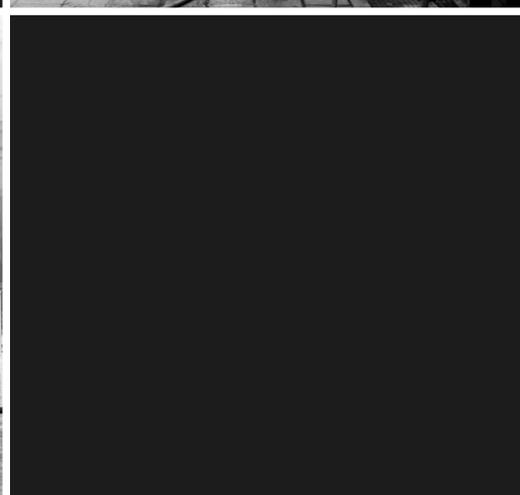
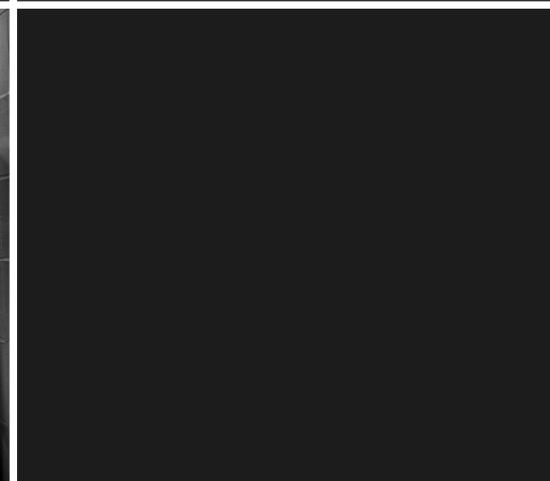
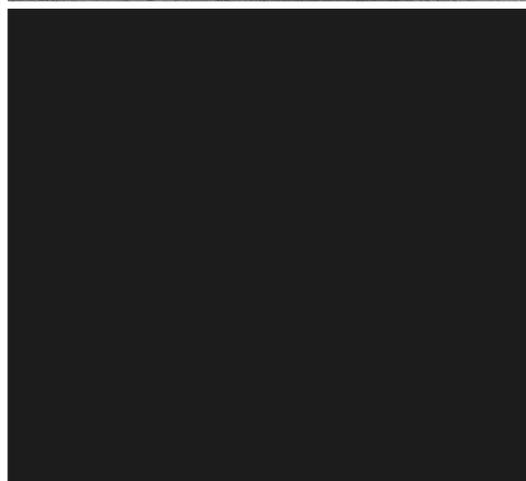
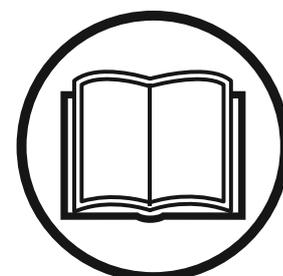




Husqvarna®



# Operator's manual Manuel d'utilisation Gebruiksaanwijzing Bedienungsanweisung PP518



GB FR NL DE

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

Lire attentivement et bien assimiler le manuel d'utilisation avant d'utiliser la machine.

Neem de gebruiksaanwijzing grondig door en gebruik de machine niet voor u alles duidelijk heeft begrepen.

Lesen Sie die Bedienungsanweisung sorgfältig durch und machen Sie sich mit dem Inhalt vertraut, bevor Sie das Gerät benutzen.

# KEY TO SYMBOLS

## Symbols on the machine

**WARNING!** The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

Always wear:

- Approved hearing protection

This product is in accordance with applicable EC directives.

Noise emission to the environment according to the European Community's Directive. The machine's emission is specified in the Technical data chapter and on the label.

The muffler is hot. Can result in burns and/or ignite materials. Keep all parts of your body away from hot surfaces.

Hydraulic oil tank

Ignition lock

Stop position, Operating position, Start position

Choke.

Fuel tank



**WARNING!**

Fuel and fuel vapour are highly flammable. Take care when handling fuel and oil. Bear in mind the risk of fire, explosion and inhaling fumes. Do not fill with fuel in the vicinity of sparks or naked flames.

**Other symbols/decals on the machine refer to special certification requirements for certain markets.**

## Explanation of warning levels

The warnings are graded in three levels.

### WARNING!



**WARNING!** Used if there is a risk of serious injury or death for the operator or damage to the surroundings if the instructions in the manual are not followed.

### CAUTION!



**CAUTION!** Used if there is a risk of injury to the operator or damage to the surroundings if the instructions in the manual are not followed.

### NOTICE!



**NOTICE!** Used if there is a risk of damage to materials or the machine if the instructions in the manual are not followed.

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# PRESENTATION

## Dear Customer,

Thank you for choosing a Husqvarna product!

It is our wish that you will be satisfied with your product and that it will be your companion for a long time. A purchase of one of our products gives you access to professional help with repairs and services. If the retailer who sells your machine is not one of our authorised dealers, ask him for the address of your nearest service workshop.

This operator's manual is a valuable document. Make sure it is always at hand at the work place. By following its content (using, service, maintenance etc.) the life span and the second-hand value of the machine can be extended. If you will sell this machine, make sure that the buyer will get the operator's manual.

## More than 300 years of innovation

Husqvarna AB is a Swedish company based on a tradition that dates back to 1689, when the Swedish King Charles XI ordered the construction of a factory for production of muskets. At that time, the foundation was already laid for the engineering skills behind the development of some of the world's leading products in areas such as hunting weapons, bicycles, motorcycles, domestic appliances, sewing machines and outdoor products.

Husqvarna is the global leader in outdoor power products for forestry, park maintenance and lawn and garden care, as well as cutting equipment and diamond tools for the construction and stone industries.

## Owner responsibility

It is the owner's/employer's responsibility that the operator has sufficient knowledge about how to use the machine safely. Supervisors and operators must have read and understood the Operator's Manual. They must be aware of:

- The machine's safety instructions.
- The machine's range of applications and limitations.
- How the machine is to be used and maintained.

National legislation could regulate the use of this machine. Find out what legislation is applicable in the place where you work before you start using the machine.

## The manufacturer's reservation

Subsequent to publishing this manual Husqvarna may issue additional information for safe operation of this product. It is the owner's obligation to keep up with the safest methods of operation.

Husqvarna AB has a policy of continuous product development and therefore reserves the right to modify the design and appearance of products without prior notice.

