

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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**KisanKraft Limited** (Formerly known as KisanKraft Machine Tools P Ltd.)

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Product	Tea-Leaf Harvester	KisanKraft Invoice Date	
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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 ♦ Coimbatore
- ♦ Guwahati ♦ Patna ♦ Hyderabad ♦ Nellore
- ♦ Jaipur ♦ Karnal ♦ Kolkata ♦ Lucknow ♦ Pune ♦ Raipur

## CONTENTS

BEFORE GETTING STARTED .....	7
SAFETY INSTRUCTIONS.....	7
ASSEMBLY INSTRUCTIONS.....	7
OPERATING INSTRUCTIONS.....	7
MAINTENANCE AND ADJUSTMENT .....	9
TROUBLESHOOTING.....	10
TECHNICAL SPECIFICATIONS.....	12
BODY - PARTS DIAGRAM.....	13
BODY - PARTS LIST.....	14
mitsubishi engine-MANUAL.....	15

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>
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### 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.)

### 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



**MITSUBISHI HEAVY INDUSTRIES, LTD.**  
**GENERAL MACHINERY & SPECIAL VEHICLE HEADQUARTERS**  
**MEIKI GASOLINE ENGINE DEPARTMENT ADMINISTRATION SECTION**  
1-Takamichi, Iwatsuka-cho, Nakamura-ku, Nagoya 453-8515, Japan  
Tel: 81-52-412-1278, Fax: 81-52-412-7811

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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.

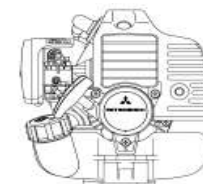


**Use of fire is strictly prohibited**



#### 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.



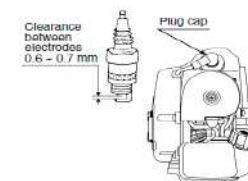
### INSPECTION AND SERVICE AT EVERY 50-HOUR

#### 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**

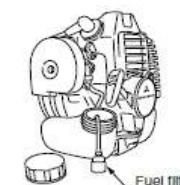


#### Cleaning of fuel filter

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.



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2. 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.
3. 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.)

## 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		✓		

## BEFORE GETTING STARTED

We wish to thank you for choosing our product. We are confident that the high quality of our product will meet your requirement and will give you long-lasting service. In order to avoid accidents or injury, please read this manual and that of gasoline engine carefully before using the machine. After reading, preserve this manual for further reference.

## SAFETY INSTRUCTIONS

1. When a borrower or a new operator is using this unit, please read the guide for safe operation before using.
2. The following shall not be allowed to operate the machine:
  - A). Children b). Pregnant Woman c). Mentally challenged d). Person who is sick, tired, is under the influence of alcohol or any other drug.
3. Operator's Clothes
  - Do not wear loose clothing that might get caught in moving parts.
  - Please wear brimmed cap and eye protection glasses.
  - Please wear gloves during inspection and maintenance.
  - Please wear anti-skid shoes.
4. In order to ensure there is no fire or smoke:
  - Don't store the fuel at places liable to catch fire.
  - Don't smoke when starting the engine or refilling the fuel.
  - Stop the engine when refilling the fuel, in case of accidental turning over of the machine or spattering fuel into machine body. Please wipe out the fuel on the machine body with dry cloth.

## ASSEMBLY INSTRUCTIONS

1. Pull the flexible pin on the power take-off point. Insert the flexible shaft-blanket's with a hole into the hole.
2. Turning round the flexible shaft-blanket, insert the flexible pin into the hole so that this end is fixed.
3. At the end of the flexible shaft-blanket with the slot, turning round the quadrate flexible shaft synchronously, insert the hole to the power.
4. Adjust the flexible shaft to meet the quadrate hole. Put the flexible shaft-blanket with a slot in the socket.
5. Insert the flexible shaft-pin and put the split pin on so that the installation of the flexible shaft is complete.

