



1400 Fairchild Avenue
Kent, OH 44240



SPECIFICATIONS

MAC LTT Model ACX-9300-1-407

220 BBL Crude Oil Tank
Double Conical
One Compartment
Tandem Axle

Date: 12/3/2021
Date Revised:
Quote Number:
Year Model: 2023
Serial Number:
Sales Contact:
Reference unit:
End User:

ESTIMATED WEIGHT: 10,650 lbs. +/-3%

A General

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|-------------------------------|------------------------------------------------|
| 1 Trailer Type | Double Conical, Exterior Ring, DOT-407 Trailer |
| 2 Overall Length | 45 Feet |
| 3 Shape | Double Conical with 12" Slope to Center |
| 4 Code | DOT-407 |
| 5 Operating Pressure | 25 PSI with 45 PSI Test Pressure |
| 6 Max. Product Density | 13 lbs./ U.S. Gallon |
| 7 Max. Loading Temp. | 150° F max. Operating Temperature |
| 8 Product(s) | Compatible with Materials and Design of Tank |
| 9 Warranty | Standard Three (3) Year Limited Warranty |
| 10 Fifth Wheel Height | 49.5" |

B Barrel

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| 1 Compartment(s) | One (1) Compartment |
| 2 Capacity | 9,300 U.S. Gallons (220 BBL) +1% |
| 3 Baffle(s) | Four (4) 1/4" 5454 OT Flangeless Aluminum Baffles, with large center hole and drain, 3" holes at 9, 12, & 3 o'clock positions with Drain Tunnel at bottom. |
| 4 Shell | 5454 H32 Aluminum-Mill Finish |
| 1 Heads | 5454 O Temper Aluminum Flanged & Dished Heads-Mill Finish |
| 7 Weld Finish | W-2 inside. Longitudinal and circumferential seams are lightly ground to remove sharp weld points and high spots. Sharp edges around nozzles, manhole and sump are ground to produce a radius. Scabs, slivers and slag are removed. |
| 8 Manway(s) | One (1) 20" DOT-407 Aluminum Manway Assembly located near center of barrel inside of spilldam area. Manhole collar cut flush with shell. Buna N (Nitrile) Gasket in cover. |
| 9 Cleanout(s) | Four (4) 3" aluminum sumps with blind flanges evenly spaced on top center line of tank, outboard of baffles. Roll over clean outs at 3 and 9 O'clock on both roadside and curbside. |
| 10 Liner | Internal Spray-on Liner suitable for Crude, Brine Water, Septic, Leachate, and Etc. Mac LTT, Inc does not install or warrant liner |

C Structure

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| 1 Design | Ring & Bolster Style |
| 2 Reinforcing Rings | 3" wide aluminum channel rings fully welded to shell |
| 3 Frame | Aluminum structural angle frame at suspension area and upper coupler plate area. Rear frame extended for mounting cabinet. |
| 4 Cross Members | Aluminum heavy duty box style crossmembers at load bearing areas |
| 5 Overturn Protection | Heavy Duty DOT-407 Aluminum Tombstone Style around Manhole area with 1-1/4" polyethylene drain hoses on Roadside & Curbside ending at Bottom with Common Tee for Drain. |

