Note:
Before using this machine, carefully read through these HANDLING INSTRUCTIONS to ensure efficient, safe operation. It is recommended that these INSTRUCTIONS be kept readily available as an important reference when using this machine.
MEANINGS OF SYMBOLS

**NOTE:** Some units do not carry them.

<table>
<thead>
<tr>
<th>Symbols</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Grass Trimmer" /></td>
<td>Do not use metal/rigid blades when this sign is shown on the unit.</td>
</tr>
<tr>
<td><img src="image" alt="WARNING" /></td>
<td>It is important that you read, fully understand before use, and observe the following safety precautions and warnings. Careless or improper use of the unit may cause serious or fatal injury.</td>
</tr>
<tr>
<td><img src="image" alt="Read, understand and follow all warnings and instructions in this manual and on the unit." /></td>
<td>Indicate handle location. Arrows which show limits for handle positioning.</td>
</tr>
<tr>
<td><img src="image" alt="Always wear eye, head and ear protectors when using this unit." /></td>
<td>Displacement</td>
</tr>
<tr>
<td><img src="image" alt="Keep all children, bystanders and helpers 15 m away from the unit. If anyone approaches you, stop the engine and cutting attachment immediately." /></td>
<td>Spark plug</td>
</tr>
<tr>
<td><img src="image" alt="Be careful of thrown objects." /></td>
<td>Idle speed</td>
</tr>
<tr>
<td><img src="image" alt="Shows maximum shaft speed. Do not use the cutting attachment whose max rpm is below the shaft rpm." /></td>
<td>Speed of output shaft</td>
</tr>
<tr>
<td><img src="image" alt="Gloves should be worn when necessary, e.g., when assembling cutting equipment." /></td>
<td>Max. engine output</td>
</tr>
<tr>
<td><img src="image" alt="Use anti-slip and sturdy footwear." /></td>
<td>Fuel tank capacity</td>
</tr>
<tr>
<td><img src="image" alt="Choke – Run position (Open)" /></td>
<td>Dry weight</td>
</tr>
<tr>
<td><img src="image" alt="Choke – Start position (Closed)" /></td>
<td>Cutting attachment</td>
</tr>
<tr>
<td><img src="image" alt="START On/Start" /></td>
<td>Sound pressure level LpA by ISO 22868 Equivalent*</td>
</tr>
<tr>
<td><img src="image" alt="STOP Off/Stop" /></td>
<td>Measured sound power level LwA by 2000/14/EC Racing</td>
</tr>
<tr>
<td><img src="image" alt="Fuel and oil mixture" /></td>
<td>Guaranteed sound power level LwA by 2000/14/EC Racing</td>
</tr>
<tr>
<td><img src="image" alt="Idle speed adjustment" /></td>
<td>Vibration level by ISO 22867 Front or Left handle / Equivalent*</td>
</tr>
<tr>
<td><img src="image" alt="Priming pump" /></td>
<td>Vibration level by ISO 22867 Rear or Right handle / Equivalent*</td>
</tr>
<tr>
<td><img src="image" alt="Guaranteed sound power level" /></td>
<td>Uncertainty</td>
</tr>
</tbody>
</table>
Before using your machine

- Read the manual carefully.
- Check that the cutting equipment is correctly assembled and adjusted.
- Start the unit and check the carburetor adjustment. See "MAINTENANCE".

**NOTE:** Equivalent noise level / vibration level are calculated as the time-weighted energy total for noise / vibration levels under various working conditions with the following time distribution:
* 1/2 Idle, 1/2 racing.

**WHAT IS WHAT? (Fig. 1)**

Since this manual covers several models, there may be some difference between pictures and your unit. Use the instructions that apply to your unit.

