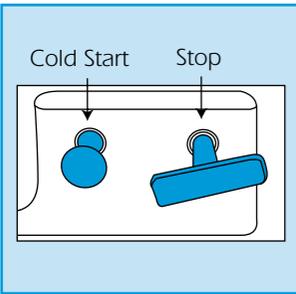


Other models are fitted with an electric starter. In this case, Turn the ignition key to position 2, the battery warning lamp will illuminate to show the battery is OK.

If the lamp does not illuminate, the battery is probably flat. In this situation, follow the

starting instructions using the pull start instead of the electric start.



If starting from cold, pull out and hold the cold start button, if restarting a warm engine, this button should not be used.

All that remains is to turn the ignition key to position 3, the starter engine will turn the engine. Once it is

running, release the cold start button and return the key to position 2.

If the key is turned to position 1 when the unit is running, the battery will NOT be recharged by the engine.

Having started up, let the engine warm up before starting work.

## BASIC TECHNIQUES

Try to adopt a comfortable, stable stance when working – one that gives a good view of whatever you are working on. You get better results. And it's a lot safer.

Keep the whole of your body clear of any cutting edges at all times.

Hand-held tools should be grasped firmly with both hands.

Bear the safety of others in mind at all times. Keep them clear of the equipment itself, and safe from any falling or flying debris.

Take your time. Rushing a job tends to produce poor results and increases the risk of serious accident.

Don't overdo it – especially if you are unused to manual work. Quite apart from the risk of injuries such as blisters, strains or worse, you are far more likely to have an accident if you are suffering from fatigue.

## EQUIPMENT CARE

**Check diesel engine fuel levels at regular intervals.** If the engine should run out of fuel, contact us for advice before re-starting.

**Never attempt to push the equipment beyond its design limits.** If it will not do what you want at a reasonable speed, with reasonable ease, then it is probably the wrong tool for the job. Improper use may cause damage and could prove dangerous. Ask our shop staff for advice.

**Keep the equipment clean.** You will find this less of a chore if you clean up each time you finish work rather than waiting until the end of the hire period.

**Never interfere with the engines speed controls other than as described** in these instructions.

**Keep the engine upright at all times.** If it should get tipped over, mop up oil and fuel spillages and contact your nearest HSS Shop for advice.

**Be sure to use the correct fuel** – 2-stroke mix for 2-stroke engines, unleaded petrol for 4-stroke engines, and DERV for diesel engines.

**Check the engine oil level DAILY.** Having let the engine cool, stand it on level ground, withdraw any dip stick and wipe clean, replace, then withdraw it a second time and verify that the oil level is between the Min and Max lines. **Top up as required.**

Be sure to **use the correct lubricating oil** for topping up and priming diesel engines – 15W40

**Never use 2-stroke oil to lubricate** and **never mix lubricating oil with petrol** as 2-stroke fuel.

When not in use, **store the equipment somewhere safe.** Choose somewhere clean, dry, and secure from both thieves and unauthorised users.

### Oil Alert

**On some engines, a warning light will come on if the oil level is too low. If this glows when you pull the starter cord and/or the motor cuts out, check the oil level and top up as necessary.**

## FINISHING OFF

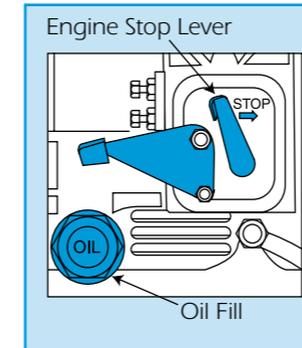
**TWO-STROKE ENGINES...**

Simply **turn the ON/OFF control to the OFF position**, and close any fuel tap fitted.

