

**Incidental / Consequential Loss:** KisanKraft Limited or its manufacturers will not be liable for general damages, including bodily injuries, or for incidental or consequential damages including, but not limited to, loss of use, loss of profits, loss of production, expense of substitute equipment or other commercial loss or damage.

**Limitation of Liability:** This limited warranty is in lieu of all other express warranties, obligations, or liabilities. Any implied warranties, obligations or liabilities, including, but not limited to, any implied warranty of merchantability shall be limited in duration to the applicable warranty period. Any action for breach of any warranties hereunder, including, but not limited to, any implied warranty of merchantability must be brought within the applicable warranty period.

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**This warranty is null & void, if you fail to register the warranty with KisanKraft by sending the KisanKraft Copy with dealer's stamp.**

|  |   |  |  |
|--|---|--|--|
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| Model                                      | <input type="checkbox"/> <b>KK-BC2-JP30</b><br><input type="checkbox"/> <b>KK-BC2-JP45</b><br><input type="checkbox"/> <b>KK-TC2-JP45</b><br><input type="checkbox"/> <b>KK-SBC2-JP43</b> |  |  |
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- (4) Negligence,
- (5) Accident or physical damage,
- (6) Repairs made by unauthorized parties and/or with unauthorized parts,
- (7) Improper set up, adjustments, tampering or altered products
- (8) Any modification to the product what-so-ever.

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Wide Range of Products for Every Need



For more information give **MISSED CALL: 07676065555**



Many of our products have BIS: ISI certification.



# Operation Manual



## ***KisanKraft Limited***

Sri Huchhanna Tower, #4, 1<sup>st</sup> Main, 7-A Cross, Maruthi Layout, Dasarahalli, HAF Post, Hebbal, Bangalore 560024, Karnataka, INDIA

- ◆ Bangalore (HO) ◆ Ahmedabad ◆ Bhopal ◆ Bhubaneswar ◆ Coimbatore ◆
- ◆ Guwahati ◆ Hyderabad ◆ Jaipur ◆ Karnal ◆ Kolkata ◆
- ◆ Lucknow ◆ Jammu ◆ Pune ◆ Raipur ◆ Shimla ◆

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KisanKraft has a large range of products to serve the farmers. A list of our products is given below:

|  |   |
|--|---|
| <p><b>Brush Cutters and Accessories</b></p> <ul style="list-style-type: none"> <li>Brush Cutter/Power Weeder</li> <li>Backpack Brush Cutter</li> <li>Tea Pruner</li> <li>Pole pruner with Engine</li> <li>Reaper Attachment</li> <li>Blades-Circular</li> <li>Blades (2 &amp; 3 points)</li> <li>Baffle</li> <li>Nylon Rope</li> <li>Tap &amp; Go</li> </ul> <p><b>Chainsaws</b></p> <ul style="list-style-type: none"> <li>Petrol Chainsaw</li> <li>Electric Chainsaw</li> <li>Chain Sharpening Machine</li> </ul> <p><b>Engines and Water Pumps</b></p> <ul style="list-style-type: none"> <li>Engine –Diesel-(Horizontal)</li> <li>Engine –Diesel(Vertical)</li> <li>Engine-Kerosene</li> <li>Water Pump with Petrol Engine</li> <li>Water Pump with Kerosene Engine</li> <li>Water Pump with Diesel Engine</li> </ul> <p><b>Hand Tools</b></p> <ul style="list-style-type: none"> <li>Secateurs</li> <li>Folding Saw</li> <li>Garden Rake</li> <li>Garden Shovel</li> <li>Hedge Shear</li> <li>Lopper</li> <li>Telescopic Hedge Shear</li> <li>Telescopic Lopping Shear</li> <li>Tree Pruner</li> <li>Telescopic Steel Pipe &amp; Fruit Picker Bag</li> <li>Sheep Shear</li> </ul> <p><b>Garden Tools</b></p> <ul style="list-style-type: none"> <li>Electric Pressure Washer</li> <li>Hedge Trimmer</li> <li>Lawn Mower (Electric, Petrol &amp; Manual)</li> <li>Leaf Blower</li> </ul> | <p><b>Cultivators and Accessories</b></p> <ul style="list-style-type: none"> <li>Petrol and Diesel</li> </ul> <p><b>Sprayers and Accessories</b></p> <ul style="list-style-type: none"> <li>Battery Sprayer</li> <li>Portable Power Sprayer</li> <li>Trolley Sprayer</li> <li>Manual Knapsack Sprayer</li> <li>Manual Pressure Sprayer</li> <li>Rose Cans</li> <li>Hose Crimping Machine</li> <li>HTP Sprayer</li> <li>HTP Delivery Hose</li> <li>HTP Hose Reel</li> <li>HTP Stand</li> <li>HTP Gun / Lance(Brass Rod)</li> <li>Knapsack Power Sprayer</li> <li>Mister / Duster / Granuel Spreader</li> <li>HTP Sprayer Set with Diesel Engine</li> <li>HTP Sprayer Set with Kerosene Engine</li> <li>Fogging Machine</li> </ul> <p><b>Milking Machine</b></p> <ul style="list-style-type: none"> <li>Wood Shredder</li> <li>Fodder Ensiling Chaff Cutter</li> <li>Fodder Grinder Chaff Cutter</li> <li>Fodder Mini Chaff Cutter</li> </ul> <p><b>Harvester</b></p> <ul style="list-style-type: none"> <li>Maize Sheller</li> <li>Maize Sheller + Dehusker</li> <li>Maize Combine Harvester</li> <li>Onion Digger Carlotti Italy</li> <li>Tea Leaf Harvester</li> <li>Sugarcane Combine Harvester</li> <li>Sugarcane Leaf Stripper</li> </ul> <p><b>Transplanter and Post Hole Digger</b></p> <ul style="list-style-type: none"> <li>Paddy Transplanter (2 &amp; 8 Rows)</li> <li>Transplanter-Vegetable &amp; Tobacco</li> <li>Post Hole Digger(4” to 14” Augers)</li> </ul> |
|--|---|

**STORAGE**

When releasing the engine from operation for more than 30 days, it must be serviced and stored as follows with care to prevent the starting trouble or malfunction due to degeneration of fuel.

1. Drain the fuel from the fuel tank and start to run the engine till it is stopped due to use-up of fuel.
2. Wash the inside of fuel tank and fuel filter with white kerosene.



Use of fire is strictly prohibited

3. Removing the ignition plug, inject a small quantity of new engine oil through the plughole. After idling slowly for few revolutions operating the recoil starter, install the ignition plug. Pull the recoil starter again and stop it at the position where it is felt heavy.
4. Clean the external surfaces with soft cloth and store it at a dry place free from fires.

**NOTE: If the unit is left over without draining fuel, impurities in the fuel could clog the fuel passages such as the carburetor, fuel filter, or others, and cause engine troubles. Make sure to drain the fuel when storing the unit for a long period of time.**



Sufficient care must be taken not to use fires at the vicinity when handling the fuel

The Company reserves the right to change or correct the contents of this manual without prior notice or obligation

|  |  |  |  |
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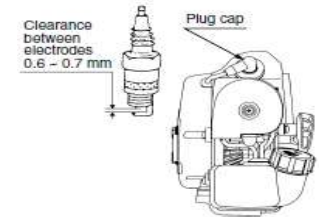
**INSPECTION AND SERVICE AT EVERY 50-HOUR**

**Cleaning and adjustment of ignition plug**

After removing carbon accumulated on the electrodes and the insulator, adjust the clearance between the electrodes at 0.6 - 0.7 mm



When mounting the plug cap, push it in securely

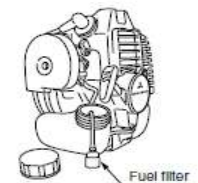


**Cleaning of fuel filter**

Using a piece of wire, or the likes, pull out the fuel filter and wash with clean white kerosene. When it is fouled heavily, replace the filter and also wash the tank inside.



Use of fire is strictly prohibited



**Carbon removal**

Remove carbon from the muffler in-/outlet, cylinder and piston. This work requires engine servicing skill and some tools. Consult the dealer or nearest service center.



**CAUTIONS DURING INSPECTION**

- Disconnect the ignition plug wires before inspection or adjustment to prevent unexpected start of engine.
- Do not touch the engine immediately after operation to prevent burn.
- Use of fire is strictly prohibited when handling the fuel (gasoline).
- Make sure to clean spilled fuel sufficiently before using the engine.
- Do not wash the engine with water.
- Do not change the setting revolution speed carelessly. (Consult your dealer when changing the revolution speed.)

### INSPECTION AND SERVICE


Table of regular inspections

| Item \ Time   | Before Each Operation | At Every 50-hours | At Every 100-hours | 2 Years |
|---|-----------------------|-------------------|--------------------|---------|
| Inspection and retightening of bolts, nuts                    | ✓                     |                   |                    |         |
| Inspection of fuel leakage                                    | ✓                     |                   |                    |         |
| Inspection, cleaning of air cleaner                           | ✓                     |                   |                    |         |
| Cleaning at cooling air inlet, cooling fin and around muffler | ✓                     |                   |                    |         |
| Inspection, cleaning of ignition plug                         |                       | ✓                 |                    |         |
| Inspection, cleaning of fuel filter                           |                       | ✓                 |                    |         |
| Removal of carbon from muffler, cylinder                      |                       | ✓                 |                    |         |
| Cleaning of spark arrestor                                    |                       | ✓                 |                    |         |
| Replacement of ignition plug                                  |                       |                   | ✓                  |         |
| Replacement of fuel piping (fuel pipe and grommet)            |                       |                   |                    | ✓       |

#### INSPECTION AND SERVICE BEFORE EACH OPERATION

##### Cleaning of air cleaner

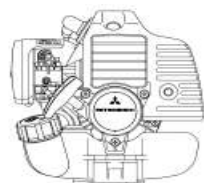
Wash the element with white kerosene and then immerse it in engine oil. Squeeze it tightly with single hand.

 **Use of fire is strictly prohibited**



##### Cleaning and service at respective sections




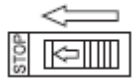


- Clean thoroughly around the muffler.
- Clean the cooling fins and the cooling air inlet.
- Inspect and retighten bolts and nuts.
- Inspect the fuel leakage.



### BEFORE GETTING STARTED

You are now the proud owner of a KisanKraft product. It is made of the finest materials and under a rigid quality control system. It will give you long and satisfactory service. To obtain the best use of our products, **please read this manual carefully**. It will help you become familiar with the operation of the product and contains many useful hints about the product maintenance. It is KisanKraft's policy to utilize as quickly as possible every advance in our research. The immediate use of new techniques in the manufacture of products may cause some small parts of this manual to be outdated. KisanKraft distributors and dealers have the most up-to-date information. Please do not hesitate to consult them.

### SAFETY SYMBOLS

|  |  |
|--|--|
| This symbol, the industry's "Safety Alert Symbol" is used throughout this manual and on labels on the machine itself to warn of the possibility of personal injury. Read these instructions carefully. It is essential that you read the instructions and safety regulations before you attempt to assemble or use this unit.              |   |
| Read the operation manual carefully  |   |
| Always wear eye and ear protectors when using this unit  |   |
| When transporting, checking or adjusting the unit be sure the engine is stopped.   |   |
| Keep people out of the danger zone. This is a circle of 15 meter radius around the unit and operator.  |  |
|  This is the safety alert symbol. When you see this symbol in this manual, be alert and avoid personal injury. When accompanied by the words "CAUTION" & "WARNIRNG", it calls your attention to items or operations which can lead to serious injury. |  |



### UNDERSTAND SIGNAL WORDS AND FOLLOW SAFETY INSTRUCTIONS

**WARNING: To avoid serious injury**

You should pay special attention to the above "WARNING" signal text given in this manual as failure to do so could result in injury or death to the operator.

**CAUTION: To avoid serious injury**

You should pay special attention to the above "CAUTION" signal text given in this manual as failure to do so could result in mechanical damage or failure.

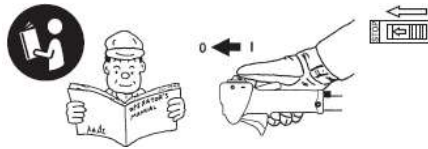
**NOTE:** This symbol refers to an area or subject of special merit emphasizing either the products capabilities, common errors in operation, maintenance and instructions which are of special interest.



A circular band with a diagonal slash means whatever is shown is prohibited.



## SAFETY INSTRUCTIONS

Read the operator's manual carefully. Be familiar with the controls and the proper use of the unit. How to turn the unit off, and how to unhook the harness quickly in an emergency.



### Dress:

**WARNING: To avoid serious injury**

- There is a great risk to eyes from thrown objects. Always wear proper eye protection in accordance with standards 
- Dress in long pants and wear boots or safety shoes. Wear leg guards when cutting large or thorny material
- DO NOT wear open-toed shoes or go barefoot or barelegged. DO NOT wear loose or dangling clothing, neckties, scarfs, or jewelry which could be caught in the unit or the vegetation 
- Secure hair under hat.

### ADJUSTING THE CARBURETOR

**!** Engine revolution speed is adjusted at the optimum condition before shipping from the factory. It should be adjusted only when it fails to operate properly. (Consult your dealer when adjustment is necessary.)

- Use the slow speed adjusting screw to adjust the slow speed revolutions.
  - Right turns: Increase the revolution speed.
  - Left turns: Slow down the revolution speed.