For customer information and assistance, contact us at our website: [www.husqvarna.com](http://www.husqvarna.com)

## Design and features

Values such as high performance, reliability, innovative technology, advanced technical solutions and environmental considerations distinguish Husqvarna's products. Safe operation of this product requires the operator to read this manual carefully. Ask your dealer or Husqvarna should you need more information.

Some of the unique features of your product are described below.

## Hydraulic unit

The PP518 hydraulic unit is fitted with a flow-adjustable hydraulic pump, which generates hydraulic power in a more efficient manner compared to more standard cogwheel pumps with fixed displacement that are available.

The PP518 hydraulic unit can be suitably used to operate hydraulic tools with the following specifications:

Hydraulic valve:	"Open centre"
Flow requirements	20, 30 or 40 l/min (5, 8 or 10 gal/min)
Max. pressure:	140 bar (2,000 psi) or more

Examples of Husqvarna hydraulic tools which can be used together with the PP518 without any modifications:



**CAUTION!** If a tool requires a flow of 20 l/min (5 gal/min), it is **NOT** permitted to operate it at a higher setting, for instance 30 or 40 l/min (8 or 10 gal/min). This may lead to serious damage to the tool or even personal injury.

**Always seek the advice of the tool manufacturer before connecting it to the power unit.**

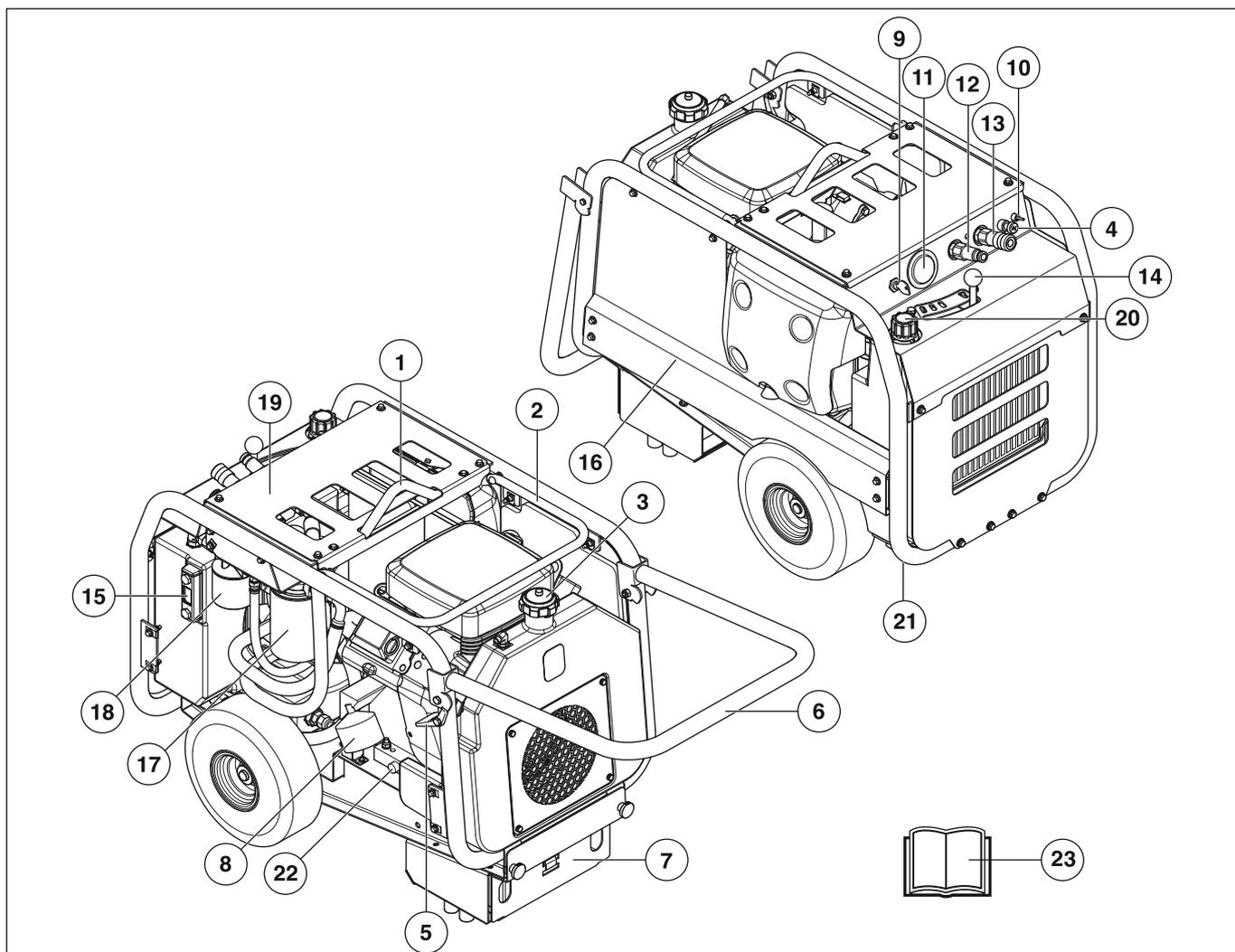
- Power cutters K2500 K3600
- Drill motor DM 406 H
- Wall saw WS 325

## Other popular tools are:

- Hydraulic chainsaw
- Hydraulic water pump

**NOTICE!** Not to be used with hydraulic hammers, hydraulic breakers or equipment with hydraulic cylinders.

# WHAT IS WHAT?



## What is what on the hydraulic unit?

- |                                |   |
|--------------------------------|---|
| 1 Lifting eye                  | 13 Return connection  |
| 2 Brackets for hydraulic hoses | 14 Flow regulation (oil)  |
| 3 Fuel cap                     | 15 Oil level gauge  |
| 4 Choke control                | 16 Electric fuse, 10A   |
| 5 Handle lock                  | 17 Large hydraulic oil filter                                   |
| 6 Transport handle             | 18 Small hydraulic oil filter                                   |
| 7 Battery                      | 19 Adjustable pressure sensor valve for full throttle or idling |
| 8 Engine oil filter            | 20 Hydraulic oil cover  |
| 9 Ignition lock                | 21 Oil plug for hydraulic oil                                   |
| 10 Throttle switch             | 22 Oil plug for engine oil                                      |
| 11 Counter                     | 23 Operator's manual  |
| 12 Pressure connection         |   |

# ASSEMBLING AND ADJUSTMENTS

## General

**CAUTION!** The PP518 hydraulic unit must be serviced before it is used.

In certain consumer markets, the hydraulic unit can be delivered filled with both engine and hydraulic oil.

