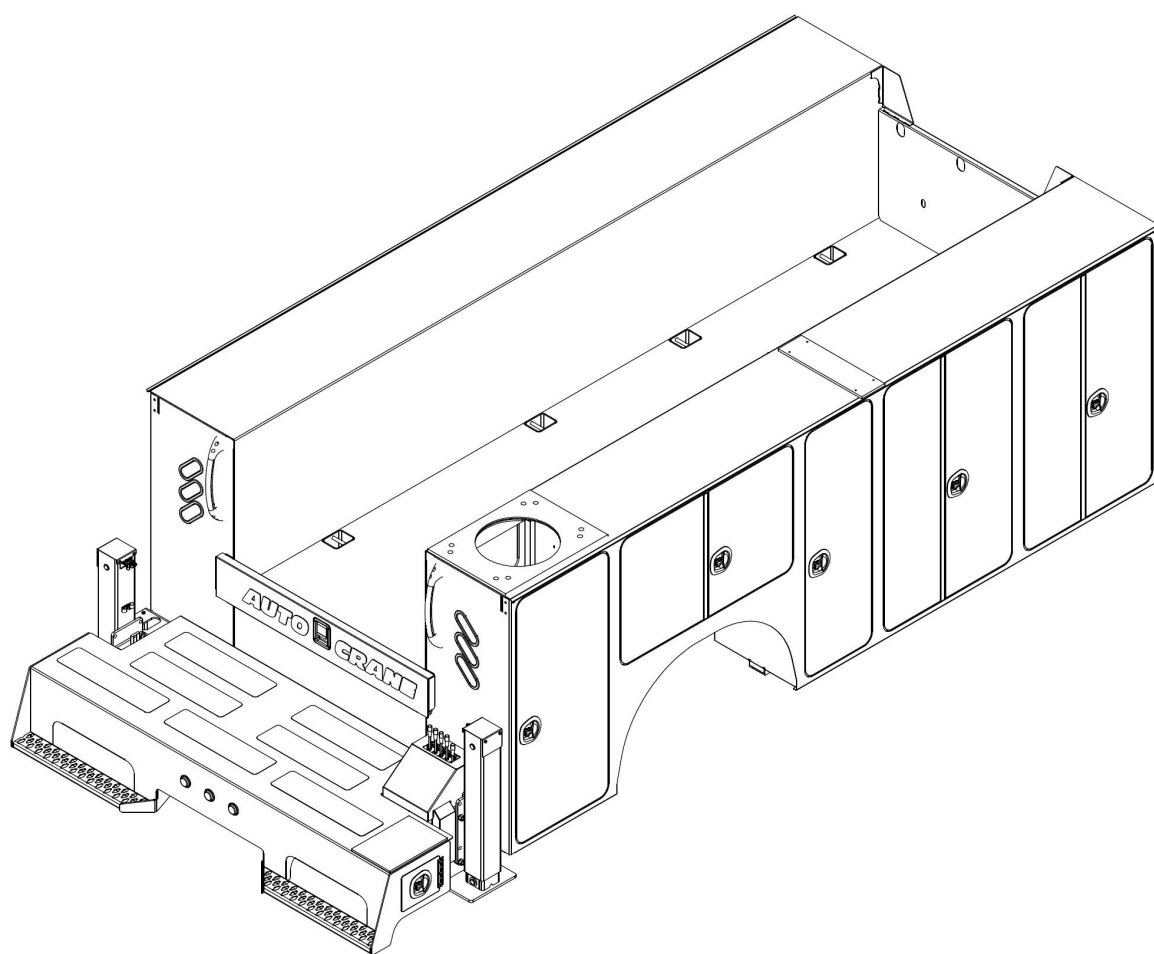




OWNER'S MANUAL

Titan 85



990800501-0226-B

Phone: 1-800-777-2760
Fax: (918) 269-6688

<http://www.autocrane.com>
actechsupport@autocrane.com

4707 N. Mingo Rd.
Tulsa, OK 74117-5904

Product Registration

Thank you for purchasing an Auto Crane® product and taking a few moments to register it online at <https://www.autocrane.com/product-registration/>. Your registration helps us keep you up to date on product information and gives you one of the strongest manufacturer's limited warranties available.

By completing the product registration, you may be eligible for valuable supplemental coverage under Auto Crane's Limited Warranty. For more information and a list of eligible products, visit our Warranty page found at <https://www.autocrane.com/warranty/>.

Before You Register

What do I need to get started?

We'll ask for:

- The product model and serial number for each product you purchased
- Your contact information so we can send confirmation of your registration and communicate product bulletins
- The date you purchased the product, date of installation or in-service (e.g. copy of bill of sale)
- Truck VIN (if applicable)
- The name, address and phone number of the dealer who sold and installed your equipment

NOTE: Much of this information will be on the invoice provided by your dealer. If you need help, please contact your installing dealer.

At the time of publishing this manual is accurate to the best of our knowledge. Auto Crane reserves the right to change any or all items, components and parts, necessary for any reason. This right does not obligate Auto Crane to immediately update the manual. Please call your local Auto Crane distributor for the most up-to-date information.

Auto Crane Company issues a limited warranty with each unit sold. See warranty pages at the end of the manual.

Table Of Contents

Product Registration	2
Table Of Contents	3
Safety Tips and Precautions	5
Introduction	6
Titan 85 General Dimensions.....	8
Titan 85 Mounting and Installation.....	9
Outrigger Relief Valve Setting	14
Titan Body Gasket Installation	15
Roller Guide, Door Rods and T-handle Adjustment	26
Body Assembly - P/N 772322001	33
Accessories	34
Tailgate Assembly - P/N 560080000	34
Fully Hydraulic Outriggers - P/N 772020001	36
Outrigger Installation	37
Outrigger Assembly	38
Hydraulic Schematic	40
Outrigger Ship Kit - P/N 772089000	42
Receiver Hitch - P/N 760365010	43
Bumper Installation	44
Masterlock Assembly - P/N 760570000	45
Adjustable Shelving - P/N 760537000	47
Fully Adjustable Shelving - P/N 760537005	48
Toolboxes	49
Oxy/Acet Assembly - P/N 736233000	50
Oxy Divider/Shelving Package - P/N 560483000	51
Oxy Divider/Shelving Fully Adj Package - P/N 560483015	52
Compartment Lights - P/N 475300145.....	53
Flood Light Kit - 475300034.....	54
Boom Support - P/N 560195015	55
Hydraulic Tank - P/N 751095070.....	56
Air Receiver Tank - P/N 751220000	57
Underbody Lighting - P/N 475300380.....	58
Body Preventive Maintenance	59
Warranty	60
Notes.....	62

Table Of Contents

Safety Tips and Precautions



Indicates a hazardous situation which, if not avoided, will result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.



Indicates information considered important, but not hazard-related.



Federal law (49 CFR part 571) requires that the Final Stage Manufacturer of a vehicle certify that the vehicle complies with all applicable federal regulations. Any modifications performed on the vehicle prior to the final state are also considered intermediate stage manufacturing and must be certified as to compliance. The installer of this crane and body is considered one of the manufacturers of the vehicle. As such a manufacturer, the installer is responsible for compliance with all applicable federal and state regulations and is required to certify that the vehicle is compliant.



It is the further responsibility of the installer to comply with the OSHA Truck Crane Stability Requirements as specified by 29 CFR part 1910.180 (C) (1). In applications, where the rotation of the load is hazardous, a tag or restraint line should be used, (ref. OSHA 1910.180(h)(3)(xvi)). To reduce the potential for the load to rotate or rope twist, operate at minimal boom angles and extension.



Do not weld, modify, or use unauthorized components on any Auto Crane unit as failure of the body may occur. This will void any warranty or liability.



Failure to correctly plumb and wire body can cause inadvertent operation and damage to equipment and/or personnel!

Introduction

NOTICE

Keep this manual with the crane at all times.

Auto Crane products are designed to provide many years of safe, trouble-free, dependable service when properly used and maintained.

To assist you in obtaining the best service from your crane and to avoid untimely crane and/or vehicle failure, this manual provides proper operating and service instructions. It is specifically recommended that all operating and service personnel consider this manual as mandatory material for reading and study before operating or servicing Auto Crane products. It is highly recommended that crane owners, equipment managers, and supervisors also read this manual.

In addition, the overall dimensions, rotation, and turning radius of the crane are included on the General Dimension Drawing.

Remember, the crane adds weight to the vehicle which may change the driving and riding characteristics of the vehicle unless the appropriate overload spring(s) are installed. The payload of the vehicle is reduced by the weight of the crane. The operator should exercise care when loading the vehicle. Distributing the payload on the vehicle evenly will greatly improve the driving and riding characteristics of the vehicle.

The cranes are electrically powered by a 12-volt DC electrical system. The use of a maintenance-free battery is not recommended on any Auto Crane product. The recommended alternator and battery that will give the longest life with the most useful duty cycle is a 60-amp alternator with a 500 cold cranking amp battery. These specifications should be considered minimum.

It has always been Auto Crane Company policy to handle all warranty claims we receive as promptly as possible. If a warranty claim involves discrepant material or workmanship, Auto Crane will take immediate corrective action. It is understandable that Auto Crane Company cannot assume responsibility of liability when it is obvious that our products have been abused, misused, overloaded or otherwise damaged by inexperienced persons trying to operate the equipment without reading the manual.

Auto Crane will not assume responsibility or liability for any modifications or changes made to the unit, or installation of component parts without authorization.

Auto Crane maintains a strong distributor network and a knowledgeable Customer Service Department. In most cases, an equipment problem is solved via phone conversation with our customer service department. This department also has the ability to bring in a local distributor, regional sales manager, or factory serviceman to help determine the solution to an equipment problem.

Auto Crane Company's extensive Research and Development Program allow our customers to use the best equipment on the market. Our engineering staff and knowledgeable salespeople are always available to our customers in solving crane and service body application problems. When in doubt, call the Auto Crane factory.

Should you require any assistance not given in this manual, we recommend that you consult your nearest Auto Crane Distributor. Our distributors sell authorized parts and have service departments that can solve almost any needed repair. This manual does not cover all maintenance, operating, or repair instructions pertinent to all possible situations.

If you require additional information, please contact the Auto Crane Company at the following telephone number: 1-800-777-2760

NOTICE

IMPORTANT—READ FIRST!!

VEHICLE PREPARATION FOR OUTRIGGER AND CRANE OPERATION

1. Park vehicle within crane operating distance from object that is to be lifted.

Notes:

- Make sure there are no obstructions preventing safe handling of load during crane operation.
 - Verify that no obstructions will prevent the full extension of the outrigger legs on both sides of vehicle.
 - Regardless of load to be lifted the outriggers should always be fully extended to keep vehicle stable.
 - Grade shall not exceed 1° of level. Level truck with blocks if grade exceeds 1° of level.
2. **ALWAYS** set the vehicle emergency brake before beginning crane operations.
 3. Use wheel chocks on the front wheels of vehicle.

INSPECT OUTRIGGERS BEFORE USE

1. Visually inspect outrigger before use making sure the outrigger is in good working order.
2. Replace or repair any worn or damaged parts before outrigger operation.
3. Check for and repair leaks on hydraulic units if they occur.

MANUAL OUTRIGGER OPERATION

1. Un-hook the sling from around the outrigger leg.
2. Extend outrigger slides from stowed position by releasing pull pin and extending the outrigger slides fully.
3. Make sure the slides are fully extended and locked into position with pull pin.
4. Lower both outrigger legs until they contact the ground then extend another inch to insure good ground contact.

Notes:

- Use blocks under pads to increase surface area if required for stability on soft ground.
- **DO NOT LIFT TRUCK WHEELS WITH OUTRIGGERS.** The outriggers are intended for vehicle stability during lifting operations not for complete vehicle support.

MANUAL OUTRIGGER STOWING PROCEDURE

1. Fully retract vertical legs to stowed position.
2. Retract outrigger slides from extended position by releasing pull pin and pushing slides in fully.
3. Make sure the slides are fully retracted and locked into position with pull pin.
4. Make sure the sling is secured in place around the outrigger leg.

HYDRAULIC OUTRIGGER OPERATION

1. Divert hydraulic flow from control valve to outrigger operations.
2. Use the hydraulic control valve to extend outrigger slides from stowed position to the fully extended position.
3. Make sure the slides are fully extended.
4. Lower both outrigger legs until they contact the ground then extend another inch to insure good ground contact.

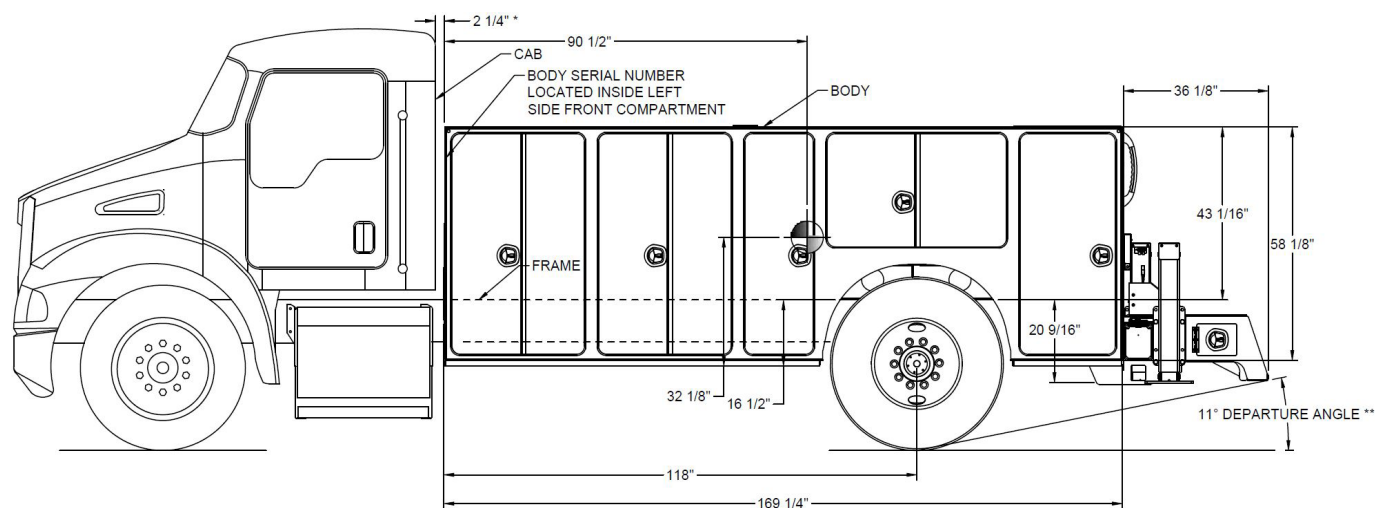
Notes:

- Use blocks under pads to increase surface area if required for stability on soft ground
- **DO NOT LIFT TRUCK WHEELS WITH OUTRIGGERS.** The outriggers are intended for vehicle stability during lifting operations not for complete vehicle support.

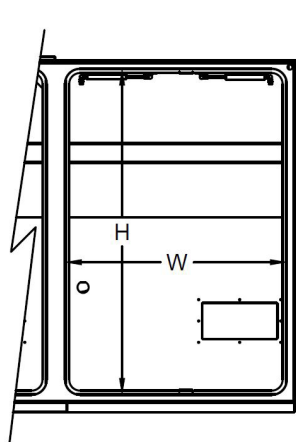
HYDRAULIC OUTRIGGER STOWING PROCEDURE

1. Fully retract vertical legs in stowed position.
2. Retract outrigger slides from extended to the fully retracted position.
3. Make sure the slides are fully retracted in the stowed position.
4. Make sure the sling is secured in place around the outrigger leg.

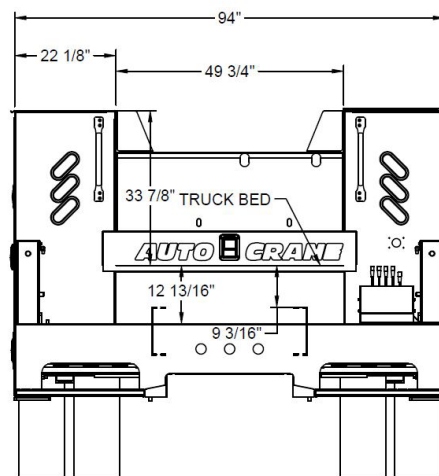
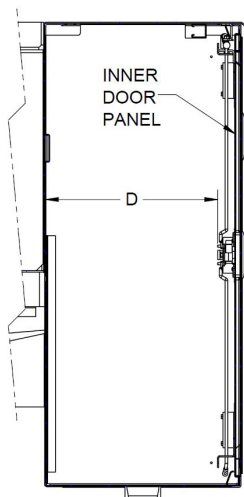
Titan 85 General Dimensions



*STANDARD GAP USING 120CA MINIMUM CHASSIS. CHECK CHASSIS BODY BUILDER BOOK FOR REQUIRED GAP BETWEEN BODY AND CHASSIS.
**DEPARTURE ANGLE SHOWN FOR REFERENCE ONLY. ANGLE WILL VARY DEPENDING ON CHASSIS AND BUMPER. DIMENSIONS BASED ON COMMON COMPONENTS AND OPTIONS.



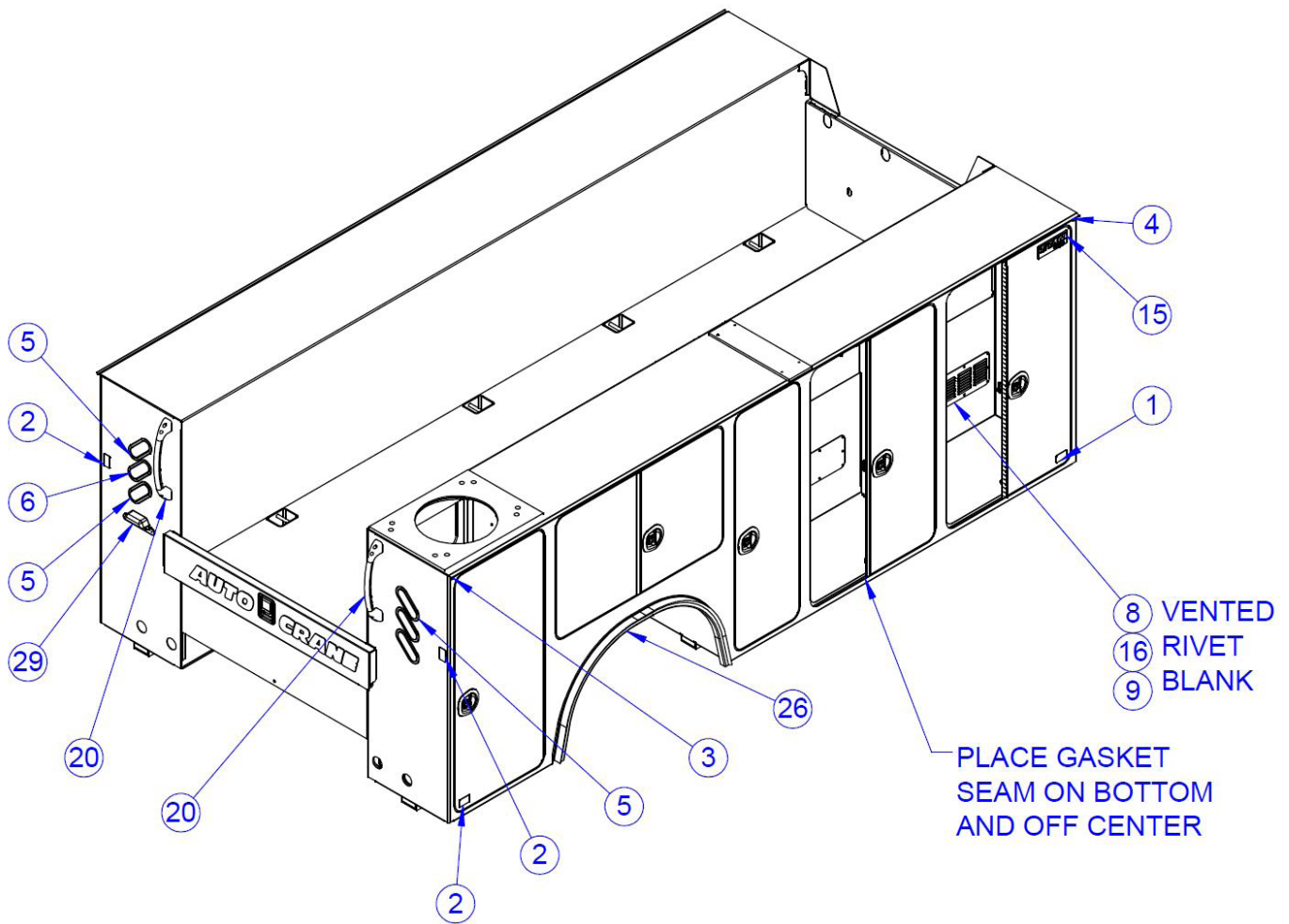
TYPICAL ALL COMPARTMENTS



TITAN 85 BODY				
WEIGHT	4540			
DOOR OPENING SIZES/DEPTH	WIDTH (W)	HEIGHT (H)	DEPTH (D)	COMPARTMENT VOLUME
FRONT	32 1/2	53 1/4	19 1/4	25.56
FRONT 2	32 1/2	53 1/4	19 1/4	14.93
MID	17	53 1/4	19 1/4	14.93
HORIZONTAL	44	26 1/2	19 1/4	18.07
REAR***	23 1/8	53 1/4	19 1/4	19.09
TOTAL BODY VOLUME				201.71

*** REAR COMPARTMENT DIMENSIONS/VOLUME ARE FOR NON CRANE BOX ONLY
^ VOLUME IS TAKEN FROM WALL TO WALL DIMENSIONS **NOT DOOR OPENING SIZES**

Titan 85 Mounting and Installation



NOTES:

1. ROCK GUARD LOCATED ON FRONT BOTTOM OF EACH SIDEPACK
2. CUT DOOR GASKET TO FIT EACG CO PARTMENT AS NEEDED
3. IDENTIFICATION LIGHTS INCLUDED WITH BUMPER
4. TIE-WRAP & CABLE TIE MOUNTS ARE USED TO ATTACH THE HARNESS TO THE TOP OF THE SIDEPACKS
5. CUT 901001141 TO FIT FULL LENGTH OF DOORS
6. CUT 901001142 INTO (8) 3.5" & (4) 1" PIECES
7. USE 752222100 FOR HOLE BLOCK OFF IN LSF COMPARTMENT
8. HANDLE HARDWARE TORQUE NOT TO EXCEED 120IN-LBS.