**!** Increasing the slow revolution excessively causes the driven equipment unable to stop even if the throttle lever is returned. The revolution speed should not be increased excessively.

- In case with the slow speed fuel adjusting screw Normal position is where it is returned by one turn from the fully closed position (right turn).

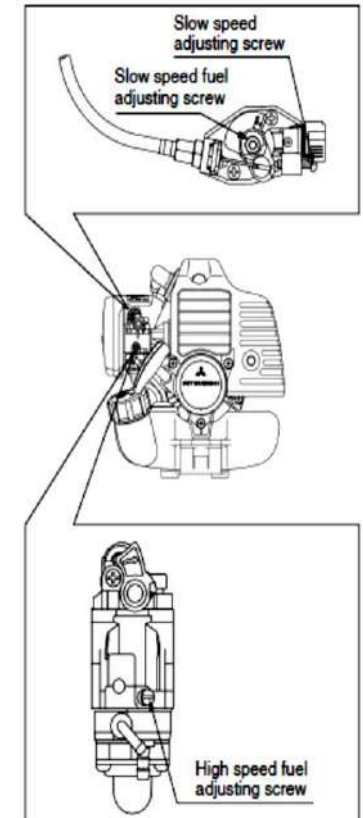
- Right turns: Increase the thickness of fuel.
- Left turns: Decrease the thickness of fuel.

- In case with the high speed fuel adjustment screw

- Right turns: Decrease the thickness of fuel.
- Left turns: Increase the thickness of fuel.

**!** Fuel adjustment for the carburetor is completed at the optimum condition before shipping from the factory. When it is necessary to adjust, consult your dealer.

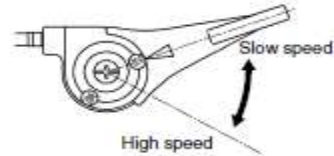
**!** Do not decrease the thickness of fuel too much. (It could result in the seizure trouble of engine.)





**PRECAUTIONS DURING OPERATION**

- After starting the engine, set the throttle lever at the slow speed position and warm up the engine for approx. 2~3 minute. As the engine worms up, the engine will be accelerated smoothly.
- Do not attempt to raise the engine speed abruptly immediately after the start because the lubrication oil may not be distributed yet all over the engine.
- If the throttle lever is turned to the fully opened position, the revolution speed picks up to a considerably higher level, which could not only shorten the life of engine but also cause trouble. It should be avoided to race the engine at high speed under no load condition or raise the speed unnecessarily.
- Before starting operation, make sure to inspect the engine in accordance with the "Inspection before starting the engine".
- Do not operate the engine at the indoor or a place with poor ventilation. (Exhaust gas contains odorless and harmful carbon monoxide.)
- Do not insert in or approach hands or foot at the moving or rotating sections.
- Stop the engine immediately if it has been discovered any leakage of fuel or gas from the carburetor, muffler, fuel tank, crankcase, cylinder or mating face at respective sections. (Contact a dealer or service center for repair.)
- Do not change the setting revolution speed of engine unnecessarily.
- Be careful not to touch highly heated muffler or sections on the engine to avoid possible risk of burn.
- Do not operate the engine while withered grasses, leaves or other inflammable substances are sticking in or around the muffler cover.
- Do not touch the ignition plug cap or high-voltage cord during operation. (There is risk of electric shock or physical injury.)
- Do not operate the engine with the muffler or air cleaner cover removed



**Environmental Precautions:**

1. Never allow children to operate or play with the machine. Never allow anyone without proper instruction to use the unit.



**WARNING: To avoid serious injury**

2. Keep people out of the danger zone. This is a circle of 15m radius around the unit and operator



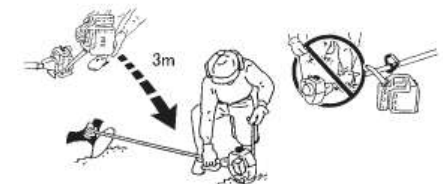
3. Operate only where firm footing is assured. DO NOT operate from a ladder or any other place where use of hands would ordinarily be necessary to prevent falls.
4. DO NOT operate under the influence of alcohol, drugs, medications or substances which can affect your vision, dexterity or judgment. You must be healthy physically and mentally in order to operate safely.
5. DO NOT operate in unventilated areas. Exhaust gas is highly poisonous.



**Strictly No Fire:**

**WARNING: Handle petrol with care. It is highly flammable**

1. Move at least three meters away from the fueling point before starting engine.
2. DO NOT remove the fuel cap when engine is still warm or running.
3. Eliminate all sources of sparks or flame (including smoking, open flames, or work that could cause sparks) in the areas where fuel is mixed, poured, or stored.

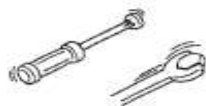


4. Always stop the engine to refuel the tank.
5. Handle in a clean and dry place away from fire.
6. DO NOT smoke while handling fuel.
7. Always store petrol in an approved container.
8. DO NOT refuel a hot engine. Wait until the engine has cooled down.
9. Avoid spilling of fuel or oil. Spilt fuel should always be wiped off.
10. Mix, pour, and store petrol in an approved marked container and in a well-ventilated area.



### Checks before Starting:

1. Adjust the handle to a position for comfort and keep good balance as recommended in this manual.
2. Make sure the unit is assembled properly.
3. Always use a harness if provided with the unit. Balance the unit as recommended by adjusting the position of the harness



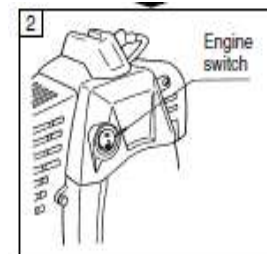
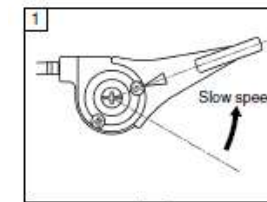
### WARNING: To avoid serious injury

4. Hold the unit down firmly so that you may not lose control while cranking. If not held down properly, the engine could pull you off balance or swing the cutting line into an obstruction or your body.
5. DO NOT cut with dull, cracked or damaged metal blade.
6. Keep the unit and attachments in good working condition. Tighten fastening parts at regular intervals. Check the cutting head assembly before using each time.



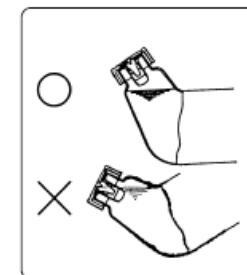
### STOP

1. Set the throttle lever at the slow speed position.
2. Turn the engine switch to the "OFF" position. (Switch position may vary depending on the specifications. Refer to the instruction manual of driven equipment.)  
In case of a push button type switch, keep pressing the push button till the engine stops completely.
  - Replenish the fuel before using up completely. It will make easier at the next starting.
  - When there is no subsequent work, drain the fuel from the fuel tank and restart the engine to use up the fuel remaining in the carburetor.



### CAUTION

- Place the engine at a horizontal position when the driven equipment is not used at the rest time, or others, in summer season. (If the tank is tilted as much as the inside of fuel cap is submerged in the fuel, the fuel may leak.)
- Do not touch the engine body, especially the muffler, during or immediately after stopping the operation. (There is risk of burn.)

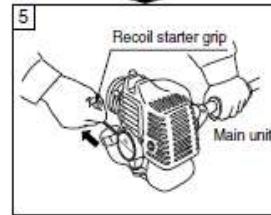


- While holding down the engine firmly, grasp the recoil starter grip and pull vigorously



**CAUTION:**

- When the engine stops on the way after starting, or
- When the engine fails to start after trying the recoil operation for 7 to 8 times.



Return the starter lever to the operating position and try the recoil operation.

- If you move the throttle lever to the high-speed side a little after the engine has started, the starter lever returns to the operating position. Continue the warm-up operation for 2 to 3 minutes in this condition. Observing the condition of the engine, move the throttle lever to a desired engine speed.

**START**



**CAUTION**

- Before starting the engine, confirm that the area of radius 15 m around the engine is completely evacuated.
- Do not operate the engine when any flammable material (gasoline, volatile chemicals, or others) is present around it.
- Driven equipment may start simultaneously with the start of engine. Carefully read the instruction manual of the equipment and start the engine carefully.
- When a class FC oil is used, a larger resistance may be felt when pulling the recoil starter grip under low temperature condition or at the initial operation at the next season. This is related to the characteristic of the oil and there is no problem on the engine. Once it started, it will return to the normal condition.

**Concerning New Start System**

It can start even if it is pulled slower than normal.



If the rope is pulled (vigorously) till it will not come out any more, it could damage the recoil mechanism.



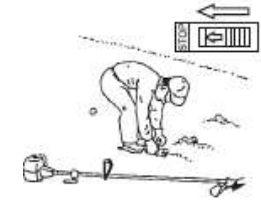
Do not disassemble the recoil. It is dangerous to disassemble the inside of recoil. (Consult your dealer when it is necessary to replace related parts.)



If the decompression slot of cylinder is clogged, the engine may start slower than normal. Clean the slot to restore the normal condition.

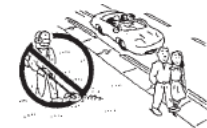
**NOTE:**

- Thoroughly inspect the area where the unit is to be used and remove all stones, sticks, wire and other objects that could cause injury if thrown at high speeds.
- Never operate the unit without proper guards, shields or other safety protective devices in place and properly connected. Inspect to determine that these safety devices are installed properly, are in good condition and operate properly. If the condition or operation of the devices are abnormal, they must be repaired or replaced before using the unit.
- Make sure the cutting head stops turning when the throttle trigger is released and the engine runs at idle speed.
- DO NOT use any accessory or attachment other than those supplied by the manufacturer for use with this particular unit.
- Use only for jobs mentioned in this manual.
- Inspect the entire unit before using each time for worn, loose, or damaged parts. DO NOT use until the unit is in proper working order.
- DO NOT attach any blade to a unit without proper installation of all required parts.



**Cautions during Operation:**

- If necessary to cut where people or cars could be hit by thrown objects, cut at reduced (slow) throttle speed to reduce the speed of the cutting head.



**CAUTION: To avoid serious injury**

- Shut down immediately if the unit starts to shake or vibrate. This could be a sign of danger from a broken part or missing fasteners.



- Disconnect spark plug wire before you work on the unit or leave it unattended.



- Always keep both hands on the control handles. DO NOT operate one-handed. DO NOT hold material you are cutting.




**WARNING: To avoid serious injury**

- After shutting down the engine, keep fingers and feet away from the cutting head until all rotation stops.
- Never use wire in place of nylon monofilament cutting lines. The wire tip can break off during cutting and become a dangerous missile.
- DO NOT put hands or feet near or under rotating parts while engine is running.
- BLADE THRUST may occur when the spinning blade contacts a solid object in the critical area. A dangerous reaction may occur causing the entire unit and operator to be thrust violently. This reaction is called BLADE THRUST. As a result the operator may lose control of the unit which may cause serious or fatal injury. BLADE THRUST is more likely to occur in areas where it is difficult to see the material to be cut.



- To avoid hitting small stones or other debris, do not cut too close to the ground.
- Keep cutting attachment below waist level.
- After striking a foreign object or if the unit vibrates abnormally, stop the engine, disconnect and secure the spark plug wire. Inspect the unit for any damage and repair it if necessary.
- Cover the blade when storing or during transport.
- The muffler side of the engine should be away from your body. This is necessary to avoid arm burns.

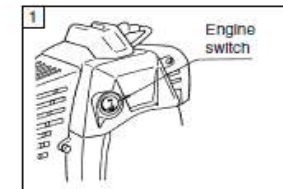


- When the engine has started, return the choke lever gradually to the fully opened position (at the  Mark).

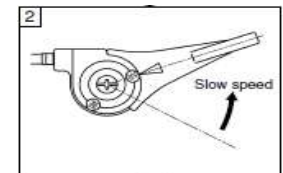
If only exploding sounds are heard, but it does not start, return the choke lever to the fully closed position and pull the starter grip vigorously once again.

### START (STARTER LEVER TYPE UNIT)

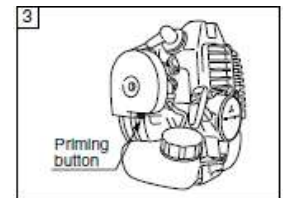
- Turn the engine switch to the "ON" side.



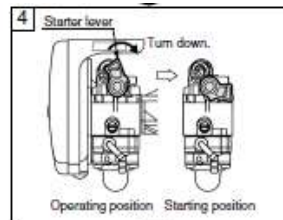
- Set the throttle lever at the slowest speed position.



- Push the priming button repeatedly with finger till it hits the top. (More than 10 times)  
Pressing the priming button is necessary to prime the fuel to facilitate the start-up. Since any excess amount of primed fuel returns to the tank, there is no problem of over-priming. Prime the fuel rather more than sufficiently to avoid starting trouble.





