**TECHNICAL SPECIFICATIONS**

**SECTION 1.0 – GENERAL TECHNICAL SPECIFICATION**

1.1 **MATERIALS**

1. The whole of the materials used in the work shall be of the best quality, suitable for the duty, and unless the Engineer otherwise approves shall be of EU manufacture from materials of EU origin, conforming to the current EU or British Standards.

Where the materials do not conform to such specification sufficient information shall be provided to enable the Engineer to identify the mechanical, electrical and chemical suitability of the materials.

b) Materials shall be free from flaws of every description. All castings shall be smooth, sharp and free from blowholes, with ample fillets, and correctly centralised cores. All structural sections and plate shall be free from scale.

c) Light alloy sections shall not be used unless authorised by the Engineer.

d) No plates, flat bars or angles used in load bearing structural members, including platform supports, shall be less than 8mm thick, subject to the Contractors standards and approval by the Purchaser.

1.2 **WORKMANSHIP**

a) Workmanship throughout shall be of the highest standard and will be constantly monitored by the Engineer or his approved representative. If in his opinion the work, rectification work, or methods used do not meet with his approval then that work will be stopped at the Contractor's expense until an approved method is adopted.

All plate’s sections, etc. shall be straightened or curved as may be required by pressure and not by hammering. All abutting ends and edges shall butt truly over the full areas.

b) The work after drilling shall be taken apart and all burrs left by the drill completely removed. Screw threads, accurately formed shall be to the appropriate ISO Standards unless otherwise specified.

1.3 **QUALITY CONTROL AND INSPECTION**

a) The manufacturer will be required to submit evidence that a formal system of quality control approved by the Engineer is applied to all bought in materials and equipment.

b) Mill certificates for rolled steel sections shall be obtained and records shall be maintained to match the Mill certificates to the various sections during manufacture.

c) The manufacturer will be required to submit evidence that all full penetration welds in structural members of the structure are to be subjected to radiographic inspection if they are to be stressed in tension.

d) Cost of radiographic inspections and any re-testing of repaired welds shall be at the expense of the manufacturer.

e) Reasonable access shall be provided by the manufacturer to the Purchaser's inspecting authority which might be asked to attend the manufacturer's works, or works of the manufacturer's sub-contractors, during construction.

f) Acceptance tests will be carried out prior to shipment if the Contractor should decide to commission before delivery. Notwithstanding this the unit will again be visibly checked and will undergo a full operational check on arrival at its destination.

* 1. **ENVIRONMENTAL NOISE LEVELS**

|  |
| --- |
| Noise reduction both for the operator and for radiated noise is an aspect of the Technical Specification. |
|  |
| The Contractor shall give full consideration to the design of the Equipment and the selection of materials to reduce noise levels. |
|  |
| All noise levels specified by the Purchaser will be verified as part of the Purchasers acceptance tests. |

* 1. **ADDITIONAL PARTS**

For a period of seven years from the date of the Acceptance Certificate, the Contractor shall deliver any Additional Parts to the Port of Felixstowe [or such other place designated by the Purchaser] within sixty (60) hours of receipt of notice. In the event that the Additional Parts are not delivered to the Purchaser within sixty (60) hours of receipt of notice, the Additional Parts shall be free of charge.

“Additional Parts” means materials or parts in respect of the Goods weighing less than 60kg [per item].

**SECTION 2.0 - MECHANICAL TECHNICAL SPECIFICATION**

2.1 **REGULATIONS**

The Fuel Bowser described under this specification shall in all respects comply with all current United Kingdom Legislation that is in force at the time the Fuel Bowser is handed over to the Purchaser and will at least include, where relevant and applicable:-

1. The EC Machinery Directive for which a CE certificate must be issued and copies of the appropriate Technical and Safety Files (including all risk assessments) issued to the Purchaser prior to Delivery of the Equipment. Also included shall be a full whole body vibration test according to EN 130592.
2. The Health and Safety at Work Act 1974.

3. Safety in Docks Approved Code of Practice L148;.

4. The Electricity at Work Regulations 1989 and to comply in all respects with the 18th Edition BS.7671: 1992, requirements for Electrical Installations.

