DE&S Secretariat Land Equipment

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Defence Equipment & Support
Maple 0a #2043
MOD Abbey Wood
Bristol BS34 8JH

[redacted]

Via: request-403729-64720621@whatdotheyknow.com

24-May-17 Our Reference:FOI2017/05127

[redacted]

Thank you for your e-mail of 27th April 2017 requesting the following information:

> *We have a request from a customer for the purchase of a number of Thompson Carmichael 32,000 litre bulk fuel tankers as formerly owned and operated by Her Majesty's Armed Forces.*
>
> *In an effort to try to establish whether these tankers are "Specially Designed for Military use" and therefore subject to the need for having the appropriate export licence for resale to customers outside of the UK, we have tried to contact the manufacturers (Thompson Carmichael Ltd) only to find that they went out of business 12 years ago, the company that took them over has no historical data relating to the order and can provide no insight as to the characteristics of the tankers.*
>
> *We therefore respectfully request any information held relating to the MOD Contract No. LV2B/377 which might offer us details to confirm whether these tankers are wholly "Specially Designed for Military Use" or whether they are civilian by design utilising civilian components with perhaps a few Specially Designed for Military Use components having been added and which can be removed, thereby returning the units to a civilian configuration.*
>
> *This information can then be used for us to determine whether these units will need to be exported under the current OGEL or an SIEL or whether they can be determined as NLR (No Licence Required).*

I am treating your correspondence as a request for information under the Freedom of Information Act 2000 (FOIA).

A search for the information has now been completed within the Ministry of Defence (MOD), and I can confirm that information in scope of your request is held.

Please find attached documentation on MOD contract LV2B/377 Thompson Carmichael Semi-Trailer Bulk Fuel Transporter. The documentation shows characteristics and technical data regarding to the tankers.

Section 40(2) has been applied to some of the information in order to protect personal information as governed by the Data Protection Act 1998. Section 40 is an absolute exemption and there is therefore no requirement to consider the public interest in making a decision to withhold the information.

If you are not satisfied with this response or you wish to complain about any aspect of the handling of your request, then you should contact me in the first instance. If informal resolution is not possible and you are still dissatisfied then you may apply for an Independent Internal Review by contacting the Information Rights Compliance Team, Ground Floor, MOD Main Building, Whitehall, SW1A 2HB (e-mail CIO-FOI-IR@mod.uk). Please note that any request for an Internal Review must be made within 40 working days of the date on which the attempt to reach informal resolution has come to an end.

If you remain dissatisfied following an Internal Review, you may take your complaint to the Information Commissioner under the provisions of section 50 of the Freedom of Information Act. Please note that the Information Commissioner will not investigate your case until the MOD Internal Review Process has been completed. Further details of the role and powers of the Information Commissioner can be found on the Commissioner's website, http://www.ico.org.uk.

Yours Sincerely

DE&S Secretariat Land Equipment

Annex D to
Contract LV2B/377

AMENDMENTS TO SPECIFICATION 0135 ISSUE 1 FOR CONTRACT ITEM No 6

Paragraph	2.2	-	ADD "F34, F43 and F44" to the list.
"	5.1.2	-	Not required, but mechanical operated foot valves to each tank compartment are to be included.
"	5.3.1	-	DELETE "32000 litres", INSERT "28000 litres in 5 compartments".
"	5.3.2	-	ADD "Dipsticks are to be anodised black for ease of reading of contents".
"	5.4.1	-	)
"	5.4.2	-	)
"	5.4.3	-	)
"	5.5.1	-	) Not
"	5.5.2	-	) Required.
"	5.5.4	-	)
"	5.5.7	-	)
"	9.7	-	)

ANNEX A TO
CONTRACT LV28/377

PDLV/HLV 2/5 SPECIFICATION Nº 0135
ISSUE No: 1
DATE: December 1993

DIRECTORATE GENERAL OF POLICY AND SPECIAL PROJECTS

SPECIFICATION

FOR

SEMI-TRAILER BULK FUEL TRANSPORTER
32,000 litre

SUMMARY

This Specification defines the required operating characteristics, technical data and performance standards of SEMI-TRAILER BULK FUEL TRANSPORTER 32,000 litre which has been developed to meet the requirements of JSOR BV, SUR (L) 040. It also includes statements to the materials, workmanship and construction, protective finishes, identification, packaging and testing applicable to the manufacture of this equipment.