Titan 85 Mounting and Installation

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	2	560452000	REFLECTOR AMBER
2	4	560453000	REFLECTOR RED
3	2	739317783	LED 3/4" MARKER LIGHT, RED W/ CONNECTOR
4	2	739317784	LED 3/4" MARKER LIGHT, AMBER W/ CONNECTOR
5	6	739408005	GROMMET, LIGHT OVAL
6	4	739408003	LIGHT, STOP/TURN/TAIL OVAL
7	2	739408004	LIGHT, BACK-UP OVAL
8	1	752221000	PANEL LOUVER
9	2	752222000	PANEL BLANK F/ MID VENT OPENING
10	2	750732000	ROCK GUARD
11	266"	901001141	GASKET, D SHAPE (.375 X .750)
12	12	750737000	TIE WRAP PUSH-IN
13	12	750738000	STICK-ON, CABLE TIE MOUNT
14	32	750736000	LOOM, CONVOLUTED, 7/16 ID
15	2	560510000	DECAL "TITAN"
16	28	754028000	RIVET POP 3/16 DIA X 1/4 - 3/8 GRIP SS
17	8	015900000	NUT HX 1/4-20UNC SS
18	8	020200000	WASHER SP LK 1/4
19	1	560540000	GROMMET, NYLON
20	2	760629000	HANDLE, GRAB PLASTIC BLACK W/GRIP
21	2	560114000	GASKET, DOOR 2003
22	4	739408008	SCREW, FLAT 1/4-20UNC 1-3/8LG SOCKET
23	4	739408007	SCREW, FLAT 1/4-20UNC 1-3/4LG SOCKET
24	2	015800000	NUT HX NYLK #10-32UNF GR3 ZP
25	46"	901001142	CLEAR VINYL TUBING 1/2"
26	2	760710269	FENDER FLARE, RUBBER
27	1	002609000	SCREW RD HD #10-32UNF X 5/8LG
28	2	019900000	WASHER FL #10
29	1	750980110	LICENSE PLATE HOLDER, LED, CPI
30	1	990800501	TITAN 85 BODY MANUAL
31	2	752222100	PANEL BLANK, HARNESS OPENING

Titan 85 Mounting and Installation



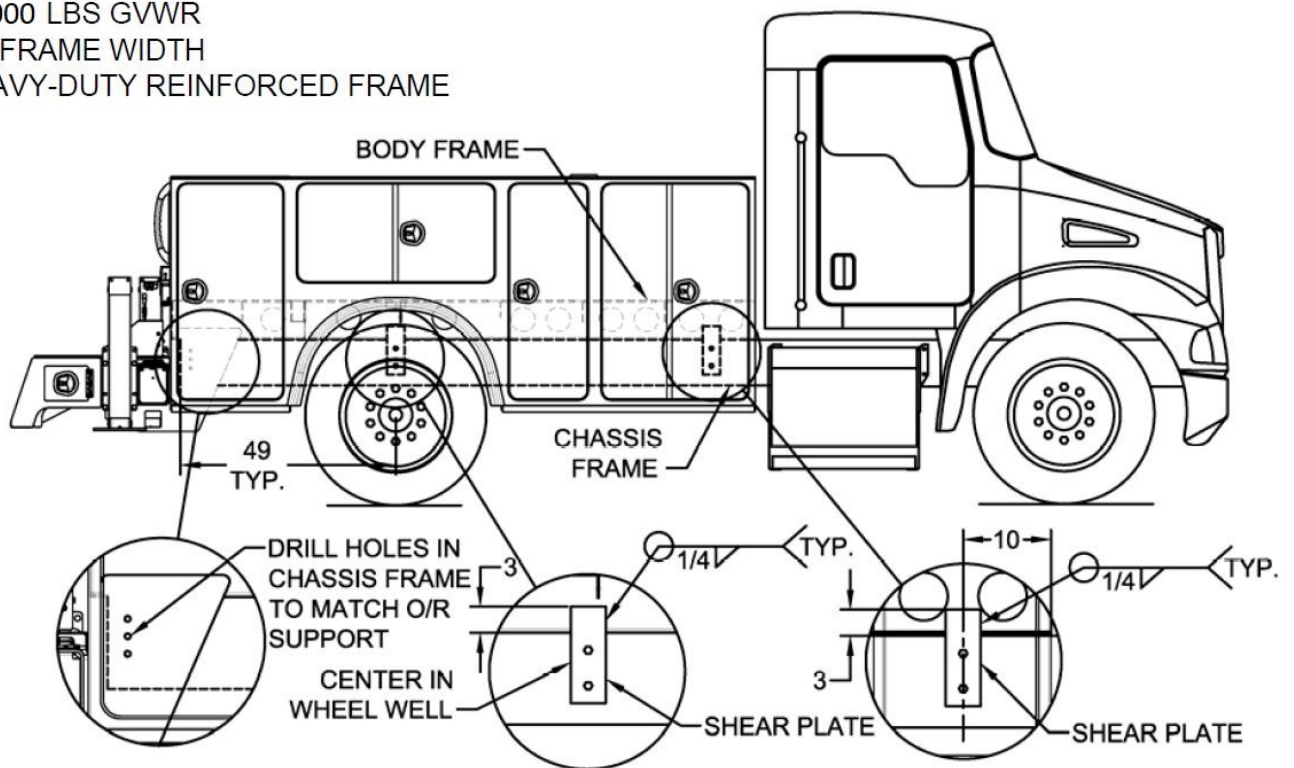
DO NOT WELD TO TRUCK FRAME. REFER TO BODY-BUILDERS MANUAL FOR FUTURE INFORMATION

INSTALLATION INSTRUCTIONS BELOW ARE COMMON MOUNTING PRACTICES, ALWAYS REFER TO CHASSIS BODY-BUILDERS MANUAL FOR ACCEPTABLE MOUNTING OPTIONS

CUTTING AFTER-FRAME MAY BE REQUIRED. REFER TO CHASSIS BODY-BUILDERS MANUAL FOR PROPER CUTTING PROCEDURE.

MINIMUM CHASSIS REQUIREMENTS

- 33,000 LBS GVWR
- 34" FRAME WIDTH
- HEAVY-DUTY REINFORCED FRAME



ALL DIMENSIONS SHOWN ARE IN INCHES.

MOUNTING INSTRUCTIONS:

AVAILABLE MOUNTING KIT—560581000 INCLUDES HARDWARE & SHEAR PLATES

1. Pick up body using a 4-point choke chain rated for the body weight shown in Gen. Dimension page. Use the tie down locations in bed for lifting points.
2. Center body along the width of the chassis and center the wheel well with the tires.

NOTICE

MAKE SURE YOU HAVE ENOUGH CLEARANCE BETWEEN BODY AND CHASSIS CAB PER THE MANUFACTURERS REQUIREMENTS.

Titan 85 Mounting and Installation

3. Locate the shear plates as shown in the above diagram. Drill (2) Ø21/32 holes into each shear plate and chassis frame.

NOTICE

LOCATE HOLE FOR BOLT SO THAT THE BOLT, WASHER, AND NUT WILL NOT INTERFERE WITH ANY CHASSIS COMPONENTS. LOCATIONS OF SHEAR PLATES SHOWN ABOVE ARE PREFERRED LOCATIONS. THEY MAY NEED TO BE MOVED TO ACCOMMODATE COMPONENTS ON THE CHASSIS RAILS.

4. Using the pre-drilled holes in the outrigger support, drill (3) Ø 21/32" holes into chassis rail per side.
5. Weld shear plates to the body frame.
6. Bolt Body to Chassis Frame using 5/8" UNC Grade 8 Hardware (Bolt, Washer, Nut, Etc...) Torque to 180 Ft-Lbs.
7. Install Fenderettes (Supplied) to the body:
 - A. Wipe mounting surface with clean cloth and cleaning solution of ONE PART ISOPROPYL ALCOHOL and ONE PART WATER.
 - B. Locate Fenderette to sidepack, aligning the bottom edges and centering it on fender well opening.
 - C. Press rubber fenderette onto flange of face. Once the Fender Flare has been pushed on, use your hand or a rubber mallet to tap the Edge Trim to ensure the Fender Flare is completely pushed on.
 - D. Once fenderette is placed on sidepack face, peel back top lip and remove adhesive paper. Press top lip against face.
8. Install wiring, lights, and reflectors onto body. Reference electrical installation manual for wiring detail. Reference view at beginning of Mounting and Installation section for location of remaining components.
9. Install all accessories per their installation procedures. If unit has a hydraulic outrigger, you must follow the procedure shown on page 16 to set the outrigger relief valve.
10. Verify final truck configuration meets all applicable federal, state and local guidelines.
11. Read operating section of manual before operating the unit.

The diagram illustrates the electrical wiring for a vehicle's lighting system, centered around a main chassis connection point. The system includes the following components and connections:

- STOP/TURN SIGNAL LEFT:** 10' WHT - 16GA, 10' BWN - 16GA, 10' YEL - 16GA.
- STOP/TURN SIGNAL RIGHT:** 10' GRN - 16GA, 10' BWN - 16GA, 10' WHT - 16GA.
- BACK-UP LIGHT:** 8' WHT - 16GA, 8' BWN - 16GA, 8' YEL - 16GA.
- MARKER LIGHT SIGNAL:** 12' WHT - 16GA, 12' BWN - 16GA.
- TO CHASSIS:** 6' BWN - 16GA, 6' BLU - 16GA, 6' GRN - 16GA, 6' WHT - 16GA, 6' YEL - 16GA.
- BUMPER TAIL LIGHT:** 36' BLU - 14GA.

Legend:

ID#	DESCRIPTION	COLOR
1	STOP/TURN SIGNAL RIGHT	GREEN
2	GROUND	WHITE
3	STOP/TURN SIGNAL LEFT	YELLOW
4	BACK-UP SIGNAL	BLUE
5	TAIL LIGHT SIGNAL	BROWN

TITAN 85 13

Outrigger Relief Valve Setting

OUTRIGGER RELIEF VALVE SETTING INSTRUCTIONS

For hydraulic powered outrigger control valves provided by AutoCrane

AutoCrane hydraulic powered outriggers utilize a control valve which contain an integral hydraulic relief valve that is preset at the factory. This preset is NOT the final setting and must be adjusted to account for hydraulic system backpressure once the installation is complete. The adjustment is straight forward and requires basic hand tools, thermometer or means to measure hydraulic oil temperature, and a hydraulic pressure gauge with a minimum rating of 5,000 psi and hydraulic fittings necessary to install the gauge in-line with the incoming pressure line to the outrigger control valve body. Follow the procedure below to make the final adjustments to this relief valve.

1. The outrigger hydraulic relief valve should be adjusted to 200 psi above the crane hydraulic relief valve. Please consult the appropriate owner's manual for this setting or contact the crane manufacturer for this value.



Under no circumstances should this relief valve setting exceed any of the hydraulic system components ratings or limitations as component damage or personal injury may result.

2. Install the hydraulic pressure gauge in-line with the incoming pressure line to the outrigger control valve body.
3. With all personnel clear of the vehicle, start the engine and engage the vehicle PTO. Let the hydraulic oil warm until it reaches 100°F.
4. While watching the hydraulic pressure gauge, activate a hydraulic outrigger function to deadhead the hydraulic system. Read the gauge value quickly and do not hold the function into the deadhead position.
5. Using the hand hold, back off the lock nut on the hydraulic relief valve and make small rotation adjustments (1/2 turn) to the relief valve stem.
6. Repeat step 4 to check if this adjustment meets the system requirements. If not, then repeat Step 5 and Step 4 until correct.
7. Tighten the lock nut on the hydraulic relief valve.
8. Remove the hydraulic pressure gauge and fittings and re-attach the pressure supply line to the hydraulic valve body.

TITAN BODY GASKET INSTALLATION INSTRUCTIONS

Removal and installation time:

5 Minutes per single door, 10 Minutes per double door, 30 minutes cure time.

List of Materials needed to perform installation door seal, vinyl tubing, and silicone:

- New door gasket seal
- Clear vinyl tubing 3.5 inches long by ½ inch outside diameter
- Clear vinyl tubing 1 inch long by ½ inch outside diameter
- Double door seal gasket (D-shaped gasket) full length of door
- 100% Clear Silicone fast cure Water Proof non-paintable caulking 1 tube per body
- Shears to cut weather-stripping
- Adhesion Remover (Paint Thinner, Mineral Spirits)
- Rubber Mallet
- Pry bar
- Small Flat Head Screw Driver
- Flat Blade Putty Knife
- Box Cutter with extra blades
- Caulking gun

This is a time sensitive installation so install the silicone to the door gasket edge trim after cutting the correct length and prepare to do the install.

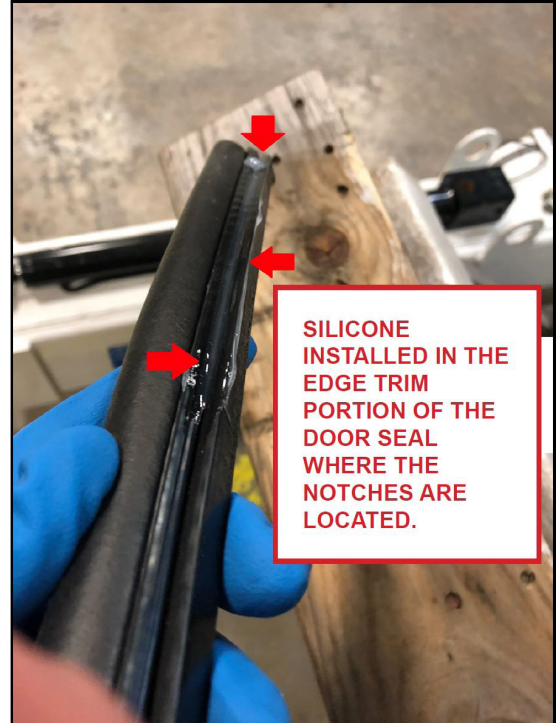
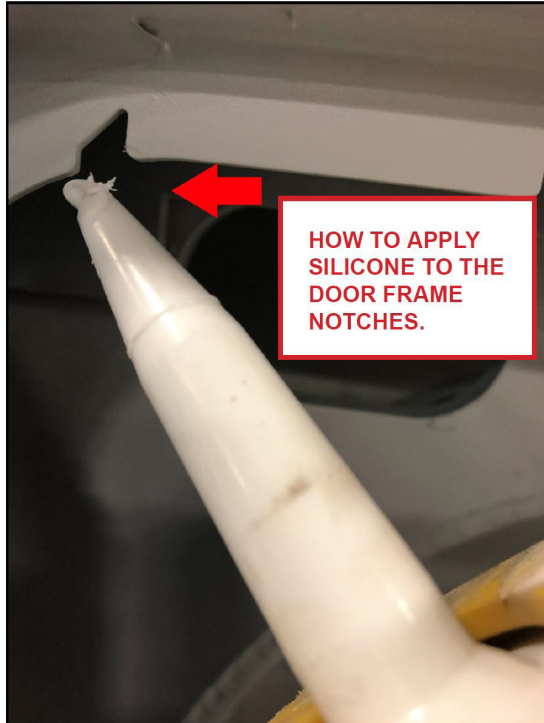
NOTICE

Allow for 30 minute cure time before shutting of doors.

Titan Body Gasket Installation

Installation of Single Door Gasket

1. Before installing gasket, apply silicone to both sets of notches in the door frame, top and bottom. Also apply silicone to the edge trim where the notches will be located.



2. Insert the Door Gasket behind the hinges so that the door gasket bulb is facing outwards towards the door but do not apply to the door frame edge until the door gasket ends are at the center of the bottom door frame.
3. Start by applying one end of the door gasket onto the bottom center of the door frame and work your way into the 1st corner, then up the side of the frame until the 2nd corner making sure to keep the corners pushed tight. Then work the door gasket into the 3rd corner and behind the door hinges by moving the door back and forth so you have room behind the hinges to work the door gasket onto the edge. Use a pry bar to push on the door gasket onto the edge and a rubber mallet to evenly install the door gasket. When you reach the 4th corner install tight and continue until needed to trim excess door gasket, leaving about 1 inch excess after cutting for pressure retention between the seams. Trim the door gasket ends as straight as possible. Use a rubber mallet to ensure fit in corners and remove door dampener if necessary to facilitate installation.
4. Install the 1 inch clear vinyl tubing, leaving about 1/2 inch sticking out to install into the other seam. Apply the silicone on the bulbs around the diameter of the vinyl tubing and onto and into the edge trim portion of the door gasket on both sides of the seam. Insert the door gasket with silicone applied to the vinyl tubing and surface into the other seam and push down the door gasket until flush onto the edge. (The extra silicone will push out of the seam so wipe away excess but leave the silicon in the center to make a flush molded seal).

Titan Body Gasket Installation



Titan Body Gasket Installation



CLEAR VINYL TUBING
INSTALLED INTO THE SEAM



INSTALL VINYL TUBING
INTO THE SECOND SEAM
AND PUSH TOGETHER.

Titan Body Gasket Installation



WHEN THE TWO SEAMS ARE PUSHED TOGETHER, INSTALL BOTH SEAM ONTO THE DOOR FRAME EDGE TRIM.



WIPE EXCESS SILICONE OFF THE OUTER PORTION OF DOOR GASKET BULB AND EDGE TRIM.