- A: Fuel cap
- B: Throttle trigger
- C: Starter handle
- D: Cutting attachment guard
- E: Guard extension
- F: Cutting attachment
- G: Drive shaft tube
- H: Handle
- I: Hanger
- J: Ignition switch
- K: Spark plug
- L: Priming pump
- M: Harness
- N: Throttle trigger lockout
- O: Choke lever
- P: Engine
- Q: Gear case
- R: Combi box spanner
- S: Handling instructions
- T: Goggles
- U: Hex bar wrench
- V: Top cover

**WARNINGS AND SAFETY INSTRUCTIONS**

Pay special attention to statements preceded by the following words:

**WARNING**
Indicates a strong possibility of severe personal injury or loss of life, if instructions are not followed.

**CAUTION**
Indicates a possibility of personal injury or equipment damage, if instructions are not followed.

**NOTE**
Helpful information for correct function and use.

**Operator safety**
- Wear head protection (1). (Fig. 2)
- Wear a safety face shield or goggles (2). (Fig. 2)
- Wear approved hearing protection (3). (Fig. 2)
- Do not allow children near the tool during operation.
- Do not operate the tool at night or under bad weather conditions when visibility is poor. And do not operate the tool when it is raining or right after it has been raining. Working on slippery ground could lead to an accident if you lose your balance.
- Never let a child or inexperienced person operate the machine.
- Do not start the engine if there are any flammables such as dry leaves, waste paper or fuel in the vicinity.
- Do not start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- Keep handles free of oil and fuel.
- Keep hands away from cutting equipment.
- Do not grab or hold the unit by the cutting equipment.
- Keep hands away from the engine, top cover or exhaust vent during or shortly after operation. Doing so may result in injury.
- When the unit is shut off, make sure the cutting attachment has stopped before the unit is set down.
- When operation is prolonged, take a break periodically so that you may avoid possible Hand-Arm Vibration Syndrome (HAVS) which is caused by vibration.

**WARNING**
- Always operate the tool with proper protective equipment and clothing. Failure to do so may result in accidents such as burns or injuries. (Fig. 2)
- Do not touch the spark plug area or high voltage during operation. Doing so may result in electric shock.
- Do not allow children near the tool during operation.
- Do not touch the engine, top cover or exhaust vent during or shortly after operation. Doing so may result in burn or injury.
- Antivibration systems do not guarantee that you will not sustain Hand-Arm Vibration Syndrome or carpal tunnel syndrome. Therefore, continual and regular users should monitor closely the condition of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.
- If you are using any medical electric/electronic devices such as a pacemaker, consult your physician as well as the device manufacturer prior to operating any power equipment.

**Unit/machine safety**
- Inspect the entire unit/machine before each use. Replace damaged parts. Check for fuel leaks and make sure all fasteners are in place and securely tightened.
- Never modify the unit/machine in any way. Do not use your unit/machine for any job except that for which it is intended.
- Make sure the cutting attachment guard and harness are properly attached. Do not operate if cutting attachment guard and harness are not properly attached.
- Do not operate the tool if the cutting attachment guard and harness are not properly attached.
- Keep hands away from cutting equipment at all times. Doing so may result in injury.
- Never operate the tool when the cutting attachment guard and harness are not properly attached.
- Before operation, keep sure that there are no tools such as the adjustment key or spanner still attached to the unit.
- If the cutting attachment guard and harness are not properly attached, never operate the tool.
- Before operation, make sure that there are no tools such as the adjustment key or spanner still attached to the unit.

**WARNING**
- Never operate the tool if the cutting attachment guard and harness are not properly attached.
- Never start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- NEVER start or run the engine inside a closed room or building. Breathing exhaust fumes can kill.
- When the unit is shut off, make sure the cutting attachment has stopped before the unit is set down.
- When operation is prolonged, take a break periodically so that you may avoid possible Hand-Arm Vibration Syndrome (HAVS) which is caused by vibration.
English

- Non-authorized modifications and/or accessories may result in serious personal injury or the death of the operator or others.

**Fuel safety**
- Mix and pour fuel outdoors and where there are no sparks or flames.
- Use a container approved for fuel.
- Move at least 3 m away from fueling site before starting engine.
- Stop engine before removing fuel cap. Do not remove the fuel cap during operation.
- Empty the fuel tank before storing the unit/machine. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store so fuel will not leak.