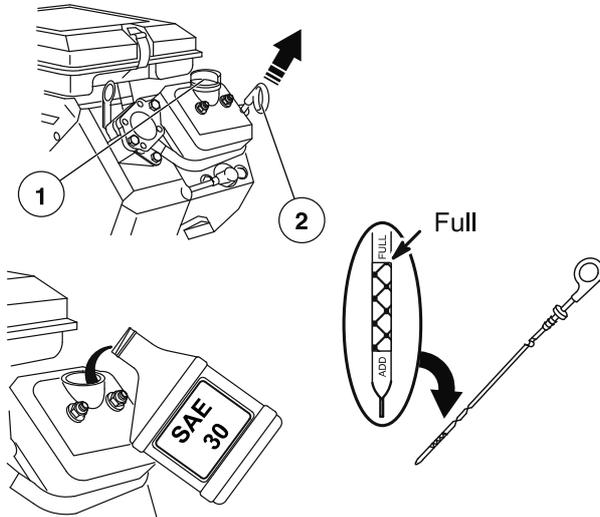
Remove the hydraulic unit from the transport packaging and place it on a level surface.



**IMPORTANT!** Only use the lifting eye when lifting the hydraulic unit.

## Filling engine oil

Check the engine's oil level



- 1 Engine oil fill
- 2 Dipstick

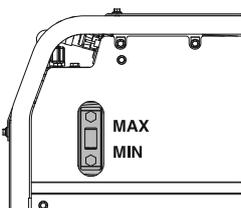
If there is no oil on the dipstick, the engine must be filled with oil according to the instructions under the Engine oil heading or see the instruction manual from Briggs & Stratton.

## Filling hydraulic oil

Fill the hydraulic oil tank

Use only premium quality hydraulic oil such as ISO 46. See the Hydraulic oil section for other alternatives. The total oil volume required to fill the container the first time is 10 litres (2.6 gal). The oil must be filled up to the centre of the gauge glass.

Check the oil level and adjust if required after the first test run.



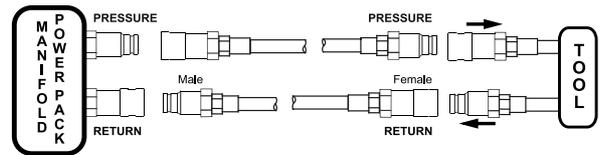
## Connecting the hydraulic hoses

Clean the hydraulic hose couplings with a cloth before connecting them.

Connect the hydraulic hoses to the hydraulic unit. Connect the two couplings to the free ends of the hoses. The hoses are now ready to be filled with oil from the oil container.

**CAUTION!** The hoses can be connected to the power unit with either hose end.

All sets of hoses with couplings which are fitted as outlined in this illustration always result in complete compatibility between the power unit, hoses and tools.



If the hydraulic hoses (7.5 m/25 ft) are empty, a further 1.8 litres (2 quart) of oil or so must be added to the oil tank, after the power unit has been operated for the first time. If an extra 30 metre (100 ft) long, 5/8 inch hose set is used, about 12 litres (3.2 gal) of oil must be added.

The oil level in the oil tank must be checked several times when a new set of hoses are being filled.

## Checking the tyre pressure

Check the tyre pressure. The tyres are tubeless.

If the tyre pressure is too low, the tyre will be completely deflated. Adjust the pressure to 2 bar (30 psi).

# ASSEMBLING AND ADJUSTMENTS

## Connecting the battery

The hydraulic unit is supplied with no battery cables connected.

The original battery is maintenance free. Do not attempt to open or remove caps or covers. It is usually not necessary to check or adjust the level of electrolyte.

Replace only with a similar maintenance-free battery. See information in the Technical data section.



**WARNING! Lead-acid batteries produce explosive gases. Avoid sparks, open flames and smoking close to batteries.**

**Connecting or disconnecting the battery may cause sparks and short circuits. Never connect the battery terminals to keys, coins, screws or other metal as this may short-circuit the battery.**

**Batteries emit explosive gas. Sparks, flames and cigarettes must absolutely not be brought into the vicinity of the battery.**

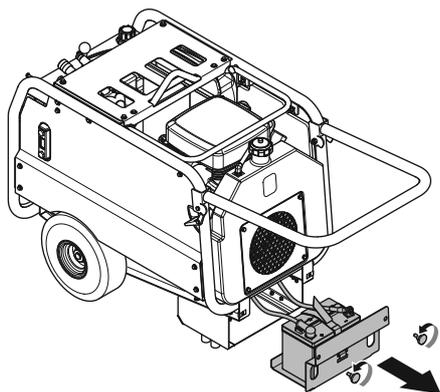
**Unused batteries must be kept away from metal objects such as nails, coins, jewellery.**

**Remove metal bracelets, watches, rings, etc., before connecting the battery. Wear gloves and protective goggles or a dust mask when working with the battery.**

Do as follows to connect the battery.

The battery is placed in the hydraulic unit's support foot.

- 1 Loosen the two knobs at the front of the support foot. Pull out the battery using the two holes on the front edge. This gives full access to the battery and cables.



- 2 Always connect the RED (+) cable to the positive (+) battery terminal first. Attach the cable to the terminal using the 5/16" screw and nut (13 mm or 1/2" wrench).
- 3 Connect the BLACK (-) grounding cable to the negative (-) battery terminal. Attach the cable to the terminal using the 5/16" screw and nut (13 mm or 1/2" wrench).

# FUEL/OIL HANDLING

## General



**WARNING!** Take the following steps to reduce the risk of personal injury and damage to property.

Take care when handling fuel. Bear in mind the risk of fire, explosion and inhaling fumes.

Do not fill with fuel in the vicinity of sparks or naked flames. Do not smoke.

Only store fuel in containers approved for the purpose.

Never remove the fuel cap or fill the fuel tank with fuel while the engine is running. Always stop the engine and let it cool for a few minutes before refuelling.

Never fill the fuel tank indoors.

Store and transport the machine and fuel so that there is no risk of any leakage or fumes coming into contact with sparks or open flames, for example, from electrical machinery, electric motors, electrical relays/ switches or boilers.

Never fill containers inside a vehicle. Always place the container on the ground away from your vehicle when filling.

Remove the machine from the vehicle and refuel it on the ground. If this is not possible, refuel the equipment with a portable container, rather than from a petrol dispenser nozzle.



**WARNING!** Let the nozzle touch the edge of the fuel tank or the container's opening until refuelling is completed. Do not use a nozzle that can be locked in an open position.

