

# PORTABLE LPX SEED TREATER

## Operators Manual



**Document: TD-09-06-1003**

**Revision: B**



## **INTRODUCTION**

Thank you for choosing USC, LLC for your equipment needs. We appreciate your business and will work diligently to ensure that you are satisfied with your choice.

### **OVERVIEW**

The purpose of this manual is to provide you with the basic information needed to operate and maintain the Portable LPX Treater . It does not hold USC, LLC liable for any accidents or injuries that may occur.

### **OPERATOR RESPONSIBILITIES**

As the purchaser/owner/operator of this equipment and control system, you have an obligation to install, operate, and maintain the equipment in a manner that minimizes the exposure of people in your care to any potential hazards inherent in using this equipment. It is critical that the owner of this equipment:

- Has a clear and documented understanding of the process this machine is being used in and of any resulting hazards or special requirements arising from this specific application.
- Allow only properly trained and instructed personnel to install, operate or service this equipment.
- Maintain a comprehensive safety program involving all who work with this machine and other associated process equipment.
- Establish clear areas of staff responsibility (e.g. operation, setup, sanitation, maintenance, and repairs).
- Provide all personnel with necessary safety equipment.
- Periodically inspect the equipment to insure that the doors, covers, guards, and safety devices are in place and functioning, that all safety instructions and warning labels are intact and legible, and that the equipment is in good working order.
- In addition to the operating instructions, observe and enforce the applicable legal and other binding regulations, national and local codes.

As the person with the most to gain or lose from working safely, it is important that you work responsibly and stay alert. By following a few simple rules, you can prevent an accident that could injure or kill you or a co-worker.

- Do not operate, clean, or service this equipment until you have read and understood the contents of this manual. If you do not understand the information in this manual, bring it to the attention of your supervisor, or call USC at (785) 431-7900 for assistance.

## PORTABLE LPX TREATER

- Any operator who is known or suspected to be under the influence of alcohol or drugs should not be allowed to operate the equipment.
- Understand and follow the safety practices required by your employer and this manual.
- **PAY ATTENTION** to what you and other personnel are doing and how these activities may affect your safety.
- **Failure to follow these instructions may result in serious personal injury or death.**

### RECEIVING YOUR EQUIPMENT

As soon as the equipment is received, it should be carefully inspected to make certain that it has sustained no damage during shipment and that all items listed on the packing list are accounted for. If there is any damage or shortages, the purchaser must immediately notify USC, LLC. Ownership passes to purchaser when the unit leaves the USC, LLC. premises. The purchaser is responsible for unloading and mounting all components of the equipment.

Document the serial number of the conveyors for future reference. The serialization labels are located on the right side of each conveyor near the inlet end.

**INLET CONVEYOR SERIAL NUMBER:** \_\_\_\_\_

**OUTLET CONVEYOR SERIAL NUMBER:** \_\_\_\_\_

Document the vehicle identification number for future reference. On gooseneck trailers, the V.I.N. is located on a sticker on the side near the top of the gooseneck as shown below. On bumper mount trailers, the sticker is located near the hitch.



*V.I.N.  
Number*

**TRAILER V.I.N. NUMBER:** \_\_\_\_\_

# **TABLE OF CONTENTS**

| <b><u>Section</u></b> | <b><u>Contents</u></b>                    | <b><u>Page #</u></b> |
|-----------------------|---|----------------------|
| <b>Section A</b>      | <b>Safety Instructions.....</b>           | <b>5</b>             |
| <b>Section B</b>      | <b>Installation .....</b>                 | <b>14</b>            |
| <b>Section C</b>      | <b>Mechanical Operation.....</b>          | <b>16</b>            |
|                       | Hopper and Conveyor Description .....     | 16                   |
|                       | Portable LPX Treater Overview .....       | 17                   |
| <b>Section D</b>      | <b>Electrical Operation .....</b>         | <b>18</b>            |
| <b>Section E</b>      | <b>Troubleshooting.....</b>               | <b>19</b>            |
| <b>Section F</b>      | <b>Maintenance .....</b>                  | <b>20</b>            |
| <b>Section G</b>      | <b>Belt Tensioning Specification.....</b> | <b>25</b>            |
| <b>Section H</b>      | <b>Storage.....</b>                       | <b>26</b>            |
| <b>Section I</b>      | <b>Mechanical Drawings .....</b>          | <b>28</b>            |
| <b>Section J</b>      | <b>Limited Warranty.....</b>              | <b>71</b>            |

# SAFETY INSTRUCTIONS

## SECTION A

Every year accidents in the work place maim, kill and injure people. Although it may be impossible to prevent all accidents, with the right combination of training, operating practices, safety devices, and operator vigilance, the number of accidents can be significantly reduced. The purpose of this section is to educate equipment users about hazards, unsafe practices, and recommended hazard avoidance techniques.

### SAFETY WORDS AND SYMBOLS

It is very important that operators and maintenance personnel understand the words and symbols that are used to communicate safety information. Safety words, their meaning and format, have been standardized for U.S. manufacturers and published by the American National Standards Institute (ANSI). The European Community (E.C.) has adopted a different format based on the International Standards Organization (I.S.O.) and applicable machinery directives. Both formats are presented below. Graphic symbols are not standardized, but most manufacturers will use some variation of the ones seen in this manual.



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



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



Indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury and/or property damage.



Provides additional information that the operator needs to be aware of to avoid a potentially hazardous situation.





**Mandatory Lockout Power Symbol.** Disconnect, lockout and tagout electrical and other energy sources before inspecting, cleaning or performing maintenance on this panel.



**International Safety Alert Symbol.** The exclamation point (!) surrounded by a yellow triangle indicates that an injury hazard exists. However, it does not indicate the seriousness of potential injury. The exclamation point (!) is also used with the DANGER, WARNING and CAUTION symbols so the potential injury is indicated.



**Electrocution Hazard Symbol.** This symbol indicates that an electrocution hazard exists. Serious injury or death could result from contacting high voltage.



**International Electrocution Hazard.** This symbol indicates that an electrocution hazard exists. Serious injury or death could result from contacting high voltage.



**Mandatory Read Manual Action Symbol.** (I.S.O. format) This symbol instructs personnel to read the Operators Manual before servicing or operating the equipment.



**Mandatory Read Manual Action Symbol.** This symbol instructs personnel to read the Operators Manual before servicing or operating the equipment.

**NOTICE**

Notice is used to notify people of important installation, operation or maintenance information which is not hazard related.

## **LOCKOUT / TAGOUT PROCEDURES**

Lockout/Tagout is the placement of a lock/tag on an energy isolating device in accordance with an established procedure. When taking equipment out of service to perform maintenance or repair work, always follow the lockout/tagout procedures as outlined in ANSI Z344.1 and/or OSHA Standard 1910.147. This standard “requires employers to establish a program and utilize procedures for affixing appropriate lockout devices or tagout devices to energy isolating devices and to otherwise disable machines or equipment to prevent unexpected energizing, start-up, or release of stored energy in order to prevent injury to employees.”

## **EMERGENCY STOP**



There is an Emergency Stop push button on all Portable LPX Seed Treaters which is located on the Treater Control Panel. The Portable LPX Automated Treater has an additional Emergency Stop pushbutton on the Main Control Panel. Actuators of emergency stop shall be colored RED. The background immediately around the device actuator shall be colored YELLOW. The actuator pushbutton operated device shall be of the palm or mushroom head type.

## **CONTROLLED STOP**

This is the stopping of machine motion by reducing the electrical command signal to 0 (zero) once the stop signal has been recognized. The operator initiates this stop by pressing the PAUSE button at the bottom of the main screen.

## **HAZARD REVIEW**

### **Electrocution Hazard**



Electrocution accidents are most likely to occur during maintenance of the electrical system or when working on or near exposed high voltage wiring. This hazard does not exist when the electrical power has been disconnected, properly locked, and tagged out.

### **Automatic Start Hazard**



This equipment may be controlled by an automated system and may start without warning. Failure to properly disconnect, lockout, and tagout all energy sources of remotely controlled equipment creates a very hazardous situation and could cause injury or even death. PLEASE STAY CLEAR AND BE ALERT.

## PORTABLE LPX TREATER

**YOU** are responsible for the **SAFE** operation and maintenance of your USC, LLC equipment . **YOU** must ensure that you and anyone else who is going to operate, maintain or work around the equipment be familiar with the operating and maintenance procedures and related **SAFETY** information contained in this manual. This manual will take you step-by-step through your working day and alert you to good safety practices that should be adhered to while operating the equipment

Remember, **YOU** are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program. Be certain that **EVERYONE** operating this equipment is familiar with the recommended operating and maintenance procedures and follows all the safety precautions. Most accidents can be prevented. Do not risk injury or death by ignoring good safety practices.

- Equipment owners must give operating instructions to operators or employees before allowing them to operate the machine, and at least annually thereafter per OSHA (Occupational Safety and Health Administration) regulation 1928.57.
- The most important safety device on this equipment is a **SAFE** operator. It is the operator's responsibility to read and understand **ALL** Safety and Operating instructions in the manual and to follow them. All accidents can be avoided.
- A person who has not read and understood all operating and safety instructions is not qualified to operate the machine. An untrained operator exposes himself and bystanders to possible serious injury or death.
- Do not modify the equipment in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment.
- Think SAFETY! Work SAFELY!

### GENERAL SAFETY

1. Read and understand the operator's manual and all safety labels before operating, maintaining, adjusting or unplugging the equipment .
2. Only trained persons shall operate the equipment . An untrained operator is not qualified to operate the machine.
3. Have a first-aid kit available for use should the need arise, and know how to use it.





## PORTABLE LPX TREATER

4. Provide a fire extinguisher for use in case of an accident. Store in a highly visible place.
5. Do not allow children, spectators or bystanders within hazard area of machine.
6. Wear appropriate protective gear. This includes but is not limited to:
  - A hard hat
  - Protective shoes with slip resistant soles
  - Protective goggles
  - Heavy gloves
  - Hearing protection
  - Respirator or filter mask
7. Place all controls in neutral or off, stop motor, and wait for all moving parts to stop. Then disable power source before servicing, adjusting, repairing, or unplugging.
8. Review safety related items annually with all personnel who will be operating or maintaining the equipment.



### **OPERATING SAFETY:**

1. Read and understand the operator's manual and all safety labels before using.
2. Disconnect and disable electrical supply completely and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Clear the area of bystanders, especially children, before starting.
4. Be familiar with the machine hazard area. If anyone enters hazard area, shut down machine immediately. Clear the area before restarting.
5. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
6. Stay away from overhead obstructions and power lines during operation and transporting. Electrocutation can occur without direct contact.
7. Do not operate machine when any guards are removed.
8. Inspect welds and repair if needed.

### **PLACEMENT SAFETY**

1. Move only with the appropriate equipment
2. Stay away from overhead power lines when moving equipment. Electrocutation can occur without direct contact.
3. Be familiar with machine hazard area. If anyone enters hazard areas, shut down machine immediately. Clear the area before restarting.
4. Operate the equipment on level ground free of debris. Anchor the equipment to prevent tipping or upending.



Before placement of the equipment, be sure that ground is reasonably level. The equipment may topple or work improperly if the ground is too uneven, damaging the equipment and/or causing personal injury.

### **MAINTENANCE SAFETY**

1. Review the operator's manual and all safety items before working with, maintaining or operating the equipment.
2. Place all controls in neutral or off, stop motors, disable power source, and wait for all moving parts to stop before servicing, adjusting, repairing or unplugging.
3. Follow good shop practices:  
Keep service area clean and dry.  
Be sure electrical outlets and tools are properly grounded.  
Use adequate light for the job at hand.
4. Keep hands, feet, hair and clothing away from all moving and/or rotating parts.
5. Clear the area of bystanders, especially children, when carrying out any maintenance and repairs or making any adjustments.
6. Before resuming work, install and secure all guards when maintenance work is completed.
7. Keep safety labels clean. Replace any sign that is damaged or not clearly visible.



PORTABLE LPX TREATER

**SAFETY LABELS**

1. Keep safety labels clean and legible at all times.
2. Replace safety labels that are missing or have become illegible.
3. Replaced parts that displayed a safety label should also display the current label.
4. Replacement safety labels are available. Contact USC at (785) 431-7900 .

**How to Install Safety Labels:**

- Be sure that the installation area is clean and dry.
- Be sure temperature is above 50°F (10°C).
- Decide on the exact position before you remove the backing paper.
- Remove the smallest portion of the split backing paper.
- Align the sign over the specified area and carefully press the small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the sign in place.
- Small air pockets can be pierced with a pin and smoothed out using the piece of sign backing paper.



Located on the USC equipment you will find safety labels. Always be sure to read and follow all directions on the labels.



Guards provided with USC equipment are to remain in place during operation.

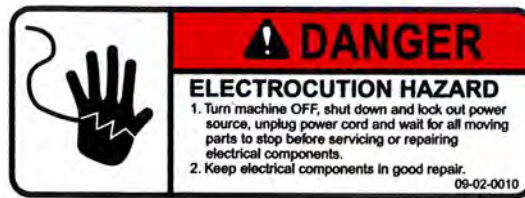
PORTABLE LPX TREATER

Think **SAFETY!** Work **SAFELY!**

REMEMBER—If safety labels have been damaged, removed, become illegible, or parts replaced without safety labels, new labels must be applied. New safety labels are available from USC at (785) 431-7900.