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D Running Gear		
1	Suspension	Hendrickson Intraxx AAT25K, 25,000 lb tandem axle with standard 49" axle spacing. 5.75" diameter Hendrickson integrated axles. Galvanized Hangers and Galvanized Hanger Support Brackets.
2	Axles	Hendrickson Intraxx AAT25K-71 1/2" Track P Spindles (parallel) same inner and outer bearings.
3	Number of Axles	2
4	Hubs	Dura-Light 10 Stud Hub Piloted, 11 1/4" B.H.C.
5	Drums	Centrifuse 16 1/2" x 7", 10-Stud Outboard Mount Drums
5	Dump Valve	Manual Dump Valve with control on Roadside, near landing gear.
6	Brakes	23,000# Rating with S-Cam 16 1/2" x 7", 2.5" stroke, 3030 Chambers, and Non-Asbestos Linings
7	Slack Adjusters	Automatic
8	Glad-Hands	Standard
9	ABS System/Roll Stability	ABS - Meritor Wabco 4S/2M ABS with Roll Stability System - Wired to Blue Wire with Rear Malfunction Warning Light.
10	Suspension Frame	Aluminum Extruded Subframe with Aluminum Fender Supports.
11	Tow Hook	Install Galvanized Bolt-On Tow Hook Assembly.
12	Bumper	Heavy Duty Extruded Aluminum Bumper
13	Underride Protection	None when 12" Wheels Back Exemption Applies
E Tires/Wheels		
1	Wheels	10 Hole Hub Piloted Aluminum Wheels
2	Tires	Goodyear Marathon RSS 11R 24.5 16 PLY
3	Number of Tires	8
4	Tire Inflation	None
5	Tire Chain Holders	Install a Set of Tire Chain Holders on both Roadside and Curbside in Front of Toolbox.
F Fenders		
1	Fenders	Aluminum Contour Front and Rear with Aluminum Bolt-On Brackets
2	Mudflaps	MAC LTT Mudflaps on Rear of Front & Rear Fenders Install Small Closeout Mudflap on Front of Front Fender
G Landing Gear		
1	Landing Gear	Jost AX150 AlumiLight Landing Gear
2	Crank Location	Roadside Crank Handle Location
H Upper Fifth Wheel		
1	King Pin Plate	5/16" Upper Plate with Hubbed Kingpin. Adjustable by 3" Increments
I Ladder/Platform/Walkway		
1	Ladder(s)	Aluminum Bolt-On Ladder located on Roadside for easy access to Manhole area
2	Safety Hand Rails	Double Hand Rails outside of Main Rails
3	Platform(s)	12" Wide Aluminum Gripstrut Walkway platform for access to Manhole area.
4	Ladder Closeout	Aluminum Bolt-on Plate to prevent Ladder Access.
5	Safety Harness Rail	Tubular aluminum rail elevated around circumference of spill dam
J Cabinet(s) & Components		
1	Cabinet(s)	One (1) 24" High x 36" Wide X 18" Deep Double Door Aluminum Cabinet on Curbside. Add small aluminum catch angle to bottom of Roadside cabinet.
2	Cabinet(s)	One (1) 36" Wide x 32" High x 29" Deep Aluminum 2-door Cabinet on Roadside, forward of suspension. Install divider, slides and hardware for installation of MAC Supplied Koehler Centrifuge.
3	Cabinet(s)	One (1) 14" x 14" x 7" Aluminum Box with window mounted on roadside at landing gear to house Titan display and Discharge valve operation.
K Hose Carrier(s)		
1	Hose Carrier(s)	Two (2) Aluminum Hose Trays 16" Wide 2" High x 21' Long. Install Ball Valve drain at Rear of Each Hose Tray with Drain Hoses after Valve.
2	Hose Carrier(s) Location	One each Side Located at Rear of Trailer.

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L Pump System

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| 1 | Pump | Roper 3548MBHF17142, with Direct Coupled Hydraulic Motor with Viton Gasket
Pump to have triple lip seal and graphite bushings with a stainless steel shaft. |
| 2 | Hydraulic Lines | Two (2) Stainless Steel Lines routed above Upper Coupler to front, center of trailer terminating with NPT. |
| 3 | Hydraulic Lines | Directional Control Valve located on Roadside at landing gear and Controlable from Curbside. |
| 4 | Hydraulic Hose Bracket | Bracket at top of front bulkhead to support hydraulic hoses from tractor to trailer. |
| 5 | Platform | N/A |
| 6 | Pump Installation | Pump Installed Inverted in Landing Gear Frame. |
| 7 | Pump Inlet | See Piping. |
| 8 | Side Pump Outlet(s) | Pump outlet plumbed to Roadside and Curbside with a 3" SCH. 40 Flanged Tee. Each side of Tee equipped with a Butterfly Valve, 3" TTMA Flange x 3" Male Camlock Adapter and Dust Cap with Keeper chain.
Each side equipped with a Coupling, Stainless Steel Naturally Closed Ball Valve Oriented down. Drains to End with 1/2" Cam Adapter and 1/2" Dust Cap. |
| 9 | Rear Pump Outlet | Tee in Curbside Pump outlet with a 3" SCH. 40 Aluminum line extending up and towards the rear. Line to be equipped with a Butterfly Valve near the tee and a 3" TTMA Flange x 3" Male Camlock Adapter and Dust Cap with Keeper chain at the rear. |
| 10 | Pressure Gauge(s) | 0-60 PSI Pressure Gauges on every Vapor and Discharge Line. |