**WARNING**
- Fuel is easy to ignite or get explosion or inhale fumes, so pay special attention when handling or filling fuel.
- Do not smoke or allow smoking near fuel or the unit/machine or while using the unit/machine.
- Wipe up all fuel spills before starting engine.
- Store unit/machine and fuel in area where fuel vapors cannot reach sparks or open flames from water heaters, electric motors or switches, furnaces, etc.
- When using the unit in dry areas, make sure that fire extinguishing equipment is readily available.
- If you shut off the engine for refueling, make sure the unit has cooled down before adding fuel.

**Cutting safety**
- Do not cut any material other than grass and brush.
- Inspect the area to be cut before each use.
- Remove objects which can be thrown or become entangled.
- Do not operate in areas where there are tree roots or rocks.
- For respiratory protection, wear an aerosol protection mask when cutting the grass after insecticide is scattered.
- Keep others including children, animals, bystanders and helpers outside the 15 m hazard zone. Stop the engine immediately if you are approached.
- Please exercise caution as engine startup may be delayed after pulling the start handle.
- Always keep the engine on the right side of your body.
- Hold the unit/machine firmly with both hands.
- Keep firm footing and balance. Do not over-reach.
- Losing your balance during work may lead to an injury.
- When using the unit in dry areas, make sure that fire extinguishing equipment is readily available.
- If you shut off the engine for refueling, make sure the unit has cooled down before adding fuel.

**Transport and storage**
- Carry the unit/machine by hand with the engine stopped and the muffler away from your body.
- Allow the engine to cool, empty the fuel tank, and secure the unit/machine before storing or transporting. Failure to do so may result in fire or accidents.
- Empty the fuel tank before storing the unit/machine. It is recommended that the fuel be emptied after each use. If fuel is left in the tank, store so fuel will not leak.
- Store unit/machine out of the reach of children.
- Clean and maintain the unit carefully and store it in a dry place.
- Make sure engine switch is off when transporting or storing.
- When transporting and storing, either remove the cutting attachment or place the blade cover over the blade.
- You have to secure the machine during transport to prevent loss of fuel, damage or injury.
- If a warning label cannot be read, peels off or becomes indistinct, replace it with a new one. To purchase new labels, contact Hitachi Authorized Service Centers. If situations occur which are not covered in this manual, take care and use common sense. Contact Hitachi Authorized Service Centers if you need assistance.

**SPECIFICATIONS**

The SPECIFICATIONS of this machine are listed in the table on page 15.

**NOTE**
All data subject to change without notice.

**ASSEMBLY PROCEDURES**

**Installation of handle**
Loop handle type (Fig. 3)
Attach the handle to the drive shaft tube.
Adjust the location to the most comfortable position before operation.
Make sure to securely attach the handle with the 4 bolts.

**NOTE**
If your unit has handle location label (8) on drive shaft tube, follow the illustration.
ENGLISH

WARNING
Do not use metal or plastic blade cutting attachments with loop handle type.

Installation of harness
WARNING
If the product includes a harness, always make sure to use it.

Attach the harness hook (9) to the hanger (10) on the drive shaft tube. (Fig. 4)
Adjust the length of the harness for easy operation of the tool.

NOTE
You may need to adjust the position of the hangar (10) to balance the unit. To do so, loosen bolt (11) and adjust the position of hangar (10). After adjusting as necessary, make sure to securely tighten the bolt (11). (Fig. 4)

Installation of cutting attachment guard
WARNING
If an incorrect or faulty guard is fitted, this may cause serious personal injury.

CAUTION
Some cutting attachment guards are equipped with sharp line limiters. Be careful with handling it.

NOTE
- When using a trimmer head with two piece type cutting attachment guard, attach the extension to the cutting attachment guard, then tighten the bolt (12). (Fig. 5)
- The guard bracket may come already mounted to the gear case on some models.