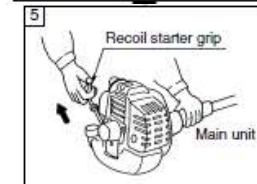
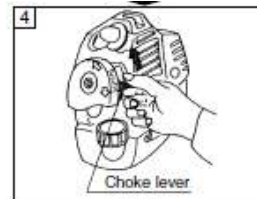
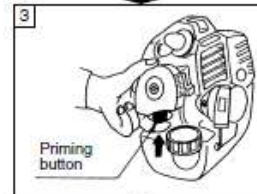
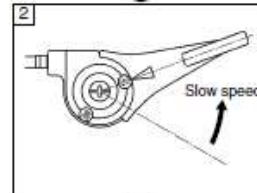
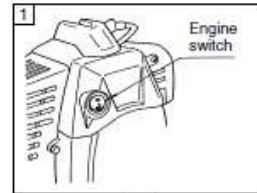
- Turn down the starter lever of carburetor to set it at the start position.  
It is not necessary to operate the starter lever when the engine is warmed up (For about 15 minutes after stopping the engine.)  
(To be left in the operating position)  
Depending on specifications, the starter lever may be provided at the throttle wire side.




**METHODS OF STARTING AND STOPPING THE ENGINE**

**START (CHOKE TYPE UNIT)**

1. Turn the engine switch to the “ON” side.
2. Set the throttle lever at the slowest speed position.
3. Push the priming button repeatedly with finger till it hits the top. (More than 10 times) Pressing the priming button is necessary to prime the fuel to facilitate the start-up. Since any excess amount of primed fuel returns to the tank, there is no problem of over-priming. Prime the fuel rather more than sufficiently to avoid starting trouble.
4. Turn the choke lever to the fully closed position (at the  Mark). When sufficient fuel is retained and the engine is warm, set the choke lever at the fully opened position (at the  mark)
5. While holding down the engine firmly, grasp the recoil starter grip and pull vigorously



**Precautions after Operation:**

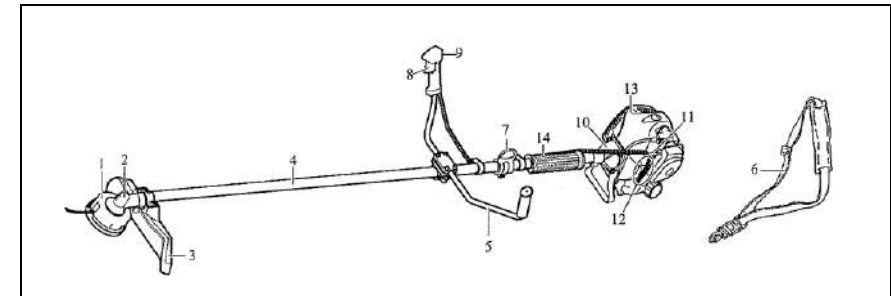
|   |   |
|---|---|
|  | <p><b>WARNING:</b></p> <p>1. Do not store the unit with fuel in the tank, because a fuel leak could start a fire. Allow the engine to cool before storing in any enclosure.</p> |
|---|---|

2. Before cleaning, repairing or inspecting, make certain cutting head has stopped. Disconnect and secure the spark plug away from plug to prevent accidental starting
3. Use only recommended, genuine replacement parts to avoid creating a hazard and/or voiding your warranty.
4. Store in a dry area out of reach of children.



**PRODUCT OVERVIEW**

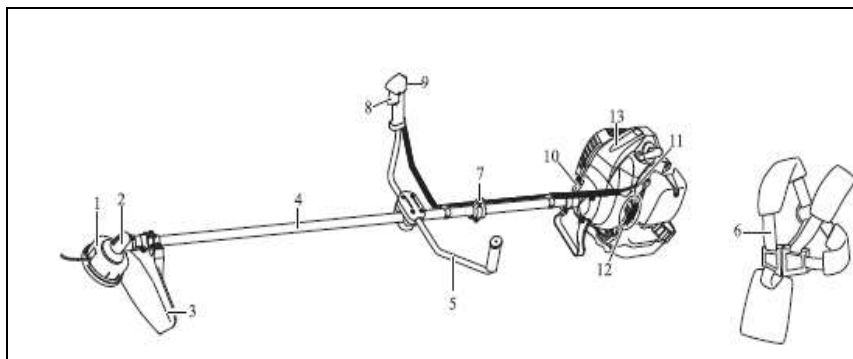
**KK-BC2-JP30:**



|                             |                     |
|-----------------------------|---------------------|
| 1. Nylon cutter             | 8. Throttle trigger |
| 2. Gear case                | 9. Engine switch    |
| 3. Cutting attachment guard | 10. Clutch case     |
| 4. Shaft tube               | 11. Throttle wire   |
| 5. Handle                   | 12. Lead wire       |
| 6. Harness                  | 13. Engine          |
| 7. Suspension eyelet        | 14. Main grip       |

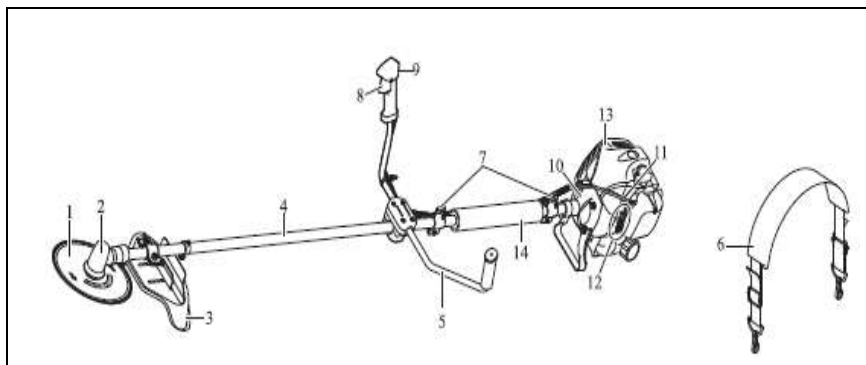


**KK-BC2-JP45:**



|                             |                     |
|-----------------------------|---------------------|
| 1. Nylon cutter             | 8. Throttle trigger |
| 2. Gear case                | 9. Engine switch    |
| 3. Cutting attachment guard | 10. Clutch case     |
| 4. Shaft tube               | 11. Throttle wire   |
| 5. Handle                   | 12. Lead wire       |
| 6. Harness                  | 13. Engine          |
| 7. Suspension eyelet        |                     |

**KK-TC2-JP45:**



|                             |                     |
|-----------------------------|---------------------|
| 1. Blade                    | 8. Throttle trigger |
| 2. Gear case                | 9. Engine switch    |
| 3. Cutting attachment guard | 10. Clutch case     |
| 4. Shaft tube               | 11. Throttle wire   |
| 5. Handle                   | 12. Lead wire       |
| 6. Harness                  | 13. Engine          |
| 7. Suspension eyelet        | 14. protector       |

**INSPECTION OF RESPECTIVE SECTIONS**

Make sure to inspect these sections before operating the engine.

**Inspection of fuel**

- Is sufficient quantity of oil reserved?
- Is not the fuel degenerated?
- Use the proper fuel referring to the "Fuel" section.

**CAUTION**

- Sufficient care must be taken on the fire not only when replenishing but also handling fuel. It could cause fire or explosion.
- Securely close the oil tank cap. Fuel may leak if the cap is tightened aslant. It will never leak if the cap is tightened properly. (Excluding: TL tank cap breather type)

**Inspection of clogging**

- Check the cooling fins, around the muffler and cooling air inlet for trash or withered grasses trapped.
- Remove them if necessary.

**Inspection of air cleaner**

- Is not fouled the air cleaner element?
- When the element is fouled or it is not impregnated with oil, inspect and service it in accordance with "Inspection and servicing before each operation" on page 12.

**Inspection of fuel pipes**

- Check for cracks or fissures on the fuel pipe and grommet, disconnection or fuel leakage from joints on the fuel tank and carburetor.

**CAUTION**

Cracks, fissures or disconnection from joints could cause fire or explosion by leaked fuel. Service or replace damaged fuel pipe and grommet.

**Inspection of screws and nuts**

- Check respective sections for loose or missing screws or nuts.
- Service them if necessary.



**INSPECTION BEFORE OPERATING THE ENGINE**

**FUEL:**

Use mixed oil of ordinary regular gasoline for vehicle and special 2-cycle engine oil with the proportion as shown in the following table.

Mixing ratio (Volumetric ratio):

|                               |
|-------------------------------|
| Gasoline : 2-cycle engine oil |
| 40: 1                         |

- Do not use degenerated oil (with sour smell). (It could cause engine trouble, such as the starting error, insufficient output, etc.)
- Make sure to clean spilled fuel. It could foul clothes or cause fire.
- Do not use 4-cycle engine oil. (It could cause fouled plug, bound piston ring, clogged muffler, or others.)

**CAUTION**

Take care of fire when handling gasoline. (There is a risk of explosion.)

**ADJUSTMENT OF THROTTLE WIRE**

Adjust the play on the throttle wire at 0.5 ~ 1.0 mm.



**LARGER PLAY**

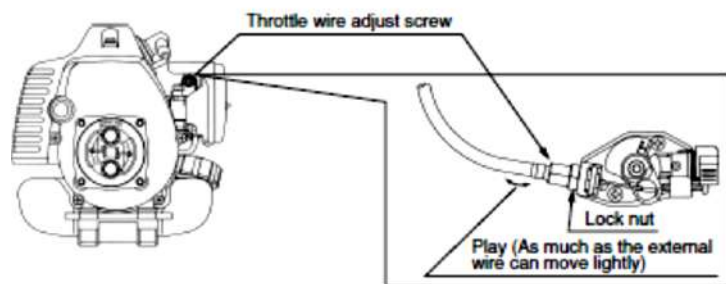
It could cause the starting trouble.

Revolution speed could rise unexpectedly when the external wire of the throttle wire comes off from the position.



**NO PLAY**

Driven equipment may fail to stop even if the throttle lever is returned



**TECHNICAL SPECIFICATIONS**

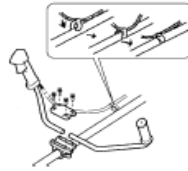
| Model                 | KK-BC2-JP30                               | KK-BC2-JP45     | KK-TC2-JP45                            |
|-----------------------|---|-----------------|--|
| Drive System          | Auto Centrifugal Clutch Spiral Bevel Gear |                 |  |
| Reduction Ratio       | 13:19                                     | 14:19           | 16:19                                  |
| Drive shaft (mm)      | 3937                                      | 3362            | 3327                                   |
| Engine                | Mitsubishi                                |                 |  |
| Engine type           | 2 – Stroke, Air-cooled                    |                 |  |
| Engine Displacement   | 25.6 cc                                   | 43 CC           |  |
| Standard blades (rpm) | Nylon cutter:10000 (max)                  |                 | Metal balde:255 mmx25.4 mm/10000 (max) |
| Size (LxWxH)          | 1770x620x470                              | 1807x620x500    | 1537x615x415                           |
| Fuel Tank Capacity    | 0.6L                                      | 0.9 L           |  |
| Rated speed (rpm)     | 7500                                      | 7000            | 5470                                   |
| Rated Power (kw/rpm)  | 0.74 kW(1 hp)                             | 1.14 kW(1.5 hp) |  |
| Handle type           | Double handle                             |                 |  |
| Weight (2 Kgs)        | 5.30                                      | 7.80            | 8.1                                    |
| Fuel mixture          | 40ml (2T) oil per 1 Litre of Petrol       |                 |  |
| Spark plug (mm)       | 0.6-0.7< gap of electrodes>               |                 |  |
| Fuel Consumption      | 0.83 L/hr                                 | 600 ml / hour   |  |

**NOTE:** The Company reserves the right to change the specifications without prior notice.

**INSTALLATION – ASSEMBLY**

**Installation of Handle (Double handle):**

Insert the handle into the handle joint and fix it securely using 4 bolts.

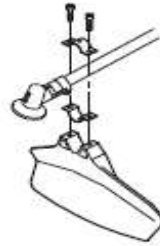


**Installation of cutting attachment guard:**

Position the cutting attachment guard so that it contacts the edge of the gear case. Fix in place with the spacer, bracket and bolts (x2), as shown in the figure.

**NOTE:**

For your own safety, be sure to keep the cutting attachment guard attached during operation.



|  |  |
|--|--|
|  | <b>WARNING: To avoid serious injury</b><br>For safety, stop the engine and then attach or detach the blade |
|--|--|

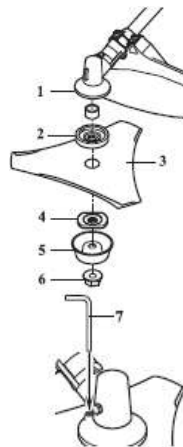
**Installation of Blade:**



**Caution : To avoid serious injury**

Blade is sharp, please handle carefully to prevent injury.

- Affix parts in the following order: holder A(2), blade (3), holder B (4), stabilizer (5), and blade-fastening nut (6).
- In order to lock the rotation of the spline shaft, align holes of gear case (1), and holder A and insert bar wrench (7).

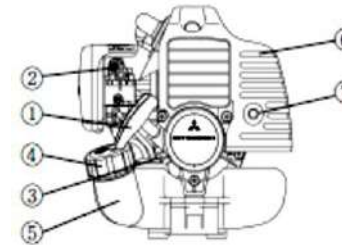


- Check frequently the parts used in the fuel line for cracks or leakage, and replace them if necessary.
- Remove dirt, grasses or other trash from the cooling fins and the cooling air inlet. (Make sure to stop the engine and the driven equipment before cleaning.)
- Make sure to use always new gasoline. (Old gasoline may cause sticky substance adhering at the inside of carburetor or operation trouble.)
- Before starting the engine, confirm that the area of radius 15 m around it is evacuated and no tank filled with fuel, or others are not left over.
- Make sure to use only the genuine parts supplied from the Mitsubishi Meiki Engine. Use of parts other than the genuine parts could cause trouble to engine or premature abrasion.