1. IEC 61508 Standards for Electrical Parts.
2. EMC Regulations 2016.

7. The Control of Noise at Work Regulations 2005;

8. The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (CDG Regs)

9. Institute of Petroleum IP Code for the Design & Construction of Vented, Pressure Road Tankers Used for the Carriage of Flammable Liquids

10. The Pressure System and Transportable Gas Containers Regulations 1989.

11. The Provision and Use of Work Equipment Regulations 1992 .

12. Relevant British Standard Specifications, or EEC approved (Equivalents or Superior Standard).

13. EU Exhaust Emissions Directive NRMM/97/68EC

14. Roll-over and Falling Object Protection (ISO 3471 & 3449)

15. All and any substances that fall within the requirements of COSHH Regulations that may be used within the equipment. (Felixstowe Dock and Railway Company has an environment policy that could preclude the use of certain substances.)

16. The End-of-Life Vehicles (Producer Responsibility) Regulations 2005,

The End-of-Life Vehicles (Producer Responsibility) (Amendment) Regulations 2010.

17. Fluorinated greenhouse gases and repealing Regulation (EC) No. 842/2006.

18. Control of Vibration at Work Regulations 2005

2.2 **MECHANICAL DESIGN**

This section covers the provision by the manufacturer of all labour and materials required:

a) To design, manufacturer, ship and install all the necessary mechanical materials, equipment and appurtenances;

b) To shop test as far as practicable and to field-test the entire mechanical equipment of the machine.

All in accordance with this Technical Specification.

2.3 **GENERAL**

1. Responsibility for the reliable operation of the Equipment in accordance with the requirements of this Technical Specification shall be borne entirely by the Contractor. The Contractor shall demonstrate with his drawings and specifications and with the required tests that the Equipment is capable of performing all of the required functions with a minimum of downtime.
2. The mechanical equipment shall be designed to be fully capable of operating the Fuel Bowser reliably at the specified requirements on a continuous duty cycle with ease, safety and a minimum of noise, vibration and maintenance.
3. All parts of the mechanical equipment shall be designed so that they may be easily assembled, adjusted, removed for replacement and easily accessible for lubrication, inspection, maintenance and repair. Emphasis shall be placed upon quick replacement of faulty or worn parts as opposed to repair in place.
4. The design shall be fail safe as far as practical so that the failure of a component or loss of power precludes accidental coasting out of control.
5. Parts, components and purchased sub-systems shall be readily accessible in the country of destination.
6. All materials used shall be identified by reference to the specification of an internationally recognised body with indication of equivalence to a local standard where applicable.

g) All major components, sub-assemblies and complete assemblies shall be provided with suitably rated, integral lifting points to facilitate correct handling. All removable eye bolts shall be suitably rated and supplied with a relevant test certificate. All integral lifting points shall be marked with their safe working load. (SWL)

2.4 **DESCRIPTION OF WORK**

The works comprising this Contract are the design, manufacture, painting, testing and delivery to site of the Fuel Bowser built in accordance with this specification.

The equipment supplied shall meet or exceed the requirements of the Technical Specifications and comply with the appropriate European, National and Local Standards, Statutory Orders, Regulations, Acts, Codes etc. that apply.

**Note:** All test certificates shall be supplied with the machine on delivery.

* 1. **AREA OF USE.**

The Fuel Bowser will be required to operate within the confines of the Dock Estate at the Port of Felixstowe and shall include areas of the public road system.

2.6 **GENERAL DESCRIPTION**

The Fuel Bowser supplied under this Contract shall be designed to transport Diesel Fuel from the storage tanks and deliver via a metered pump to various machines and equipment around the port.

It shall be mounted upon pneumatic rubber-tyred wheels and powered by a diesel engine via an automatic transmission unit.

The design of the Fuel Bowser shall recognise that the machine will be subjected to an arduous duty cycle and will be working in an environment where protection against impact damage is essential. However whilst the provision of damage protection is important, it should not be at the complete expense of access to the basic components that require regular maintenance.

It shall carry, in the region of 18,000 litres of diesel fuel as well as approximately 750 litres of adblue and be able to dispense the diesel fuel both via ‘aircraft’ coupling and a via a nozzle [in a similar manner to a normal highway fuel station] and the adblue shall be pumped and dispensed via a nozzle similar to highway refuelling stations.

Fueltek dispensing and measuring system to be installed with control box located inside drivers cabin.

The Fuel Bowser will be operating on a 12 hour day, 7 days per week.