Published by
Heavy Logistic Vehicles 2/5
Ministry of Defence (PE)
Directorate General of
Policy and Special Projects
St Christopher House
Southwark Street
London, SE1 0TD

PDLV/HLV 2/5 SPECIFICATION Nº 0135/1

SPECIFICATION

FOR

SEMI-TRAILER BULK FUEL TRANSPORTER
32,000 litre

PREPARED BY PDLV
PRINTED AND DISTRIBUTED BY HLV 2/5

APPROVED

PM HEAVY LOG VEHS
FOR DIRECTOR GENERAL OF
POLICY AND SPECIAL
PROJECTS
DECEMBER 1993

C:\DATA\WP51\TD135BC / Mon 20 Dec 1993, 9:02

CONTENTS PAGE

AMENDMENT RECORD

AMENDMENT NUMBER	DATE	SIGNATURE

1 INTRODUCTION

1.1 The aluminium semi-trailer tanker unit shall be fully interoperable with the new in service Seddon Atkinson (Petroleum Regulation) "STRATO" 6x4 Right Hand Drive (RHD) and Left Hand Drive (LHD) configuration tractor units. It shall be capable of carrying up to 32000 litres of liquid and shall be required to operate on Motorways, A and B class roads, Airfields and unsealed surfaces. The semi-trailer shall be of both left and right hand drive variants ie. pumping station left hand or right hand.

1.2 The semi-trailer shall provide a facility to move in-service fuels.

1.3 This semi-trailer shall be required to operate unimpaired worldwide, in climatic conditions A2 to C1 inclusive (as laid down in Def Stan 00-35, temperature range -21°C to +44°C).

1.4 An in service life of 15 years is anticipated.

1.5 The semi-trailer shall remain in production for 5 years; with no major design changes, except to meet new legislation for a further period of 2 years minimum.

1.6 Support will be required to continue for 10 years after the cessation of the model.

2 GENERAL

2.1 The semi-trailer shall be based on a standard commercial model of three axle configuration with road friendly suspension; modified to the minimum extent necessary to comply with this specification (Alternative designs may be considered if their applicability can be proven eg. weight reducing, extended life etc).

2.2 The equipment shall be used for transporting and dispensing fuels worldwide, having a density at 15°C of between 0.815 and 0.860 kg/ltr. An example list of some oil products are listed below :

Petroleum Spirit (NATO F-46) of SG 0.74

Diesel Fuel (NATO F-54) of SG 0.84

Light Grade Heating Oil (3/50 FFO to BS2869) SG 0.86

Aviation Fuel (NATO F-35).

2.3 Ready access shall be required to all parts of the semi-trailer for driver/operator servicing. Routine maintenance shall be straightforward with easy access to all the areas that require periodic inspection. Routine servicing intervals should be at least 10,000 km.

2.4 The semi-trailer shall operate on service lubricants as listed in DEF STAN 01-5/9.

2.5 The semi-trailer shall have proven reliability and shall conform to the standards of maintenance and reliability detailed in DEF STAN 00-5 Parts 1, 2 and 3.

2.6 The semi-trailer shall conform at time of delivery (NOT at tender stage) to current and future known EEC, German and UK Motor Vehicle Construction and Use Regulations, and European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), Road Traffic Acts, the Regulations covering the conveyance of Diesel fuel, Petroleum spirit, Aviation kerosene, Standing Instructions 1992 No 743, Code of Practice-Design and construction of Road Vehicles, Safe Load Pass Scheme and Road Vehicle Lighting Regulations. The semi-trailer shall be type approved and be suitable for unrestricted travel worldwide.

2.7 The semi-trailer shall be plated with its design limit by the company. The coupled tractor and semi-trailer shall not exceed 44 tonnes (when loaded with the appropriate fuel), but it shall be plated to the current UK legal maximum (applicable at time of delivery).

3 PERFORMANCE

3.1 The semi-trailer when coupled to the tractor unit shall have a maximum potential cruising speed of 100 kph whilst fully laden.

