



FUELCUBE BUNDED DIESEL TANKS

OPERATION AND MAINTENANCE MANUAL

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1. IMPORTANT NOTICE

The following information must be carefully read by the operator and fully understood: operator should know its applications, its limitations and any hazards involved. The operator is responsible for the safe use of the equipment. Do not remove, deface, or render inoperable any of the safety devices or warnings on this equipment.

Every effort has been made to ensure that information in this manual is accurate and current. However, Fuel Proof reserves the right to change, alter or otherwise improve the product and this document at any time without prior notice.

Symbols used in this manual:



WARNING

Warning that if not avoided, the situation could result in property damage, equipment damage or injury; failure to follow this warning will void your product warranty.






2. USER SAFETY

Misuse can cause danger to the operator, the function of the equipment, and the surrounding environment.

To ensure the safety and well-being of all users during operation and maintenance, it is important that the applicable regulations regarding occupational safety be observed, as well as personal protection measures. The following guidelines should be read and adhered to during use.

The end user is responsible for conducting their own risk / COSSH assessments before using this equipment.

The following guidelines should be read and adhered to during use.

	Personal protective equipment. Relevant PPE should be worn during the use of the equipment
	No unauthorised personnel. Only users with correct training should operate this equipment
	Smoking and naked flames prohibited. Smoking around live fuel is a serious fire risk
	No mobile phones. Mobile phone use during tank usage poses a fire risk, and is a distraction to the operator
	Risk of high noise levels Where necessary ear protection should be worn during the use of the equipment



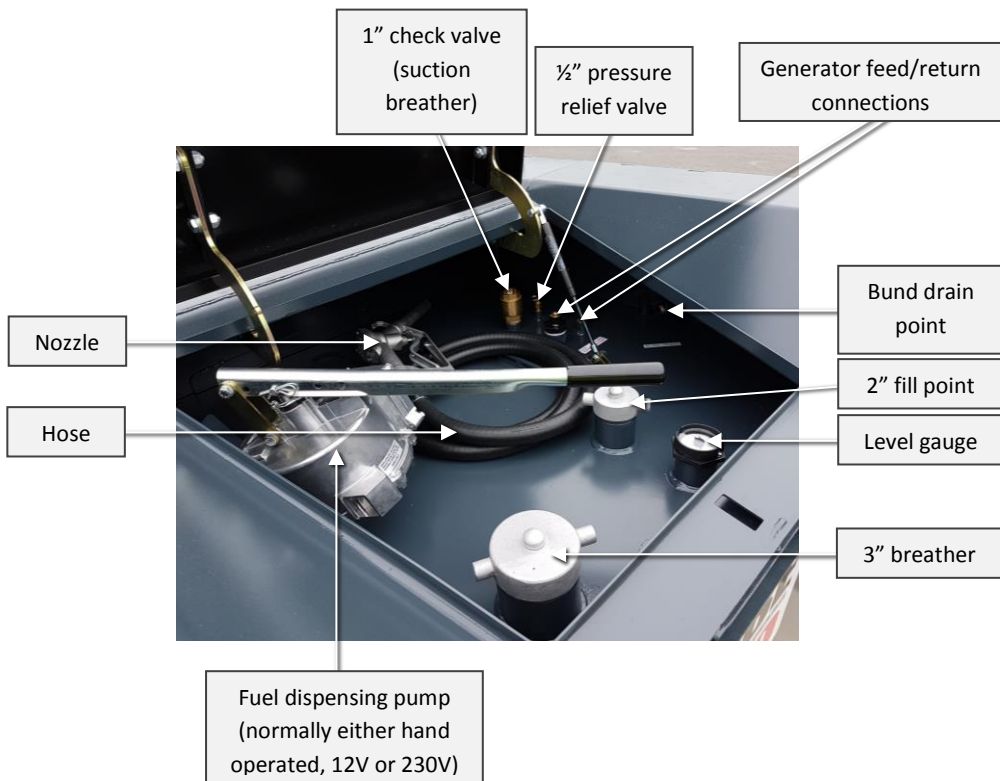
Under certain conditions or high ambient temperatures, diesel fuel and its vapours are extremely flammable and explosive. Fire or explosion can cause severe burns or death.