### FOUR STROKE ENGINES

If adjustable, **set the throttle to give minimum revs, disengage any clutch mechanism, then switch any ON/OFF switch to the OFF position.**

**On engines with only a single control lever, move this into the STOP position.**



Finally, remember to **shut off the fuel tap.**

**DIESEL ENGINES...**

To stop a diesel engine, simply **move the STOP lever into the STOP position** (or pull out the remote stopping control, if fitted) and **hold it there until the engine dies.**



### ...any comments?

If you have any suggestions to enable us to improve the information within this guide please fax your comments or write to the Product Manager at the address below

**Fax: 0181-687 5001**

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Group Office: 25 Willow Lane, Mitcham, Surrey CR4 4TS

Web Site: <http://www.hss.co.uk>

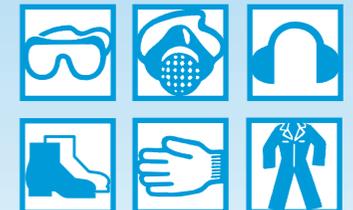
## Operating & Safety Guide 841

# HSS Hire Shops



# Petrol / Diesel Equipment

A basic guide to the safe operation of 2 stroke, 4 stroke and diesel powered engines.



## GENERAL SAFETY

For advice on the safety and suitability of this equipment contact your local HSS Hire Shop.

There is a serious risk of personal injury if you do not follow all instructions laid down in this guide.

This equipment should be used by an able bodied, competent adult who has read and understood these instructions. Anyone with either a temporary or permanent disability, should seek expert advice before using it.

Keep children, animals and bystanders away from the work area.



Never use this equipment if you are ill, feeling tired, or under the influence of alcohol or drugs.



Safety Goggles should be worn by everyone in the work area.



Some materials being worked on may contain substances that, when inhaled, can be harmful to health. A suitable mask must be worn when using this equipment.



Most petrol and diesel engines generate potentially harmful noise levels. To comply with health and safety at work regulations, ear defenders must be worn by everyone in the vicinity.



Wear practical, protective clothing, gloves and footwear. Avoid loose garments and jewellery that could catch in moving parts, tie back long hair.

## Exhaust Danger

NEVER operate petrol or diesel engines indoors or in a confined space.

The exhaust contains gases that can Kill.

Keep the work area clean and tidy. Having everything within easy reach makes life easier and reduces the risk of accidents.

If working above ground level, work from an adequate, stable, purpose made platform. Ladders and steps are fine for access and light work, but for prolonged/heavy work at any height, tower scaffolding is a must.

Always double check the condition of equipment before use. If it shows signs of damage or excessive wear – or if any of the component parts are loose and shouldn't be – return it immediately.

Always switch OFF – and wait for moving parts to stop – before attempting to service or adjust the equipment.

Ensure the work area is well lit and ventilated. If you must work in a confined space, ask about hiring a fume extractor.

## Fuel Safety

NEVER refuel while the engine is hot or running.

Never smoke or allow naked lights into the area while refuelling.

Never inhale fuel vapour.

ALWAYS mop up spillage's as quickly as possible, and change your clothes if you get fuel on yourself.

ALWAYS store fuel in a purpose-made sealed container, in a cool, safe place well away from the work area.

Always switch OFF the equipment when not in use.

Never leave the engine running and unattended.

Make sure you know how to switch the equipment OFF before you switch it ON, in case you get into difficulty.

Engines, especially the exhausts, get very hot so switch OFF and allow to cool before touching them.

Keep flammable materials away from the engine and exhaust.

Watch your footing. Take special care if working other than on firm, level ground.

## Rules & Regulations

Please note that the use of certain types of equipment in certain situations (notably trade use) may be governed by specific regulations and/or legislation. Make sure you are fully acquainted with any rules that may apply and abide by them. If in doubt, ask our shop staff for advice.

COSHH Information sheets are available from your local HSS Hire Shop.

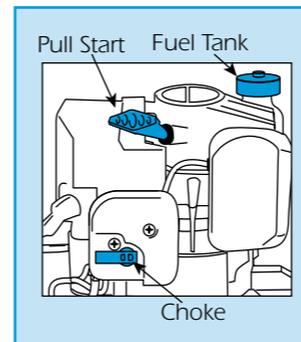
## GETTING STARTED

Make sure moving parts are clear of the ground and other obstructions. They may move as soon as the engine starts. If the equipment has a clutch, see that this is disengaged.