3.2 The fully laden train shall be capable of stopping and restarting on a 22% incline, both forward and reverse.

3.3 A minimum static tilt angle of 25 degrees fully laden is required, when coupled to the tractor unit.

3.4 A turning circle (when coupled) Kerb to Kerb of not more than 22 metres is preferred.

4 TECHNICAL SPECIFICATION (CHASSIS)

4.1 Brakes

The semi-trailer shall be fully compatible with both 2 and 3 line braking systems that comply with EEC legislation. An air braking system is required which shall incorporate the following :-

4.1.1 Automatic slack adjusters.

4.1.2 Tilt type drain valves fitted to the air brake reservoirs.

4.1.3 A load sensing valve fitted in the braking system is desirable.

4.1.4 An Antilock Braking System (ABS) to comply with ECE Regulation 13.

4.1.5 The braking system shall be so designed that when the semi-trailer is uncoupled and parked the brakes are automatically applied. A manual system ie. hand brake shall also be fitted.

4.1.6 C & CA brake couplings to BS AU 138 shall be provided at the front of the semi-trailer.

4.2 Wheels and Tyres

Radial, road pattern tyres shall be fitted which conform to BS AU50 and shall be anti-static.

4.3 Electrical

4.3.1 The complete electrical system shall comply with S I 1981 No 1059 and "The Dangerous Substances (Conveyance by Road in Road Tankers and Tank Containers) Regulations 1992" and The Code of Practice for Road Tankers and Tank Containers. In addition the road lighting system shall conform to Def Stan 23-6 including convoy lighting.

4.3.2 A 24v electrical system with double pole wiring shall be fitted.

4.3.3 The wiring shall be heavily insulated and armoured throughout, and be independent of the chassis.

4.3.4 All insulation material shall be crush, UV and fuel resistant.

4.3.5 One switched, easily removable, flashing beacon shall be fitted to the top of the semi-trailer. (If attached to the tank unit a special bar for mounting the beacon shall be fitted). This shall interface with the tractor unit.

4.3.6 Reversing lights shall be fitted.

4.3.7 A light system cut out which shall be linked to the system employed on the tractor unit shall be fitted.

4.3.8 Emergency stop/shutdown buttons shall be fitted that comply with known, and proposed, legislation.

4.3.9 All electrical equipment shall be weather proof to meet the climatic conditions.

4.3.10 The electrical interface between tractor and trailer shall be via a military standard type 12 pin connector, unless this is precluded by regulations.

4.3.11 The brake electrical connections between tractor unit and the semi-trailer shall be by means of a connector to ISO 7638.

4.3.12 All electrical equipment shall conform to the requirements of BS 5345 in respect of the hazardous zone appropriate to the most volatile cargo.

4.4 Chassis

4.4.1 The chassis shall incorporate an easily accessible spare wheel carrier complete with spare wheel, which is one person operable. The approach/belly/departure angles shall be maximised).

4.4.2 A 2.0" kingpin shall be fitted which conforms to Def Stan 25-4 and shall be compatible with the fifth wheel unit fitted to the tractor unit. The fifth wheel height of the tractor unit is 1320mm (+/-25mm) in the unladen condition.

4.4.3 Full height, suitably braced, adjusting landing legs shall be fitted, which shall have rocking feet. Wheels shall not be considered acceptable.

4.4.4 Hydraulic hoses complete with self sealing hose couplings to BS 1495 shall be provided to power the fully adjustable hydraulic delivery pump system. These hoses shall have secure stowage points attached to the chassis in a readily accessible position. (This is to prevent hose coupling end damage).

4.4.5 Anchor points shall be provided to enable the trailer to be tied down for ferrying options. A manufacturers preferred tie down scheme shall be supplied within the final literature package.

4.4.6 The trailer chassis shall be 3 axle configuration.

4.4.7 Easily removable side and underrun bars including the mounting uprights shall be fitted.

4.4.8 A sturdy under run deflector guard shall be fitted under the fuel delivery pump system to prevent damage (removable for major overhauls).

4.4.9 All hydraulic grease nipples shall be to BS 1486.

4.5 Rear mudwings

Mudwings incorporating spray suppression to BS AU 200 shall be fitted over all wheels. The mudwings fitted over the

wheels shall be positioned to ensure adequate clearance. The wheel arches shall be removable, without creating undue problems ie. wheel arches shall not have electrical or other items fitted.