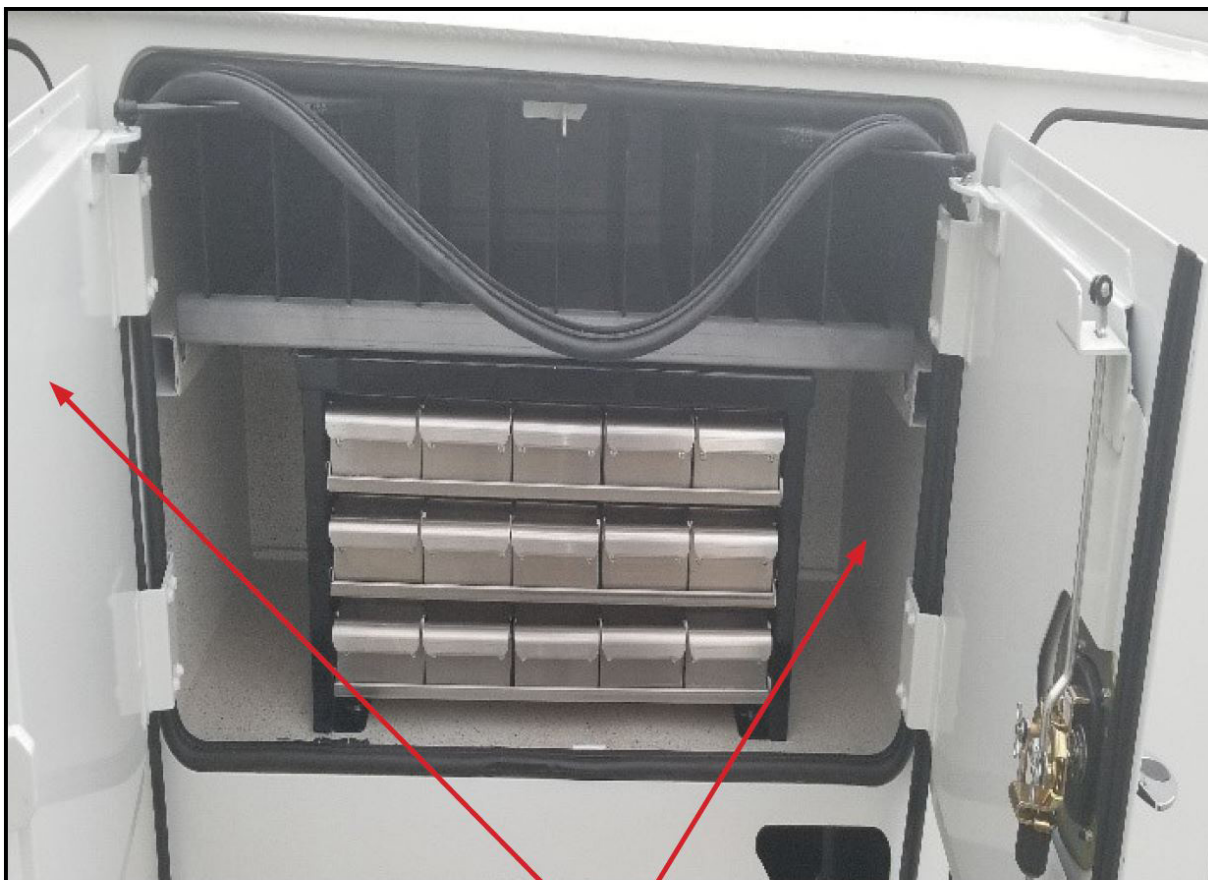
Titan Body Gasket Installation

Installation of Double Door Gasket

1. Insert the door gasket behind the hinges so that the door gasket bulb is facing outwards to the door, but do not apply to the door frame edge until the door gasket ends are positioned correctly at the bottom door frame.

NOTICE

Position of door gasket end is described in step 2 of Single Door Installation.



POSITION THE DOOR GASKET IN THE CORRECT DIRECTION AND PLACE THRU THE HINGES FOR EASIER ADJUSTMENT AND INSTALLATION.

NOTICE

Apply silicone to notches in double door the same as in single doors.

Titan Body Gasket Installation

2. Start by applying one seam of the door gasket onto the bottom of the door frame. The position of the seam needs to be behind the inner door about $\frac{1}{2}$ inch from the outside edge of the door. Work your way into the 1st corner, then up the side of the frame behind the hinges (using rubber mallet and pry bar if needed) until the 2nd corner. Make sure to keep the corners pushed tight. If needed remove the door dampeners (shocks). Work the door seal into the 3rd corner and behind the door hinges by moving the door back and forth so you have room behind the hinges to work the door gasket onto the edge. Use a pry bar to push the door gasket on and a rubber mallet to evenly install the door gasket. When you reach the 4th corner, install tight and continue until it is necessary to trim excess door gasket, leaving about 1 inch excess after cutting for pressure retention between the seams. Trim the door gasket ends as straight as possible.



**SEAM 1 INCH AWAY FROM
OUTER DOOR EDGE**

OUTER DOOR EDGE

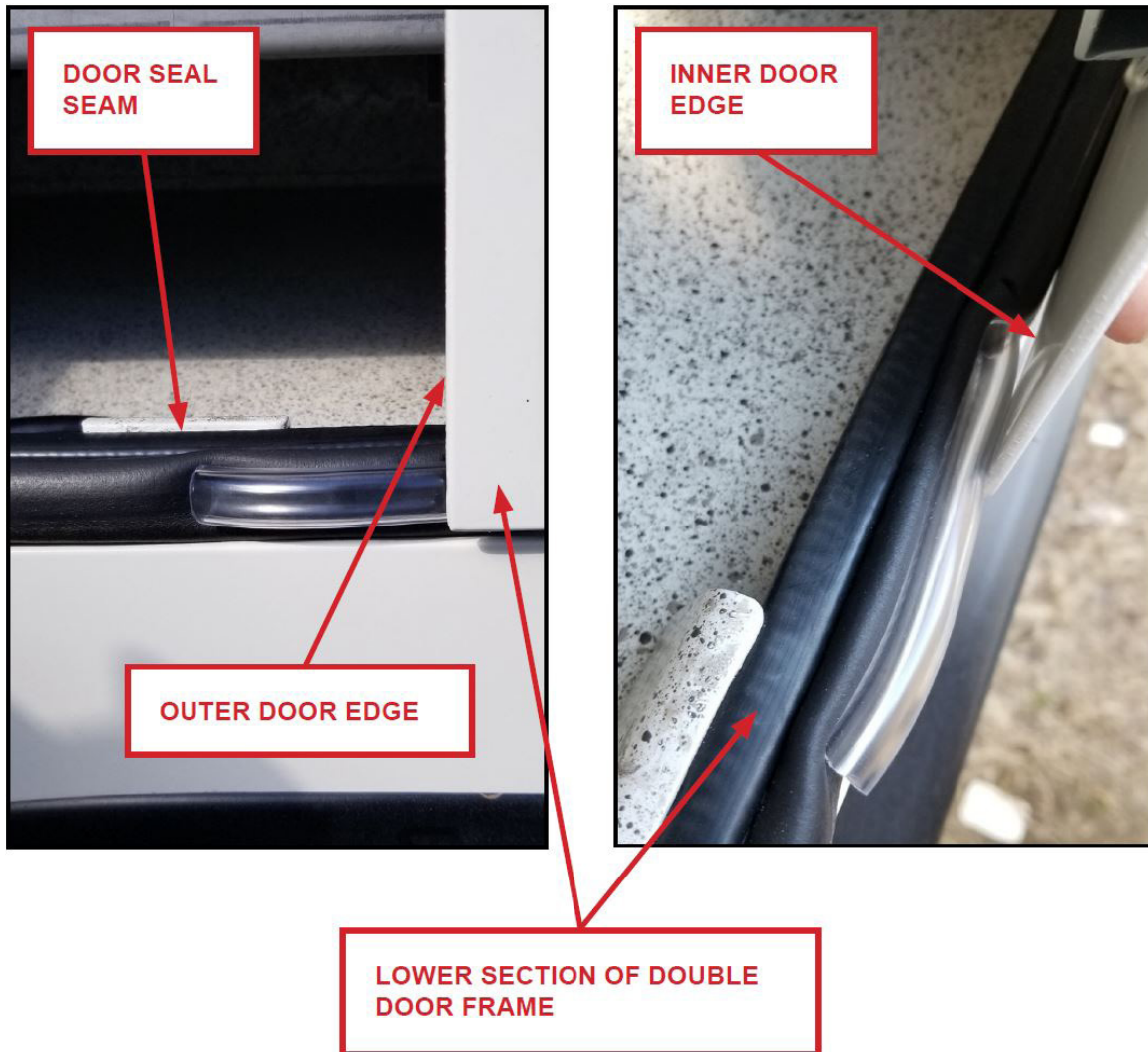


**INNER DOOR
EDGE**

**SEAM 0.5 INCHES INSIDE
INNER DOOR**

Titan Body Gasket Installation

3. The 3.5 inch vinyl tubing needs to be installed correctly based on the beginning of the first seam. The vinyl tubing needs to be positioned so it is installed into both bulb seams and between the inner door and outer door. Insert the 3.5 inch vinyl tubing into the bulb seam about 1/2 inch behind the inner door seam, using the silicone. Apply the silicone to the seam and edge trim and apply around the tubing where it meets the seam. On the second seam, apply silicone to the bulb and edge trim. Slide the rest of the 3 inches of the tubing inside the 2nd seam tight and push the seam onto the edge, flush. Work the door gasket down on the edge trim. Wipe off excess silicone leaving the silicone in the center to make a flush molded seal. (Lubricant can be added to the tubing for assemble easier. Before applying silicone remove any oil or grease from the sealing surfaces.)



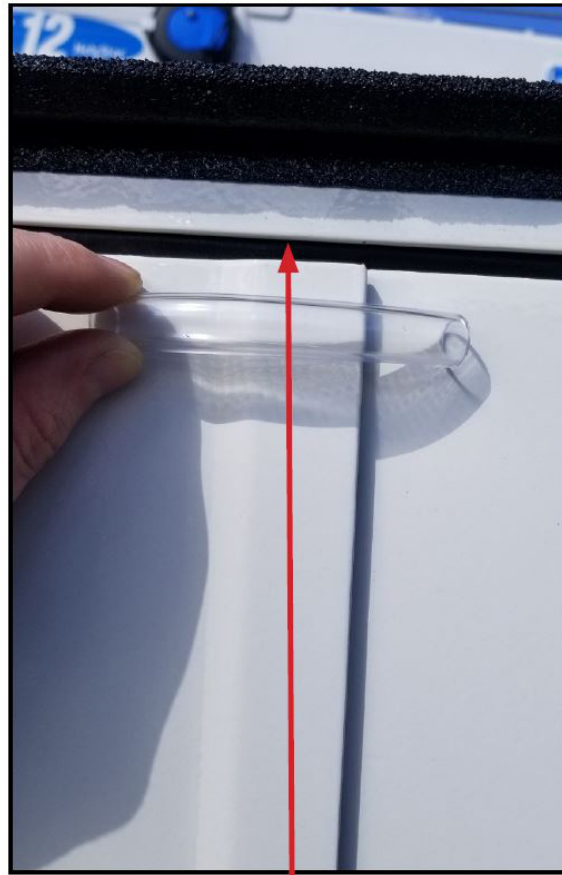
4. Install the vinyl tubing and silicone to press the end seams together in the same similar fashion as single door gaskets.

Titan Body Gasket Installation

5. Once the bottom seams of the door frame are complete, pull the door gasket down from the top of the door frame where the 2nd 3.5 inch tubing will be installed and sealed. Once the door gasket is pulled down enough away from the edge to cut the door gasket into 2 pieces, cut the door gasket keeping the cut straight. After cutting the door gasket, install the tubing as the same as the bottom portion by installing the tubing 1/2 inch into the door gasket seam behind the inner door and 3 inches inside the other seam leading to the outer door. Silicone the door gasket edge trim that was removed to cut and install the tubing. Silicone the tubing seam area, the bulb, and edge trim and install the seams flush and flat. Wipe away excess silicone leaving the silicone in the center to make a flush molded seal. (Lubricant can be added to the tubing to assembly easier. Before applying silicone remove any oil or grease from the sealing surfaces.)

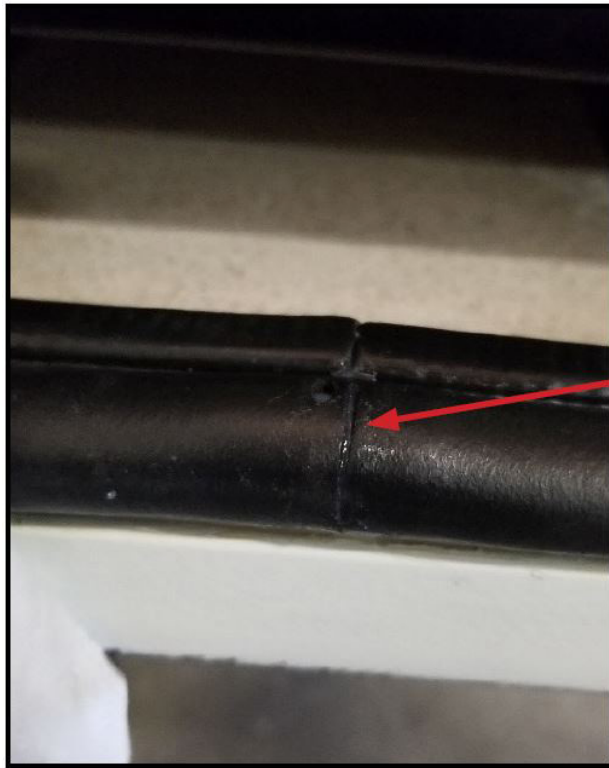


**TOP PORTION OF DOOR
GASKET PULLED DOWN TO
MAKE CLEARANCE TO CUT
WITH SHEARS.**



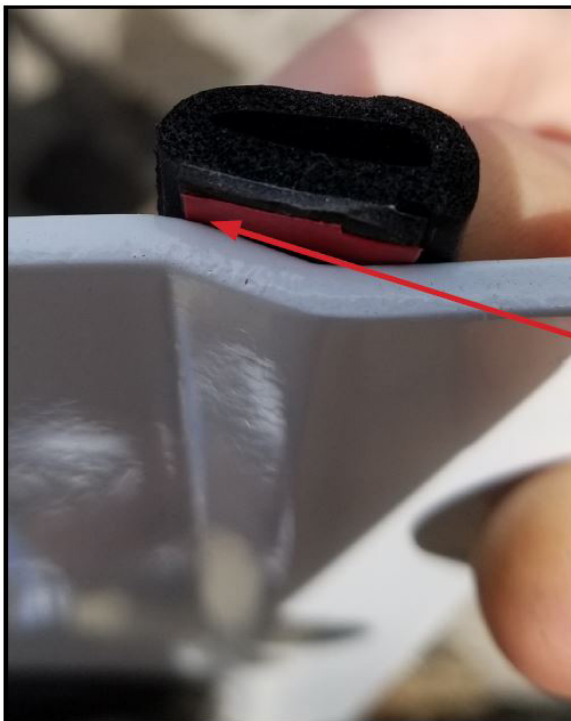
**ACCOMPLISH TOP PORTION
IN SIMILAR FASHION AS THE
BOTTOM.**

Titan Body Gasket Installation



SEAM FILLED WITH SILICONE
THAT HAS BEEN WIPED CLEAN
TO ALLOW FOR A FLUSH SEAL.

6. The door seam gasket (D-shaped seal with adhesive) must be applied to the full length of the outer door. It must be applied to the inside radius of the double bend. Before applying gasket to door, position the red tape in line with the tangent line of the radius as shown below.



RED TAPE IN LINE WITH
TANGENT OF RADIUS

Titan Body Gasket Installation

7. Cut door seam gasket to full length of door and apply flush. Firmly press gasket into door to make sure adhesive holds



NOTICE

Now that the door gasket is installed on the door frame, the T-handle, roller guides and door rods will need to be adjusted to accommodate the extra diameter and pressure from the vinyl tubing and door seam gaskets. Review the roller guide, door rod and T-handle section of the work instructions to adjust the doors properly.

Roller Guide, Door Rods and T-handle Adjustment

Adjustment time: 10 minutes per door

List of materials needed to perform adjustment:

- Pry bar
- Table top vise
- Small rubber mallet
- SAE allen wrench pack

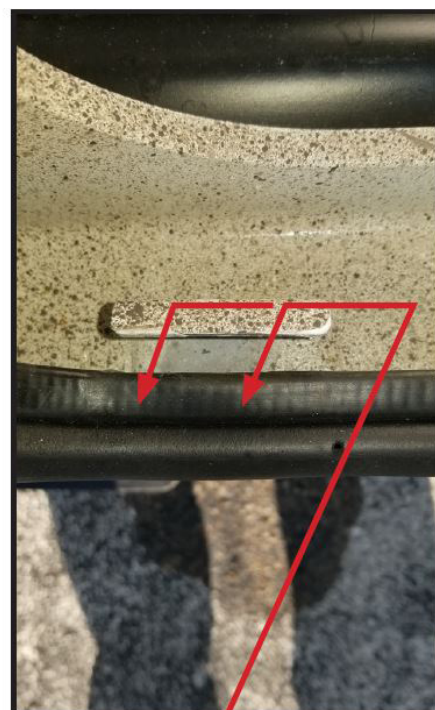
The final phase of the work instructions, the adjustment of these components will not only help seal the door better, it will help by allowing the T-handle latch to open easily but remain a tight 3 point contact with the locking system. To help evenly distribute and close any gaps and set in the door gasket, pressure is required to ensure that the door face meets the bulb seal 100% around the doors.

Once all of the modifications have been performed, the T-handle gasket installation, the caulking inspection and repair, the removal and installation of the tape gasket, the installation of door gaskets and backer rods. Adjustment of the door rod, roller guide, and T-handle will be required due to the stiffness of the backer rod and pressure required for the double doors and on the single doors to remain leak free.

Single Door Adjustments

1. The adjustment of the roller guides may be required. The roller guide may need to be pried in small gap increments (1/16 inch, 1/8 inch, 3/16 inch, 1/4 inch) in the direction of the back of the compartment. This will tighten the door rod rollers and pull the door into the door gasket when turning the T-handle to the close the door.
2. After adjustment, the T-handle whale tail should turn moderately with one hand without pushing in on the door. You will notice as you turn the T-handle that the door pressure against the bulb will increase and flatten the bulb seal. The adjustments should be performed evenly to the top and bottom roller guide. If the T-handle whale tail is difficult to turn due to over-gapping the roller guide, shorten the gap with a mallet until the T-handle whale tail will turn with moderate ease.
3. After the adjustment of the roller guide, adjustment of the T-handle pivot tensioner will need to be performed. On most single doors the black bump stop roller with its allen head screw will need to be positioned to its tightest setting. Loosen the allen head screw and pull the black bump stop roller toward the inside of the door until it stops then tighten. Close the door and turn the T-handle latch to lock the door, then close the whale tail into its stowage position. If closing the whale tail in the stowage position is extremely difficult then loosen the black bump stop roller and adjust accordingly.

Roller Guide, Door Rods and T-handle Adjustment



ROLLER GUIDE ADJUSTMENT ON SINGLE DOORS. GAP THE DOOR FRAME'S TOP AND BOTTOM ROLLER GUIDE AWAY FROM THE DOOR GASKET SO THE DOOR WILL MAINTAIN CONSTANT PRESSURE WHEN CLOSED.

VERIFY T-HANDLE LATCH WILL OPERATE CORRECTLY AFTER ADJUSTMENT. IF NEEDED, ADJUST ROLLER GUIDE TOWARDS THE DOOR GASKET UNTIL THE T-HANDLE WHALE TAIL TURNS EASILY.

Roller Guide, Door Rods and T-handle Adjustment



**SINGLE DOOR
ADJUSTMENT
DIRECTION.**



NOTICE

When the T-handle whale tail is stowed in its locked position, it should pull the door into the door frame even tighter. If it doesn't pull the middle of the door tighter then it is not contacting with the door frame. The middle of the door will not retain tension and could leak water. This can cause the T-handle whale tail to open during mobile operation.

Double Door Adjustments

Correct adjustments of the latching system is crucial to help remain easy operation and pressure to help maintain the compartments to be leak free. The opposite will be performed on the double doors due to the extra diameter of the door seal backer rods. Without adjustments to the rods and T-handle latching system, it will be next to impossible to operate and close, and the doors will not shut correctly.

The adjustment of the door rods will need to be performed, The roller guide on most double doors will most likely be at the closed position so adjustment of the striker roller guide will not affect the tension on the doors unless it is gapped in the direction of the back of the compartment. If there is a gap between the striker plate and the door seal edge trim then it can be adjusted by using a rubber mallet and closing the gap if necessary.

Roller Guide, Door Rods and T-handle Adjustment

1. Remove the doors rods from the T-handle pivot retainer and place the door rod in a vice so that about 4 inches is sticking up beneath the rollers. The direction the door rods are placed in the vice is crucial to perform the bend in the correct direction. In 99% of adjustments, the bend of the roller neck will need to be in the same direction as the bend that is in the lower portion of the door that meets the T-handle pivot tensioner. This bend will allow the rollers to meet the tapered portion of the striker plate when the doors are close instead of the flat portion of the striker plate which will make the T-handle whale tail difficult to turn to shut.



**DIRECTION TO
BEND ROD NECK
ROLLER HEAD
WHEN ORIENTED
CORRECTLY.**

NOTICE

Bending the neck of the rod rollers too far will result in a loss of pressure against the door and door seal and could potentially develop a leak.

When the rod bend is correct, pressure from the latching system when the door is closed and shut, will be great enough to close all the door seal gaps evenly against the backer rod and the rest of the door. The D-profile gasket should be crushed flat against the door seal and inner door when the door is closed and shut.

