Internal combustion engine 7HP 1/2R



Instructions for use

Translation of the original instructions

ATTENTION, THE ENGINE IS NOT FILLED WITH LUBRICATING OIL!

Top up its level as instructed!

SAFETY INFORMATION

It is necessary to become familiar with the operation of all controls and learn how quickly the engine can be shut down in an emergency. Care must be taken to ensure that the operator is properly instructed before the equipment.

Do not allow children to operate the equipment. Do not allow children or pets near the running motor.

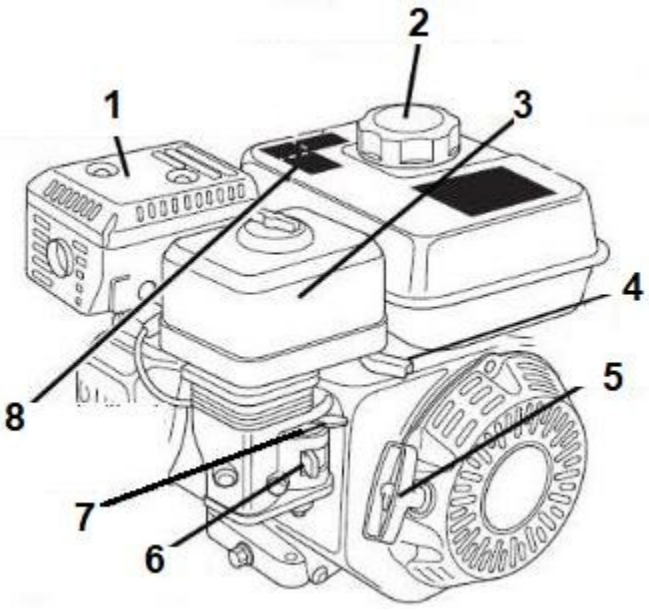
The fumes from this engine contain poisonous monoxide. Do not run the engine in places where proper ventilation is not provided, never run the engine in enclosed spaces.

During engine operation, the exhaust system heats up to very high temperatures. Do not bring the running engine closer than 1 meter to buildings and other equipment. Do not carry combustible materials near the engine and do not place objects on the running engine.

BASIC SAFETY PRINCIPLES

1) Do not run engines indoors: exhaust fumes contain carbon monoxide, are toxic, can lead to poisoning and even death.
2) Do not start the engine near combustible materials.
3) Do not touch the rotating elements while working due to possible injury to the body.
4) The operator is liable for damages caused to third parties.
5) Do not cover or shield the engine when it is or shortly after switching off when it is hot.
6) Do not operate the engine in rain or in conditions of excessive humidity.
7) Do not start the engine when it is standing in water.
8) Do not tilt the engine even during transport.
9) During operation, the pump must be firmly positioned on a level and hard surface in a clean environment.
10) Never overload the engine. The total power of the powered equipment must not exceed the rated power of the motor.
11) It is forbidden to smoke or approach the engine with an open flame when it is in operation.
12) It is forbidden to refuel with the engine running. If is spilled during refuelling, it must be wiped dry before starting.
13) After starting you have to wait until the revs stabilise before you can switch on the receivers.
14) Do not change the engine speed set by the manufacturer.
15) Keep the engine clean, paying particular attention to the warning labels.
16) Wait until the engine has cooled down before transporting or servicing.
17) All repairs must only be carried out by authorised service centres or persons who are authorised to do so.

BASIC DESCRIPTION OF THE ENGINE



1. The silencer heats up to high temperatures during operation.

2. Fuel tank cap

3. Air filter cover

4. Throttle lever

5. Starter handle

6. Fuel valve

7. Choke lever

8. The fuel is highly flammable. Extra care is needed.

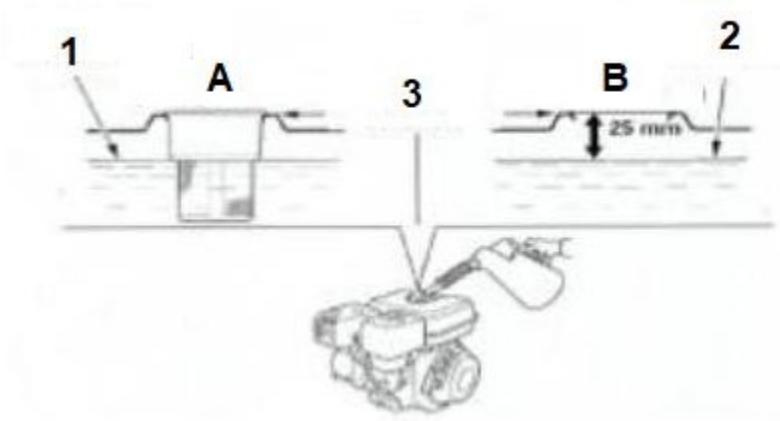
REFUELLING

The engine is adapted to burn unleaded petrol. Less deposits are deposited on the spark plugs and in the combustion chamber of the unleaded petrol engine and the exhaust system lasts longer.

