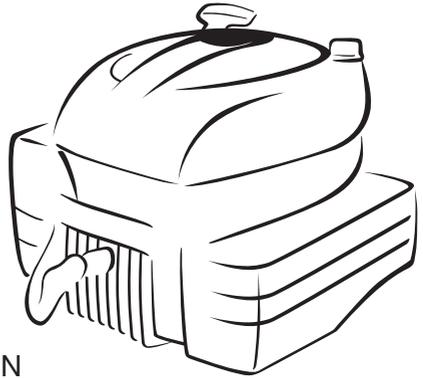
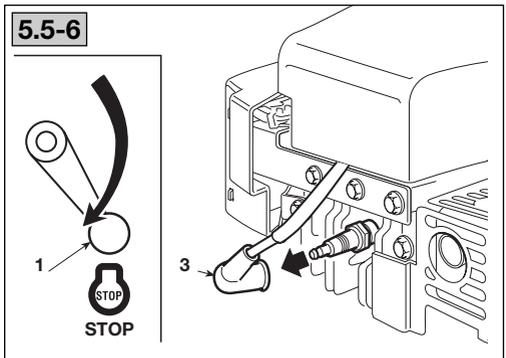
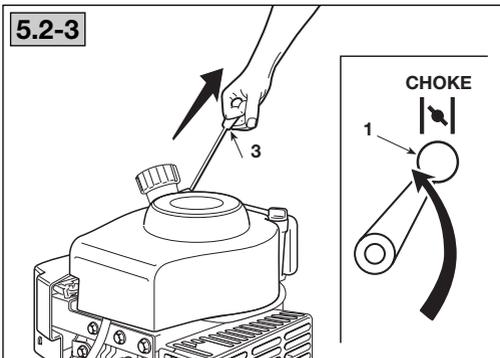
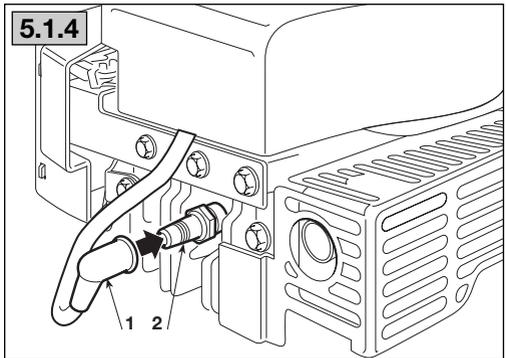
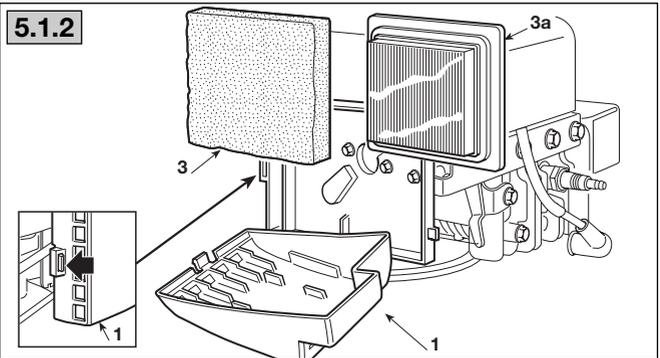
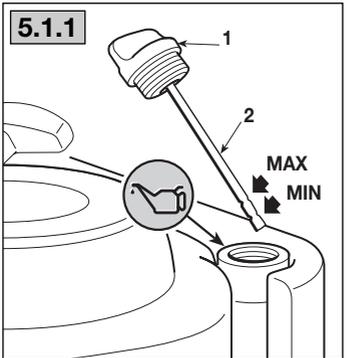
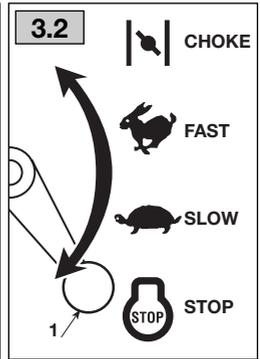
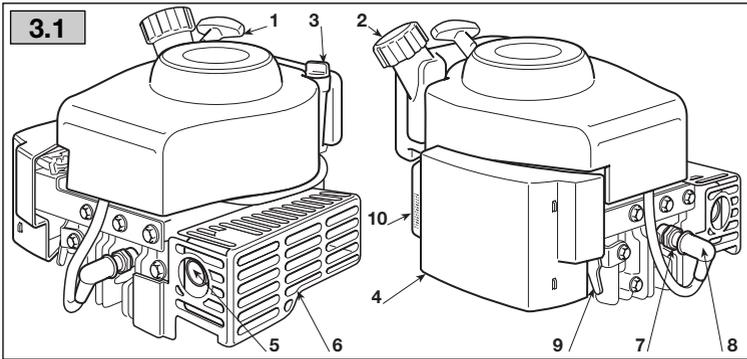