Part # 09-02-0003



Part # 09-02-0010



Part # 09-02-0001



Part # 09-02-0002

PORTABLE LPX TREATER



Part # 09-02-0007



Part # 09-02-0006



Part # 09-02-0011



Part # 09-02-0009



Part # 09-02-0012



SECTION  
B

## INSTALLATION



**HIGH VOLTAGE** ~ Always disconnect the power source before working on or near the control panel or lead wires.



**HIGH VOLTAGE** ~ Use insulated tools when making adjustments while the controls are under power.

### NOTICE

Permanent installation may require additional electrical cords, chemical tubing, and air lines, since each installation is unique.

### SET-UP

The following steps outline the initial set-up of your USC Portable LPX Treater :

1. Clear the area of bystanders, especially small children, before moving.
2. Be sure there is enough clearance from overhead obstructions and power lines or other equipment to move the machine into its working position.
3. Attach the Portable System to an appropriate towing vehicle.
4. Move the portable system to a desired position on a level surface ensuring the machine remains stable during the treating process.
5. Set the park brake on the towing vehicle before dismounting.
6. Place chocks in the front and rear of each wheel and unhook the unit from the towing vehicle.

### NOTICE

A block may be placed under the left side jack to gain more slope to allow seed to flow better out of the discharge end of the seed treater.

7. Remove any boxes from the drum of the treater.
8. Inspect machine thoroughly for screws, bolts, fittings, etc. which may have come loose during shipping.

PORTABLE LPX TREATER

- If the treater does not come equipped with a generator, or you are supplying your own generator, have a certified electrician provide power to the seed treating system. Provide convenient shutdown switches, comply with local electrical codes and ensure that the system is properly grounded and bonded. All USC control panels must be connected adhering to the same electrical requirements as specified in the main control panel on the power requirement tag (right), or the electrical schematic shipped with the piece of equipment. This will power the USC LPX Manual seed treater and any attached conveyors.

| Mfg. By: USC, LLC<br>Max voltage: 230V, 1PH, 60 HZ<br>Total FLA: 80.5<br>Largest Motor FLA: 28<br>Schematic number: 03-12-0199B<br>Enclosure rating: UL type 1<br>Short Circuit Current Rating:<br>5ka RMS Sym, 600V Max   |         |      |                     |
|--|---------|------|---------------------|
| <b>WARNING</b><br>To maintain over current, short-circuit and ground fault protection, the manufacturer's instruction for selection of overload and short circuit protection must be followed to reduce the risk of fire or electrical shock.  |         |      |                     |
| <b>WARNING</b><br>If an overload or a fault current interruption occurs, circuits must be checked to determine the cause of the interruption. If a fault condition exists, the current-carrying components should be examined and replaced if damaged, and the integral current sensors must be replaced to reduce the risk of fire or electrical shock. |         |      |                     |
| TREATER CONTROL PANEL<br>See schematic number: 03-12-0199B<br>for interconnections.  |         |      |                     |
| <b>Replacement Fuse Chart</b>  |         |      |                     |
| Fuse   | Line    | Size | Type                |
| FU107  | 107/109 | 20A  | CLASS CC 600V TD FS |
| FU111  | 111/113 | 10A  | CLASS CC 600V TD FS |
| FU122  | 122/124 | 10A  | CLASS CC 600V TD FS |

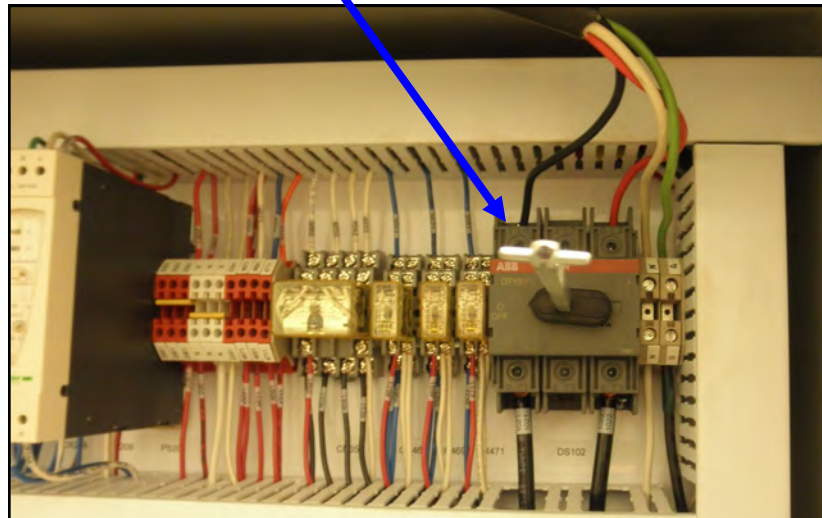
**NOTICE**

A minimum rating of 21 KW is required when using a generator with the system.

**WARNING**

When using a generator, be sure to press in the Emergency Stop button prior to starting generator. This will help prevent damage to any electrical components on the machine.

*Incoming power connected to these terminals in the Treater Control Panel*



- Reverse the previous steps when removing the machine from its working position.

**PORTABLE LPX TREATER OVERVIEW****FILL HOPPER**

The fill hopper holds 65 units of seed. The hopper feeds into the inlet conveyor using a rack and pinion gate.

**INLET CONVEYOR**

The 17 foot inlet conveyor feeds into the seed treater supply hopper. The conveyor plugs into a receptacle on the bottom of the treater control panel marked (Inlet Conveyor). The inlet conveyor is tied in with a proximity switch located in the 12 inch hopper extension ring. When seed reaches up and covers the proximity switch, the inlet conveyor will automatically shut-off so the hopper will not overflow. The conveyor will remain off until seed drops below the proximity switch. When the proximity sensor no longer detects seed, a timer relay will begin to count down to a pre-set time and turn the conveyor back on. The time delay prevents the conveyor from turning on and off too quickly.

**NOTICE**

If the inlet conveyor will not turn on after being shut down awhile, this may mean the proximity switch is malfunctioning. Refer to the Proximity Switch Adjustment Guide in the LPX Treater manual, document number TD-09-06-1035B.

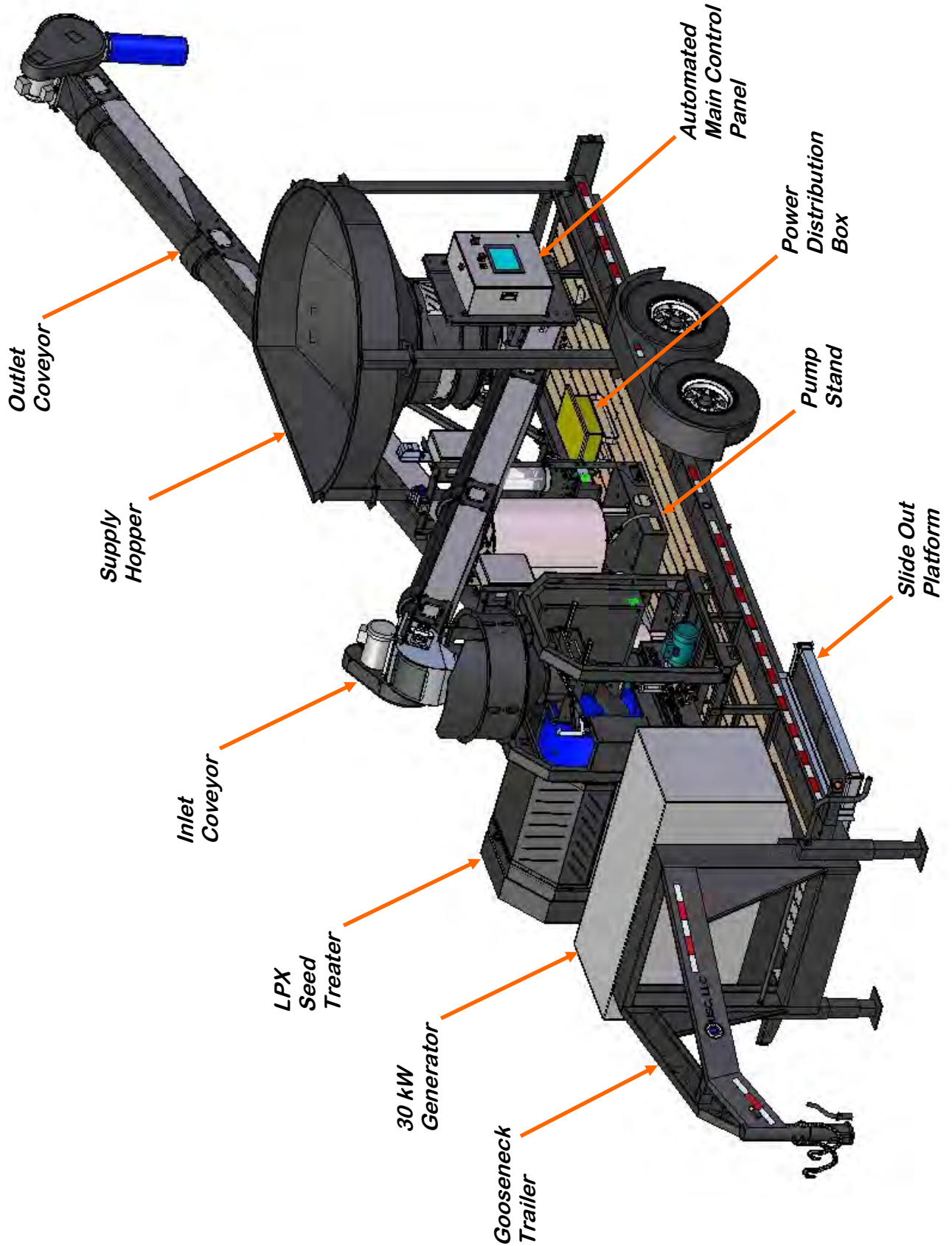
**OUTLET CONVEYOR**

As seed passes through the length of the treater drum, it is tumbled, producing accurate and uniform seed coating. The seed then exits the seed treater out the discharge chute of the machine and into the 32 foot outlet conveyor. The conveyor plugs into a receptacle on the bottom of the treater control panel marked (Outlet Conveyor). The seed is then discharged into a pro box, trailer, or any other container.

**CAUTION**

Never allow exposure of persons or clothing to the drive shaft, idler wheels, or the treater drum during operation. Always have the safety shields in place during operation.

PORTABLE LPX TREATER



SECTION  
D

# ELECTRICAL OPERATION



**HIGH VOLTAGE** ~ Always disconnect the power source before working on or near the control panel or lead wires.



**HIGH VOLTAGE** ~ Use insulated tools when making adjustments while the controls are under power.



**AUTHORIZED PERSONNEL** only shall work on the control panel. Never allow anyone who has not read and familiarized themselves with the owner's manual to open or work on the control panel.

This section provides a general overview and description of the operator controls for the Portable LPX Treater.



**USC recommends the use of a surge protection device with a minimum rating of 400 Joules for all automated main control panels.**

## General Panel Descriptions

- The LPX Treater Control Panel is an enclosure that is attached to the side of the treater and contains the electrical components required to actuate the seed treater. This includes the VFDs for the seed wheel and atomizer. Power for the treater is supplied here. Power to this panel is hard wired.
- The Automated Main Control Panel is a plug connected enclosure that is mounted on a stand next to the fill hopper. It contains the PLC (Programmable Logic Controller) as well as the HMI (Human Machine Interface) touch screen. The operator is able to control the entire system through the HMI. Power to this panel is supplied from a power cable to a standard 115V outlet.

**AUTOMATED TREATERS ONLY.**

## LPX TREATER HMI TOUCH SCREENS

For the LPX Manual Treater, see document number:  
**TD-09-06-1035C = Manual - LPX Seed Treater.**

For the LPX Automated Treater, see document number:  
**TD-09-06-1041D = Manual - U-Treat v3.5 Automation.**



**TROUBLESHOOTING****SECTION  
E****TROUBLESHOOTING**

Below is a table describing the most frequent problems and solutions with the Inlet and Outlet conveyors. For further assistance, contact the USC Service department at (785) 431-7900.

| Problem                 | Possible Cause   | Solution   |
|-------------------------|--|--|
| Conveyor will not run.  | <ol style="list-style-type: none"> <li>1. Not turned on.</li> <li>2. Conveying belt loose.</li> <li>3. Drive belt loose.</li> </ol>  | <ol style="list-style-type: none"> <li>1. Start power source or turn on power.</li> <li>2. Tighten and align belt.</li> <li>3. Tighten drive belt.</li> </ol>                          |
| Belt edge fraying.      | <ol style="list-style-type: none"> <li>1. Belt not aligned.</li> </ol>   | <ol style="list-style-type: none"> <li>1. Align and tension belt.</li> </ol>   |
| Low conveying capacity. | <ol style="list-style-type: none"> <li>1. Angle too steep.</li> <li>2. Slow operating speed.</li> <li>3. Conveyor belt slipping.</li> <li>4. Drive belt slipping.</li> </ol> | <ol style="list-style-type: none"> <li>1. Reposition with angle at 30°.</li> <li>2. Increase operating speed.</li> <li>3. Tighten belt.</li> <li>4. Set drive belt tension.</li> </ol> |

**SECTION  
F****MAINTENANCE**

Proper maintenance of the Portable LPX Treater is critical for peak performance, reliability and accuracy of this system. The following is a guideline for the type of maintenance and servicing that should be performed on this unit. Your environment and uses may require additional maintenance and service beyond this list to assure a reliable and safe unit. The operator of this unit has ultimate responsibility to identify areas of concern and rectify them before they become a hazard or safety issue. There is no substitute for a trained, alert operator.