2.7 **STRUCTURE**

The structure throughout shall be constructed from standard hot-rolled steel sections generally in accordance with BS EN 10025 (BS 4360 & BS 4848) or similar approved specifications. The steel grades shall be of weldable quality not requiring special temperature conditions for repair works, etc.

The structure shall be so designed that water pockets are not formed in any member or by the inter-section of members and be such that there shall be no unsealed blind areas where paint cannot be applied. Adequate drainage holes shall be provided to discharge water clear of the structure in all cases where there is a tendency for water to collect.

The structure shall be so designed that vibration is a minimum under all conditions of operation and particular attention shall be given to limiting vibration during the acceleration and deceleration periods.

2.8 **OPERATORS CABIN**

The operators/drivers cabin must be of the “Low Level” entry type, the driver and passengers shall be able to enter the cabin at a level which is lower than the upper dimension of the front wheel and tyre assembly. The passenger door shall be an air operated bus style shutter door style.

2.8.1 Driver Environment

The Supply of Machinery (Safety) Regulations 1992 requires (in Schedule 3, para 3.6.3.) that all Instruction Handbooks contain specific information on the level of ‘Whole Body Vibration’ that will be experienced by the operator. Data regarding vibration should therefore be available from the handbooks and a copy of a full test report according to EN13059 provided (Schedule A – A.14).

The Fuel Bowser shall be provided with weather tight, totally enclosed, forced ventilated right hand drive operator cabin.

The cabin shall be provided with sufficient sound absorption to provide a maximum noise level of 75dB(A) Leq,5min measured at the position of the operator’s ear. The interior of the cabin shall be covered with a durable material approved by the Engineer which can withstand the fluids associated with the bowser and which can be cleaned easily. The combination of sound absorption, covering material and associated adhesives shall comply with normal Health and Safety Requirements and the Contractor shall state the classification of this combination.

The maximum noise level at a distance of 1m from the right hand side of bowser and adjacent to cabin of a static tractor (directly in front of bowser). Full range of motion speeds – 85dB(A) Leq,5min.

* + 1. Access

Access to the operator’s cabin shall be via a minimum number of steps

* + 1. Tank Top Access

The top of the tank is to be protected by fixed handrails (not folding) with a height of not less than 1100mm c/w an opening in the off side suitably protected by the use of removable chains to allow access via the loading platform. Ladder access is not acceptable.

* + 1. Mountings

The cabin shall be isolated from the engine compartment and the tractor chassis by a vibration isolation system or similar in order to reduce cabin vibration to a minimum. To provide the access required to maintain and remove the engine and transmission easily, the cabin or engine hood shall be arranged to tilt. The tilting mechanism shall be an electric/ hydraulic system with a fixed stay to secure the cab in the raised position.

* + 1. Noise Levels.

|  |
| --- |
| Noise reduction both for the operator and for radiated noise is an aspect of the Technical Specification. |
|  |
| The Contractor shall give full consideration to the design of the Equipment and the selection of materials to reduce noise levels. |
|  |
| All noise levels specified by the Purchaser will be verified as part of the Purchasers acceptance tests. |

2.8.6 Windows

The cabin shall be fitted with fixed laminated front and rear screens (if fitted) mounted in rubber, Electric windows shall be fitted in both doors. All screens shall be of Triplex tinted laminated glass and mounted in rubber. Particular attention shall be given to the ratio of individual window length to width in order to reduce the problem of shatter and also ability to clean the exterior of the windows. Blinds shall be fitted to the front windows.

2.8.7 Windscreen wipers and washers

Independently controlled and electrically operated, self-parking windscreen wipers and washers shall be provided for the front, and rear windows. Each windscreen wiper shall be provided with a motor control system that allows the operator to select an intermittent wipe facility.

2.8.8 Drivers Seat

An air suspension 'Armchair' type seat unit or similar shall be fitted, which has adjustments for height, distance from the front windscreen, angle of squab, air operated lumbar support and suspension. The seat shall be covered with ventilated non-slip type material and allow the operator to enter and exit without unnecessary effort. A three point inertia seat belt shall be fitted.

* + 1. Passenger/ Trainers Seats

As per vehicle manufacturers standard, but all with three point inertia seat belts fitted, however as a minimum the following will be accepted:

Two (2) passenger seats c/w three point inertia seat belts fitted, the driver’s seat is additional to the passenger seating.

