# Quote for Univar Solutions



P.O.BOX 100 CERES, CA 95307 www.west-mark.com PHONE: (209) 537-4747 TOLL FREE: (800) 692-5844 FAX: (209) 537-1753

# **GENERAL**

The following equipment shall be a new West-Mark DOT-407 tandem axle semi trailer. (8201-8202)

General reference previous job #M40610-12

OVERALL LENGTH: Approximately forty-two feet six inches (42' 6").

PRODUCT: Compartment one (Caustic) - Compartment two (HCL) - Compartment three (Sulfuric)

PRODUCT WEIGHT: 16 lbs./gallon.

CODE VESSEL: DOT 407.

OPERATING PRESSURE: 35 PSI maximum. VACUUM RATING: Full Vacuum (29 in./Hg).

OPERATING TEMPERATURE: One hundred sixty-five degrees Fahrenheit (165° F) maximum.

INTENDED AREA OF OPERATION: State of California.

INTENDED USE: Highway only.

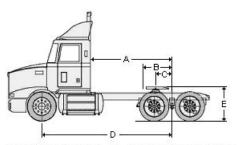
#### **PASSIVATION:**

None. (Available as option upon request and may be recommended for the product specified herein)

## **TRACTOR**

#### TRACTOR:

Customer supplied.



A= BACK OF CAB TO TRUNION B= FIFTH WHEEL SLIDE LENGTH C= FIFTH WHEEL OFFSET D= WHEELBASE E=FIFTH WHEEL HEIGHT

FRONT AXLE WT. LBS F TANDEM AXLE WT. LBS G

(Note: weights are based on tractor full of fuel and with driver.)

A=\_\_\_ D=\_\_ G=\_\_ B=\_\_ E=\_\_ C= F=

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(Customer to supply chassis info. at time of order.)

If information is not supplied at time of order, West-Mark will use its standard typical setup. Any information supplied after engineering package has been released to production, that requires set-up changes, will be done at additional charge to customer.

### TANK / MANHOLES / VENTING

#### **BARREL:**

4500 Gallons round, straight barrel, three compartment (1500/1500). The barrel shall be made from 7 gauge T-316/T-316L stainless steel, 2B finish material.

Tank shall also include an additional 3% gallons (minimum) for outage which is required on all code vessels.

HEADS: Two (2) each stainless steel, T-316/T-316L 2B, 7 gauge, 100% dished and flanged.

HEAD FINISH: Outside of heads to be spin polished.

BAFFLES: None. (Available as option upon request)

DIVISION HEADS: Four (4) each stainless steel, T-316/T-316L 2B, 7 gauge, 100% dished and flanged.

RINGS: Stainless steel channel sections, fully welded to shell.

WINGS AND BOLSTERS: Shall be made of stainless steel.

SIDE FILLERS: Stainless steel with coupler plate adjustment rails.

#### **WELD FINISH:**

INTERIOR: Weld finish to be W-3 inside. EXTERIOR: Weld finish to be W-2 outside.

Spilldam in compartment two and three to have W-3

#### **MANHOLE FOR COMPARTMENT 1 & 3:**

Two (2) BETTS 20" x 10" 8387LCX full opening, T316L stainless steel ASME with 6 hold downs and a hinge stop for keeping the lid off the shell when open. 50 psi MAWP.

#### **MANHOLE FOR COMPARTMENT 2:**

One (1) Betts 20" x 10" 8260 full opening for rubber lining, T316L stainless steel ASME with 8 hold downs and a hinge to keep the lid off shell when open. 50 psi MAWP. Located in second and third compartment.

Hinge all manholes to front. All Three (3) manholes to be located as close together as possible for a single common spilldam.

Brake interlock to set parking brake shall be installed at all manholes.

Gasket to be Viton.

Gasket to be Viton.

#### CLEANOUT(S):

None. (Available as option upon request)

#### **DEPRESSURIZING VALVE COMPARTMENT 1 & 3:**

Two (2) each 2" butterfly valve with cast iron split body, Teflon disc and seat, stainless steel stem out top of shell to a S/S elbow for vent to atmosphere. Customer requested 2" abz valve with paladon actuator.