M Vapor Recovery System

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| 1 | Vent | 3.5" Vapor Valve with Aluminum Body and Viton Seals installed. Inside Spill Dam. Vent opens when Emergency Valve is opened via Air Switch. |
| 2 | Vent Piping | 3" Aluminum Pipe Down Roadside following Contour of Tank. Tee Line to both Roadside and Curbside ending with a Butterfly Valve, 3" x 2" Aluminum Adapter and 2" Aluminum Dust Cap with Keeper chain.

On Roadside Tee Line and Extend 3" SCH10 Aluminum Pipe to Rear on Roadside with 3" Metering Aluminum Butterfly Valve with Positive Shutoff Handle, 3" x 2" Aluminum Adapter and 2" Aluminum Dust Cap. |
| 3 | Pressure Gauge | 0-60 PSI Pressure Gauge on Both Sides, prior to Butterfly Valve with 1/4" Stainless Ball Valve. |

N Valving/Piping/Hose

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| 1 | Sump | One (1) 6" Aluminum Drain Pocket #SU25535AL located at bottom center |
| 2 | Emergency Valve | One (1) 6" x 4" Aluminum Air-Operated Emergency Valve with Tef-Sil Seats Flanged Outlet, Epoxy Coated, attached to sump, BETTS Model EV46466ALTS. Outlet flange oriented towards front of trailer. |
| 3 | Emergency Valve Operator | Operator for Emergency Valve Located on Roadside and Curbside at Landing Gear area. |
| 4 | Emergency Valve Closure | Emergency Closure located on Front Outrigger Roadside. |
| 5 | Piping | 4" SCH40 Aluminum pipe extended forward from Valve to area behind landing gear and attached to a 4" aluminum Cross with flanged outlets to curbside, roadside and front. Butterfly Valve installed between inlet flange of Cross and pipe. |
| 6 | Outlets | <p>Front Butterfly Valve with Handle Extension and Flange x Hose Shank fitting fastened to front outlet of Cross. Connection to Pump inlet completed with 4" Heavy Duty Chemical/Petroleum Hose.</p> <p>Roadside API Load/Unload Valve and API Dust Cap with Chain</p> <p>Curbside Two (2) Outlets on Curbside. (1) Outlet equipped with an API Load/Unload Valve and API Dust Cap with Keeper chain. (1) Outlet equipped with a Butterfly Valve, 4" TTMA Flange x 4" Male Camlock Adapter and Dust Cap with Keeper chain.
Each side equipped with a Coupling (installed at 3 or 9 o'clock in piping), Stainless Steel Naturally Closed Apollo Valve and Oriented down. Drains to End with 1/2" Cam Adapter and 1/2" Dust Cap.</p> |
| 7 | Adapter & Cap | See Piping |
| 8 | Gaskets | Viton Green Gaskets on all Flanged Connections. |
| 9 | Thermometer | Install 3" Dial Thermometer in Discharge Line Tee, prior to pump. |

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O Venting

- 1 **Pressure** One (1) 4" Flanged DOT-407 Pressure/Vacuum Relief Vent, 25 PSI MAWP, Rated at a Test Pressure of 45 PSI, Complete with a Teflon Encapsulated O-Ring and
- 2 **Vacuum** See Pressure
- 3 **Pressure Package** 3/4" Stainless Steel Pressurizing Package Consisting of a 0-60 PSI Pressure Gauge, Stainless Steel Ball Valve, Stainless Steel Chicago Coupler and Dead End. 3/4" Aluminum Coupler Installed in 3" Threaded Nipple with SST Cap