## OPERATING INSTRUCTIONS

Instructions **before** operation:

1. Before every operation, please inspect the machine and make necessary adjustments.  
If you notice any abnormality, please get the machine repaired, and if necessary, to take it to the authorized dealer for service.
2. The following inspections are to be done before the operation:



Location	Check content	Correction
Appearance	Wearing-out or loose	Reinforcing
Fasteners	Loose	Tighten
Gearbox	Sufficient grease	Replenishing every 20 to 30 hours
Blades	Rounding, breaking or deforming of blades	Replacing the components
	Lubricating of blades	
Air Filter	Contamination	Cleaning
Oil tank	Sufficient fuel and loosing of tank cover	Cleaning & Lubricating
Throttle Switch	Smooth operation	Replenishing or reinforcing
Gasoline Engine Blade Adjusting	Proper on/off operation	Adjusting or replacing the components
Nut Handle	Proper adjustment of the gap between blades	Adjusting
	Proper fixation of the handle	Adjusting

### Instructions during operation:

1. Inspection of fuel must use the mixture of 90# ordinary gasoline and 2-stroke purpose machine oil. The mixing ratio should be correct. During the first 20 hours, the ratio between volume of 90# ordinary gasoline: and a volume of 2-stroke purpose machine oil should be 20:1, and then it can be changed to 25:1.
2. The gasoline engine can't stop suddenly. The speed should be adjusted to 2300-2700 rotations/min.
3. After every one hour of operation, the blades should be oiled with HG-10# lubricating oil. The space between the blades should be adjusted correctly.
4. Every 8-10 hours fill the gearbox with ZFG-2 lubricating oil once a time.
5. Avoid great impacts when moving the machine.
6. This machine cannot be used as a cropper.
7. When the gasoline engine is working, don't touch the blades even when the clutch is apart.
8. Do shut off the gasoline engine once the work is done.
9. When working, do not touch the spark plug.
10. The banding angular magnitude of flexible shaft can't be too big to break. Before working, insert the flexible shaft with grease on it into the flexible duet and pull it for several times.

### ADJUSTING THE CARBURETOR

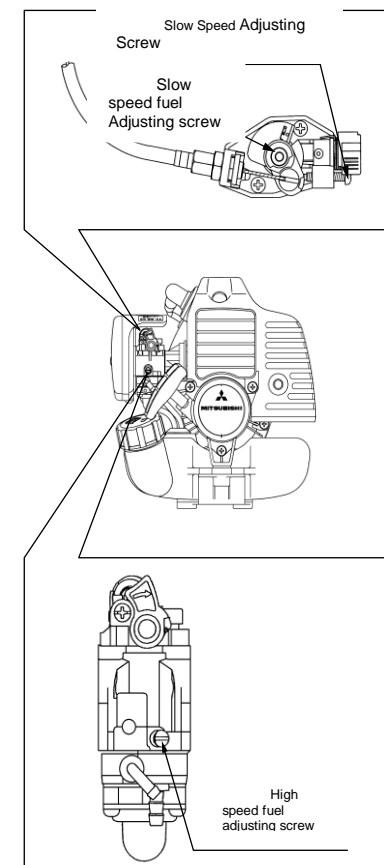


Engine revolution speed is adjusted at the optimum condition before shipping from the factory. It should be adjusted only when it fails to operate properly. (Consult your dealer when adjustment is necessary.)

1. 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.



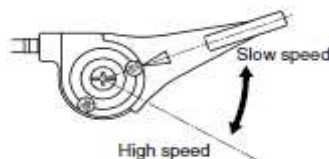
Increasing the slow revolution excessively causes the driven equipment unable to stop even if the throttle lever is returned. The revolution speed should not be increased excessively.





### 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



### Starting of the gasoline engine:

- Press the primer pump several times before working. The fuel goes into the carburetor. All the throttles should be shut off.
- When the gasoline engine is under cool state or in winter, close the red chokes of the carburetor before opening the electric circuit.
- Fix the machine and pull the starting rope.
- After starting, add the throttle for some time and run free for 2-3 minutes to warm-up. Later, add the throttle and work normally.

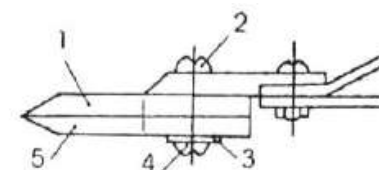
### Stopping of the gasoline engine:

Switch the throttle to low-speed to slow it down. Work 2-3 minutes for cold running and then switch off the machine.