#### **DEPRUSSERIZING VALVE COMPARTMENTS #2:**

One (1) each 2" butterfly valves with cast iron split body, Teflon disc and seat, stainless steel stem out top of shell to a plastic CPVC 180° elbow and capped with a welded screen for vent to atmosphere.

Each vent to have seperate controls and will not open with the internal. Controls to be located in pump box.

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#### **VENTING COMPARTMENT 1,2 & 3:**

Three (3) each DOT407-412 Fort Vale #USA 407/14204C Teflon Lined 42 PSI 2" HG Vac Vent mounted on a 3" ASA 4-bolt flanged nozzle.

Three (3) 2" four bolt blind flanges for future customer installation shall be installed intalled in the shell, one (1) in each spilldam.

#### **INSULATION:**

None. (Available as option upon request)

#### **AIR INJECTION LINES:**

A 1" air injection line to each compartment with manual valves at top inside each spilldams. The air injection lines will only be used if the pump is not functioning.

#### THERMOMETER:

One (1) Each 0-300° Degree F., 3-1/2" face with stainless steel case in compartment 1. Located curbside in front of ladder, approx 6' from ground.

#### **TANK LINING:**

Compartment one to have no lining. Compartment two to have Blair Rubber CC4624 1/4" lining. Compartment three to have Chemline 784-32 lining.

## LADDERS / WALKWAYS / SPILLDAMS

#### SPILLDAM:

One (1) each common for three (3) compartment, stainless steel construction with drain hoses each side for each compartment. Floor to be flat side to side. Spilldam to be divided into three (3) sections(one per compartment). The middle and rear compartments to be lined. Overturns to be stainless steel box type, per D.O.T. specifications. Spilldam to be 36" wide approx. Spilldam to have ball valves at bottom of drains and extended to vent on front compartment. Front spilldam to have skid tape. Compartment two and three spilldam to be W-3 welding for proper lining.

#### **OVERTURNS:**

Stainless steel box type located at ends of vessel if required per D.O.T. specifications.

#### WALKWAY:

Non-skid tape installed only on compartment one, ship loose a roll of skid tape.

#### LADDER:

One (1) Stainless Steel tubular, with West-Mark heavy duty slip resistant steps, 12" wide stainless steel slip resistant platform work station, located at 3 O'clock, with guard rails outside of platform and hand rails down sides of ladder; located curbside. Ladder to be accessed from the curbside of the trailer with steps up to workstation. Workstation to be full length of spilldam.

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## LIGHTS AND WIRING

#### **ELECTRICAL SYSTEM:**

System shall be 12-volt, 7-way, and vapor proof. All lamps to be L.E.D. type and locations shall meet all D.O.T. requirements.

STOP/ TAIL/ TURN: Four (4) each model 44 type in 2-hole, stainless steel boxes; 2 red each side.

CENTER ID: One (1) each Truck-Lite model 15 stainless steel I.D. shall be mounted at rear per D.O.T.

MID TURN/ MARKER: One (1) each amber model 60 oval turn/ marker light shall be mounted @ center of unit (approx.) each side if required by D.O.T.

FRONT MARKERS: One (1) each amber model 30 light shall be mounted to the front corner of the trailer at 45° on each side of unit.

REAR MARKERS: One (1) each red model 30 marker lamp located at end of each light box.

SECURITY RINGS / MOUNT COVERS: None. (Available as option upon request)

#### **REFLECTORS:**

To be mounted per D.O.T. specifications.

#### **CONSPICUITY STRIPING:**

To be installed at sides and rear per D.O.T. specifications.

#### FRONT RECEPTICAL:

Truck-Lite 7-way nosebox (model #50806) with 15-amp circuit breakers and front access to cable hookup, mounted on a stainless steel bracket between glad hands. Extra 4 pole socket & plug to be included with 12v to 24v DC converter for flow meter power input. [Flowmeter received had 24V input requirement]

## **PLUMBING**

#### **VALVING:**

Compartment #1 & 3: From compartment to 3" air actuated butterfly valve with Teflon discs. The pluming to have external manual valve before 1-1/2" flow meter & 1-1/2" diaphragm pumps. Plumbing to be s/s. Plumbing to end in 1-1/2" ASA flange [\* 1" nipple with coupler welded to plumbing as per customer request before flow meter.]