Never use outdated or contaminated fuel or a mixture of oil and petrol. Ensure that no dirt or water enters the fuel tank. Sometimes, when the engine is running under heavy load, a knocking ("ringing" - metallic banging) can be heard. This is not a symptom of irregularities. However, if the knocking occurs at constant engine speed under normal load, a better type of fuel should be used.

1. With the engine switched off, stand the engine on a level surface, remove the fuel filler cap and check the fuel level. If the fuel level is too low, refill the fuel tank.

2. Fill the tank to the marked rim of the maximum level. Do not overfill the tank. Wipe up any fuel spillage before starting the engine.



A) Version with sieve

B) Version without strainer

1. Maximum fuel level

2. Maximum fuel level

3. Top edge of the fuel tank

Fuel should be poured in a well-ventilated place before starting the engine. If the engine has been for a long time, wait until it has cooled down. Pour the fuel carefully to avoid spillage. Do not fill the tank below the cap. Approximately 25 mm of clearance should be left under the top of the tank to allow for any increase in fuel volume. Depending on operating conditions, it may be necessary to lower the fuel level. After refuelling, tighten the fuel filler cap securely.

3. Never refuel in a building where petrol fumes could come into contact with flames or sparks. Do not feed petrol near "eternal flames", barbecues, electrical appliances, power tools, etc.

MOTOR OIL

Oil is one of the main factors influencing engine performance and durability. Use engine for four-stroke engines that meets minimum API SJ, SL or equivalent quality requirements. Always check the oil packaging for the API grade designation SJ, SL or
Equivalent. In most applications, oil with viscosity grade SAE 10W/30 is recommended.

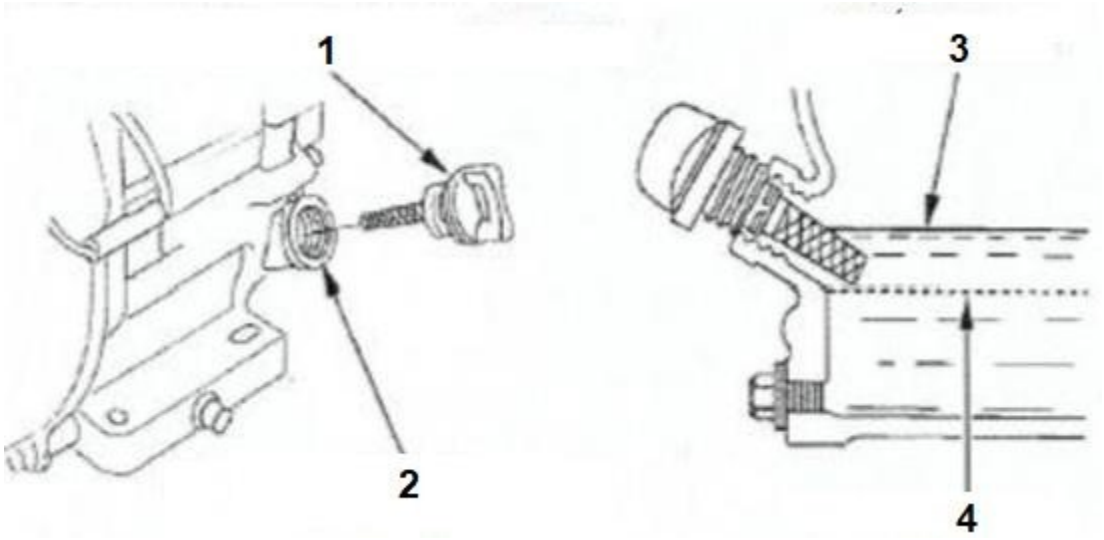
Checking the oil level

The oil level should be checked with the engine switched off and the engine positioned horizontally.
1. Remove the oil tank cap with the dipstick and wipe the dipstick clean.

2. Insert the oil level dipstick cap into the oil filter neck as shown in the illustration, do not tighten the cap. Then remove the dipstick cap and check the oil level.

3. If the oil level is near or below lower limit on the dipstick, the recommended oil should be added to the upper limit (to the lower edge of the hole). Do not add too much oil.