Do not put this unit into operation with any questionably maintained parts. Poor performance or a hazard may occur.

**ELECTRIC GENERATOR**

If the portable treater is equipped with a Broadcrown generator, refer to the owners manual located inside the front door of the unit under the operators control panel.

**FLUIDS AND LUBRICANTS****Grease**

Use an SAE multipurpose high temperature grease with extreme pressure (EP) performance. Also acceptable is an SAE multipurpose lithium-based grease.

**Storing Lubricants**

Your machine can operate at top efficiency only if clean lubricants are used. Use clean containers to handle all lubricants. Store them in an area protected from dust, moisture and other contaminants.

**GREASING**

- Use a Maintenance Checklist to keep record of all scheduled maintenance.
- Use a hand-held grease gun for all greasing.
- Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
- Replace and repair broken fittings immediately.

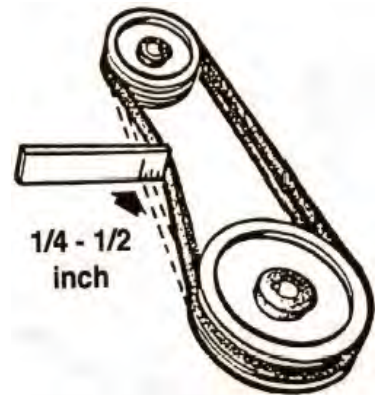
**NOTICE**

If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

## **CONVEYOR SERVICING INTERVALS**

### **Every 40 hours or Weekly**

1. Check the conveyor belt tension and alignment.
2. Grease conveyor bearings.
  - Two bolt flanged bearings, tail roller bearings right and left (2 locations).
  - Two bolt flanged bearings, drive roller bearings right and left (2 locations).
  - Two bolt flanged bearings, jackshaft bearings right and left (2 locations).
3. Remove guard and check the drive belt tension and alignment. The belts will deflect approximately 1/4 to 1/2 inch when properly tensioned.
4. Check the chain tension. Adjust if required, lubricate chain and re-install guard.



---

### **Every 200 hours or Annually**

1. Repack trailer wheel bearings.
2. Wash machine.
3. Check pulley bushing for wear. To inspect pulley:
  - Lower the conveyor to its lowest position.
  - When the conveyor has reached the lowest position, it will stop on the hinge support.
  - Loosen and remove the bolt.
  - Inspect the bushing on the pulley for wear.
  - Reverse steps for re-assembly.

## **CONVEYING BELT TENSION AND ALIGNMENT-TAIL END**

A contoured belt with molded flights is used to convey material along the frame. The tension and alignment of the belt should be checked weekly, or more often if required, to be sure that it does not slip or run to one side. A properly tensioned belt will not slip when it is operating. Operating the belt with less slippage will increase the belt life and causes less stress on bearings, pulleys and shafts.

### **WARNING**

Although it is acceptable to align the belt from either the Head or the Tail (Intake) end. Tightening the belt may only be done from the Tail end of the conveyor

To maintain the belt, follow this procedure:

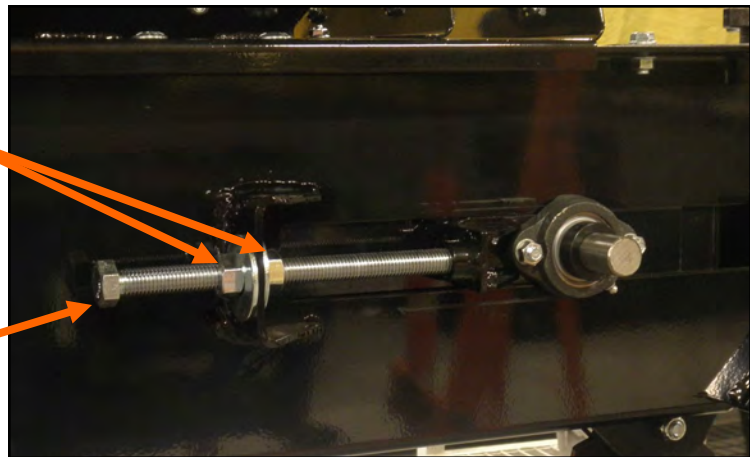
### **NOTICE**

Place all controls in neutral or off, stop motor and disable power source before working on belt.

1. Use the take-up bolt located at the tail to set the tension of the belting.
2. If the belt needs to be tightened to prevent slippage, use the take-up adjustments on the tail end only.
3. The belt is tightened by turning both take-up adjustments an **equal** number of turns.
4. Use the drive roller to check the alignment. The belt should be centered.
5. Turn the belt 1/2 revolution when the belt is new and check the drive and tail roller. If out of alignment, the belt will move to the loose side. Loosen the jam nut and use the bearing position bolts to set the position. Tighten jam nut.
6. Run and check again. Check frequently during the first few minutes of operation and then several times during the first 10 hours. The belt normally seats itself during the first 10 hours of operation and can be checked weekly after that.
7. The belt is properly aligned when the belt runs in the center of the head and tail rollers.

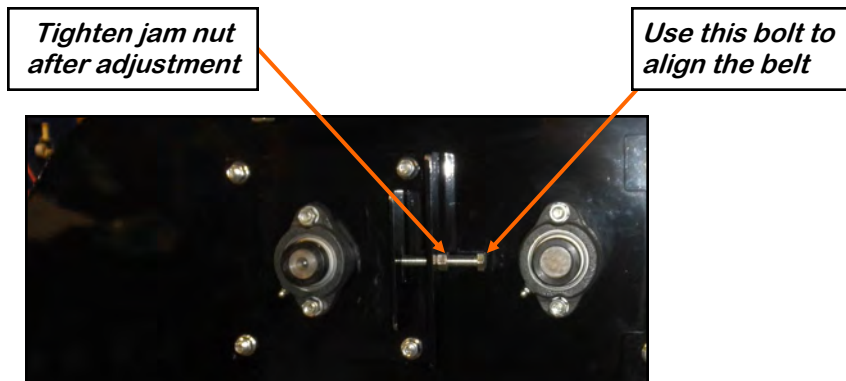
*Loosen these jam nuts before adjusting the bearing position bolt*

*Use this bolt to tighten and align the belt*



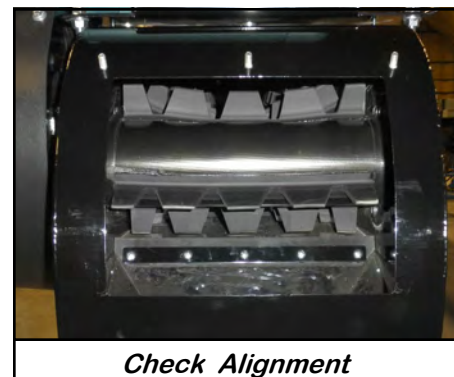
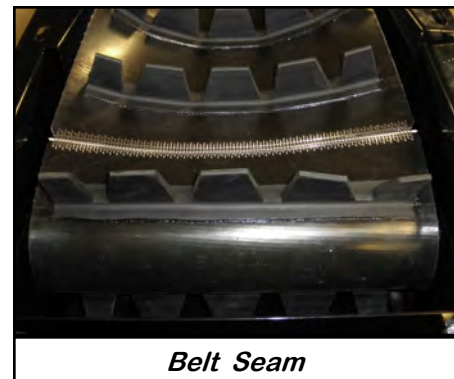
### **CONVEYING BELT ALIGNMENT - HEAD END**

1. A misaligned belt will track toward the loose side. Set the tracking by loosening the bearing mounts on the tight side and using the bearing position bolt to move the end of the head roller toward the tail. Tighten the bearing mount when the belt is centered on the head roller.
2. Run the belt and check the tracking again. Loosen the tight side slightly again if required. Repeat the adjusting and checking procedure until the belt centers on the input end roller and remains centered when running.
3. Always repeat this aligning procedure when installing a new belt. Check frequently during the first 10 hours of operation. After 10 hours, the belt is normally seated and checking the alignment can be done less frequently.



### **BELT REPLACEMENT**

1. Rotate the belt until the seam is visible.
2. Move the tail roller to its loosest position.
3. Pull all the slack to the seam area.
4. Remove the wire connector and open the belt.
5. Attach one end of the replacement belt to the belt end being removed.
6. Pull the old belt out and the new belt will be threaded into place.
7. Disconnect the old belt.
8. Connect the ends of the new belt together and secure.
9. Set the belt tension.
10. Check and set the belt alignment





## **DRIVE BELT TENSION & ALIGNMENT**

Power to the conveying belt is transmitted through a V-belt. The V-belt drive system must be maintained at the proper belt tension and pulley alignment to obtain the desired performance and life. When maintaining the belt drive system for the electric drive model, follow this procedure:

### **NOTICE**

Turn motor off and unplug power cord or turn off power and lock out the master panel before starting maintenance on drive belt system.

#### **Drive Belt Tension**

1. Push on the center of the belt span with a force of approximately 5 to 10 lbs.
2. Follow the belt tensioning specification on page 25 to determine proper belt deflection.
3. Move the motor up, using the adjustment bolts, to set drive belt tension (right).
4. Close and secure guards.

#### **Drive Belt Alignment**

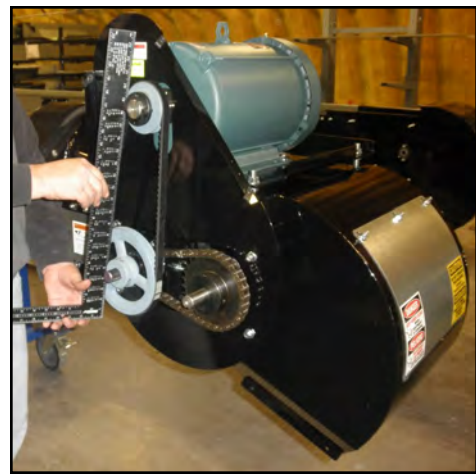
1. Lay a straightedge across the pulley faces to check the alignment (right).
2. Use the pulley hub or the motor mounting plate slots to move the pulley to the required position for alignment.
3. Tighten hub bolts to secure pulley on shaft.
4. Check belt tension
5. Close and secure guards.

#### **Drive Belt Replacement**

1. Lower motor to its loosest position.
2. Remove old belt and replace with a new one.
3. Raise motor to set the belt tension.
4. Check pulley alignment. Adjust if required.
5. Close and secure guards.



*Motor base adjustment*

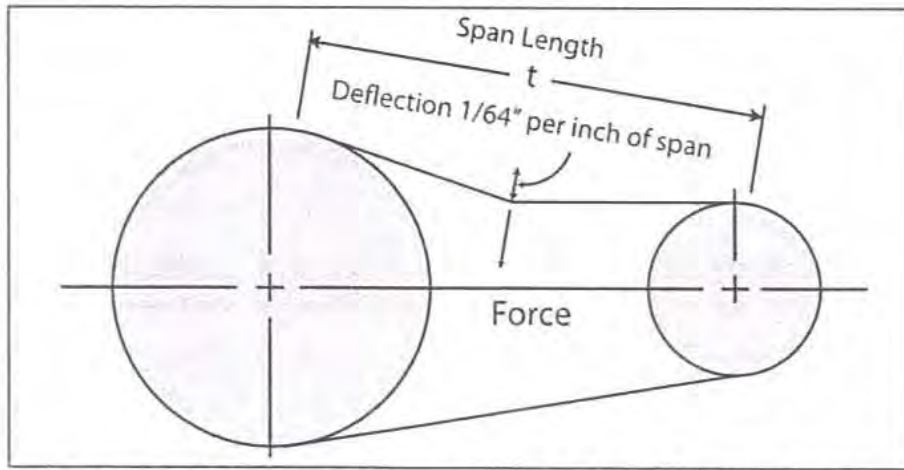


*Lay a straightedge across*

# BELT TENSIONING SPECIFICATION

## SECTION G

V-Belt tensioning adjustment can be made using a tension meter or other type spring scale using the following procedure. After seating the belts in the groove and adjusting center distance so as to take up the slack in the belts, further increase the tension until only a slight bow on the slack side is apparent while the drive is operating under load. Stop the drive and using the meter, measure the force necessary to depress one of the center belts 1/64 inch for every inch of belt span (see sketch below). For example, a deflection for a 50 inch belt span is 50/64 or 25/32 inch. The amount of force required to deflect the belt should compare with the deflection forces noted in the table below. Also notice for V- Belts that deflection forces vary from the initial RUN - IN values which are greater (reflecting higher run-in tensioning) to the NORMAL values for after the run-in period.



