

DAIRY UK CODES OF PRACTICE ON MILK TANKER DESIGN

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REGULATION

All tanks must conform to current legislation for build and food hygiene specification for tanks for the transport of milk and milk product:

- BS 3441 (1995) – *for reference only*,
- Food Hygiene Regulation (EC) No. 852/2004 (transposed into UK law), No. 853/2004 (transposed into UK law)
- Dairy UK DTAS (Dairy Transport Assurance Scheme)

FOREWORD

This Code of Practice sets down the guide lines and the minimum requirements for the design and build of any Milk Tanker that will be used under the Dairy Transport Assurance Scheme (DTAS).

This document is to be used in conjunction with the above legislative documents and is in no way a replacement or substitute on its own.

The purpose of this document is to highlight the "Minimum Allowable Standard" agreed between the major Milk Companies, Tank Manufacturers and Operators in the UK and is endorsed by the UK Trade body for the Dairy Industry namely "Dairy UK".

It is agreed that this COP does not and should not restrict any future design or improvements.

However, any changes outwith the COP standard must be approved by Dairy UK before they are included into any build programme. All due consideration will be given to any proposed design changes with an agreement that they will not be unreasonably refused.

It is the responsibility of all concerned in the design change to seek approval from Dairy UK as failure to do so could result in a breach of the DTAS document.

1. VACUUM LOADING PRESSURE DISCHARGE RIGID MILK COLLECTION TANKER

		Code of Practice Standard	Minimum Allowable Standard	Customer Options/ Preference
1 Capacity		As per customers requirement +/- 1% ullage.	X	
2 General Dimensions		To operate at customers requirement.	X	X
	Length	Length as per current Road use Regulations.	X	X
	Height	Height as per customer requirement but must be within current Road use Regulations.	X	X
	Slope to rear	Slope to Rear 1.5°.	X	X
3 Test Pressure			X	
	Working Pressure	Must be less than 0.5 bar if 0.5 or more PED and PSSR apply.	X	
	Test Pressure	0.75 bar.	X	
	Working Vacuum	460mm Hg.	X	
	Test Vacuum	510mm Hg.	X	
4 Barrel	Full Material description	304 stainless steel Minimum or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm Minimum.	X	X
	Barrel type	Straight cylindrical single compartment.	X	X
	Internal finish	Welds ground and polished to 2B surface finish as per BS3441.	X	
5 Baffle	Full material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm Minimum.	X	X
	No of baffles	1 No. (Preferred).	X	X
	Baffle features	Adequate cut out for access to both compartments.	X	X
		Top cut out for venting. Bottom cut out for drainage.	X	X
	Side Drain Holes	Yes @ 3 & 9 o'clock.	X	X
	Cleaning Rings	3mm 304L stainless steel or other Food Grade Steel of comparable strength may be used with top and bottom 3/4" test sockets, PVC bottom catch tube.	X	X
6 Dished Ends	Full material description	304 stainless steel or other suitable food grade materials of comparable strength may be used.	X	
	Thickness	4mm.	X	X
7 Stiffening Rings	Full material description	304L stainless steel or equivalent in other material of similar strength.	X	
	Total No. of rings	Sufficient to comply with tank design.	X	X
	Cradle Supports	304 stainless steel.	X	X
8 Pipe Work and Connections	Full material description	304 stainless steel.	X	X
		All Fittings to be RJT. Size as per design / customer requirement.	X	X
		All external pipework connections to have the ability to have security tags fitted.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
9 Spill Box	Security	If there is an access ladder on the tanker, there is a requirement for the spill box to be sealed. The method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel.		X
	Size of box	Size to suit.	X	X
	Lids	One Lid or two split lids hinged and lockable dependant on the size of manway with the ability to have security tag fitted from ground level.	X	X
	Drains	2 No. 1" with plastic extension below chassis level.	X	X
10 Top Manway				X
	Security	If there is an access ladder on the tanker, there is a requirement for the top manway to be sealed. Unless incorporated with a spill box, the method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel non-pressure.	X	X
	Neck-ring	Profiled positioned @ centre top.	X	X
	Size of manway	300mm or 500mm round.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (sweet white rubber).	X	X
	No of fasteners	Dependent on type of lid fitted.	X	
11 Rear Cabinet				X
	Full material description	As per customers requirement.		X
	Finish	As per customers requirement.		X
	Type	As per customers requirement but must have rear doors with the ability to have security tag fitted from the ground.	X	X
	Special features	Switchable interior lamp provided. Ability to house sample box as per customer requirements.	X	X
12 Side Cabinet				X
	Full material description	As per customers requirement.		X
	Finish	As per customers requirement.		X
	Type	As per customers requirement but must have rear doors with the ability to have security tag fitting.	X	X
	Special features	Switchable interior lamp provided.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
13 Low level Manway				X
	Full material description	304L stainless steel.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security, including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	X
		Jumper hose provided to CIP line for cleaning.	X	X
		Must be designed with no water traps in the pipe work to ensure complete drainage of pipe work and sample valve.	X	X
		Must allow for proper cleaning during CIP process.	X	
	Seal	Hygienic Food Grade Seal. Easy clean. (EPDM seal) not sweet white wrap round seal.	X	X
	Security	All manways to have means of security tag fitting from the ground.	X	X
14 Low level Manway		Rear Fitting Only		X
	Full material description	304L stainless steel. Rear Dome.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security, including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	X
		Jumper hose provided to CIP line for cleaning.	X	X
		Must be designed with no water traps in the pipe work to ensure complete drainage of pipe work and sample valve.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (EPDM seal) not sweet white wrap round seal	X	X
	Security	All manways to have means of security tag fitting from the ground.	X	X
Note: this configuration significantly reduces the ability to carry out any visual inspection of the front compartment.				