4.6 Recovery

Recovery eyes shall be fitted at front and rear of the semi-trailer. The rear eyes shall be suitable for use with a fully loaded vehicle train. They shall comply with the requirements of Def Stan 25-23.
The semi-trailer shall be capable of being recovered by current in service recovery vehicles and their standard on board equipment.

4.7 Climatic conditions.

The semi-trailer shall be able to operate without preparation, unimpaired, worldwide, in climatic conditions A2 to C1 inclusive (as laid down in Def Stan 00-35, temperature range -21°C to +44°C). The implications of operating in climatic conditions A1 and C2 shall also be provided.

5 TOP HAMPER EQUIPMENT.

5.1 General

5.1.1 The tank unit shall be of aluminium construction suitable for the parameters outlined in this document.

5.1.2 Pneumatic push button operation of valves and controls shall be fitted providing the system can be made reliable and fail-safe. The method of operating with loss of operating power shall be indicated.

5.1.3 In the event of pumping power loss the semi-trailer shall be capable of discharging its product load under gravity.

5.1.4 The semi-trailer tanker shall be designed for bottom loading, but shall also be capable of top loading safely.

5.1.5 All compartment outlets shall be "manifolded" to enable one, or all, compartments to be filled/emptied via one outlet/inlet.

5.1.6 The "manifolded" pipe system shall be inboard of the 3 inlet/outlets which shall be of 4inch, 3inch and 2.5inch diameter.

5.1.7 All tank compartments shall remain unaffected by manifolding operations.

5.1.8 Each compartment shall be independently fitted with a leak proof sample line facility to enable the safe sampling of contents. This system shall be suitably leak protected at the foot valve end in case of sample line failure. Ball type valves are preferred.

5.1.9 A full vapour recovery system shall be fitted, inclusive of dump valve.

5.2 Performance

The semi-trailer shall have the following capabilities :-

5.2.1 Delivering at varying rates between 0 to 1000 litres per minute is required at 900 rpm engine speed.

5.2.2 Self loading of the semi-trailer from an outside source at a rate not of less than 450 litres per minute.

5.2.3 Discharging each compartment via the semi-trailer pump.

5.2.4 Discharge by gravity, bypassing the semi-trailer pump system.

5.2.5 The pump shall be fitted with a pressure relief valve.

5.3 Tank details

The aluminium tank shall meet the following minimum requirements :-

5.3.1 Capacity of 32000 litres not including ullage space, ullage space shall be a minimum of 5%.

5.3.2 Manhole covers, which incorporate a secured dipstick and minimum leak rate vent valves.

5.3.3 A rear access ladder in accordance with HSE guidance note GS26 which provides safe access to the top of the tank. The design of the ladder shall provide adequate spacing and hand holds for personnel wearing arctic and or Nuclear Biological Chemical (NBC) type clothing. It shall not impede the departure angle capability.

5.3.4 A catwalk and safety guard rail shall be fitted. A folding guard rail is preferred. The safety guard rail shall be capable of being lowered for when the semi-trailer is moved. It shall have a device fitted which automatically prevents the semi-trailer being moved whilst the walkway is in the raised position. It is desirable that the guard rail can be raised and lowered whilst the operator is standing at ground level.

5.3.5 A full vapour recovery system shall be fitted.

5.3.6 A safe cross vehicle loading (overfill) protection system shall be fitted which enables the tanker to be filled easily and in a legally safe manner in the field. (The system shall be capable of operating on independent compartments).

5.3.7 A high level cut off/terminal overfill protection system shall be fitted that complies with the petroleum regulations.

5.3.8 A non corrosive tank serial number plate shall be fitted.

5.3.9 All tanks shall be fitted with both longitudinal and cross baffles to minimise surge.

5.3.10 Each compartment shall be indelibly marked with its capacity.

5.3.11 The overall capacity of the tank in litres shall be painted in 25mm high black, block lettering at the centre rear of the tank.