MEASURE THE SPAN LENGTH "T" AS SHOWN IN THE SKETCH ABOVE.

| BELT CROSS SECTION | SMALLER PULLEY DIAMETER RANGE (inches) | DEFLECTION FORCE |              |
|--------------------|--|------------------|--------------|
|                    |  | RUN - IN (lbs)   | NORMAL (lbs) |
| AX                 | 3.0 - 3.6                              | 4 - 1/8          | 2 - 3/4      |
|                    | 3.8 - 4.8                              | 5                | 3 - 1/4      |
|                    | 5.0 - 7.0                              | 6                | 4            |
| BX                 | 3.4 - 4.2                              | 5 - 1/4          | 3 - 1/2      |
|                    | 4.4 - 5.2                              | 7 - 1/8          | 4 - 3/4      |
|                    | 5.4 - 9.4                              | 9                | 6            |

## SECTION H STORAGE

When storing the Portable LPX Treater for long periods of time, the following procedure must be followed to reduce the chance of rust, corrosion and fatigue of the conveyor. You can also use these steps when storing the machine for the winter.



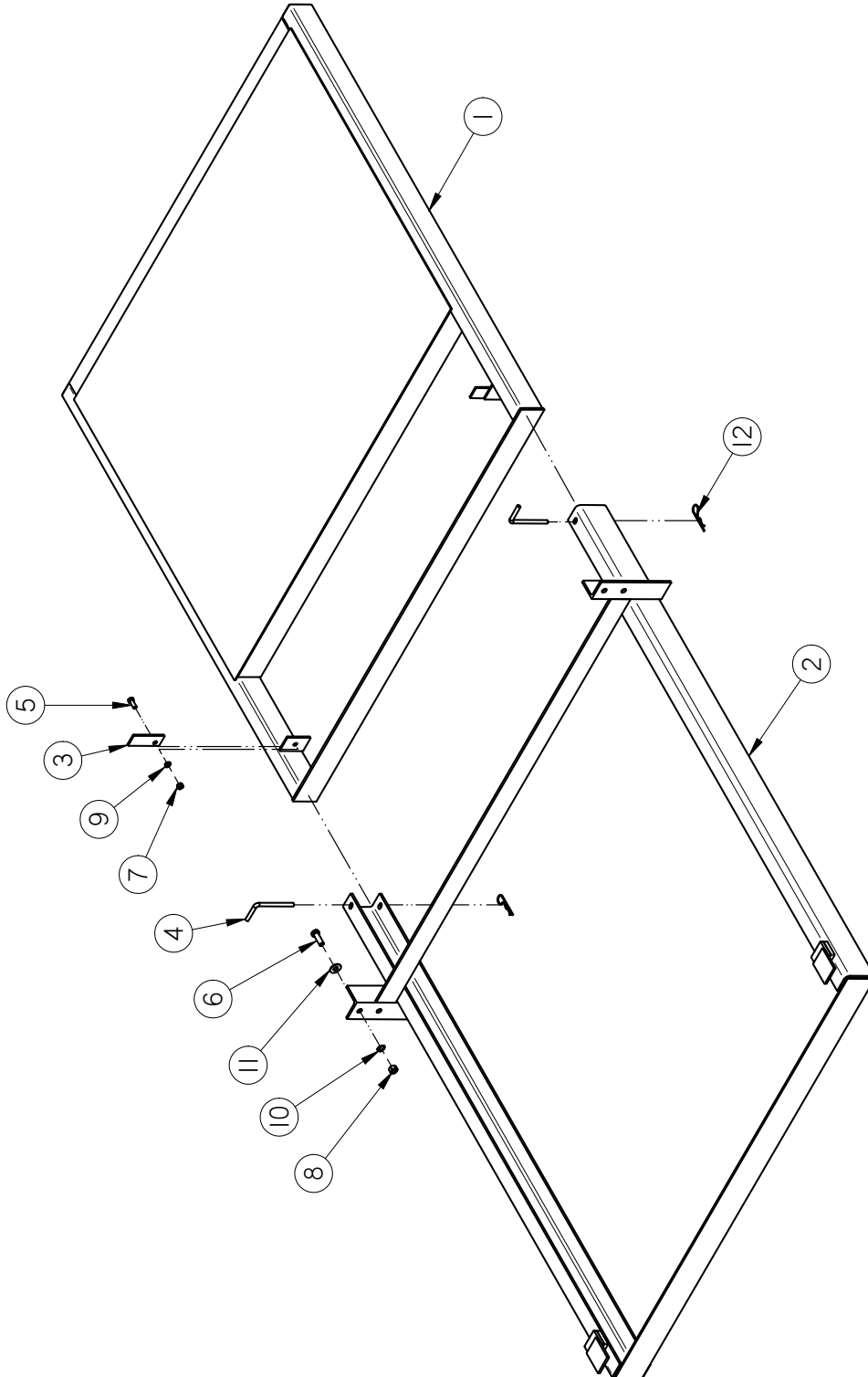
A dust mask and protective rubber gloves shall be used when cleaning the machine.

1. Clear the area of bystanders, especially small children.
2. Thoroughly wash the entire machine to remove all dirt, mud, debris or residue.
3. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
4. Lubricate all grease fittings. Make sure that all grease cavities have been filled with grease to remove any water residue from the washing. This also protects the bearing seals.
5. Remove drive assembly cover. Clean entire area and ensure drive belt and chain are clean and free of debris. Lubricate drive chain.
6. Touch up all paint nicks and scratches to prevent rusting.
7. Store the machine inside a protective building to keep it from being exposed to the weather. Select an area that is dry, level and free of debris. If storing outside, cover with a waterproof tarpaulin.
8. Unhook from towing vehicle.
9. Place blocks under the intake or the jack if required.
10. Store machine in an area away from human activity.
11. Do not allow children to play on or around the stored machine.

PORTABLE LPX TREATER

**NOTES:**

**SLIDE OUT PLATFORM ASSEMBLY (13-05-0058)**



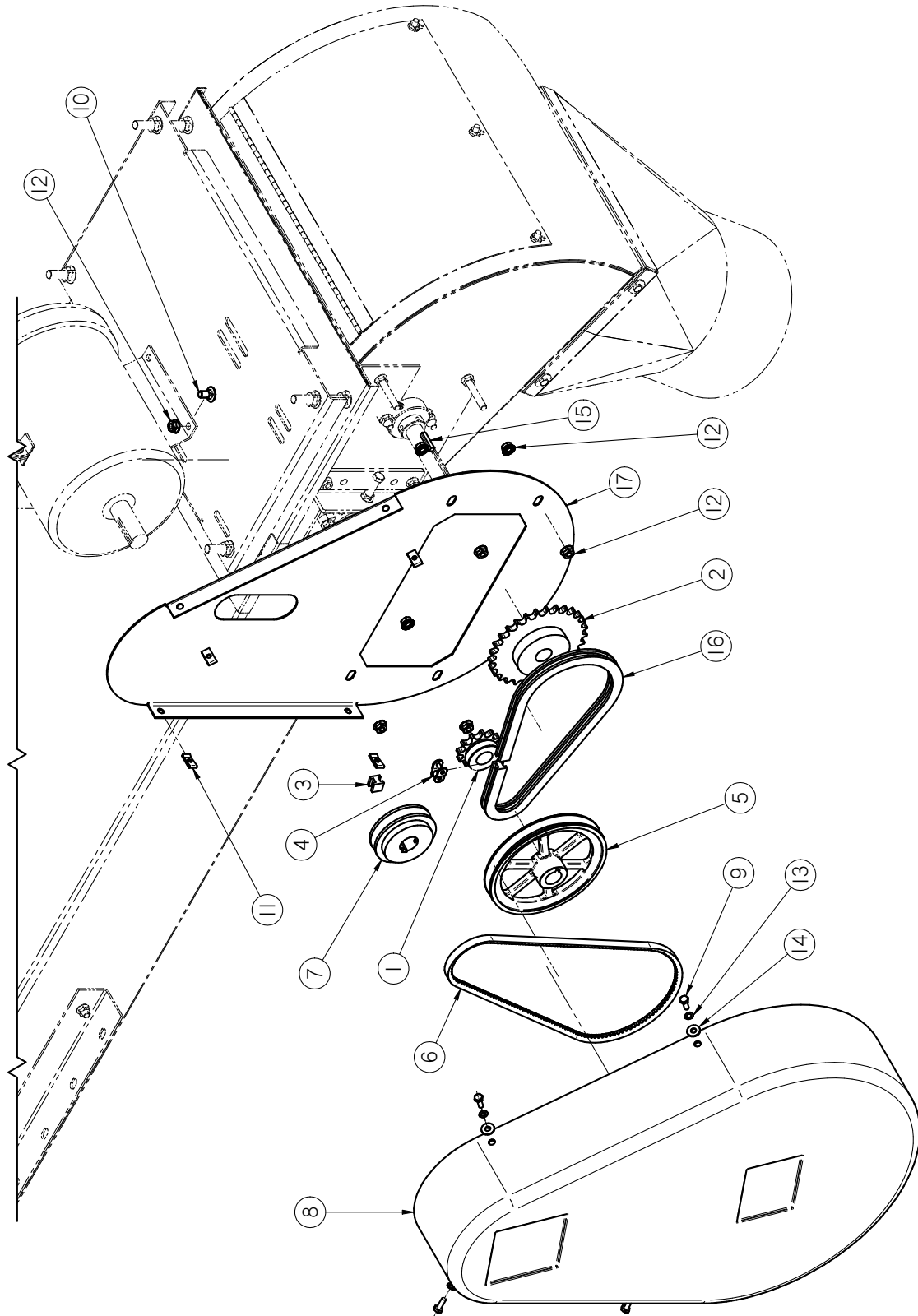


PORTABLE LPX TREATER

**SLIDE OUT PLATFORM ASSEMBLY (13-05-0058)**

| Item # | Part #     | Description                | Qty |
|--------|------------|----------------------------|-----|
| 1      | 05-08-0055 | SLIDE OUT PLATFORM         | 1   |
| 2      | 05-08-0056 | GUIDE RAIL                 | 1   |
| 3      | 05-10-1611 | PORT TRTR STOP PLT         | 2   |
| 4      | 05-11-0119 | RETAINING PIN 3/8"         | 2   |
| 5      | 06-01-0016 | BOLT .375-16 X 1.00 ZP GR5 | 2   |
| 6      | 06-01-0025 | BOLT .500-13 X 1.50 ZP GR5 | 4   |
| 7      | 06-02-0003 | NUT FULL .375-16 ZP GR5    | 2   |
| 8      | 06-02-0004 | NUT FULL .500-13 ZP GR5    | 4   |
| 9      | 06-04-0003 | WSHR LOCK SPLT .375 ZP     | 2   |
| 10     | 06-04-0004 | WSHR LOCK SPLT .500 ZP     | 4   |
| 11     | 06-05-0005 | WSHR FLAT .500 ZP          | 4   |
| 12     | 06-09-0029 | CLIP, .105 HAIR PIN        | 2   |

