANGE BOLT M12X1.25X55	6
8	02.D250.11771	D250.11.771	NYLON BUSHING	6
9	03.02.2842-M12X1,5/05	SJ2842-M12x1.5	FLANGE NUT M12	6
10	02.DN250.01.02.08A	DN250.01.02.08.00A	RIGHT PROTECTIVE BAR	1
11	03.01.5787-M10X1,25X20/05	5787-M10X1.25X20	FLANGE BOLT M10X1.25X20	1
12	03.02.2842-M10X1,25/05	SJ2842-M10x1.25	FLANGE NUT M10	2
13	03.01.5787-M10X1,25X65/05	5787-M10X1.25X65	FLANGE BOLT M10X1.25X65	2
14	02.DN250.01.02.0001	DN250.01.02.00.01	ARC CUSHION \U+220532	12
15	02.DN250.01.02.03	DN250.01.02.03.00	REINFORCED BAR	2
16	03.01.5787-M8X20/05	5787-M8X20	FLANGE BOLT M8X20	2
17	02.D800.04.02.0200	D800.04.02.02.00	WATER TANK.GK800	1
18	02.D800.04.02.02.01	D800.04.02.02.01	WATER TANK CAP.GK800	1
19	03.02.6187,1-M8/05	6187.1-M8	FLANGE LOCK NUT M8	2
20	02.DN250.01.02.02	DN250.01.02.02.00	TOP PROTECTIVE BAR1	1
21	02.DN250.01.02.05	DN250.01.02.05.00	TOP PROTECTIVE BAR2	1
22	02.DI250.05.01.01	DI250.05.01.01.00	RADIATOR SAFETY COVER	1
23	03.01.5787-M8X30/05	5787-M8X30	FLANGE BOLT M8X30	2
24	02.DN250.01.02.06	DN250.01.02.06.00	RADIATOR SUPPORT	1
25	02.JD.1910003	JD1910003	RADIATOR RUBBER BUSHING	2
26	02.D250.09904	D250.09.904	RADIATOR CAPRADIATOR	1
27	02.DI250.05.01.01	DI250.05.01.01.00	RADIATOR	1
28	02.D650.04.06.01	D650.04.06.01.00	ACT(ACTIVATED CARBON	1
29	02.D650.04.06.0002	D650.04.06.00.02	BLOCK SHEET.ACT	1
30	02.D650.04.06.0001	D650.04.06.00.01	SUPPORT.ACT	1
31	03.02.6187,1-M6/05	6187.1-M6	FLANGE LOCK NUT M6	3
32	03.01.5787-M6X20/05	5787-M6X20	FLANGE BOLT M6X15	3
33	02.DN250.01.02.01A	DN250.01.02.01.00A	LEFT PROTECTIVE BAR	1
34	02.DN250.05.02.0004	DN250.05.02.00.04	INLET PIPE.ACT	1
35	02.JD.1135000	JD1135000	FUEL TANK CAP	1
36	02.DN250.05.02.03.01	DN250.05.02.03.01	FUEL TANK	1
37	03.01.5787-M8X20/05	5787-M8X20	FLANGE BOLT M8X20F	4
38	03.02.2842-M8/05	SJ2842-M8	FLANGE NUT M8F	4
39	02.JD.1138000	JD1138000	FUEL SWITCHF	1
40	02.DN250.05.02.0004	DN250.05.02.00.04	FUEL PIPE 1	1
41	02.DS250.11.01.0009	DS250.11.01.00.09	GAS FILTER	1
42	02.DN250.05.02.0005	DN250.05.02.00.05	FUEL PIPE 2	1
43	02.DN250.01.02.07A	DN250.01.02.07.00A	SHIFT COVER	1
44	02.D800.04.02.02.02	D800.04.02.02.02	SEAL CUSHING.WATER TANK	1
45	02.JD.1135001	JD1135001	RUBBER WASHER	1
46	02.DN250.05.02.0002	DN250.05.02.00.02	CLAMP 1.FUEL FILTER	1
47	02.DN250.05.02.0006	DN250.05.02.00.06	PROTECTIVE SPRING1.FUEL	1
48	02.DN250.05.02.0003	DN250.05.02.00.03	CLAMP 2.FUEL FILTER	1
49	02.DN250.05.02.0007	DN250.05.02.00.07	PROTECTIVE SPRING 2.FUEL	1

20 ALUMINIUM BAFFLE



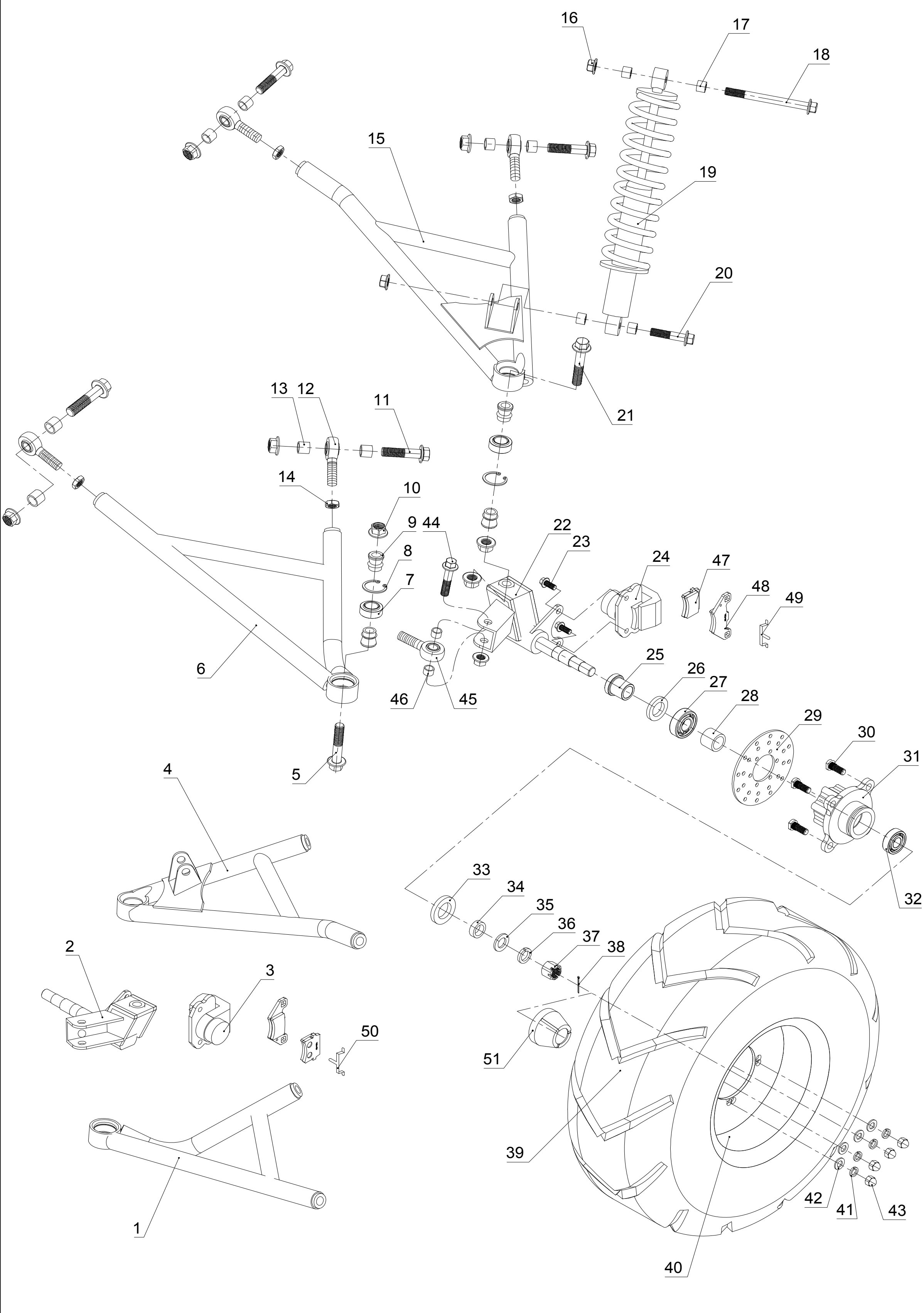
20 ALUMINIUM BAFFLE				
NO.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DNB250.01.0100	DNB250.01.01.00.00	MAIN FRAME	1
2	02.DNB250.01.02.0011	DNB250.01.02.00.11	LEFT SIDE BAFFLE	1
3	02.DNB250.01.02.0010	DNB250.01.02.00.10	BAFFLE UNDER SEATS	1
4	02.DNB250.01.02.0009	DNB250.01.02.00.09	BAFFLE UNDER FOOT	1
5	02.DNB250.01.02.0008	DNB250.01.02.00.08	FRONT LOWER BAFFLE	1
6	02.DNB250.01.02.0012	DNB250.01.02.00.12	RIGHT SIDE BAFFLE	1
7	02.DNB250.01.02.0003	DNB250.01.02.00.03	CONSOLE PLATE	1
8	02.DNB250.01.02.0900	DNB250.01.02.09.00	WING BOX	1
9	02.LS2.01.02.01.06	LS2.01.02.01.06	LOCK ON WING BOX	1

21、FRONT SUSPENSION



21 FRONT SUSPENSION				
NO.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DN250.02.03	DN250.02.03.00.00	RIGHT LOWER A-ARM	1
2	02.DN250.02.06	DN250.02.06.00.00	RIGHT KNUCKLE	1
3	02.DN250.04.01.0001	DN250.04.01.00.01	BRAKE CLIPPER 1	1
4	02.DN250.02.01	DN250.02.01.00.00	RIGHT UPPER A-ARM	1
5	03.01.5787-M14X1,5X90/05	5787-M14X1.5X90	FLANGE BOLT M14X1.5X90	2
6	02.DN250.02.04	DN250.02.04.00.00	LEFT UPPER A-ARM	1
7	03.05.304,1-GE20C	304.1-GE20C	JOINT BEARING GE20C	4
8	03.09.893,2-φ35	893.2-φ35	HOLE RETAINOR RING 35	4
9	02.DN250.02.000005	DN250.02.00.00.05	SPACER.GE20C	8
10	03.02.2842-M14/05	SJ2842-M14	FLANGE NUT M14x1.5	12
11	03.01.5787-M14X1,5X60/05	5787-M14X1.5X60	FLANGE BOLT M14X1.5X60	8
12	03.05.304,1-POSA14X2,0	304.1-POSA14x2.0	ROD END BEARING 14	8
13	02.DN250.02.000004	DN250.02.00.00.04	ROD END BEARING SPACER 14	16
14	03.02.6172,1-M14X1,5-R/05	6172.1-M14x1.5-R	THIN NUT M14	8
15	02.DN250.02.02	DN250.02.02.00.00	LEFT UPPER A-ARM	1
16	03.02.2842-M12X1,5/05	SJ2842-M12X1.5	FLANGE NUT M12X1.5	6
17	02.DN250.09.000007	DN250.09.00.00.07	SHOCK ABSORBOR SPACER	8
18	03.01.5787-M12X1,5X170/05	5787-M12X1.5X170	FLANGE BOLT M12X1.5X170	2
19	02.DN250.02.07	DN250.02.07.00.00	FR SHOCK ABSORBOR	2
20	03.01.5787-M12X1,5X60/05	5787-M12X1.5X60	FLANGE BOLT M14X1.5X60	8
21	03.01.5787-M14X1,5X80/05	5787-M14X1.5X80	FLANGE BOLT M14X1.5X80	2
22	02.DN250.02.05	DN250.02.05.00.00	LEFT KNUCKLE	1
23	03.01.5787-M8X20/05	5787-M8x20	FLANGE BOLT M8X15	4
24	02.DN250.04.01.0002	DN250.04.01.00.02	BRAKE CLIPPER 2	1
25	02.DN250.02.000003	DN250.02.00.00.03	FRONT WHEEL BUSHING 33.8	2
26	03.06.13871-FB28X47X7	13871-FB28x47x7	GREASE SEAL FB47X28X7	2
27	03.05.276-6204	276-6204	BALL BEARING 6204	2
28	02.JD.0360007	JD0360007	FRONT WHEEL BUSHING 22	2
29	02.JD.0360150	JD0360150	FRONT BRAKE DISC	2
30	02.DS250.02.000002	DS250.02.00.00.02	FRONT WHEEL KNURLED BOLT	8
31	02.JD.0360200-EU	JD0360200-EU	BEARING HUB	2
32	03.05.276-6203	276-6203	BALL BEARING 6203	2
33	03.06.13871-FB25X40X6	13871-FB25x40x6	GREASE SEAL FB40X25X6	2
34	02.JD.0360006	JD0360006	SMALL SPACER 8	2
35	02.D250.06011	D250.06.011	REAR WHEEL AXLE WASHER	2
36	03.04.93-φ16/05	93-ϕ16	SPRING WASHER 16	2
37	03.02.6178-M16/05	6178-M16	SLOTTED NUT M16	2
38	03.08.91-φ4X40/05	91-ϕ4x40	COTTER PIN 4x40	2
39	02.DN250.02.08.0001	DN250.02.08.00.01	TYRE 21X8-10	2
40	02.JD.0760800	JD0760800	RIM 10X5.5	2