			Minimum Allowable Standard	Customer Options/ Preference
<i>15 Breather Line</i>			X	
	Full material description	304L stainless steel.	X	X
	Diameter	Suitable size to suit pumped flow rates including unload.	X	X
	Number of Valves	None. Breather line fitted with 2" RJT blank cap on the inside of manway lid.	X	X
	Type	2" pneumatic operated from the ground.	X	X
	Pipe work	Size to suit the flow rate from flash vacuum pad neck, taken down and terminating at bearer level, pointing downwards with an open end.	X	X
	Foot and Mouth Filter	Provision to be provided for future fitting of Foot and Mouth Filter.	X	
<i>16 Mountings</i>			X	
	Full material description	As per customer requirements.	X	X
	Type	As per customer requirements.	X	X
	Securing Points	To suit manufacturer's requirements.	X	X
	Finish	Descaled.	X	X
<i>17 Vacuum Line</i>			X	
	Full material description	304L stainless steel.	X	X
	Diameter	1.5" minimum requirement.	X	X
	No of Valves	2.	X	X
	Type of Valve	1 No. 1.5" pneumatically actuated butterfly valve at low level adjacent to exhauster isolating valve when over spill occurs and on CIP.	X	X
	Wash Connection	20mm ball valve and 20mm hose tail adjacent to the exhauster isolating valve on exhauster side.	X	
	Pipework	2" pipework taken down near side from manway of tank into AEV top valve. All pipework connection to have the ability to have security tag fitting.	X	
	AEV Pipework	T connection off vacuum horizontal line fitted with 2" pipework and connected to probe chamber, outlet side of probe chamber taken to D140 via exhauster isolation valve.	X	
		Two over spill probes fitted, one in vertical vacuum line at high level and one in probe chamber both interconnected to control box in cab.	X	