4. Screw on and tighten the cap with the gauge.



1. Oil tank cap with scale

2. Oil tank opening (lower edge)

3. Upper limit

4. Lower edge

Oil change

Used oil should be drained when the engine is warm. Warm oil will flow faster and in the engine there will be no leftovers.

1. Place a suitable used oil container under the engine, then unscrew the oil dipstick cap, oil drain plug and remove the washer.

2. Wait until all the used oil has drained, then screw in the drain plug and insert the new washer. Tighten the oil drain plug firmly. Used engine oil must be disposed of in an safe manner. We recommend that you take the used oil in a sealed container to your local used collection/redemption point. Do not dispose of the oil container in the general waste, do not pour oil on the ground or down the drain.

3. Place the engine in a horizontal position and pour in the recommended oil until the oil level reaches the upper limit (bottom edge of the tank opening).

4. Fit the oil filler cap with the dipstick and tighten it securely.

AIR FILTER

A dirty air filter restricts airflow to the carburetor, adversely affecting engine performance and shortening engine life.

If the engine is used in a heavily dusty area, use a paper air filter (pleated).

CONTROL

Remove the air filter cover and check the liners. Dirty filter cartridges need to be cleaned or replaced. Damaged filter cartridges should always be replaced. In the case of "wet" filters with an oil bath, the oil level should also be checked.

CLEANING

1. It is forbidden to clean the filter with a brush, as this leads to the introduction of dust into the structure of the liner.
2. It is recommended to use pressurized air for cleaning.
3. A damaged filter should be replaced immediately.
4. Also clean the filter cover.

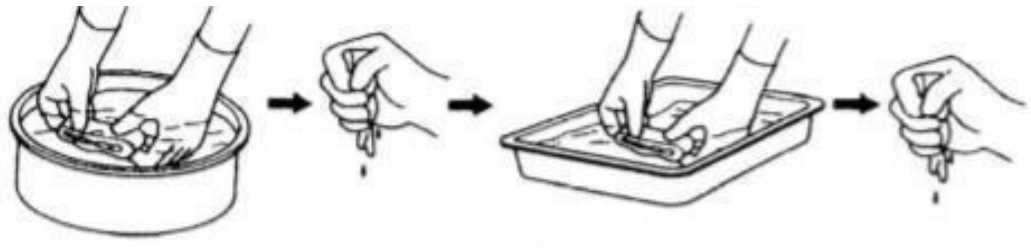
Paper insert: tap lightly on a hard several times to remove dust, or blow out the inside of the insert with compressed air [do not exceed 207 kPa (2.1 kG/cm2)].

Never attempt to remove dust with a brush as the dust will get in between the fibres.

Foam insert: the insert should be cleaned in warm soapy , rinsed and allowed to dry completely. The liner can also be cleaned in a non-flammable solvent and allowed to dry. Dip the insert in clean engine oil and then squeeze out the excess oil. If too much oil remains in the foam, the engine will smoke.

CLEANING THE FOAM FILTER

Laundry Squeezing Soaking Squeezing



NON-FLAMMABLE CLEANER FRESH ENGINE OIL

5. When cleaning is complete, the filter cover must be tightened securely.

SPARK PLUG

Recommended spark plugs:

BPR6ES (NGK)

W20EPR-U (DENSO)

The recommended spark plugs are adapted to the typical operating temperature range of the engine. Correct adjustment of the spark plug electrode pitch and removal of deposits from the spark plug is a prerequisite for correct engine operation and good performance.

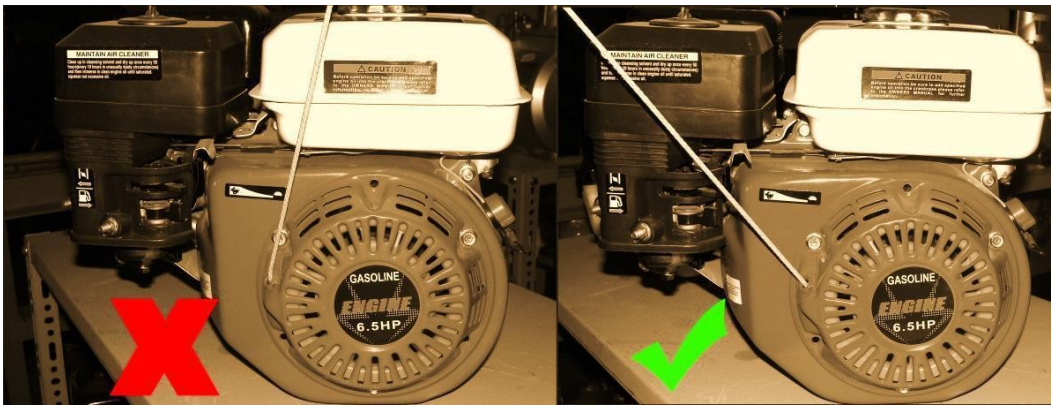
CHANGE COVERAGE (some versions)

The electric starter relay circuit and the battery charging circuit are protected by a fuse with a rated current of 5 A. If the fuse blows, the electric starter will not operate. In this case, the engine can be started manually, but the battery will not be charged while the engine is running.