# M150



- FR** MANUEL D'UTILISATION
- EN** OPERATOR'S MANUAL
- DE** GEBRAUCHSANWEISUNG
- IT** MANUALE DI ISTRUZIONI
- NL** GEBRUIKERSHANDLEIDING
- ES** MANUAL DE INSTRUCCIONES
- PT** MANUAL DE INSTRUÇÕES
- EL** ΕΓΧΕΙΡΙΔΙΟ ΟΔΗΓΙΩΝ
- TR** KULLANIM KILAVUZU
- MK** УПАТСТВО ЗА УПОТРЕБА
- NO** INSTRUKSJONSBOK
- SV** BRUKSANVISNING
- DA** BRUGSANVISNING
- FI** KÄYTTÖOHJEET
- CS** NÁVOD K POUŽITÍ
- PL** INSTRUKCJE OBSŁUGI
- HU** HASZNÁLATI UTASÍTÁS
- RU** РУКОВОДСТВО ПО ЭКСПЛУАТАЦИИ
- HR** PRIRUČNIK ZA UPORABO
- SL** PRIROČNIK ZA UPORABU





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## 1. GENERAL INFORMATION

### 1.1 READING AND UNDERSTANDING THE MANUAL

Some paragraphs in the manual containing information of particular importance for safety and operation are highlighted at various levels of emphasis, and signify the following:

#### NOTE

or

#### IMPORTANT

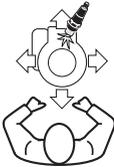
*These give details or further information on what has already been said, and aim to prevent damage either to the engine or other damages.*

**▲ WARNING!** *Non-observance will result in the risk of injury to oneself or others.*

**▲ DANGER!** *Non-observance will result in the risk of serious injury or death to oneself or others.*

#### NOTE

*All indications, "front", "rear", "right" and "left", are to be taken as referring to the engine positioned with the spark plug facing forwards with respect to the observer.*



The number before the paragraph title refers to the text references and their related figures (shown inside front and back covers).

### 1.2 SAFETY SYMBOLS

Your engine should be used with due care and attention. Symbols have therefore been placed on the engine to remind you of the main precautions to be taken. Their full meaning is explained later on.

You are also asked to carefully read the safety regulations in the applicable chapter of this handbook.



**Warning!** - Read instructions before using.



**Warning!** - Keep away from hot surfaces.

## 2. GENERAL SAFETY STANDARDS

(to be strictly applied)

### A) TRAINING

- 1) *Carefully read the instructions contained in this manual and the instructions of the machine on which this engine is installed. Learn how to stop the motor quickly.*
- 2) *Never allow people unfamiliar with these instructions to use the engine.*
- 3) *Never use the engine while people, especially children, or pets are nearby.*
- 4) *Remember that the operator or user is responsible for accidents or hazards occurring to other people or their property.*

### B) PREPARATION

- 1) *Do not wear loose-fitting clothing, dangling drawstrings, jewels or items that could become caught; tie up long hair and keep at safe distance while starting the lawnmower.*
- 2) *Turn engine OFF and let it cool before removing gas cap.*
- 3) **WARNING: DANGER!** *Fuel is highly flammable:*
  - *store the fuel in special containers;*
  - *refuel only outdoors by using a funnel; never smoke while refueling and/or handling fuel;*
  - *add fuel before starting the engine. Never remove the cap of the fuel tank or add fuel while the engine is running or when the engine is hot;*

- *if you have spilt some fuel, do not attempt to start the engine but move the machine away from the area of spillage and avoid creating any source of ignition until the fuel has evaporated and fuel vapours have dissipated.*
  - *always put the tank and fuel container caps back on and tighten well.*
- 4) *Replace faulty silencers and the guard, if damaged.*