- Refuel in a well ventilated area.
- Always fill the fuel tank outdoors. Do not overfill tank.
- Be careful not to spill fuel when refuelling. If any fuel is spilled, make sure the area is cleaned.
- Do not smoke or allow naked flames or sparks in the refuelling area or where fuel is stored.
- Store fuel in UN approved containers.

3. TANK INFORMATION

- 110% BUNDED TANK, ALL-STEEL CONSTRUCTION
- UN APPROVED FOR TRANSPORTING DIESEL ON THE HIGHWAY
- FOUR CORNER GALVANISED LIFT EYES
- FORK LIFT ACCESS FROM ALL SIDES
- STACKABLE DESIGN WITH LOCKABLE DOOR





4. INSTALLATION

- The fuel storage tank should be installed outdoors on a flat, level surface with sufficient load bearing capacity to support the total tank and full fuel volume weight.
- If external power is required, ensure power outlets and cables have been considered; please consult with a trained electrician.
- The fuel storage tank should typically be delivered ready for use; once situated, check that all power connections, valves and fittings are secure before use.

5. IMPORTANT GUIDELINES

DO:

- Open the 3" breather cap when filling the Fuelcube.
- Every 6 months remove the fuel filter strainer located inside the inner tank on the pump suction line, and clean the mesh strainer.
- Replace the hose and trigger into the bund for storage after use.
- Check delivery hose and fittings for leaks weekly.
- Ensure the bund area is kept clean. Every month connect a suction pump to the bund test point, and pump out any fuel that may have settled in the bund area.
- **If there is an excessive amount of fuel in the bund investigate further.**

DO NOT

- Lift the Fuelcube with un-tested lifting chains or slings.
- Allow electric pumps to run in the bypass condition when the fuel nozzle is closed, for periods of more than 30 seconds.
- Leave battery in an uncharged state. This will void the warranty on battery.



Note on electric pumps:

DC motors have a 30 minute duty cycle. After having been operated continuously for 30 minutes, turn the pump off and allow it to cool for at least 30 minutes.

AC motors are of continuous duty type. In normal operating conditions they can work continuously without limitation.

6. FUELCUBE FILLING PROCEDURE

1. 2" fuel filler cap and 3" breather cap are located in lockable bund area
2. Remove 2" filler cap and 3" breather cap
3. Screw tanker delivery nozzle onto 2" fill point
4. Commence filling
5. Do not overfill!
6. Once filling is completed, unscrew tanker nozzle from 2" fill point
7. Replace both caps



- BEFORE FILLING TANK REMOVE 3" BREATHER CAP
- DO NOT LEAVE TANK UNATTENDED DURING FILLING
- DO NOT OVERFILL (THIS MAY CAUSE SPILLAGE WHEN TANK IS IN TRANSIT)

7. MACHINE REFUELLING PROCEDURE

1. Remove hose and trigger from bunded area
2. Check there are no kinks in the delivery hose
3. Insert nozzle into machines fuel tank
4. Open trigger
5. Commence refuelling
6. Close trigger
7. Return hose and trigger to bunded area

The Fuelcube is fitted with an automatic breather valve, which allows air into the inner tank when fuel is being dispensed from the Fuelcube into a machine. **This does not act as a vent when the Fuelcube is being filled (see section 6 for filling procedure).**



- DO NOT LEAVE TANK UNATTENDED DURING REFUELLING
- DO NOT OVERFILL MACHINES DURING REFUELLING

8. MAINTENANCE

In order to maintain the product's high level of quality and usability, as well as ensuring user safety, it is recommended that the equipment and general construction of the fuel storage tank is checked on a specified basis.

The following maintenance schedule is provided to outline actions to be taken in order to keep the product in safe working order and maximise its life cycle.

DAILY CHECKS	ACTION
Fixtures and fittings	Check all fittings are free from damage and corrosion, and there are no signs of leakage.
Hoses	Ensure fuel hoses are free from obstruction, kinks or splits.
Electrical connections	Inspect all wires and connections for signs of corrosion or damage.
Valve operation	Operate all isolation valves; the valves should operate smoothly and free from obstruction.
General product condition	General cleanliness of the dispensing area should be inspected on a daily basis. Dispensing area should be checked for: <ul style="list-style-type: none">- Fuel spillages- Unspecified items- Accidental or deliberate damage to equipment
Fuel level	It is important to monitor the fuel level in the tank on a daily basis using the tank level gauge. This helps ensure the tank does not run out of fuel and also aids in leak detection.