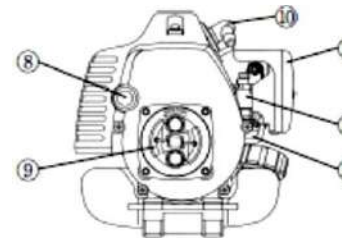
**NOTE**

Important safety items quoted in this manual do not necessarily cover all situations or conditions that could occur. Although sufficient cares have been taken to assure the safety of the engine, operators or service personnel must observe necessary precautions to operate it safely and protect themselves from possible dangers.

**NAME OF THE COMPONENTS**



- Recoil starter grip
- Starter lever
- Cooling air inlet
- Fuel tank cap
- Fuel tank
- Muffler
- Exhaust outlet  
(Types vary depending on the specifications)
- Engine switch  
(Types vary depending on the specifications)
- Clutch
- Ignition plug cap
- Air cleaner
- Carburetor
- Priming button



### SAFETY PRECAUTIONS



You have to observe the descriptions indicated with this mark because they contain very important information to assure the safety.



#### PROHIBITED ITEMS

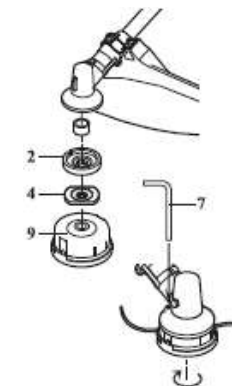
- No person who does not understand the content of this manual should be allowed to operate the engine.
- The engine should not be operated at the indoor or a place with poor ventilation. (Exhaust gas contains odourless and harmful carbon monoxide.)
- Do not insert into or approach hands or foot to the moving or revolving sections.
- Do not store, spill or use gasoline in the vicinity of the fire, stove, furnace or devices using the pilot flame or sparks like a water heater or others. (There is a risk of explosion.)
- Do not refill the fuel indoors or at a place not well ventilated.
- Do not refill the fuel while smoking.
- Do not remove the fuel tank cap or refill the fuel during engine operation or immediately after the operation when the engine is still hot. (Wait for more than 2 minutes after terminating the operation before refilling the fuel.)
- Do not operate the engine when gasoline has spilled, smell of gasoline is felt or there is a risk of explosion.
- Do not adjust the engine speed setting unnecessarily.
- Do not check sparks while the ignition plug is removed.
- Do not operate the engine with the muffler or air cleaner cover removed. (Inspect particularly the muffler at regular intervals for loose mounting screws, breakage or leakage, and repair or replace it if any abnormal condition has been discovered.)
- Do not operate the engine when grasses, leaves or inflammable substances are stuck in or around the muffler.
- Do not touch the parts of the muffler or engine at high temperatures. (There is a risk of burn.)
- Do not touch the ignition plug or high-voltage cord during operation. (There is a risk of electric shock or physical injury.)
- Make sure to stop the engine whenever the work is interrupted or moving the engine to another place.
- Do not operate the engine alone. (It must be connected to the driven equipment when it is operated.)

- Rotate blade-fastening nut with plug box wrench (8) in counterclockwise direction until securely tightened.



#### Installation of Nylon Cutter:

- In case of affixing the nylon cutter (9), put parts in the following order: holder A (2), holder B (4), and nylon cutter.
- As in the case of affixing the blade, insert bar wrench (7) to lock the rotation of the spline shaft.
- Rotate nylon cutter in counterclockwise direction unit securely tightened



#### Harness-To-Shaft:

- Hold harness remembering the side of catcher
- Work your arms through the straps in the manner illustrated above (the way you wear a coat)
- Connect the buckle with the catcher positioned properly. (The buckle can be engaged by simple insertion of the tongue). Then hang the brush cutter to it and adjust the band length.
- Adjust the fit so that the blade lays almost flat on the ground.



#### Harness with quick release device:

Use this harness to protect yourself from the unit in case of emergency (fire in the engine, etc.) In an emergency, pull the release belt (1) strongly upward, and you can detach the machine from you. Be extremely careful to maintain control of the machine at this time. Do not allow the machine to be deflected toward you or anyone in the work vicinity.

**NOTE:**

Use hook to connect and disconnect the band from the hunger of the unit. Don't work the quick release device with the exception of emergency.

**OPERATING INSTRUCTIONS**

**(Starting & Stopping the Engine)**

**Preparation before starting the engine:**

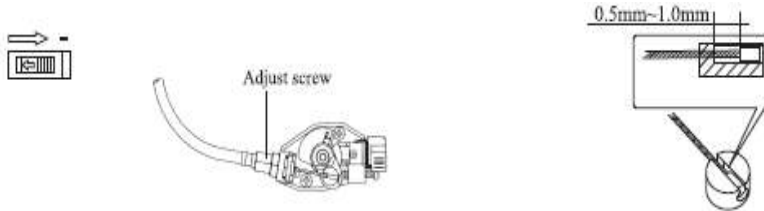
|  |  |
|--|--|
|  | <p><b>CAUTION: To avoid serious injury.</b></p> <ul style="list-style-type: none"> <li>Using the fuel with incorrect mixture ratio may cause insufficient output power or malfunction of the engine.</li> <li>Wipe off completely any spilled petrol (gasoline). It may soil clothes or cause a fire.</li> </ul> |
|--|--|

Fill the fuel tank with the correct mixture of regular automobile petrol (gasoline) and 2 Stroke engine oil.

|                         |
|-------------------------|
| Petrol (gasoline) : oil |
| 40:1                    |

**Adjustment of the Throttle Wire:**

- Adjust the play of throttle wire to 0. To 1.0 mm.
- Excessive play will cause a starting failure.



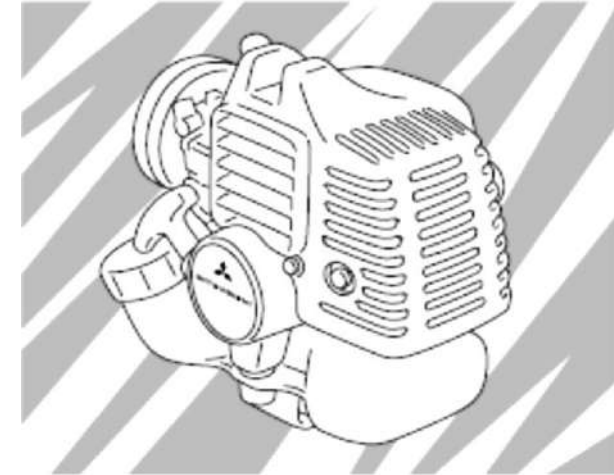
**Starting the Engine:**

- Release the throttle trigger (1).
- Set the engine switch (2) to the "I" (start) position.
- Slowly press the priming pump (3) several times until fuel comes out of the overflow tube (4). (More than 10 times)

**NOTE:**

- Fuel that overflows by pressing the priming pump is returned by design to the fuel tank.
- Press the priming pump a sufficient number of times to start the engine as there is no possibility of flooding the engine.
- Move the choke lever (5) to the fully closed position ( mark side).

**2-STROKE PETROL ENGINE-MANUAL**



- This manual describes various cautions necessary to operate the engine properly. Before starting the engine, read the manual and understand the proper method of use. (Improper use of the engine could result in accident or injury.)
- Use the engine after reading and understanding also the manual of equipment driven by the engine.
- Keep the manuals at a safe place where you can consult whenever you may need it.



| Ref No        | Part Name               | Ref No    | Part Name                   |
|---------------|-------------------------|-----------|-----------------------------|
| 71008-318-104 | Gear Case Assy          | 913B-0629 | Bearing                     |
| 51001-267-104 | Gear Case               | 912B-6000 | Bearing                     |
| 64001-144     | Gear Shaft/Spline Shaft | 913B-6000 | Bearing                     |
| 78002-170     | Pinion/Bevel Pinion     | 919B-6201 | Bearing                     |
| 78001-150     | Gear/Bevel Gear         | 61002-128 | Oil Seal                    |
| 11001-150     | Holder (A)              | 812V-1000 | Stop Ring/C-Snap Ring       |
| 11002-126     | Holder (B)              | 811V-2600 | Stop Ring/C-Snap Ring       |
| 61001-119     | Spline Sleeve           | 811V-3200 | Stop Ring/C-Snap Ring       |
| 31001-106     | Saw Locknut             | 322N-0810 | Grease Bolt/(+)Hexagon Bolt |
| 11027-119     | Cover Metal/Stabilizer  | 412N-0620 | Socket Screw                |

- When fuel is remaining and the engine is warm, move the choke lever to the fully open position (☐ mark side).



**CAUTION: To avoid serious injury.**

- Do not pull the recoil starter rope out completely. This can damage the unit.
- Do not let the recoil starter grip snap back. This can cause bodily injury or damage the unit.

- Place the unit on the ground.
- Check that the cutting tool is not touching the ground or any other obstacles.
- Hold the unit with your left hand and press it down firmly.
- Pull the recoil starter grip (6) slowly with your right hand until you feel it engage and then give it brisk strong pull.
- After starting, watch the engine condition and move the choke lever slowly to the full open position (☐ mark side),

**NOTE:**  
 When the explosion sound is heard, but the engine does not start, move the choke lever the full open position and again pull the starter knob rapidly.




**CAUTION: To avoid serious injury.**

- Do not increase the engine speed immediately after starting as the lubrication oil is not yet evenly distributed to every part.
- When the throttle is in fully open position, the engine speed becomes considerably high, and that not negatively affects the engine life but it also can cause engine failure. Do not race the engine (high revving with the engine at idle), and also avoid unnecessary high-speed operation.

- Release the throttle trigger. Warm up the engine at the idling speed for a few minutes.

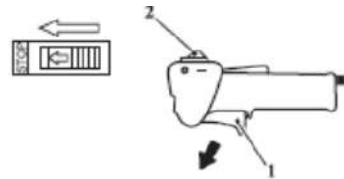
**NOTE:**  
 As the engine becomes warm, smooth acceleration is obtained.

- Perform cutting work by setting the throttle trigger to the required RPM.

|   |  |
|---|--|
|  | <p><b>CAUTION: To avoid serious injury.</b></p> <ul style="list-style-type: none"> <li>• Do not stop the engine suddenly during high-speed operation as this can cause engine damage.</li> </ul> |
|---|--|


**Stopping the Engine:**

- Release the throttle trigger (1).
- Move the engine switch (2) to the "0" (stop) position.



**NOTE:**

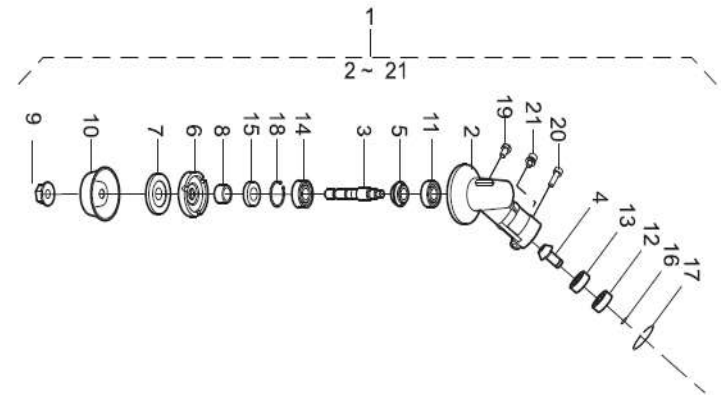
- Storing for short period: Fill the fuel tank until full and store the unit in a dry place until it is used again in order to prevent condensation.
- Storing for long period: Drain the fuel from the fuel tank. Restart and continue operating the engine until it stops.

|   |  |
|---|--|
|  | <p><b>WARNING: To avoid serious injury.</b></p> <ul style="list-style-type: none"> <li>• Be careful that the inner packing of fuel tank cap is not submerged in the fuel as shown in the figure, during the summer months when the unit is not used. If the air hole is submerged in the fuel may leak due to the increased internal pressure in the fuel tank.</li> <li>• Do not touch the muffler and other parts of the engine when hot. Doing so could result in serious burn injury. The muffler and other parts are hot during operation and for some time after stopping the engine.</li> </ul> |
|---|--|



| Ref No    | Part Name               | Ref No    | Part Name                       |
|-----------|-------------------------|-----------|---------------------------------|
| 71008-307 | Gear Case Assy          | 61001-121 | Spline Sleeve                   |
| 51001-258 | Gear Case               | 11001-164 | Holder (A)                      |
| 78001-148 | Gear/Bevel Gear         | 11002-142 | Holder (B)                      |
| 64001-157 | Gear Shaft/Spline Shaft | 31001-106 | Saw Locknut                     |
| 913B-0629 | Bearing                 | 812V-1000 | Stop Ring/C-Snap Ring For Shaft |
| 919B-6202 | Bearing                 | 811V-2600 | Stop Ring/C-Snap Ring           |
| 78002-168 | Pinion/Bevel Pinion     | 811V-3500 | Stop Ring/C-Snap Ring           |
| 912B-6000 | Bearing                 | 377L-0810 | Grease Bolt/(+)Binding screw    |
| 913B-6000 | Bearing                 | 412U-0620 | Socket Screw                    |
| 61002-107 | Oil Seal                | 335M-0512 | Flange Bolt                     |