### C) OPERATION

- 1) *Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.*
- 2) *Do not use starting fluids or similar products.*
- 3) *Do not change the engine governor settings or overspeed the engine.*
- 4) *Do not tilt the machine onto its side to prevent fuel leaks from the fuel tank cap.*
- 5) *Do not touch the cylinder fins and/or the silencer guard until the engine has cooled down.*
- 6) *Stop the engine and disconnect the spark plug cable before checking, cleaning or servicing the machine or the engine.*
- 7) *Do not crank the engine with spark plug removed.*
- 8) *Transport the machine with an empty fuel tank.*

### D) MAINTENANCE AND STORAGE

- 1) *A routine maintenance is essential for safety and for keeping a high performance level.*
- 2) *Do not store the machine with fuel in the tank in an area where the fuel vapours could reach an open flame, a spark or a strong heat source.*
- 3) *Allow the engine to cool before storing in any enclosure.*
- 4) *To reduce fire hazards, keep the engine, exhaust silencer, and fuel storage area free of grass cuttings, leaves, excessive grease or any other easily inflammable material.*
- 5) *If the fuel tank has to be drained, this should be done outdoors once the engine has cooled down.*
- 6) *On safety ground, never use the engine with either worn or damaged parts. Parts are to be replaced and not repaired. Use genuine spare parts. Parts that are not of the same quality can damage the engine and impair your safety.*

## 3. COMPONENTS AND CONTROLS

### 3.1 ENGINE COMPONENTS

1. Rope handle
2. Fuel tank filler cap
3. Oil filler cap with dipstick
4. Air cleaner cover
5. Silencer
6. Silencer guard
7. Spark plug
8. Spark plug cap
9. Speed control lever
10. Engine code



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Note your engine serial number here

### 3.2 ACCELERATOR CONTROL

The throttle trigger (generally a lever), fitted to the machine, is connected to the engine by a cable (1).

Consult the machine's Instructions Manual to identify the throttle trigger and its positions, usually marked by symbols, corresponding to:



CHOKE = to be used for cold starting.



FAST = corresponds to maximum revs; to be used when working.



SLOW = slowest speed.



STOP = engine stop (if fitted).

## 4. WHAT YOU NEED TO KNOW

The engine performance, reliability and life are influenced by many factors, some external and some strictly associated with the quality of the products used and with the scheduled maintenance.

The following information allow a better understanding and use of your engine.

### 4.1 ENVIRONMENTAL CONDITIONS

The operation of a four-stroke endothermic engine is affected by:

#### a) Temperature:

- Working in low temperatures could lead to a difficult cold starting.
- Working in very high temperatures could lead to a difficult hot starting due to the evaporation of the fuel either in the carburetor float chamber or in the pump.
- In any case, the right kind of oil must be used, according to the operating temperatures.

#### b) Altitude:

- The higher the altitude (above sea level), the lower the max power developed by an endothermic engine.
- When there is a considerable increase in altitude, the load on the machine should be reduced and particularly heavy work avoided.

### 4.2 FUEL

A good quality fuel is the major issue for the engine reliability of operation.

- a) Use unleaded gasoline, with a minimum of 90 octane.
- b) Use clean, fresh fuel; purchase fuel in quantity that can be used within 30 days, to prevent gum from forming inside the container or the tank.
- c) Do not use fuel which contains Methanol.
- d) Do not add neither oil nor any kind of fuel additive.

### 4.3 OIL

Use always high quality oils, choosing their viscosity grade according to the operating temperature.

- a) Use only detergent oil classified SF-SG.
- b) Choose the SAE viscosity grade of oil from this chart:
  - from 5 to 35 °C = SAE 30
  - from -15 to + 5 °C = 5W-30 or 10W-30 (Multi-viscosity)
  - from -25 to + 35 °C = Synthetic oils 5W-30 or 10W-30 (Multi-viscosity)
- c) The use of multi-viscosity oils in hot temperatures will result in higher than normal oil consumption; therefore, check oil level more frequently.
- d) Do not mix oils of different brands and features.
- e) SAE 30 oil, if used below 5°C, could result in possible engine damage due to inadequate lubrication.
- f) Oil should be at "MAX" mark (see 5.1.1): do not overfill. Overfilling with oil may cause:
  - Smoking;
  - Spark plug or air filter fouling, which will cause hard starting.