Roller Guide, Door Rods and T-handle Adjustment



NOT BENT FAR ENOUGH



BENT TOO FAR



BENT CORRECTLY

Roller Guide, Door Rods and T-handle Adjustment

2. After the adjustment of the door rods and/or roller guide, adjustment of the T-handle pivot tensioner will need to be performed. The black bump stop roller with its allen head screw will need to be positioned so that the whale tail will shut moderately in the stowage position. Loosen the allen head screw and adjust the black bump stop roller accordingly so when the door is closed and shut, and the whale tail is in the stowage position, it closes the doors gap between the inner and outer door. This adjustment should put even more pressure on at top, middle, and bottom of the D-profile gasket.



**DOUBLE
ADJUSTMENT
DIRECTION**

NOTICE

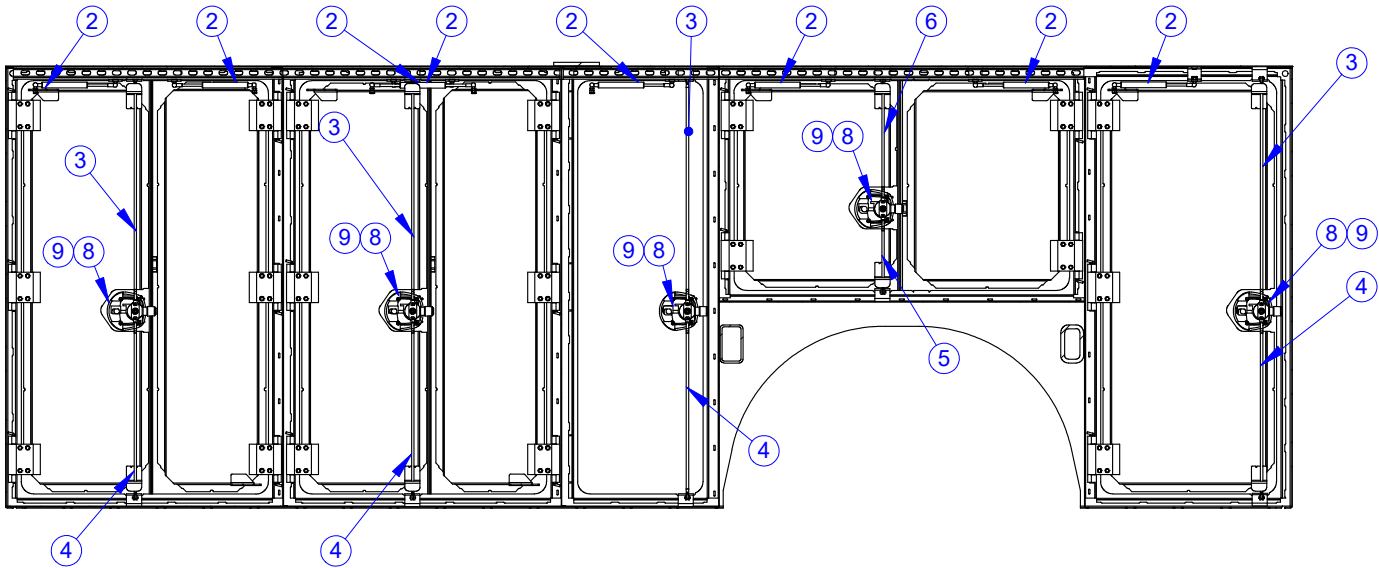
Close the door and turn the T-handle latch to shut the door then close the whale tail into its stowage position. If closing the whale tail in the stowage position is extremely difficult then loosen the black bump stop roller and adjust accordingly.

Roller Guide, Door Rods and T-handle Adjustment

3. When the T-handle whale tail is stowed in the locked position it should pull the door into the door frame even tighter. If it doesn't pull the middle of the door tighter then it is not contacting with the inner door strike plate and the middle of the door will not retain tension and could leak water. This can cause the T-handle whale tail to open during mobile operation.



Body Assembly - P/N 772322001

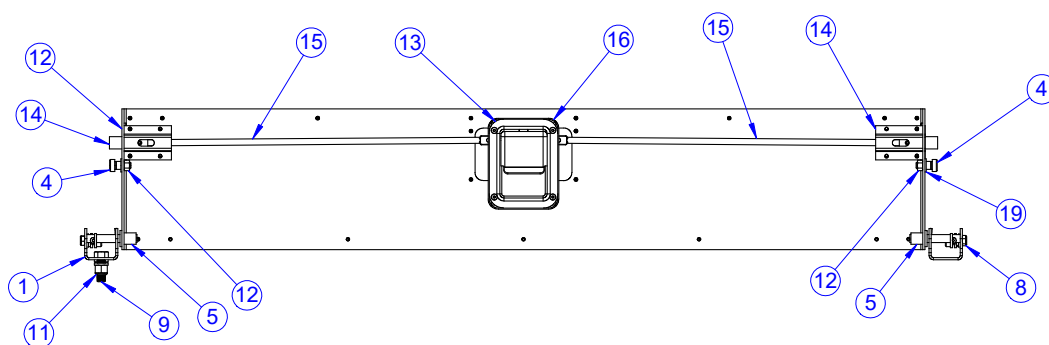
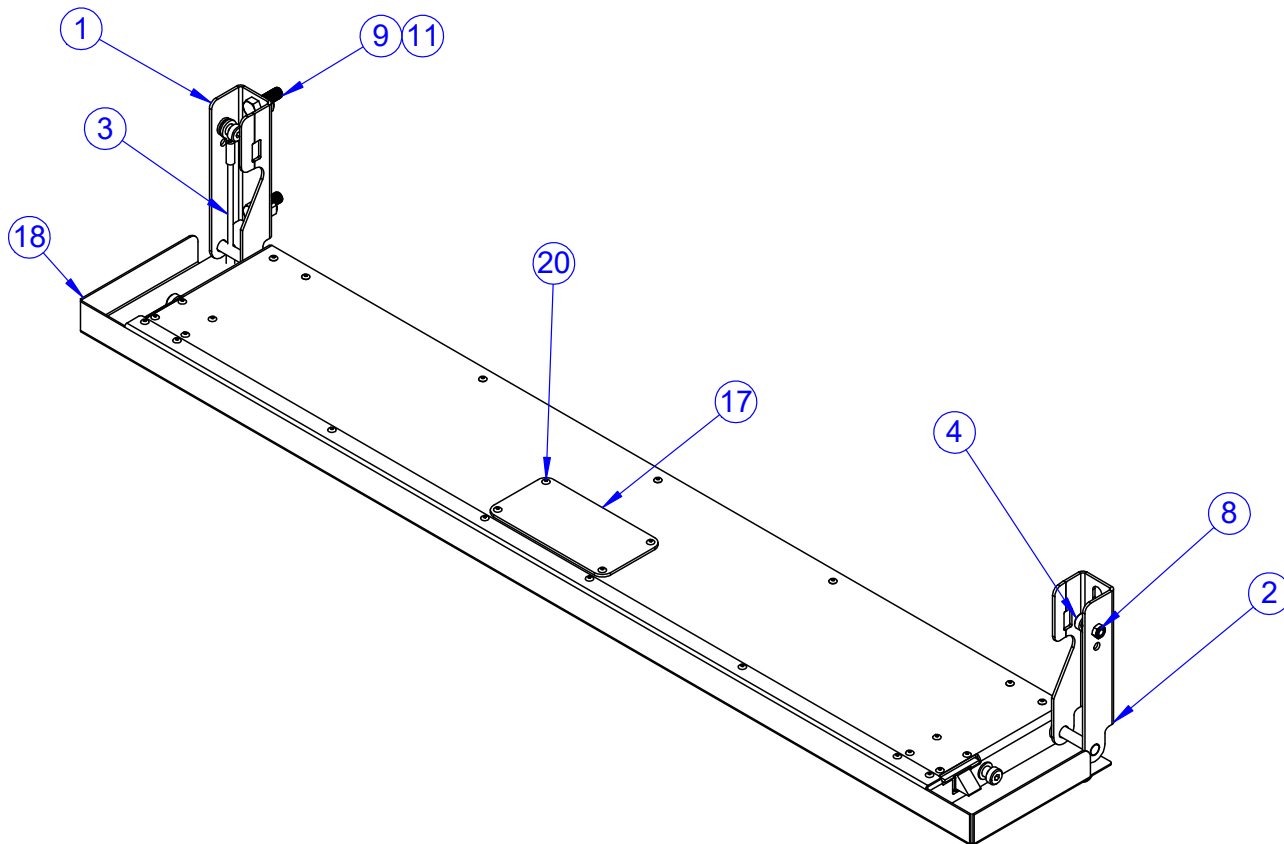


FINAL ASSEMBLY (INSIDE SECTION VIEW)

ITEM NO.	PART NUMBER	DESCRIPTION
1	560080000	TAILGATE ASSY
2	760535005	DOOR PROP ASSY (GAS)
3	560102000	DOOR ROD TALL
4	560101000	DOOR ROD
5	560103000	DOOR ROD HORIZ
6	560111000	DOOR ROD TALL
7	330622000	DECAL, SERIAL NO.
8	560525100	T-HANDLE ASSY
9	750074000	NUT #10 NC STAINLESS

Accessories

Tailgate Assembly - P/N 560080000



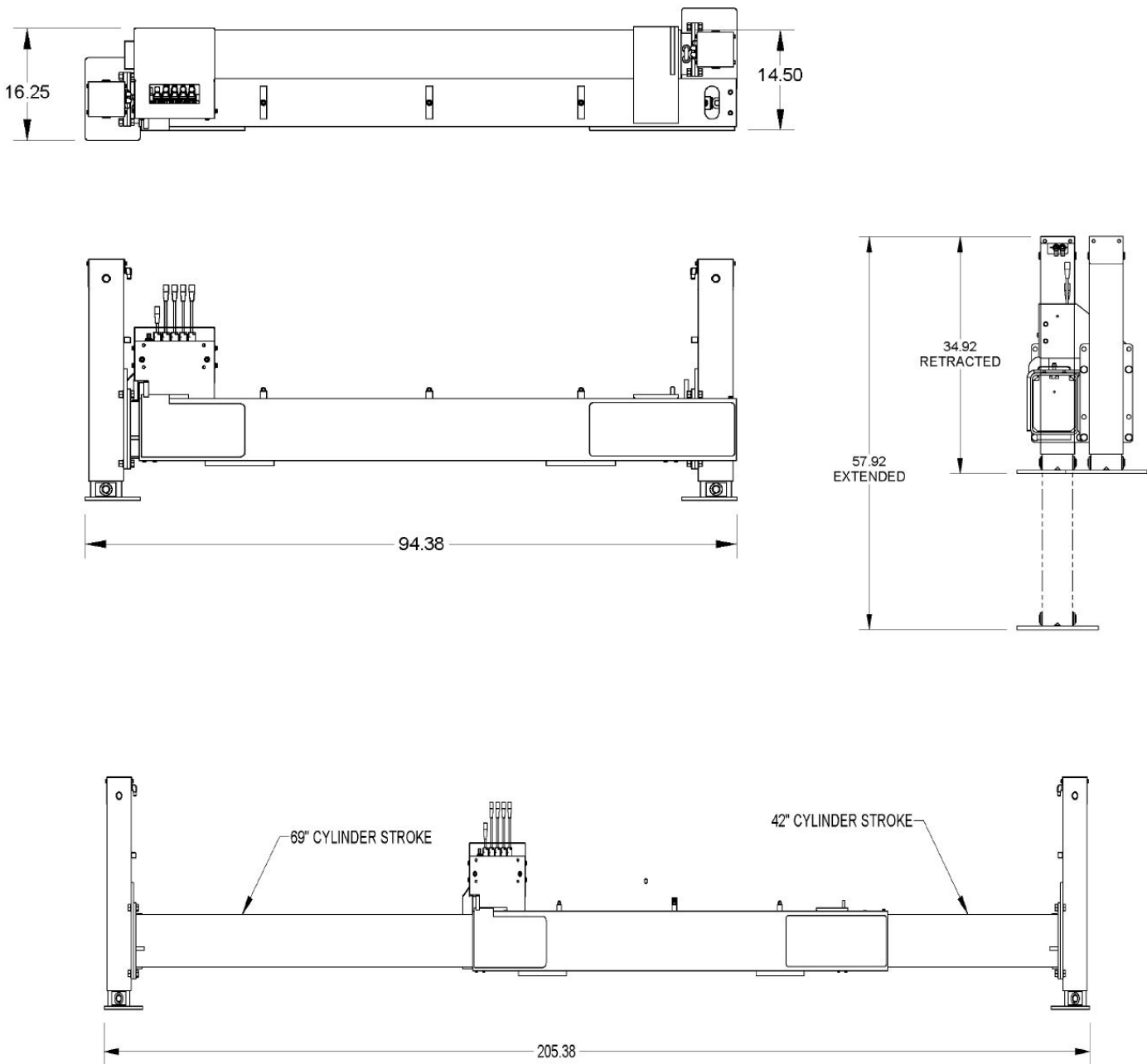
Tailgate Assembly - P/N 560080000

ITEM NO.	QTY.	PART NUMBER	DESCRIPTION
1	1	560085000	TAILGATE MTG BRKT WDMT LH
2	1	560088000	TAILGATE MTG BRKT WDMT RH
3	2	560090000	CABLE ASSY TAILGATE
4	4	560091000	SCREW SHOULDER 1/2 X 3/8-16UNC
5	2	736738000	TAILGATE BUSHING
6	2	021100000	WASHER SP LK 3/8
7	2	320976000	WASHER, FLAT, 3/8 SAE HARDENED
8	2	330372001	NUT, HX, 3/8-16, GR 5, THIN NYLON-INSERT LOCKNUT
9	2	738642001	SCREW HX HD 1/2-13UNC X 1 1/2 LG GR8
10	2	021500001	WASHER, SP LK 1/2, ZINC YELLOW
11	2	480986000	NUT HEX, 1/2-13 UNC, NYLON INSERT LOCK NUT, ZINC PLATED, GRADE 8
12	1	560095001	TAILGATE INNER PANEL WELDMENT
13	1	560093000	PADDLE LATCH
14	2	560094000	LATCH
15	2	560096000	ROD 3/8
16	1	560098000	GASKET G-10
17	1	560084000	ACCESS PNL TAILGATE
18	1	560082003	TAILGATE OUTER PANEL W/SIDES
19	2	021403000	WASHER, FLAT-HARDENED 3/8
20	31	754028000	RIVET POP 3/16 DIA X 1/4 - 3/8 GRIP SS
21	2	560093001	HAIR PIN .080 DIA X 1 3/16 LG

Accessories

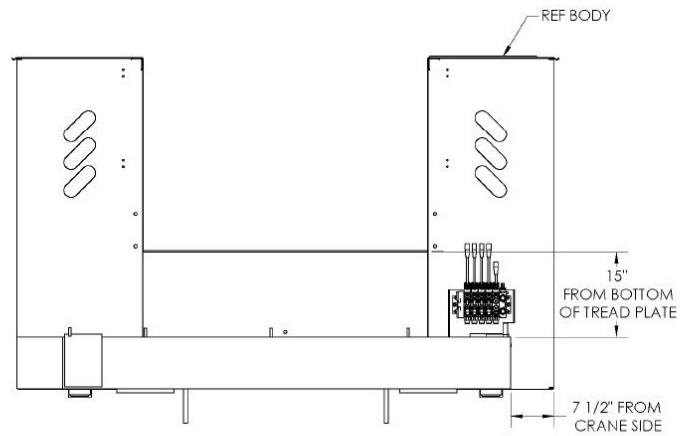
Fully Hydraulic Outriggers - P/N 772020001

General Dimensions

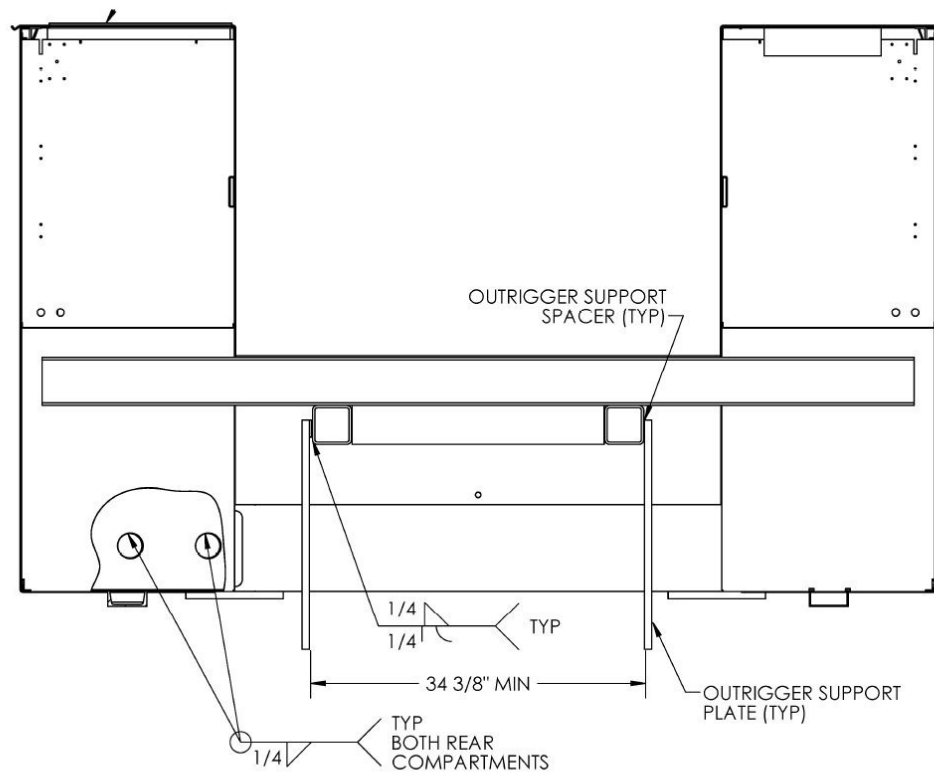


APPROXIMATE WEIGHT: 1420 LBS

Outrigger Installation



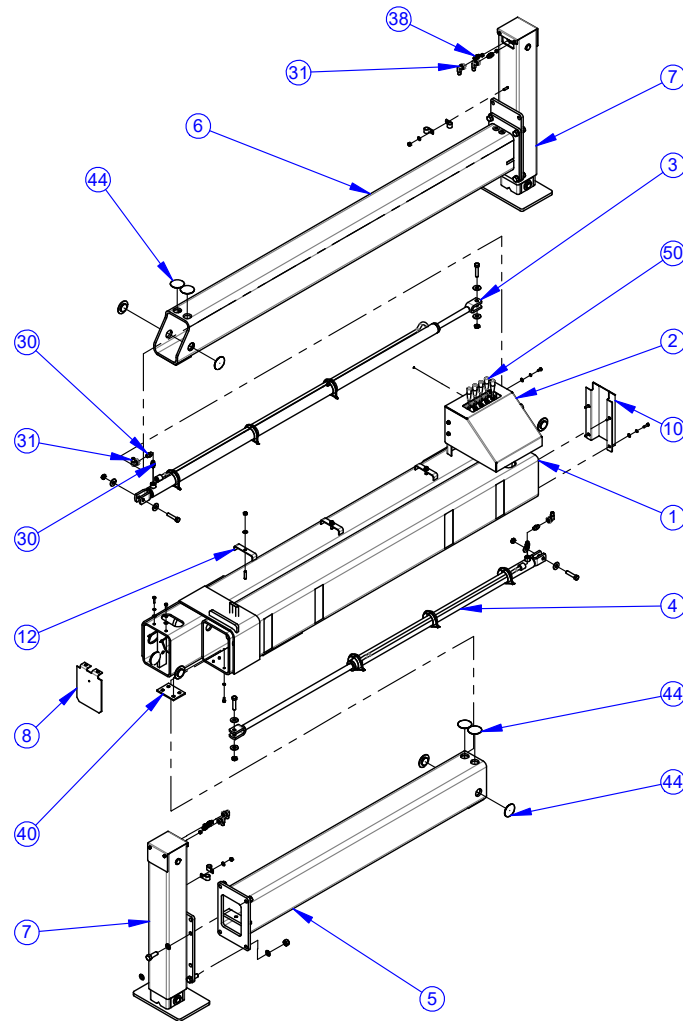
**CROSS TUBE LOCATION
HYDRAULIC OUTRIGGER**