If you spill fuel or engine oil on yourself or your clothes. Change your clothes.

Avoid overfilling. If you have spilled fuel or engine oil on the machine. Wipe off the spill and allow the remaining fuel to evaporate. Tighten the fuel cap carefully after refuelling.

**CAUTION!** Handle oil, oil filters, fuel and the battery carefully, of environmental considerations. Follow the local recycling requirements.

## Fuel

The Briggs & Stratton engine is guaranteed to run on unleaded petrol with an octane rating of 86 or more as defined by the 'Pump Octane Number' (M+R) or 91 or more as defined by the 'Research Octane Number' (RON). Refuel in a well ventilated area with the engine turned off.

Unleaded standard petrol not containing more than 10% ethanol (E10) can be used. Do not use petrol that contains methanol.

If fuel with an ethanol content higher than 10% (E10) is used, there may be problems starting and/or operating the unit. It may also damage metal, rubber and plastic components in the fuel system, and can be a fire hazard.

Do not use fuel that is older than 30 days. Old fuel can cause running problems as well as fuel system damage.

**The engine will not operate with fuel that is sold as E85 (85% ethanol).**

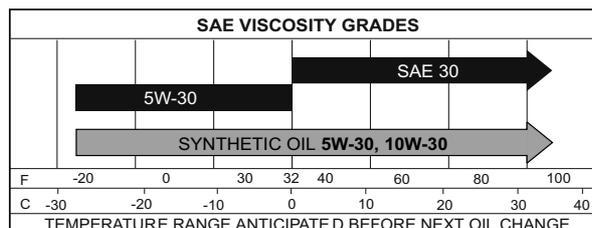
## Engine oil

### Recommended oil

The engine holds approximately 1.4 l (1-1/2 qt/48 oz) of oil, when both the oil and oil filter are replaced.

- Use a high quality detergent oil classified "For Service SF, SG, SH, SJ" or higher.
- Briggs & Stratton strongly recommends that synthetic oils are used.
- Do not use any specific oil additives.
- Select viscosity according to the table below.

Using a synthetic oil does not alter the required oil change intervals. See the accompanying instruction manual from Briggs & Stratton for complete details on the oil.



## Hydraulic oil

All high quality hydraulic oils with a viscosity index of ISO 46 (46 cSt) can be used.

High quality hydraulic oils which are marketed as "biodegradable" can be used with a viscosity index similar to ISO 46.

**CAUTION!** Biodegradable hydraulic oils may require other service intervals compared to the traditional mineral-based oils.

Consult and comply with the supplier's recommendations with regard to the oil's service life.

The hydraulic system can also be used with some "food quality" oils, and can be used in certain applications. Contact Husqvarna Construction Products for assistance.

# OPERATING

## Protective equipment

### General

Do not use the machine unless you are able to call for help in the event of an accident.

### Personal protective equipment

You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



**WARNING!** The use of products such as cutters, grinders, drills, that sand or form material can generate dust and vapours which may contain hazardous chemicals. Check the nature of the material you intend to process and use an appropriate breathing mask.



**WARNING!** Long-term exposure to noise can result in permanent hearing impairment. So always use approved hearing protection. Listen out for warning signals or shouts when you are wearing hearing protection. Always remove your hearing protection as soon as the engine stops.



**WARNING!** There is always a risk of crush injuries when working with products containing moving parts. Wear protective gloves to avoid body injuries.

Always wear:

- Protective helmet
- Hearing protection
- Protective goggles or a visor
- Breathing mask
- Heavy-duty, firm grip gloves.
- Tight-fitting, heavy-duty and comfortable clothing that permits full freedom of movement.
- Boots with steel toe-caps and non-slip sole.

Be careful as clothing, long hair, and jewellery can get caught in moving parts.

### Other protective equipment



**WARNING!** Sparks may appear and start a fire when you work with the machine. Always keep fire fighting equipment handy.

- Fire fighting equipment
- Always have a first aid kit nearby.

## General safety precautions



**WARNING!** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

This section describes basic safety directions for using the machine. This information is never a substitute for professional skills and experience.

- Please read the operator's manual carefully and make sure you understand the instructions before using the machine.
- Keep in mind that the operator is responsible for accidents or hazards occurring to other people or their property.
- All operators shall be trained in the use of the machine. The owner is responsible for ensuring that the operators receive training.
- The machine must be kept clean. Signs and stickers must be fully legible.



**WARNING!** The machine can be a dangerous tool if used incorrectly or carelessly, which can cause serious or fatal injury to the operator or others.

Never allow children or other persons not trained in the use of the machine to use or service it. Never allow anyone else to use the machine without first ensuring that they have read and understood the contents of the operator's manual.

Never use the machine if you are fatigued, while under the influence of alcohol or drugs, medication or anything that could affect your vision, alertness, coordination or judgement.



**WARNING!** Unauthorized modifications and/or accessories may lead to serious injury or death to the user or others.

Do not modify this product or use it if it appears to have been modified by others.

Never use a machine that is faulty. Carry out the safety checks, maintenance and service instructions described in this manual. Some maintenance and service measures must be carried out by trained and qualified specialists. See instructions under the Maintenance heading.

Always use genuine accessories.

### Always use common sense

It is not possible to cover every conceivable situation you can face. Always exercise care and use your common sense. If you get into a situation where you feel unsafe, stop and seek expert advice. Contact your dealer, service agent or an experienced user. Do not attempt any task that you feel unsure of!

# OPERATING

## Work safety

### Work area safety

- **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
- Always check and mark out where gas pipes are routed. Cutting close to gas pipes always entails danger. Make sure that sparks are not caused when cutting in view of the risk of explosion. Remain concentrated and focused on the task. Carelessness can result in serious personal injury or death.
- Do not use the machine in environments where there is a risk of explosion.
- Make sure that no pipes or electrical wires are routed in the work piece or in the working area.
- Make sure that electrical cables within the working area are not live.
- Observe your surroundings to ensure that nothing can affect your control of the machine.
- Do not use the machine in bad weather, such as dense fog, heavy rain, strong wind, intense cold, etc. Working in bad weather is tiring and can lead to dangerous conditions, e.g. slippery surfaces.
- Do not use the machine in wet or humid surroundings, close to water, in the rain or snow.
- Never start to work with the machine before the working area is clear and you have a firm foothold.