MONTHLY CHECKS	ACTION
Pump (if fitted)	A number of components on the pump may require monitoring or servicing; <i>for a full list of components and instructional guide to servicing please see the pump's manual provided separate to the this user manual.</i>
Paintwork	Inspect the entire tank's paintwork for scratches or signs of rust. All rust must be removed and the paintwork must be touched up.

IBC TESTING AND MAINTENANCE

- All our Fuelcubes are UN approved and are classified as IBCs (Intermediate Bulk Containers)
- UN approved IBC's must be tested every 2.5 years if used on the highway

In order to be compliant for transporting diesel on the highway, the tank needs to be re-tested every 2½ years, either by Fuel Proof Ltd or a competent, qualified engineer.

To keep your tank in optimal condition, we recommend that an inspection and general service is carried out at the same time as the IBC re-test.

The service should be carried out by competent engineers and include the following checks, in addition to the checks listed in *Section 8*:

SERVICE CHECKS	ACTION
Flowmeter (if fitted)	This should be calibrated on a yearly basis, or re-calibrated immediately if inaccurate or unrealistic readings are displayed
Hoses	Where necessary a pressure test should be conducted on the hoses, and should be conducted on a 5 year basis as standard.
Flow rate	Test the flow rate to ensure the dispensing equipment is working correctly. If the flow rate is found to be low, see <i>Section 9: Troubleshooting</i> for details on suggested fixes.
Level gauge	Inspect the level gauge: checking for leaks and damage to the casing.



Always isolate power when conducting maintenance work

When conducting maintenance checks or a service, ensure the power is isolated and the valves are closed, unless product operation is necessary.

Refuelling of vehicles is not permitted whilst maintenance and servicing takes place.

Records of all servicing, maintenance and repairs should be kept and stored appropriately.

9. TROUBLESHOOTING

Problem	Remedial action
Difficulty loading fuel into Fuelcube	<ul style="list-style-type: none"> ▪ Ensure breather cap has been removed ▪ Ensure the tank is not already full of fuel
Difficulty dispensing fuel from Fuelcube	<ul style="list-style-type: none"> ▪ Check there is fuel in the tank ▪ Check all hose clips are tight ▪ Check flexible hoses for splits and kinks ▪ Check that the check (suction breather) valve is working correctly by pressing the centre of the valve <p><i>If using an electric pump:</i></p> <ul style="list-style-type: none"> ▪ Check that the pump is rotating ▪ Check the electric supply to the pump ▪ Check the fuse on the pump ▪ Check that all connections to battery or mains are correct and in good condition ▪ Check that the battery is charged <p><i>If using an automatic shut-off trigger:</i></p> <ul style="list-style-type: none"> ▪ When being used for the first time, pumps sometimes have difficulty 'priming'. In most cases this is solved by removing the trigger from the end of the hose and operating pump to dispense a small amount of fuel into a suitable container ▪ Automatic shut-off triggers will only work when nozzle is pointing downwards
Excessive amount of fuel in bund area	<ul style="list-style-type: none"> ▪ Check that the trigger is closed when replaced in the bund area ▪ Ensure that the tank is not overfilled when refuelling ▪ Check flexible hoses for splits ▪ Check that filler caps have been replaced properly before transit ▪ Check the retaining screws for the fuel gauge are tight

10. WARRANTY

Extended limited warranty

Equipment is warranted by Fuel Proof Ltd to be free from defective workmanship and material for the period specified below:

Tanks & bowsters not exceeding 2,500 Litres	3 Years
Site bowsters from 3,000 to 10,000 Litres	3 Years
Static tanks 3,000 to 4,500 Litres	3 Years*
Tanks from 5,000 to 60,000 Litres	15 Years*

* Warranty only covers tanks used for static installations

During this period any parts which the manufacturer agrees to be defective in workmanship or material will be repaired or replaced without charge.