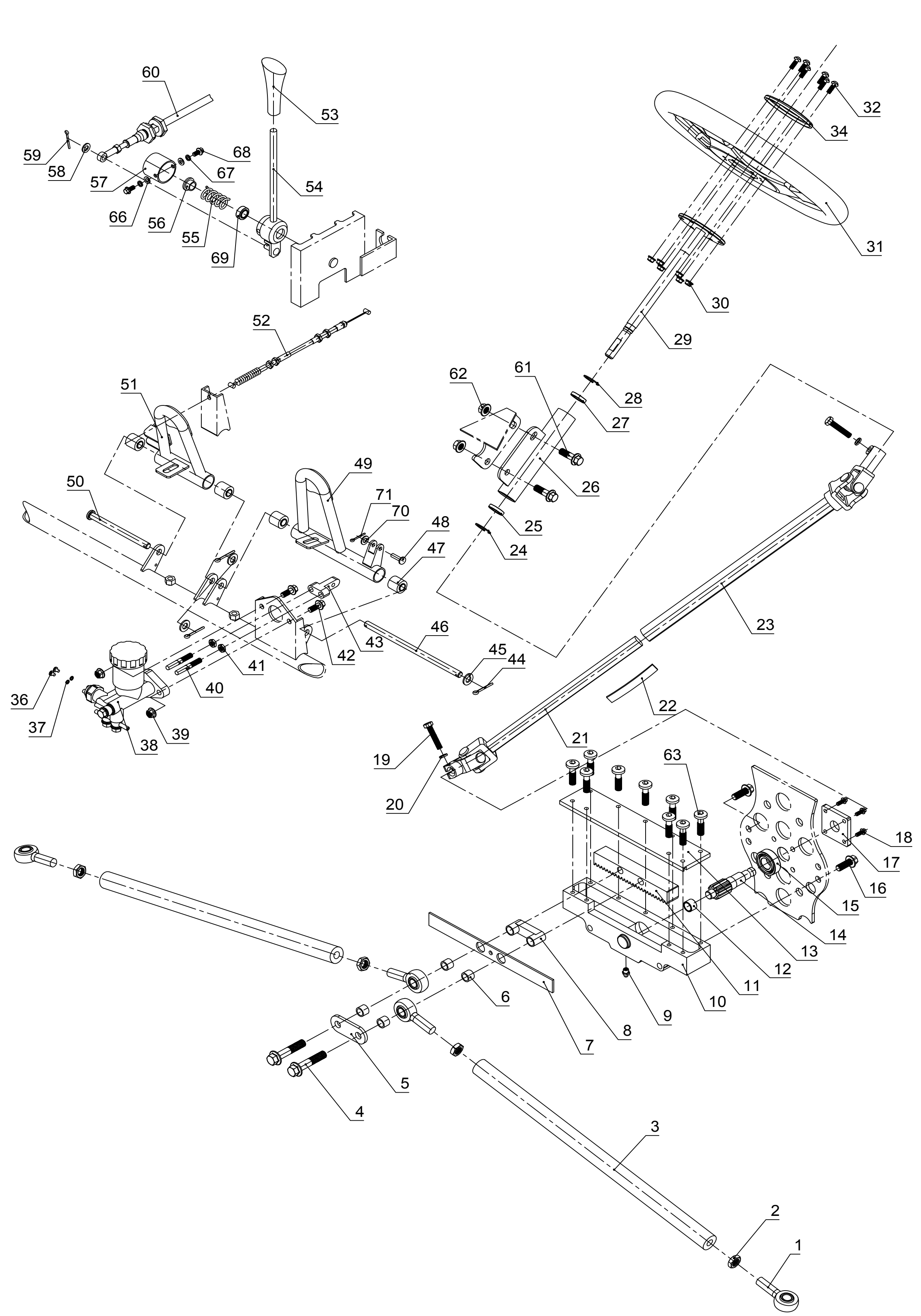
21 FRONT SUSPENSION



21 FRONT SUSPENSION				
NO.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
41	03.04.93-φ10/05	93-φ10	SPRING WASHER 10	8
42	03.03.95-φ10X20X2/05	95-φ10x20x2	PLAIN WASHER 10	8
43	03.02.923-M10X1,25	923-M10x1.25	CAPPED NUT M10X1.25	8
44	03.01.5787-M12X1,5X80/05	5787-M12X1.5X80	FLANGE BOLT M12X1.5X80	8
45	02.D800.05.01.0002	D800.05.01.00.02	ROD END BEARING 12	8
46	02.D800.05.01.0003	D800.05.01.00.03	SPACER φ12.TIE ROD	8
47	02.DN250.04.01.0003	DN250.04.01.00.03	FRACTION PLATE 1	2
48	02.DN250.04.01.0004	DN250.04.01.00.04	FRACTION PLATE 2	2
49	02.DN250.04.01.0005	DN250.04.01.00.05	BRAKE CLIPPER SPRING PLATE 2	1
50	02.DN250.04.01.0006	DN250.04.01.00.06	BRAKE CLIPPER SPRING PLATE 1	1
51	02.JD.0360010	JD0360010	FRONT WHEEL HUB COVER	2

22、 STEERING&THROTTLE&BRAKE&SHIFT

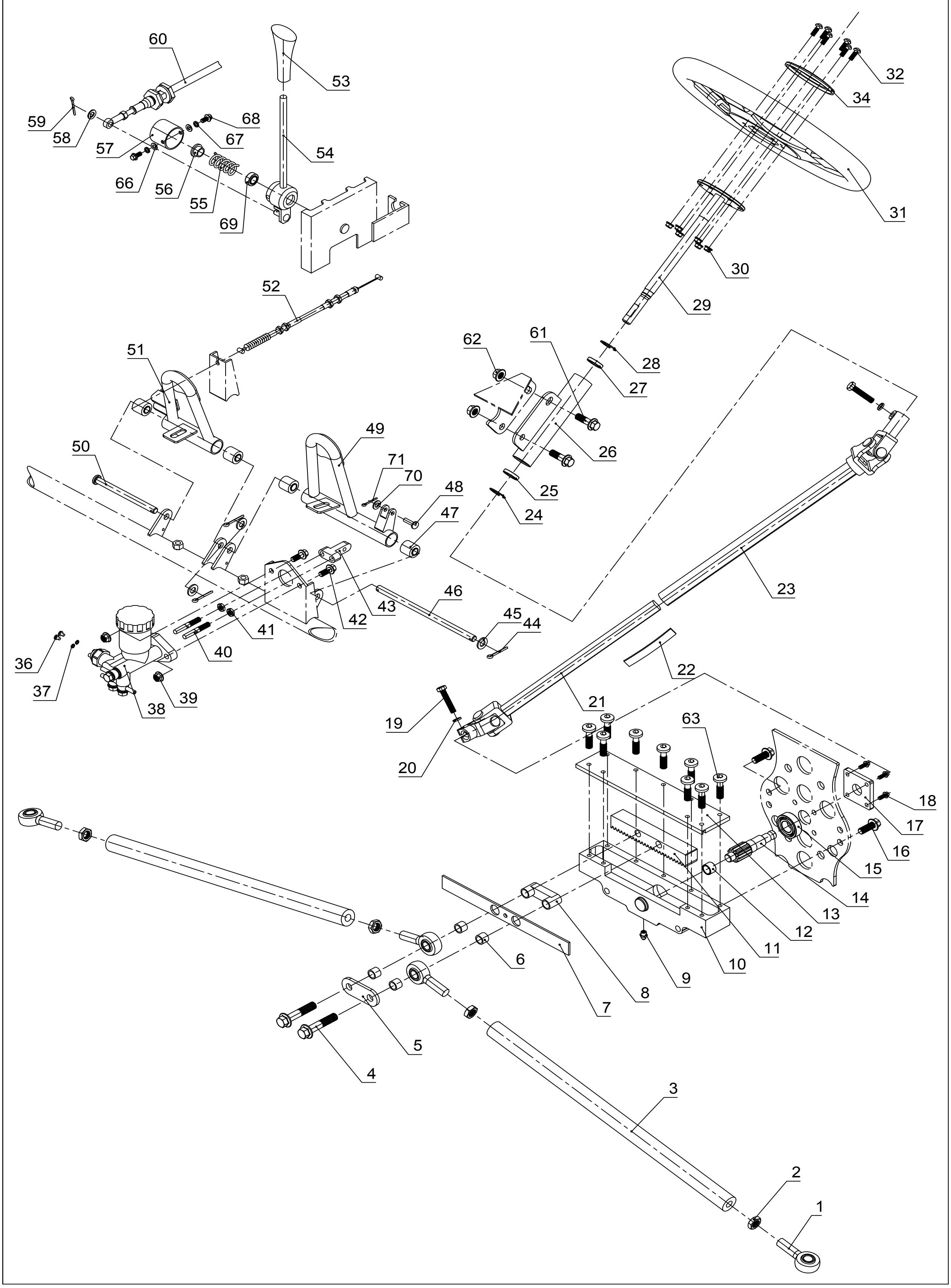
22 STEERING&THROTTLE&BRAKE&SHIFT



22 STEERING&THROTTLE&BRAKE&SHIFT				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.D800.05.01.0001	D800.05.01.00.01	ROD END BEARING POSA12L	2
2	03.02.6172,1-M12-L/05	6172.1-M12-L	THIN NUT M12L	2
3	02.DN250.03.02	DN250.03.02.00.00	TIE ROD	2
4	03.01.70,1-M12X80/05	70.1-M12x80	BOLT M12X80	2
5	02.D800.05.01.0004	D800.05.01.00.04	REINFORCED SHEET.TIE ROD	1
6	02.D800.05.01.0003	D800.05.01.00.03	TIE ROD SPACER	8
7	02.D800.05.01.03.07	D800.05.01.03.07	DUST GUARD PLATE	1
8	02.D800.05.01.03.06	D800.05.01.03.06	TIE ROD SUPPORT	1
9	03.11.7940,1-M8	7940.1-M8	GREASE CUP M8X1	1
10	02.D800.05.01.03.01	D800.05.01.03.01	STEERING BOX CASE	1
11	02.D800.05.01.03.04	D800.05.01.03.04	STEERING RACK	1
12	02.D800.05.01.03.10	D800.05.01.03.10	BUSH BEARING14c7x18x12	1
13	02.D800.05.01.03.03	D800.05.01.03.03	STEERING BOX COVER PLATE	1
14	02.D800.05.01.03.02	D800.05.01.03.02	STEERING GEAR SHAFT	1
15	02.D800.05.01.03.09	D800.05.01.03.09	BALL BEARING 20x42x12	1
16	03.01.5787-M10X30/05	5787-M10X30	FLANGE BOLT M10x30	2
17	02.D800.05.01.03.05	D800.05.01.03.05	BEARING STOP PLATE	1
18	03.01.5787-M6X25/05	5787-M6x25	FLANGE BOLT M6x25	4
19	03.01.5782-M8X30/05	5782-M8x30	BOLT M8X30	2
20	03.04.93-φ8/05	93-φ8	SPRING WASHER 8	2
21	02.DN250.03.04.0001	DN250.03.04.00.01	SLIP UNIVERSAL JOINT SHAFT	1
22	02.DN250.03.04.0003	DN250.03.04.00.03	SPRING PLATE	1
23	02.DN250.03.04.0002	DN250.03.04.00.02	SLIP UNIVERSAL JOINT SLEEVE	1
24	03.09.893,2-φ26	893.2-φ26	CIRCLIP FOR HOLE 26	1
25	03.05.276-61803	276-61803	BALL BEARING 61803	1
26	02.DN250.03.03.02	DN250.03.03.02.00	STEERING COLUMN SLEEVE	1
27	03.05.276-61902	276-61902	BALL BEARING 61902	1
28	03.09.893,2-φ28	893.2-φ28	CIRCLIP FOR HOLE 28	1
29	02.DN250.03.03.01	DN250.03.03.01.00	STEERING COLUMN SHAFT	1
30	03.02.6187,1-M8/05	6187.1-M8	FLANGE LOCK NUT M8	6
31	02.TR1100.05.01.0002	TR1100.05.01.00.02	STEERING WHEEL	1
32	03.01.70,2-M6X25/05	70.2-M6x25	INNER SUNK SCREW M6x25	6
34	2.TR1100.05.01.0002-3	TR1100.05.01.00.02-3	PLASTIC COVER	1
36	03.02.41-M4/05	41-M4	CROSS PANHEAD SCREW M4x5	2
37	03.04.93-φ4/05	93-φ4	SPRING WASHER 4	2
38	02.DN250.04.01.01	DN250.04.01.01.00	MAIN BRAKE PISTON	1
39	03.02.6187,1-M8/05	6187.1-M8	FLANGE LOCK NUT M8	2
40	02.DN250.04.01.0005	DN250.04.01.00.05	BRAKE PUSH POLE	2
41	03.02.6172,1-M8-R/05	6172.1-M8-R	THIN NUT M8	2
42	03.01.5787-M8X30/05	5787-M8X30	FLANGE BOLT M8x30	2
43	02.D250.10005	D250.10.005	"T" BLOCK	1
44	03.08.91-φ3X30/05	91-φ3x30	COTTER PIN 3x30	3
45	03.03.95-φ10X20X2/05	95-φ10X20X2	PLAIN WASHER 10	3
46	02.DN250.04.000002	DN250.04.00.00.02	BRAKE BOARD FOOT PIN	1