* + 1. Adjustable Mirrors

A rear view mirror shall be provided inside the cabin together with two external glass mirrors mounted on robust brackets one each side of the cabin to provide a clear view along both sides of the tank. The mirrors shall be of the electrically adjusted and heated type.

* + 1. Heating and Ventilation

A full air conditioning and heating unit shall be fitted such that the temperature inside the cabin can be maintained at 20oC in ambient of minus 10oC to plus 30oC.

Air flow shall be arranged such that de-frosting and de-misting operations are efficiently carried out on all primary windows. Noise produced by the fan and general air flow shall be reduced to an acceptable minimum.

The airflow shall be arranged such that de-frosting and de-misting operations are efficiently carried out on all primary windows.

If fitted the cab heater shall be of the diesel type to allow heating of the cab without the requirement of the engine running.

2.8.12 Controls and Instruments

The Operator's cabin shall be equipped with the following controls, instruments and warning alarms as a minimum requirement:-

Main controls:-

Accelerator pedal

Brake pedal

Forward/reverse gear selector

Parking brake

Steering wheel

Air operated horn

PTO engagement switch shall be able to be operated both from inside and outside the cabin.

Control switches and indicators:-

Heater/ Air Conditioner switches

Windscreen wiper/washer switch

Headlight/sidelight switch

Interior light switch

Horn push

Directional indicator switch and light with bleeper

Hazard warning switch and light

Rear Floodlight switches

Rotating beacons

Instruments:-

Speedometer including milometer

Tachometer

Fuel level indicator gauge

Cooling water temperature indicator gauge

Air pressure indication gauge

Gearbox oil temperature indicator

Battery condition indicator

Engine oil pressure gauge

Warning alarms:-

High water temperature indication and or buzzer

Low coolant level warning light and buzzer

Low engine oil pressure light and buzzer

Low air pressure light and buzzer

Low fuel level indicator light and buzzer

Direction indicator warning bleep

Reverse warning bleeper when gear selected

2.8.13 Flooring

To be designed to promote cleanliness by the elimination of recesses into which debris is likely to collect and where ribbed flooring is used to ensure that the ribs can be swept easily towards the door of the cabin.

2.8.14 Additional Fitments

1. Two rotating beacons with LED light unit and with amber lens, one to be fitted to the top of the cabin via a bracket and one to be mounted on the tank at the rear, both to be wired through the ignition. Vertical light shall be restricted by an anti-glare top. Type of beacon shall have a flexible stem to eliminate vibrations.
2. Floodlighting of the LED type to be mounted onto the rear and sides of the unit/tank of the cabin to floodlight the rear area and side of the unit when used in dark locations and at night.
3. Fire extinguishers to be fitted size and positions to be as required by the relevant regulations.
4. Drinks bottle holder
5. Radio / CD player
6. 12v supply for communication radio (to be fitted by others)
7. Storage boxes for a broom and shovel located on the outside of the unit
8. Reversing camera system installed.
9. Parking sensors installed on front and rear of unit.
10. Heated and electric adjustable mirrors to be fitted.
11. Heated front windscreen
12. All relevant hazardous chemical data plates to be fitted.
13. Fueltek dispensing and fuel monitoring system to be priced as additional extra, control box to be installed within operator cabin.

2.9 **ENGINE**

The Fuel Bowser shall be powered by a suitably rated environmentally friendly clean air diesel engine that complies with the latest exhaust emission regulations.

A diesel engine that complies with European emission standards for engines used in new non-road mobile machinery (NRMM) may also considered.

Easy access to those parts requiring daily maintenance such as engine oil dipstick/filler, coolant filler and battery will be required.

Exhaust to be mounted vertically or horizontally at the front of the cabin.

**NB! Fuel delivery pump to be linked to the gear selector so that the driver cannot move off with the delivery pump still engaged.**

2.10 **FUEL AND ADBLUE TANKS**

Both fuel and ADBLUE tanks (utilised by the vehicle) shall be provided giving easy access for refilling and yet suitably protected against impact damage. A strainer shall be incorporated into the filler neck and the fuel tank filler cap shall be provided with a chain to prevent its loss when refilling.

2.11 **DRIVE SYSTEM**

An automatic transmission system with forward and reverse speeds shall be fitted (Allison 3000 transmission prefeed or vehicle manufacturers standard automatic transmission).

Easy access to the dipstick/filler shall be arranged.