### MAINTENANCE AND ADJUSTMENT

- Because the blades work at a high speed, it should be oiled once in every hour during working. Please use non-toxic, edible lubricating oil for blades, as that comes in contact with tea leaf.
- Inspect and adjust the space between the blades. After some time of working, blades are worn out and screws become loose, which can change the normal space (about 0.05mm), so please pay regular attention to their working condition.
- Inspect the firmness of the screws and the space between the blades. Improper spacing may reduce the working ability of the machine. Too much space may lead to breakage of the blades. It not only reduces the quality of the tea, but also roughens the surface of the tea tree. Too small space may lead to a large load and hardship of working or harm the blades.

The space between the edges can be adjusted as follows.



- Upper blade
- Nut
- Washer
- M6 crew
- Bottom blade

- Unscrew the nut
- Use the plus driver to screw the crew to the end lightly and then turn back 3/8 round.
- Screw the nut tightly. The adjusting washer should be flexible.
- Put the non-toxic, edible lubricating oil on the blades.
- Start the gasoline engine and let the blades work at a high speed for 1 minute.
- Switch off the gasoline engine and touch the nut. If hands can withstand the temperature, it means the adjustment is successful. If hands feel hot, loosen the crew slightly, and adjust it until it is OK. (Note: Please adjust it when the

machine is shut off. The screw should be in the narrow hole. If there is dirt in it, clean it.)

7. Keep the air-filter system clean.
8. Cleaning of the carbon in the spark plug and the adjustment of the space: After every 25 hours of working, please take off the spark plug and clean it. Adjust the space between the electrodes (0.5-0.6mm)
9. Dismantle the air filter after 15 hours of usage. Use the gas line to clean it thoroughly. Then dry and reinstall it. Dismantle the casing lid, clean the carbon and the dirt.
10. Cleaning of carburetor. When working in bad conditions, carbon powder and dust on the tree may contaminate the machine, so besides cleanings after each usage, cleaning after every 100 hours usage is necessary. (Cleanings must be held when the oil box is switched off.) (Note: The inside parts have matched the machine, please do not adjust it.)
11. Do not use for a long time, without allowing to cool or clean the machine
12. When the machine is cooled off, let the fuel go out and press the oil pump so the fuel remaining in the pump goes back to the oil tank. At last, empty the fuel in the oil tank.
13. Take off the spark plug, and drop the oil into the hole. Pull the starter so that the oil covers the inner well. Put the spark plug back.
14. Clean the outside parts, blades and blade edges of the machine. Put it in a dry room.

**NOTE:** Necessary repairs must be done by the authorized dealer.

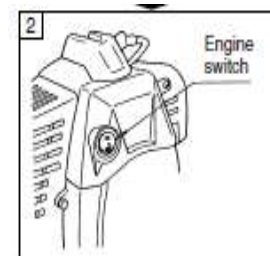
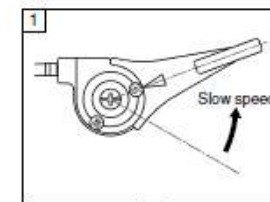
## TROUBLESHOOTING

### STARTING PROBLEMS:

Symptom	Category	Cause	Remedy
Lighting a fire without a spark.	Spark plug	The electrodes are damped.	Drying
		Carbon got deposited in the electrodes of the spark plug.	Cleaning
		The ramous insulator of the electrode is bad.	Replacing the spark plug
		The space between electrodes is too small or too large.	Adjust it to 0.5 -0.6mm
		The electrodes are overheated	Replacing the spark plug
Lighting a fire with a spark.	Good Compression	High density of the fuel	Adjusting carburetor
		Bad quality of the fuel	Use better fuel
	Bad compression	The casing piston and the piston ring have been badly damaged due to wear and tear.	Replacing the piston ring or piston whichever is necessary
		Lack of fuel	Fill the fuel
	Carburetor	Measuring hole jammed	Clearing

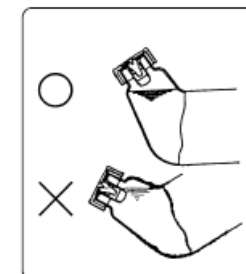
### STOP

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 chase 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.)