22、STEERING,THROTTLE,BRAKE&SHIFT

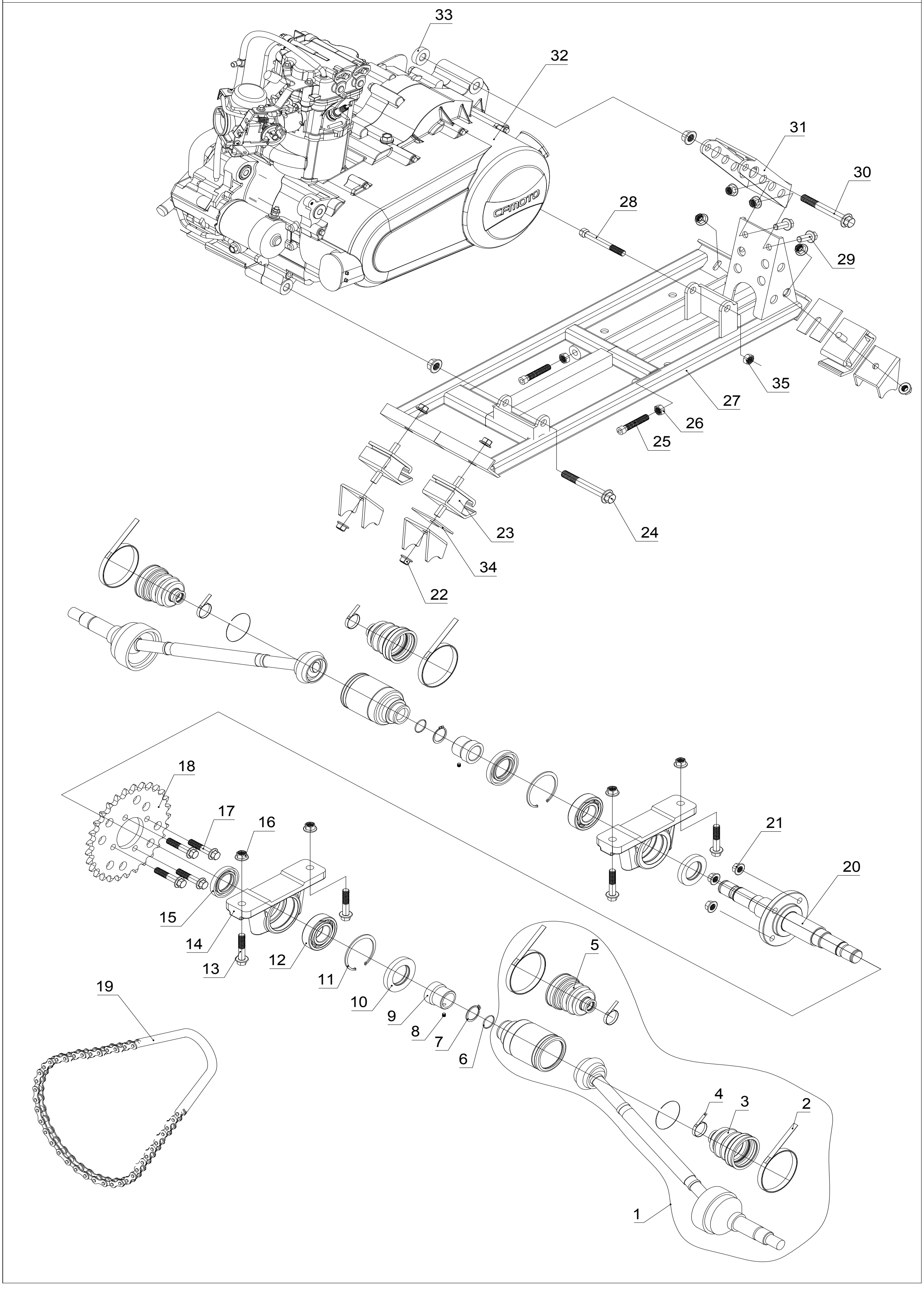
22 STEERING&THROTTLE&BRAKE&SHIFT



22 STEERING&THROTTLE&BRAKE&SHIFT				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
47	02.D250.04002	D250.04.002	BUFFER BUSHING.LINK ROD	4
48	03.07.882-6X25/05	882-6x25	PIN B M6x30	2
49	02.DN250.04.02A	DN250.04.02.00.00A	BRAKE BOARD	2
50	02.DN250.05.02.01A	DN250.05.02.01.00A	THROTTLE PIN	2
51	02.DN250.05.02.0001	DN250.05.02.00.01	THROTTLE BOARD	1
52	02.DN250.05.02.02A	DN250.05.02.02.00A	THROTTLE CABLE	1
53	02.JD.1082101	JD1082101	SHIFT RUBBER BUSHING	1
54	02.DI250.05.05.03	DI250.05.05.03.00	SHIFT LEVER	1
55	02.D250.08004	D250.08.004	SHIFT SPRING	1
56	02.D250.08005	D250.08.005	STOP RING	1
57	02.D250.08009	D250.08.009	SHIFT LEVER COVER	1
58	03.03.95-φ8X16X1,5	95-φ8x16x1.5	PLAIN WASHER 8	1
59	03.08.91-φ3X30/05	91-φ3x30	COTTER PIN 3x30	1
60	02.DN250.05.06.01A	DN250.05.06.01.00A	SHIFT CABLE	1
61	03.01.5787-M10X1,25X30/05	5787-M10X1.25X30	FLANGE BOLT M10x1.25x30	2
62	03.02.2842-M10X1,25/05	SJ2842-M10x1.25	FLANGE NUT M10x1.25	2
63	03.02.6183,1-M6/05	6183.1-M6	FLANGE LOCK NUT M6	1
65	02.DN250.04.000001	DN250.04.00.00.01	FOOT BRAKE SPRING.DN250	2
66	03.03.95-φ6X12X1/05	95-φ6x12x1	PLAIN WASHER 6	2
67	03.02.6183,1-M6/05	6183.1-M6	SPRING WASHER 6	2
68	03.01.5787-M6X10/05	5787-M6x10	FLANGE BOLT M6X10	2
69	03.05.304,1-GE12C	304.1-GE12C	JOINT BEARING GE12C	1
70	03.03.95-φ8X16X1,5	95-φ8x16x1.5	PLAIN WASHER 6	1
71	03.08.91-φ2X25/05	91-φ2x25	COTTER PIN 2x20	1

23、ENGINE RACK & TRANSMISSION

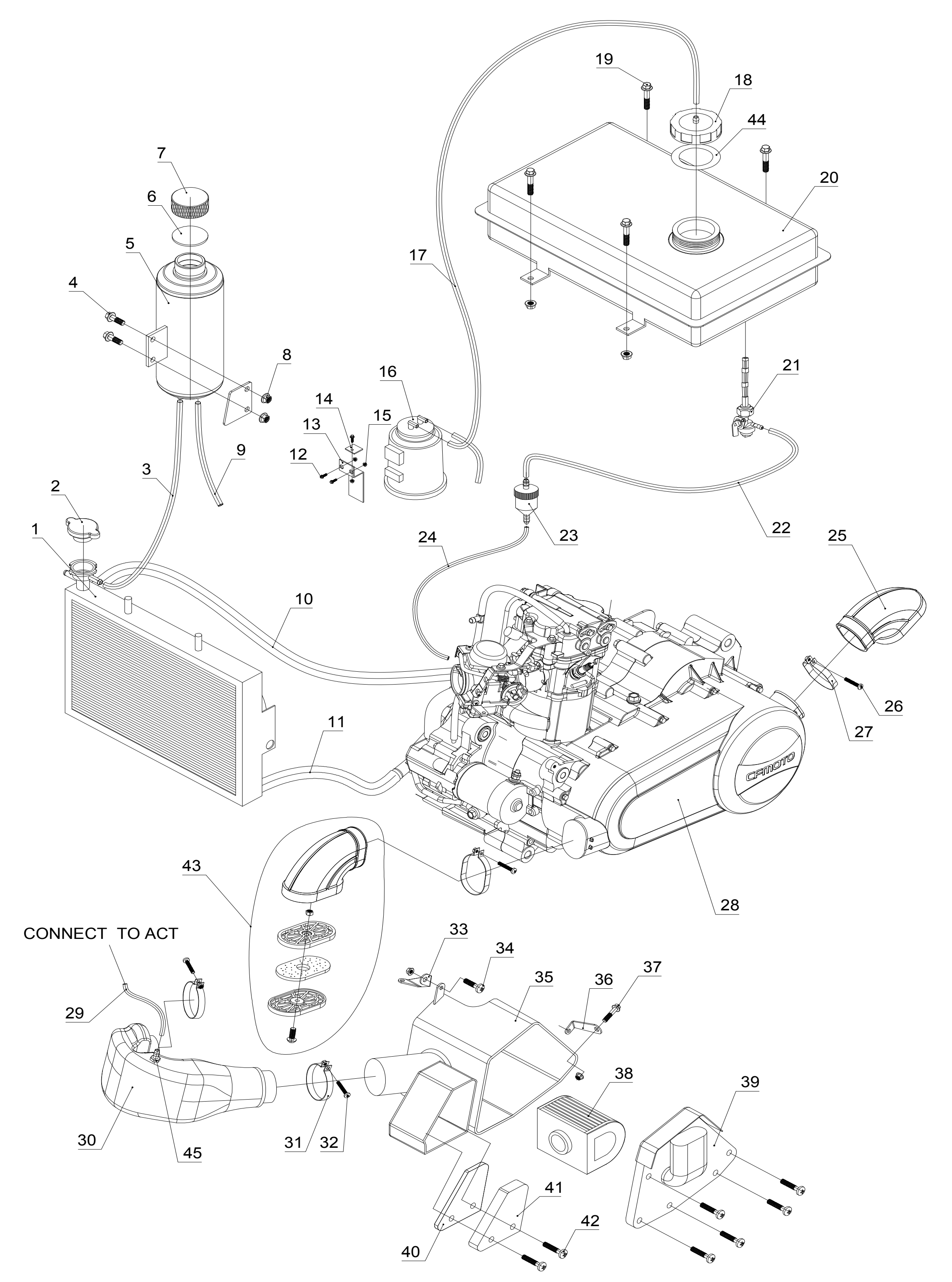
23 ENGINE RACK&TRANSMISSION



23 ENGINE RACK&TRANSMISSION				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DN250.07.0100	DN250.07.01.00.00	CV AXLE.ASSY	2
2	02.DI250.07.01.0001	DI250.07.01.00.01	BRIDLE.BOOT	4
3	02.DLJ.BT-2075	BT-2075	OUTER BOOT	2
4	02.DI250.07.01.0003	DI250.07.01.00.03	BRIDLE.BOOT	4
5	02.DLJ.BT-2075	BT-2075	INNER BOOT	2
6	02.DLJ.MQC4-2303016	MQC4-2303016	STEEL THREAD CIRCLIP	2
7	03.09.894,2-φ26	894.2-φ26	CIRCLIP FOR AXIS 26	2
8	03.01.77-M5X6/09	77-M5X6	HOLDING SCREW M5x6	2
9	02.DN250.07.000003	DN250.07.00.00.03	SPROCKET SHAFT SLEEVE	2
10	03.06.13871-FB38X62X8	13871-FB38x62x8	GEASE SEAL FB 38x62x8	2
11	03.09.893,2-φ62	893.2-φ62	CIRCLIP FOR HOLE 62	2
12	03.05.281-1206	281-1206	BALL BEARING 1206	2
13	03.01.5787-M12X1,5X45/05	5787-M12X1.5X45	FLANGE BOLT M12x1.5x45	4
14	02.DI250.07.000006	DI250.07.00.00.06	BEARING SEAT（CAST STEEL）	2
15	03.06.13871-FB35X55X8	13871-FB35x55x8	GEASE SEAL FB 35x55x8	2
16	03.02.2842-M10X1,25/05	SJ2842-M10x1.25	FLANGE NUT M12x1.5	2
17	03.01.5787-M8X30/05	5787-M8x30	FLANGE BOLT M8x30	6
18	02.DN250.07.000004	DN250.07.00.00.04	CHAIN PULLEY(43 TOOTH)	1
19	02.DN250.07.03A	DN250.07.03.00.00A	10A CHAIN(66)	1
20	02.DN250.07.0200	DN250.07.02.00.00	MID AXIS	1
21	03.02.6187,1-M8/05	6187.1-M8	FLANGE LOCK NUT M8	6
22	03.02.2842-M10X1,25/05	SJ2842-M10x1.25	FLANGE NUT M10x1.25	6
23	02.DS250.08.000003	DS250.08.00.00.03	ENGINE BUMPER	4
24	03.01.5787-M12X1,5X115/05	5787-M12X1.5X115	FLANGE BOLT M12x1.5x115	1
25	03.01.70,1-M10X100/05	70.1-M10x100	SOCKET HEAD BOLT M10x100	2
26	03.02.6172,1-M10-R/05	6172.1-M10-R	THIN NUT M10	2
27	02.DN250.08.02A	DN250.08.02.00.00A	ENGINE RACK	1
28	03.01.5782-M12X1,25X80/05	5782-M12x1.25x80	BOLT M12x1.5x100	1
29	03.01.5787-M10X1,25X25/05	5787-M10X1.25X25	FLANGE BOLT M12x1.5x25	2
30	03.01.5787-M12X1,5X115/05	5787-M12x1.5x115	FLANGE BOLT M12x1.5x115	1
31	02.DN250.08.01A	DN250.08.01.00.00A	ENGINE STAY.REAR	1
32	02.DI250.07.0400	DI250.07.04.00.00	ENGINE ASSY	1
33	02.DI250.08.000001	DI250.08.00.00.01	ENGINE STAY SPACER	1
34	02.D650.01.02.0002	D650.01.02.00.02	ENGINE RACK CUSHION	2
35	03.02.2842-M12X1,25/05	SJ2842-M12x1.25	NUT M12x1.5	2