2.12 **WHEELS AND TYRES**

It shall be fitted with pneumatic tyres and fully protected wheel nuts.

**Tyres -** It should be noted that the surfaces upon which these vehicles operate are uneven and the necessity for tight cornering both contribute to major tyre wear.

**Due consideration shall be given to alleviating/ minimising the damage to the tyres, such as a steering rear axle.**

2.13  **SPARE PARTS**

For a period of seven years from the date of the Acceptance Certificate, the Contractor shall deliver any Additional Parts to the Port of Felixstowe (or such other place designated by the Purchaser) within 60 (sixty) hours of receipt of notice. In the event that the Additional Parts are not delivered to the Purchaser within 60 (sixty) hours of receipt of notice, the Additional Parts shall be free of charge.

“Additional Parts” means materials or parts in respect of the Goods weighing less than 60kg (per item).

**SECTION 3.0 - ELECTRICAL**

3.1 **ISOLATION**

A battery isolation switch shall be provided in an accessible and clearly marked position outside the cabin. The battery isolator shall be of the type which allows a padlock to be fitted for the purposes of secure isolation when performing maintenance activities. The isolator shall keep the unit completely isolated and safe for maintenance when turned off. No power shall be transferred from the batteries to any circuit on the truck when the isolator is switched off. This is to ensure the safety of all when performing maintenance or inspecting the unit.

3.2 **CONTROL EQUIPMENT**

Radio Supply

Two 12 volts D.C. supplies shall be provided for the fitting by others of a radio transceiver into the operator’s cabin. A Voltage stabiliser shall be fitted to maintain 12 volts.

3.3 **LIGHTING**

|  |
| --- |
| The road lights are to be of highway standard with rear stop, tail and indication lights incorporating reflectors and all wired through the ignition switch. Headlights shall be of a type and intensity, and aligned so as to work effectively with passive cat’s eyes at 40m. |
|  |
| All exterior lighting of the Equipment shall be of the LED type. This must include headlights. |
|  |
| All lamps must be able to withstand the amount of vibration encountered especially the headlights. |
|  |
| Directional indicators, flashing type front and rear. |
|  |

**Note:** The rear floodlights and reverse bleep shall automatically operate when reversing only.

One (1) cabin interior LED light.

All externally mounted driving lights shall be recessed into the structure and protected against impact damage.

Low level lights to be positioned on drivers side along the length of the tank for the illumination of the fuel delivery meters.

3.4 **AUDIBLE ALARMS**

Electrically actuated, warning horns shall be provided.

A reverse warning bleeper shall be activated when reverse gear is selected.

**SECTION 4.0 – PAINTING**

During construction and after fabrication has been completed, the Equipment shall be thoroughly cleaned and painted in a manner approved by the Engineer.

4.1 **PAINTING - COLOURS**

The following colours shall be applied as the finish coat:

a) Chassis, walkways, platform and stairs - Black Non Slip

b) Cabin - RAL code 9010 –

Pure White

c) Walking surfaces - Black Non Slip

d) Base of cabin & Mid height of tank - White Reflective

Strip 75mm wide

e) Tank - RAL code 9010 –

Pure White

4.2 **LOGO AND IDENTITY NUMBER**

Plant identity numbers to be over-painted in 100mm black figures onto the front and rear of the Operator's Cabin, and rear of the tank. Number will be confirmed at a later date.

**SECTION 5.0 - TESTING, COMMISSIONING AND ACCEPTANCE**

5.1 **STATIC SAFETY TESTS**

Acceptance and load tests will be carried out by the Contractor and witnessed by representatives of the Purchaser prior to Delivery. These tests will include full compliance with the Technical Specification and any Equipment not complying will not be Delivered. Notwithstanding this the unit will again be visibly checked and will undergo full operational tests including load test on arrival at its destination.

5.2 **SETTINGS AND ADJUSTMENTS**

Check diesel engine operation under no load and full load conditions and that the audible and visual warnings operate as required.

5.3 **CERTIFICATION – Required for Equipment Acceptance**

Certification of the Fuel Bowser is required in accordance with those Labour Standards and Statutory Regulations that are in force and current at that time.

1. A certification of conformity shall also be provided on delivery.
2. Calibration certificates for the fuel delivery meters
3. The repeated vibrations in the cab emitted by the Fuel Bowser, to which the Operator can expect to be exposed, must be listed in the Operators handbook.
4. ADR compliance certificate

5.4 **OPERATING MANUALS**

a) Index.

b) Brief general description and outline specification highlighting special features of the plant for the guidance of the non-technical operating staff and management.