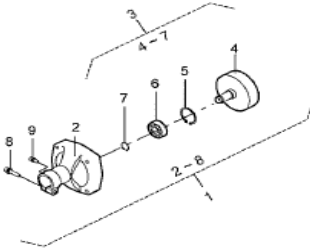
**5. Gear Case Assy - 45 Degree**





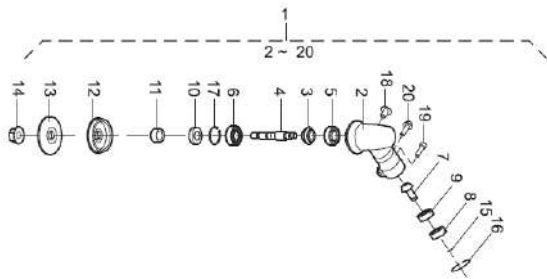
| Ref No    | Part Name                      | Ref No       | Part Name                      |
|-----------|--------------------------------|--------------|--------------------------------|
| 71008-307 | Gear Case Assy                 | 71012-121    | Holder Assy 2/Hanger Band Assy |
| 71130-157 | Outer Pipe/Main Pipe CP        | 71010-214    | N/A                            |
| 64011-219 | Drive Shaft/Main Shaft         | 11024-130-09 | Stand-Clutch Comp              |
| 71012-130 | Holder Assy 1/Hanger Band Assy | 315L-0635    | Hex Bolt M6x35                 |

**3. Clutch Case Assy**



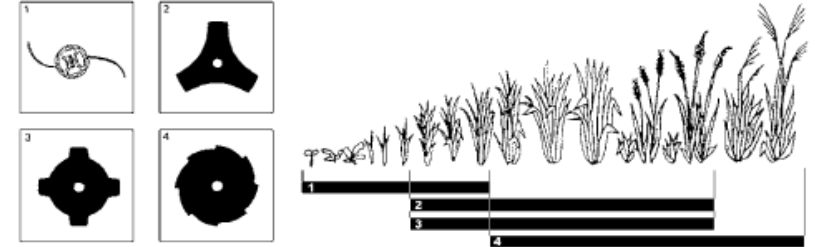
| Ref No    | Part Name                          | Ref No    | Part Name                 |
|-----------|------------------------------------|-----------|---------------------------|
| 71010-214 | Clutch Comp Assy/ Clutch Case Assy | 912B-6202 | Bearing 6202 ZZ           |
| 51030-167 | Linker/Clutch Case                 | 812V-1500 | Stop Ring 15/C-Snap Ring  |
| 71034-152 | Clutch Drum Assy                   | 416N-0630 | Socket Screw (W/SW) M6x30 |
| 11014-193 | Clutch Drum CP                     | 413N-0515 | Socket Screw (W/SW) M5x15 |
| 811V-3500 | Stop Ring 35/C-Snap Ring           |           |                           |

**4. Gear Case Assy - 90 Degree**



**SELECTION OF ROTARY CUTTER**

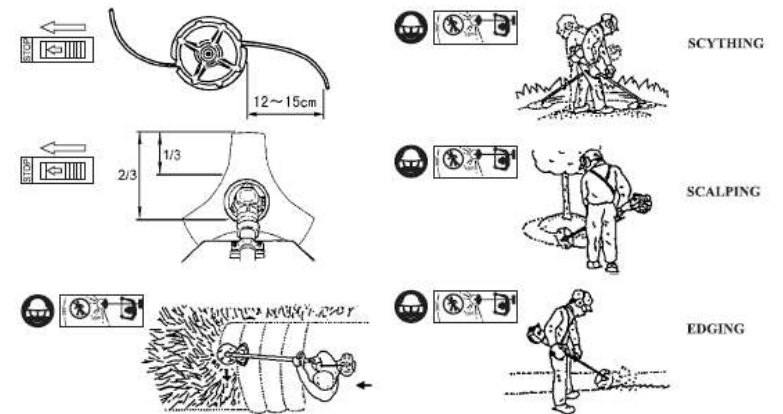
Select the blade best suited to your purpose as shown in the diagram below:



**Selection of rotary cutter:**

|    | Types of cutters | Applications              |
|----|------------------|---------------------------|
| 1. | Nylon cutter     | For soft and low weeds    |
| 2. | 3-blade cutter   | For relatively low weeds  |
| 3. | 4-blade cutter   | For relatively low weeds  |
| 4. | 8-blade cutter   | For relatively hard weeds |

**WARNING: To avoid serious injury.**  
 Be sure not to cut wood and twigs with the blade set, 3-toothed blade or 4-toothed blade or 8-toothed blade. For the sake of safety the cutter used shall be the one designed by our company





**WARNING: To avoid serious injury.**

Wear safety goggles, safety shoes, gloves and helmet during operation.

**Nylon cutter:** Pull on the cord of the nylon cutter by 12-15 cm.

**Blade:** Blades can be sharpest from the edge to one third up the shaft. When mowing grass, use two thirds.

**Working methods:** Since rotary blades rotates in the left direction (as seen from the top), it is more efficient to mow grass from right to left.



**WARNING: To avoid serious injury.**

- In case the rotary blade hits anything it should not (stone or the like), stop the engine and check that the blade has no cracks.
- Use only nylon line. Do not use any type of blade for edging or scalping. Always check that there is a safe distance between the cutting device and your feet.

If the cutting blade is clogged or stuck with grass, weeds or bushes. Immediately stop the engine and remove it, paying attention to the cutting blade. Clean the cutting blade periodically.

### INSPECTION & MAINTENANCE

Inspect and maintain satisfactorily for achieving a longer life of the equipment and good safe work. Follow these procedures.

Adjust the idle speed so that it differs sufficiently from the engine speed when the clutch is engaged.

**NOTE:** clutch-engaged rpm/idle rpm = 1.25 or more

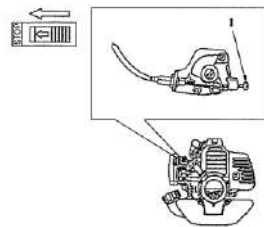


**WARNING: To avoid serious injury.**

- Hot engine parts can cause severe burns.
- Allow engine to stop and cool before checking and servicing.
- Never use damaged or faulty parts in order to prevent serious or fatal injury.
- Replace damaged or faulty parts with new parts.

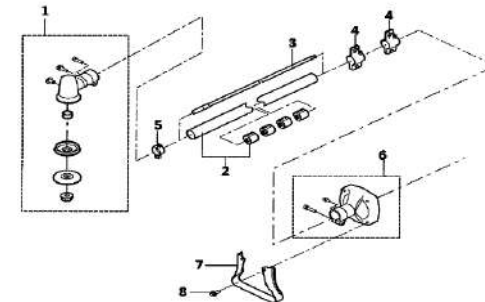
### Adjustment of Carburetor:

- Adjust the low RPM with the idle speed adjuster (1).
- Right turns: RPM increases
- Left turns: RPM decreases



| Ref No       | Part Name                         | Ref No    | Part Name                  |
|--------------|-----------------------------------|-----------|----------------------------|
| 71011-149    | N/A                               | 464L-0410 | (+)Tapping Screw           |
| 51009-142    | Cap Up-Handle/Handle Joint (A)    | 661L-0400 | Spring Lock washer         |
| 51010-145    | Bracket Handle/Handle Joint (B)   | 68028-103 | Wire band                  |
| 51013-121    | Cap Lower-Handle/Handle Joint (C) | 71041-186 | Left Handle Assy           |
| 36005-161    | Rubber-Handle                     | 36007-129 | Left Handle Grip           |
| 412N-0620    | Socket Screw M6x20                | 36063-187 | Harness Assy/Shoulder Band |
| 412N-0625    | Socket Screw M6x25                | 36016-118 | Protector                  |
| 71038-162    | N/A                               | 41003-125 | Tube                       |
| 11029-132    | Safety Guard Bracket/Band         | 41003-128 | Tube                       |
| 318L-0620    | (+)Hexagon Bolt M6x20             | 91001-172 | Throttle Cable/Wire        |
| 11113-352-09 | Stay                              | 91072-104 | Grasses                    |
| 36046-156-09 | Safety Guard                      | 66005-101 | Spanner                    |
| 71014-189    | Right Handle Assy                 | 66006-117 | Box Spanner                |
| 71014-185    | Right Handle/Handle Assy          | 66007-103 | L Wrench                   |
| 36007-130    | Right Handle Grip                 | 66007-104 | L Wrench                   |
| 71056-106    | Throttle Lever Assy               |           |                            |

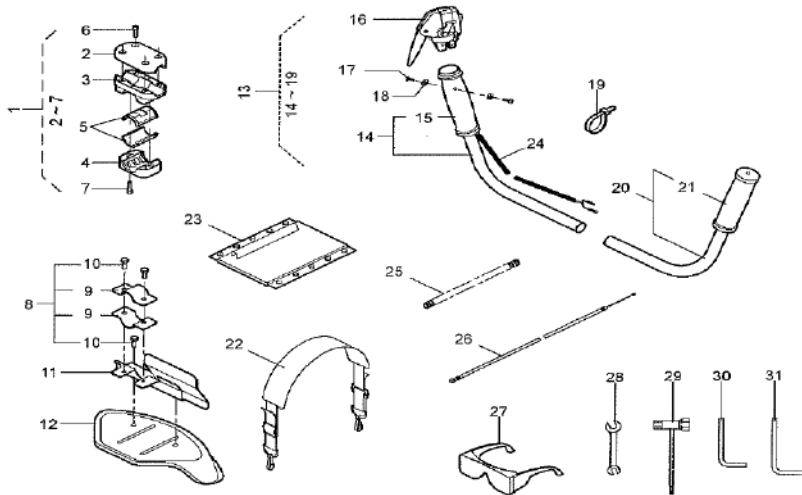
### 2. Gear Case & Driving Apparatus



| Ref No    | Part Name               | Ref No    | Part Name               |
|-----------|-------------------------|-----------|-------------------------|
| 71008-319 | Gear Case Assy          | 913B6001  | Bearing 6001            |
| 51001-266 | Gear Case               | 919B6202  | Bearing 6202 C3         |
| 64001-140 | Gear Shaft/Spline Shaft | 61002-107 | Oil Seal (TC20357)      |
| 78002-173 | Pinion/Bevel Pinion     | 812V1200  | Stop Ring/ C. Snap Ring |
| 78001-153 | Gear / Bevel Gear       | 811V2800  | Stop Ring/ C. Snap Ring |
| 11001-148 | Holder A                | 811V3500  | Stop Ring/ C. Snap Ring |
| 11002-115 | Holder B                | 322N0810  | Hexagon Bolt            |
| 61001-121 | Spline Sleeve           | 412N0620  | Socket Screw            |
| 31001-106 | Saw Lock Nut            | 413N0515  | Socket Screw (W/SW)     |
| 912B6001  | Bearing 6001 ZZ         |           |                         |

**BODY PARTS- KK-TC2-JP45**

**1. Handle & Fitting**



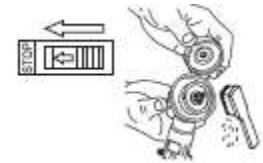
|  |   |
|--|---|
|  | <p><b>CAUTION: To avoid serious injury.</b></p> <p>The adjustment of the carburetor is usually not necessary, since it is adjusted at the optimum position when delivered from the factory. If the fuel is adjusted extremely lean, it may cause the seizure of the engine.</p> |
|--|---|

**DAILY MAINTENANCE**

**Gear case:**

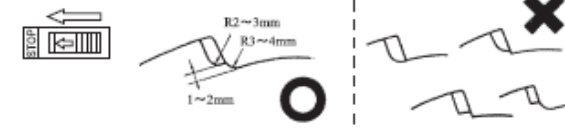
After the work is finished, remove holder A, and take off scraps and grass from inside it and wipe it off cleanly. Also wipe the gear case and the shaft tube.

**NOTE:** The gear case is hot just after the engine is stopped. Perform maintenance when it has been cooled.



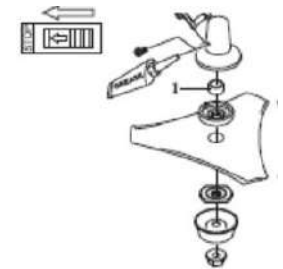
**Checking for the tightness of screws:**

Check the screws periodically for tightness, and if any are loose, tighten it again.



**Setting of rotary blade**

- Do not perform this maintenance unless you have the proper equipment and mechanical proficiency.
- Consult your authorized dealer for service.
- Root of a blade should be rounded by round file



**MAINTENANCE AFTER EVERY 25 HOURS OF OPERATION**

**Gear case lubrication:**

When supplying gear case grease, pull off spline sleeve (1) to push out old grease.

**NOTE:**

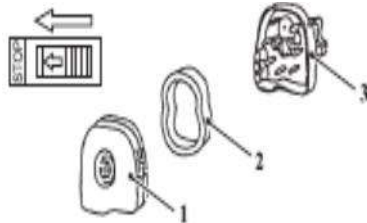
For grease, use lithium type grease No. 2 or equivalent.

**MAINTENANCE AFTER EVERY 25 HOURS OF OPERATION**

**Air Filter**

Consult your authorized dealer for service.