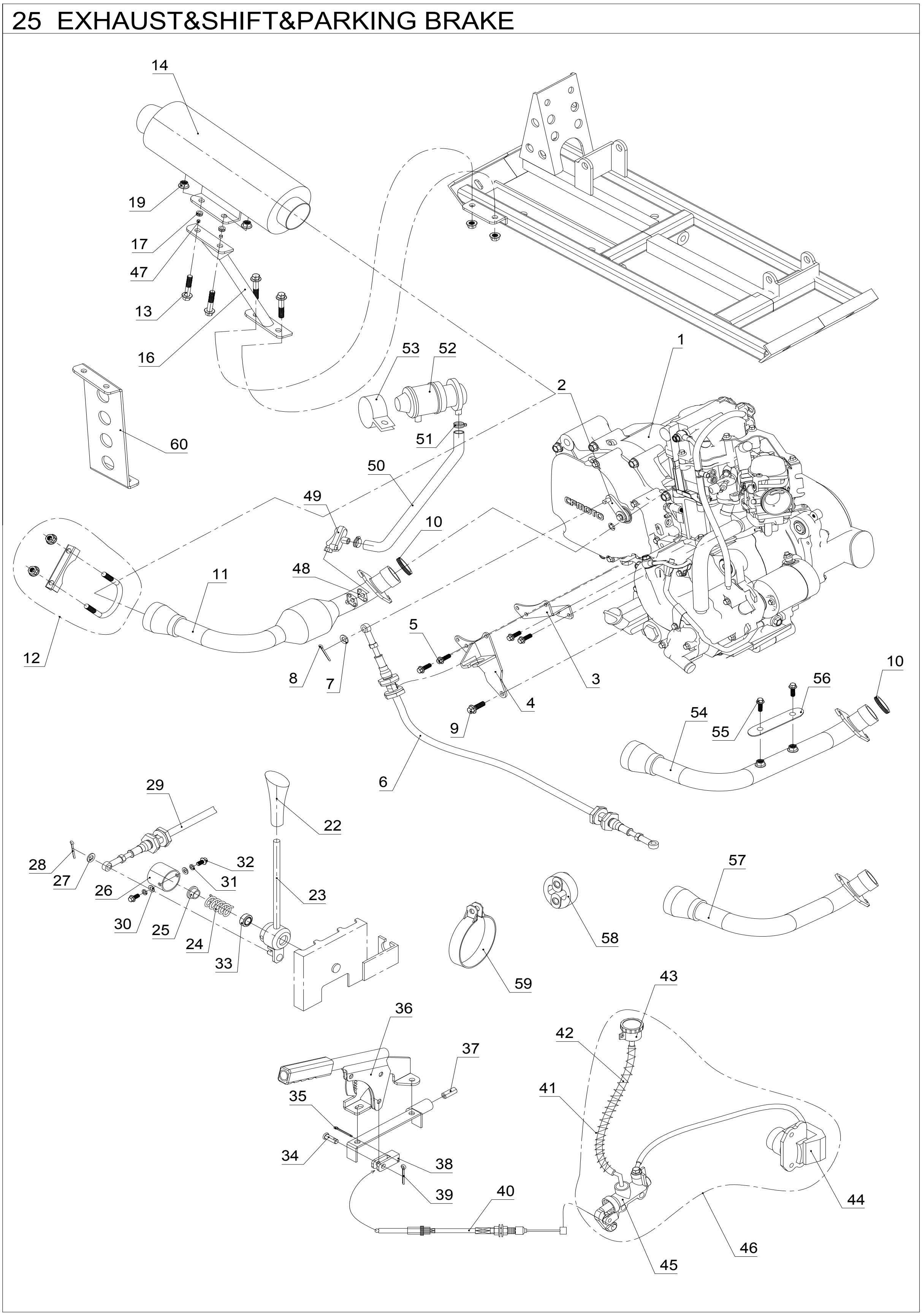
24、ENGINE ASSEMBLY

24 ENGINE ASSEMBLY



24 ENGINE ASSEMBLY				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DI250.05.01.01	DI250.05.01.01.00	RADIATOR	1
2	02.DI250.05.01.0102	DI250.05.01.01.02	RADIATOR VALVE	1
3	02.DN250.05.01.0004	DN250.05.01.00.04	SUCTION PIPE	1
4	03.01.5787-M8X20/05	5787-M8x20	FLANGE BOLT M8X20	2
5	02.D800.04.02.0200	D800.04.02.02.00	WATER TANK.GK800	1
6	02.D800.04.02.02.02	D800.04.02.02.02	SEAL CUSHION	1
7	02.D800.04.02.02.01	D800.04.02.02.01	WATER TANK CAP	1
8	03.02.6187,1-M8/05	6187.1-M8	FLANGE LOCK NUT M8	6
9	02.DN250.05.01.0005	DN250.05.01.00.05	OVERFLOWING PIPE	1
10	02.DN250.05.01.0001	DN250.05.01.00.01	ENGINE OUTLET WATER PIPE	1
11	02.DN250.05.01.0002	DN250.05.01.00.02	ENGINE INLET WATER PIPE	1
12	03.01.5787-M6X20/05	5787-M6x20	FLANGE BOLT M6X20	3
13	02.D650.04.06.0001	D650.04.06.00.01	SUPPORT.ACT	1
14	02.D650.04.06.0002	D650.04.06.00.02	ACT STOP	1
15	03.02.6187,1-M6/05	6187.1-M6	FLANGE LOCK NUT M6	3
16	02.D650.04.06.01	D650.04.06.01.00	ACT	1
17	02.DN250.05.05.0001	DN250.05.05.00.01	INLET PIPE.ACC	1
18	02.JD.1135000	JD1135000	FUEL TANK CAP	1
19	03.01.5787-M8X25/05	5787-M8x25	FLANGE BOLT M8X25	4
20	02.D250.11804	D250.11.804	FUEL TANK	1
21	02.JD.1138000	JD1138000	FUEL SWITCH	1
22	02.DN250.05.02.0002	DN250.05.02.00.02	GAS PIPE1	1
23	02.DS250.11.01.0009	DS250.11.01.00.09	GAS FILTER	1
24	02.DN250.05.02.0003	DN250.05.02.00.03	GAS PIPE2	1
25	02.DN250.11.01.07	DN250.11.01.07.00	OUTLET CVT AIR FILTER	1
26	03.01.823-M5X30/05	823-M5x30	CROSS PANHEAD SCREW M5X30	2
27	02.DN250.11.01.13	DN250.11.01.13.00	CVT WRAP HOOP	2
28	02.DI250.07.0400	DI250.07.04.00.00	ENGINE ASSY	2
29	02.DN250.05.05.0002	DN250.05.05.00.02	OUTLET PIPE.ACC	1
30	02.DS250.11.01.0020	DS250.11.01.00.20	AIR BOX	1
31	02.DLJ.CF250T-430500	CF250T-430500	AIR FILTER WRAP HOOP	2
32	03.01.823-M5X30/05	823-M5x30	CROSS PANHEAD SCREW M5X30	2
33	02.DN250.05.03.0001	DN250.05.03.00.01	AIR FILTER SUPPORT EAR1	1
34	03.01.D818-M6X20	D818-M6x20	CROSS PANHEAD SCREW M6X20	1
35	02.DI250.05.03.0002	DI250.05.03.00.02	AIR FILTER SHELL	1
36	02.DI250.05.03.0002	DI250.05.03.00.02	AIR FILTER SUPPORT EAR2	1
37	03.01.5787-M8X20/05	5787-M8x20	FLANGE BOLT M8X20	1
38	02.DN250.05.03.0103	DN250.05.03.01.03	AIR FILTER CORE	1
39	02.DN250.05.03.0102	DN250.05.03.01.02	AIR FILTER COVER BOX	1
40	02.DN250.05.03.0105	DN250.05.03.01.05	AIR&OIL SEPARATOR FILTER SPONGE	1
41	02.DN250.05.03.0104	DN250.05.03.01.04	AIR&OIL SEPARATOR COVER	1
42	03.01.823-M5X30/05	823-M5x30	CROSS PANHEAD SCREW M5X30	7
43	02.DN250.11.01.06	DN250.11.01.06.00	CVT INLET AIR FILTER	1
44	02.JD.1135001	JD1135001	RUBBER SEAL WASHER	1
45	02.DLJ.REV-22A	REV-22A	AIR INTLET	1

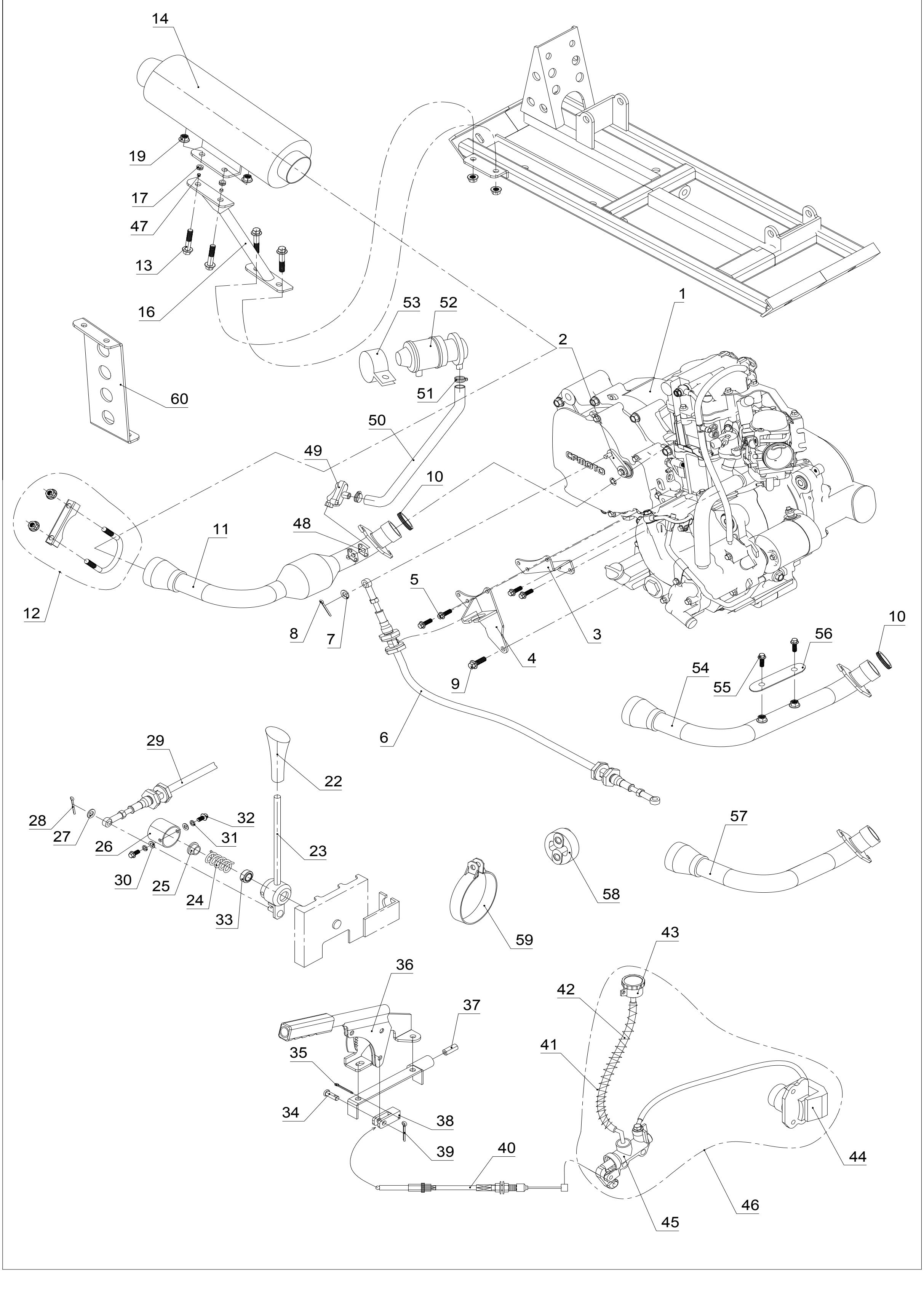
25、EXHAUST,SHIFT& BRAKE



25　EXHAUST&SHIFT&PARKING BRAKE				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DI250.07.0400	DI250.07.04.00.00	ENGINE ASSEMBLY	1
2	02.DI250.05.05.05	DI250.05.05.05.00	GEAR SHIFT ARM	1
3	02.DI250.05.03.0005A	DI250.05.03.00.05A	FIXED MOUNT OF SHIFT CABLE 3.1	1
4	02.DI250.05.03.0003A	DI250.05.03.00.03A	FIXED MOUNT OF SHIFT CABLE 1.1	1
5	03.01.5787-M6X10/05	5787-M6x10	HEXAGON-HEADED FLANGE BOLT	2
6	02.DN250.05.06.01A	DN250.05.06.01.00A	SHIFT CABLE	1
7	03.03.95-φ8X16X1,5	95-φ8x16x1.5	PLAIN WASHER 8	1
8	03.08.91-φ2X25/05	91-φ2x25	COTTER PIN 2X25	1
9	03.01.5787-M8X20/05	5787-M8x20	HEXAGON-HEADED FLANGE BOLT	1
10	02.D250.11037	D250.11.037	ASBESTOS MUFFLER GASKET	1
11	02.DN250.05.04.0001	DN250.05.04.00.01	MUFFLER ELBOW PIPE	1
12	02.DI250.05.04.0002	DI250.05.04.00.02	INTAKE MUFFLER CLAMP	1
13	03.01.5787-M8X25/05	5787-M8x25	FLANGE BOLT M8X25	2
14	02.DN250.05.04.0002B	DN250.05.04.00.02B	SHORTER MUFFLER 250	1
15	03.01.5787-M8X30/05	5787-M8x30	HEXAGON-HEADED FLANGE BOLT	2
16	02.DN250.05.02.0003	DN250.05.02.00.03	MUFFLER MOUNT	1
17	02.JD.1910003A	JD1910003A	RUBBER MUFFLER BUSHING	2
18	02.DN250.01.02.0005	DN250.01.02.00.05	RIGHT TAIL SIDE BOARD	1
19	03.02.2842-M8/05	SJ2842-M8	SELF-LOCKING HEXAGON-HEADED	4
22	02.JD.1082101	JD1082101	SHIFT RUBBER BUSHING	1
23	02.DI250.05.05.03	DI250.05.05.03.00	SHIFT LEVER	1
24	02.D250.08004	D250.08.004	SHIFT SPRING	1
25	02.D250.08005	D250.08.005	STOP RING	1
26	02.D250.08009	D250.08.009	SHIFT LEVER COVER	1
27	03.03.95-φ8X16X1,5	95-φ8x16x1.5	PLAIN WASHER 8	1
28	03.08.91-φ3X30/05	91-φ3x30	COTTER PIN 3x30	1
29	02.DI250.05.05.04	DI250.05.05.04.00	SHIFT CABLE	1
30	03.03.95-φ6X12X1/05	95-φ6x12x1	PLAIN WASHER 6	2
31	03.04.93-φ6/05	93-φ6	SPRING WASHER 6	2
32	03.01.5787-M6X10/05	5787-M6x10	FLANGE BOLT M6X10	2
33	03.05.304,1-GE12C	304.1-GE12C	JOINT BEARING GE12C	1
34	03.07.882-8X25	882-8x25	B PIN 8x24	1
35	03.08.91-φ3X30/05	91-φ3x30	COTTER PIN 3X30	1
36	02.D650.07.02.0100	D650.07.02.01.00	PARKING MACHANISM	1
37	02.D650.07.02.0004	D650.07.02.00.04	PARKING STEEL BUSHING	1
38	02.D650.07.02.0001	D650.07.02.00.01	PARKING BRAKE JOINT	1
39	03.08.91-φ3X30/05	91-φ3x30	COTTER PIN 3x30	1
40	02.D650.07.02.02	D650.07.02.02.00	PARKING BRAKE CABLE	1
41	02.DI250.04.03.0003	DI250.04.03.00.03	GUARD SPRING	1
42	02.DN250.04.03.0002	DN250.04.03.00.02	PARKING BRAKE OIL TUBE	1
43	02.DI250.04.03.0001	DI250.04.03.00.01	PARKING BRAKE OIL CUP	1
44	02.DN250.04.01.0002	DN250.04.01.00.02	BRAKE CALIPER 2	1