5. 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.

6. 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.

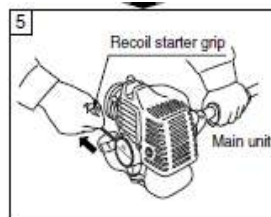


Do not disassemble the recoil.

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.



		Cleaner-net jammed	Clearing
Failure to supply the fuel.		Fasteners have become loose	Reinforcing

### INSUFFICIENT POWER:

Symptom	Cause	Remedy
Good Compression but failure to burn	Air goes into the seam of the fuel pump	Reinforcing
	Air goes into the carburetor	Changing the seal or reinforcing
	Water mixed with the fuel	Use good fuel
	Burnt smell in the piston	Clean all components carefully
	Surround some carbon	DE compounding and clearing
Overheated	Low density of the fuel	Adjust the carburetor
	Dusts on the fan guard and the cylinder fin	Cleaning
Having the tendency to produce noise	The quality of the fuel is not so good	Change to a better fuel
	Carbon in the fuel room	Clearing
Others	The air - Cleaner is blocked	Clean the block.
	Overload	Limit the load.

### STOPPING DURING OPERATION:

Symptom	Cause	Remedy
Stop abruptly during operation	Piston sintering	Use a file to clean the piston and the casing. The damaged ring should be changed.
	Short circuit of the electrode due to the carbon	Cleaning
	Problems of the inner part of the magneto electric coil.	Dismantle and inspect it
	Sparking cap jumps out	Embed it as before
Stop with running spend descend	Lack of fuel	Fill the fuel
	Blocking in the inner part of the carburetor	Inspection and clearing
	Water mixed with the fuel	Empty it and refill the fuel


### DIFFICULTY IN STOPPING:

Symptom	Cause	Remedy
Itself of gasoline engine	Overheat of casing and piston spontaneous combustion	Clearing carbon of casing and piston

Others	Heating top of spark plug	Clearing electrode
	Dropping connecting wire	adjusting gap 0.5-0.6 mm

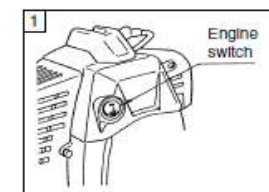
### TECHNICAL SPECIFICATIONS

Product Code	TH-525/TH-JP600 (powered by MITSUBISHI)
HP	1 hp
CC	26 cc
Engine Type	2- Stroke
RPM/Out Put Pressure	6000 (Engine RPM)
Fuel Used	Petrol
Fuel Tank Capacity	750 ml
Oil (Mixing)	40ml (2T) oil per 1 liter of Petrol
Weight of the Machine	10 kg
Consumption/Out Put Capacity	2 liter/ hour (Engine). & 400 kg/hour(Output)

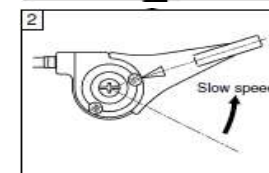
- When the engine has started, return the choke lever gradually to the fully opened position (at the  Mark).  
If only exploding sounds are heard, but it does not start, return the choke lever to the fully closed position and pull the starter grip vigorously once again.

### START (STARTER LEVER TYPE UNIT)

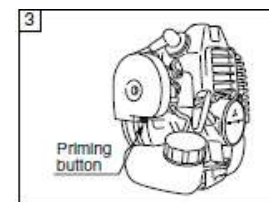
- Turn the engine switch to the "ON" side.



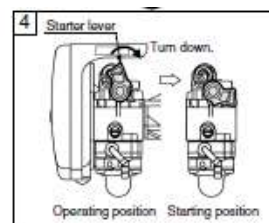
- Set the throttle lever at the slowest speed position.



- 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.



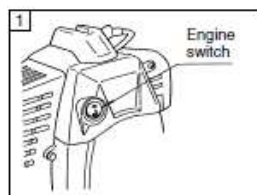
- Turn down the starter lever of carburetor to set it at the start position.  
It is not necessary to operate the starter lever when the engine is warmed up (For about 15 minutes after stopping the engine.)  
(To be left in the operating position)  
Depending on specifications, the starter lever may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



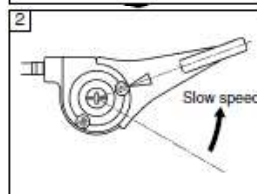
## METHODS OF STARTING AND STOPPING THE ENGINE

### START (CHOKE TYPE UNIT)

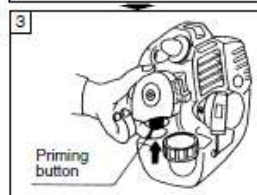
1. Turn the engine switch to the "ON" side.