Defective products or parts must be returned to the manufacturer for warranty approval, unless otherwise agreed with Fuel Proof Ltd. Replacement products or parts will be invoiced, and a credit will then be raised following satisfactory approval.

All products or parts replaced by Fuel Proof Ltd during the warranty period shall become the property of Fuel Proof Ltd.

Fuel Proof Ltd may, at its own discretion, make any repairs to or replace defective parts not covered under warranty; however this work shall not be deemed to be any admission of liability.

Conditions & exclusions:

1. Fair wear and tear or damage caused by misuse, improper maintenance or neglect is not covered by the terms of this warranty.
2. Fuel Proof Ltd has taken great care in the selection of materials, painting and finishing techniques so as to provide its customers with a quality cosmetic appearance allied to durability. However, damage caused to the finish of the product must be repaired in a timely and satisfactory manner to avoid the risk of further deterioration. If the repairs are not carried out to Fuel Proof Ltd's satisfaction, the warranty may be void. The warranty only covers the structural integrity of the product but not the cosmetic or aesthetic appearance, including galvanized, plated or painted surfaces.
3. Products with a warranty period of 15 years must be inspected by Fuel Proof Ltd at 5 years from the delivery date, and every 2½ years thereafter. Any remedial work that is reported must be carried out to Fuel Proof Ltd's satisfaction to maintain the warranty (if this is not a manufacturing defect work would be chargeable at Fuel Proof Ltd's standard rate). Inspection visits will be chargeable – Price on application.
4. The equipment must not have been subject to any modification, repair or replacement other than as authorised by Fuel Proof Ltd.
5. Fuel Proof Ltd may sanction third parties to carry out warranty work on their behalf, however any costs must be agreed prior to work commencing, and invoices will only be accepted with a valid Fuel Proof Ltd.
6. Defects caused by the use of parts and accessories not authorised by Fuel Proof Ltd are not covered by this warranty.

7. Fitted parts and equipment, such as fuel dispensing equipment and fittings, are covered by the respective manufacturer's own warranty, and are not covered under the terms of this warranty.
8. Wheels and tyres are not covered by this warranty, due to the different environments in which these products can be used.
9. Normal servicing and normal service items, such as fuel filters, oil and air filters are not covered by this warranty. Similarly items which are expected to wear as part of their normal function such as tyres, bulbs, chains, brake shoes and brake cables are also excluded.
10. The warranty does not cover travel costs or other expenses incurred while carrying out repairs to or replacing defective parts or materials.
11. The warranty does not cover defects which have not been reported to Fuel Proof Ltd within ten days of discovery of the defect.
12. The warranty does not cover equipment which has been inadequately lubricated, for which the wrong type of lubricant has been used, or which has been used to store or dispense the wrong type of fuel.
13. Fuel Proof Ltd takes no responsibility for any damage or filter blockages resulting from the use of bio fuels.
14. Hand pumps are warranted for 6 months from the original date of purchase of the equipment. After this 6 month period, hand pumps will be excluded from the terms of this warranty.
15. Should a warranty claim become necessary, Fuel Proof Ltd shall not be liable for loss of use, inconvenience, lost time, commercial losses or other incidental or consequential damages. If for any reason Fuel Proof Ltd needs to replace the product, or part of the product, any costs incurred gaining access to the product or part are to be borne by the customer (for example moving electrical cables, pipework etc.)
16. This warranty does not cover equipment which has been damaged or rendered defective due to external causes including, but not limited to:
 - a. Natural occurrences, such as lightning strikes, earthquakes, floods, extreme cold weather, and other force majeure circumstances.
 - b. Use in a hostile/marine environment.
17. The warranty is non-transferrable and only applies to the original purchaser.
18. Static tanks from 5,000 to 60,000 Litres must remain at the original delivery location, as per Fuel Proof Ltd's delivery notes, otherwise the warranty will be void.

This warranty shall be interpreted in accordance with English law and any question arising from this warranty shall be subject to the jurisdiction of the English courts.

Any statement, condition, representation, description or warranty otherwise contained in any catalogue, advertisement or other publication shall not be construed as enlarging, varying or overriding anything contained herein. Fuel Proof Ltd reserves the right to make alterations or improvements without notification to any equipment without obligation to do so to equipment already sold. This warranty does not affect your statutory rights.