Align the cutting attachment guard with the guard bracket (13) and secure it to the drive shaft tube, using the bolt. (Fig. 6)

NOTE
To remove the guard extension, refer to the drawings. Wear gloves as the extension has a sharp line limiter. Loosen the bolt (12). Then push three square tabs on the guard one by one in order. (Fig. 7)

Installation of cutting attachment
WARNING
- Install the cutting attachment properly and securely as instructed in the handling instructions.
- If not attached properly or securely, it may come off and cause serious and/or fatal injury.
- Do not install or remove cutting attachments while the engine is running.
- Always use genuine Hitachi cutting attachments and metal fittings.

Installation of semi-auto cutting head
1. Function
Automatically feeds more nylon cutting line when it is tapped at low rpm (not greater than 6000 /min).

Specifications

<table>
<thead>
<tr>
<th>Code No.</th>
<th>Type of attaching screw</th>
<th>Direction of rotation</th>
<th>Size of attaching screw</th>
</tr>
</thead>
<tbody>
<tr>
<td>6600570</td>
<td>Female screw</td>
<td>Counter-clockwise</td>
<td>M10xP1.25-LH</td>
</tr>
</tbody>
</table>

Applicable nylon cord
- Cord diameter: 0.4 mm
- Length: 5 m

2. Precautions
- The case must be securely attached to the cover.
- Check the cover (14), case (15) and other components for cracks or other damage. (Fig. 8)

OPERATING PROCEDURES

Fuel (Fig. 12)

WARNING
- The trimmer is equipped with a two-stroke engine. Always run the engine on fuel, which is mixed with oil.
- Fuel is highly flammable and it is possible to get seriously injured when inhaling or spilling on your body.
- Always pay attention when handling fuel. Always have good ventilation when handling fuel inside building.

Fuel
- Always use branded 89 octane unleaded gasoline.
- Use genuine two-cycle oil or use a mix between 25:1 to 50:1, please consult about the mixture ratio to Hitachi Authorized Service Centers.
- If genuine oil is not available, use an anti-oxidant added quality oil expressly labeled for air-cooled 2-cycle engine use (JASO FC GRADE OIL or ISO EGC GRADE). Do not use BIA or TCW (2-stroke water-cooling type) mixed oil.
- Never use multi-grade oil (10 W/30) or waste oil.
- Never mix fuel and oil in machine’s fuel tank. Always mix fuel and oil in a separate clean container.
- Always start by filling half the amount of gasoline, which is to be used.
- Then add the whole amount of oil. Mix (shake) the fuel mixture. Add the remaining amount of gasoline.
- Mix (shake) the fuel-mix thoroughly before filling the fuel tank.
- Mixing amount of two-cycle oil and gasoline

<table>
<thead>
<tr>
<th>Gasoline (Liter)</th>
<th>Two-cycle oil (ml)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio 50:1</td>
<td>Ratio 25:1</td>
</tr>
<tr>
<td>0.5</td>
<td>10 ——— 20</td>
</tr>
<tr>
<td>1</td>
<td>20 ——— 40</td>
</tr>
<tr>
<td>2</td>
<td>40 ——— 80</td>
</tr>
<tr>
<td>4</td>
<td>80 ——— 160</td>
</tr>
</tbody>
</table>

9
English

Fueling

**WARNING**
- Always shut off the engine and let it cool for a few minutes before refueling.
- Do not smoke or bring flames or sparks near the fueling site.
- Slowly open the fuel tank, when filling up with fuel, so that possible over-pressure disappears.
- Tighten the fuel tank cap carefully, after fueling.
- Always move the unit at least 3 m from the fueling area before starting.
- Always wash any spilled fuel from clothing immediately with soap.
- Be sure to check any fuel leakage after refueling.
- Before fueling, in order to remove static electricity from the main body, the fuel container and the operator, please touch the ground that is slightly damp.

Before fueling, clean the tank cap area carefully, to ensure that no dirt falls into the tank. Make sure that the fuel is well mixed by shaking the container, before fueling.