**SECTION VIEW FROM INSIDE FENDER WELL
TOWARD BACK OF BODY**

Accessories

Outrigger Assembly



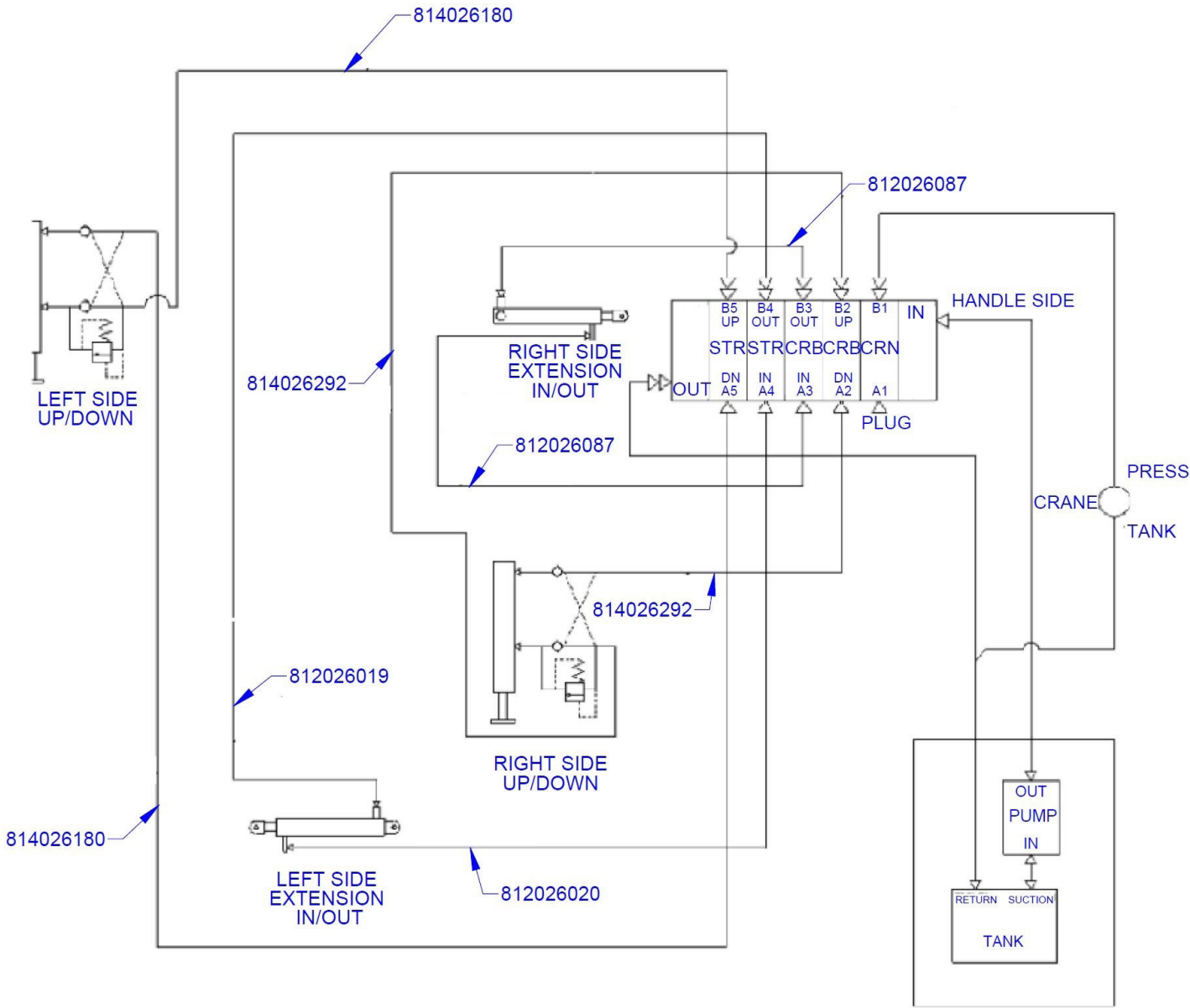
ITEM NO.	PART NUMBER	DESCRIPTION
1	772030000	MAIN CROSS TUBE WELDMENT, CSC, TITAN 60/70
2	760268000	VALVE COVER, TITAN 60
3	772023000	CYLINDER, 1.5 BORE, 69 IN STROKE
4	772024000	CYLINDER, 1.50 BORE X 42 STROKE X 1.00 ROD
5	772034000	SLIDE WELD SHORT, CSC, T60/70
6	772022006	SLIDE WELDMENT, LONG, RSC, TITAN 85
7	772029000	VERTICAL LEG ASSY, TITAN 60/70
8	760417000	COVER ASSEMBLY, OUTRIGGER TUBE
9	760248000	BRACKET ASSEMBLY, COVER
10	760249000	COVER, HOSE
11	374086000	NYLON HOSE SLEEVE, 1.81" ID
12	407216000	HOSE RETAINER, 4.75 WIDE
13	736272000	NUTSERT 1/4-20UNC X .027-.165 GRIP
14	020200000	WASHER SP LK 1/4

Outrigger Assembly

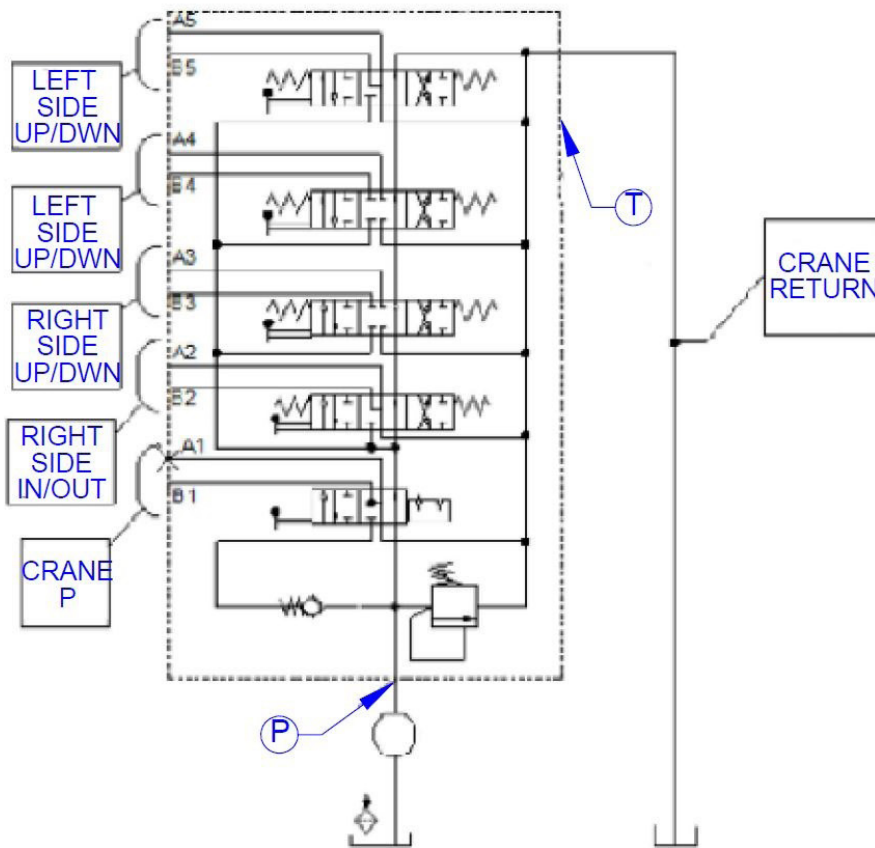
ITEM NO.	PART NUMBER	DESCRIPTION
15	005102000	SCREW HX HD 1/4-20UNF X 5/8 LG
16	012198000	SCREW HX HD 5/8-11UNC X 1 3/4 LG GR8
17	407315000	NUT HX 5/8 NC CP GR8
18	023902000	WASHER FL 5/8 HARDENED
19	021600000	WASHER FL 1/2
20	011511000	SCREW HX HD 1/2-20UNF X 2 1/4 LG GR5
21	017700000	NUT LK 1/2-20UNF
22	020901000	WASHER FL 5/16
23	016500000	NUT HX 5/16-18UNC
24	021200000	WASHER FL 3/8
25	017301000	NUT HX NYLK 3/8-16UNC CP
26	005401000	SCREW HX HD 1/4-20UNC X 5/8 LG CP
27	020400000	WASHER FL SAE 1/4
28	005604000	SCREW HX HD 1/4-20UNC X 1 LG
29	772035000	HYDRAULIC KIT TITAN 60/70, CSC
30	760203000	FITTING, STR, -6 SAE/6 JIC RESTRICTED
31	480194000	FITTING 6 SWIVEL NUT ELBOW
32	480024000	MOUNT PENDANT CABLE RETAINER
33	812026019	HOSE ASSY, -6JICF/-6JICF, -4 HOSE
34	812026020	6 FEMALE JIC/6 FEMALE JIC, 20 INCHES LONG
35	814026292	HOSE ASSY, R7, -6JICF/-6JICF X -4 HOSE, 292"L
36	814026180	HOSE ASSY, R7, -6JICF/-6JICF X -4 HOSE, 180"L
37	812026087	HOSE ASSY, -6JICF/-6JICF X -4 HOSE, 87"
38	200876000	FITTING STR 6 SAE/6 JIC
39	760229000	TRIM EDGE, 5/16
40	772033000	PAD, 4.25 X 3.0 X .25, 1/4-28 NUTS
41	772027000	GROMMET, RUBBER, 1/2" ID, 1/2" THICK PLATE
42	407202000	PAD BOOM 2.50 O.D.
43	560356000	PAD BOOM 2.50 OD x .125
44	470048000	PAD, BOOM 2.50 O.D. X 0.063 THICK
45	772042000	RUBBER STRIP, 1 X 8 X .06
46	772043000	ZIP TIE STRAP, 12 IN, NYLON, BLACK
47	772046006	SPIRAL HOSE WRAP, 1/2", 6" LONG
48	772089000	SHIP KIT, OUTRIGGER, TITAN 60/70, HYDRAULIC
49	760245000	DECAL INSTALLATION, TITAN 60
50	760260000	CONTROL VALVE SUB-ASSY, 5 SECTION
51	008400000	SCREW HX HD 3/8-16UNC X 3/4 LG GR 5
52	021100000	WASHER SP LK 3/8
53	330372000	NUT HX 3/8 NC GR5

Accessories

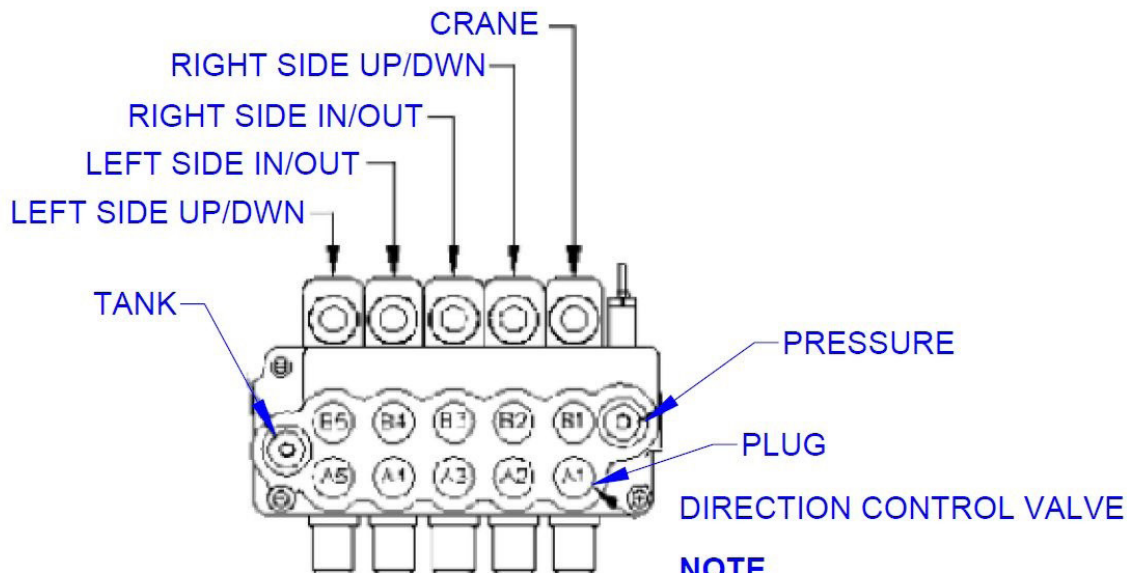
Hydraulic Schematic



Hydraulic Schematic



HYDRAULIC SCHEMATIC

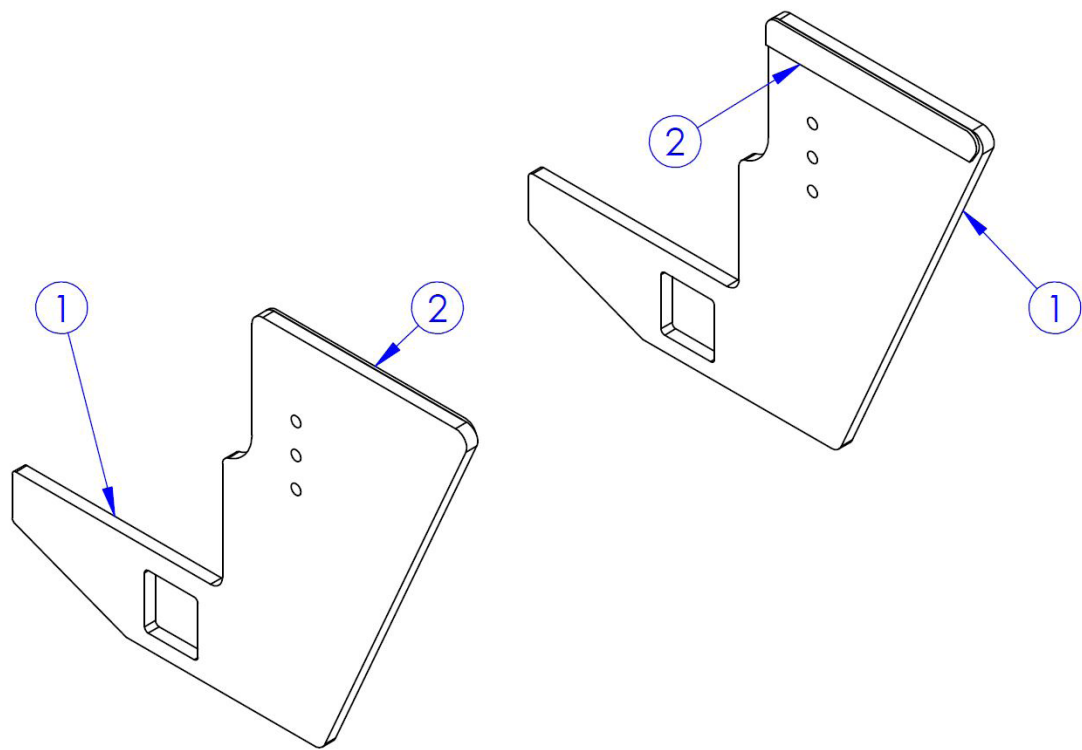


NOTE

A-PORT BOTTOM
B-PORT HANDLE SIDE

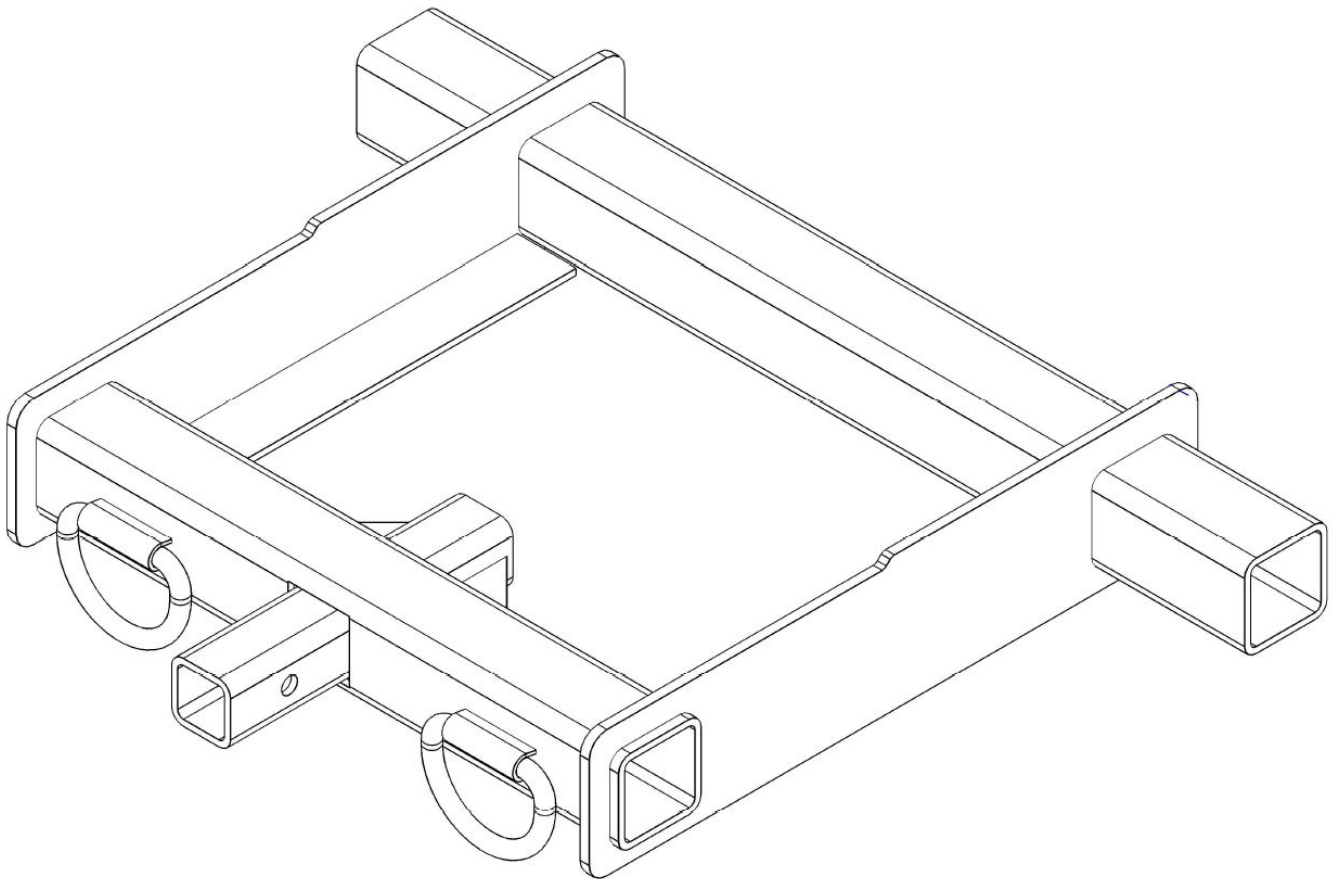
Accessories

Outrigger Ship Kit - P/N 772089000



ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	2	760288001	OUTRIGGER SUPPORT PLATE F/HITCH
2	2	750989000	SPACER, OUTRIGGER SUPPORT, TITAN 50, 60, 70
3	1	760290000	INSTALLATION DRAWING, TITAN 60 OUTRIGGER

Receiver Hitch - P/N 760365010



Specifications:

12,000 LBS rating

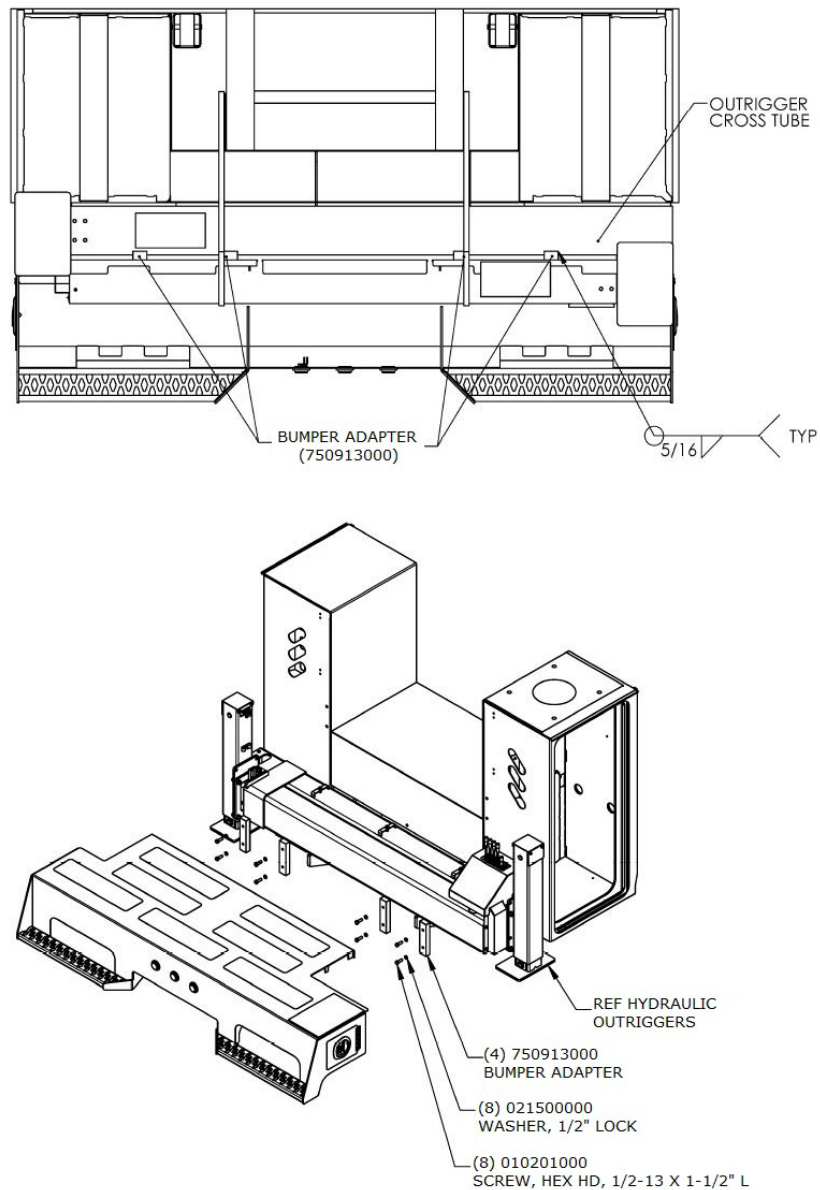
2" Opening for hitches.

