



## Using the Arc Welder

1. Wear protective equipment especially a welding helmet.
2. Care must be taken to avoid an electric shock from the welding cables.
3. Work should not be carried out in damp or wet conditions.
4. Check that the welding cables are connected properly. The machine must be switched off if any adjustments need to be made, including changing rods or the welding current.
5. The cables should be uncoiled completely. A good connection must be made on the workpiece close to the part to be welded.
6. The welding rod should always be put down on an insulated surface. If it touches the workpiece or earth, it could strike an arc.
7. Goggles must be worn to protect the eyes when chipping the slag off.
8. The welder may switch itself off if it is overloaded. It should be allowed to cool down before restarting. If this happens repeatedly, check with an electrician or the hire company.
9. Any welding will remain hot for some time. Make sure no-one touches it. Do not cool with water.
10. The engine should be stopped before the machine is left unattended.
11. If the equipment does not work properly, operators should not attempt to repair it. Contact the hire company.

Please keep this leaflet safely as it may be required for future reference



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6. Gloves must not be worn when starting the engine. Also make sure there are no flapping sleeves or loose clothing that could get caught.
7. Fit the starting handle to the shaft, and check it by turning it anti-clockwise the ratchet mechanism works. Check also that the handle slides on and off the shaft easily.
8. Move the decompression valve lever into the decompression position.
9. If the engine is fitted with a cold start button, this should be pressed when starting from cold.
10. The starting handle should be grasped firmly in one hand – but the thumb should not be wrapped around the handle. It should be kept on the same side as the fingers – this is very important. The thumb could be broken if wrapped around the handle, and the engine kicks back.
11. The engine should be cranked strongly before lowering the decompression lever. The engine should fire up. If it doesn't the steps should be followed again from instruction 7 above.
12. If the engine is now running, slide the handle off the shaft.
13. If the operator lets go of the handle when the engine fires up, they should not try to grab it. The engine should be stopped using the stop control. The engine should then be re-started.
14. The engine should never be stopped using the decompression lever. This may damage the engine and will be regarded as misuse by the hire company. Only the proper RUN / STOP controls must be used.

1. This section describes the starting procedure for most diesel-engined arc welders.
2. If the hire company has provided special instructions, these must be followed. Otherwise operators must follow the instructions below.
3. The oil and fuel levels should be checked before trying to start the machine.
4. Move the STOP control to the RUN position.
5. Check that the throttle lever is in the IDLE position.
6. Wipe any fuel off the machine. Dispose of fuel soaked cloth carefully.
7. If any fuel is spilled on the ground, it should be wiped up or covered with soil.
8. If any fuel is spilled on clothes, they should be changed immediately.
9. All fuel caps should be put back on properly, and the fuel can moved to a safe, cool place.
10. If possible the arc welder should be moved away from the work area.
11. The filter cap and area around it should be cleaned to prevent dirt falling into the fuel tank.
12. Use a funnel and clean diesel when refuelling. Operators must take care not to spill fuel on themselves or the machine.
13. Wipe any fuel off the machine. Dispose of fuel soaked cloth carefully.
14. If any fuel is spilled on the ground, it should be wiped up or covered with soil.
15. If any fuel is spilled on clothes, they should be changed immediately.
16. All fuel caps should be put back on properly, and the fuel can moved to a safe, cool place.

### STARTING THE ENGINE

### ARC WELDER

1. Check the welder, engine and all equipment. Do not use anything found to be damaged – contact the hire company.
2. Petrol tanks or anything that has contained flammable liquid or gas must not be welded – it is likely to explode.
3. The welding machine should be allowed to get wet.
4. The welding machine will get hot in use. The air vents in the case must not be covered. Ensure there is adequate air flow.
5. 18. Operators should make sure that they understand all of the controls. Before starting the welder it must be known how to stop it.
6. No smoking.
7. Stop the engine and allow it to cool down.

### REFUELLING

1. The following items of personal protective equipment (ppe) must be worn as a minimum whenever this machine is used. Particular jobs or environments may require a higher level of protection.
2. This equipment is likely to cause noise levels up to 97 dB(A) – appropriate ear muffs or plugs giving hearing protection up to this level as a minimum must be worn.
3. Impact resistant goggles must be worn when chipping slag off the workpiece.
4. An appropriate dust mask must be worn (with a minimum of EN149 FFP3(s) protection) if the work produces hazardous fumes.
5. A welding mask must be worn when using the welder.
6. The glare and heat from the arc, and the sparks, can burn the skin, canvas gloves, shoes must be worn. Rubber or nylon cotton overalls and safety boots or strong shoes must be worn. Rubber or nylon cotton overalls and safety boots or strong shoes must be worn. Rubber or nylon cotton overalls and safety boots or strong shoes must be worn.
7. Anybody who is working nearby will also need to wear personal protective equipment.
8. Watches and rings must be removed before starting work. The action of the welding current may make them hot.
9. The hot sparks could start a fire, check there is nothing nearby that would burn easily.

### WORK AREA

## Before Starting Work...

## Arc Welder

Read this entire leaflet before using the Arc Welder

1. Diesel is highly flammable. Care must be taken not to cause a fire or explosion.
2. Electricity can be hazardous and must always be used with great care.
3. The glare produced by the electric arc during welding is harmful to the eyes and skin.
4. This welder is designed to weld metals like iron and steel. It will not weld metals like aluminium.
5. The action of this welder can cause injury or damage if the machine is not used in a careful and controlled way. It is quite heavy, care must be taken when moving it.
6. If operators have not used the arc welder before, they should practice using some scrap metal before starting on the main task.
7. The work should be planned ahead and thought out to make sure it will always be carried out safely.
8. The following items of personal protective equipment must be worn as a minimum:  
Dust mask – a minimum of EN149 FFP3(s) protection;  
Ear muffs or plugs giving protection for levels up to 94 dB(A);  
Welding mask: EN166/EN169/EN175 or BS679/1542;  
Impact resistant goggles: EN166 – B or BS2092 grade 1;  
Gloves.
9. This machine must not be used by minors, or by anyone under the influence of drugs or alcohol.
10. This arc welder is designed for operation by an able bodied adult. Anyone with either a temporary or permanent disability must seek expert advice before using it.



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