5.3.12 An ullage marker shall be fitted (visible from on top of the catwalk with the manlid/s open).

5.3.13 Each compartment shall be sumped for drainage.

5.4 Pumping equipment

5.4.1 The semi-trailer pump shall be hydraulically driven via the PTO's hydraulic system fitted on the tractor unit. The pump shall be self priming, and suitable for the flow rates required (para 5.1). The pumping system shall incorporate the following (as minimum):- Speed control valve, reversing valve (if required), hydraulic motor, pump, and in line pump filter units complete with micron filters (to both sides of the pump).

5.4.2 An hours run meter shall be fitted which is required to record pump running time.

5.4.3 The pump shall be suitable for pumping ALL types of oil product carried and pumped (including petroleum spirit).

5.5 Pumping Station

The pumping station controls, incorporating the inlets/outlets specified in para 5.1, shall be located centrally on the side of the semi-trailer. The pumping station shall be fitted with a lockable roller shutter. It shall be suitable for one man operation, and have all the necessary controls grouped together.

The controls shall include the following :-

5.5.1 A remotely controlled hand throttle, if required.

5.5.2 Emergency stop for tractor engine and foot valves.

5.5.3 Foot valve controls.

5.5.4 A delivery meter showing quantity delivered in litres.

5.5.5 A schematic diagram together with simple operating instructions, (operators guide) shall be positioned where it can be easily read. It shall to be engraved on an easily cleanable material.

5.5.6 A flow meter shall be fitted having sufficient capacity such that it shall be capable of accepting the maximum output of the pump.

5.5.7 An air eliminator is required.

5.5.8 Sample lines.

5.5.9 A vapour recovery connector.

5.5.10 4inch API's for the 4 inch inlet/outlet.

5.5.11 Self sealing Dry break connectors to match in service Avery Hardoll couplings fitted to the 3inch male inlet/outlet.

5.5.12 2.5 inch BSP threaded end for the 2.5inch male inlet/outlet.

5.5.13 Vehicle interlocks to prevent the semi-trailer being driven before any foot valves, hoses and any earthing, or overfill protection, cables are disconnected. (This includes any hoses connected to or from the pump inlet/outlet).

5.5.14 Indelible plates fitted adjacent to any manually operated valves to show the fully open and closed positions.

NOTE All the pumps controls / equipment shall be so sited as to be easily operable. The location and mounting of the pumping station with its associated equipment, components and controls shall be such that ground clearances and departure angles are maximised.
All wiring shall be clipped to the adjacent members (staples shall not be used), with protective sleeving provided where necessary. Grommets shall be fitted wherever wiring passes through metal or plastic.

5.6 Delivery

Fuel shall delivered through the following fitments and hoses and are required :-

5.6.1 15 metres of 64 mm diam layflat hose with 3 inch female Avery Hardoll type couplings at either end.

5.6.2 5 metres of 64mm diam armoured hose with 3 inch female Avery Hardoll type couplings at either end.

5.6.3 Quantity 1 off 5 metre armoured hoses with 4inch API couplings shall be supplied.

5.6.4 All hoses shall be stowed on the semi-trailer in suitable covered housings and wedged by appropriate means to prevent them from being displaced.

5.6.5 All connections shall meet the requirements of STANNAG 3756. (They shall be double banded (minimum) or a suitable approved alternative).

5.6.6 All hoses shall be suitable for the wide range of oil based product likely to be carried.

5.7 Bonding and earthing

The bonding and earthing requirements are as follows :-

5.7.1 The semi-trailer shall be electrically bonded throughout.

5.7.2 A conducting rubber earthing strip to specification AD2/SRD/1172P shall be fitted (or similar approved alternative).

5.7.3 A minimum of 2 bonding reels each containing 20m of earthing cable shall be fitted, 1 shall be fitted adjacent to the control station, the other shall be fitted at a position to be agreed prior to or at first off. This further bonding reel shall be fitted in a suitable location to protect and enable safe inter vehicle and cross vehicle fluid transfer. A suitable method of cable retention (to prevent cable unwinding whilst stowed) shall be fitted.

5.7.4 Earth spikes and large hand operated earth clamps (crocodile type) shall be supplied for each bonding reel. A dedicated earth bonding reel complete with spike and retention device shall also be supplied. BL

5.8 Fire fighting equipment

A minimum of 2 in quantity, 9 litre pressurised foam or approved suitable alternative extinguishers and waterproof mounting containers for them shall be positioned in convenient locations on the semi-trailer. These containers shall be suitably marked.

