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## ARC WELDER - (Diesel)

### SAFETY PRECAUTIONS & WARNINGS

It is in the interests of those operating this equipment, and for the safety of others, that these **SAFETY PRECAUTIONS & WARNINGS** are carefully read and understood before operating this equipment.

### PURPOSE

1. This equipment is designed for welding ferrous metals (steel and iron) only, using the appropriate welding rods and fluxes.

### PERSONAL SAFETY

2. This equipment is designed for operation by an able bodied adult. Anyone with either temporary or permanent disability must seek expert advice before using it. It must not be operated by minors, or by anyone under the influence of drugs or alcohol.
3. If the equipment is not used in a safe, careful and controlled way, personal injury or injury to others may result.
4. This equipment employs the use of diesel, which can cause fire and explosion if not handled in a safe manner.
5. The glare produced by the arcing electrode when welding can be harmful to both eyes and unprotected skin. Always wear the correct protection.
6. Remove watches and rings before starting to weld.
7. Before attempting to operate this equipment you must familiarise yourself with the equipment, its controls and operating characteristics.
8. Before starting your work, think and plan ahead to ensure you, and others around you, will be working in a safe environment.
9. When using this equipment, it is recommended that the following items of Personal Protective Equipment (PPE) be worn:
  - Ear defenders providing protection up to 97dB(A).
  - Welding mask to provide protection to EN166/EN169/EN175 or BS5670/1542.
  - Dust mask to a minimum protection of EN149ffp2(s).
  - Impact resistant goggles to EN166-B or BS2092, grade 1 protection.
  - Appropriate industrial gloves.

**NOTE:** Other types of work, or environment, may require a higher level of PPE.

### OPERATING AREA SAFETY

**WARNING:** If used indoors or in confined spaces this equipment could cause fatal carbon monoxide poisoning. Never use it in domestic premises and if used in other indoor situations you must ensure you first assess its suitability and the ventilation required for safe use. Mechanical extraction ventilation will be required in almost every case.

10. Before commencing work, ensure that the area you are to operate the equipment in is a safe environment. Erect safety barriers and warning signs as necessary.

11. Make sure that the work area is clear of obstructions and hazards (projections, cables, pipes, etc.).
12. Ensure the equipments cables are routed safely. Keep them clear of traffic, windows and doorways where they may become trapped.
13. Site the equipment near to your intended place of work and on firm, level ground.
14. Hot sparks will be emitted when welding, keep flammable materials well away from the work area.
15. Before commencing work, warn others who may be working in the vicinity of the equipment, to keep clear. If possible place safety barriers around your work area.
16. Anybody who is working near to you will also need to wear the appropriate PPE.
17. Protect others from noise and welding glare. Erect shielding screens where possible.
18. Do not use this equipment where there is a danger of igniting fumes from petrol, or gas cylinders.

### BEFORE OPERATING THE EQUIPMENT

#### SAFETY CHECKS

19. Visually inspect the equipment and all its accessories (engine, cables, safety barriers, etc.) for serviceability (completeness, signs of damage, undue wear, etc.). Do not use the equipment if found damaged or worn - contact the hire company immediately.
20. Before attempting to operate the equipment, familiarize yourself with the equipments controls. Make sure you understand their purpose and function.
21. Do not attempt to operate this equipment in confined or enclosed spaces without adequate ventilation due to the risk of inhaling toxic exhaust fumes, which can prove fatal.
22. Do not use this equipment in the rain or where it could become wet.
23. Before you start the equipment, you must know how to **STOP** it in an emergency.

### OPERATING THE EQUIPMENT

#### USING THE EQUIPMENT

24. This equipment may be heavy. Do not attempt to move it on your own, enlist assistance.
25. Once sited, 'chock' both wheels.
26. The equipment may become hot whilst in use. Do not cover air vents.
27. You must not attempt to weld items that had previously contained flammable materials (i.e. petrol/diesel tanks, etc.) unless they have been correctly 'de-gassed' beforehand and certified by a competent person.
28. Ensure that the equipment electrical cables are correctly connected, secure and un-coiled.
29. Ensure a good positive earth connection is made to your work piece.
30. Always place the welding rod holder on an insulated surface.
31. The equipment may become hot whilst working and switch its self 'off'. Allow it to cool down before re-starting.
32. Metal will remain hot for some time after welding; do not touch until it has cooled down.

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33. When 'chipping' slag from a weld, always wear protective goggles.
34. Stop working and switch-off the machine if someone approaches you.
35. Stop the equipment before moving it or making any adjustments.

## **STARTING AND STOPPING THE EQUIPMENT**

**Note: If the hire company has provided you special or additional instructions, you must follow them. Otherwise, follow the instructions given below.**

### **ELECTRIC START**

36. Ensure the hand brake has been fully applied; the gear lever is in '**NEUTRAL**' and that the '**STOP CONTROL**' knob is pushed fully home.
37. Rotate the ignition key part way to engage the '**COLD START**' device and hold it in that position for 20 seconds, then rotate the key further to start the equipment whilst keeping the throttle '**OPEN**'.
38. If the equipment fails to start after a few seconds, repeat the procedure at step 37 (above) again, maintaining the key at the '**COLD START**' position a few seconds longer.

**Note: If the equipment has previously been running, there is no requirement to operate the 'COLD START' device.**

39. To stop the engine, pull out the '**STOP CONTROL**' knob, never use the '**DECOMPRESSION**' lever and remove the ignition key.

### **REFUELLING**

40. Refuel with diesel only.
41. The engine must not be running whilst refueling. Warm engines must be allowed to cool down first.
42. Do not smoke whilst refuelling.
43. Clean the area around the fuel filler cap, then, remove it.
44. Using a clean funnel, pour diesel into the fuel tank. Care must be taken not to overfill or spill. Fuel spilt on the engine must be wiped dry, that spilt on the ground must be removed and the area covered with sand or earth. Fuel soaked clothes must be removed.
45. Replace the fuel filler cap securely.

### **SECURITY AND MAINTENANCE**

46. Visually check the condition of the equipment at the start of each day.
47. If the equipment operates erratically, or incorrectly, do not use and do not attempt to repair it. Inform the hire company.
48. Periodically clean the equipment to ensure it is free from dust, dirt and other debris.
49. When the equipment is left unattended for long periods (i.e. overnight), ensure it is made secure to prevent unauthorized use or loss.

### **COLLECTION & PICK-UP**

50. For safety reasons this equipment requires you to use a **LORRY**.