Starting

**CAUTION**
Before starting, make sure the cutting attachment does not touch anything.

1. Starting the cold engine
   1. Set ignition switch (19) to ON position. ([Fig. 13](1))
   2. Push priming pump (20) several times so that fuel flows through return pipe (21). ([Fig. 14](1))
   3. Set choke lever (22) to START position (closed) (A). ([Fig. 15](1))
   4. Pull recoil starter briskly again, taking care to keep the handle in your grasp and not allowing it to snap back. ([Fig. 16](1))
   5. When you hear the engine want to start, return choke lever to RUN position (open) (B). ([Fig. 15](1))
   6. Pull recoil starter briskly again. ([Fig. 16](1))

**NOTE**
If engine does not start, repeat procedures from 2 to 5.

7. Then allow the engine about 2-3 minutes to warm up before subjecting it to any load.
8. Check that the cutting attachment does not rotate when the engine is idling.

2. Starting the warm engine
   Use only 1, 6 and 8 of the starting procedure for a cold engine.
   If the engine does not start, use the same starting procedure as for a cold engine.

Cutting

**WARNING**
- Always use the harness and wear the proper attire and protective equipment when operating the unit. ([Fig. 17](1))
- Keep others including children, animals, bystanders and helpers outside the 15 m hazard zone. Stop the engine immediately if you are approached. ([Fig. 18](1))
- When grass or vines wrap around attachment, stop engine and attachment and remove them. Continuing operation with grass or vines wrapped around the attachment may result in damages such as early abrasion of the clutch.

**CAUTION**
Use and points of caution will vary depending on the type of cutting attachment. For safe use, make sure to follow instructions and guidelines provided with each type.

**NOTE**
- Press the quick release button or pull emergency release flap (if so equipped) in the event of emergency. ([Fig. 19](1))
- Use in accordance with local laws and regulations.

Using a semi-auto cutting head
- Set the engine at high speed when using this attachment.
- Cut grass from left to right. The cut grass will be discharged away from the body, minimizing transfer to your clothes. ([Fig. 20](1))
- Cut grass from right to left as the cutting attachment of the curved drive shaft tube model rotates clockwise.
- With nylon cord, use about 2 cm of the end of the cord to cut grass. Using the full length of the cord will reduce rotation speed and make cutting difficult.

**NOTE**
Automatically feeds more nylon cutting line when it is tapped at low rpm (not greater than 6000 /min).

**WARNING**
- This product is equipped with a line limiter that will automatically cut any excess cord. When operating the unit, do not remove the guard or line limiter.
- As the resistance is greater for nylon cords as opposed to blades, mishandling could increase engine load and result in damage.
- Do not use with the engine set at low speeds. If the engine speed is low, grass may wrap around the attachment, causing the clutch to slip which could result in clutch abrasion.
- With nylon cord cutters, always use over 15 cm of cord. If the length of the cord is too short, rotation speed will increase and may cause damage to the nylon cord cutter. As the curved drive shaft tube model in particular is not equipped with a deceleration mechanism, the possibility of increased rotation speed for the cutting attachment is high.

Stopping ([Fig. 21](1))
Decrease engine speed and run at an idle for a few minutes, then turn off ignition switch (19).

**WARNING**
A cutting attachment can injure while it continues to spin after the engine is stopped or Throttle trigger is released. When the unit is turned off, make sure the cutting attachment has stopped before the unit is set down.

**MAINTENANCE**

MAINTENANCE, REPLACEMENT OR REPAIR OF THE EMISSION CONTROL DEVICES AND SYSTEMS MAY BE PERFORMED BY ANY NON-ROAD ENGINE REPAIR ESTABLISHMENT OR INDIVIDUAL.

**Carburetor adjustment ([Fig. 22](1))**

**WARNING**
- The cutting attachment may be spinning during carburetor adjustments.
- Never start the engine without the complete clutch cover and tube assembled! Otherwise the clutch can come loose and cause personal injuries.