PORTABLE LPX TREATER  
**5 HP MOTOR DRIVE ASSEMBLY (13-05-0210)**

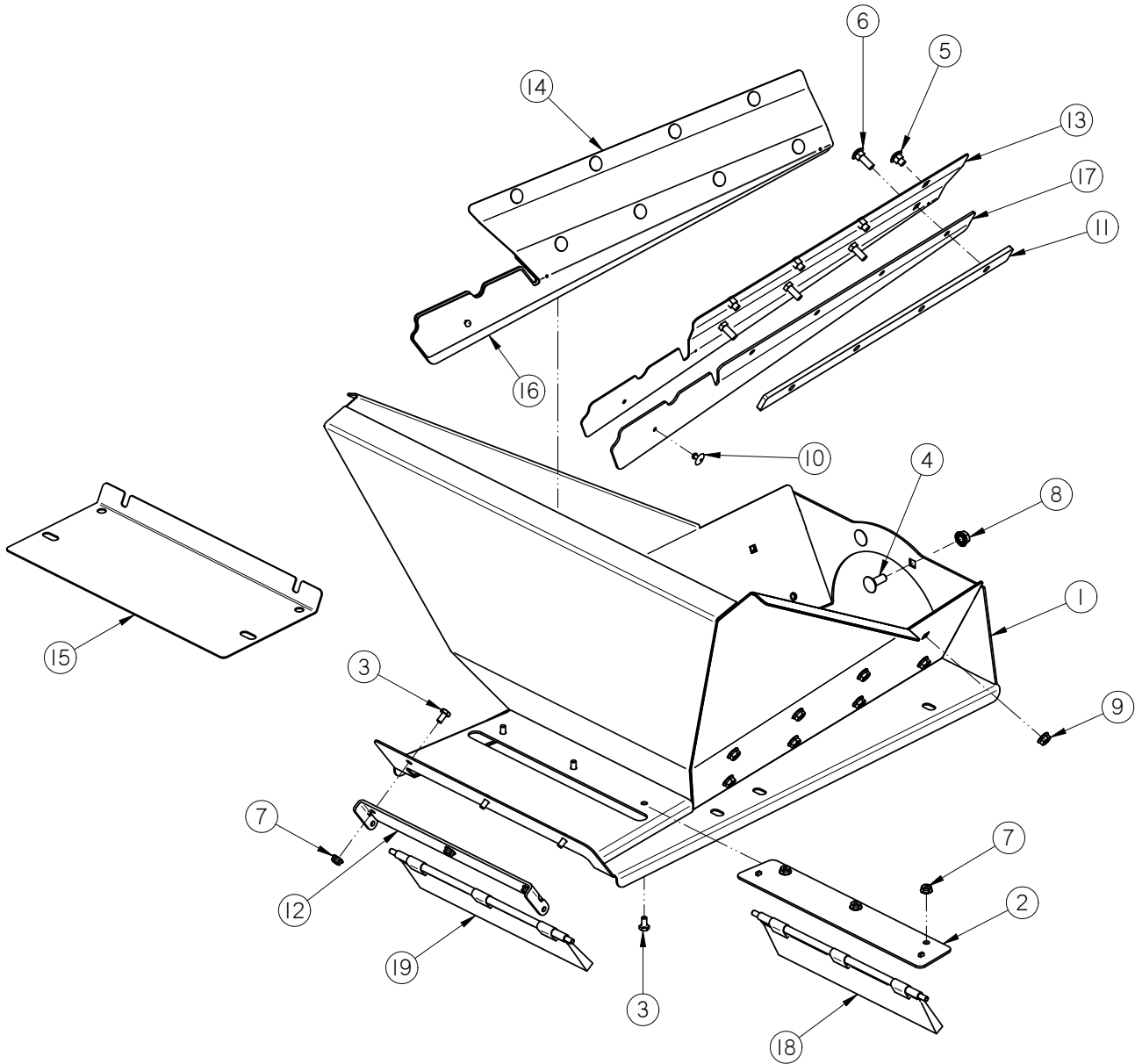


PORTABLE LPX TREATER  
**5 HP MOTOR DRIVE ASSEMBLY (13-05-0210)**

| Item # | Part #     | Description                            | Qty |
|--------|------------|--|-----|
| 1      | 01-02-0076 | Sprocket #50 12T 1.0000 in Bore Type B | 1   |
| 2      | 01-02-0109 | Sprocket #50 29T 1.00 in Bore Type B   | 1   |
| 3      | 01-04-0005 | #50 CNTG LINK                          | 1   |
| 4      | 01-04-0007 | #50 OFFSET LINK                        | 1   |
| 5      | 01-08-0058 | SHEAVE BK75 1.00 BORE                  | 1   |
| 6      | 01-08-0059 | BELT BX38                              | 1   |
| 7      | 01-08-0063 | SHV BK36 1.125 FSH BORE                | 1   |
| 8      | 05-06-0035 | DRIVE SHIELD MOLDED                    | 1   |
| 9      | 06-01-0006 | BOLT .250-20 X .750 ZP GR5             | 4   |
| 10     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK    | 4   |
| 11     | 06-02-0047 | NUT .250-20 U-CLIP NUT                 | 4   |
| 12     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5            | 12  |
| 13     | 06-04-0001 | WSHR LOCK SPLT .250 ZP                 | 4   |
| 14     | 06-05-0001 | WASHER, FLAT .250                      | 4   |
| 15     | 106-3-2036 | KEY .250 X 1.25 CS                     | 3   |
| 16     | 13-05-0185 | 50 ROLLER CHAIN 28.5IN                 | 1   |
| 17     | 280-3-0053 | SHIELD BACKPLATE                       | 1   |

PORTABLE LPX TREATER

**17 FT INLET CONVEYOR LARGE INLET HOPPER ASSEMBLY (13-08-0540)**



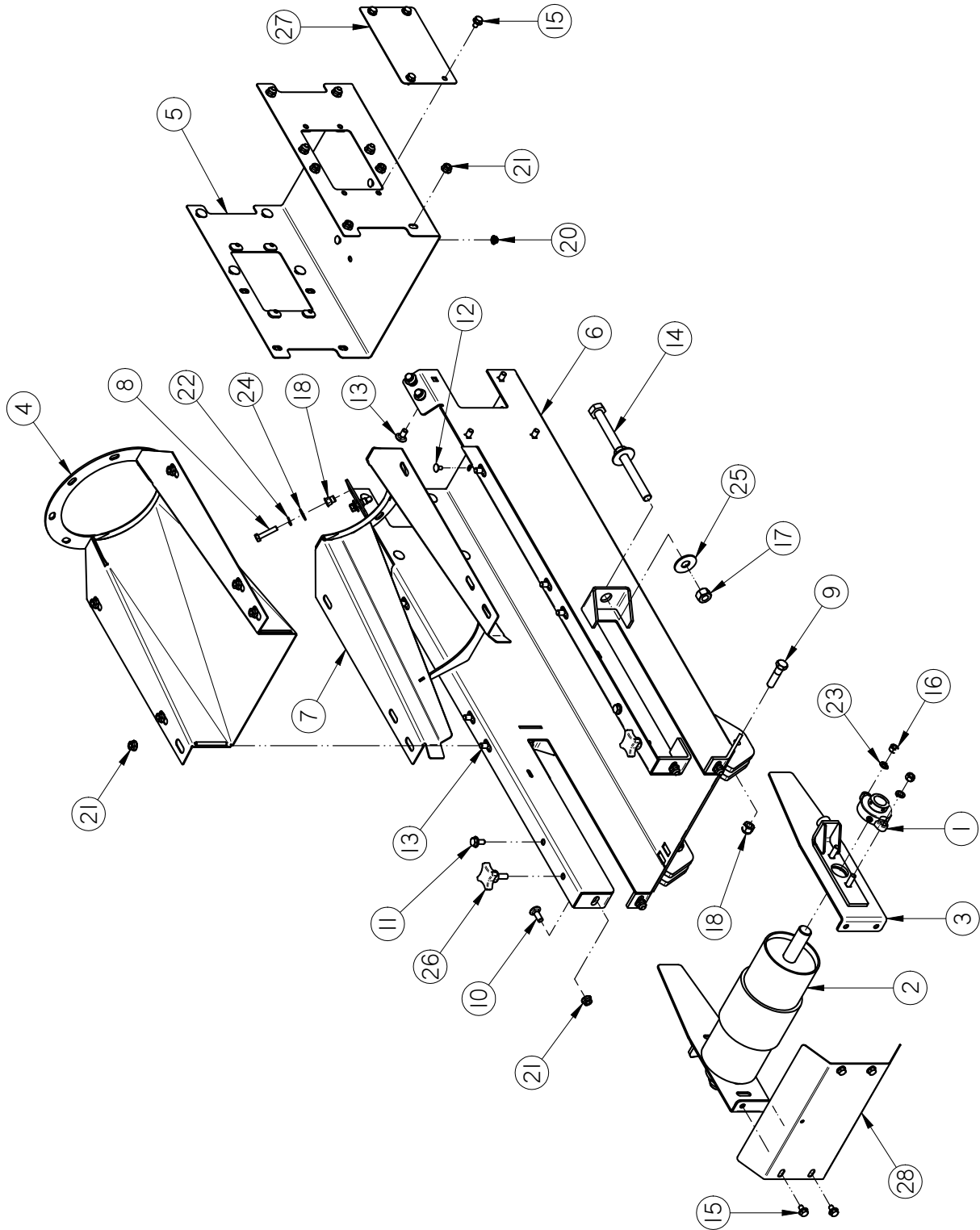
PORTABLE LPX TREATER

**17 FT INLET CONVEYOR LARGE INLET HOPPER ASSEMBLY (13-08-0540)**

| Item # | Part #     | Description                         | Qty |
|--------|------------|-------------------------------------|-----|
| 1      | 05-08-0477 | WDMT LG INLET 8IN RND               | 1   |
| 2      | 05-08-0536 | WDMT PIVOT BRSH PLT TS25            | 1   |
| 3      | 06-01-0004 | BOLT, .250-20 X .500 UNC ZP GRADE 5 | 6   |
| 4      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5      | 2   |
| 5      | 06-01-0129 | BOLT CRG .313-18 X .50 ZP GR5       | 8   |
| 6      | 06-01-0223 | BOLT CRG .313-18 X 1.00 ZP GR5      | 8   |
| 7      | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED  | 6   |
| 8      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 2   |
| 9      | 06-03-0019 | NUT LOCK FLG .3125-18 ZP GR5        | 16  |
| 10     | 06-12-0022 | RIVET POP .188 X .312 GRIP SS .65HD | 2   |
| 11     | 103D17     | PLT SKIRT SPACER                    | 2   |
| 12     | 10472A     | EAR BRUSH MNT                       | 1   |
| 13     | 1047FE     | PLT SEED GUIDE RH                   | 1   |
| 14     | 1047FF     | PLT SEED GUIDE LH                   | 1   |
| 15     | 104800     | PLT INLET CVR TS25                  | 1   |
| 16     | 104803     | SKIRT RBBR INLET LH                 | 1   |
| 17     | 104804     | SKIRT RBBR INLET RH                 | 1   |
| 18     | 13-05-0478 | ASSY BRUSH W\CLIPS 11.25            | 1   |
| 19     | 13-05-0479 | ASSY BRUSH W\CLIPS 11.88            | 1   |