### 4.4 AIR FILTER

The air filter must always be in perfect working order, to prevent debris, dirt or dust from getting sucked into the engine, reducing the efficiency and working life of the machine.

- a) Always keep the filter element free of debris and dirt in perfect working order (see 6.5).
- b) If necessary, replace the filtering element with an original spare part. Incompatible filtering elements can impair the efficiency and life of the engine.
- c) Never start the engine without mounting the filtering element properly.

### 4.5 SPARK PLUG

Not all the spark plugs for endothermic engines are the same!

- a) Use only spark plugs of the recommended type, with the right heat range.
- b) Check the length of the thread, because - if too long - it will damage the engine beyond repair.
- c) Make sure that the electrodes are clean and their gap is correct (see 6.6).

## 5. STANDARDS OF USE

### 5.1 BEFORE EVERY USE

Before every use, perform the following checking procedures in order to assure a regular operation.

#### 5.1.1 Check oil level

See the specific chapter (see 8.1) for the oil to be used.

- a) Place engine level.
- b) Clean around oil fill.
- c) Remove the filler cap (1), clean the tip of the dipstick (2), insert and tighten down.
- d) Remove dipstick again and check the oil level that must be between the "MIN" and "MAX" marks.
- e) If oil is required, add oil of the same kind up to the "MAX" mark, being careful not to spill any outside the oil fill.
- f) Close the filler cap (1) and wipe off any spilled oil.

#### 5.1.2 Air filter check

The efficiency of the air filter is fundamental for the engine to work properly. Do not start the engine if the filtering element is missing or broken.

- a) Clean the area around the filter cover (1).
- b) Remove the cover (1) by releasing the rear tab (2) and check the condition of the filtering element (3 - 3a). It must be intact, clean and in perfect working order; if not, either replace it or carry out maintenance (see 6.5).
- c) Remount the cover (1).

#### 5.1.3 Adding fuel

##### IMPORTANT

*Do not drip petrol onto the plastic parts of the motor or the machine to prevent damaging them and remove all traces of spilt petrol immediately. The warranty does not cover damage to plastic parts caused by petrol.*

See the specific chapter (see 8.1) for the fuel characteristics.

Add fuel only when the engine is cold.

- a) Place the lawnmower level.
- b) Clean around the filler cap (1).

- c) Remove the filler cap (1).
- d) Using a clean funnel (2), fill tank to approximately 5 mm below the inner edge of the filler neck (3), being careful not to spill fuel.
- e) Tighten the filler cap (1) back and clean any spilled fuel.

#### 5.1.4 Spark plug cap

Firmly connect the cable cap (1) to the spark plug (2), making sure that there are no traces of debris or dirt inside the cap or on the spark plug terminal.

### 5.2 STARTING THE ENGINE (cold starting)

The engine must only be started when all the accessory devices are disconnected (if fitted on the machine) and when the gear (where fitted) is in neutral.

- a) Move throttle control (1) to "CHOKE" position.
- b) Set the machine controls as indicated in the machine's Instructions Manual.
- c) Grasp rope handle (3) and pull slowly until resistance is felt. Then pull cord rapidly.
- d) When engine starts, release the rope.
- e) After a few seconds, slowly move throttle (1) from "CHOKE" to "FAST" or "SLOW" position.

##### NOTE

*If the engine does not start, repeat from section b).*

##### NOTE

*If the engine starts but does not keep running, repeat the whole starting procedure with throttle control in "FAST" position.*

### 5.3 STARTING THE ENGINE (hot starting)

- Follow the whole cold-starting procedure with throttle control (1) in "FAST" position.

### 5.4 USE OF THE ENGINE IN OPERATION

Maximum revs must be used to optimise the engine's yield and performance, by setting the throttle lever to "FAST".

##### ⚠ WARNING!

**Keep your hands away from the silencer and surrounding areas that can become extremely hot. With the**

**engine running, do not get loose-fitting clothing (ties, scarves, etc.) or hair closer to the top part of the engine.**

**IMPORTANT** Do not operate on over 15° inclines to prevent malfunctioning of the engine.

## 5.5 STOPPING DURING OPERATION

- Move the throttle (1) to "SLOW".
- Stop the engine as described in the machine's instructions manual.