			Minimum Allowable Standard	Customer Options/ Preference
<i>18 CIP</i>			X	
	Full material description	304L stainless steel.	X	
	No of spray balls/spinners	Suitable number of spray balls or spinners to provide a suitable CIP.	X	X
	Manifold	Each transpray manifold with 2" pipework to customer specifications.	X	X
	No of Valves	1.	X	X
	Valve Description	2" pneumatically actuated butterfly valve.	X	X
	Security	All pipework connections to have the ability to have security tag fitting.	X	X
<i>19 Outlet pipe</i>			X	
	Full material description	304L stainless steel.	X	X
	Diameter	3" connection.	X	X
	No of Connections	1.	X	X
	Type of Connections	Slipper type.	X	X
	Position	Bottom rear of tank into rear cabinet.2	X	X
	Fast Dump	3" fitted between outlet and sump box.	X	X
<i>20 Side access ladder</i>		If required.		X
	Full material description	Stainless steel or aluminium above nearside side-guard fixed to spill box. Signage stating, "No Access - Authorised personnel only." to be placed in front of ladder.		X
	Quantity	1No.		X
	Finish	Polished or powder coated.		X
<i>21 Manway Access Platform</i>				X
	Full material description	Aluminium grating profiled to front dome and supported on stainless steel brackets.304L Stainless steel.	X	X
	Handrail	Aluminium tubular covering two sides of the platform, open for access from the ladder.	X	X
	Position	On front dome.	X	X
<i>22 Ladder</i>			X	
	Full material description	Aluminium tube.	X	X
	Position	Nearside or Offside of platform determined by position of manway lid and chassis / cab equipment.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
23 Hose Storage				X
	Security	The hose needs to be fully enclosed with any inspection hatches sealable.	X	
	Full material description	304 stainless steel, aluminium or material of comparable strength.	X	X
		1 no.	X	X
		Size as per Tank Manufactures design.	X	X
		Position as per requirement to tank design.	X	X
24 Hose	Make	Food grade.	X	X
		Length as per customers requirement.	X	X
		Hose End Filter and Blanking Cap. Size as per customer requirements.	X	X
25 Sample Cabinet				X
	Full material description	304L stainless steel.	X	X
	Type	Stainless steel cabinet with lift up door, mounted at rear offside large enough to accept sample box with means of security tag fitting.	X	X
26 Compressor / Exhauster			X	
	Compressor / Exhauster	As per customers requirement. Suggested D140.	X	X
	Foot and Mouth point	Provision to be made for the fitting of Foot and Mouth Filter.	X	
27 Hydraulic Drive	Hydraulic Drive	As per customers requirement. Suggested suitable drive system with solenoid stop / start control fitted with handbrake interlock.	X	X
28 Certification	Hydraulic Test & Certification	As Per customers requirement.	X	
29 Cladding Stainless Steel			X	X
	Full material description	0.7mm 304 stainless steel.		X
	External finish	As per customers requirement.		X
		Sheets overlapped, bands at front & rear dome.		X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.	X	X
30 Cladding GRP			X	X
	Full material description	Glass Reinforced Plastic.		X
	External finish	White impregnated or coloured to suit customers requirement.		X
		Sheets overlapped and sealed.	X	X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.		X

			Minimum Allowable Standard	Customer Options/ Preference
31 Type of insulation			X	
	Full material description	Polystyrene on tank, fibreglass on domes.	X	X
	Thickness of insulation	Sufficient to ensure temperature does not increase any more than half a degree in 24hrs as per BS 3441 (1995).	X	
32 GRP Domes		White impregnated or coloured to suit customer requirements.	X	X
33 Sealing Points		All lid and door locking points to incorporate holes to accept appropriate sealing tags that can be carried out at ground level.	X	X
34 Side-guards			X	
	Full material description	Sufficient to Whole Vehicle Type approval.	X	X
	No of Rails	Sufficient to comply with Whole Vehicle Type approval.	X	X
35 Mudguards		Spray suppression.	X	X
36 Lighting		All lighting to conform to Whole Vehicle Type approval.	X	
37 Rear Bumper		Must conform to Whole Vehicle Type approval.	X	X
38 Thermometer		Customer requirement.		X
39 Hub odometers		Customer requirement.		X
40 Reverse Alarm		Audible reverse alarm fitted.	X	X
41 Lubrication		Auto-lube fitted to steer axle and lift axle grease points if fitted.		X
42 Shipping Hooks		Stainless steel / Mild Steel.		X
43 Painting Mild steel parts			X	
	Paint make	Customer option.		X
	Grade	Customer option.		X
	Colours	Your fleet colour.		X
44 Extras		Spanners supplied should be suitable for the pipework fitted.	X	X
		CIP document holder.		X
45 Data Capture	Type	As per customers requirement and design.	X	X