2. Set the throttle lever at the slowest speed position.



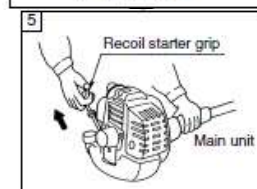
3. Push the priming button repeatedly with finger till it hits the top. (More than 10 times)  
Pressing the priming button is necessary to prime the fuel to facilitate the start-up. Since any excess amount of primed fuel returns to the tank, there is no problem of over-priming. Prime the fuel rather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



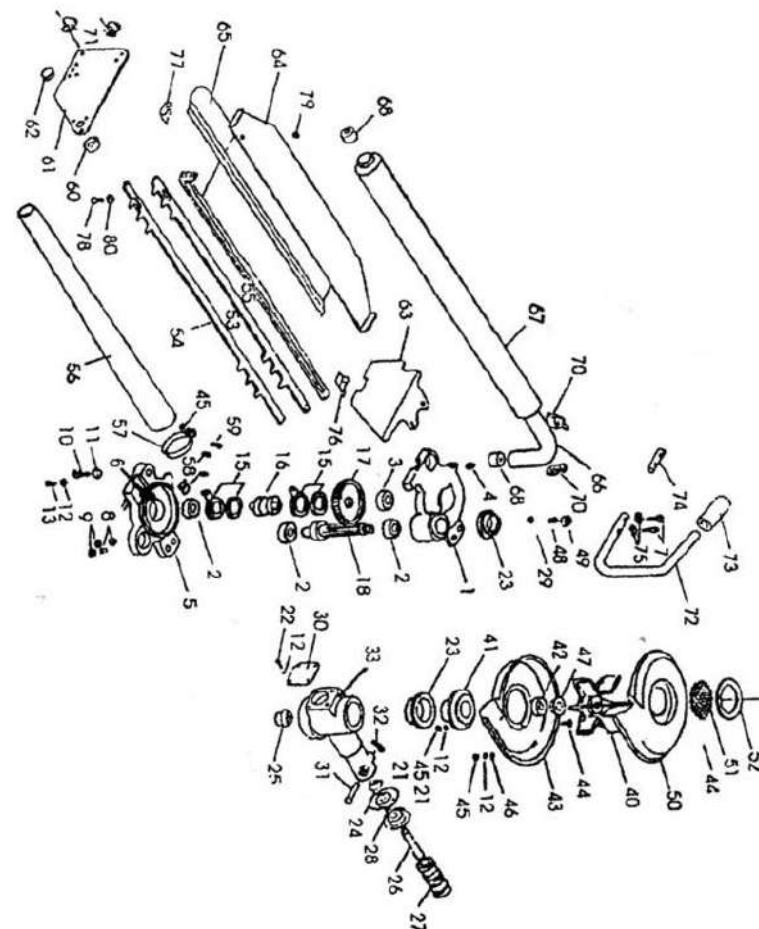
4. Turn the choke lever to the fully closed position (at the  Mark).  
When sufficient fuel is retained and the engine is warm, set the choke lever at the fully opened position (at the  mark)