## 5.6 STOPPING AT THE END OF OPERATION

- Move the throttle (1) to "SLOW".
- Stop the engine as described in the machine's instructions manual.
- Once the engine has cooled, disconnect the spark plug cap (3).
- Remove all traces of debris or dirt from the engine and especially around the exhaust silencer to reduce the risk of fire

## 5.7 CLEANING AND STORAGE

- Do not spray with water or use hydraulic lances to clean the exterior of the engine.
- Preferably use a compressed air gun (max. 6 bars), to prevent debris, dirt or dust from penetrating inside the machine.
- Store the lawnmower (and the engine) in a dry place, sheltered from severe weather conditions and sufficiently ventilated.

## 5.8 LONG STORAGE (over 30 days)

In case the engine has to be stored for a long time (for example at the end of the season), a few precautions are needed to help the future start-up.

- Drain fuel from tank to prevent build-ups inside the tank.
- Remove the spark plug and pour inside the spark plug hole about 3 cl of clean engine oil. Close the hole with a cloth, then pull, slowly and carefully, the starting rope so that, with a few engine revolutions, the oil will be distributed on the cylinder inner walls. Reinstall the spark plug without connecting the cable cap.

## 6. MAINTENANCE

### 6.1 SAFETY RECOMMENDATIONS

**▲ WARNING!** Remove the spark plug cap and read instructions before carrying out any cleaning, repair or maintenance operation. Wear proper clothing and working gloves whenever your hands are at risk. Do not perform maintenance or repair operations without the necessary tools and technical knowledge.

**IMPORTANT** Never get rid of used oil, fuel or other pollutants in unauthorised places.

**IMPORTANT** If necessary (if foreseen in the Machine's Instruction Manual), the engine can be laid down on its left side, or the front part can be lifted, taking care not to allow oil or fuel to leak out.

### 6.2 MAINTENANCE SCHEDULE

Follow the hourly or calendar – whichever occur first – maintenance schedule shown in the following table.

Operation	After First 5 hours	Every 5 hours or daily	Every 25 hours or every season	Every 50 hours or every season	Every 100 hours
Check oil level (see 5.1.1)	-	✓	-	-	-
Change oil <sup>1)</sup> (see 6.3)	✓	-	-	✓	-
Clean silencer and engine (see 6.4)	-	-	✓	-	-
Check air cleaner <sup>2)</sup> (see 6.5)	-	-	✓	-	-
Oil air cleaner <sup>2)</sup> (see 6.5)	-	-	✓	-	-
Check spark plug (see 6.6)	-	-	✓	-	-
Replace spark plug (see 6.6)	-	-	-	✓	-

<sup>1)</sup> Change oil every 25 hours if the engine is operating under heavy load or in ht weather.

<sup>2)</sup> Clean air cleaner more frequently if the machine is operating in dusty areas.

### 6.3 CHANGE OIL

See the specific chapter (see 8.1) for the oil to be used.

**⚠ WARNING!** *Drain oil while the engine is warm, being careful not to touch the hot engine nor the drained oil.*

- a) Place engine level.
- b) Clean around oil fill (1).
- c) Remove the filler cap (1).
- d) Have a container ready (2) to collect the oil.
- e) Lay the engine on its left side to allow the oil to flow from the refill inlet (3) or follow the procedures indicated in the Machine's Instruction Manual.
- f) When the engine is upright, top it up with new oil.
- g) Check the oil level on the dipstick (4). Oil should be at "MAX" mark.
- h) Close the filler cap and wipe off any spilled oil.

#### NOTE

*The oil capacity is about 0.6 liter.*

### 6.4 CLEAN SILENCER AND ENGINE

Silencer must be cleaned when the engine is cold.

- a) Use a jet of compressed air or a brush to remove any debris and dirt that could cause a fire from the silencer (1) and its protective cover (2).
- b) Clean the cylinder and cylinder head fins (3) to ease engine cooling and prevent overheating.
- c) Clean the plastic components with a sponge (4) soaked in water and detergent.

### 6.5 AIR FILTER MAINTENANCE

- a) Clean the area around the filter cover (1).
- b) Remove the cover (1) by releasing the rear tab (2) and remove the filtering element (3 - 3a).
- c) Carry out maintenance on the filtering element as described below for each type.
- d) Clean inside the filter housing (4) to get rid of

- any dust, debris or dirt, taking care not to push anything into the induction pipe (5).
- e) Put the filtering element (3 - 3a) back in place and close the cover (1).