- Move the choke lever to the closed position.
- Remove the air filter cover (1).
- Remove the air filter element (2) from the air filter case (3).
- Wash the element in detergent and water, and dry it thoroughly.
- Dry the air filter element before installing.
- Reinstall all parts.
- Never reinstall a damaged air filter element. Replace the element if damaged.



**NOTE:**

More frequent maintenance is necessary when the engine is operated in dusty conditions



**WARNING: To avoid serious injury.**

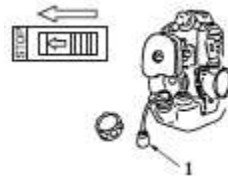
Never use gasoline or low flash-point solvents for cleaning the air filter element. Using such liquids could result in fire or explosion.

**MAINTENANCE AFTER EVERY 100 HOURS OF OPERATION**

**Cleaning the fuel filter**

Consult your authorized dealer for service.

Pull out the filter (1) with a steel wire, etc. from the fuel filler port, and clean it well with gasoline. If the dirt is extreme, replace the fuel filter and clean the fuel tank as well



**MAINTENANCE AFTER EVERY 100 HOURS OF OPERATION**

**Carbon Removal of Engine Internal Parts**

Do not perform this maintenance unless you have the proper equipment and mechanical proficiency. Consult your authorized dealer for service.

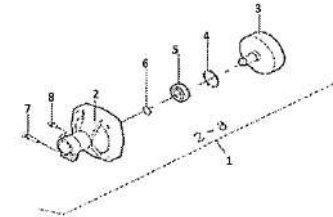
**Spark Plug**

Do not perform this maintenance unless you have the proper equipment and mechanical proficiency.

Consult your authorized engine dealer for service

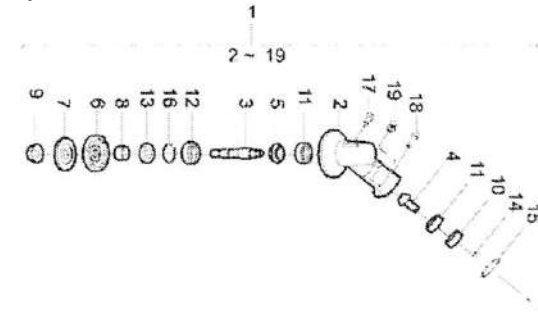
| Ref No    | Part Name                    | Ref No       | Part Name              |
|-----------|------------------------------|--------------|------------------------|
| 71008-319 | Gear Case Assy               | 71010-140    | N/A                    |
| 71130-131 | Outer Pipe/Main Pipe C.P     | 416N0635     | Socket Screw           |
| 64011-234 | Drive Shaft/Main Shaft       | 11024-130-09 | Stand-Clutch Comp      |
| 71012-146 | Holder Assy/Hanger Band Assy | 11027-119    | Cover Metal/Stabilizer |

**3. Clutch Case Assy**



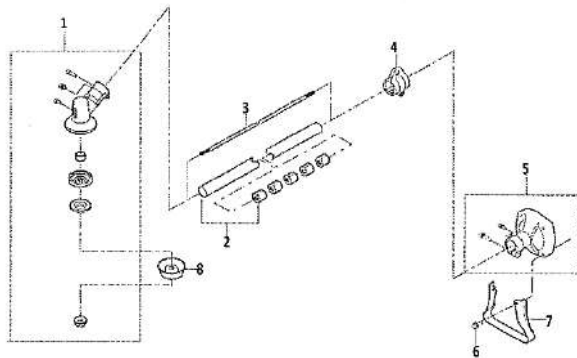
| Ref No    | Part Name              | Ref No   | Part Name               |
|-----------|------------------------|----------|-------------------------|
| 71010-140 | Clutch Comp Assy/Case  | 912B6202 | Bearing 6202 ZZ         |
| 51030-146 | Linker/ Clutch Case    | 812V1500 | Stop Ring/ C. Snap Ring |
| 11014-106 | Clutch Drum C.P        | 416N0630 | Socket Screw            |
| 811V3500  | Stop Ring/C. Snap Ring | 413N0515 | Socket Screw (W/SW)     |

**4. Gear Case Assy**

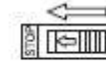


| Ref No    | Part Name                        | Ref No    | Part Name                  |
|-----------|----------------------------------|-----------|----------------------------|
| 71011-153 | N/A                              | 36007-154 | Left Handle Grip           |
| 51009-143 | Cap Up-Handle/Handle Joint (A)   | 36063-206 | Harness Assy/Shoulder Band |
| 51010-146 | Bracket-Handle/Handle Joint (B)  | 71038-168 | N/A                        |
| 51013-122 | Cap Lower-Handle/Handle Joint(C) | 412N0620  | Socket Screw               |
| 412N0625  | Socket Screw                     | 11029-109 | Safety Guard Bracket/Band  |
| 71014-460 | N/A                              | 36046-162 | Safety Guard               |
| 71014-185 | Right Handle/Handle Assy         | 66006-117 | Box Spanner (17x19)        |
| 36007-130 | Right Handle Grip                | 66007-103 | L Wrench (4)               |
| 71056-301 | Lever Assy/Throttle Lever Assy   | 66007-104 | L Wrench (5)               |
| 464L0410  | Tapping Screw                    | 41003-128 | Tube                       |
| 661L0400  | Spring Lock Washer               | 41003-152 | Tube                       |
| 68028-103 | Wire Bend                        | 91001-167 | Throttle Cable /Wire       |
| 51002-126 | Wire Holder                      | 71001-124 | Grass Cover Set            |
| 71014-363 | Left Handle / Handle Assy        |           |                            |

**2. Gear Case & Driving Apparatus**



- Spark plug cleaning
- Electrode Gap (A) Check / Reset: Check the electrode gap and reset it, if necessary according to the specifications. Never reinstall damaged spark plug. Replace with a new part



**NOTE:**

Always use the recommended type of spark plug  
 An incorrect spark plug can damage the cylinder/piston

|               |                              |
|---------------|------------------------------|
| Electrode gap | 0.6- 0.7mm (0.023- 0.028 in) |
|---------------|------------------------------|

**STORAGE**

When the working season is over and the equipment need to be stored for a long time, do the following.

1. Clean each and every part and apply a little oil over metal parts.
2. Adjust loosening of clamping positions for all the parts.
3. Remove cutters and clean them.
4. Remove fuel from the fuel tank, and used up fuel in the carburetor chamber.
5. Pour a little oil from the hole of spark plug, pull the recoil starter and stop it when the compression is felt.
6. Check air cleaner, fuel strainer, etc., clean, dry and install them.
7. Store the equipment in a less humid place so that dust will not get accumulated on it, damaged parts should be repaired.

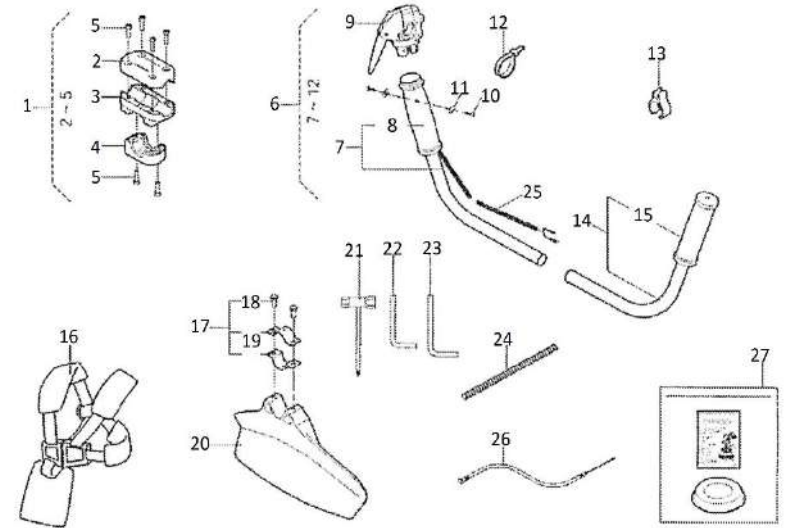
**TROUBLESHOOTING**

| Problem  | Probable Cause   | Action to be taken   |
|--|--|--|
| When the machine dose not start at all                               | Water may be mixed with fuel   | Clean and Replace the fuel mixture                         |
|  | Intake of fuel is may be excessive   | Use 2-stroke mixed fuel in 40:1 mixture ratio              |
| When the rotating speed does not increase after starting             | Choke is not fully open  | Choke should be fully open                                 |
|  | Mixing ratio of fuel may be incorrect  | Use 2-stroke mixed fuel in 40:1 mixture ratio              |
|  | Water may be mixed with fuel   | Clean and Replace the fuel mixture                         |
| When the output is insufficient even if the rotation continues       | Element of the air cleaner may be stained  | Clean the air cleaner and replace if necessary             |
|  | The exhaust port of the cylinder and the inlet and outlet of the muffler may be clogged with carbon. | Clean the exhaust port and inlet and outlet of the muffler |
| When the machine gradually slows down and stops during an operation: | The air vent hole of the fuel tank may be clogged with dust, etc.                                    | Clean the air vent hole                                    |
|  | The fuel system is not blocked by dust, etc.   | Clean the fuel system                                      |
|  | Water may be mixed with fuel   | Clean and Replace the fuel mixture                         |

| Part No | Part Name                 | Part No | Part Name                 |
|---------|---------------------------|---------|---------------------------|
| E10-1   | Fuel Tank Assy            | E10-9   | Bush                      |
| E10-2   | Fuel Tank Lid/Tank Cap    | E10-10  | Petrol Filter/Filter Fuel |
| E10-3   | N/A                       | E10-11  | Valve Breather            |
| E10-4   | N/A                       | E10-12  | Clip                      |
| E10-5   | Fuel Pipe Grommet         | E10-13  | Engine Stand              |
| E10-6   | Fuel Pipe-Long/Hose Fuel  | E10-14  | Screw & Washer            |
| E10-7   | Tube Fuel (Breather)      | E10-15  | Screw & Washer            |
| E10-8   | Fuel Pipe-Short/Hose Fuel |         |                           |

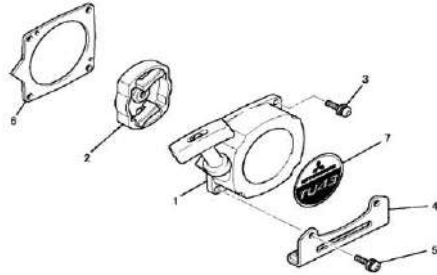
**BODY PARTS- KK-BC2-JP45**

**1. Handle & Fitting**



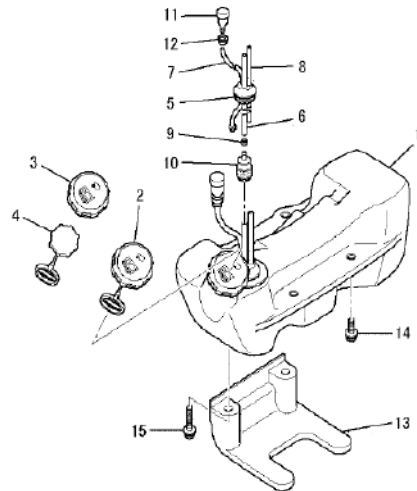


**9. Recoil Starter System**



| Part No | Part Name                   | Part No | Part Name      |
|---------|-----------------------------|---------|----------------|
| E9-1    | Starter Assy/Recoil Starter | E9-5    | Screw & Washer |
| E9-2    | Start Reel/Pulley Starter   | E9-6    | Plate          |
| E9-3    | Screw & Washer              | E9-7    | Label Name     |
| E9-4    | Bracket-Tank                |         |                |

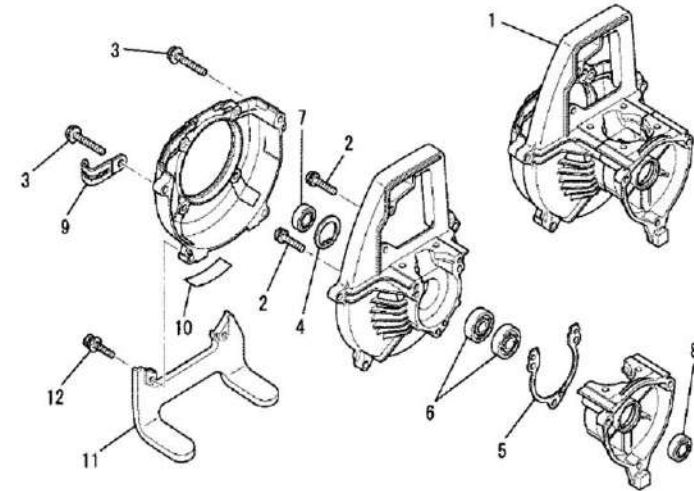
**10. Fuel Tank System**



**PARTS DIAGRAM & LIST (KK-BC-JP30)**

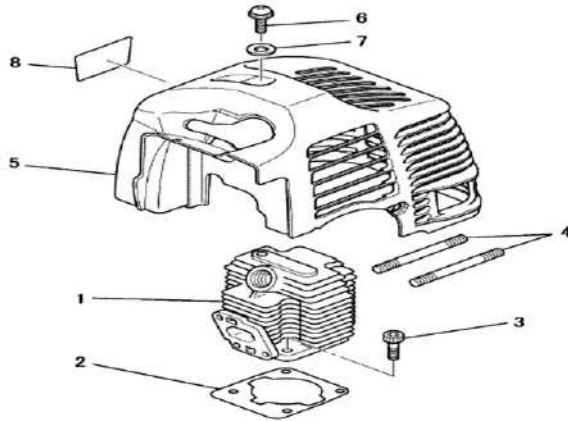
**Engine Parts**

**1. Crankcase System**



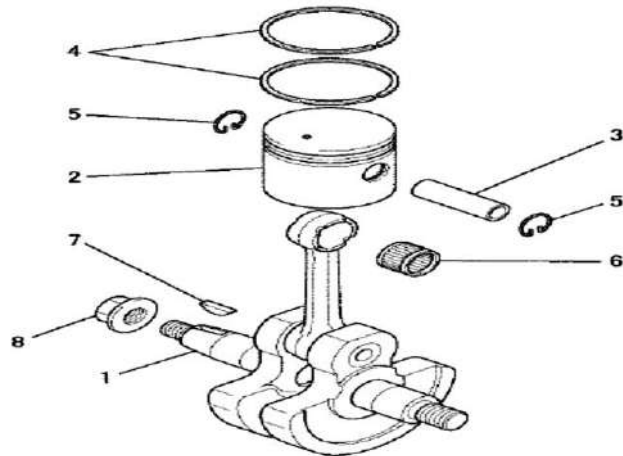
| Part No | KK Part Name        | Part No | Part Name     |
|---------|---------------------|---------|---------------|
| E1-1    | Crankcase Assy      | E1-7    | Oil Seal      |
| E1-2    | Screw & Washer      | E1-8    | Oil Seal      |
| E1-3    | Bolt & Washer       | E1-9    | Clamp         |
| E1-4    | Stop Ring/Snap Ring | E1-10   | Label         |
| E1-5    | Gasket Crankcase    | E1-11   | Engine Stand  |
| E1-6    | Bearing 6001        | E1-12   | Bolt & Washer |