Sufficient background information should be provided to promote full understanding of the operating instructions with a view to ensuring safe and efficient operation of the plant.

c) Brief description supported by general arrangement drawings and photographs/layout drawings (suitably reduced size) of such parts of the plant as are of particular interest to the operator, e.g. Operator’s Cabin, control panel/console, safe means of access. This section should describe the function of and clearly identify and help to locate all controls, instruments, indicators and alarms etc. provided for use by the operator.

d) Routine checks to be carried out by the operator.

e) Detailed step by step instructions for starting up, normal operation and shutting down the plant.

f) Special safety instructions, “Do’s and Don’ts” for the operator during normal working and emergency conditions.

g) Three sets of manuals will be required with each machine.

**SECTION 6.0 - GENERAL OVERVIEW – REQUIREMENTS**

* Low Level "Step in Cab"
* Automatic Gear Box (Allison 3000 transmission preferred)
* Fuel Delivery Pump linked to Gear Selector so that Driver can not move the Tanker with the Delivery Pump engaged.
* Pump Drive – Engine start/ stop and PTO switches to be mounted externally of the main pump/ meter housing in weatherproof stainless steel housing and also shall have a further option of PTO engagement inside the cabin which can be operated by the driver.
* Flow Rate To be ECU Controlled, not adjustable.
* Fuel Metering Device & All Hoses etc to be accessed on the "Off Side" This is a mandatory requirement.
* Metering Device to record the Fuel Delivered from the "Large Main Bulk Delivery Hose" & the "Small Bore Hose with Hand Nozzle"
* Pump & metering device to be suitable to feed both the 25mm Dia hose reel, 40 metres in length and the 38mm, 5 metres in length, bulk feed hoses
* Single Filling "Pot" at Top of Tanker for Filling Tanker (baffles required)
* Hand Rails, with Access Walkways fitted with Chains, around Top of Tanker.
* Large Dia (38mm) Bulk Delivery Hose (wire protected) c/w Aircraft Coupler , to be permanently connected to the pump via hand shut off valves to isolate from the hose reel operation and vice versa. To be stored on the hose tray (pump side) of the tank.
* Small Bore (25mm) Hose on Powered Hose Reel at rear of Driver's Cabin c/w Hand operated Nozzle
* Hand Operated Flow Control Valve in Small Hose pipework.
* Ground Level "Tanker Filling Point" - If available
* Engine Exhaust Fumes Outlet, Near Side or Vertical
* Low Level Lights on Off Side (Walkway, Meter Reading etc. in poorly lit areas)
* Tank Capacities 18000 Litres
* Dippoint – Dip gauge fitted within manway neck ring c/w Stainless Steel dipstick marked every 200 Ltrs. Dipstick to be stored within tank.
* Earthing Points – Two ¾” diameter brass earthing points fitted on the top valance and one ½” Dia earthing point fitted outside of the pump cabinet. Earth strap fitted between chassis and tank.
* Foot valve – Tank to be fitted with a 3” fortvalve highllift pneumatically operated internal valve.
* Fire Extinguishers – Two 6kg dry powder fire extinguishers housed in stainless steel weatherproof housings.
* Right Hand Drive
* Diesel Engine
* Eye Wash Bottles in Drivers Door plus First Aid Kits.
* Spillage Bin, easy accessible from ground level, Storage of Spill Kits and Warning Signs - to includes Dams, Drain Putty, Gloves, Absorbent Crystals, Red Triangles, etc.
* Rear of Vehicle marked with "No Smoking / Naked Flame" signage
* All necessary safety signs to conform with current legislation
* 750 litre Adblue tank with pump and metering device to be fitted to the rear with small bore (25mm) hose and hand nozzle on a ratchet type hose reel for dispensing of Adblue to other vehicles. This must be pumped using the truck power or air supply and must not require additional power sources. Photographs of current installation can be provided if required. Adblue delivery hose shall be 12 metres in length.
* Rear steer axle to be provided as additional option to aid steering and reduce tyre wear.
* Fueltek dispensing and measuring system to be installed with control box located inside drivers cabin, this is to be priced as an additional extra to be confirmed at point of order.