Compartment #2: From compartment to 3" Asahi valve plumbing to be UHMW. The plumbing will go to parallel instrument for two extra parallel lines. One parallel line to end with 1-1/2" coupler with cap. Second parallel line to end with air brake switch. Connection to air brakes switch to be supplied and installed. The original plumbing line and parallel camlock line to have manual Asahi valves. The original line to end up into 1-1/2" flowmeter & 1 1/2" pump. Flow meter will need grounding disc on both ends in case of lined plumbing.

A separate 1-1/2" line shall be provide before pump inlet in case of external loading or gravity product off on all compartments.

Flowmeter display to be on inside pump box near pumps. Flowmeter to display shielding cable to be long enough. Flowmeters to be customer supplied and West-Mark Installed.

**OPERATOR:** Three (3) air operated emergency valve switches with fusible shutoff(s) as required. Locate outside pump compartment. 3/4" air line with airking coupling in beginning to have filter/regulator should end up in 3 ball valves. Each ball valve to end up in each pump inlet. Check valve to be included before pump inlet

3 Brake interlocks will be used on all 3 manholes which will set parking brakes whenever Manhole Lid is open. Brake interlock must disengage while opening the Manhole Lid which will set Parking Brakes. The air switches to internal valves should also set parking brake whenever we try to open the internal valve.

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#### **PUMP PACKAGE:**

Three (3) Customer Supplied pumps to be West-Mark installed. Two stainless steel pumps received for comp #1 & comp #3. One Kynar pump received for comp #2. Pump mounting plates to be threaded.

### UNDERCARRIAGE

#### APRON:

Stainless steel rear subframe cover to be installed at rear between bumper uprights and extend forward to rear bolster.

#### **KICK PLATE:**

To be installed at front of unit and to be of stainless steel construction.

#### KING PIN PLATE:

Adjustable upper coupler, mild steel.

48" Ride height, unless noted otherwise in tractor spec's above.

King Pin to be located:

#### **WEAR PAD:**

None. (Available as option upon request)

#### **LANDING GEAR FRAME:**

Frame to be stainless steel construction.

#### **LANDING LEG SUPPORTS:**

Pipe style from legs up to crossmember and to rear of subframe.

#### **LANDING GEAR:**

JOST square leg A400, 2-speed, steel, sand shoes, 50,000 lb. lift, 160,000 lb. static load capacity. Crank located on driverside.

#### **REAR SUBFRAME:**

Stainless steel construction for a tandem axle suspension.

#### SUSPENSION:

Two (2) HENDRICKSON TURNER INTRAAX AANT 23K air ride integration system 17" ride height, weld-on wing style hangers, front shock absorbers

### **AXLES:**

Two (2) 23K, 5-3/4" round 71-1/2" track 10 stud on 11.25" centers with HUB piloted mounting HP spindles (same inner and outer bearings) Chevron Delo semi fluid grease

#### **BRAKES:**

Wabco PAN 22 disc brakes Hendrickson standard actuators Tone rings for ABS system

#### **DUST SHIELDS:**

None. (Available as option upon request)

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#### WHEELS:

OUTER: Four (4) Each <u>Alcoa</u> 22.5 x 8.25 Aluminum <u>Dura-Bright®</u> finish, 10-hole, 11-1/4" bolt circle, hub piloted. INNER: Four (4) Each <u>Alcoa</u> 22.5 x 8.25 Aluminum machine finish, 10-hole, 11-1/4" bolt circle, hub piloted.

#### TIRES:

Eight (8) Each 295/75R 22.5 CONTINENTAL HT3.

#### **HEIGHT CONTROL (SUSPENSION SPECIFIC):**

One (1) Each height control valve.

#### **DUMP VALVE:**

Automatic dump valve for air bags to be installed. Dump valve is designed to automatically release air from bags when trailer parking brake is set from inside tractor.

#### TIRE INFLATION SYSTEM:

One (1) each Hendrickson Turner TIREMAAX PRO tire inflation system. System provides constant pressure with active inflation, deflation and equalization. Control box located at front of rear subframe.