**2. Cylinder & Top Cover System**

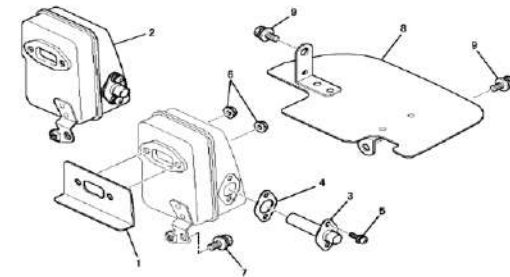


| Part No | Part Name       | Part No | Part Name                  |
|---------|-----------------|---------|----------------------------|
| E2-1    | Cylinder        | E2-5    | Guide Cover Assy/Cover Top |
| E2-2    | Gasket Cylinder | E2-6    | Screw & Washer             |
| E2-3    | Bolt SCH        | E2-7    | Washer                     |
| E2-4    | Bolt STUD       | E2-8    | Label Name                 |

**3. Crankshaft & Piston System**

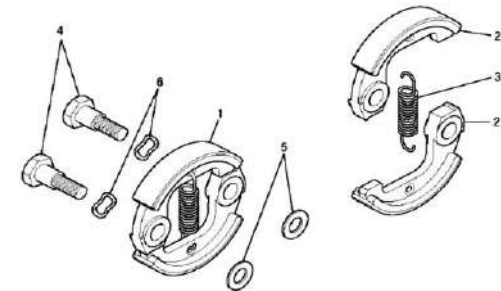


**7. Muffler System**



| Part No | Part Name        | Part No | Part Name             |
|---------|------------------|---------|-----------------------|
| E7-1    | Gasket Muffler   | E7-6    | Nut Flange            |
| E7-2    | Muffler          | E7-7    | Screw & Washer        |
| E7-3    | Pipe Tail        | E7-8    | Gasket-Muffler(Cover) |
| E7-4    | Gasket-Tail Pipe | E7-9    | Screw & Washer        |
| E7-5    | Screw & Washer   |         |                       |

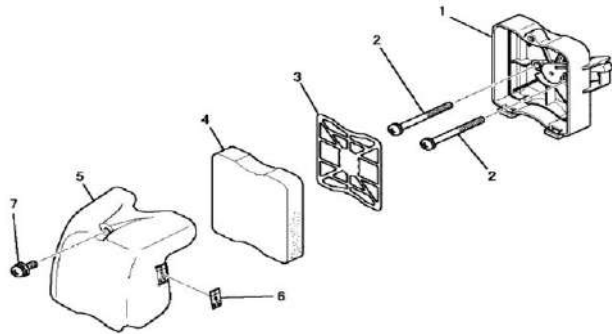
**8. Clutch System**



| Part No | Part Name        | Part No | Part Name       |
|---------|------------------|---------|-----------------|
| E8-1    | Clutch Shoe Assy | E8-4    | Clutch Bolt     |
| E8-2    | Shoe Clutch      | E8-5    | Washer A-Clutch |
| E8-3    | Spring-Clutch    | E8-6    | Washer B-Clutch |

| Part No | Part Name        | Part No | Part Name         |
|---------|------------------|---------|-------------------|
| E5-11   | Pin              | E5-28   | Screw             |
| E5-12   | Lever            | E5-29   | Needle High Speed |
| E5-13   | Body             | E5-30   | Spring            |
| E5-14   | Cover            | E5-31   | Washer            |
| E5-15   | Primer Pump Assy | E5-32   | O Ring            |
| E5-16   | Valve Throttle   | E5-33   | Washer            |
| E5-17   | Holder Wire      |         |                   |

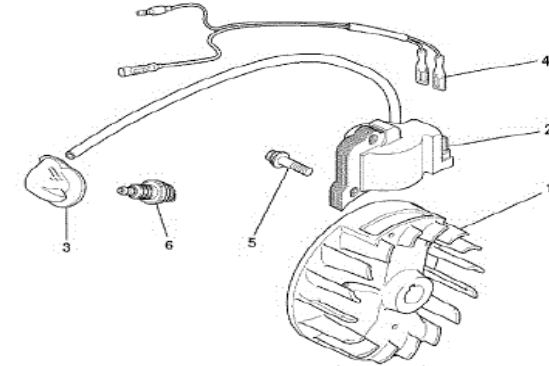
**6. Air Cleaner System**



| Part No | Part Name                             | Part No | Part Name                               |
|---------|---------------------------------------|---------|---|
| E6-1    | Air Cleaner Inside Cover/Case Cleaner | E6-5    | Air Cleaner Outside Cover/Cover Cleaner |
| E6-2    | Screw & Washer                        | E6-6    | Label Name                              |
| E6-3    | Grid                                  | E6-7    | Screw & Washer                          |
| E6-4    | Air Filter Sponge/Element Cleaner     |         |   |

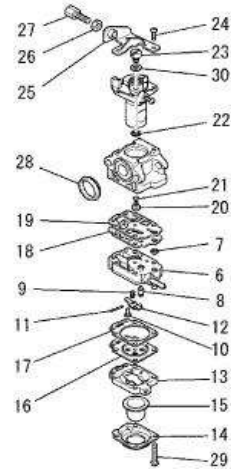
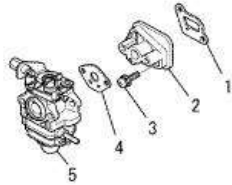
| Part No | Part Name       | Part No | Part Name                 |
|---------|-----------------|---------|---------------------------|
| E3-1    | Crankshaft Assy | E3-5    | Circlip-Piston Pin        |
| E3-2    | Piston          | E3-6    | Needle Bearing-Piston Pin |
| E3-3    | Piston Pin      | E3-7    | Key-Crankshaft(Woodruff)  |
| E3-4    | Piston Ring     | E3-8    | Nut Conical SPG           |

**4. Fly Wheel Magneto System**



| Part No | Part Name        | Part No | Part Name      |
|---------|------------------|---------|----------------|
| E4-1    | Fly Wheel/ Rotor | E4-4    | Cord Comp-Coil |
| E4-2    | Ignition Coil    | E4-5    | Bolt & Washer  |
| E4-3    | Cap-Spark Plug   | E4-6    | Spark Plug     |

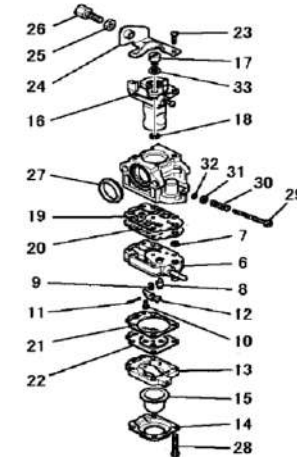
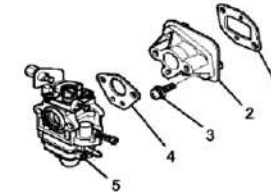
**5. Carburetor System**



| Part No | Part Name         | Part No | Part Name   |
|---------|-------------------|---------|-------------|
| E5-1    | Gasket-Insulator  | E5-16   | Diaphragm   |
| E5-2    | Insulator         | E5-17   | Gasket      |
| E5-3    | Screw & Washer    | E5-18   | Diaphragm   |
| E5-4    | Gasket-Carburetor | E5-19   | Gasket      |
| E5-5    | Carburetor        | E5-20   | Jet Main    |
| E5-6    | Body Pump         | E5-21   | O Ring      |
| E5-7    | Screen            | E5-22   | Clip        |
| E5-8    | Valve Needle      | E5-23   | Wire Holder |
| E5-9    | Spring            | E5-24   | Screw       |
| E5-10   | Screw             | E5-25   | Bracket     |
| E5-11   | Pin               | E5-26   | Nut         |
| E5-12   | Lever             | E5-27   | Screw       |
| E5-13   | Body              | E5-28   | Packing     |
| E5-14   | Cover             | E5-29   | Screw       |
| E5-15   | Primer Pump Assy  | E5-30   | Washer      |

| Part No | Part Name       | Part No | Part Name           |
|---------|-----------------|---------|---------------------|
| E4-1    | Fly Wheel/Rotor | E4-4    | Cord Comp/Wire Lead |
| E4-2    | Ignition Coil   | E4-5    | Bolt & Washer       |
| E4-3    | Cap-Spark Plug  | E4-6    | Spark Plug          |

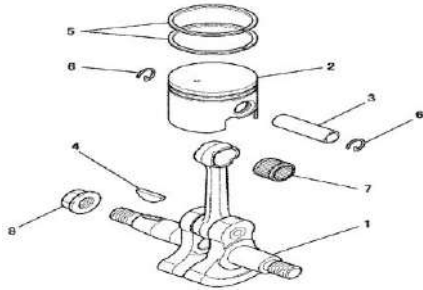
**5. Carburetor System**



| Part No | Part Name         | Part No | Part Name    |
|---------|-------------------|---------|--------------|
| E5-1    | Gasket-Insulator  | E5-18   | Clip         |
| E5-2    | Insulator         | E5-19   | Gasket       |
| E5-3    | Screw & Washer    | E5-20   | Diaphragm    |
| E5-4    | Gasket-Carburetor | E5-21   | Gasket       |
| E5-5    | Carburetor        | E5-22   | Diaphragm    |
| E5-6    | Body Pump         | E5-23   | Screw        |
| E5-7    | Screen            | E5-24   | Bracket      |
| E5-8    | Valve Needle      | E5-25   | Nut          |
| E5-9    | Spring            | E5-26   | Screw Adjust |
| E5-10   | Screw             | E5-27   | Packing      |

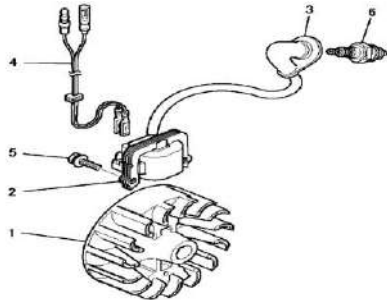
| Part No | Part Name                  | Part No | Part Name      |
|---------|----------------------------|---------|----------------|
| E2-1    | Cylinder                   | E2-6    | Screw & Washer |
| E2-2    | Gasket Cylinder            | E2-7    | Screw & Washer |
| E2-3    | Bolt SCH                   | E2-8    | Screw & Washer |
| E2-4    | Bolt STUD                  | E2-9    | Washer         |
| E2-5    | Guide Cover Assy/Cover Top |         |                |

**3. Crankshaft & Piston System**

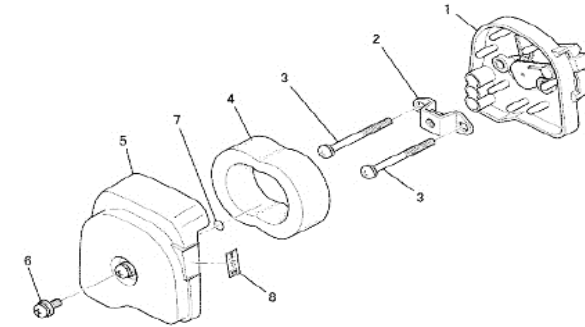


| Part No | Part Name                | Part No | Part Name                 |
|---------|--------------------------|---------|---------------------------|
| E3-1    | Crankshaft Assy          | E3-5    | Piston Ring               |
| E3-2    | Piston                   | E3-6    | Circlip-Piston Pin        |
| E3-3    | Piston Pin               | E3-7    | Needle Bearing-Piston Pin |
| E3-4    | Key-Crankshaft(Woodruff) | E3-8    | Nut-conical SPG           |