2. ATMOSPHERIC PUMP LOADING / DISCHARGE RIGID / ARTICULATED MILK COLLECTION TANKER

		Code of Practice Standard	Minimum Allowable Standard	Customer Options/ Preference
<i>1 Capacity</i>		As per customers requirement +/- 1% ullage.	X	
<i>2 Test Pressure</i>		Minimum 5psi Hydraulic test pressure.	X	X
		Working pressure Atmospheric.	X	
<i>3 General Dimensions</i>		To operate at customers requirement.	X	X
		Length as per current Road use Regulations.	X	X
		Height as per customer requirement but must be within current Road Use Regulations.	X	X
		Slope to Rear 1.5°.	X	X
<i>4 Barrel</i>			X	
	Full Material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm Minimum.	X	X
	Barrel type	As per customers requirement.	X	X
	Internal finish	Welds ground and polished to 2B surface finish as per BS3441.	X	
<i>5 Baffle</i>	Full material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm minimum.	X	X
	No of baffles	1 No. (Preferred).	X	X
	Baffle features	Adequate cut out for access to both compartments.	X	X
		Bottom cut out for drainage.	X	X
	Side Drain Holes	Yes @ 3 & 9 o'clock.	X	X
	Cleaning Rings	3mm 304L stainless steel or other Food Grade Steel of comparable strength with top and bottom 3/4" test sockets, PVC bottom catch tube.	X	X
<i>6 Dished Ends</i>	Full material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm.	X	X
<i>7 Pipe Work and Connections.</i>	Full material description	304 stainless steel.	X	X
		All Fittings to be RJT. Size as per design / customer requirement. All external pipework connections to have the ability to have security tags fitted.	X	X
<i>8 Milk Pump</i>			X	
	Full material description	304 stainless steel.	X	X
	Type	As per customers requirement.	X	X
<i>9 Pressure / Vacuum Relief</i>			X	
	No. of relief valves	1 No. Flash-Vacuum vent valve.	X	X
		1 x 2.5" pressure relief valve fitted to man-lid.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
<i>10 Spill Box</i>	Security	If there is an access ladder on the tanker, there is a requirement for the spill box to be sealed. The method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel.		X
	Size of box	Suitable size to gain access.	X	X
	Lids	One lid or two split lids hinged and dependant on the size of manway with the ability to have security tag fitting from ground level.	X	X
<i>11 Top Manway</i>				X
	Security	If there is an access ladder on the tanker, there is a requirement for the top manway to be sealed. Unless incorporated with a spill box, the method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel non-pressure.	X	X
	Neck-ring	Profiled positioned @ centre top.	X	X
	Size of manway	300mm or 500mm round.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (sweet white rubber). Not wrap round type.	X	X
	No of fasteners	Dependent on type of lid fitted.	X	X
	Top vent	2" pneumatic activated vent operated from ground level.	X	X
<i>12 Rear Cabinet</i>				X
	Full material description	As per customers requirement.		X
	Finish	As per customers requirement.		X
	Type	As per customers requirement but must have rear doors with means of security tag fitting from the ground.	X	X
	Special features	Switchable interior lamp provided.	X	X
<i>13 Side Cabinet</i>				X
	Full material description	As per customers requirement.		X
	Finish	As per customers requirement.		X
	Type	As per customers requirement but must have rear doors with means of security tag fitting from the ground.	X	X
	Special features	Switchable interior lamp provided.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
<i>14 Low level Manway</i>				X
	Full material description	304L Stainless Steel.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	X
		Jumper hose provided to CIP line for cleaning.	X	X
		Must be designed with no water traps in the pipe work to ensure drainage of pipe work and sample valve.	X	
		Must allow for proper cleaning during CIP process.	X	
	Seal	Hygienic Food Grade Seal. Easy clean. (EPDM seal). Not sweet white wrap round seal.	X	X
	Top vent	2" Pneumatically operated valve to top neck, sprung-open, closes with roller switch to rear door.	X	X
	Security	All manways to have means of security tag fitting from the ground.	X	X
<i>15 Low level Manway</i>		Rear Fitting Only		X
	Full material description	304L stainless steel. Rear Dome.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	X
		Jumper hose provided to CIP line for cleaning.	X	X
		Must be designed with no water traps in the pipe work to ensure drainage of pipe work and sample valve.		
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (EPDM seal) Not sweet white wrap round seal.	X	X
	Top vent	2" Pneumatically operated valve to top neck, sprung-open, closes with roller switch to rear door.	X	X
	Rear Cabinet	Stainless steel or GRP cabinet containing low man-lid, outlet and CIP inlet, with appropriate means of security.	X	X
Note: this configuration significantly reduces the ability to carry out any visual inspection of the front compartment				