**WARNING! Do not wash the machine with water, as water can enter the electrical system or the engine and cause damage to the machine or short circuit.**

### Personal safety

- Never use the machine if you are fatigued, while under the influence of alcohol or drugs, medication or anything that could affect your vision, alertness, coordination or judgement.
- Prevent unintentional starting. Make sure the ignition switch is in the Stop position and the flow control is in position 0.
- Never leave the machine unsupervised with the motor running.
- Never work alone, always ensure there is another person close at hand. Apart from being able to receive help to assemble the machine, you can also get help if an accident should occur.
- People and animals can distract you causing you to lose control of the machine. For this reason, always remain concentrated and focused on the task.

## Use and care

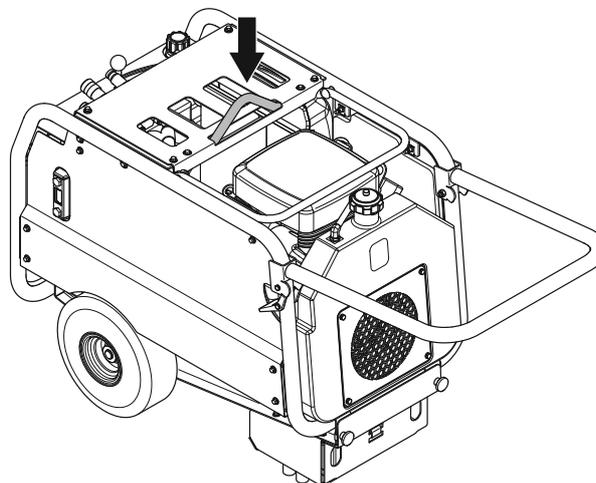
- The machine is intended for use in industrial applications by experienced operators.
- Switch off the engine before carrying out any checks or maintenance.
- Do not overload the machine. Overloading can damage the machine.
- Always switch off the machine before you move it.
- Observe care when lifting. You are handling heavy parts, which imply the risk of pinch injuries or other injuries.
- Do not expose the machine to temperatures exceeding 45°C or to direct sunlight.
- Check that all couplings, connections and cables are intact and free from dirt.
- Keep all parts in good working order and ensure that all fixtures are properly tightened.

## Transport

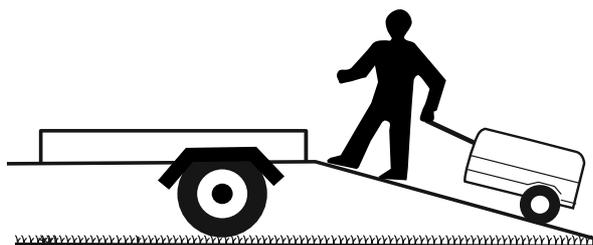
The safest way to move the hydraulic unit from a trailer to a working area is to lift it using the lifting eye. Never attach lifting devices to any other part of the machine. The other components are not designed to withstand the full weight of the hydraulic unit.



**IMPORTANT! Only use the lifting eye when lifting the hydraulic unit.**

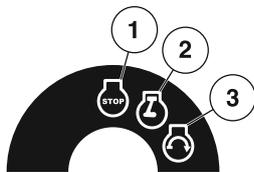


Make sure no one is standing under the hydraulic unit if it has to be moved by hand up into or off a trailer or up and down a slope.



## Control functions

### Ignition lock



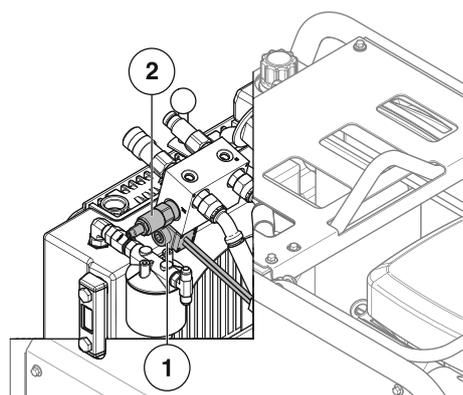
- 1 Stop position, no power to any of the electrical devices.
- 2 Operating position for the hydraulic unit. Note that the timer records the time regardless of whether the engine is running or not. If the key is left in the operating position, the battery also discharges faster.
- 3 Start position, the engine is started.

### Flow regulation (oil)

- Adjust the oil flow by pressing down the flow switch and pushing it to the left for the required oil flow. Regarding flow requirements, see the instruction manual for the tool in question. Never use an oil flow setting higher than the recommended value.
- Once the work is complete, the flow switch must always be reset to position 0 before turning off the engine.
- The engine must always be started with the flow switch in position 0. This ensures that the electric starter motor can crank the engine.

This hydraulic unit can produce an oil flow of 40 litres (10 gallons) a minute. The factory setting for the pressure relief valve is an "opening" pressure of 148 bar (2,150 psi).

### The automatic throttle



- 1 Excess flow valve (do not adjust)
- 2 Adjustable pressure sensor valve for full throttle or idling

The automatic throttle function is triggered by means of an adjustable pressure sensor for idling and full throttle in the hydraulic block.

Setting the adjustable pressure sensor for idling and full throttle for the automatic throttle has no effect on the excess flow valve setting (= maximum system pressure). It detects only the system pressure, and signals the engine to run on idle or at full throttle. The excess flow valve must not be adjusted.

When the tool is engaged, the oil pressure increases quickly to over 50 bar (700 psi). This normally makes the automatic throttle increase the throttle to "full". It is recommended that the engine reaches full speed when the tool is engaged.

In some applications, the hydraulic system throttle can be set too low. This allows the engine to continue to idle even after the tool is connected and full power is required.

The circulation of oil through the hoses creates low pressure, a so-called counter pressure at the adjustable pressure sensor valve.

The counter pressure in the system can vary for several reasons, e.g.:

- Cold hydraulic oil
- The length of the hoses, a longer hose generates a higher counter pressure.
- The valve in hydraulic tool can restrict flow substantially.

When the flow switch is set to 40 litres (10 gallons), this volume of oil circulates through the hoses, through the tool and back to the tank.

### Adjustment

In the PP518, the pressure at which the throttle valve reacts, is adjusted to achieve the required function of a specific tool and condition.

- 1 Connect the hoses and the tool to be used.
- 2 Set the switch for the automatic throttle to position 1.
- 3 Set the flow switch to a suitable setting for the tool.

**CAUTION!** If the oil is cold, the counter pressure in the system triggers full throttle.

- 4 Allow the hydraulic oil to heat up for 1 to 2 minutes. It is now ok to begin working. The hydraulic oil reaches a stable operating temperature in about 5 to 10 minutes.
- 5 If the machine has been running for 10 minutes and the automatic throttle function is not working correctly, the pressure's threshold value between idling and full throttle can be adjusted.
- 6 Adjust the pressure in the throttle's pressure sensor with an 8 mm or 5/16" hex wrench.