TWO-STROKE ENGINES...

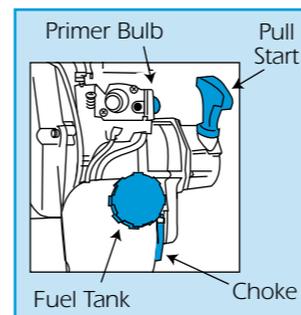
Mix 2-stroke oil with unleaded petrol as directed on the sachet and fill the tank. Never add the ingredients to the tank unmixed.

Turn any ON/OFF control to the ON position and, if starting from cold, fully close the choke. Now, set the throttle half on and where applicable hold using the trigger lock button.



Note that some 2-stroke engines must now be primed. Simply press the priming lever or bulb a few times to inject fuel into both the carburettor and cylinder. If the engine is fitted with an overflow pipe, continue priming until fuel drips out.

Next pull the starter cord a few times until the engine 'coughs', fully open the choke and pull the starter cord once more. The engine should fire.



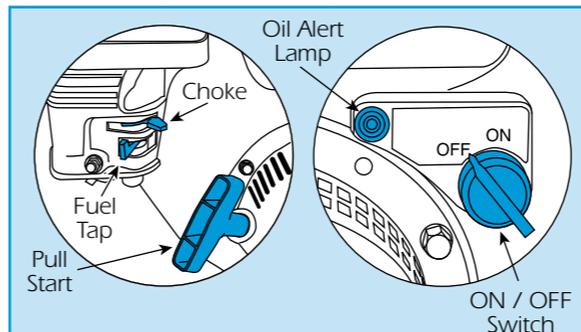
Note that, if restarting after a short break, you need only set the choke half open. If the engine floods, fully open the choke, lock the throttle full on, then pull the starter cord repeatedly until the engine fires.

If the engine floods, open the choke, lock the throttle full on, then pull the starter cord a few times until the engine starts.

Once the engine has warmed up, fully open the choke and release the trigger lock to leave the throttle set in the idling position.

FOUR STROKE ENGINES...

Turn on the fuel, turn on the ignition switch, then set the choke (fully closed if starting from cold ; half open if the engine is still warm).



With the throttle control set to 'fast' two or three pulls on the starter cord should start the engine.

Turn off the choke once the engine has warmed up and reset the throttle to idling speed.

Some models have a combined choke/throttle control, with START and STOP positions at the extremes of the FAST/SLOW speed scale.

On some models the throttle setting is fixed. NEVER attempt to adjust this setting or you will seriously damage the equipment.

DIESEL ENGINES...

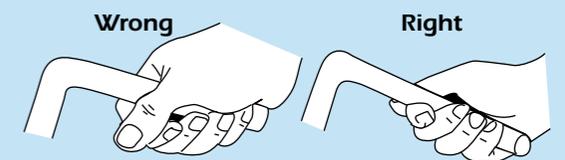
Begin by priming the engine, if necessary. Remove the priming plunger, top up the priming cup with engine oil until full, then replace the plunger.

Next, set the STOP lever into the ON position. On engines with a START throttle setting, twist the throttle lever out into the start position, then replace once the engine is running.

Hold back the decompression lever, and slowly turn the engine over with the starter handle until you hear the fuel injector begin to click.

## Rule of Thumb

There's a right way and a wrong way to hold a diesel engine's starter handle. The wrong grip could break your thumb if the handle kicks when the engine fires.



If you now turn the starter handle more rapidly and release the decompression lever, the engine should fire.

Some diesels have a pull start or on older models, a separate rope pull rather than a starter handle.

For pull starting, slowly pull the cord until you feel resistance, then either pull out or hold the decompression lever and allow the cord to rewind. Pull the starter and if necessary, release the decompression lever and the engine should start.

If using a rope pull, locate the knotted end of the rope in the flywheel's notch, wrap the rope around the fly wheel then pull the rope until resistance is felt. Hold back the decompression lever, pull the rope and release the decompression lever and the engine should start.