5.9 Safety devices

Variously positioned emergency shut off buttons shall be fitted (positions & quantity shall be stated, at time of tender, by the contractor, to meet the best of commercial practices and shall be revised as required, during the life of any contract placed, at no charge to the Ministry).

6 PAINTING and FINISHING

6.1 The exterior paint finish shall be IRR green to BS 381c, colour number 285 NATO green including the chassis.

6.2 Underbody protection shall be in accordance with Def Stan 03-32/1.

6.3 An approved wax injection treatment of all box section areas of the semi-trailer is required.

6.4 Tyre pressures (BAR) shall be painted in 25mm block numerals above each wheel station.

6.5 Over-painting of identified air/brake/electrical systems shall not be acceptable. (Unless these are clearly and indelibly identified/labelled afterwards).

7 MISCELLANEOUS

7.1 A number plate holder (for removable number plates) shall be fitted (unless otherwise stated). The design shall be such that the number plate is easily removable, but shall ensure that the number plate remains in position no matter what driving surface is encountered.

7.2 A suitable wheel brace and jack complete with handle shall be supplied and housed in a suitable waterproof location on the semi-trailer.

7.3 Standard safety markings shall be fitted ie. long semi -trailer signs etc.

7.4 Stowage boxes with secure fastenings shall be fitted to carry all Complete Equipment Schedule items as deemed necessary. This shall be discussed in detail at the pre -production meeting but shall be included within the tender price).

7.5 Top hamper tools shall be provided ie. hatch keys, spanners etc. complete with suitable stowage.

7.6 A weather proof document holder to contain the relevant HSE / Regulation 7 certification etc. shall be fitted in a visible and readily accessible position on the semi-trailer.

7.7 Hazard warning panel indicator, holders for removable plates shall be fitted to the semi-trailer applicable to the relevant legislation (UK Hazchem or ADR).

7.8 Externally fitted adjustable product indicator shall be fitted adjacent to each compartment.

7.9 A military pollution prevention kit including fixed stowage position on the semi-trailer, shall be provided.

7.10 A legally compliant set of wheel chocks shall be supplied in a suitable waterproof compartment.

7.11 All hoses and inlets / outlets shall be provided with suitable leak-proof, damage resistant captivated end covers.

7.12 Two flashing, amber lights, which are independent of the electrical equipment of the semi-trailer shall be provided. They shall be designed in accordance with electrical equipment operating within the appropriate hazardous area applicable to petroleum spirit.

7.13 The relevant contract number and item number shall be stamped on the manufacturers own data plate. If there is insufficient space, a separate non ferrous plate shall be provided for this purpose. The plate shall be securely attached to the semi-trailer adjacent to the manufacturers own data plate.

8 STANDARDISATION

8.1 Materials and components shall comply with the relevant British Standards or their equivalent if of non UK manufacture.

8.2 Where reference is made to any specification or standard the issue which is current at the date of tender, or, if there is no tender the date of issue of Contract documents shall apply in every instance.

8.3 Where reference is made to regulations or acts the issue which is current at the date of delivery shall apply in every instance.

8.4 Copies of the standards referred to in this document may be obtained from :-

Defence Standards :- Director of Standardisation
Ministry of Defence
Kentigern House
65 Brown Street
Glasgow
G2 8EX

British Standards :- ISO Standards	British Standards Institute Linford Wood Milton Keynes MK14 6LE
Health & Safety Exec :- HSE Notes.	Health & Safety Executive St Hugh's House Stanley Precinct Bootle Merseyside L20 3QY
Statutory Instruments :- S I's.	Her Majesty's Stationery Office
Code of Practice :- COP's	Her Majesty's Stationery Office

9 QUALITY REQUIREMENTS

9.1 The first off completed semi-trailer shall be subjected to a 25 mile road test, of which 15 miles shall be in a fully laden condition, (diesel or agreed suitable alternative load, shall be supplied by the contractor free of charge for all tests), and 10 miles half laden (each tank half full), during which applications of the brakes will be made to check any tendency to surge, the results shall be noted. The security of the tank mountings shall be checked on the completion of the road test.