PORTABLE LPX TREATER

**17 FT INLET CONVEYOR INLET END ASSEMBLY (13-08-0532)**





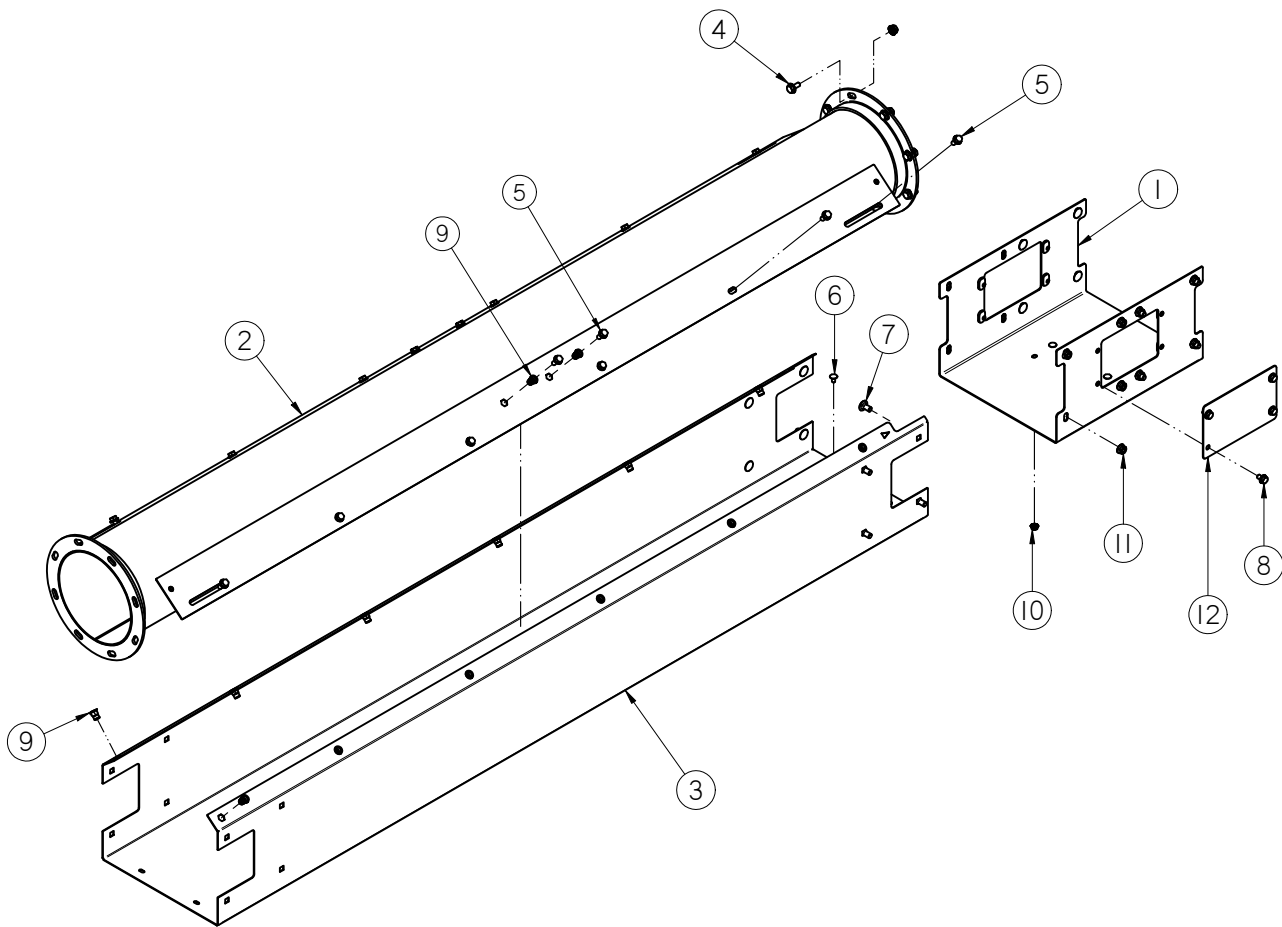
PORTABLE LPX TREATER

**17 FT INLET CONVEYOR INLET END ASSEMBLY (13-08-0532)**

| Item # | Part #     | Description                            | Qty |
|--------|------------|--|-----|
| 1      | 01-03-0042 | BRG FLG MNT 1.000ID 2BOLT ECNTRC       | 2   |
| 2      | 01-08-0108 | PULLEY TAIL W-LAGGING                  | 1   |
| 3      | 05-08-0404 | WDMT TAKE-UP PLT RND CNVR              | 2   |
| 4      | 05-08-0417 | WDMT TRANS 8IN RND                     | 1   |
| 5      | 05-08-0419 | WDMT SPLICE 12IN                       | 1   |
| 6      | 05-08-0452 | WDMT INLET HSG 12IN RND                | 1   |
| 7      | 05-08-0569 | WDMT TAIL TRANS TS25                   | 1   |
| 8      | 06-01-0013 | BOLT, .312-18 UNC ZP GRADE 5; 1.50" LG | 4   |
| 9      | 06-01-0027 | BOLT .500-13 X 2.00 ZP GR5             | 2   |
| 10     | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5         | 4   |
| 11     | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5         | 2   |
| 12     | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP      | 4   |
| 13     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK    | 22  |
| 14     | 06-01-0249 | BOLT .625-11 X 9.00 ZP GR5 FTH         | 2   |
| 15     | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5        | 12  |
| 16     | 06-02-0003 | NUT FULL .375-16 ZP GR5                | 4   |
| 17     | 06-02-0005 | NUT, .625-11 UNC ZP GRADE 5            | 4   |
| 18     | 06-02-0092 | RIVETNUT .312-18 ZP                    | 4   |
| 19     | 06-03-0004 | NUT NYL LOCK .500-13 ZP GR5            | 2   |
| 20     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATED      | 4   |
| 21     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5            | 26  |
| 22     | 06-04-0002 | WSHR LOCK SPLT .313 ZP                 | 4   |
| 23     | 06-04-0003 | WSHR LOCK SPLT .375 ZP                 | 4   |
| 24     | 06-05-0003 | WSHR FLAT .313 ZP                      | 4   |
| 25     | 06-05-0006 | WASHER, .625 FLAT ZP                   | 4   |
| 26     | 06-09-0066 | KNOB .375 -16 X 1. 4 LUG PLASTIC       | 2   |
| 27     | 103B9A     | PLT SPLICE COVER                       | 2   |
| 28     | 104241     | PLT TAKE-UP CVR                        | 1   |

PORTABLE LPX TREATER

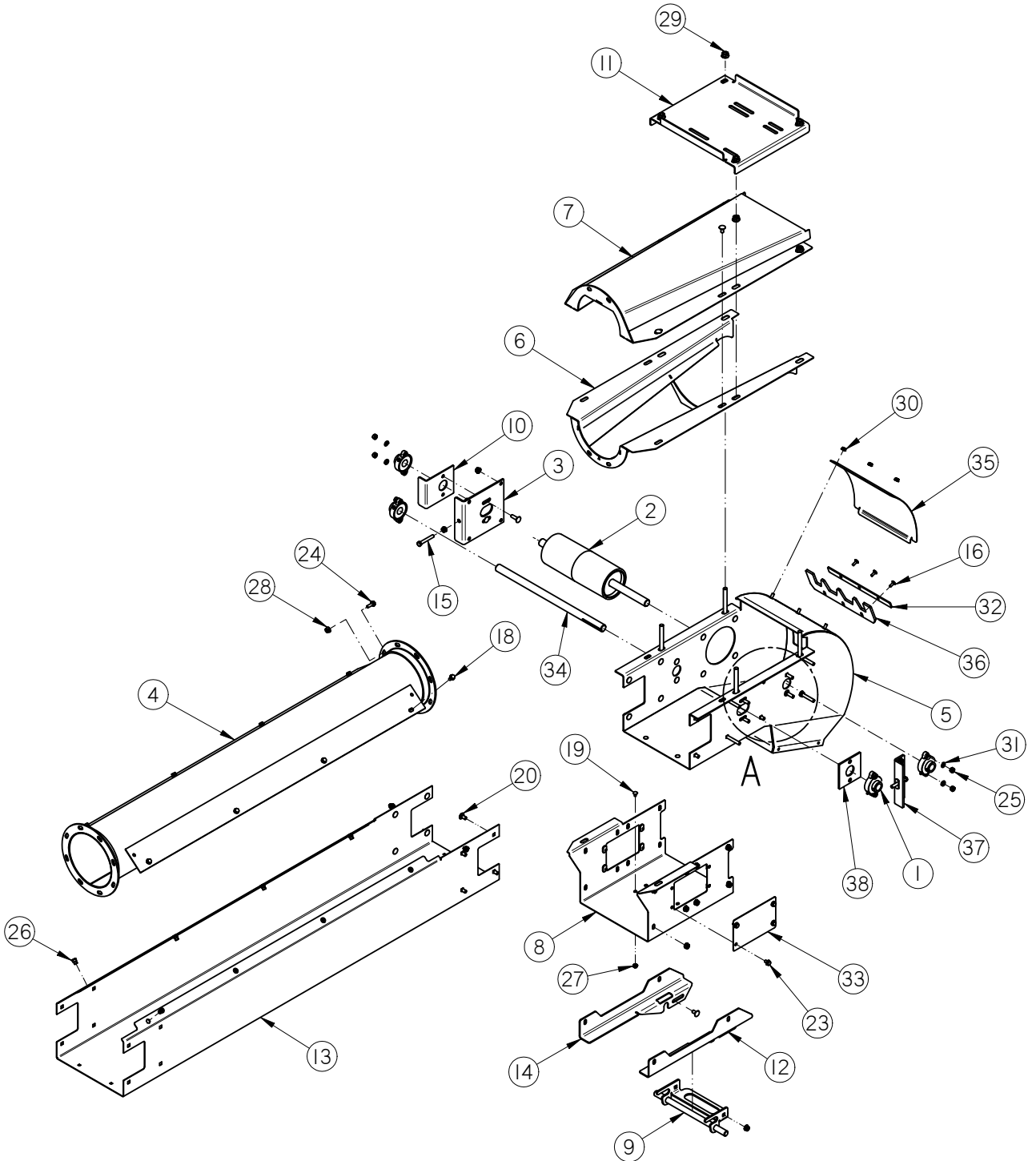
**17 FT INLET CONVEYOR INLET EXTENSION ASSEMBLY (13-08-0541)**



| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 1      | 05-08-0419 | WDMT SPLICE 12IN                           | 1   |
| 2      | 05-08-0461 | WDMT TUBE 8.00IN X 84.86IN                 | 1   |
| 3      | 05-10-4352 | FRAME INLET 12IN SEC                       | 1   |
| 4      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5             | 8   |
| 5      | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 16  |
| 6      | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP          | 4   |
| 7      | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK        | 16  |
| 8      | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5            | 8   |
| 9      | 06-02-0092 | RIVETNUT .312-18 ZP                        | 16  |
| 10     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED         | 4   |
| 11     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5                | 24  |
| 12     | 103B9A     | PLT SPLICE COVER                           | 2   |

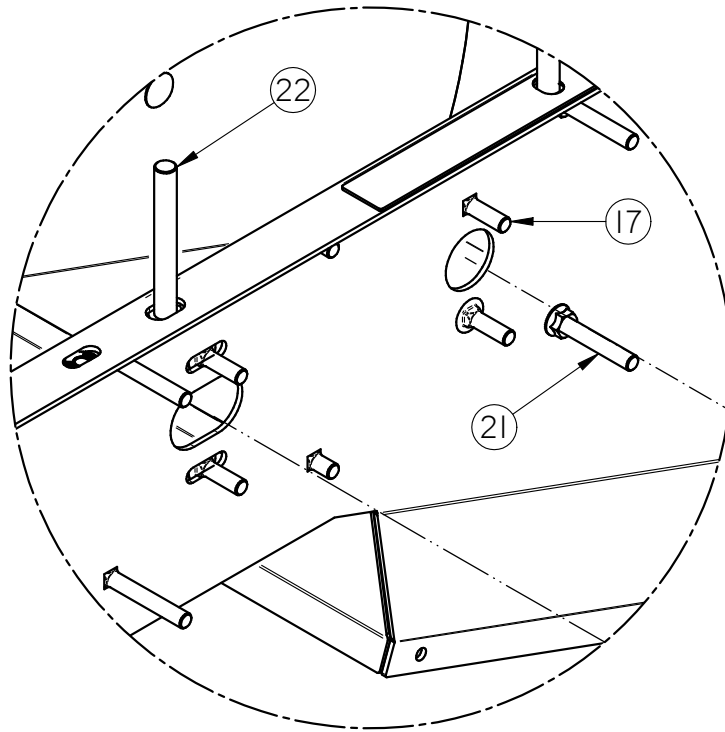
PORTABLE LPX TREATER

**17 FT INLET CONVEYOR HEAD SECTION ASSEMBLY (13-08-0542)**



PORTABLE LPX TREATER

**17 FT INLET CONVEYOR HEAD SECTION ASSEMBLY (13-08-0542)**



DETAIL A

| Item # | Part #     | Description                       | Qty |
|--------|------------|-----------------------------------|-----|
| 1      | 01-03-0042 | BRG FLG MNT 1.000ID 2BOLT ECNTRC  | 4   |
| 2      | 01-08-0109 | PULLEY HEAD VULC TS2500           | 1   |
| 3      | 05-07-0445 | WDMT ADJ PLT CNVR HEAD SECT       | 1   |
| 4      | 05-08-0414 | WDMT TUBE 8.00IN X 60IN           | 1   |
| 5      | 05-08-0453 | WDMT DSCGH HD 12IN                | 1   |
| 6      | 05-08-0501 | WDMT HD TRANS TS25                | 1   |
| 7      | 05-08-0503 | WDMT TRANS CVR TS25               | 1   |
| 8      | 05-08-0520 | WDMT HD SPLICE 12IN               | 1   |
| 9      | 05-08-0529 | WDMT LOCK PORT CNVR               | 1   |
| 10     | 05-10-3947 | PLT BRG ADJ STRIKE                | 1   |
| 11     | 05-10-4329 | MTR MNT 12IN                      | 1   |
| 12     | 05-10-4359 | BRKT MNT PORT RH                  | 1   |
| 13     | 05-10-4360 | FR HEAD SECT PORT 12IN            | 1   |
| 14     | 05-10-4361 | BRKT MNT PORT LH                  | 1   |
| 15     | 06-01-0071 | BOLT .375-16 X 2.50 ZP GR5        | 2   |
| 16     | 06-01-0122 | BOLT, CARRIAGE, .250-20x.75 G5 ZP | 3   |