			Minimum Allowable Standard	Customer Options/ Preference
<i>16 Breather Line</i>	Fitted with 14 & 15 above.		X	
	Full material description	Stainless steel.	X	
	Diameter	2".	X	X
	Number of Valves	1.	X	X
	Type	2" Pneumatically operated from the ground.	X	X
	Pipe work	Size to suit the flow rate from flash vacuum pad neck, taken down and terminating at bearer level, pointing downwards with an open end.	X	X
	Foot and Mouth Filter	Provision to be provided for future fitting of Foot and Mouth Filter.	X	
<i>17 Mountings</i>	Full material description	As per customer requirements.	X	X
	Type	As per customer requirements.	X	X
	Securing Points	To suit manufacturers requirements.	X	X
	Finish	Descaled.	X	X
<i>18 Stiffening Rings</i>	Full material description	304L stainless steel or equivalent in other material of similar strength.	X	
	Total No. of rings	Sufficient to comply with tank design.	X	X
	Cradle Supports	304 stainless steel.	X	X
<i>19 CIP</i>		Yes.	X	
	Full material description	304 stainless steel.	X	X
	Type	Permanently fixed spray balls (removable by "C" clips) or spinners.	X	X
	No. of spray balls/spinners	Suitable number of spray balls or spinners to provide a suitable CIP.	X	X
	Diameter	2" pipe reduced to 1½" @ spray balls.	X	X
	Fitting	2 x 2" RJT male connections fitted centrally to top of tank. All pipework connections to have the ability to have security tag fitted.	X	X
	Inlet location	In rear cabinet. Valve is 2" manual RJT male/male thread with blank cap and chain.	X	X
	CIP Flow Rate & Required Pressure	Flow Rate and required pressure to be indicated next to CIP inlet connection.	X	
<i>20 Side access ladder</i>		If required.		X
	Full material description	Stainless steel or aluminium of equal strength above nearside side-guard fixed to spill box. Signage stating, "No Access - Authorised personnel only." to be placed in front of ladder.		X
	Quantity	1No.		X
	Finish	Polished or powder coated.		X
<i>21 AEV Breather Line</i>	Full material description	304L stainless steel.		X
	Position	On top of AEV as per manufactures design.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
22 Hose Storage	Security	The hose needs to be fully enclosed with any inspection hatches sealable.	X	
	Full material description	If required.		X
		304 stainless steel or aluminium.	X	X
		1No.	X	X
		Size as per Tank Manufactures design.	X	X
		Position as per requirement to tank design.	X	X
23 Hose	Make	Food grade.	X	X
		Length as per customers requirement.	X	X
		Hose End Filter and Blanking Cap. Size as per customer requirements.	X	X
24 Cladding Stainless Steel			X	X
	Full material description	0.7mm 304 stainless steel.		X
	External finish	As per customers requirement.		X
		Sheets overlapped, bands at front & rear dome.		X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.	X	X
25 Cladding GRP			X	X
	Full material description	Glass Reinforced Plastic.		X
	External finish	White impregnated or coloured to suit customers requirement.		X
		Sheets overlapped and sealed.	X	X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.		X
26 Type of insulation			X	
	Full material description	Polystyrene on tank, fibreglass on domes.	X	X
	Thickness of insulation	Sufficient to ensure temperature does not increase any more than half a degree in 24hrs as per BS 3441 (1995).	X	
27 GRP Domes		White impregnated or coloured to suit customer requirements.	X	X
28 Sealing Points		All lid and door locking points to incorporate holes to accept appropriate sealing tags that can be carried out at ground level.	X	X
29 Side-guards			X	
	Full material description	As per customers requirement.	X	X
	No of Rails	Sufficient to comply with current Whole Vehicle Type Approval.	X	X
30 Mudguards		Spray suppression to comply with current legislation.	X	X
31 Lighting		All lighting to comply with current Whole Vehicle Type Approval.	X	