#### • Sponge filtering element (3)

Keep the filtering element clean and soaked in oil. Replace it if it is disintegrating, cut or broken.

#### IMPORTANT

*Do not use compressed air to clean the filtering element.*

- Clean the sponge filtering element with water and detergent and dry it with a clean cloth.
- Soak the filtering element in 2 tablespoonfuls of clean engine oil and wring it well to distribute the oil evenly.
- Remove any excess oil with a clean cloth.

If you need to replace the filtering element, oil the new filter as described above.

#### • Cartridge filtering element (3a)

- Blow compressed air from the inside to remove dust and debris.

#### IMPORTANT

*Do not use water, petrol, detergents or any other products to clean the filtering element.*

### 6.6 SPARK PLUG SERVICE

- a) Remove the spark plug (1) using a spark plug socket wrench (2).
- b) Clean the electrodes (3) with a metal brush and remove any carbonaceous build-up.
- c) Using a thickness gauge (4), check for the right gap (0.6 - 0.8 mm) between the electrodes.
- d) Install the spark plug (1) and tighten with a socket wrench (2).

Replace the spark plug if the electrodes are burnt or if the porcelain is broken or damaged.

**⚠ WARNING!** *Fire hazard! Do not check the ignition system with spark plug removed.*

#### IMPORTANT

*Use only spark plugs of the recommended type (see 8.1).*

## 6.7 ADJUSTMENT OF THE ACCELERATOR CABLE

If the engine does not reach its maximum rpm with the throttle control in "FAST" position, this is likely due to an out-of-phase connection between the accelerator lever and the governor lever.

To restore the correct phase:

- a) Stop the engine, remove the spark plug cap and wait until the engine has cooled.
- b) Loosen the screw (1) of the clamp (2) so that the cable casing (3) is free to move.
- c) Move the throttle control to "SLOW".
- d) Move governor control lever (4) forward as far as possible and, by keeping it in this position, lock the casing (3) full tightening the screw (1) of the clamp (2).

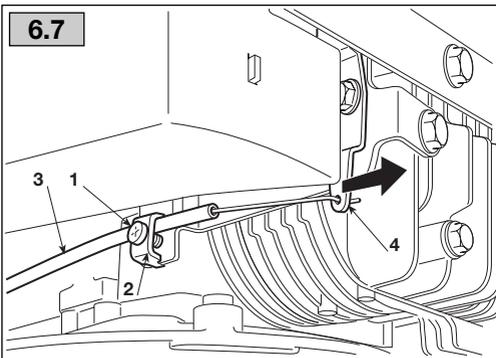
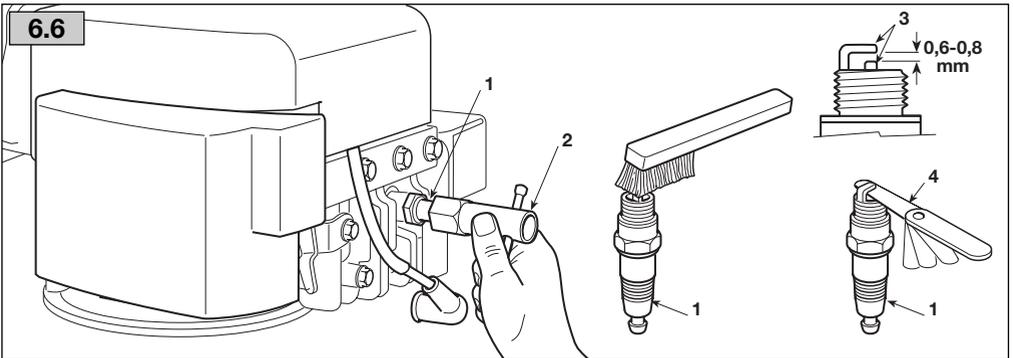
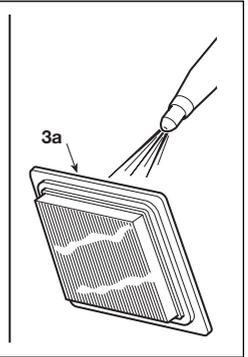
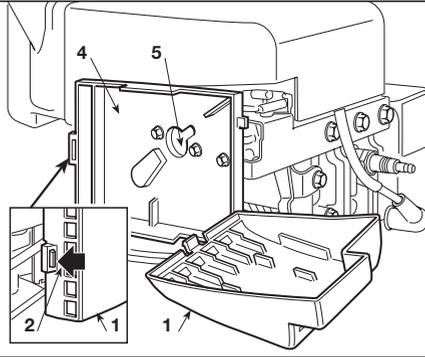
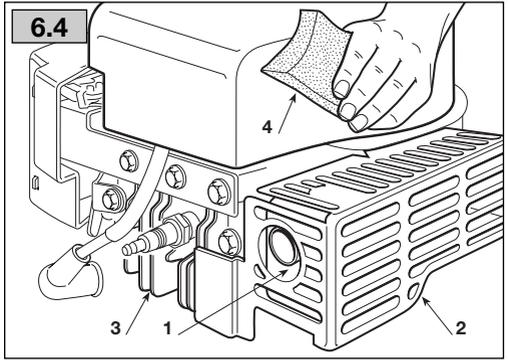
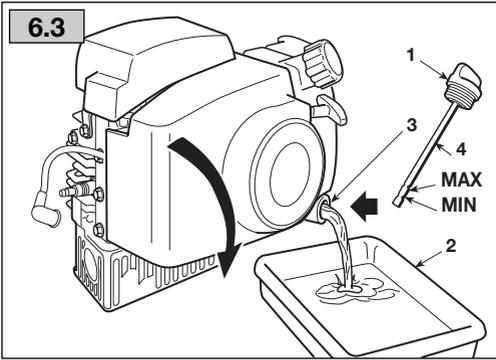
## 7. TROUBLESHOOTING