In the carburetor, fuel is mixed with air. When the engine is tested at the factory, the carburetor is adjusted. A further adjustment may be required, according to climate and altitude. The carburetor has one adjustment possibility:
- T = Idle speed adjustment screw.

**Idle speed adjustment (T)**
Check that the air filter is clean. When the idle speed is correct, the cutting attachment will not rotate. If adjustment is required, close (clockwise) the T-screw, with the engine running, until the cutting attachment starts to rotate. Open (counter-clockwise) the screw until the cutting attachment stops. You have reached the correct idle speed when the engine runs smoothly in all positions well below the rpm when the cutting attachment starts to rotate.
To put the air filter (Fig. 23) must be cleaned from dust and dirt in order to avoid:

- Carburetor malfunctions.
- Starting problems.
- Engine power reduction.
- Unnecessary wear on the engine parts.
- Abnormal fuel consumption.

Clean the air filter daily or more often if working in exceptionally dusty areas.

Open the air filter cover and remove the air filter (23). Clean it. Check that the filter is dry before reassembly. An air filter that has been used for some time cannot be cleaned completely. Therefore, it must regularly be replaced with a new one. A damaged filter must always be replaced.

NOTE
To put the air filter cover back into place, hook it on the upper tabs and then attach it.

Fuel filter (Fig. 24)
Remove the fuel filter (24) from the fuel tank, and replace it if it is dirty.

NOTE
A blocked fuel filter (24) can prevent the supply of fuel and cause a rotation malfunction of the engine.

Spark plug (Fig. 25)
The spark plug condition is influenced by:

- An incorrect carburetor setting.
- Wrong fuel mixture (too much oil in the gasoline)
- A dirty air filter.
- Hard running conditions (such as cold weather).

These factors cause deposits on the spark plug electrodes, which may result in malfunction and starting difficulties. If the engine is low on power, difficult to start or runs poorly at idling speed, always check the spark plug first.

If the spark plug is dirty, clean it and check the electrode gap. Re-adjust if necessary. The correct gap is 0.6 mm. The spark plug should be replaced after about 100 operation hours or earlier if the electrodes are badly eroded.

NOTE
In some areas, local law requires using a resistor spark plug to suppress ignition signals. If this machine was originally equipped with resistor spark plug, use same type of spark plug for replacement.

Gear case (Fig. 26)
Check gear case or angle gear for grease level about every 50 hours of operation by removing the grease filler plug on the side of gear case.

If no grease can be seen on the flanks of the gears, fill the gear case with quality lithium based multipurpose grease up to 3/4. Do not completely fill the gear case.

CAUTION
- Make sure to remove any dirt or grit when attaching the plug to its original position.
- Before attempting inspection or maintenance of the gear case, make sure the case has cooled.

Nylon line replacement
1. Remove the case (15) by firmly pushing inward the locking tabs with your thumbs as shown in Fig. 27.
2. After removing the case, take out the reel and discard the remaining line.
3. Fold the new nylon line unevenly (approx. 10 cm) in half as shown in picture.
4. Hook the U-shaped end of the nylon line into the groove (25) on the center partition of the reel.
5. Insert both loose ends of the line through the cord guide (27) when placing the reel in the case. (Fig. 30)

NOTE
When placing a reel in the case, try to line up the stopper holes (26) with the cord guide (27) for easier line release later.

6. Place the cover over the case so that the cap locking tabs (29) on the cover meet the long holes (28) on the case. Then push the case securely until it clicks into place. (Fig. 31)
7. The initial cutting line length should be approx. 11–14 cm and should be equal on both sides. (Fig. 32)

For long-term storage
Drain all fuel from the fuel tank. Start and let engine run until it stops. Repair any damage which has resulted from use. Clean the unit with a clean rag, or the use of high pressure air hose. Put a few drops of two-cycle engine oil into the cylinder through the spark plug hole, and spin the engine over several times to distribute oil. Cover the unit and store it in a dry area.

Maintenance schedule
Below you will find some general maintenance instructions. For further information please contact Hitachi Authorized Service Centers.