			Minimum Allowable Standard	Customer Options/ Preference
32 Rear Bumper		Must conform to comply with current Whole Vehicle Type Approval.	X	X
33 Thermometer		Customer Requirement.		X
34 Hub odometers		Customer Requirement.		X
35 Reverse Alarm		Audible reverse alarm fitted	X	X
36 Lubrication		Auto-lube fitted to steer axle and lift axle grease points if fitted.		X
37 Shipping Hooks		Stainless steel / Mild Steel.		X
38 Painting Mild steel parts			X	
	Paint make	Customer option.		X
	Grade	Customer option.		X
	Colours	Your fleet colour.		X
39 Extras		Spanners supplied should be suitable for the pipework fitted.	X	X
		CIP document holder.		X
40 Data Capture System	Type	As Per customers requirement and design.	X	X
41 Sample Box Cabinet.		Provision to be made to include a Sample Box storage shelf or Cabinet to hold the standard size sample box and have the ability to have security tag fitted.	X	X

3. APPROVED RELOAD / BULK TANKER

		Code of Practice Standard	Minimum Allowable Standard	Customer Options/ Preference
1 Capacity		30,000-litres +/- 1% ullage. (Removed 38,000).	X	X
		Capable of operating at 44 tonne GVW.	X	
2 Test Pressure		Minimum 5psi Hydraulic test pressure.	X	X
		Working pressure Atmospheric.	X	
3 Tare Weight		Target Weight of 5.8 tonnes.	X	X
		Length as per current Road use Regulations.	X	X
		Height as per customer requirement but must be within current Road use Regulations.	X	X
4 Barrel	Full Material description	304 stainless steel Minimum or other Food Grade Steel of comparable strength.	X	
	Thickness	2.5mm Minimum.	X	X
	Barrel type	Preferred Straight cylindrical.	X	X
	Internal finish	Welds ground and polished to 2B surface finish as per BS3441.	X	
5 Baffle	Full material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm.	X	X
	No of baffles	1 No. (Preferred).	X	X
	Baffle features	Adequate cut out for access to both compartments.	X	X
		Bottom cut out for drainage.	X	X
	Side Drain Holes	Yes @ 3 & 9 o'clock.	X	X
Cleaning Rings	3mm 304L stainless steel or other Food Grade Steel of comparable strength with top and bottom 3/4" test sockets, PVC bottom catch tube.	X	X	
6 Dished Ends	Full material description	304 stainless steel or other Food Grade Steel of comparable strength.	X	
	Thickness	3mm.	X	X
7 Top Manway				X
	Security	If there is an access ladder on the tanker, there is a requirement for the top manway to be sealed. Unless incorporated with a spill box, the method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel non-pressure.	X	X
	Neck-ring	Profiled positioned @ centre top.	X	
	Size of manway	300mm or 500mm round.	X	X
	Pressure Relief Valve	3mm stainless steel pressure relief valve.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (sweet white rubber).	X	X
	No of fasteners	Dependent on type of lid fitted.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
<i>8 Low level Manway</i>			X	X
	Full material description	304L stainless steel.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	
		Must be designed with no water traps in the pipe work to ensure complete drainage of pipe work and sample valve.	X	
		Jumper hose provided to CIP line for cleaning.	X	
		Must allow for proper cleaning during CIP process.	X	
	Seal	Hygienic Food Grade Seal. Easy clean. (EDPM seal).	X	X
	Top vent	2" Manually operated valve to top neck, operated from ground level.	X	X
	Security	All manways to have means of security tag fitting from the ground.	X	X
<i>9 Low level Manway</i>		Rear Fitting Only		
	Full material description	304L stainless steel. Rear Dome.	X	X
	No of fasteners	Dependent on type of lid fitted. Oval or 500mm round.	X	X
	Size of manway	20" x 16". Oval or 500mm round.	X	X
	Sample valve – anti tamper	Constructed of stainless steel, manually or pneumatically operated fitted with access to the main vessel via manway that must be able to provide a full representative load sample and has appropriate means of security including hygienic CIP flow or other routine cleaning process. Sample point has appropriate means of security.	X	X
		Jumper hose provided to CIP line for cleaning.	X	X
	Position	Must allow for maximum visibility and access of internal areas of the tank.	X	X
	Seal	Hygienic Food Grade Seal. Easy clean. (EPDM seal). Not sweet white wrap round.	X	X
	Top vent	2" Manually operated valve to top neck, sprung-open, closes with roller switch to rear door.	X	X
	Rear Cabinet	S/Steel or GRP cabinet containing low man-lid, outlet and CIP inlet, with appropriate means of security.	X	X