Max Tow Weight: 12,000 LBS

Max Tongue Weight: 2,400 LBS

Accessories

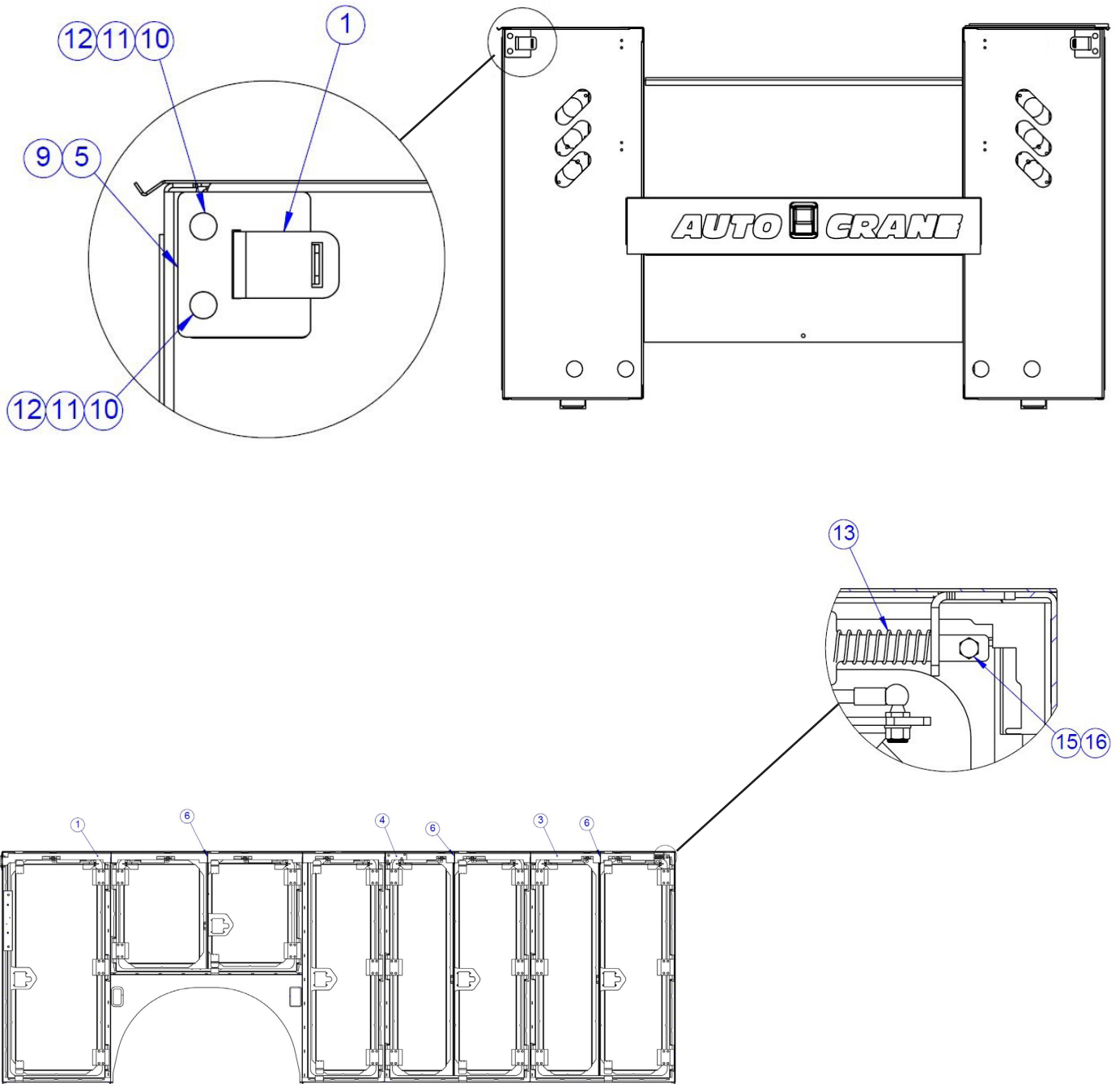
Bumper Installation



BUMPER INSTALLATION INSTRUCTIONS:

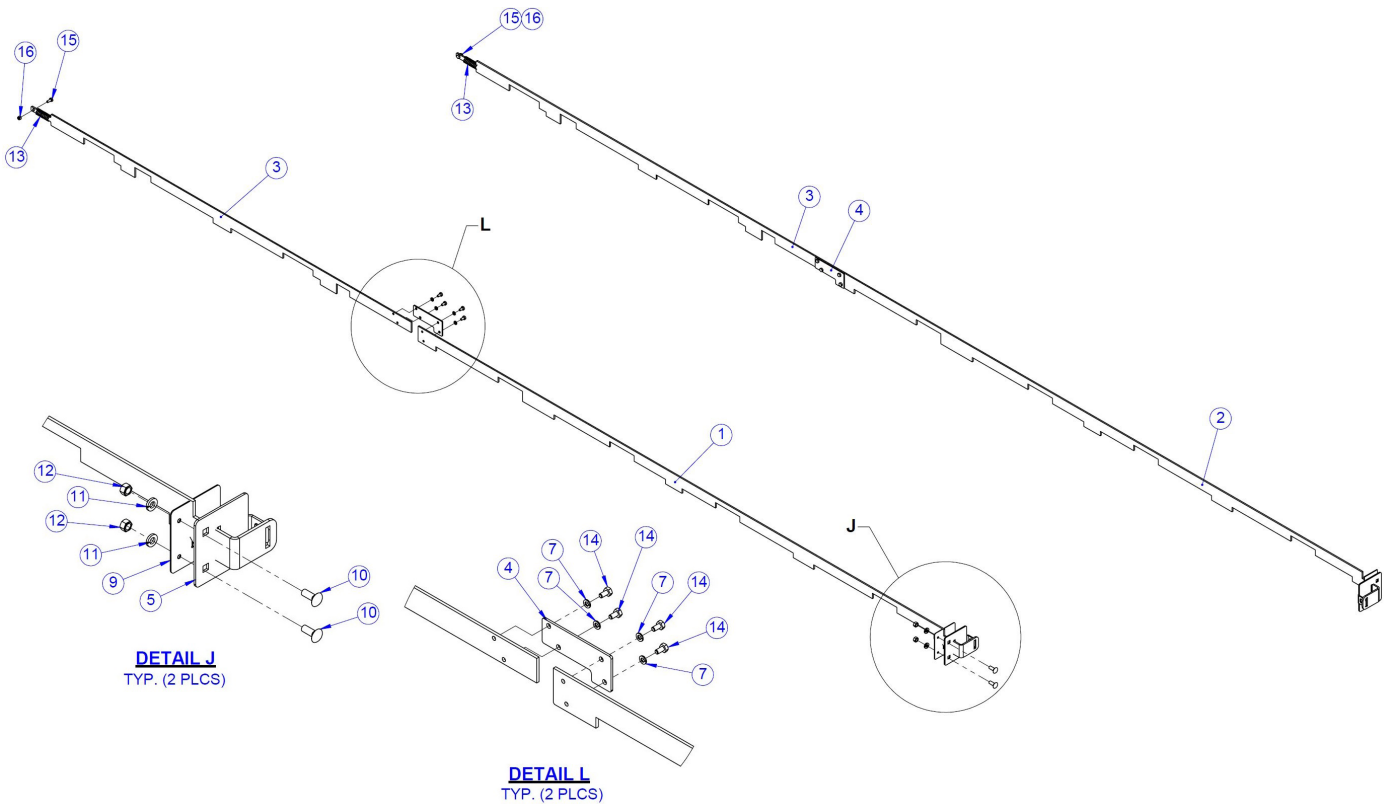
1. Attach the (4) bumper adapters (750913000) with 1/2" bolt (010201000) and 1/2" lock washer (021500000).
2. Place the bumper in place with the bumper adapters against the outrigger cross tube and the bumper top plate resting on top of the cross tube.
3. Square and center the bumper to the rear of the body, then tack weld the adapters to the cross tube.
4. Remove the bumper by removing the 1/2" hardware.
5. Weld all (4) adapters with a 5/16 fillet weld all around.
6. Reinstall the bumper with 1/2" hardware.

Masterlock Assembly - P/N 760570000



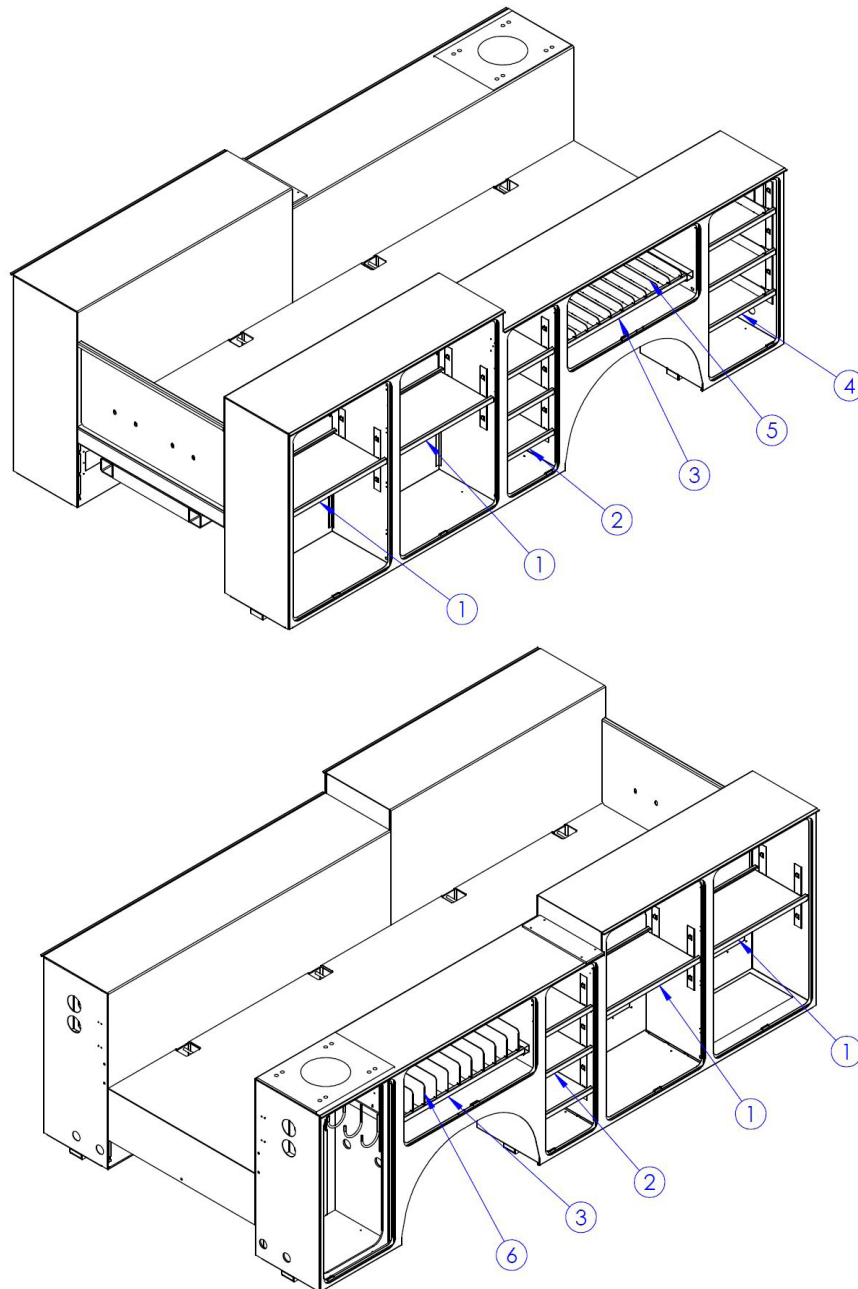
Accessories

Masterlock Assembly - P/N 760570000



ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	739191011	PUSH BAR SHORT LEFT SIDE, TITAN 60/120CA, STAINLESS
2	1	739191012	PUSH BAR SHORT RS, TITAN 60/120CA, STAINLESS
3	2	739191014	PUSH BAR FRONT, 120CA FULL HEIGHT, STAINLESS
4	2	739191015	PLATE, SPLICE, MASTERLOCK SYSTEM, 120CA
5	2	739190005	MASTER LOCK LOCKING PLATE, STAINLESS STEEL
6	6	560119000	MASTER LOCK GUIDE
7	4	020200000	WASHER SP LK 1/4
8	2	560122000	MASTER LOCK MOUNT
9	2	560139000	GASKET MASTERLOCK
10	4	560138000	SCREW CARRIAGE 3/8-16UNC X 1 LG
11	4	021100000	WASHER SP LK 3/8
12	4	330372000	NUT HX 3/8 NC GR5
13	2	736730000	SPRING
14	8	005406000	SCREW HX HD 1/4-28UNF X 1/2 LG
15	2	005401000	SCREW HX HD 1/4-20UNC X 5/8 LG CP
16	2	016300000	NUT HX NYLK 1/4-20UNC

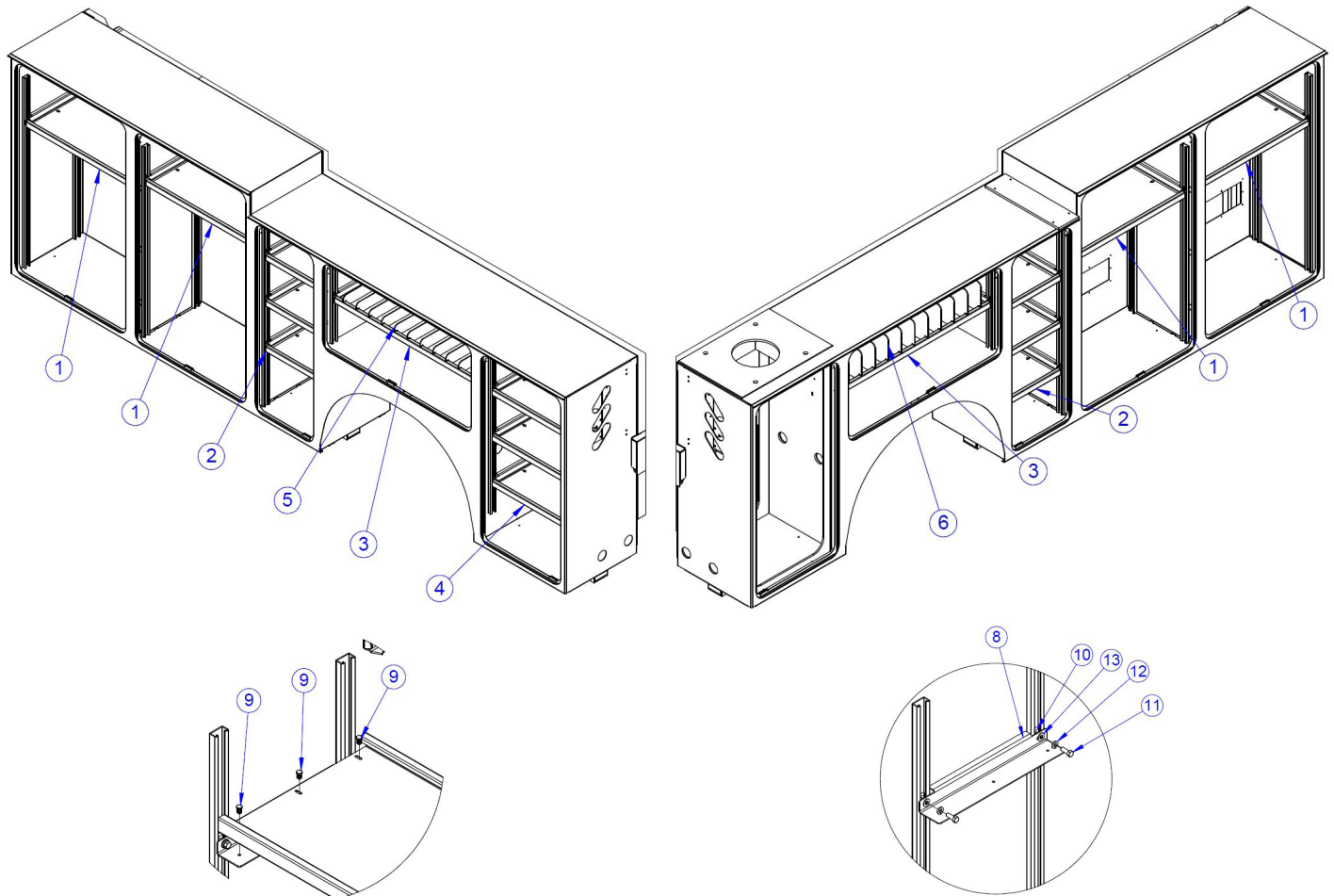
Adjustable Shelving - P/N 760537000



ITEM NO.	PART NUMBER	DESCRIPTION
1	560476000	SHELF FRONT COMPT
2	760538000	SHELF MID COMPT 120CA
3	560536000	SHELF HORIZ (PLASTIC DIVIDERS)
4	560537002	SHELF REAR COMP (PLASTIC DIVIDER)
5	560480001	DIVIDER, SHELF (SHORT)
6	560481001	DIVIDER, SHELF TALL (PLASTIC)

Accessories

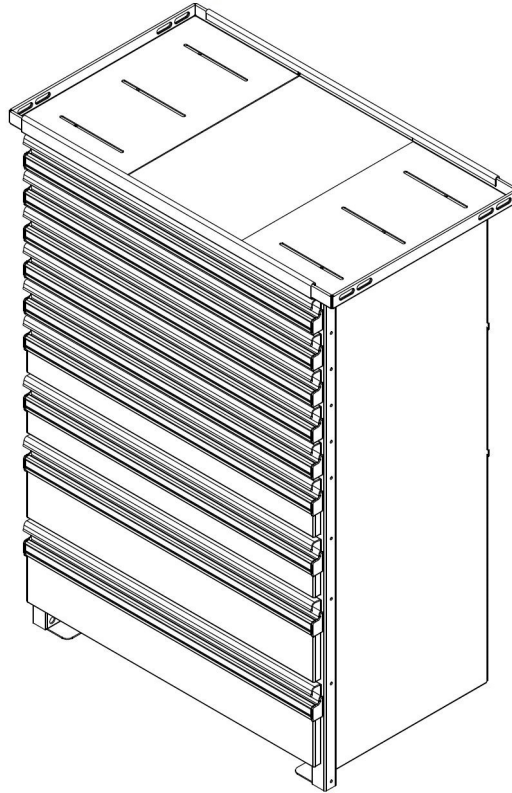
Fully Adjustable Shelving - P/N 760537005



SHELF CONNECTION VIEW (TYP)