#### **BUMPER:**

Stainless steel D.O.T. Code 4" X 8". UNDERRIDEMENT BUMPER (NONE)

#### **BRAKE SYSTEM:**

To be built to D.O.T. specifications, WABCO 4S/2M ABS with ROLL STABILITY system and Aluminum air tank(s). ABS malfunction/ operation light located on front fender bracket of roadside rear fender, facing forward, per D.O.T.

#### FRONT FENDERS:

None. (Available as option upon request)

### MISC. ITEMS

#### CABINET:

One (1) each stainless steel 12-door, 101"L x 48"D (approx dimensions, final dimensions TBD) with stainless steel hardware and lockable latch. Cabinet shall be a minimum of 18" from the ground. 6-doors located on two sides of box; curbside and roadside. one set of doors for each pump. Drill drainage holes with bonnie flanges in bottom of cabinet. Add plugs on bonnie flanges. Spill containment lips shall be installed between each compartment pump. No components to be bolted to pump floor.

#### **CABINET LIGHT:**

None. (Available as option upon request)

DOOR STAYS: Installed on all doors for holding doors in the open position while in use.

<u>LOCATION</u>: Cabinet to be located at belly of tank. Exact location TBD.

#### TRANSPORT SECURITY SYSTEM:

Lugs for padlock/seal tab security system at all openings. Including cabinets and manholes.

#### **HOSE TRAY:**

Two (2) Each stainless steel hose trays. Hose tray to be length x 20" wide x 4" deep. Locate trays as close to wings as possible. Slope to rear prox 3" and provide a 1" threaded drain plug. One located each side. Act as fenders.

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#### **LIQUID LEVEL GAUGE:**

None. (Available as option upon request)

#### **PLACARD MOUNTING:**

Three (3) placards to be mounted at front head, rear and each side at cabinets door. Ref M40610

#### **PLACARDS:**

Twelve (12) each duo flip type with brackets and clips. PLACARD MOUNTING (HEAD/SIDE OF S/S TANK) PLACARD MOUNTING (HEAD/SIDE OF ALUM TANK)

#### **CERTIFICATE HOLDER:**

Betts PS-1 (#820012) document holder with spring. Mounted on landing leg subframe (roadside).

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#### **PAINT:**

One (1) Color Acrylic Urethane paint on suspension and on all carbon steel fabricated parts. Color to be Gloss Black

(Note: some colors may require additional charges.)

Tank	Color, Number, Brand:
Comments:	Comments:
Plumbing	Color, Number, Brand:
Comments:	Comments:
Cabinet, Platform	Color, Number, Brand:
Comments:	Comments:
Subframe	Color, Number, Brand:
Comments: LL Subframe	Comments: Gloss Black
Bolsters, Wings, Side fillers, Rear Apron, Bumper	Color, Number, Brand:
Comments:	Comments:
Spill Dams, Ladders	Color, Number, Brand:
Comments:	Comments:
Landing Legs	Color, Number, Brand:
Comments: Painted	Comments:Gloss Black
Truck Frame	Color, Number, Brand:
Comments:	Comments:
All Carbon Steel Parts	Color, Number, Brand:
Comments: Painted	Comments: Gloss Black
Air Tanks and Suspensions	Color, Number, Brand:
Comments: Suspension Painted	Comments: Gloss Black

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#### **INSPECTION DECALS:**

HM-180 inspection form and VIKP decals shall be provided with unit.

#### **MANUALS:**

One (1) each operation and maintenance manual(s) on CD-ROM shall be supplied and shipped with unit; complete with the following:

- · Operator & maintenance manual
- Calibration chart (if applicable)
- Equipment parts list
- Misc. vendor literature / manuals

#### **CALIBRATION:**

Theoretical, in 1/4" increments, complete with charts.

#### **WARRANTY:**

Unit shall be guaranteed to be free from defects in material and workmanship, while under normal use and service by the original purchaser, for a period of ONE (1) year from the date unit is delivered.

#### F.O.B.:

West-Mark 581 Industry Way Atwater, CA 95301. (F.O.B. destination available as option upon request.)

Shipping for lining inluded INSPECTION AND ACCEPTANCE:

West-Mark (CAGE: 880W5) 581 Industry Way Atwater, CA 95301