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SPECIFICATIONS

407 INSULATED TRIDEM SEMI

(CRUDE)

HS344010A7W

2015 MODEL YEAR



1. **Model: HS34401OA7W**

- Aluminum insulated semi trailer tank for crude products
- Three (3) axles

2. **Regulations:**

- TC407, 25 PSI MAWP
- CSA B620
- Conforms to all applicable Canadian Motor Vehicle Safety standards & regulations

3. **Service:**

- Intended for crude oil & condensate hauling

4. **Capacity:**

- 44,000 liters (9,679 imperial gallons)
- Expansion 3%

5. **Compartments:**

- Standard is 1 compartment 44,000 liter
- Option is 1 compartment with divider (approx one third, two third split)

6. **Axle Spacing:**

- Tridem 1.52 m (60 inch)

7. **Coupler Height:**

- 1.27 m (50 inch)

8. **Slope of Tank:**

- 127 mm (5 inch) on the length of the tank (toward trailer rear)

9. **Shape:**

- Round, 84 inch diameter; ASME pressure heads

10. **Shell:**

- Material:
- Aluminum 5454 H32
- Mill finish
- 6 mm (.236 inch) thickness



11. **Bulkheads:**

- (2) end bulkheads flanged & dished to ASME code
- material aluminum 5454-0
- mill finish
- 9.5 mm (.375 inch) thickness

12. **Baffles:**

- Combination of internal T ring supports & dished, flangeless baffles that are fully welded both sides. Baffles have 20 inch flared manways, large mouseholes & sides & top vent drain holes – welding spatter & all sharp edges removed.
- Material:
- aluminum 5454-0
- mill finish
- 9.5 mm (.375 inch) thickness

13. **Ring Stiffeners:**

- Aluminum extrusions
- 6.6 mm (.250 inch) thickness
- continuous weld
- hole at bottom & top for moisture drain
- minimum of two (2) ring stiffeners over king pin plate

14. **Clean Out Nipples:**

- 102 mm (4 inch) nominal diameter in each section separated by a baffle
- with brass cap

15. **Spill Box:**

- Aluminum construction with integrated overturn protection
- Dimensions are 40 inch wide x 49 inch long x 10 inch high

16. **Walkway:**

- Aluminum Safety Grip
- 10 inch wide around the (4) spill box sides
- 20 inch wide to the clean-outs

17. **Drains:**

- The spillbox is drained through PVC pipe on curbside

18. **Overturn Protection:**

- Located at quarter & three quarter barrel length



19. **Manholes:**

- Knappco LM1110, 40 PSI, with Buna gaskets
- 20 inch diameter
- aluminum domed construction with 6 cam arm latching closures
- lids open towards tank front

20. **Overfill Protection System:**

- Flotech five wire
- Receptacles are one (1) set of SAE J560 7-way, female thermistor & optic sockets
- located in curbside enclosure with an additional set of receptacles in an aluminum enclosure on the driver`s side.
- Ground Hog studs & ball grounds included with receptacles

21. **Venting:**

- 90 mm (3 and a half inch) aluminum schedule 40 pipe that runs internally through tank, from burp box to driver`s side exit, into 3 inch sump pot and air emergency tee valve for vent lines.
- Vent lines are reduced to 60 mm (two and three eighths inch) aluminum pipe, running both forward and to rear of tank terminating in ball valves & adapters. Front portion of vent line runs to landing gear area turned outward at 45 degrees.
- Vent master switch prevents opening of emergency valves until placed in open position.
- Relief valve is Fort Vale F29
- Combination 30 PSI pressure relief with 10 inch Hg vacuum breaker
- Compound gauge with 60 PSI x 30 inch Hg vacuum readings located in 13 inch cabinet on front, driver`s side.

22. **Discharge System:**

- Dixon Bayco 5204 NGC
- 100 mm (4 inch) aluminum openable load / unload adaptor with 4500 cap ring, sight glass & a 4 inch male adapter with cap at curb side in front of the tridem suspension.
- 4 inch steel gate valve installed upstream of API adapter
- sch 40 line tee`d to driver`s side and fitted with 4 inch steel gate valve, male adapter & cap.
- Non-asbestos mounting gaskets at all locations



23. **Emergency Valves:**

- Betts 4 inch model EV46435 ALB, Victaulic outlet connection with Buna flat seat disc
- Pneumatic operation
- Individual selectors located in enclosure cabinet over driver`s side front fender
- 4 inch aluminum sump at rear of compartment and in front bulkhead
- One (1) emergency shut-off valve at rear curbside on fender bracket
- 6.6 mm (quarter inch) nylon tubing

24. **Piping: Internal & External:**

- 115 mm (4 and a half inch) OD, schedule 40 piping
- 4 inch pipe size bolted TTMA flanges & non-asbestos gaskets
- cast aluminum sch40 elbows & tee`s as necessary
- internal piping anchored using half inch stainless steel u-bolts with double nuts

25. **Pump-off Lines:**

- Internal from rear of compartment offset to front head on driver`s side
- 115 mm (4 and a half inch) aluminum sch40 piping with cast elbow into rear trough
- front aluminum sump pot assembly for air emergency valve elbowed to centerline
- stub line also provided in front head offset to curbside
- pump-off lines are manifolded together with a skyward 4 inch male adapter and cap

26. **Level Gauges:**

- (2) Two Titan TD80 level gauges - one in each compartment with (1) one Finch display
- (2) Two driver`s side Rochester "Roughrider" gauges – one in each compartment

27. **Insulation:**

- Fibreglass material
- 150 mm (6 inch) thickness compressed to 4 inch
- all around tank
- shutting plate to retain insulation underneath the barrel

28. **Sheeting:**

- Aluminum 5032-H32 material
- 1220 mm (48 inch) wide; 18 gauge
- jacket sheets overlap each other
- end sheets hooked to retainer and screwed to tank structure
- assembled jacket caps



UNDERCARRIAGE

NOTE: All pneumatic suspension bags are equipped with an isolation valve in case of failure.