BRACKET CONNECTION VIEW (TYP)
SHELF REMOVED FOR CLARITY

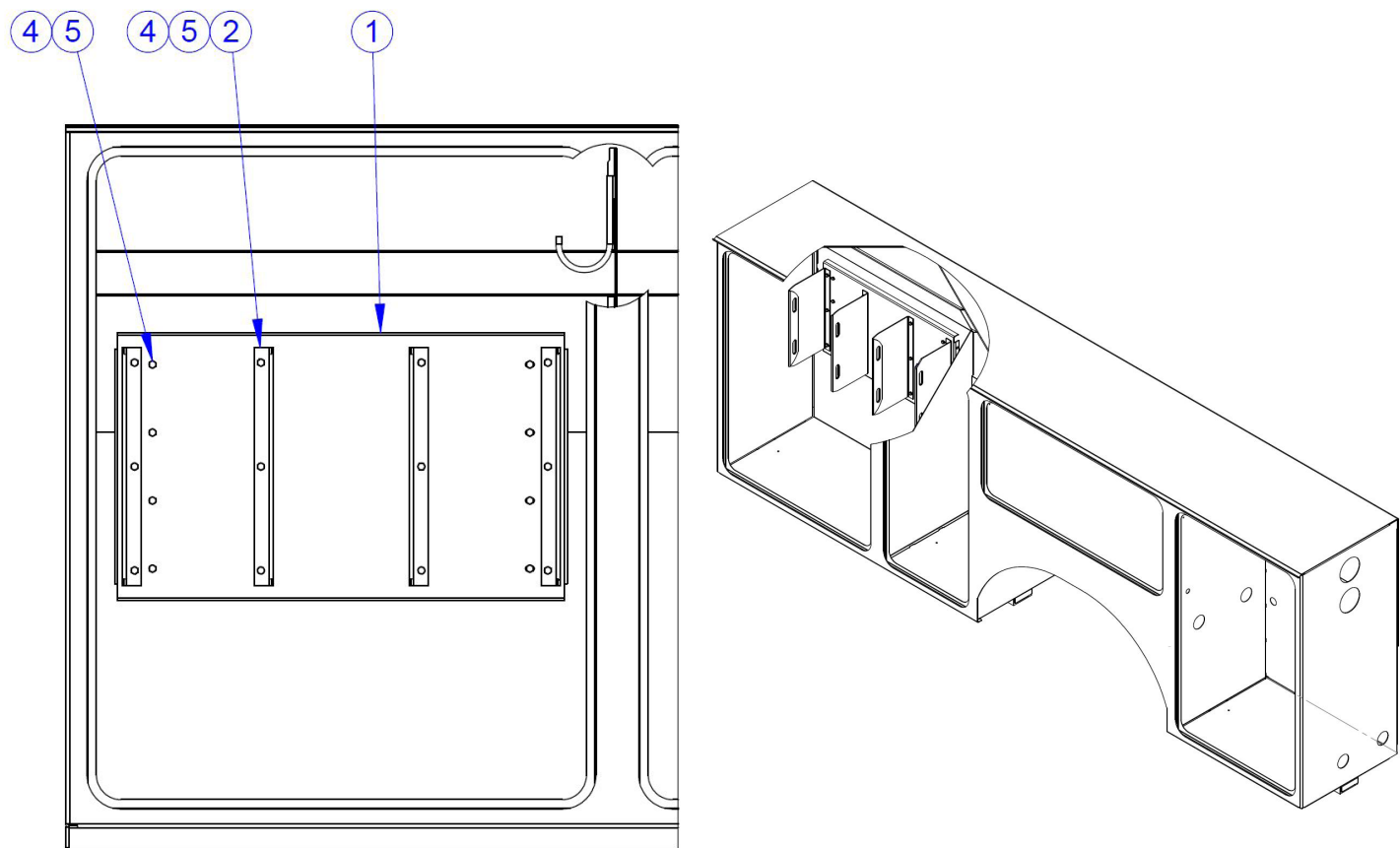
ITEM NO.	PART NUMBER	DESCRIPTION
1	560476039	SHELF, FRONT, CHANNEL STRUT, TITAN 50-85
2	560476032	SHELF, MID, CHANNEL STRUT, TITAN 50-85 120CA
3	560476033	SHELF, HORIZONTAL, TITAN 50-85
4	560476034	SHELF, REAR COMP, CHANNEL STRUT, TITAN 50-85
5	560480001	DIVIDER SHORT (PLASTIC)
6	560481001	DIVIDER, SHELF TALL (PLASTIC)
7	715078018	SHELF, BRACE, TITAN 38-85 REAR
8	715078017	SHELF, BRACE, 12 GA TITAN 38-85
9	739429528	PANEL RIVET, 1/4 INCH HOLE
10	750796002	NUT, CHANNEL STRUT, 3/8 THREAD
11	008701000	SCW HX 3/8 UNC X 1 GR5
12	021100000	WASHER SP LK 3/8
13	021200000	WASHER FL 3/8



STANDARD TOOL BOX PART NUMBERS		
COMPARTMENT	PART NO.	DESCRIPTION
FRONT	760385100	TOOLBOX (5) 3", (2) 5", (2) 7" FRONT TALL
MID	760585200	TOOLBOX (4) 3", (2) 5", (3) 7" MID & REAR
HORIZONTAL	760585301	TOOLBOX (3) 3" HORIZONTAL
REAR	760585200	TOOLBOX (4) 3", (2) 5", (3) 7" MID & REAR
-----	560320118	EGG CRATE DIVIDER FOR 5" DRAWER
-----	560320119	EGG CRATE DIVIDER FOR 3" DRAWER
-----	760385101	DIVIDER FOR 3" DRAWER
-----	760385107	DIVIDER FOR 4" DRAWER
-----	760385102	DIVIDER FOR 5" DRAWER
-----	760385114	DIVIDER FOR 7" DRAWER
-----	560126012	DRAWER SLIDES, 16"
-----	754551000	DRAWER SLIDES, 18"

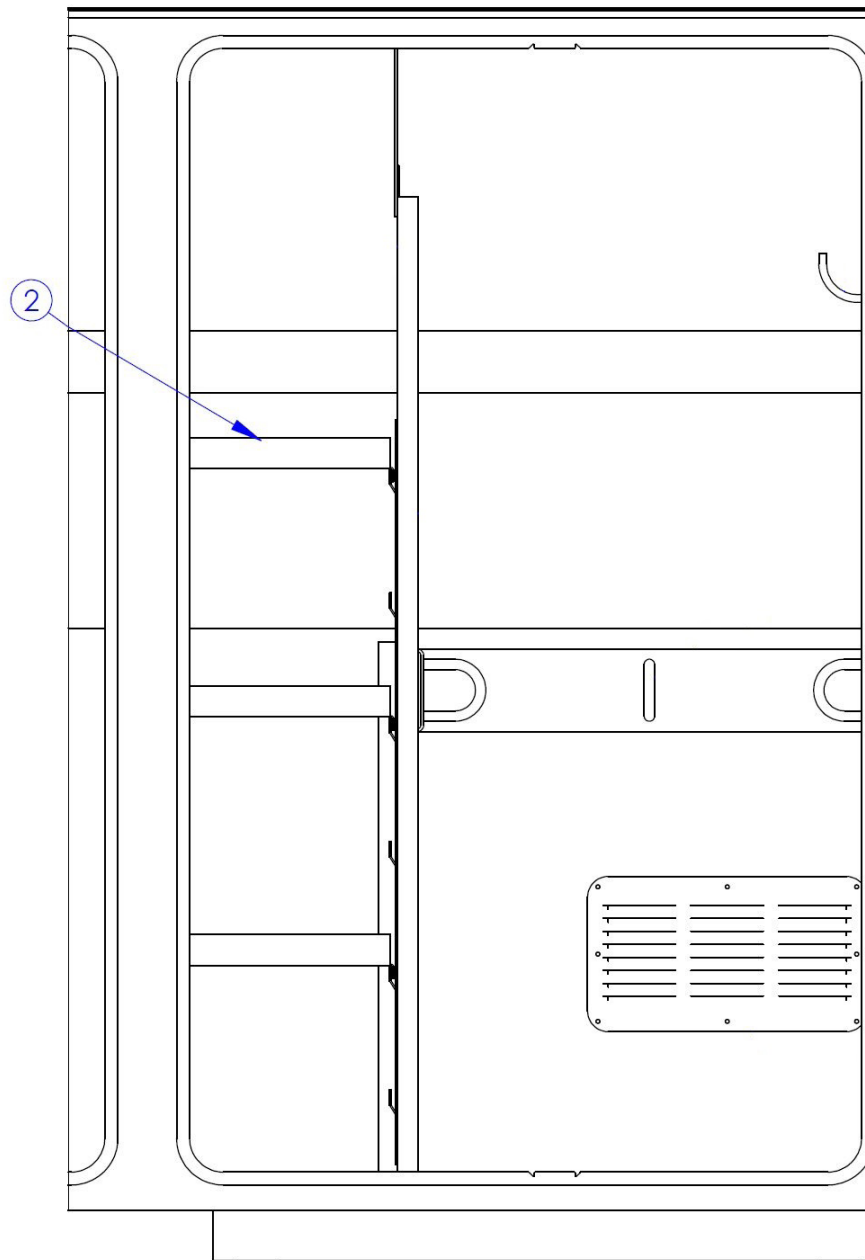
Accessories

Oxy/Acet Assembly - P/N 736233000



ITEM NO.	PART NUMBER	DESCRIPTION
1	736226000	OXY-ACET MTG PLT ASSY
2	736229000	DIVIDER PNL - OXY/ACET
3	725039000	STRAP HOLD DOWN OXY/ACET
4	020200000	WASHER SP LK 1/4
5	005500000	SCREW HX HD 1/4-20UNC X 3/4 LG

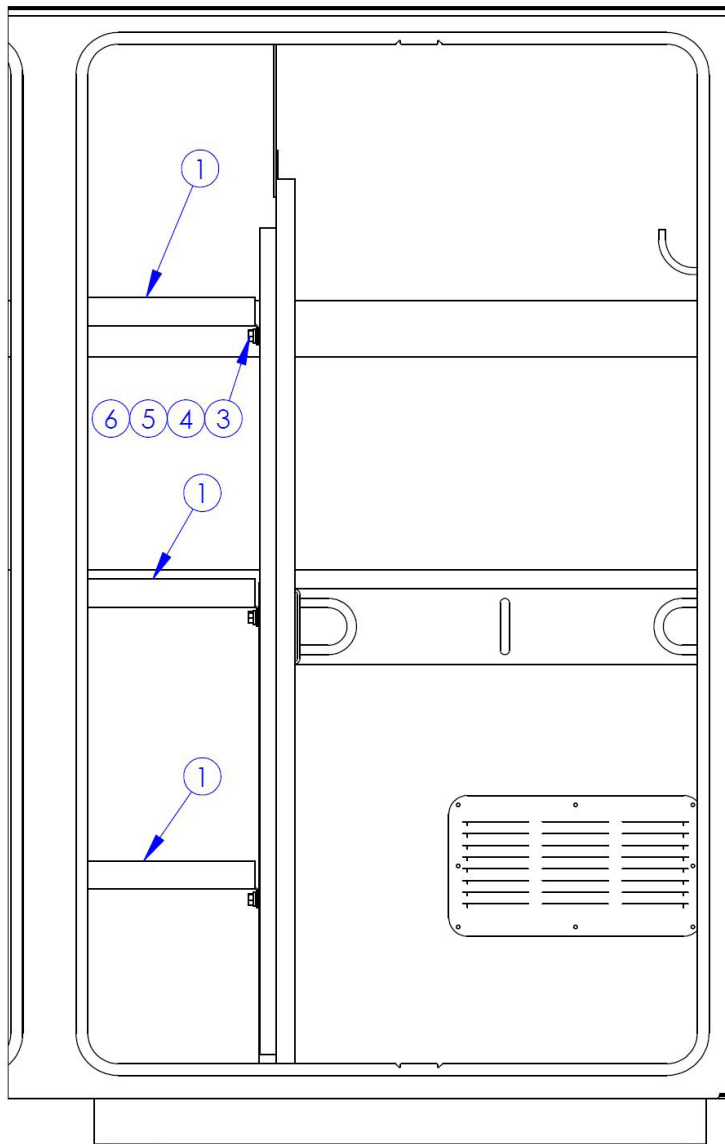
Oxy Divider/Shelving Package - P/N 560483000



ITEM NO.	PART NUMBER	DESCRIPTION
1	725039000	STRAP HOLD DOWN OXY/ACET
2	560484000	SHELF FRONT COMP (OXY/DIVIDER)

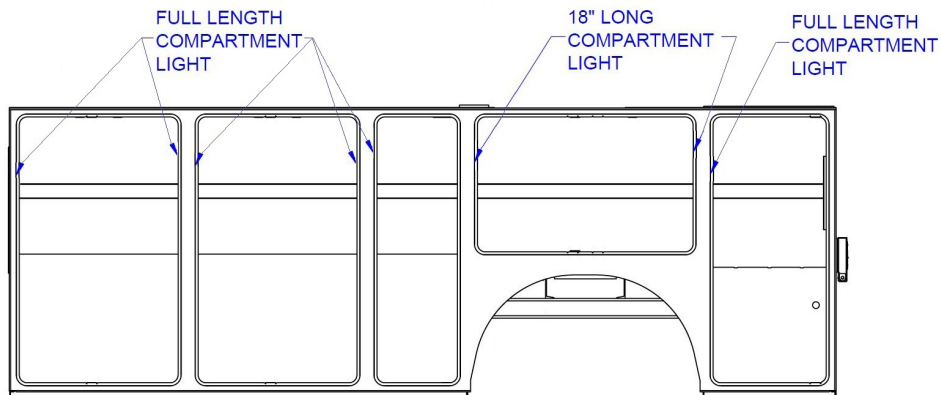
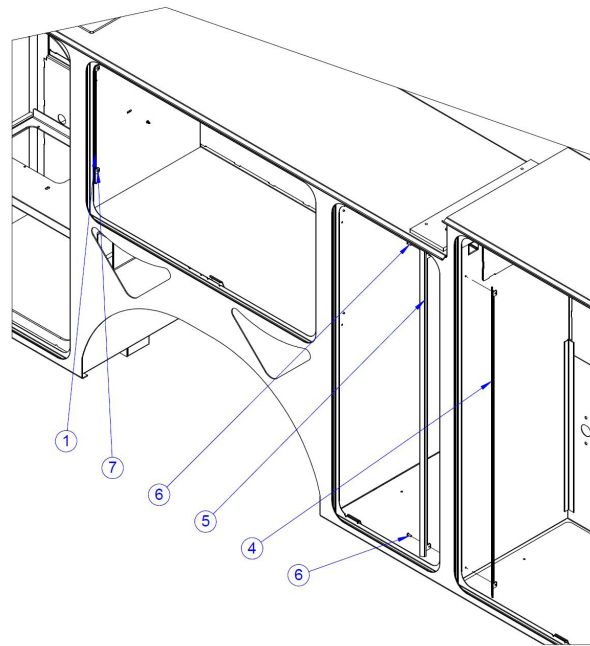
Accessories

Oxy Divider/Shelving Fully Adj Package - P/N 560483015



ITEM NO.	PART NUMBER	DESCRIPTION
1	739316803	SHELF, OXY DIVIDER. FULLY ADJ.
2	725039000	STRAP HOLD DOWN OXY/ACET
3	008701000	SCW HX 3/8 UNC X 1 GR5
4	021100000	WASHER SP LK 3/8
5	418184000	WASHER-3/8ID X5/8 ODX1/16,FLAT ALUM
6	750796002	NUT, CHANNEL STRUT, 3/8 THREAD
7	560483016	WELDMENT, 'OXY DIVIDER/ ADJ. SHELVING

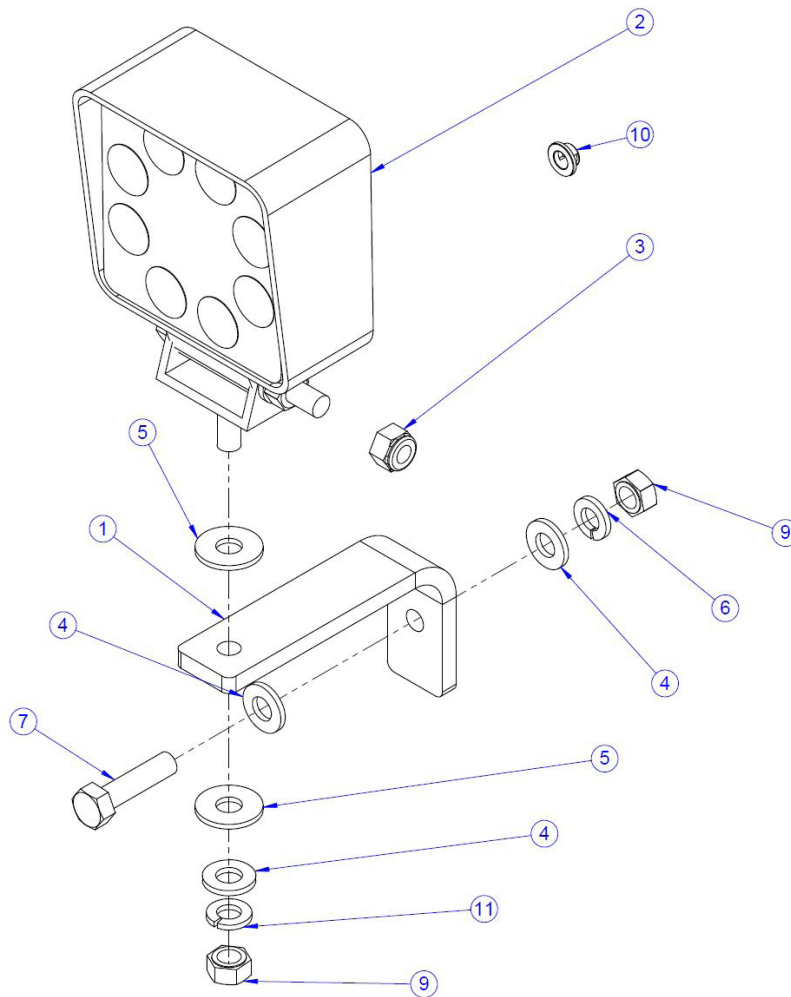
Compartment Lights - P/N 475300145



ITEM NO.	PART NUMBER	DESCRIPTION
1	475300115	LED LIGHT ASSEMBLY 18" LH
2	475300116	LED LIGHT ASSEMBLY 18" RH
3	475300118	LED LIGHT ASSEMBLY 36" RH
4	475300146	LED LIGHT ASSEMBLY 48" LH
5	475300119	LED LIGHT ASSEMBLY 48" RH
6	754028000	RIVET POP 3/16 DIA X 1/4 - 3/8 GRIP SS
7	754028001	RIVET 3/16 POP .126-.250 GRIP SS
8	001303000	SCREW RD HD #8UNC X 3/8 SS
9	019700000	WASHER SP LK #8

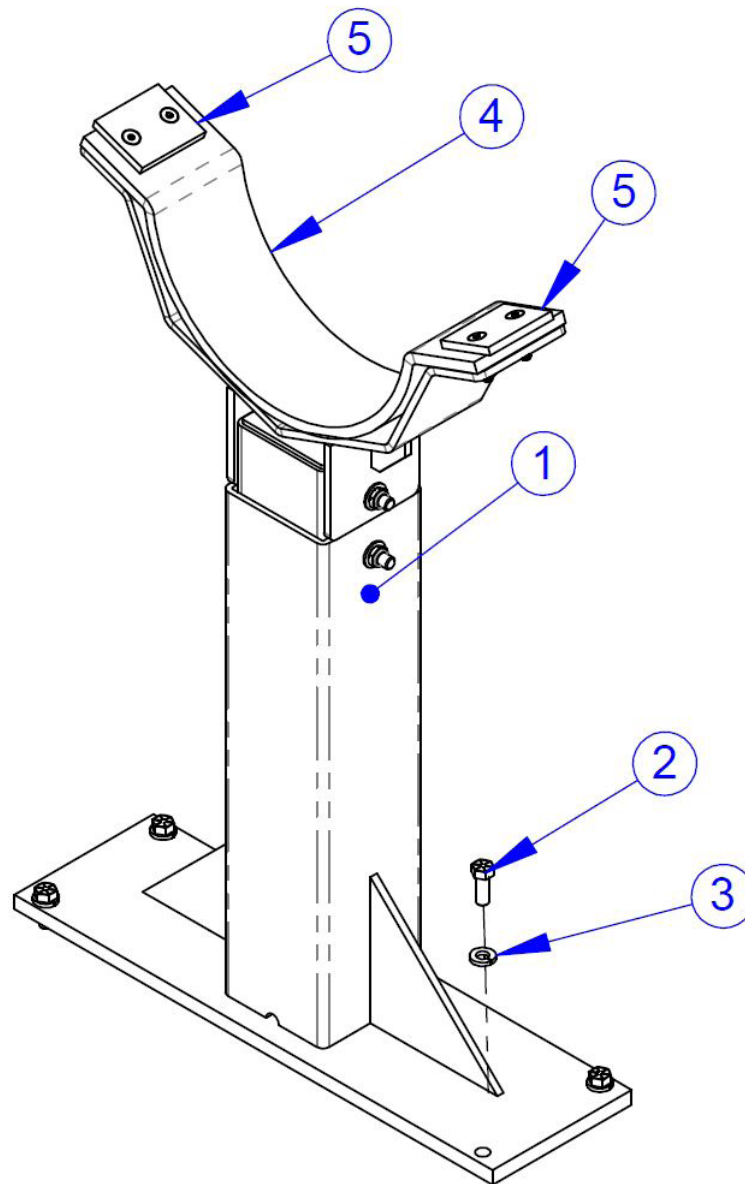
Accessories

Flood Light Kit - 475300034



ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	475300042	FLOOD LIGHT BRACKET
2	1	475300032	FLOOD LIGHT, SQUARE LED, 1600 LUMENS
3	1	016801000	NUT HX NYLK 5/16-18UNC CP
4	3	020901000	WASHER FL 5/16
5	2	716044000	5/16" FLAT WASHER, NYLON
6	1	020600000	WASHER 5/16 LOCK SS
7	1	007804000	SCREW HX HD 5/16-18UNC X 1 1/4 LG CP
8	1	811029000	SCREW HX HD 5/16-18UNC X 2 1/2 LG
9	3	016500000	NUT HX 5/16-18UNC
10	1	560540000	GROMMET, NYLON
11	1	020601000	WASHER SP LK 5/16