If the hydraulic unit's engine is still at full throttle without engaging the tool and hydraulic oil is hot. Turn the adjustment screw clockwise 1/8<sup>th</sup> of a turn at a time until the correct operation is obtained.

If the hydraulic unit's engine still idles when the tool is engaged and work well, but the oil is cold. Turn the adjustment screws counter clockwise 1/8<sup>th</sup> of a turn at a time until the correct operation is obtained.

# OPERATING

## Hydraulic hoses and couplings

The PP518 is fitted with a 7.5 m (25 ft) long hose with an inner diameter of 12.7 mm (1/2 in). ONE additional half-inch hose 10 m (33 ft) long can be fitted (18-20 m/60-65 ft in total). If you need a longer hose for your application, we recommend:

Maximum hose extension - up to a total length of 40 m (130 ft).

- Use the 7.5 m (25 ft) long hose that is supplied with the power unit.
- Connect two 16-metre (53 ft) extension hoses with a diameter of at least 16 mm (5/8 in).

A 32 metre (100 ft.) hose length can also be used, but it is cumbersome to handle.

We strongly recommend using HTMA "Flat Face" compatible hydraulic couplings.



**IMPORTANT! The hydraulic hoses and couplers must have a rated pressure capacity of 140 bar (2,000 psi) with a safety factor of 4 to 1.**

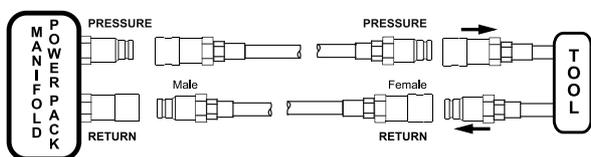
**CAUTION!** The flow direction through the system is always from the male to the female coupling. This means that all extension hoses must be assembled in the same way. If there is a male coupling at one end of a hose, there must always be a female coupling at the reverse end. Never use two of the same type of coupling on a single hose.



**IMPORTANT! The hydraulic oil and, consequently, the hoses and hydraulic couplings can become scalding during normal operation.**

A hydraulic coupling at a temperature of 50 °C (120 °F) is experienced as HOT when touched. It is normal for the oil temperature in the hydraulic unit to reach 70 °C (158 °F) if it is used on a very hot day with ambient temperatures of over 40 °C (104 °F).

As a reference, it can be noted that a car engine normally operates at 90 °C (195 °F).



# STARTING AND STOPPING

## Before starting



**WARNING!** Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

**Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.**

**Make sure no unauthorised persons are in the working area, otherwise there is a risk of serious personal injury.**

**Check that the machine is assembled correctly and do not show any signs of damage.**

See the instructions under the "Assembly and Settings" heading.

- Perform daily maintenance. See instructions under the heading Maintenance.



**WARNING!** The engine emits carbon monoxide, which is a colourless, poisonous gas. Do not use the machine in enclosed spaces.

## Starting for the first time

If the power unit is delivered without hydraulic oil in the tank and hoses, the oil levels must be carefully inspected, before using the unit for the first time.

A new set of empty hydraulic hoses requires approximately 1.8 l (2 qt) of oil.

When the power unit has been started for the first time and the flow switch has been adjusted to the required setting, the hydraulic hoses will fill with oil. Before the machine is used, the level in the hydraulic oil tank must be checked.

If necessary, stop the engine and fill with hydraulic oil.

## Check before starting

Before starting the hydraulic unit, check that:

- The battery is charged and fitted correctly.
- The tyres are correctly inflated.
- The engine oil level is correct.
- The fuel tank is filled with fresh and clean, unleaded regular petrol.
- The hydraulic oil tank is filled to the correct level.
- You are familiar with the location of the controls and their function. Test them before you start the engine.
- You have connected the hydraulic hoses to the hydraulic unit and connected the other ends to a hydraulic tool or to each other.
- Always set the flow switch to position 0 before starting.



**IMPORTANT!** Check the various parts and components in the hydraulic unit for damage before each use. Pay special attention to petrol or oil leaks.

## Starting

Always start the engine with flow switch set in the 0 position and the throttle in position 1.

The throttle lever switch allows you to select one of two modes of operation for the throttle.

The switch for the automatic throttle can be set to either 1 or 0.

- The automatic throttle switch in position 0.

When operating with the lever in position 0, the engine runs at full speed, from 2,600 to 2,700 rpm (loaded) and approx. 2,800 rpm (unloaded).

- The automatic throttle switch in position 1.

After starting, the engine's idling speed is about 1,900 rpm.

When the tool is engaged, a pressure switch on the power unit increases the engine speed to full speed.

When the tool is disengaged, the engine speed is reduced to 1,900 rpm.

The sensitivity of the control system for the automatic throttle can be adjusted to compensate for different conditions, such as increased counter pressure when the hose extensions are connected, operation at lower temperatures, differences in oil viscosity, etc.

See instructions under the Adjustment heading.

- 1 **With a cold engine:** Pull the choke control fully out.
- 2 Turn the ignition key to the start position.
- 3 When the engine starts, immediately release the ignition key so that it returns to the operating position. Push in the choke if you used it to start.
- 4 Allow the engine to warm up for 1 to 2 minutes. Set the flow switch to the required setting. This allows the hydraulic oil to flow from the pump through the hoses to the tool.

In cold weather, we recommend that the hydraulic unit is allowed to pump oil through the hoses and the tool, until the oil has reached a temperature of at least 10 °C (50 °F) before using the tool. This ensures that the automatic throttle switch functions correctly.

See instructions under the Adjustment heading.

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# STARTING AND STOPPING

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## Starting the engine with a weak battery

If the battery is too weak to start the engine, it should be recharged or replaced.

When jump leads are used for emergency starting, follow the procedure below:



**IMPORTANT! Your hydraulic unit is equipped with a 12-volt system with negative earth. The other vehicle must have a 12-volt system with negative earth. Do not use your unit battery to start other vehicles.**

## Connecting the jump leads

- 1 Connect each end of the red cable to the POSITIVE pole (+) on each battery, exercise care not to short circuit any of the ends against the chassis.
- 2 Connect one end of the black cable to the NEGATIVE pole (-) on the fully charged battery.
- 3 Connect the other end of the black cable to a good CHASSIS EARTH, away from the fuel tank and the battery.

## Remove the cables in the reverse order

- 1 The BLACK cable is removed from the chassis and then the fully charged battery.
- 2 Finally the RED cable from both batteries.