Daily maintenance
- Clean the exterior of the unit.
- Check that the harness is undamaged.
- Check the cutting attachment guard for damage or cracks. Change the guard in case of impacts or cracks.
- Check that the cutting attachment is properly centered, sharp, and without cracks. An off-center cutting attachment induces heavy vibrations that may damage the unit.
- Check that the cutting attachment nut is sufficiently tightened.
- Check that nuts and screws are sufficiently tightened.
- Check that the unit is undamaged and free of defects.

Weekly maintenance
- Check the starter, especially the cord.
- Clean the exterior of the spark plug.
- Remove the spark plug and check the electrode gap. Adjust it to 0.6 mm, or change the spark plug.
- Check that the angle gear is filled with grease up to 3/4.
- Clean the air filter.

Monthly maintenance
- Rinse the fuel tank with gasoline.
- Clean the exterior of the carburetor and the space around it.
- Clean the fan and the space around it.

SELECTING ACCESSORIES
The accessories of this machine are listed on page 16.
**SELECTING CUTTING ATTACHMENTS**

Recommended accessories for each model are presented in the table below. For purchases, contact Hitachi Authorized Service Centers. Please check carefully as those accessories not marked with "●" cannot be attached.

List of recommended accessories

<table>
<thead>
<tr>
<th>Type</th>
<th>Name</th>
<th>Specification</th>
<th>LOOP HANDLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUMINUM HEADS</td>
<td>NYLON HEAD CH-100 (W/NYLON LINE)</td>
<td>4&quot; Pre-Cut Line</td>
<td>●</td>
</tr>
<tr>
<td></td>
<td>NYLON HEAD CH-100</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TAP &amp; GO NYLON HEADS</td>
<td>NYLON HEAD BF-5</td>
<td>5&quot; L M10 x 1.25 Nut</td>
<td>●</td>
</tr>
</tbody>
</table>
# TROUBLESHOOTING

Use the inspections in the table below if the tool does not operate normally. If this does not remedy the problem, consult your dealer or the Hitachi Authorized Service Center.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine does not start</strong></td>
<td>Fuel tank is empty or fuel level is low</td>
<td>Fill the fuel tank with the correct fuel mix (25:1-50:1)</td>
</tr>
<tr>
<td></td>
<td>Fuel tank contains old fuel (offensive odor)</td>
<td>Replace with new fuel</td>
</tr>
<tr>
<td></td>
<td>Too much fuel is absorbed and spark plug is wet</td>
<td>1. Disconnect the spark plug and allow to dry&lt;br&gt;2. Pull the starter handle 5 or 6 times to remove the surplus fuel&lt;br&gt;3. Attach the spark plug&lt;br&gt;4. Set the choke lever to RUN position and pull the starter handle</td>
</tr>
<tr>
<td></td>
<td>Fuel filter is clogged with dirt</td>
<td>Clean the fuel filter</td>
</tr>
<tr>
<td></td>
<td>Fuel pipe is bent or disconnected</td>
<td>Ensure that the fuel flows smoothly</td>
</tr>
<tr>
<td></td>
<td>Carburetor malfunction</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td><strong>Electrical system</strong></td>
<td>Stop switch lead has short-circuited</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td></td>
<td>Spark plug is dirty</td>
<td>Replace or clean the spark plug</td>
</tr>
<tr>
<td></td>
<td>Electrode gap is too big</td>
<td>Adjust the gap to 0.6mm</td>
</tr>
<tr>
<td></td>
<td>Poor connection between high tension cable and spark plug</td>
<td>Reconnect</td>
</tr>
<tr>
<td></td>
<td>Electrical system malfunction</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Muffler exhaust port is clogged with carbon</td>
<td>Contact Hitachi Authorized Service Centers for repair</td>
</tr>
<tr>
<td><strong>Engine starts but cuts out straightaway</strong></td>
<td>Fuel tank is empty or fuel level is low</td>
<td>Fill the fuel tank with the correct fuel mix (25:1-50:1)</td>
</tr>
<tr>
<td></td>
<td>Fuel tank contains old fuel (offensive odor)</td>
<td>Replace with new fuel</td>
</tr>
<tr>
<td></td>
<td>Two-cycle oil has not been added</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td></td>
<td>Choke lever is in START position</td>
<td>Set the choke lever to RUN position</td>
</tr>
<tr>
<td></td>
<td>Air has got into fuel system</td>
<td>Reconnect the fuel pipe or joint</td>
</tr>
<tr>
<td></td>
<td>Carburetor malfunction</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td><strong>Electrical system</strong></td>
<td>Ignition failure</td>
<td>Replace with new spark plug</td>
</tr>
<tr>
<td></td>
<td>Spark plug failure</td>
<td>Replace with new spark plug</td>
</tr>
<tr>
<td></td>
<td>Electrical system failure</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Engine overheating</td>
<td>Replace with designated part&lt;br&gt;See “SPECIFICATIONS”</td>
</tr>
<tr>
<td></td>
<td>Wrong spark plug model</td>
<td>Replace with designated part&lt;br&gt;See “SPECIFICATIONS”</td>
</tr>
<tr>
<td></td>
<td>Dirty air cleaner</td>
<td>Clean</td>
</tr>
<tr>
<td></td>
<td>Carbon clogging (muffler exhaust port)</td>
<td>Clean</td>
</tr>
<tr>
<td></td>
<td>Insufficient compression (piston, piston ring, cylinder)</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td><strong>Abnormal vibration</strong></td>
<td>Cutting attachment is not properly installed</td>
<td>See “Installation of cutting attachment”</td>
</tr>
<tr>
<td></td>
<td>Handle, handle bracket or other fastening part is loose</td>
<td>Check and tighten</td>
</tr>
<tr>
<td></td>
<td>Grass is wrapped round gear case</td>
<td>Remove grass</td>
</tr>
<tr>
<td><strong>Engine is running but cutting attachment does not move</strong></td>
<td>Grass is wrapped round gear case</td>
<td>Remove grass and dirt</td>
</tr>
</tbody>
</table>
### English