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



## BODY - PARTS DIAGRAM





### BODY - PARTS LIST

Part No	Name	Part No	Name
1.	Gearbox (upper)	43.	Fan-guard (lower)
2.	Bearing 608	44.	Roundhead screw M4x8
3.	Bearing 6001	45.	Nut
4.	Grease nipple	46.	Flat washer
5.	Gearbox (lower)	47.	Washer 3
6.	Base plate-seating	48.	Washer 4
7.	Internal hexagonal screw M6 x 40	49.	Washer 5
8.	Spring Washer	50.	Fan guard (upper)
9.	Hexagonal nut	51.	Net
10.	Hexagonal bolt M5 x 25	52.	Raster
11.	Spring-washer	53.	Blade (upper)
12.	Spring-washer	54.	Blade (lower)
13.	Hexagonal bolt	55.	Blade edge press=piece
15.	Connecting lever	56.	Air-feed duct
16.	Cam	57.	Fixing ring of air-feed duct
17.	Large Gear	58.	Self-tapping screw
18.	Gear Aziz	59.	Round head screw M4 x 12
21.	Bearing	65.	Base plate (lower)
22.	Roundhead screw	66.	Rack
23.	Plastics bush	67.	Rack-blanket
24.	Segment bevel gear 1	68.	Stop nut
25.	Segment bevel gear 2	70.	Bag hook
26.	Driving spindle	71.	Bag hook (middle)
27.	Flexible shaft blanket	72.	Handle
28.	Washer 1	73.	Handle-blanket
29.	Washer 2	74.	Reinforcing-pipe
30.	Side plate	75.	Pad R
31.	Flexible shaft pin	76.	Guide plate (L)
32.	Split pin	77.	Guide plate (R)
33.	Flexible shaft seating	78.	Blade adjustment bolt
40.	Fan	79.	Blade adjustment pad
41.	Fan seating	80.	Blade adjustment nut
42.	Bearing 6000		

### 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 screws and nuts

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



#### 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 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

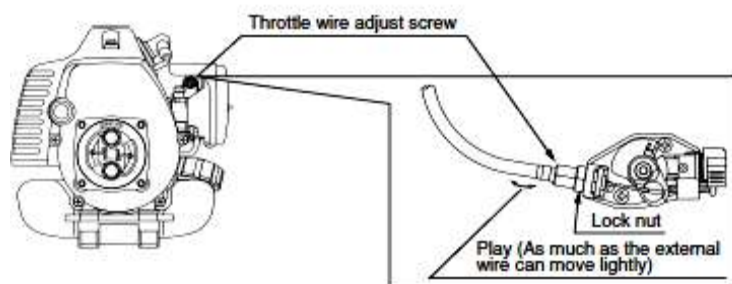
It could cause the starting trouble.

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

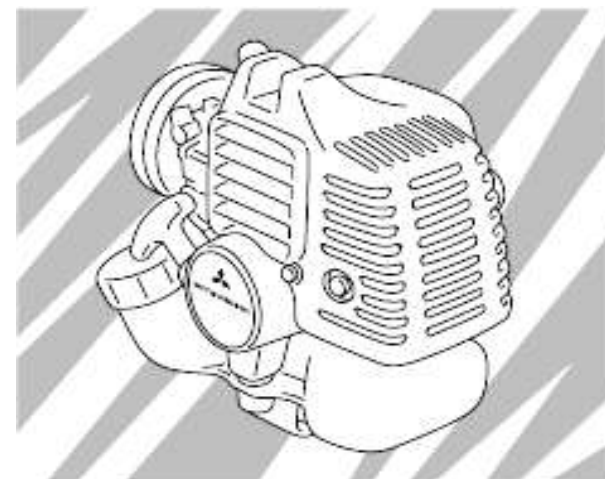


#### NO PLAY

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



## MITSUBISHI 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.

 **MITSUBISHI HEAVY INDUSTRIES, LTD.**



## SAFETY PRECAUTIONS



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



### PROHIBITED ITEMS

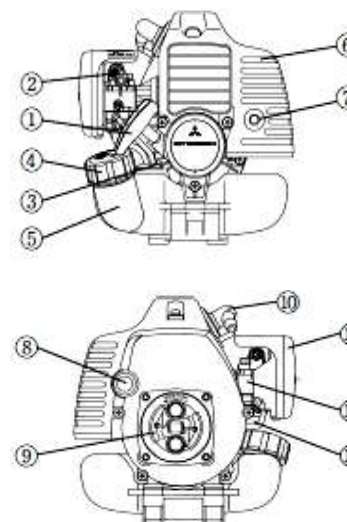
- No person who does not understand the content of this manual should be allowed to operate the engine.
- The engine should not be operated at the indoor or a place with poor ventilation. (Exhaust gas contains odourless and harmful carbon monoxide.)
- Do not insert into or approach hands or foot to the 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.)

- 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