## Stopping

Turn the ignition key to Stop position to stop the hydraulic unit.

# MAINTENANCE

## General

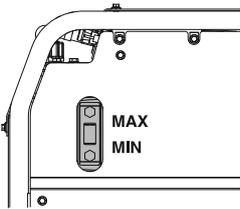


**WARNING! The user must only carry out the maintenance and service work described in this Operator's Manual. More extensive work must be carried out by an authorized service workshop.**

The life span of the machine can be reduced and the risk of accidents can increase if machine maintenance is not carried out correctly and if service and/or repairs are not carried out professionally. If you need further information please contact your nearest service workshop.

## Daily maintenance

- Check that the machine's safety equipment is undamaged. See instructions in the section "Machine's safety equipment".
- Always clean all the equipment at the end of the working day. Use a heavy-duty hand-held brush or a large paint brush.
- Make sure to keep the connectors and pins clean. Clean with a rag or brush.
- Check that hydraulic oil level in the gauge glass is above the lower specified limit. Add oil if necessary.



- Check that the hydraulic hoses are not leaking or bent and that the couplings are not leaking.
- Check for any accumulated debris or dirt in the oil cooler. Clean using compressed air or with a garden hose. Do not use a high pressure washer directly on the cooler.

**NOTICE! Do not use a high pressure washer to clean the machine. The high pressure jet can damage seals and lead to water and dirt permeating into the machine, resulting in serious damage.**

## Engine

The oil level must always be checked before starting the engine. Always maintain the oil level at the full mark. Do not fill with too much oil. Check the level daily or after 8 hours of operation.

**CAUTION! The engine holds approximately 1.4 l (1-1/2 qt/ 48 oz) of oil, when both the oil and oil filter are replaced.**

The hydraulic unit must always be placed on a flat surface, when checking and replacing the oil.

Change the oil after the first 5 to 8 hours of operation. It should then be changed after every 50 hours of running time.

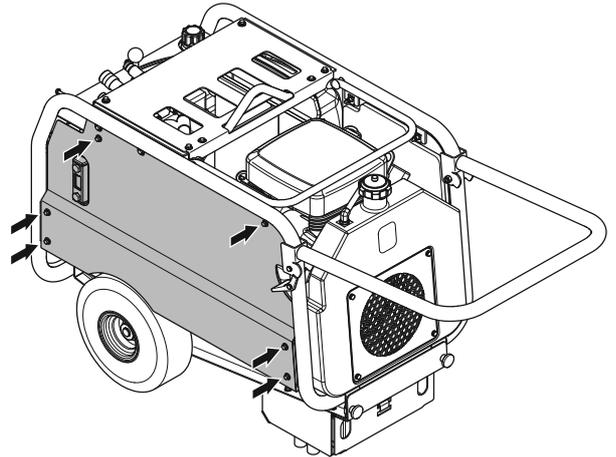
The oil filter must be replaced after every 100 hours running time.

See the instructions under the Engine oil and Oil recommendation headings and in the instruction manual from Briggs & Stratton.

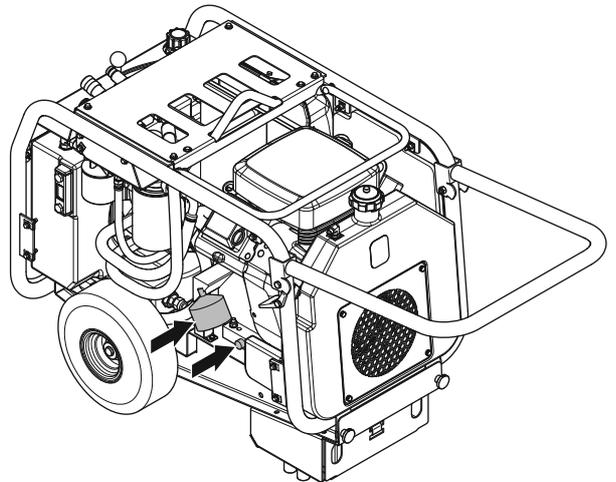
We strongly recommend using only original spare parts from Briggs & Stratton.

## Replacing the engine oil

- 1 With the engine switched off but it is still hot.
- 2 Loosen the 6 screws as outlined below.



- 3 Remove the side panel to access the oil plug and the oil filter.

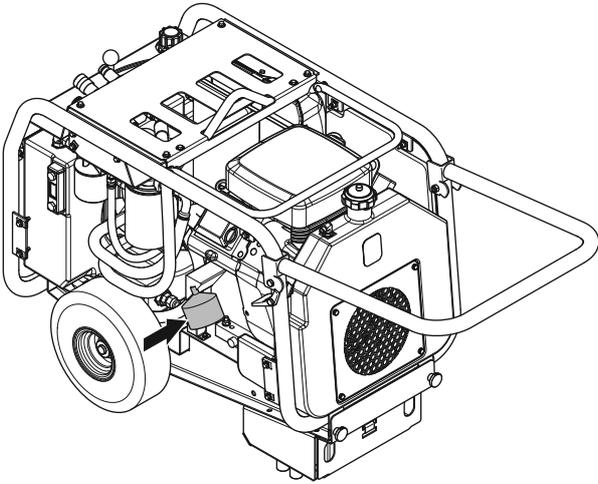


- 4 Drain off the oil into a suitable container. For further information, see the instruction manual from Briggs & Stratton.
- 5 Fill first with 1 litre (1 quart) of any of the recommended oils.
- 6 Start and run the engine at idling speed for approx. 30 seconds.
- 7 Turn off the motor. Check the oil level again, and add more oil if needed. Normally 0.3 to 0.5 litres (12-15 oz).

# MAINTENANCE

## Changing the oil filter

To access the engine oil filter, follow the instructions under the Changing the engine oil heading in section 1-4.



- 1 Remove the engine oil filter.
- 2 Before the new filter is fitted, its gasket must be coated with fresh, clean oil.
- 3 Screw on the filter by hand until the gasket touches the oil filter adapter.
- 4 Tighten a further 1/2 to 3/4 turns.

## Engine oil pressure

- If the engine oil pressure drops below 0.1 to 0.2 kg/cm (1-4 psi), an oil pressure switch shuts down the engine.
- If the engine oil level is below the mark on the dipstick, fill with engine oil until the level reaches the "Full" mark. Try starting the engine.
- If the problem persists, contact an authorised Briggs & Stratton service agent.