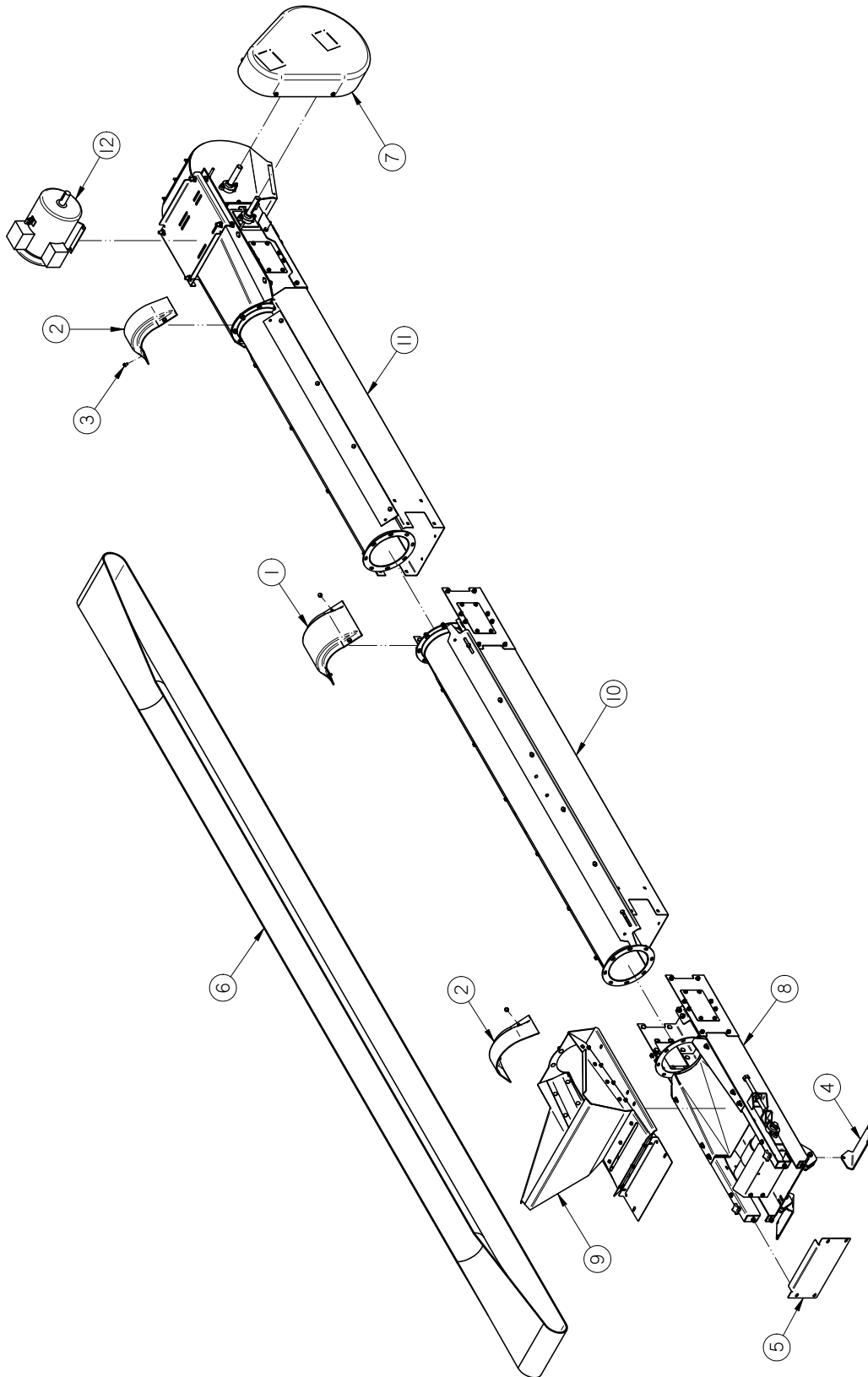
PORTABLE LPX TREATER

**17 FT INLET CONVEYOR HEAD SECTION ASSEMBLY (13-08-0542)**

| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 17     | 06-01-0127 | BOLT CRG .375-16 X 1.25 ZP GR5             | 8   |
| 18     | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 8   |
| 19     | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP          | 4   |
| 20     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK        | 26  |
| 21     | 06-01-0154 | BOLT CRG .375-16 X 2.50 FTH ZP GR5         | 4   |
| 22     | 06-01-0157 | BOLT, .500-13 X 4" UNC ZP GRADE 5 fth      | 4   |
| 23     | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5            | 8   |
| 24     | 06-01-0273 | BOLT FLG .3125-24 X 1.00 ZP GR5            | 4   |
| 25     | 06-02-0003 | NUT FULL .375-16 ZP GR5                    | 8   |
| 26     | 06-02-0092 | RIVETNUT .312-18 ZP                        | 8   |
| 27     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED         | 7   |
| 28     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5                | 36  |
| 29     | 06-03-0015 | NUT LOCK FLG .500-13 ZP GR5                | 12  |
| 30     | 06-03-0019 | NUT LOCK FLG .3125-18 ZP GR5               | 3   |
| 31     | 06-04-0003 | WSHR LOCK SPLT .375 ZP                     | 8   |
| 32     | 103B39     | PLT SCRAPER HLDR 12IN CNVR                 | 1   |
| 33     | 103B9A     | PLT SPLICE COVER                           | 2   |
| 34     | 103C88     | SHAFT JACK-HEAD 12IN CNVR                  | 1   |
| 35     | 103DAF     | PLT INSP CVR 12IN DSCHG                    | 1   |
| 36     | 104259     | RBBR SCRAPER 12IN FILL                     | 1   |
| 37     | 280-2-0016 | TRACKING ANGLE WELDMENT                    | 1   |
| 38     | 280-3-0112 | BEARING SPACER PLATE                       | 1   |

PORTABLE LPX TREATER

**17 FT INLET CONVEYOR ASSEMBLY**





PORTABLE LPX TREATER

**17 FT INLET CONVEYOR ASSEMBLY**

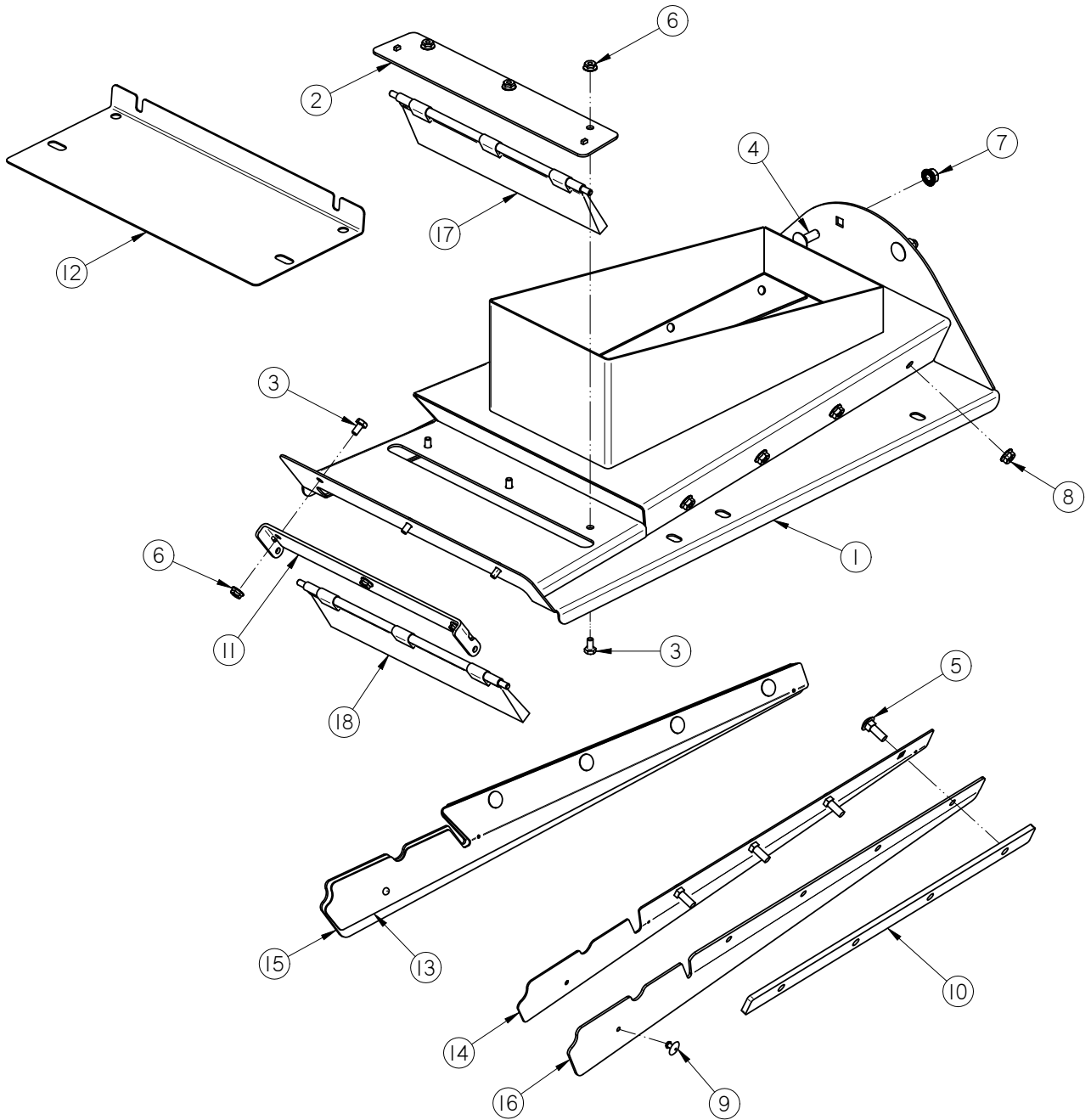
| Item # | Part #      | Description                     | Qty |
|--------|-------------|---------------------------------|-----|
| 1      | 05-06-0111  | CVR SPLICE RND CNVR 8IN         | 1   |
| 2      | 05-06-0112  | CVR SPLICE INLET RND CNVR 8IN   | 2   |
| 3      | 06-01-0261  | BOLT FLG .3125-18 X .500 ZP GR5 | 8   |
| 4      | 102F37      | FLR MNT CNVR BRKT               | 2   |
| 5      | 103B89      | PLT REAR CVR                    | 1   |
| 6      | 11-02-0136  | BELT CNVR CLTS TS1217           | 1   |
| 7      | 13-05-0210  | KIT DRV 5HP CONVEYOR            | 1   |
| 8      | 13-08-0532  | ASSY INLET SECT 8IN RND         | 1   |
| 9      | 13-08-0540  | ASSY LG INLET HOPPER TS25       | 1   |
| 10     | 13-08-0541  | ASSY 12IN INLET EXT             | 1   |
| 11     | 13-08-0542  | ASSY HEAD SECT 8IN PORT         | 1   |
| 12     | SEE TABLE 1 | CONVEYOR MOTOR                  | 1   |

TABLE 1

| Conveyor Part # | Motor Part # | Conveyor Description                    |
|-----------------|--------------|---|
| 17-13-0016      | 01-01-0107   | PORTABLE TREATER CONVEYOR 17FT 230V 1PH |
| 17-13-0017      | 01-01-0151   | PORTABLE TREATER CONVEYOR 17FT 230V 3PH |
| 17-13-0020      | 01-01-0209   | PORTABLE TREATER CONVEYOR 17FT 460V 3PH |
| 17-13-0022      | 01-01-0143   | PORTABLE TREATER CONVEYOR 17FT 575V 3PH |

PORTABLE LPX TREATER

**32 FT CONVEYOR INLET HOPPER ASSEMBLY (13-08-0545)**



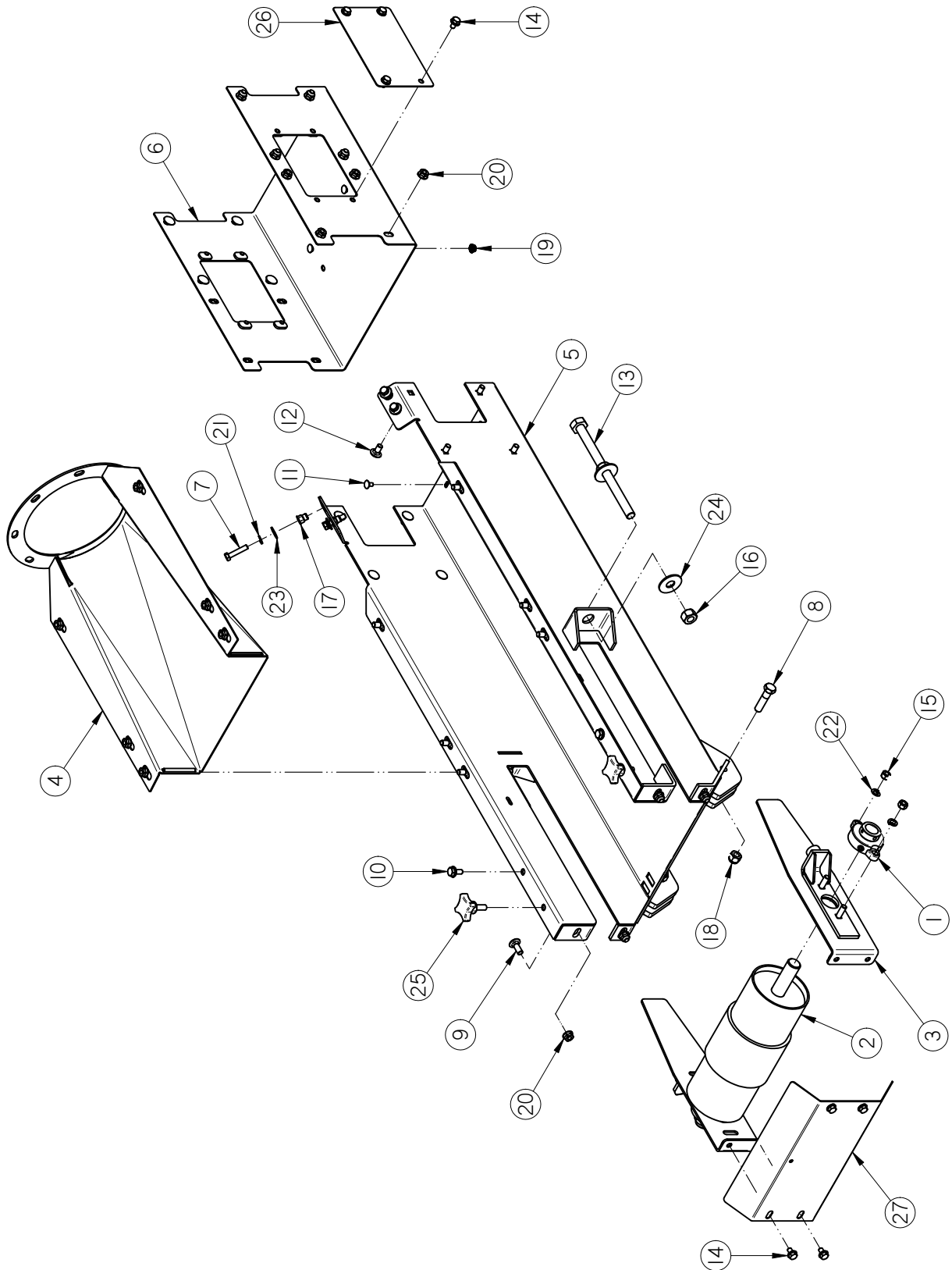
PORTABLE LPX TREATER

**32 FT CONVEYOR INLET HOPPER ASSEMBLY (13-08-0545)**

| Item # | Part #     | Description                         | Qty |
|--------|------------|-------------------------------------|-----|
| 1      | 05-08-0472 | WDMT INLET TS25 PORT                | 1   |
| 2      | 05-08-0536 | WDMT PIVOT BRSH PLT TS25            | 1   |
| 3      | 06-01-0004 | BOLT, .250-20 X .500 UNC ZP GRADE 5 | 6   |
| 4      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5      | 2   |
| 5      | 06-01-0223 | BOLT CRG .313-18 X 1.00 ZP GR5      | 8   |
| 6      | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED  | 6   |
| 7      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5         | 2   |
| 8      | 06-03-0019 | NUT LOCK FLG .3125-18 ZP GR5        | 8   |
| 9      | 06-12-0022 | RIVET POP .188 X .312 GRIP SS .65HD | 2   |
| 10     | 103D17     | PLT SKIRT SPACER                    | 2   |
| 11     | 10472A     | EAR BRUSH MNT                       | 1   |
| 12     | 104800     | PLT INLET CVR TS25                  | 1   |
| 13     | 104801     | PLT SEED GUIDE LH                   | 1   |
| 14     | 104802     | PLT SEED GUIDE RH                   | 1   |
| 15     | 104803     | SKIRT RBBR INLET LH                 | 1   |
| 16     | 104804     | SKIRT RBBR INLET RH                 | 1   |
| 17     | 13-05-0478 | ASSY BRUSH W\CLIPS 11.25            | 1   |
| 18     | 13-05-0479 | ASSY BRUSH W\CLIPS 11.88            | 1   |