PROBLEM	LIKELY CAUSE	SOLUTION
a) Hard starting	- No fuel	- Check and top up (see 5.1.3)
	- Stale fuel or build-ups in tank	- Empty fuel tank and refill with fresh fuel
	- Incorrect starting procedure	- Perform the starting procedure correctly (see 5.2)
	- Spark plug disconnected	- Check that the spark plug cap fits well over the plug terminals (see 5.1.4)
	- The spark plug is wet or the spark plug electrodes are dirty or placed inadequately	- Check (see 6.6)
	- Air filter clogged	- Check and clean (see 6.5)
	- Incorrect oil for the season	- Replace with proper oil (see 6.3)
	- Fuel evaporation in the carburetor (vapor lock) due to high temperatures	- Wait for a few minutes then start again (see 5.3)
	- Fault in carburation	- Contact a Licensed Service Centre
	- Hard starting	- Contact a Licensed Service Centre
b) Inconsistent working	- Dirty electrodes or incorrect gap	- Check (see 6.6)
	- The spark plug cap is inserted incorrectly	- Check that the cap is fitted correctly (see 5.1.4)
	- Air filter clogged	- Check and clean (see 6.5)
	- Throttle trigger in "CHOKE" position	- Move the lever to the "FAST" position
	- Fault in carburation	- Contact a Licensed Service Centre
	- Fault in ignition	- Contact a Licensed Service Centre
c) Loss of power whilst operating	- Air filter clogged	- Check and clean (see 6.5)
	- Fault in carburation	- Contact a Licensed Service Centre
	- Governor out of phase with respect to the accelerator	- Adjust the cable (see 6.7)

## 8. TECHNICAL SPECIFICATIONS

### 8.1 REFILLING AND OPERATION MATERIALS

Fuel .....	Unleaded gasoline, minimum 90 octane
Tank capacity .....	0.8 liter
Engine oil: from 5 to 35 °C.....	SAE 30
from -15 to +5 °C.....	5W-30 or 10W-30
from -25 to +35 °C.....	Synthetic 5W-30 or 10W-30
Oil capacity .....	0.6 liter
Spark plug .....	QJ19LM (Champion) or equivalent
Spark plug gap .....	0.6 - 0.8 mm



Manufactured by:  
**SUMEC** - Nanjing, China

**GGP ITALY SPA**

Via del Lavoro, 6

**I-31033 Castelfranco Veneto (TV) ITALY**



GLOBAL GARDEN PRODUCTS

Realizzazione: EDIPROM / bergamo

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