## Air filter

If the engine seems to lack power or does not run smoothly this may be because the air filter is clogged. Inspect and service the air filter at every oil change, after every 50 hours of operation.

## Muffler

If the muffler is corroded or is damaged in any other way, it must be replaced because it may become a fire hazard and/or cause injury.

## Fuel filter

The fuel filter must be replaced if it becomes clogged and the flow of fuel to the carburettor is blocked.

We recommend that the fuel filter is replaced every 250 hours of operation or once a season.

## Additional engine information

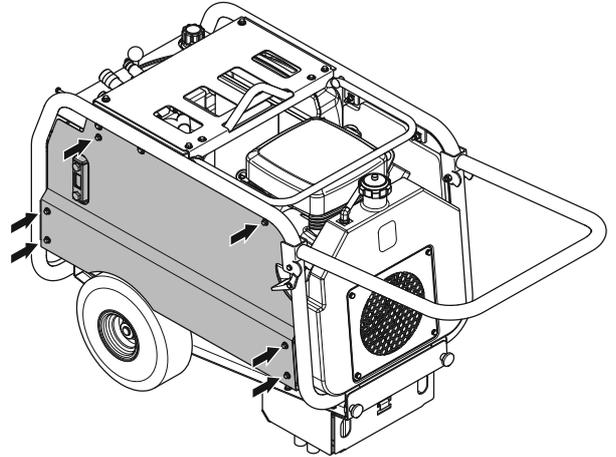
See the accompanying instruction manual from Briggs & Stratton for more information on how to service the engine. The manual also contains specific details on specifications, service parts, engine guarantee, emissions compliance, etc.

## Hydraulic System

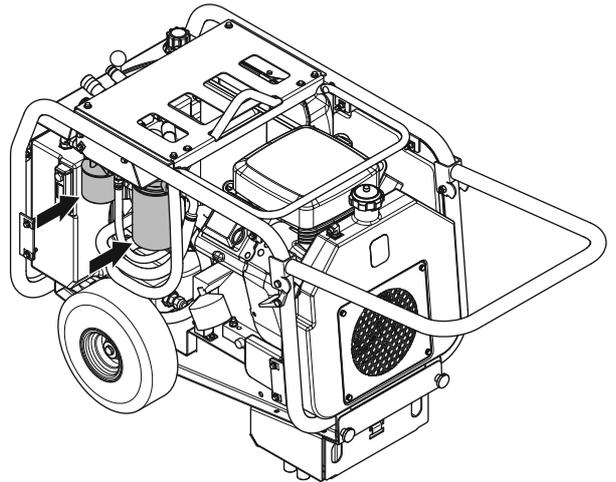
### Replacing the hydraulic oil and the hydraulic oil filter

Accessing the hydraulic oil filter.

- 1 Loosen the 6 screws as outlined below.



- 2 Lift off the side panel.



- 3 Attach the hoses to the hydraulic unit and connect the ends of the hoses together.
- 4 Start the hydraulic unit's engine and set the flow switch in the 40 l (10 gal) position.
- 5 Allow the engine to warm up for 5 minutes with this flow setting.
- 6 Turn off the engine and drain the hydraulic oil into a suitable container. The quick couplings on the hoses should preferably be removed and the oil drained from the hoses too.
- 7 Replace the hydraulic oil filter.
- 8 Fill the tank with hydraulic oil.

## Battery

### Disconnect the battery.

- 1 Always disconnect the BLACK (-) earth cable from the battery (13 mm or 1/2-inch wrench) first.
- 2 Then disconnect the RED (+) cable.

### Charging the battery.

The only safe way to charge a battery is to completely remove it from the hydraulic unit. A standard charger with a charging power of 12 V and 2 to 10 A can be used. Follow all the instructions relating to the charger before it is connected to the battery.

To connect the battery again after charging, see the instructions under Connecting the battery heading.

## Service



**WARNING! All types of repairs may only be carried out by authorised repairmen. This is so that the operators are not exposed to great risks.**

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# TECHNICAL DATA

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## PP518

### Dimensions

Dry weight without hoses, kg/lb	127/280
Weight, with oil but without petrol, kg/lb	135/298
Weight, 1/2" x 7.5 m (25 ft) hose, dry, kg/lb	8,5/19
Weight, 1/2" x 7.5 m (25 ft) hose with oil, kg/lb	10/22
Length with handle folded, mm/inch	860/34
Length with handle extended, mm/inch	1300/51
Width, mm/inch	550/22
Height	740/29
Height with hose/tool holder extended	920/36

### Engine

	Briggs & Stratton, V-twin Vanguard 18 hp
Nominal engine output, kW (see note 1)	10,4/14
Volume, engine oil, l/fl oz	1,4/48
Volume, fuel tank, litres/gal	7,9/2,1

### Hydraulic system

Hydraulic system, tools	Valve with open centre
Hydraulic system, power unit	Closed loop
Pump type	Piston pump with variable displacement
Outflow, litres/min/gpm	20, 30, 40/5, 8, 10
Setting for the excess flow valve, bar/psi	148/2150
Nominal hydraulic pressure, bar/psi	110/1595
Main filter (large), micron	25
Pump filter (small), micron	25
Volume of oil tank, litres/gal	10/2.6
Oil type	ISO 46
Oil cooling	Air-cooled, compressed air Complies with HTMA cooling requirements

### Noise emissions (see note 2)

Sound power level, measured dB (A)	100
Sound power level, guaranteed $L_{WA}$ dB (A)	101

### Sound levels (see note 3)

Equivalent sound pressure level at the operator's ear, dB(A)	92
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### Electrical system

Types of battery	U1 size, 12 volt, cold start value 230
Fuse	10 A, similar to car fuse, placed by the starter motor

Note 1: The power rating of the engine indicated is the average net output (at specified rpm) of a typical production engine for the engine model measured to SAE standard J1349/ISO1585. Mass production engines may differ from this value. Actual power output for the engine installed on the final machine will depend on the operating speed, environmental conditions and other values.

Note 2: Noise emissions in the environment measured as sound power ( $L_{WA}$ ) in conformity with EC directive 2000/14/EC. The difference between guaranteed and measured sound power is that the guaranteed sound power also includes dispersion in the measurement result and the variations between different machines of the same model according to Directive 2000/14/EC.

Note 3: Equivalent noise pressure level, according to EN ISO 11203:2009, R=1m, is calculated as the time-weighted energy total for different noise pressure levels under various operating conditions. Reported data for equivalent noise pressure level for the machine has a typical statistical dispersion (standard deviation) of 1 dB (A).