P Wiring

- 1 **Nose Box** ATA 7-Way with Circuit Breakers, Located Below the Center Line on Roadside of Front Head. Blue wired to ABS System. Second J560 7-Way
- 2 **Light System** 12 Volt LED Lighting System
Combination Side Center Turn/Marker Lights on Roadside & Curbside near Center
Three (3) Upper Clearance - Upper Clearance lights wired as Marker/Stop
- 3 **Work Light(s)** Four (4) Grote Swivel LED Floodlights with Clear Lens and 20 AMP Toggle Switch. Mounted on Curbside and Roadside Fore and Aft of Work area.
Two (2) Grote Swivel LED Floodlights with Clear Lens and 20 AMP Toggle Switch Mounted at Rear, One (1) on Curbside and One (1) on Roadside.
Two (2) LED Flood Lights Mounted on Bottom of Tank Near Discharge/Work area to illuminate the Ground Underneath the Tank at the Work area.
- 4 **Work Lights(s)** Two (2) Grote LED Perimeter Lamps, mounted at top of rear bulkhead on each side. Both lamps connected to Blue wire with common switch inside curbside cabinet.
Heat Shrink all Worklight Connections
- 5 **Light Boxes** Two (2) Three Hole Aluminum Light Boxes on the Rear of the Trailer
- 6 **Cabinet Light(s)** Install One (1) LED Strip Light in each Cabinet
- 7 **Wide-Turn Light(s)** Non-Optional
- 8 **Back Up Alarm** Install Back Up Alarm that is wired into a second 7-Way Plug. Backup Alarm on Red Pin and the Centrifuge Wired to the Blue Pin with all Work Lights to be ran off this Pin.

Q Paint/Finish

- 1 **Coatings** Suspension Hangers, Fifth Wheel Plate, and Chassis Frame are Hot Dipped Galvanized Axle and Trailing Arm Factory Painted with Soft Coat Grey.
- 2 **Corrosion Resistance** Electrolysis barrier between all dissimilar metals.

R Other/Options

- 1 **Security Seal Provisions** Seal Provisions on all Openings
- 2 **Conspicuity** DOT Required Conspicuity Reflective Striping - Discontinuous 3M Tape
- 3 **Document Holder** James King #500 Document Holder installed inside cabinet, on divider.
- 4 **Decals** Standard Safety/DOT-407 Decals
- 5 **Calibration** Theoretical Calibration Chart - 1/4" Increments
- 6 **Tank Thermometer** None-Optional
- 7 **Capacity Indicator** One (1) Titan Finch II probe with digital display mounted roadside landing gear area. Titan audio alarm horn located curbside on front fender bracket. Gauge and bypass are wired together on center pin on 7-way plug. Ground for gauge from tractor will run through brown wire on 7-way plug. Pump shut off system installed on roadside.
- 8 **Overfill Prevention System** **Install Titan Rack Control Module with Optic and Thermistor Sockets on Each Side of Trailer.**
- 9 **Static Cable** YES, 1/8" Stainless Cable from Manhole Collar to Discharge area.
- 10 **Placards** Aluminum plates with Slide-in Style Placard Holders, reachable from ground, Front on Curbside of Front Head, Rear Located on Roadside on Rear Head, Roadside and Curbside on ring near center of tank.
- 11 **PVC Tube** 6" Diameter x 12" Long PVC Tube with 6" PVC Plug installed on Curbside, forward of Cabinet.
- 12 **Dip Stick Tube** One (1) 1½" aluminum pipe (1.9" O.D.) x 18' long on curbside, closed at rear with retention pin at front.
- 13 **Static Ground Balls** Two (2) Sets of Grounding Balls at Landing Gear on Both Sides
- 14 **Wheel Chocks** Aluminum Wheel Chock Holder with two (2) Wheel Chocks installed on Roadside.
- 15 **Shovel Holder** Slot-and-Pin Style Shovel Holder installed on Front Roadside Fender.
- 16 **Grounding Cable(s)** Three (3) 30' Grounding Cables. (1) on each side near Vapor Piping and (1) at Rear, offset to Roadside.
- 17 **Centrifuge** Install **Kohler MS-60094** Centrifuge inside **Roadside Cabinet** with Sliding Hinges.
- 18 **Bicycle Guards** Install **Bolt-On** Guards on both sides, between landing gear and suspension.
- 19 **Testing/Inspection** HM-183 Testing and Inspection Completed at Factory with Decals Applied to Tank