29. Frame:

- Steel construction, formed C section, combination of T-100 & H.S.L.A.
- 16 mm (five eighths) zinc plated huck bolt attachment to tank sills
- Provision for base components of Yak Empty Air Assist lift for future installation

30. Tridem Suspension:

- Model: Hendrickson INTRAAX AAT25K, 14 inch ride height, 25,000 lb capacity
- pneumatic suspension with dump control – 60” axle spread
- bolted to chassis frame

31. Axles:

- Welded spiders
- 196 cm (77 and a half inch) track
- ten spline camshafts with cam enclosures
- interchangeable inner & outer bearings HM518445
- Walther Dura-Lite ten 910) stud, hub piloted hubs, ADI
- outboard Centrifuse brake drums
- Pro-torque nuts
- Tiremax ready

32. Brakes:

- Compliant with CMVSS-121
- 420 mm x 180 mm (16 and a half x 7 inch) long life quick change brake shoes
- ABS Meritor / Wabco 2S / 2M system
- Heavy duty dust shields
- brake boosters TSE 3030 spring brakes
- Haldex automatic slack adjusters
- brake stroke indicators
- air brake lines color coded (SAE standard)
- cable actuated air tank drain valves
- aluminum air tanks

33. Tires and Wheels:

- twelve (12) Michelin XZE-2 11R x 22.5 14 ply (G) with 8.25 x 22.5 mill finish aluminum wheels.



34. **Hubodometer:**

- Engler Datatrac
- metric recording (km)
- mounted on rear axle, curb side

35. **Kingpin Plate:**

- 86 mm (3 and three eighths) high, heavy-duty assembly
- heavy-duty steel apron plate of 9.5 mm (3 eighths)
- semi trailer kingpin of 50 mm (2 inch)
- adjustable in 76 mm (3 inch) increments
- bolted installation

36. **Landing Gear:**

- Holland Mark V 200,000 lbs
- 2-speed with non-removable roadside handle
- square weight saver skid feet
- bolted installation

37. **Fenders:**

- Stainles steel contoured trailer fenders
- one set, (2) two from front of tank to the landing gear support brackets, over tractor tires.
- Six (6) half round, single fenders over each set of trailer dual tires
- installed on rubber mounting washers
- bolted installation

38. **Mudguard**

- installed at front and rear of tridem fenders & at rear of front fenders
- includes anti-sail brackets
- additional mudguard package at landing gear & in front of trailer suspension

39. **Ladder:**

- Installed on curbside, near the manhole
- top of ladder shaped to use as handrail
- 32 mm (1 and one quarter inch) diameter, sch40
- top steps, 250 mm (10 inch) & 114 mm (4 inch) x 406 mm (16 inch)
- steps spaced out by 305 mm (12 inch)
- ladder at the same height as the spill box
- first platform step at 50.8 cm (20 inch) from ground level
- bolted installation



40. **Cabinet:**

- Three (3) aluminum enclosures for air actuators, sensor monitor & electronic gauges;
- One (1) 635 mm (25 inch) x 406 mm (16 inch) x 203 mm (8 inch) at front for actuators
- Two (2) 635 mm (25 inch) x 406 mm (16 inch) x 203 mm (8 inch); one (1) at driver`s side for additional set of receptacles, electronic float gauge read-out, dump valve & one at curbside rear fender support for sensor monitor & rack receptacles.
- All have single swing upward doors with slam lock latches, stainless hinge & bolted installation.
- (1) One 36" aluminum fittings cabinet mounted d/s

41. **Hose Tray:**

- One (1) aluminum hose storage tray
- 30 cm (12 inch) wide x 10 mm (4 inch) high x 6.1 m (20 foot) length
- attached on channel supports off tank sill, above fenders, curbside
- One (1) 5 mm (2 inch) pipe drain stub at rear, with selected mesh floor cut-outs for cleaning.

42. **Hose Support:**

- Front hose swivel bracket mounted off front dam with grease fitting

43. **Grounding Studs:**

- Three (3) brass, mounted as follows:
- Two (2) installed one on each side near bottom loading
- One (1) installed inside the spill box on the curbside

44. **Electrical System:**

- 12 volts meet CMVSS-108 requirements
- Seven (7) way female connector SAE J560B with dedicated power on blue wire for ABS
- Phillips wiring harness with rectangular see-through junction box
- Truck-Lite LED (lock ring) lighting components
- vapor proof system
- Remtec nose box with one (1) set of connectors
- rear brake, turn and tail lights are installed in aluminum boxes bolted to frame
- mid-ship markers & turn signals

45. **Placard Holder Bracket:**

- Four (4) aluminum, open face, 2-clip style holders
- bolted installation on aluminum brackets
- located on each face of trailer



46. **License Card Holder:**

- Two (2) red tubular registration & TDG holders
- mounted on driver`s side front fender

47. **Painting:**

- All steel parts are sandblasted before application of primer & paint
- primer is zinc chromate
- standard paint is Silver Metallic finish
- all aluminum parts left in natural finish
- stainless steel bolting

48. **Reflective Tape:**

- strips of 51 mm (2 inch) wide conspicuity decals installed to conform with CMVSS

49. **Lift System:**

- Yak Empty Assist lift axle system for operation while trailer is unloaded – lifts front two

50. **Documents Upon Delivery:**

- New Vehicle Information Statement (NVIS)
- TC407 compliance certificate
- tank inspection documents (PVIK) to B620
- certificate of warranty
- electrical & pneumatic diagrams