25、EXHAUST,SHIFT& BRAKE

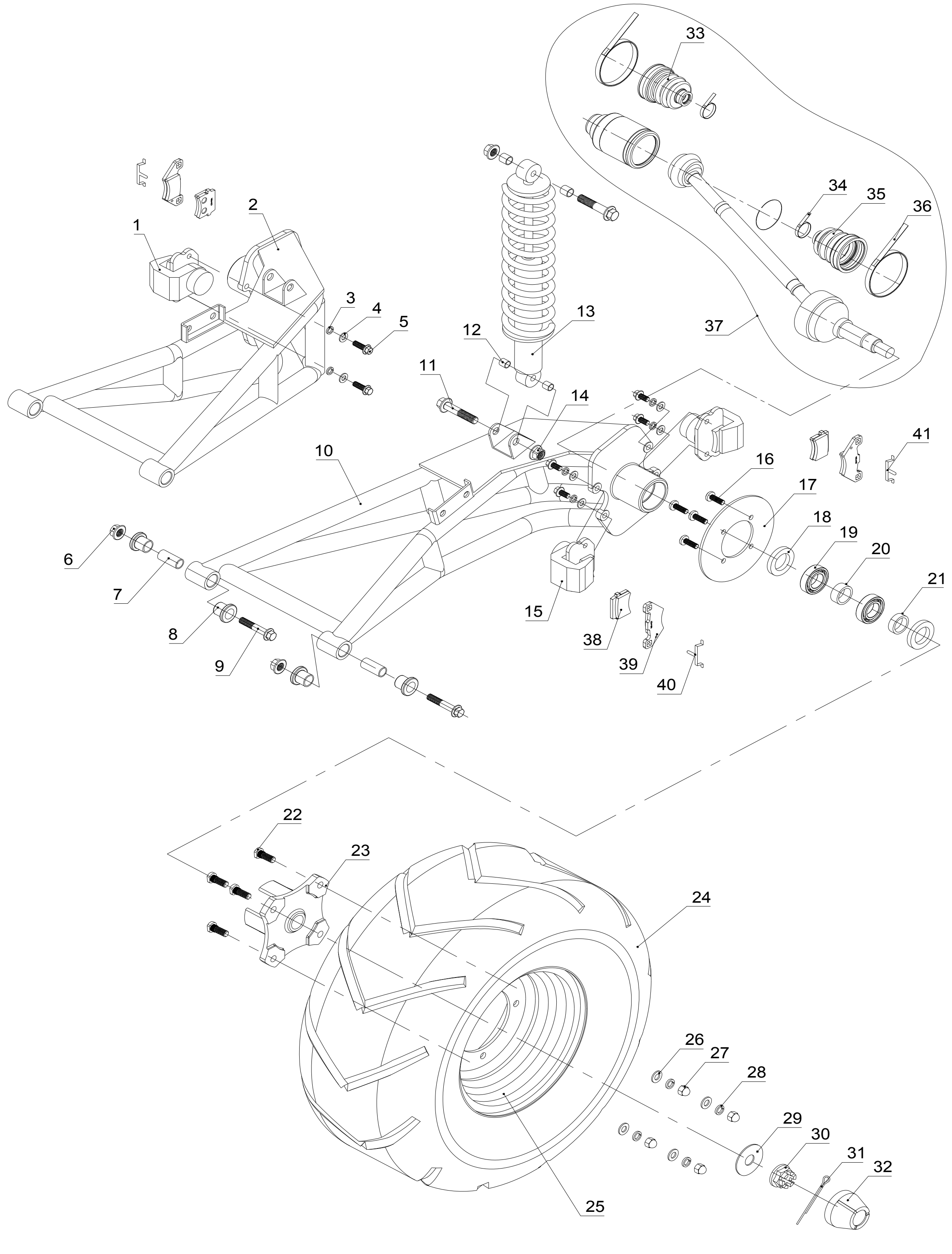
25 EXHAUST&SHIFT&PARKING BRAKE



25 EXHAUST&SHIFT&PARKING BRAKE				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
45	02.DN250.04.01.01	DN250.04.01.01.00	PARKING BRAKE MAIN PISTON	1
46	02.DN250.04.0300	DN250.04.03.00.00	PARKING BRAKE ASSY	1
47	02.JD.1910002	JD1910002	RADIATOR SLEEVE	2
48	02.D650.04.04.0005	D650.04.04.00.05	GRAPHITE WASHER	1
49	02.E650.04.04.05	E650.04.04.05.00	ONE-WAY VALVE	1
50	02.JD.0820004	JD0820004	AIR-INLET PIPE	1
51	02.SV800.04.07.0001	SV800.04.07.00.01	CLAMP	1
52	02.E650.04.04.04	E650.04.04.04.00	AIR FILTER	1
53	02.E650.04.04.0010	E650.04.04.00.10	AIR FILTER SUPPORT	1
54	02.DN250.05.04.0001	DN250.05.04.00.01	MUFFLER ELBOW PIPE	1
55	03.02.2842-M6/05	SJ2842-M6	FLANGE NUT M6	2
56	02.S650.04.04.03.01	S650.04.04.03.01	HEAT SHIELD	1
57	02.DN250.05.04.0001A	DN250.05.04.00.01A	MUFFLER ELBOW PIPE	1
58	02.DI250.05.02.0004	DI250.05.02.00.04	MUFFLER RUBBER BUMPER	1
59	02.DI250.05.04.0003	DI250.05.04.00.03	MUFFLER BRACKET	1
60	02.DN250.05.02.0003	DN250.05.02.00.03	MUFFLER MOUNT	1

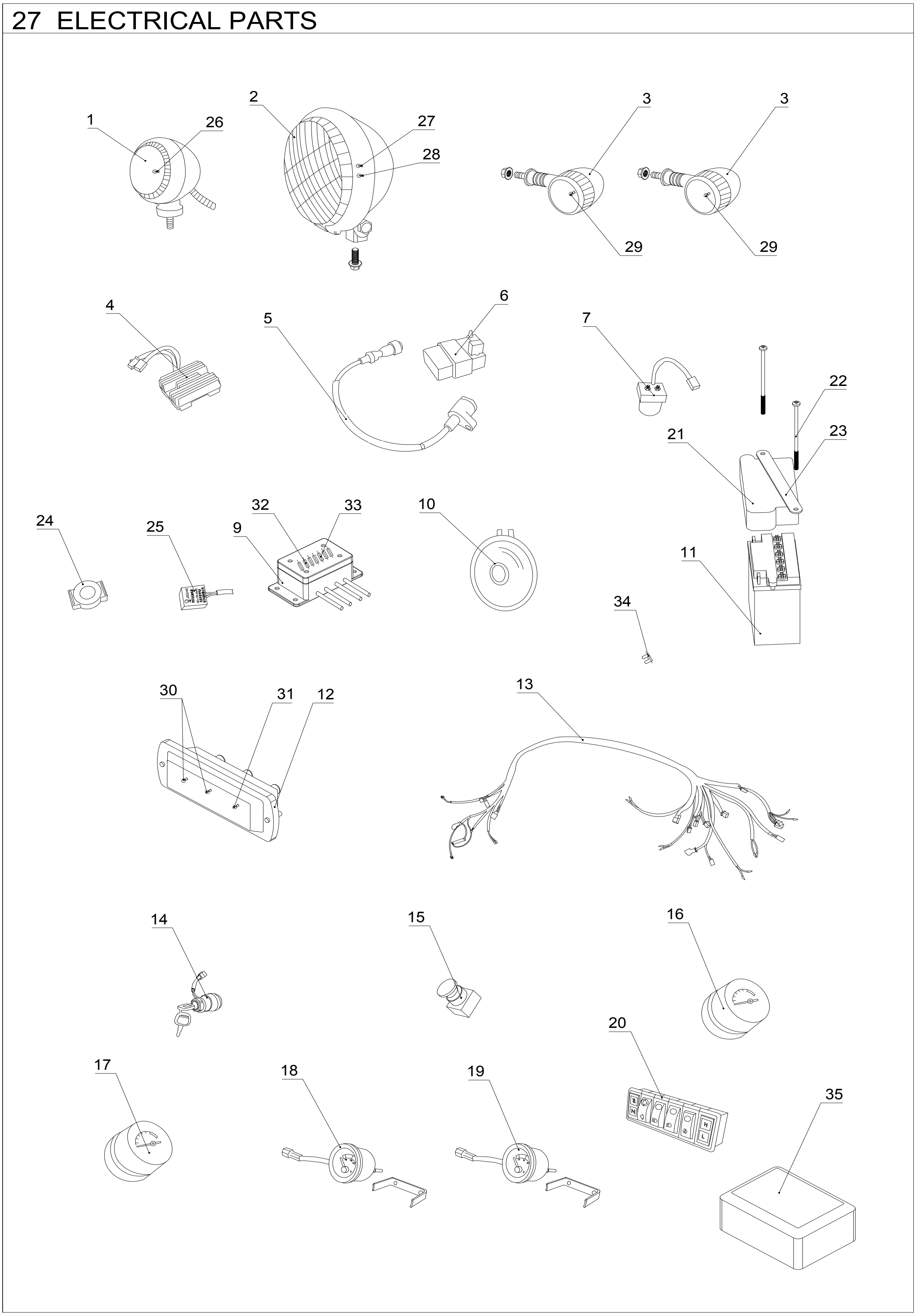
26、REAR SUSPENSION

26 REAR SUSPENSION



26 REAR SUSPENSIONG				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DN250.04.01.0002	DN250.04.01.00.02	BRAKE CALIPER 2	2
2	02.DN250.09.02	DN250.09.02.00.00	RIGHT TRAILING ARM	1
3	03.04.93-φ8/05	93-φ8	SPRING WASHER 8	4
4	03.03.95-φ8X16X1,5	95-φ8x16x1.5	PLAIN WASHER 8	4
5	03.01.5787-M8X20/05	5787-M8X20	FLANGE BOLT M8X15	4
6	03.02.6183,1-M10X1,25/	6183.1-M10X1.25	FLANGE NUT M10X1.25	4
7	02.D650.02.01.0002	D650.02.01.00.02	TRAILING ARM STEEL BUSHING	4
8	02.D650.02.01.0001	D650.02.01.00.01	TRAILING ARM RUBBER BUSHING	8
9	03.01.5787-M10X1,25X7	5787-M10X1.25X70	FLANGE BOLT M10X1.25X70	4
10	02.DN250.09.0100	DN250.09.01.00.00	LEFT TRAILING ARM	1
11	03.01.5787-M12X1,5X45/	5787-M12X1.5X45	FLANGE BOLT M12X1.5X45	4
12	02.DN250.09.000007	DN250.09.00.00.07	SHOCK ABSORBER SPACER	8
13	02.DN250.09.03	DN250.09.03.00.00	SHOCK ABSORBER	2
14	03.02.6183,1-M12X1,5/0	6183.1-M12X1.5	FLANGE NUT M12X1.5	4
15	02.DN250.04.01.0001	DN250.04.01.00.01	BRAKE CALIPER 1	1
16	03.01.70,3-M8X20/05	70.3-M8x20	INNER HEXAGON SUNK SCREW M8X20	4
17	02.DI250.04.01.0004A	DI250.04.01.00.04A	REAR BRAKE DISC	2
18	03.06.13871-FB32X47X8	13871-FB32X47X8	GREASE SEAL FB 32X47X8	4
19	03.05.276-6005	276-6005	BALL BEARING 6005	4
20	02.DI250.09.000001	DI250.09.00.00.01	REAR WHEEL SPACER 1	2
21	02.DI250.09.000006	DI250.09.00.00.06	REAR WHEEL SPACER 2	2
22	02.DI250.02.000002	DI250.02.00.00.02	KNURLED BOLT	8
23	02.DI250.09.000005	DI250.09.00.00.05	BRAKE DISC HUB	2
24	02.DN250.09.01.0001	DN250.09.01.00.01	REAR TIRE 22X10-10	2
25	02.D250.00037	D250.00.037	REAR RIM	2
26	03.03.95-φ10X20X2/05	95-φ10X20X2	PLAIN WASHER 10	8
27	03.02.923-M10X1,25	923-M10x1.25	CAPPED NUT M10X1.25	8
28	03.04.93-φ10/05	93-φ10	SPRING WAHSER 10	8
29	02.D250.06011	D250.06.011	REAR WHEEL AXLE WASHER	2
30	02.DI250.07.04.0001	DI250.07.04.00.01	HALF AXLE SLOTTED NUT	2
31	03.08.91-φ4X40/05	91-φ4x40	COTTER PIN 4X30	2
32	02.JD.0360010	JD0360010	FRONT WHEEL HUB COVER	2
33	02.DLJ.BT-2075	BT-2075	INNER BOOT	2
34	02.DI250.07.01.0003	DI250.07.01.00.03	SMALL BRIDLE.BOOT	4
35	02.DLJ.BT-2075	BT-2075	OUTER BOOT	2
36	02.DI250.07.01.0001	DI250.07.01.00.01	BIG BRIDLE.BOOT	4
37	02.DN250.07.0100	DN250.07.01.00.00	CV AXLE.ASSY	2
38	02.DN250.04.01.0003	DN250.04.01.00.03	FRACTION PLATE 1	2
39	02.DN250.04.01.0004	DN250.04.01.00.04	FRACTION PLATE 2	2
40	02.DN250.04.01.0006	DN250.04.01.00.06	BRAKE CLIPPER SPRING PLATE 2	1
41	02.DN250.04.01.0005	DN250.04.01.00.05	BRAKE CLIPPER SPRING PLATE 1	2