Note: this configuration significantly reduces the ability to carry out any visual inspection of the front compartment

			Minimum Allowable Standard	Customer Options/ Preference
<i>10 Breather Line</i>	Fitted with 8 & 9 above.		X	
	Full material description	Stainless steel.	X	
	Diameter	2".	X	X
	Number of Valves	1.	X	X
	Type	2" Pneumatically operated from the ground.	X	X
	Pipe work	2" from flash vacuum pad neck, taken down and terminating at bearer level, pointing downwards with an open end.	X	X
	Foot and Mouth Filter	Provision to be provided for future fitting of Foot and Mouth Filter.	X	
<i>11 Spill Box</i>	Security	If there is an access ladder on the tanker, there is a requirement for the spill box to be sealed. The method of sealing needs to be visible from ground level.	X	
	Full material description	304L stainless steel.	X	X
	Size of box	Sized to accept Flash Vacuum Valve vent pad, breather line valve and pressure relief valve.	X	X
	Rain Drain	Single 2" rain drain.	X	X
	Lids	Two split lids hinged and the ability to fit a security tag from the ground.	X	X
<i>12 Stiffening Rings</i>	Full material description	304L stainless steel or other Food Grade Steel of comparable strength.	X	
	Total No. of rings	Sufficient to comply with tank design.	X	X
	Cradle Supports	304 stainless steel.	X	X
<i>13 CIP</i>		Yes	X	
	Full material description	304 stainless steel.	X	X
	Type	Permanently fixed spray balls or spinners (removable by "C" clip fixing).	X	X
	No. of spray balls/spinners	Suitable number of spray balls or spinners to provide a suitable CIP.	X	X
	Diameter	2" pipe reduced to 1½" @ spray balls.	X	X
	Fitting	2 x 2" RJT male connections fitted centrally to top of tank. All pipework connections to have the ability to security tag fitted.	X	X
	Inlet location	In rear cabinet. Valve is 2" manual RJT male/male thread with blank cap and chain.	X	X
	CIP Flow Rate & Required Pressure.	Flow Rate and required pressure to be indicated next to CIP inlet connection.	X	