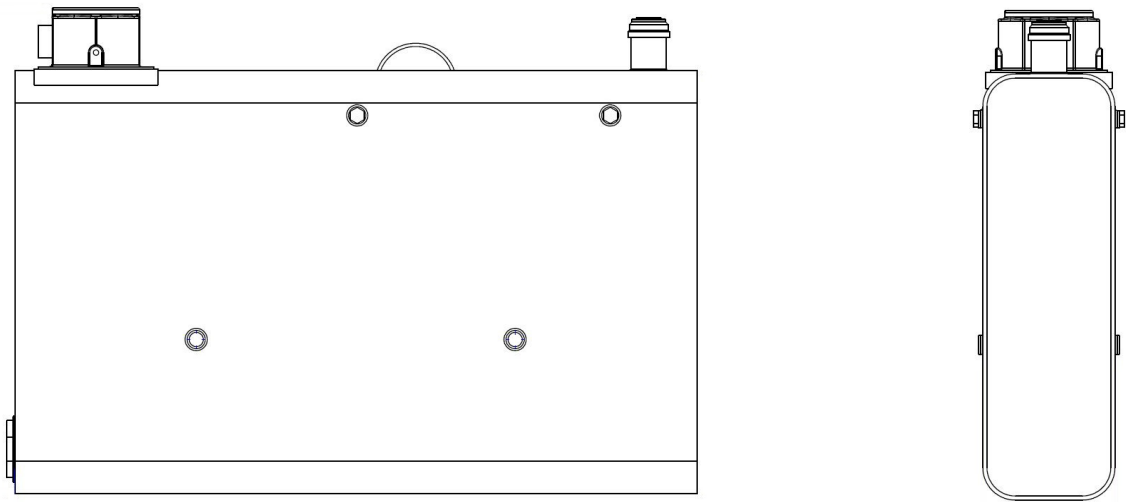
Boom Support - P/N 560195015



ITEM NO.	PART NUMBER	DESCRIPTION
1	715065015	ASSEMBLY, PLATE, STANDARD BOOM SUPPORT
2	330371000	SCREW HX HD 3/8-16UNC X 1 LG GR8
3	021100000	WASHER SP LK 3/8
4	715063013	RUBBER STRAP
5	715063012	STRAP SUPPORT, LARGE BOOM SUPPORT

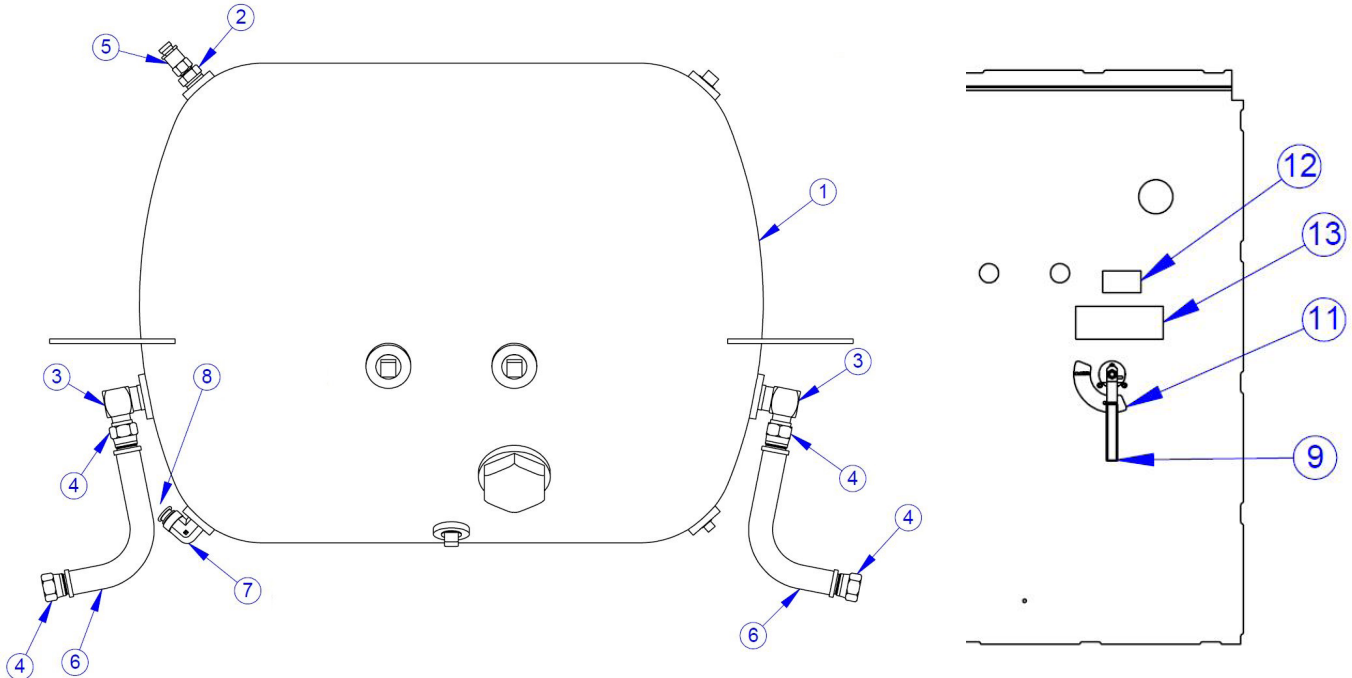
Accessories

Hydraulic Tank - P/N 751095070



SERVICE PARTS INCLUDE	PART NUMBER
RETURN FILTER AND ELEMENT ASSEMBLY	751095073
RESERVOIR GASKET	751095074
3 MICRON FILTER ELEMENT	751095075

Air Receiver Tank - P/N 751220000

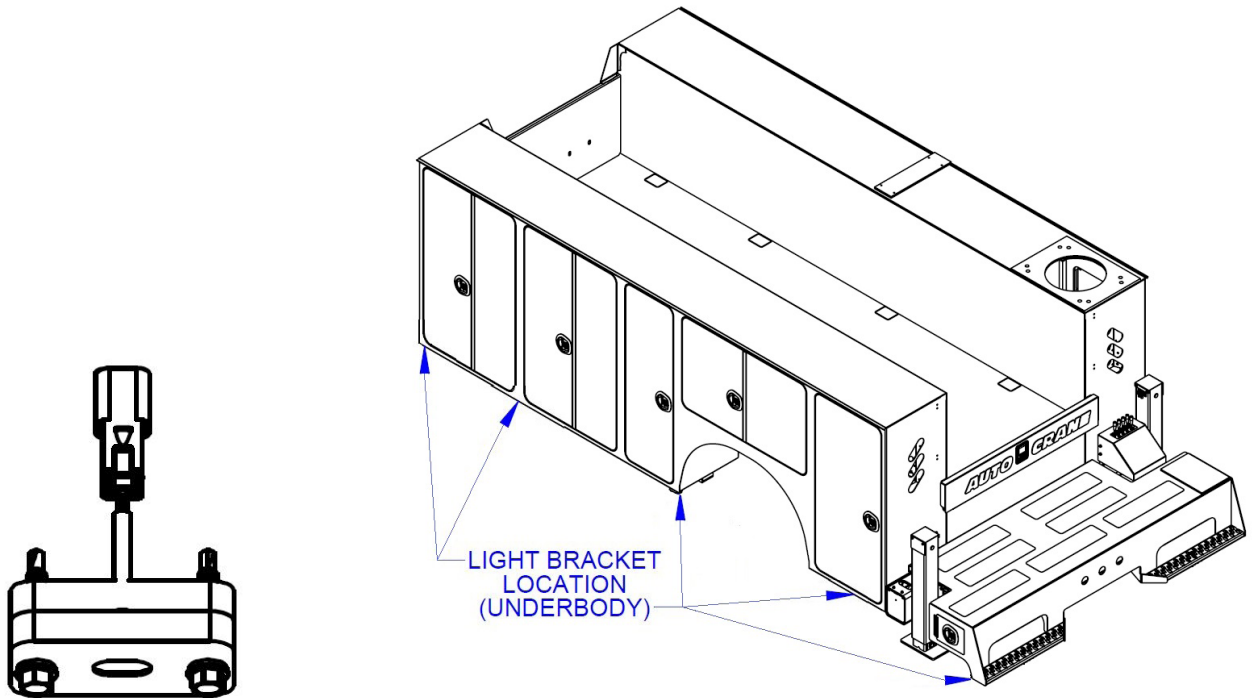


(BACK PANEL IN CRANE BOX)

ITEM NO.	QTY	PART NUMBER	DESCRIPTION
1	1	751158000	AIR TANK, 30 GALLON UNDER BODY
2	1	368193000	REDUCER, -8NPTM / -4NPTF
3	2	360263000	FITTING, 90DEG, 3/4 NPT / 7/8-14 JIC
4	4	750430000	FITTING, PUSH-ON, -10 JIC F
5	1	751220100	VALVE, RELEIF, 200 PSI, 1/4 NPT, ALUM
6	360	750209000	HOSE, 5/8
7	1	601000412	1/4 NPT SWVL
8	24	601000437	1/2" HOSE
9	1	601000404	1/2 NPT BALL VALVE
10	1	601000402	1/2 NPT SWVL 1/2 PUSH ON
11	1	475400100	DECAL OPEN-CLOSED
12	1	475400105	DECAL, DRAIN
13	1	475400106	DECAL, TANK DRAIN

Accessories

Underbody Lighting - P/N 475300380



ITEM NO.	PART NUMBER	DESCRIPTION
1	475300387	ASSEMBLY, LIGHT, UNDERBODY
2	475300384	ASSEMBLY, ANGLED LIGHT, UNDERBODY
3	475300372	BRACKET, ANGLED BASE, WORK LIGHT
4	475300388	SCREW, 1/4" X 1-3/4" LG, SELF TAPPING, 410 SS
5	475300374	SCREW, 1/4" X 2" LG, SELF TAPPING, 410 SS
6	020200000	WASHER SP LK 1/4
7	475300381	WIRE HARNESS, UNDERBODY LIGHTING, 14' BODIES
8	475300422	PLATE, MOUNT, UNDERBODY LIGHTING, BUMPER
9	460094000	SCREW, SOC HD, #10-24 X 1"L, ZPL
10	019602000	WASHER LK #10
11	750074000	NUT #10 NC STAINLESS

Body Preventive Maintenance

PREVENTIVE MAINTENANCE RECOMMENDATIONS FOR EXTERIOR SURFACES ON TRUCK SERVICE BODIES

PAINT FINISH PREVENTIVE MAINTENANCE INSTRUCTIONS

The paint finish on Auto Crane products can become damaged during normal use when chipped, scratched, exposed to harsh chemicals, cleaned with high pressure washers, etc. During periods when the truck is exposed to salt or other corrosive chemicals, the truck should be washed weekly. The paint finish should be inspected when washed or at least monthly. Any exposed bare metal or visible rust should be repaired immediately. The repairs should be performed in the damaged area by following steps 1-11 in the PAINT PREPARATION INSTRUCTIONS section.

PAINT PREPARATION INSTRUCTIONS

The following paint process steps should be used by Auto Crane distributors when top coating bodies that were primed by Auto Crane: (Note: Unbolt doors from body and paint separately per the instructions shown below)

1. Clean all surfaces to be top coated so dirt, oil, and other contaminants do not get embedded in the primer when sanded.
2. Wash with a mild detergent in warm water.
3. Rinse with clean water.
4. Wipe dry with a clean cloth.
5. Scuff sand all primed areas to be top coated with 320 grit sandpaper or an equivalent abrasive. Sand any areas with visible rust to bare metal.
6. Solvent clean all areas to be top coated to remove sanding residue. Wipe dry with a clean cloth to remove any remaining residue.
7. Re-prime the following areas to a minimum 2 mil dry film thickness per the primer manufacturer's instructions. The primer must be compatible with PPG Spectracron 573 epoxy primer.
8. All bare metal.
9. All exposed corners and narrow edges, such as on doors, door openings, drip rails, and bumpers. This is necessary because excessive primer tends to get removed when sanding corners and narrow edges.
10. All areas to be top coated if the body has been stored in an outside environment for more than 3-6 months. This is necessary because more primer tends to get removed when sanding a primed-only body that has been exposed to the sun and outside environment for an extended period.
11. Apply a minimum of 2 mil dry film thickness topcoat per the manufacturer's instructions within 24 hours of completing steps 1-4. The top coat paint must be compatible with PPG Spectracron 573 epoxy primer. The final primer and topcoat should have approximately a 4 mil dry film thickness. Allow paint to fully cure before delivery to customer.

**AUTO CRANE SERVICE TRUCK BODIES
LIMITED WARRANTY**

1.1 Scope of Warranty Coverage. Upon the terms and subject to the conditions set forth in this limited warranty:

(a) AUTO CRANE (referred to herein as “**AUTO CRANE**” or the “**Manufacturer**”) warrants to each initial end user customer (a “**Purchaser**”) relating solely to the body, hinges, and applicable paint of a new Auto Crane Service Truck Body (the “**Product**”) that:

(i) the Product will not rust through the metal, and the hinges will not fail to operate, under normal working and service conditions, for a period of five (5) years from the date the Product is shipped from AUTO CRANE (the “**Product Warranty Term**”). For purposes of this Section 1.1(a)(i), the term “rust through” means a hole rusted all the way through the metal service truck body.

(ii) the Standard Paint or Titan Armor Paint on the Product will not fail due to blistering, adhesion or surface rust, under normal working and service conditions, for a period of eighteen (18) months for Standard Paint (the “**Standard Paint Warranty Term**”) or five (5) years for Titan Armor Paint from the date that the Product is shipped from Auto Crane (the “**Titan Armor Paint Warranty Term**”, and together with the Standard Paint Warranty Term and the Product Warranty Term, the “**Warranty Term**”). For purposes of this Section 1.1(a)(ii), the term “surface rust” means rust caused by paint degradation. In no event shall “surface rust” include peeling paint caused by impact, scratches, or damage to bare metal surfaces. Additionally, Purchaser should be aware that “Titan Armor Paint” is a proven marine based industrial product rather than an automotive product; as a result, the gloss and surface texture might differ from other commonly-used paint products and will not be comparable to automotive finish smoothness or aesthetic. For avoidance of doubt, any such aesthetic complaints in Titan Armor Paint are not covered by this Limited Warranty.

(iii) A Purchaser shall be eligible for an additional eighteen (18) months of coverage in addition to the Product Warranty Term and the Standard Paint Warranty Term, or an additional ten (10) years in addition to the Titan Armor Paint Warranty Term (also referred to as the “**Standard (+) PLUS benefit**”) only if the Purchaser (i) complies with Section 1.2(a) and (ii) registers the Product within eighteen (18) months of the Product’s ship date at myproduct.autocrane.com.

(b) Notwithstanding the foregoing, this warranty does not cover components damaged by accident, abuse, misuse, neglect, untrained operators, collision, overloading, modification, disassembly, rework, misapplication, improper installation or storage, lack of cleaning or maintenance, or improper service. This warranty does not cover removal or reinstallation of the service truck body or components, or normal wear and tear and loss of functionality due to aging of the Product (which may include but is not limited to dents, chips, corrosive chemical attack to the paint, discoloration or fading caused by customer or dealer applied components or decals).

1.2 Eligibility of Warranty Coverage.

(a) A Purchaser shall be eligible for warranty coverage under Section 1.1 of this Limited Warranty during the Warranty Term only if:

(i) Purchaser maintains, or causes to be maintained, the Product according to commercially reasonable standards and any applicable materials or procedures made available to Purchaser relating to the maintenance of the Product and utilizes the Product for the purposes for which it was created; and

(ii) No repairs or alterations have been made by any party other than AUTO CRANE, including Purchaser, unless otherwise authorized in writing by AUTO CRANE.

1.3 Transferability of Warranty.

(a) This warranty is transferable only from the Purchaser to the first subsequent transferee (the “**Transferee**”) of the Product from Purchaser upon (i) written notification to AUTO CRANE and (ii) registration of the transfer, both within 30 days of such Product transfer.

(b) Upon satisfaction of transfer requirements set forth in Section 1.3(a), the Transferee shall succeed to all the rights and obligations of the Purchaser set forth in this Limited Warranty.

1.4 **Certain Limitations on Scope of Warranty Service.**

(a) Any obligation of AUTO CRANE under this warranty, statutory or otherwise, is limited to the repair of solely the Product, and no other parts of the service truck body, at its factory or Authorized Service Centers. Notwithstanding the foregoing, if field service or repair is performed by AUTO CRANE at the request of the Purchaser and no defect is found with material or workmanship of the Product, the Purchaser shall compensate AUTO CRANE for its time and expenses within thirty (30) days of delivery of an invoice relating to the same. AUTO CRANE will not provide any cash payment or credits for defective materials or workmanship.

(b) Any travel time, transportation charges, freight charges, or similar costs incurred by AUTO CRANE in connection with the repair of defective parts, shall be the responsibility of the Purchaser. If applicable, AUTO CRANE shall invoice Purchaser for the total amount of such charges within sixty (60) days of fulfilling its duties under this warranty, payable within thirty (30) days of delivery of such invoice. In no event shall AUTO CRANE be liable for bills for service, labor or other expenses that have been incurred by the Purchaser without approval or prior authorization by AUTO CRANE for inspection, maintenance, or repair of the Product.

(c) All repair quotes submitted to AUTO CRANE must be itemized to include parts, materials, labor hours, and the applicable labor rate(s). Any Purchaser (or dealer or distributor, if applicable) shall supply part numbers for paint touch up, repair, or any other warranty measures.

1.5 **Limitations of Liability.** AUTO CRANE shall in no event be liable for punitive, special or consequential damages relating to the Product or this Warranty. AUTO CRANE makes no warranty in respect to third-party accessories, upgrades, or additions to the Product.

1.6 **Improving Product.** AUTO CRANE reserves the right to improve the Product through changes in design or materials as it may deem desirable or necessary without being obligated to incorporate, upgrade, or otherwise modify previously manufactured products.

1.7 **Limitations of Warranty.**

(a) THE WARRANTY SET FORTH ABOVE IS THE ONLY EXPRESS WARRANTY. AUTO CRANE HEREBY DISCLAIMS AND EXCLUDES ANY OTHER EXPRESS, IMPLIED, OR STATUTORY WARRANTIES, ARISING BY OPERATION OF LAW, COURSE OF DEALING, COURSE OF PERFORMANCE, USAGE, OF TRADE, OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY.

(b) ANY IMPLIED WARRANTY WHICH BY LAW MAY NOT BE EXCLUDED IS LIMITED IN DURATION TO ONE (1) YEAR FROM THE DATE OF ORIGINAL RETAIL PURCHASE OF THE PRODUCT.

(c) This warranty gives you specific legal rights, and you may also have other rights which vary from jurisdiction to jurisdiction.

(d) This warranty is valid only in the U.S.A. and Canada. For warranty outside the U.S.A. and Canada contact your nearest AUTO CRANE Distributor.

1.8 **No Modifications to Warranty.** No AUTO CRANE dealer, distributor, agent or employee is authorized to make any modification, extension or addition to this warranty.

1.9 **How to Apply for Warranty Coverage.**

All claims are handled by contacting your nearest Auto Crane Dealer. For questions, please contact customer support: accustomersupport@ramseyindustries.com.

Visit [Dealer Locator - Auto Crane](#) for Auto Crane Dealer locations and contact information.

Additional warranty, service support, product information, and parts information can be found on www.autocrane.com.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