9.2 The braking efficiencies shall be checked and recorded on a fully laden semi-trailer and half laden semi-trailer. These shall conform with current Road Vehicle (Construction and Use) Regulations. An approved type roller brake tester shall be used.

9.3 The endurance braking system shall be proved and the data recorded.

9.4 The turning circle shall be checked to confirm compliance with this specification.

9.5 An unladen semi-trailer shall be weighed and its axle loads recorded.

9.6 Testing of the complete pumping installation shall be carried out, confirming that the specified delivery and control parameters have been achieved. All results shall be fully recorded. All operations shall be undertaken with arctic type hand protection, and observed to ensure compliance.

9.7 The pump shall be supplied with a test certificate.

1992

9.8 Certification in accordance with the requirements of Regulation 7 of Statutory Instrument 1981 No 1059 The Dangerous Substances (Conveyance by road in Tankers and Tank Containers) Regulations, confirming that the tank and its fittings shall be suitable for the conveyance of the oil products specified, shall be supplied.

9.9 A suitable test to confirm the integrity of the electrical insulation of the complete double pole (insulated return) wiring system, and its independence from the chassis, vide, Schedule 3 Part 1 para 4(b) of Statutory Instrument 1981 No 1059, shall be carried out and the results recorded. A functional test of the complete electrical and bonding system shall be carried out. The resistance value shall not exceed 0.5 ohms

9.10 A half laden, and fully diesel laden, semi-trailer shall be static tilt tested to confirm stability and the results shall be recorded. (when coupled to a tractor unit).

9.11 Manhole covers, complete with valves, shall be operated to ensure integrity.

9.12 The pump shall be connected and started, according to manufacturers recommended procedure, and the time and method shall be recorded. (This shall not contradict any manufacturers time, or operating instructions, and any alternatives shall be verified and recorded).

9.13 The pumping gear shall then be operated to ensure operating parameters are met, ie. the self sealing couplings API and BSP outlets shall be connected to ensure compliance with paragraphs 5.b and 5.f (as minimum requirement), in both the suction and delivery modes.

9.14 The tank manufacturer shall supply his recommended tank testing procedures (for future re-certification purposes).

9.15 Approach /belly /departure angles shall be measured and recorded.

9.16 A tractor trailer unit shall be cold soaked for a minimum of 12 hours to the minimum temperature requirement (-21°C), and temperatures within the cab, the battery box and the engine coolant, shall be recorded.

9.17 After cold soak all drain valves shall be operated. If manual and air operated, both systems shall be operated by both air and manually to ensure operability.

ANNEX B
CONTRACT LV2B/377

Procurement Executive
Ministry of Defence

QA/HEAVY LOGISTIC VEHICLES Room 5108
St Christopher House Southwark Street London SE1
Telephone (Switchboard): 071 928 3666 ext 1638
Direct Dialling: 071 921 1638
Fax: 071 921 2656

STATEMENT OF QUALITY REQUIREMENTS

ITPO/Requisition No: Procurement Branch Ref:LV2/5

Store/Service: SEMI TRAILER TANKER 32,000 LITRES

SQR Reference No: D/PDLV/106/93/077/1/ Date: 7-DEC-1993

1. The Quality Requirements applicable to this contract are contained in:-

   a. Defence Standard 05-92

   b. DEFCON 5

   c. Defence Standard 05-61 Issue 1 Parts 1, 2 and 3.

   d. DQAB Quality technical requirements (QTRs): N/A

   e. Specification No: As listed in contract

   f. Proof Schedule: N/A

   g. Packaging Particulars (Explosive Related Stores): N/A

2. At the tender stage all enquiries on the Quality Requirements are to be addressed,quoting the above SQR No,to the Project Manager at the above address.

[redacted]
Project Quality Assurance Officer

QUALITY REQUIREMENTS

D/PDLV/106/93/077/1

1 General Requirements

1.1 The Contractor shall comply with the Quality Assurance Requirements identified in Section 3 of DLV Technical Document.

1.2 The completed trailers shall be roadworthy and fit for immediate use by the User.

2 Quality Meetings and Assessment

2.1 A Quality Liaison Meeting may be convened by the QAR as soon as it is mutually convenient after the contract has been let to discuss the quality requirements.