27、ELECTRICAL PARTS

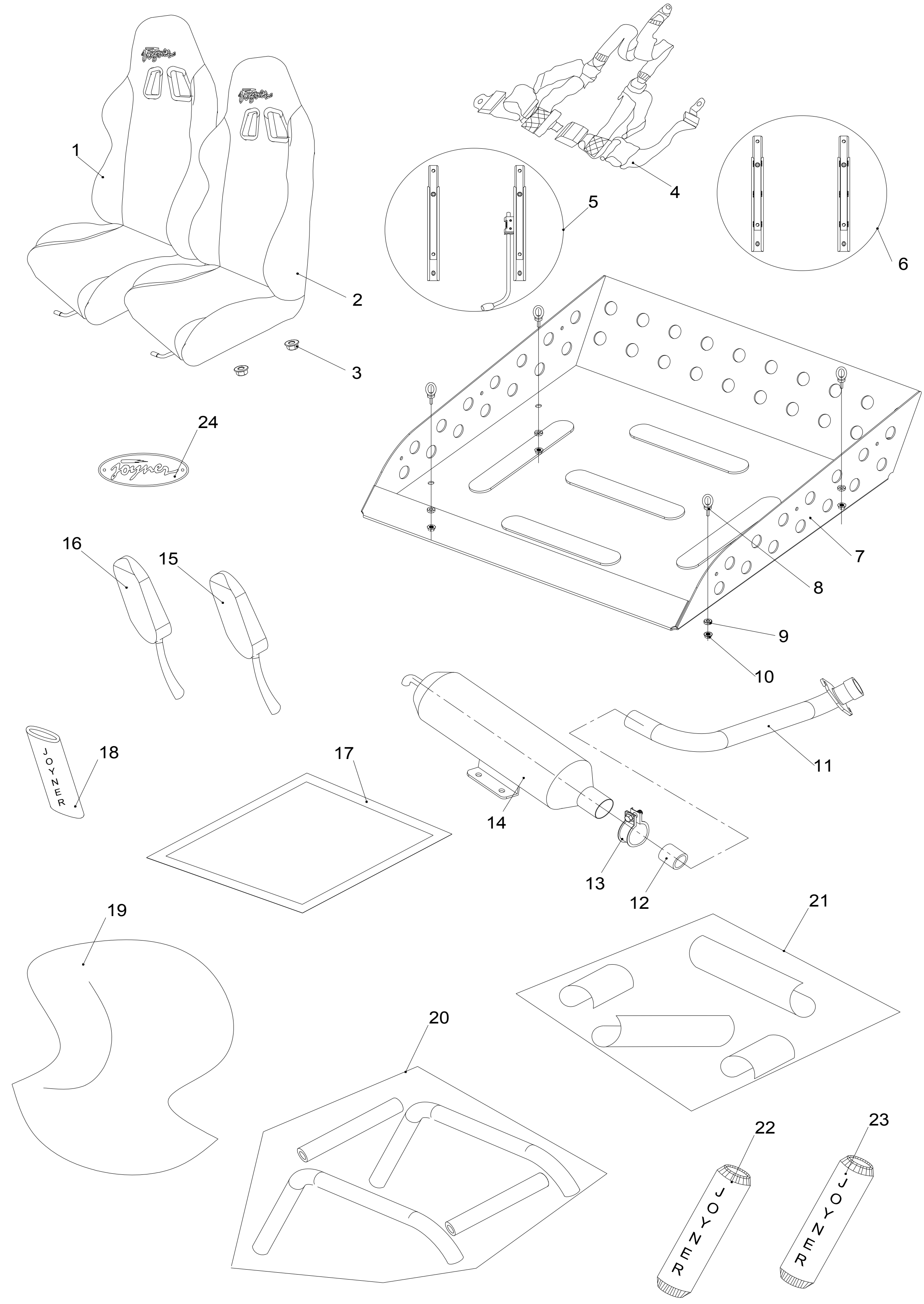


27 ELECTRICAL PARTS

No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.D650.06.0012B	D650.06.00.12.00B	SPOT LIGHT	3
2	02.D650.06.0003	D650.06.00.03.00	HEAD LIGHT	2
3	02.DN250.10.01.02	DN250.10.01.02.00	TURNING SIGNLE	2
4	02.D250.07915	D250.07.915	VOLTAGE REGULATOR	1
5	02.DI250.10.05	DI250.10.05.00.00	IGNITION COIL	1
6	02.DLJ.CF250T-461000	cF250T-461000	CDI	1
7	02.D250.07912	D250.07.912	STARTER RELAY	1
9	02.DN250.10.01.02	DN250.10.01.02.00	FUSE BOX	1
10	02.D250.07913	D250.07.913	HORN	1
11	02.D250.07802	D250.07.802	BATTERY	1
12	02.D800.06.000012	D800.06.00.00.12	TAILLIGHT ASSEMBLY	2
13	02.DN250.10.01.01	DN250.10.01.01.00	HARNESS	1
14	02.D250.07909A	D250.07.909A	IGNITION SWITCH	1
15	02.D650.06.0013	D650.06.00.13.00	HORN BUTTON	1
16	02.DN250.10.02	DN250.10.02.00.00	SPEED METER.250	1
17	02.DN250.10.03	DN250.10.03.00.00	TACHO METER.250	1
18	02.N650.06.05	N650.06.05.00.00	WATER TEMPERATURE INDICATOR.N650	1
19	02.D1600.06.05	D1600.06.05.00.00	VOLTAGE METER.D1600	1
20	02.DN250.10.06A	DN250.10.06.00.00A	PANEL SWITCH.DN250	1
21	02.DN250.10.0100	DN250.10.01.00.00	BATTERY RUBBER COVER	1
22	03.01.5782-M6X110/05	5782-M6x110	BOLT M6X110	2
23	02.DN250.10.000001	DN250.10.00.00.01	BATTERY STOP BAND	1
24	02.D250.07924A	D250.07.924A	FLASHER COAT	1
25	02.D250.07914A	D250.07.914A	FLASHER APPARATUS	1
26	02.D1600.06.10.0002	D1600.06.10.00.02	SPOT LIGHT BULB	3
27	02.D650.06.000301	D650.06.00.03.01	HENDLIGHT BULB 1	1
28	02.D650.06.000301	D650.06.00.03.01	HENDLIGHT BULB 2	1
29	02.D650.06.000501	D650.06.00.05.01	FRONT TURNING-SIGNLE BULB	2
30	02.D650.06.000401	D650.06.00.04.02	TAILLIGHT BULB	4
31	02.D650.06.000403	D650.06.00.04.03	BRAKE LIGHT BULB	2
32	02.DLJ.M-FUSE-5A	M-FUSE-5A	FUSE 5A	3
33	02.DLJ.M-FUSE-10A	M-FUSE-10A	FUSE 10A	4
34	02.DLJ.M-FUSE-20A	M-FUSE-20A	FUSE 20A	1
35	02.D250.04901A	D250.04.901A	ELECTRIC COVER	1

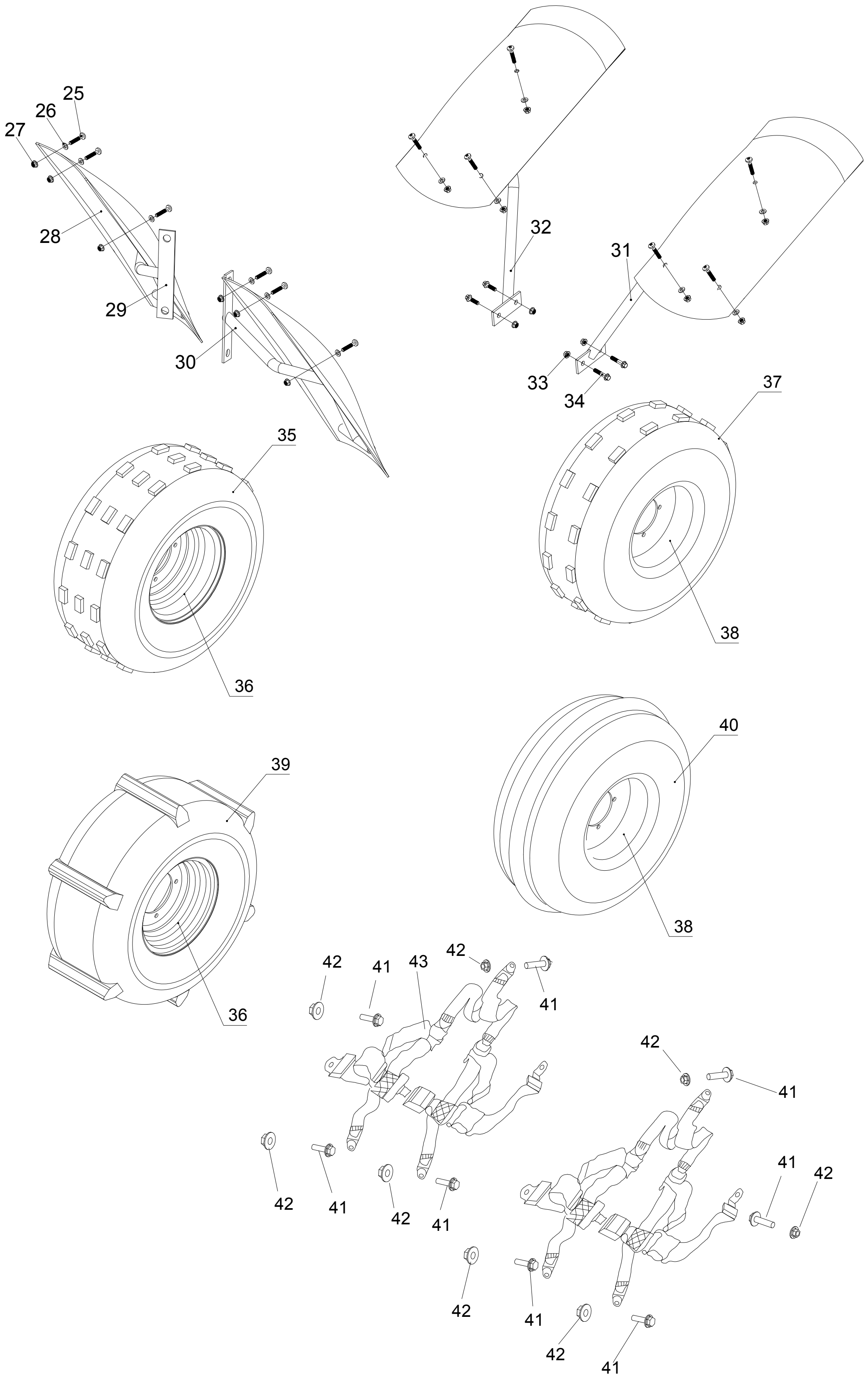
28、OTHER PARTS

28 OTHER PARTS



28 OTHER PARTS				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
1	02.DN250.11.01.1500	DN250.11.01.15.00	RIGHT SEAT COMP	1
2	02.DN250.11.01.1400	DN250.11.01.14.00	LEFT SEAT COMP	1
3	03.02.6183,1-M10X1,25/05	6183.1-M10X1.25	FLANGE NUT M10X1.25	8
4	02.D250.11005A	D250.11.005A	SAFTY BELT	2
5	02.DI250.11.01.0007	DI250.11.01.00.07	RIGHT SEAT ADJUSTER	1
6	02.DI250.11.01.0006	DI250.11.01.00.06	LEFT SEAT ADJUSTER	1
7	02.DN250.01.02.0007	DN250.01.02.00.07	ROOF RACK	1
8	02.D1600.08.01.0006	D1600.08.01.00.06	LOOP M10x1.25	4
9	02.D1600.01.02.0007	D1600.01.02.00.07	SPACER	1
10	03.02.6183,1-M10X1,25/05	6183.1-M10x1.25	FLANGE NUT M10x1.25	4
11	02.DN250.05.04.0001B	DN250.05.04.00.01B	EXHAUST PIPE FOR AU	1
12	02.JD.1118009	JD1118009	SEAL SLEEVE	1
13	02.JD.0118006	JD0118006	SMALL CLAMP	1
14	02.DN250.05.04.0002B	DN250.05.04.00.02B	MUFFLER	1
15	02.DLJ.JN0400020-EU	JN0400020-EU	LEFT BACK VIEW MIRROR	1
16	02.DLJ.JN0400030-EU	JN0400030-EU	RIGHT BACK VIEW MIRROR	1
17	02.DN250.11.01.09	DN250.11.01.09.00	CANVAS ROOF	1
18	02.D650.08.01.0013	D650.08.01.00.13	SAFTY BELT TUBE	4
19	02.D800.08.01.0003	D800.08.01.00.03	CLOTH COVER FOR ENTIRE KART	1
20	02.D250.11770B	D250.11.770B	FOAM COVER	1
21	02.D250.11770B	D250.11.770B	ENVELOPMENT	1
22	02.DN250.11.01.11.01	DN250.11.01.11.01	FRONT SHOCK ABSORBER COAT	2
23	02.DN250.11.01.11.02	DN250.11.01.11.02	REAR SHOCK ABSORBER COAT	2
24	02.DN250.11.01.0001	DN250.11.01.00.01	"JOYNER" PLATE	1