<table>
<thead>
<tr>
<th>Condition</th>
<th>Cause</th>
<th>Remedy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engine does not stop</td>
<td>Stop switch failure</td>
<td>Set the choke lever to START position to stop the engine</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cease use immediately and contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td>Engine stops when throttle is closed</td>
<td>Idle speed is too low</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td>Cutting attachment continues rotating when throttle is closed</td>
<td>Idle speed is too high Throttle wire is too taut</td>
<td>Contact Hitachi Authorized Service Centers</td>
</tr>
<tr>
<td>Parameter</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------------------</td>
<td></td>
</tr>
<tr>
<td>Model</td>
<td>CG23EC (SL)</td>
<td></td>
</tr>
<tr>
<td>(cm³)</td>
<td>22.5</td>
<td></td>
</tr>
<tr>
<td>TORCH AC6RA (NGK CMR6A)</td>
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<tr>
<td>Idle (rpm)</td>
<td>3000 – 3400</td>
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</tr>
<tr>
<td>Max. (rpm)</td>
<td>9900</td>
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</tr>
<tr>
<td>(kW)</td>
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<tr>
<td>(cm³)</td>
<td>480</td>
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</tr>
<tr>
<td>(kg)</td>
<td>4.9</td>
<td></td>
</tr>
<tr>
<td>L_pA, eq / K ISO22868 (dB(A))</td>
<td>99.6 / 3</td>
<td></td>
</tr>
<tr>
<td>L_WA, Ra(M) 2000/14/EC (dB(A))</td>
<td>112</td>
<td></td>
</tr>
<tr>
<td>L_WA, Ra(G) 2000/14/EC (dB(A))</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>a_nv, eq(F) / K</td>
<td>6.6 / 1.5</td>
<td></td>
</tr>
<tr>
<td>a_nv, eq(R) / K</td>
<td>4.8 / 1.5</td>
<td></td>
</tr>
</tbody>
</table>