2.2 It is the responsibility of the Contractor to provide the MOD QAR with a completion date for the first production trailer, designated the 'First Off' trailer. (Notification of at least 2 weeks prior to trailer completion is required.)

2.3 On completion of the 'First Off' trailer the Contractor shall produce a written Inspection Report against the MOD Specification.

The report shall contain the following information but not limited to:-

a) Statements identifying compliance or noncompliance, including any agreed deviations, against each clause of the technical specification or document.

b) Copies of all significant Certificates of Safety and Conformity.

c) Details of all tests performed and results recorded.

2.5 The completed contractors Inspection Report shall be passed to the MOD QAR who will then advise LV 2/5 on the report and availability of the trailer for a First Off Quality Meeting.

2.6 A First Off Quality Meeting shall be convened by QA/LV. The 'First Off' trailer shall be available for viewing/demonstration to enable the MOD to confirm or otherwise that the equipments configuration and observed quality conforms to the contractual requirements and to set the quality standard for the remainder of production.

3. QUALITY ASSURANCE REQUIREMENTS

3.1 Testing

3.1.1 The Contractor shall be responsible for all trials/testing and to ensure that all braking systems are fully bedded in prior to road testing.

3.1.2 All trials/testing performed by the Contractor shall be documented with a definitive rejection/acceptance criteria applied to the results.

3.1.3 The Contractor shall make available to the MOD QAR all trials/test results.

3.1.4 The trailer shall have checked and recorded the following:-

a. Overall Dimensions.

b. Unladen Deck Height.

c. Unladen Weight.

d. Brake Efficiency.

3.2 First Off Test

3.2.1 Details of each "First Off" test shall be recorded with the results to form part of the Contractors Inspection Report.

3.2.2 The "First Off" Tests listed below, but not limited to, are to confirm that the performance of the trailer meets the Contract requirement.

a. The "First Off" completed trailer shall be subjected to a fully laden road test of a minimum 15 miles and half laden of 10 miles duration. The test route, which shall be agreed with the QAR, to include motorway, A & B roads with roundabouts and gradients.

b. All brake efficiencies shall be recorded in laden and half laden condition and shall be in accordance with current Motor Vehicle (Construction and Use Regulations). The brake certificate is to be supplied with the "First Off" trailer. The use of a 'Type Approved' roller brake tester for checking braking efficiencies would be acceptable.

c. The handbrake shall hold the fully laden trailer in a forward and reverse position on a gradient of at least 1 in 5.

d. All electrical systems on the "First Off" trailer shall be functionally tested and the results recorded.

3.[redacted] Production

As part of the Pre-Delivery inspection procedure for the remainder of production, each trailer shall undergo a 15 Km unladen road test. During the road test all systems are to be functionally tested including the brakes, the efficiencies of which are to be recorded.

3.4 Certification

3.4.1 In accordance with the requirements of current UK Legislation, Test Certificates are required for the following items, but not limited to, Winches, Wire Ropes, Shackles, Hooks, Towing Eyes, 5th Wheel Couplings, Twistlocks and load securing devices. Two copies of the Test Certificates shall be supplied: one copy to the QAR and one copy with the trailer upon delivery.

3.4.2 The Contractor shall supply Manufacturers Test Certificates for all pressure vessels in addition to an overall system Test Certificate as verification that the system/systems concerned have been tested to the current British Standard requirements.

3.4.3 Full details of all painting systems including the pre-treatment to be used shall be forwarded to LV 2/5 for prior to the commencement of production.

3.6 Build Standard

3.6.1 The Contractor shall ensure that all deviations from the Specification are quoted at the time of tender submission.

3.6.2 No deviation from the declared Build Standard will be accepted without prior approval of the Authority.

3.7 Welding

3.7.1 The welding shall be in accordance with BS 3019 and/or BS 5135.

3.7.2 All welders shall be approved to the requirements of BS 4872 part 1 and/or part 2.

3.8 Interoperability

3.8.1 The Contractor shall submit to PMLV 2/5 evidence to show compatibility between the trailer and Prime Mover.

3.8.2 The Contractor shall carry out an interoperability test with the fully laden trailer and a compatable Prime Mover conforming with the details in this Specification.