**4. Fly Wheel System**

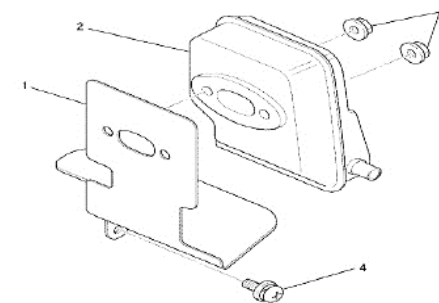


**6. Air Cleaner System**



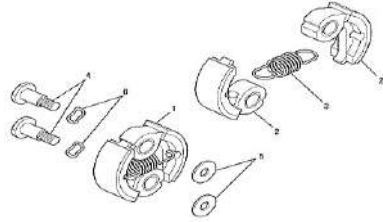
| Part No | Part Name                             | Part No | Part Name                               |
|---------|---------------------------------------|---------|---|
| E6-1    | Air Cleaner Inside Cover/Case Cleaner | E6-5    | Air Cleaner Outside Cover/Cover Cleaner |
| E6-2    | Bracket                               | E6-6    | Screw & Washer                          |
| E6-3    | Screw & Washer                        | E6-7    | O Ring                                  |
| E6-4    | Air Filter Sponge/Element Cleaner     | E6-8    | Label Name                              |

**7. Muffler System**



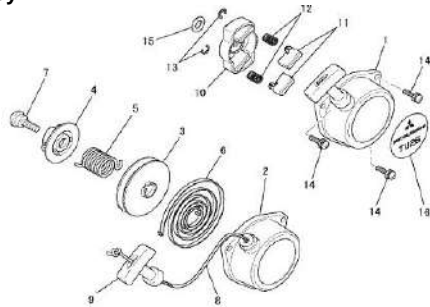
| Part No | Part Name      | Part No | Part Name      |
|---------|----------------|---------|----------------|
| E7-1    | Gasket-Muffler | E7-3    | Nut Flange     |
| E7-2    | Muffler        | E7-4    | Screw & Washer |

**8. Clutch System**



| Part No | Part Name        | Part No | Part Name       |
|---------|------------------|---------|-----------------|
| E8-1    | Clutch Shoe Assy | E8-4    | Clutch Bolt     |
| E8-2    | Shoe Clutch      | E8-5    | Washer B-Clutch |
| E8-3    | Spring-Clutch    | E8-6    | Washer A-Clutch |

**9. Recoil Starter Assy**

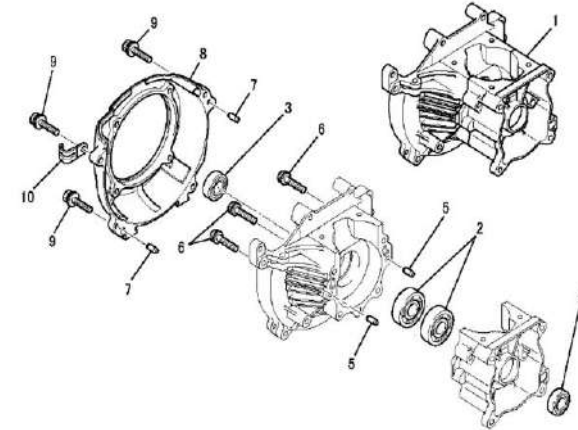


| Part No | Part Name                   | Part No | Part Name                 |
|---------|-----------------------------|---------|---------------------------|
| E9-1    | Starter Assy/Recoil Starter | E9-9    | Starter Handle/Knob       |
| E9-2    | Starter Cover/Case Starter  | E9-10   | Start Reel                |
| E9-3    | Rope Reel                   | E9-11   | Start Claw                |
| E9-4    | Ratchet Starter/Cam         | E9-12   | Claw Spring/Spring Return |
| E9-5    | Ratchet Spring              | E9-13   | E Ring/Snap Ring          |
| E9-6    | Recoil Spring               | E9-14   | Screw & Washer            |
| E9-7    | Screw                       | E9-15   | Washer                    |
| E9-8    | Starter Rope                | E9-16   | Label Name                |

**PARTS DIAGRAM & LIST (KK-BC2 - JP45 & TC2 - JP45)**

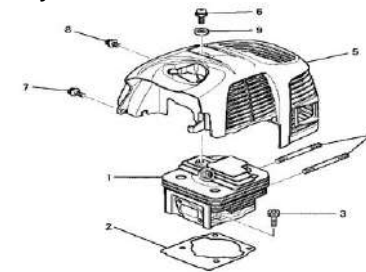
**Engine Parts**

**1. Crankcase System**



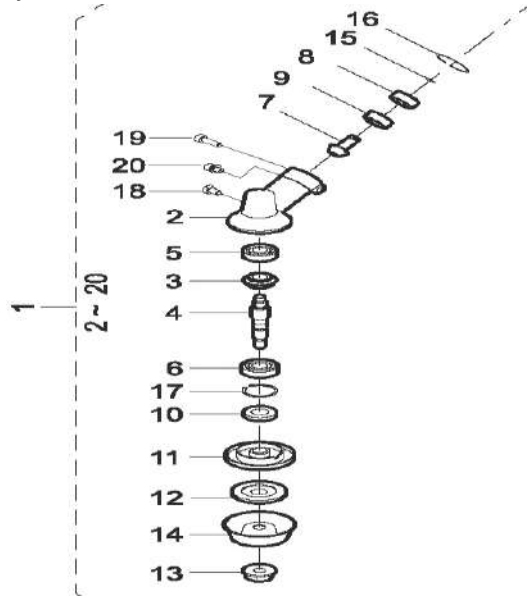
| Part No | Part Name           | Part No | Part Name           |
|---------|---------------------|---------|---------------------|
| E1-1    | Crankcase Assy      | E1-6    | Screw & Washer      |
| E1-2    | Bearing 6202        | E1-7    | Pin Dowel-Fan Cover |
| E1-3    | Oil Seal            | E1-8    | Fan Cover/Fan Case  |
| E1-4    | Oil Seal            | E1-9    | Bolt & Washer       |
| E1-5    | Pin Dowel-Crankcase | E1-10   | Clamp               |

**2. Cylinder & Top Cover System**



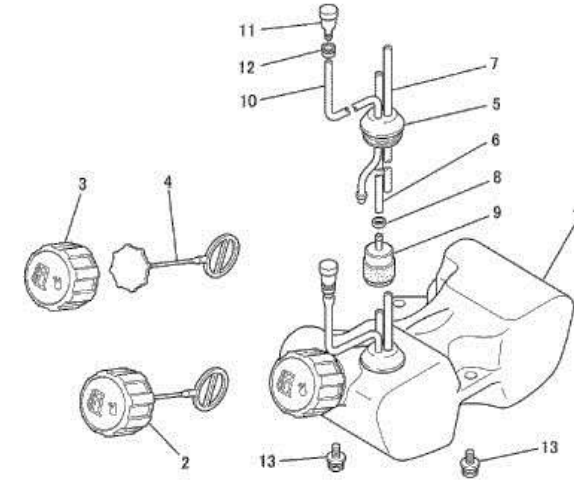


4. Gear Case Assy



| Part No | Part Name               | Part No | Part Name                |
|---------|-------------------------|---------|--------------------------|
| B4-1    | Gear Case Assy          | B4-11   | Holder A/Cover C.P       |
| B4-2    | Gear Case               | B4-12   | Holder B                 |
| B4-3    | Gear/Bevel Gear         | B4-13   | Saw Lock Nut             |
| B4-4    | Gear Shaft/Spline Shaft | B4-14   | Cover-Metal/Stabilizer   |
| B4-5    | Bearing 626             | B4-15   | Stop Ring/C-Snap Ring    |
| B4-6    | Bearing 6001 C3         | B4-16   | Stop Ring/C-Snap Ring    |
| B4-7    | Pinion/Bevel Pinion     | B4-17   | Stop Ring/C-Snap Ring    |
| B4-8    | Bearing 609 DDC3        | B4-18   | Grease Bolt/Hexagon Bolt |
| B4-9    | Bearing 609 C3          | B4-19   | Socket Screw             |
| B4-10   | Oil Seal (DS16284)      | B4-20   | Socket Screw (W/SW)      |

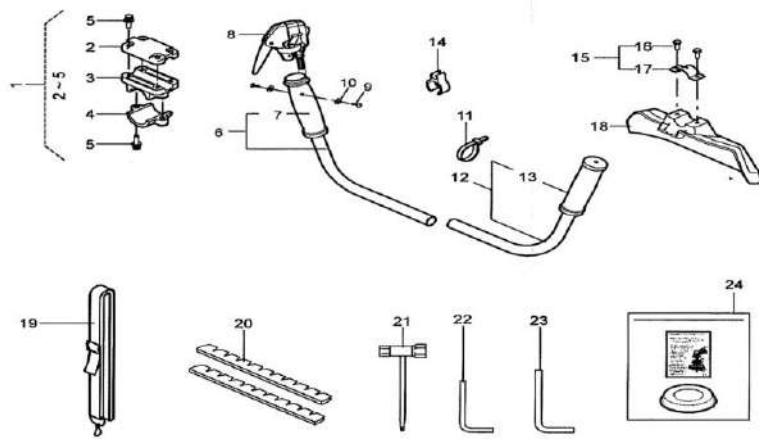
10. Fuel Tank System



| Part No | Part Name                   | Part No | Part Name                 |
|---------|-----------------------------|---------|---------------------------|
| E10-1   | Fuel Tank Assy              | E10-8   | Bush                      |
| E10-2   | Fuel Tank Lid/Tank Cap Assy | E10-9   | Petrol Filter/Filter Fuel |
| E10-3   | N/A                         | E10-10  | Hose Fuel                 |
| E10-4   | N/A                         | E10-11  | Valve Breather            |
| E10-5   | Fuel Pipe Grommet           | E10-12  | Clip                      |
| E10-6   | Fuel Pipe Long/Tube Fuel    | E10-13  | Screw & Washer            |
| E10-7   | Fuel Pipe Short/Tube Fuel   |         |                           |

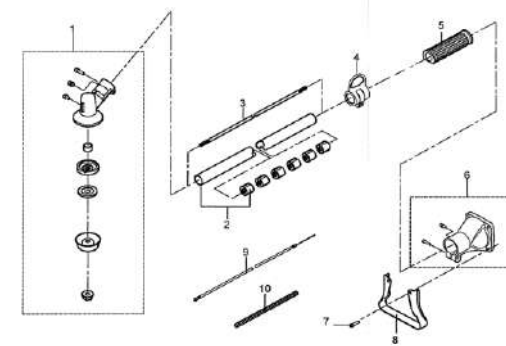
**BODY PARTS-KK-BC-JP30**

**1. Handle & Fitting**



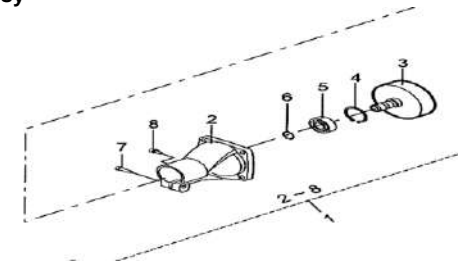
| Part No | Part Name                       | Part No | Part Name                  |
|---------|---------------------------------|---------|----------------------------|
| B1-1    | N/A                             | B1-13   | Left Handle Grip           |
| B1-2    | Cap Up-Handle/Handle Joint A    | B1-14   | Wire Holder                |
| B1-3    | Bracket Handle/Handle Joint B   | B1-15   | N/A                        |
| B1-4    | Cap Lower-Handle/Handle Joint C | B1-16   | Socket Screw               |
| B1-5    | Socket Screw                    | B1-17   | Safety Guard Bracket/Band  |
| B1-6    | Right Handle/Handle Assy        | B1-18   | Safety Guard               |
| B1-7    | Right Handle Grip               | B1-19   | Harness Assy/Shoulder Band |
| B1-8    | Lever Assy/Throttle Lever Assy  | B1-20   | Blade Cover                |
| B1-9    | Tapping Screw                   | B1-21   | Box Spanner (13x19)        |
| B1-10   | Spring Lock Washer              | B1-22   | L Wrench (4)               |
| B1-11   | Wire Band                       | B1-23   | L Wrench (5)               |
| B1-12   | Left Handle/Handle Assy         | B1-24   | Grass Cover Set            |

**2. Gear Case & Driving Apparatus**



| Part No | Part Name                    | Part No | Part Name           |
|---------|------------------------------|---------|---------------------|
| B2-1    | Gear Case Assy               | B2-6    | N/A                 |
| B2-2    | Outer Pipe/Main Pipe C.P     | B2-7    | Socket Screw        |
| B2-3    | Drive Shaft/Main Shaft       | B2-8    | Stand-Clutch Comp   |
| B2-4    | Holder Assy/Hanger Band Assy | B2-9    | Throttle Cable/Wire |
| B2-5    | Main Grip(R)                 | B2-10   | Tube                |

**3. Clutch Case Assy**



| Part No | Part Name                         | Part No | Part Name             |
|---------|-----------------------------------|---------|-----------------------|
| B3-1    | Clutch Comp Assy/Clutch Case Assy | B3-5    | Bearing 6001 ZZ       |
| B3-2    | Linker / Clutch Case              | B3-6    | Stop Ring/C Snap Ring |
| B3-3    | Clutch Drum C.P                   | B3-7    | Socket Screw          |
| B3-4    | Stop Ring/C. Snap Ring            | B3-8    | Socket Screw (W/SW)   |