28 OTHER PARTS



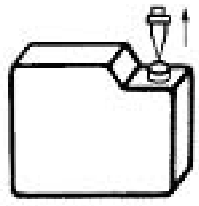
28 OTHER PARTS				
No.	ERP CODE	PART NO.	DESCRIPTION	Q'TY
25	03.01.D818-M6X20	D818-M6x20	PHILIPS HEAD SCREW M6X20	12
26	02.D250.11005A	D250.11.005A	RUBBER WASHER 6	12
27	03.02.6183,1-M6/05	6183.1-M6	LOCK FLANGE NUT M6	12
28	02.D250.11005A	D250.11.005A	MUD GUARD	4
29	02.DN250.11.01.02	DN250.11.01.02.00	FR R MUD GUARD SUPPORT	1
30	02.DN250.11.01.03	DN250.11.01.03.00	FR L MUD GUARD SUPPORT	1
31	02.DN250.11.01.04	DN250.11.01.04.00	RL MUD GUARD SUPPORT	1
32	02.DN250.11.01.05	DN250.11.01.05.00	RR MUD GUARD SUPPORT	1
33	03.02.6183,1-M8/05	6183.1-M8	FLANGE NUT M8	4
34	03.01.5787-M8X20/05	5787-M8X20	FLANGE BOLT M8X20	4
35	02.DN250.12.03.03.01	DN250.12.03.03.01	REAR TIRE 22X10-10	2
36	02.JD.0780800	JD0780800	REAR RIM 10X8	2
37	02.DN250.12.03.01.01	DN250.12.03.01.01	FRONT TIRE 21X8-10	2
38	02.JD.0760800	JD0760800	FRONT RIM 10X5.5	2
39	02.DN250.12.02.03.01	DN250.12.02.03.01	REAR DESERTR TIRE 22X10-10	2
40	02.DN250.12.02.01.01	DN250.12.02.01.01	FRONT DESERT TIRE 21X8-10	2
41	03.01.5787-M12X1,5X30/05	5787-M12X1.5X30	bolt-washer M12*1.5*25	10
42	03.02.6183,1-M12X1,5/05	6183.1-M12x1.5	nut-washer M12*1.5	10
43	02.SV1100.08.01.18	SV1100.08.01.18.00	safety belt	1

PREPARATION ATTACH INSTRUCTION2

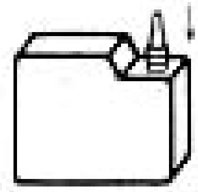
ATTACH BATTERY

STEP 1: FILL THE ELECTROLYTE AS BELOW

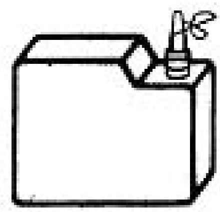
a) Pull the seal cap out of the plastic bottle



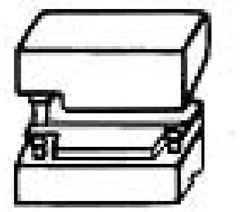
b) Turn over the seal cap 180 degree, fix it on the outlet of plastic bottle



a) Cut the inlet of plastic bottle



b) Fill the battery with electrolyte to upper lever by inserting every inlet of the battery



STEP 2: Put the battery into the box on Off highway recreational vehicle.
STEP 3: Connect the wire to battery; red to "+", black to "-".
STEP 4: Fix the RUBBER COVE, STOP BAND and tighten both bolts and nuts.

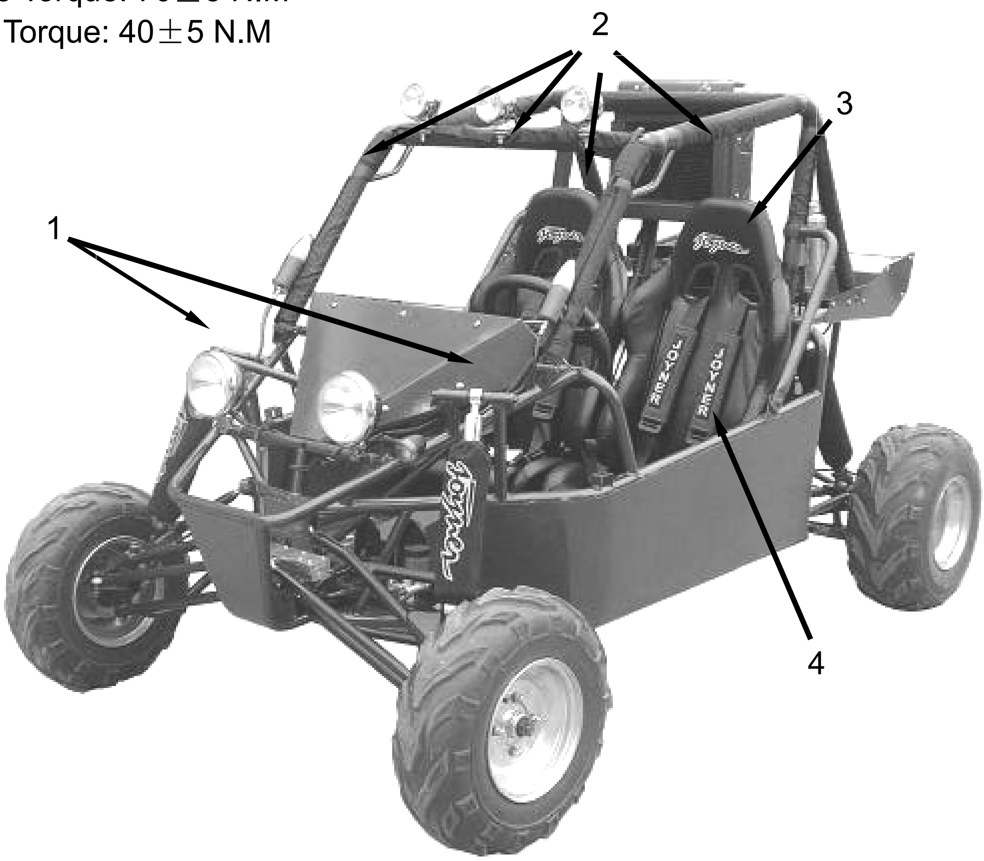
Notice:

Before use new battery, it needs to notice follows:

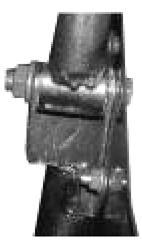
1- After the battery is filled electrolyte, the new battery need to recharge as the Owner’s manual said. Otherwise, the new battery will be damaged and can’t recharge.
2- The new battery can’t overload in use, otherwise it damage forever.
3- The new battery need to maintenance with recharge as the Owner’s manual said.

ATTACH PROTECTIVE BARS

M12x1.75 Torque: 70±5 N.M
M10x1.5 Torque: 40±5 N.M



1、



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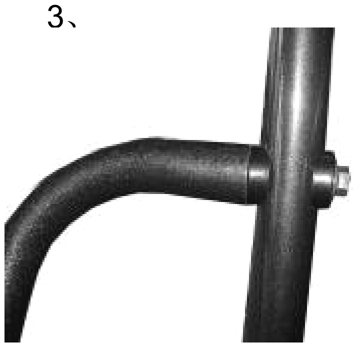
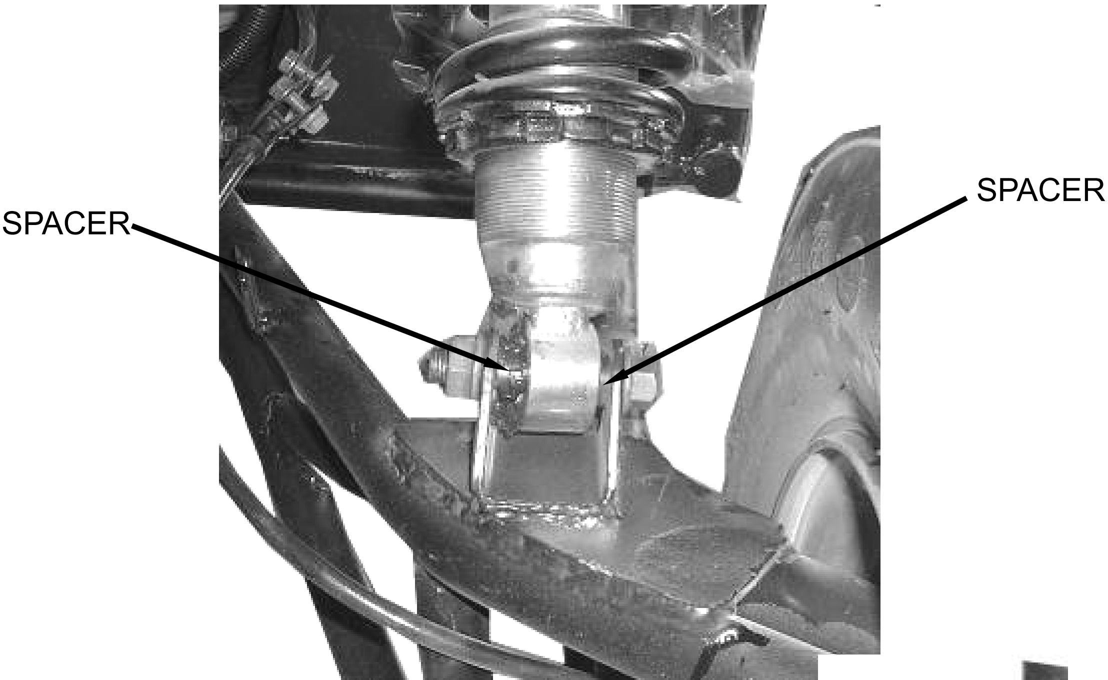
3、



4、

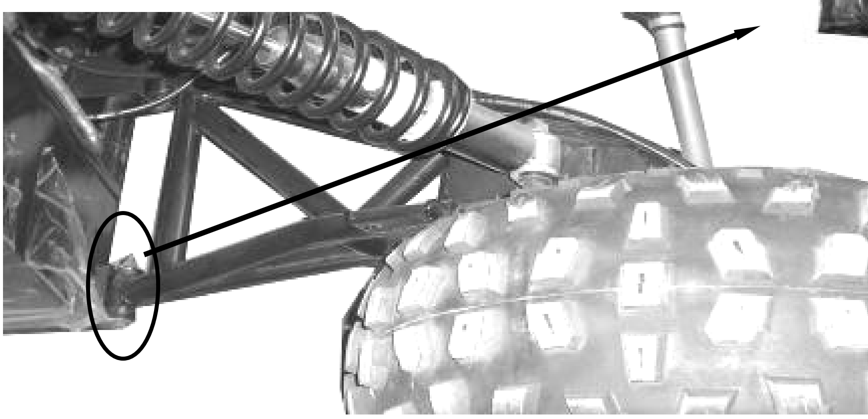
ATTACH REAR SHOCK

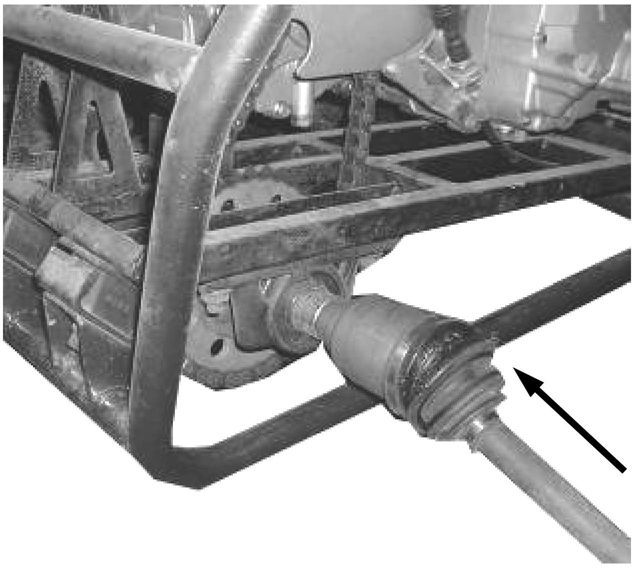
a) Remove the bolt and the nut
b) Attach the rear shock as below picture:
Torque: 70±5 N.M



ATTACH TRAILING ARM

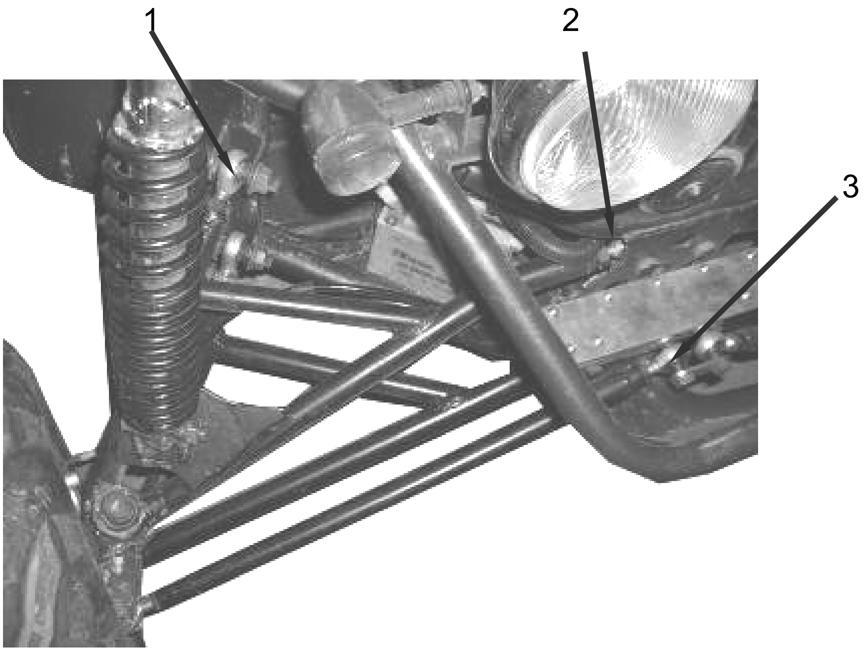
Torque: 40±5 N.M





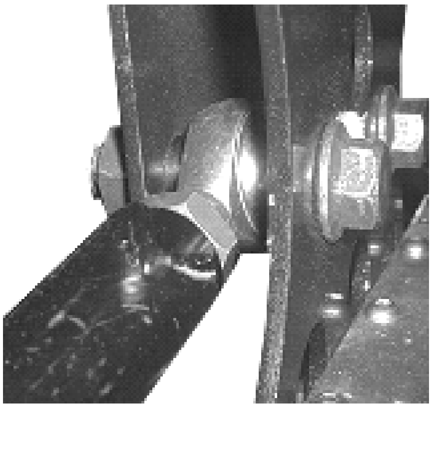
ATTACH FRONT SHOCK

Torque: 70±5 N.M

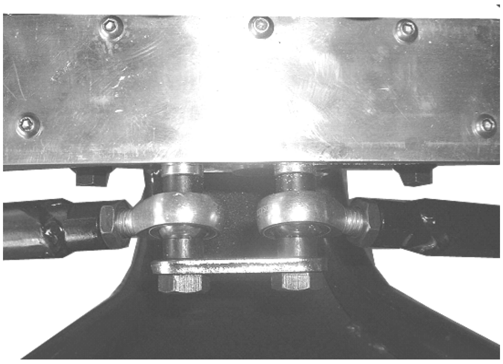


1.