1. Unscrew the 6 x 12 mm screw from the rear cover of the electrical motor box.
2. Remove the fuse cover and check the fuse. If the fuse is blown, remove the fuse cover and remove the fuse, then discard the blown fuse. Fit a new 5A fuse and replace the fuse cover.

CABLE STARTER:

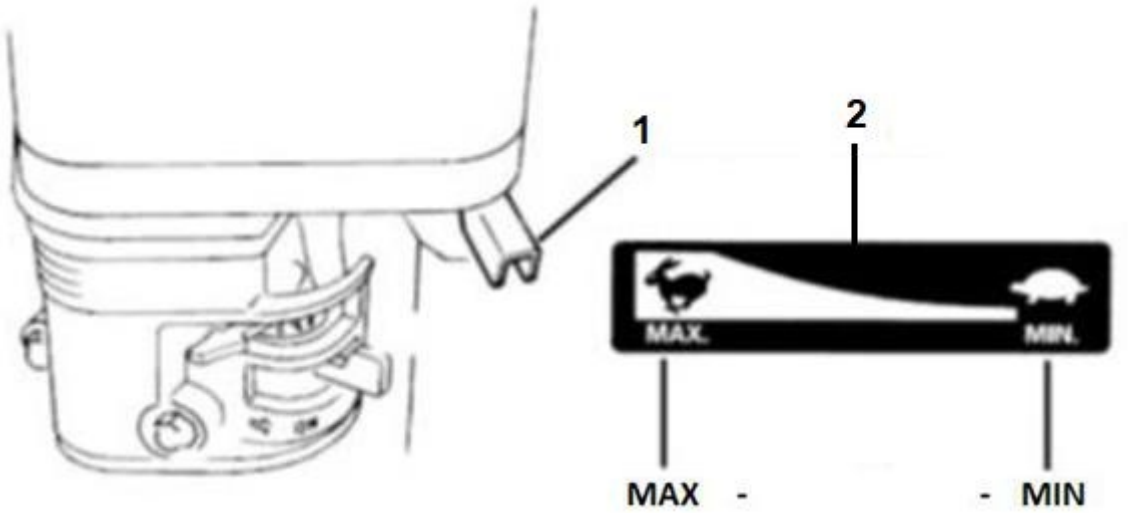
Pull lightly on the starter handle until you feel resistance, then pull quickly and firmly. Gently push the starter handle into place. Suddenly letting go of the handle can cause damage and even injury.



The cable cannot rub against the hole in the cover when starting the engine. This leads to damage and breakage.

ENGINE SPEED CONTROL

The engine speed is controlled by the lever marked in the figure



1. Motor speed control **2. Speed**

TECHNICAL PARAMETERS

MODEL:	**5.5HP**	**6.5 HP**	**7HP**	**9HP**	**15HP**
Volume (cm^3)	160	196	223	270	420
MAX. POWER (HP)	5,5	6,5	7	9	15
MAX. RPM (revolutions per minute)			3600		
TORQUE (NM)	9	10,11	14	14,39	21,27
FUEL TANK CAPACITY (L)	3,6	3,6	3,6	6	6
PURE MASS	15	16	16	27	33
ACOUSTIC PRESSURE (LwA)	86	86	86	86	90
ACOUSTIC PERFORMANCE (LpA)	69	71	81,4	72	72
ENGINE TYPE	4-CONTACT OHV				

CONTROL PLAN

Regular inspection/service work	daily	Every month or after 8 hours	Every 3 months or 50 hours	Every 6 months or 100 hours	Every 12 months or 300 hours
Checking the oil level	X				
Oil change **		X		X	
Oil filter change **				X	
Checking the air filter *	X				
Cleaning the air filter *			X		
Replacing the air filter					X
Spark plug cleaning				X	
Valve clearance check and adjustment ***					X
Fuel tank cleaning ***					X
Checking the fuel system	Every 2 years				

(*) When dust levels are high, the air filter should be cleaned daily and when ,
as well as at shorter time intervals.

(**) When operating under severe conditions and at high temperatures, the oil, including the oil filter, should be changed every 25 hours.

(***) The work should be carried out by an authorised repairer.



A - It is necessary to read the contents of the instructions for use before use

B - Attention hot element