			Minimum Allowable Standard	Customer Options/ Preference
<i>14 External Foot Valve</i>	Full material description	304L stainless steel.	X	X
	Diameter	3".	X	X
	No of valves	One.	X	
	Make	3" RJT.	X	X
	Model	3" butterfly c/w locking handle.	X	X
	Special features	Operating handle extended to rear or side cabinet.	X	X
	Method of operation	Manual.	X	X
	Outlet Pipe work.	3" outlet pipe taken from foot valve and terminated in rear cabinet with external outlet valve.	X	X
<i>15 External valves</i>	Full material description	4L stainless steel.	X	
	No of valves	One.	X	X
	Model	3" butterfly.	X	X
	Special features	Terminate inside cabinet.	X	X
	Method of operation	Manual.	X	X
	Diameter	3" RJT male thread and 3" Blanking Cap.	X	X
	Reducer	Fitted with a 3"/2.5" or 3"/2" adaptor and terminating in a 2.5" or 2" blank cap c/w s/s chain as per customer requirement.	X	X
<i>16 Trestle support</i>	Full material description	Optional Customer preference.		X
<i>17 Rims</i>			X	
	Material	Optional.		X
	Size	Optional.		X
	Finish	Optional.		X
	Dish	Optional.		X
<i>18 Tyres</i>	Size	Optional.	X	X
	Make	Optional.		X
	Model	Optional.		X
<i>19 Running Gear</i>			X	
	Make	Optional.	X	X
	Model	Air suspension.	X	
	No of axles	Three.	X	
	Lift options	Optional.	X	X
	Steer options	Optional.	X	X
	Type of brakes	Optional.	X	X
	ABS	Yes.	X	
	Type	Optional.	X	X
	Load sensing	Yes.	X	X
<i>20 Running gear sub frame</i>			X	
	Full material description	As per customer requirement and tank design.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
21 Ladder Bar	Full material description	Stainless steel 304 polished finish.	X	X
	Type	Ladder fixing point on nearside of top spill box.	X	
22 Side access ladder		If required.		X
	Full material description	Stainless Steel or Aluminium of equal strength, above nearside side-guard. Signage stating "No Access - Authorised personnel only" to be placed in front of ladder.		X
	Quantity	1No.		X
	Finish	Polished or powder coated.		X
23 Hose Storage		If required. If in use it must be enclosed and secured with any inspection hatches sealable.		X
24a Cladding Stainless Steel			X	
	Full material description	0.7mm 304 stainless steel.		X
	External finish	Optional.		X
		Sheets overlapped, bands at front & rear dome.		X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.	X	X
24b Cladding GRP	Full material description	Glass Reinforced Plastic.		X
	External finish	White impregnated or coloured to suit customers requirement.		X
		Sheets overlapped and sealed.	X	X
	Special features	Panel behind ladder relieved to give 200mm Toe - clearance minimum.		X
25 Type of insulation			X	
	Full material description	Polystyrene on tank, fibreglass on domes.	X	X
	Thickness of insulation	Sufficient to ensure temperature does not increase any more than half a degree in 24hrs as per BS 3441 (1995).	X	
26 GRP Domes		White impregnated or coloured to suit customer requirements.	X	X
27 Sealing Points		All lid and door locking points to incorporate holes to accept appropriate sealing tags which can be fitted from the ground.	X	X
28 Side-guards			X	
	Full material description	As per customers requirement.	X	X
	No of Rails	Sufficient to comply with Whole Vehicle Type approval.	X	X

			Minimum Allowable Standard	Customer Options/ Preference
<i>29 Landing legs</i>			X	
	Full material description	Mild steel.	X	X
	Speed	Two speed.	X	X
	Type of landing leg	Customers specification.	X	X
	Feet type	Customers specification.	X	X
<i>30 Rubbing Plate</i>			X	
	Full material description	Heavy duty mild steel.	X	
	King pin	Customers specification.	X	X
	Weld or bolt in	Customers specification.	X	X
	Make	Customers specification.	X	X
	Diameter	2" Kingpin.	X	
<i>31 Mudguards</i>		Spray suppression to meet current legislation.	X	X
<i>32 Lighting</i>			X	
		All lighting to conform to current Whole Vehicle Type approval.	X	
<i>33 Rear Bumper</i>		Must conform to current Whole Vehicle Type Approval.	X	X
<i>34 Thermometer</i>		Customer Requirement.		X
<i>35 Hub odometer</i>		Customer Requirement.		X
<i>36 External Brake</i>		To meet Whole Vehicle Type Approval.	X	X
<i>37 Reverse Alarm</i>		Audible reverse alarm to meet Whole Vehicle Type Approval.	X	X
<i>38 Lubrication</i>		Auto-lube fitted to steer axle and lift axle grease points if fitted.		X
<i>39 Shipping Hooks</i>		Stainless steel / mild steel.		X
<i>40 Painting Mild steel parts</i>			X	
	Paint make	Customer option.		X
	Grade	Customer option.		X
	Colours	Customer specified.		X
<i>41 Extras</i>		Spanners supplied to suit pipework fitted.	X	X
		CIP document holder		X