2.

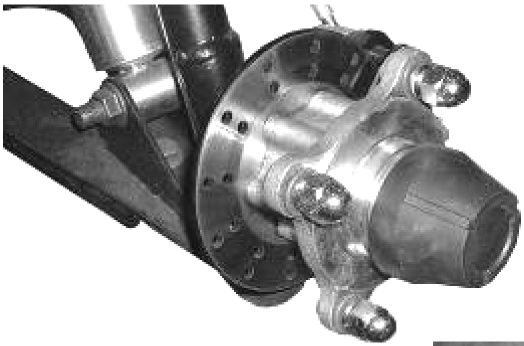


3.



ATTACH FRONT TIRE

The hub to fix the front tire is packed as below:



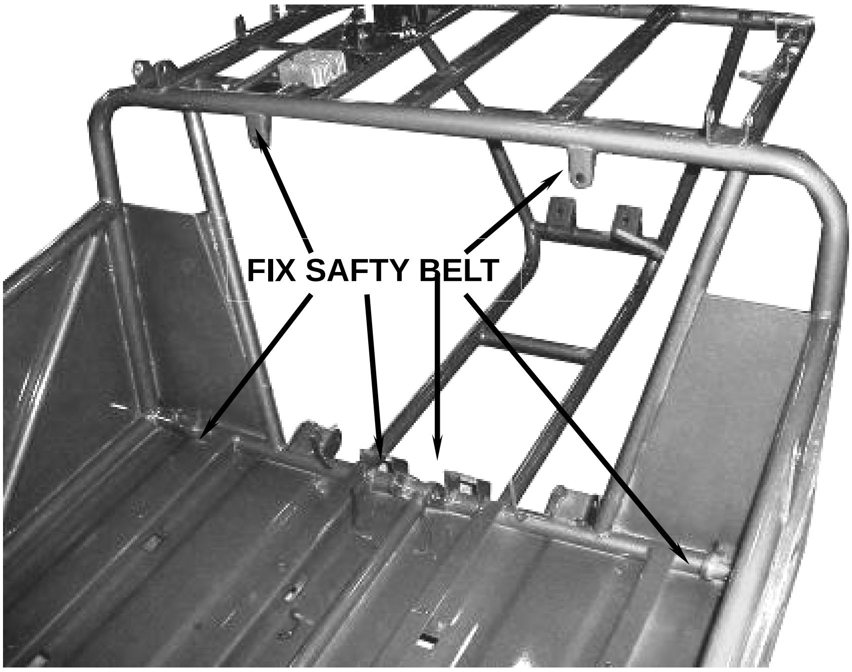
1- Remove four nuts, four spring washers, and four plain washers on the hub.
2- Fix the rim on the hub.

3- Insert the washers, spring washers through bolt on the hub. Tighten four nuts. Torque:70±5 N.M

Notice:
Direction marked on the tire must correspond to the vehicle forward

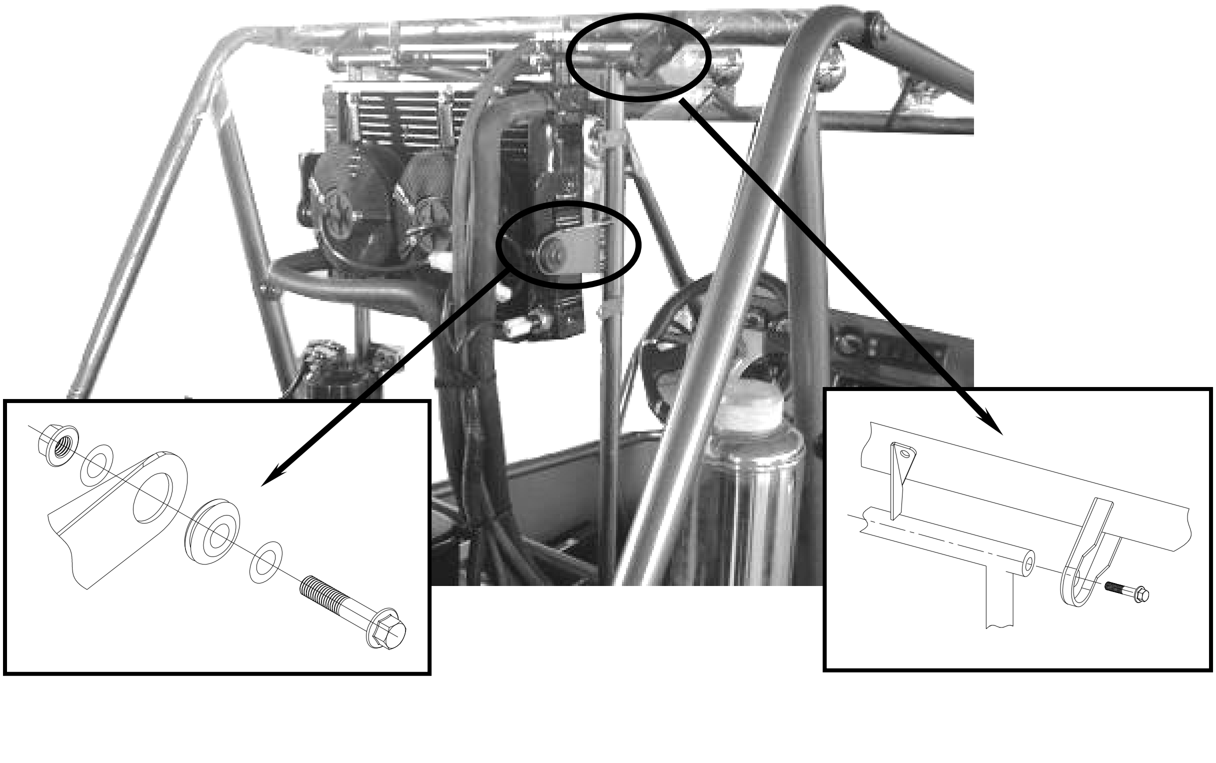
ATTACH SEAT AND SAFT BELT

Torque: 70±5 N.M



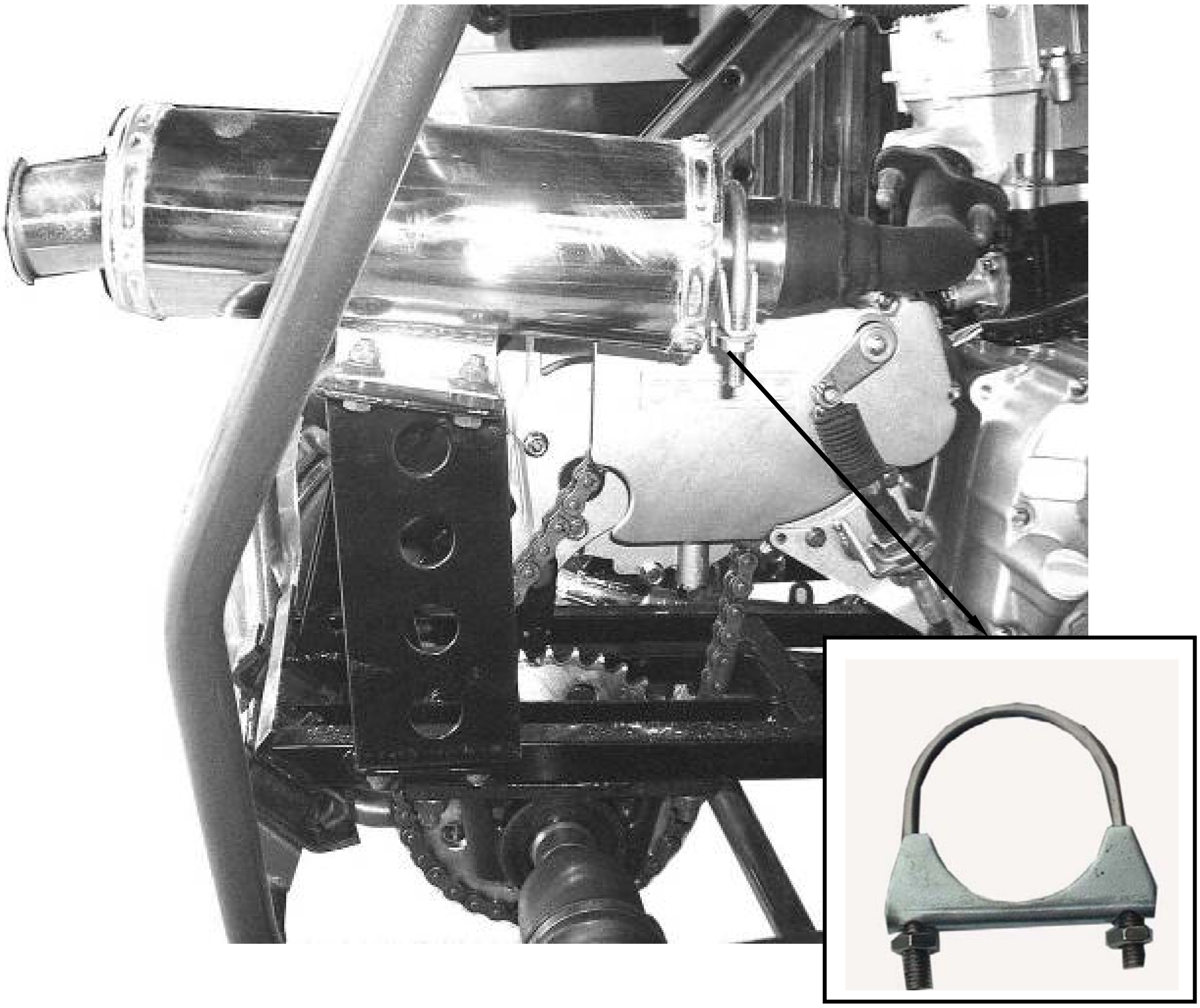
ATTACH THE RADIATOR

1- Attach the radiator as below pictures.
2- Connect wire from fan motor to main wire.
3- Arrange the main and reserve coolant rubber tube as below picture.



ATTACH SILENCER

Attach the SILENCER as below pictures.



DEALER PRE-DELIVERY INSPECTION

TEAM JOYNER USA

www.teamjoynerusa.com

DEALER PRE-DELIVERY INSPECTION

1245 N. Mondel Dr. • Gilbert, AZ 85233
Ph: 480-813-6363 • Fax: 480-813-6379

This form registers warranty

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We have determined that your vehicle is safe to operate
☐ YES ☐ NO

SOLD TO:

Customer Name ______________________

Address ______________________

City ____________ State ____________ Zip ____________

Email ____________ Contact Person ____________ Phone ____________

Phone ____________ Name ____________ Fax ____________ Cell ____________

Technician ____________ Supervisor ____________

SALE DATE:	DELIVERY DATE:	YEAR:	MAKE:	VIN #:	COLOR:

ITEM	OPERATIONAL	ITEM	OPERATIONAL	ITEM	OPERATIONAL	ITEM	OPERATIONAL
Paint	Yes No	Carburetor	Yes No	Mirror	Yes No	Rear Diff	Yes No
Lug Nuts	Yes No	Throttle Cable	Yes No	Battery	Yes No	Wheel Bearings	Yes No
Axle Nuts	Yes No	Choke Cable	Yes No	Ignition	Yes No	Blinkers	Yes No
Tie Rods	Yes No	Emergency Brake	Yes No	Gauges	Yes No	Fuel Lines	Yes No
Axles	Yes No	Charging System	Yes No	Switches	Yes No	Steering Wheel	Yes No
CV Joint	Yes No	Tires/Wheels	Yes No	Fluids	Yes No	Clutch	Yes No
Seats	Yes No	Cooling System	Yes No	Gas	Yes No	Belts	Yes No
Seat Belts	Yes No	Winches	Yes No	Engine Oil	Yes No	Brake Pedal	Yes No
Wiring Harness	Yes No	A Arms	Yes No	Transmission Fluid	Yes No	EPA Sticker	Yes No
Brakes	Yes No	Swing Arms	Yes No	Gear Oil	Yes No	Carb Sticker	Yes No
Brake Lines	Yes No	Shocks	Yes No	Shock Oil	Yes No	Oil Vent System	Yes No
Brake Pads	Yes No	Steering Boy	Yes No	Coolant Fluid	Yes No		
Shifter	Yes No	Lights	Yes No	Brake Fluid	Yes No		
Throttle Pedal	Yes No	Horn	Yes No	Front Diff	Yes No		

REMARKS:

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Dealer Name ______________________

Address ______________________

City ____________ State ____________ Zip ____________

Email ____________ Contact Person ____________ Phone ____________

Phone ____________ Name ____________ Fax ____________ Cell ____________

Dealers Signature ______________________ **Date** ____________

I agree to terms and conditions ______________________
Customer Signature **Date**

This form registers warranty