PORTABLE LPX TREATER

**32 FT CONVEYOR INLET END ASSEMBLY (13-08-0553)**



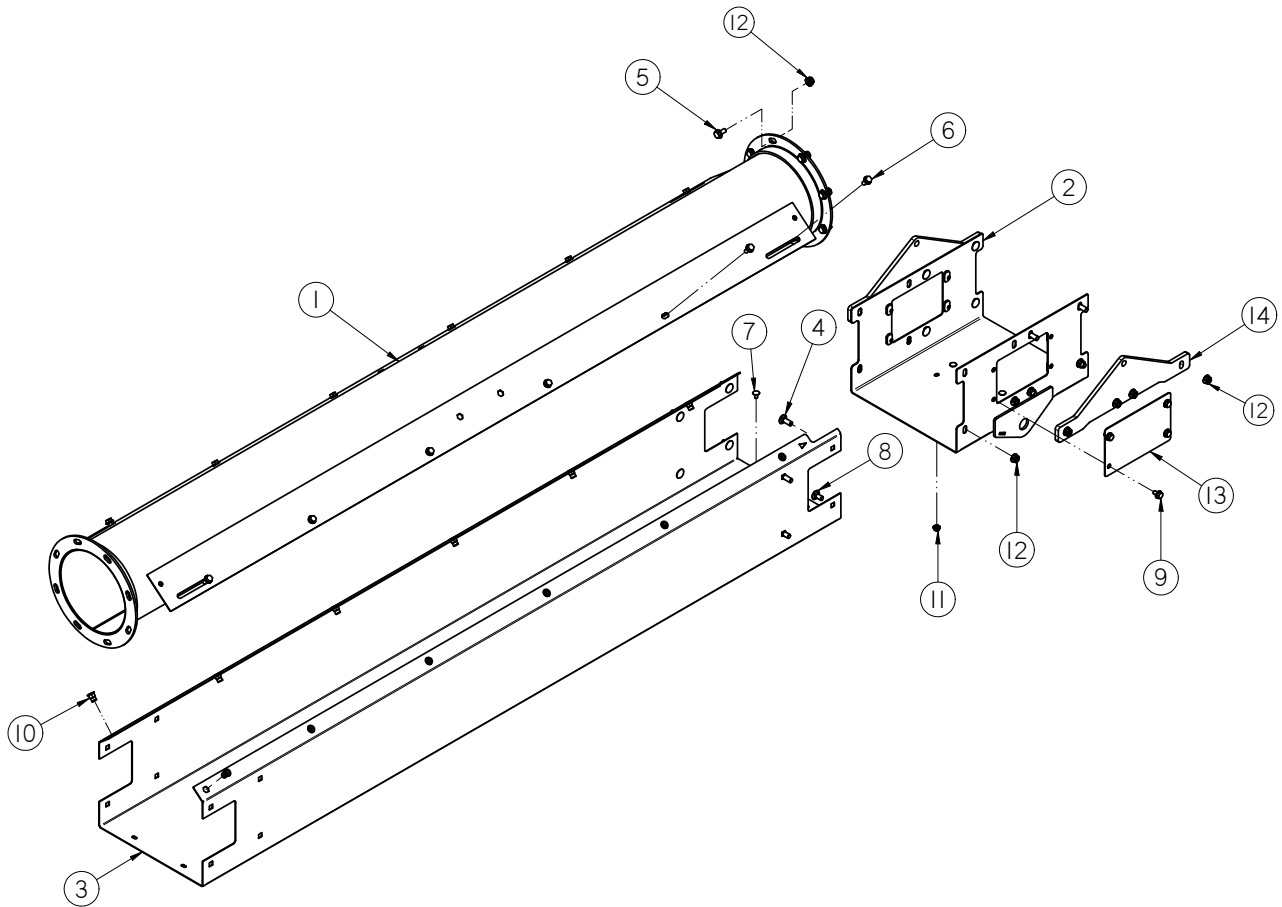
PORTABLE LPX TREATER

**32 FT CONVEYOR INLET END ASSEMBLY (13-08-0553)**

| Item # | Part #     | Description                            | Qty |
|--------|------------|--|-----|
| 1      | 01-03-0042 | BRG FLG MNT 1.000ID 2BOLT ECNTRC       | 2   |
| 2      | 01-08-0108 | PULLEY TAIL W-LAGGING                  | 1   |
| 3      | 05-08-0404 | WDMT TAKE-UP PLT RND CNVR              | 2   |
| 4      | 05-08-0417 | WDMT TRANS 8IN RND                     | 1   |
| 5      | 05-08-0452 | WDMT INLET HSG 12IN RND                | 1   |
| 6      | 05-08-0464 | WDMT SPLICE UNCRG MT 12IN              | 1   |
| 7      | 06-01-0013 | BOLT, .312-18 UNC ZP GRADE 5; 1.50" LG | 4   |
| 8      | 06-01-0027 | BOLT .500-13 X 2.00 ZP GR5             | 2   |
| 9      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5         | 4   |
| 10     | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5         | 2   |
| 11     | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP      | 4   |
| 12     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK    | 22  |
| 13     | 06-01-0249 | BOLT .625-11 X 9.00 ZP GR5 FTH         | 2   |
| 14     | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5        | 12  |
| 15     | 06-02-0003 | NUT FULL .375-16 ZP GR5                | 4   |
| 16     | 06-02-0005 | NUT, .625-11 UNC ZP GRADE 5            | 4   |
| 17     | 06-02-0092 | RIVETNUT .312-18 ZP                    | 4   |
| 18     | 06-03-0004 | NUT NYL LOCK .500-13 ZP GR5            | 2   |
| 19     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED     | 4   |
| 20     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5            | 26  |
| 21     | 06-04-0002 | WSHR LOCK SPLT .313 ZP                 | 4   |
| 22     | 06-04-0003 | WSHR LOCK SPLT .375 ZP                 | 4   |
| 23     | 06-05-0003 | WSHR FLAT .313 ZP                      | 4   |
| 24     | 06-05-0006 | WASHER, .625 FLAT ZP                   | 4   |
| 25     | 06-09-0066 | KNOB .375 -16 X 1. 4 LUG PLASTIC       | 2   |
| 26     | 103B9A     | PLT SPLICE COVER                       | 2   |
| 27     | 104241     | PLT TAKE-UP CVR                        | 1   |

PORTABLE LPX TREATER

**32 FT CONVEYOR INLET EXTENSION ASSEMBLY (13-08-0555)**

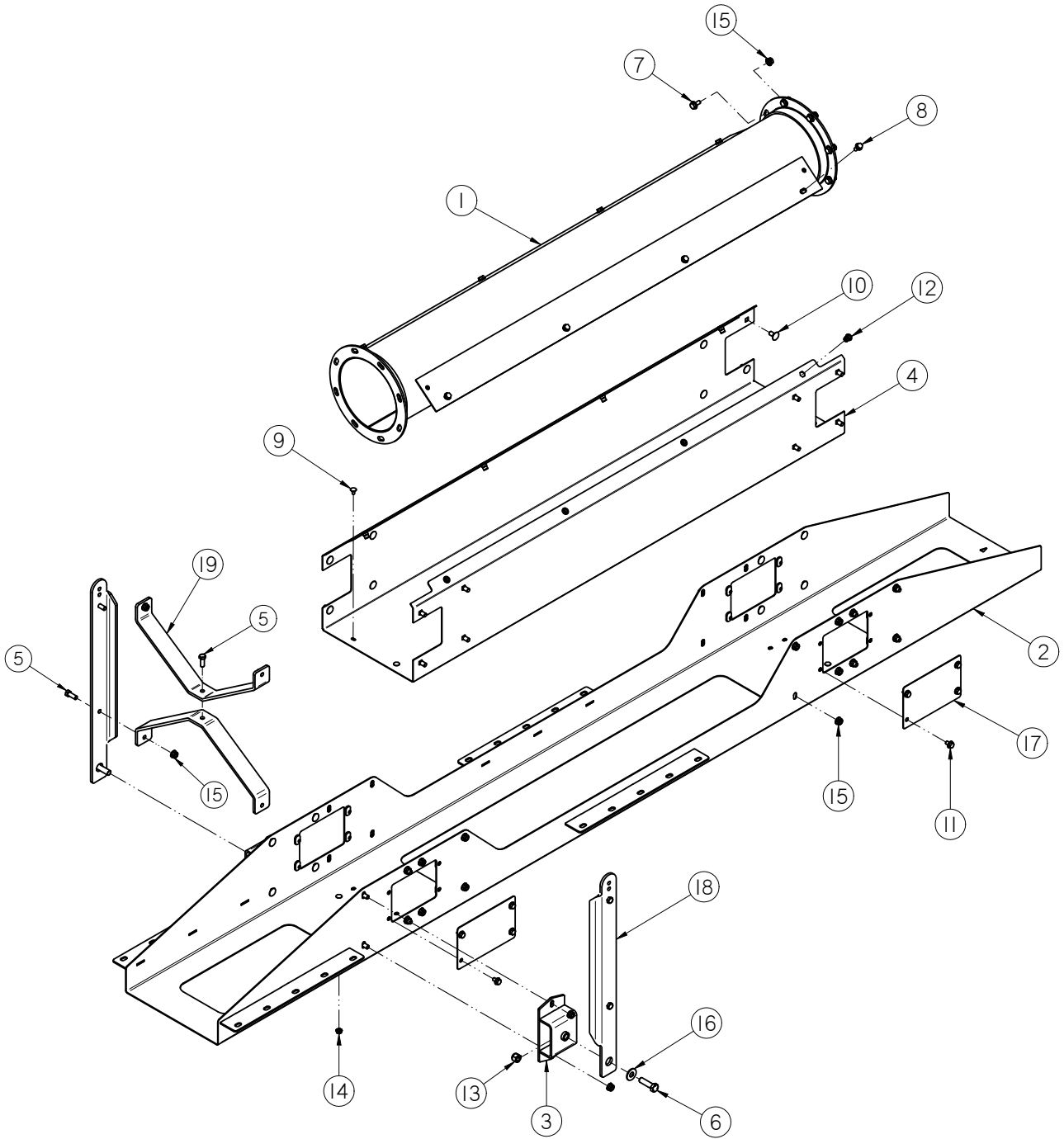


| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 1      | 05-08-0461 | WDMT TUBE 8.00IN X 84.86IN                 | 1   |
| 2      | 05-08-0471 | WDMT SPLICE CABLE MNT PORT                 | 1   |
| 3      | 05-10-4352 | FRAME INLET 12IN SEC                       | 1   |
| 4      | 06-01-0115 | BOLT CRG .375-16 X 1.00 ZP GR5             | 8   |
| 5      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5             | 8   |
| 6      | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 12  |
| 7      | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP          | 4   |
| 8      | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK        | 8   |
| 9      | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5            | 8   |
| 10     | 06-02-0092 | RIVETNUT .312-18 ZP                        | 12  |
| 11     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATED          | 4   |
| 12     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5                | 24  |
| 13     | 103B9A     | PLT SPLICE COVER                           | 2   |
| 14     | 104922     | PLT CABLE ATTACH                           | 2   |



PORTABLE LPX TREATER

**32 FT CONVEYOR 5 FT MID SECTION ASSEMBLY (13-08-0549)**



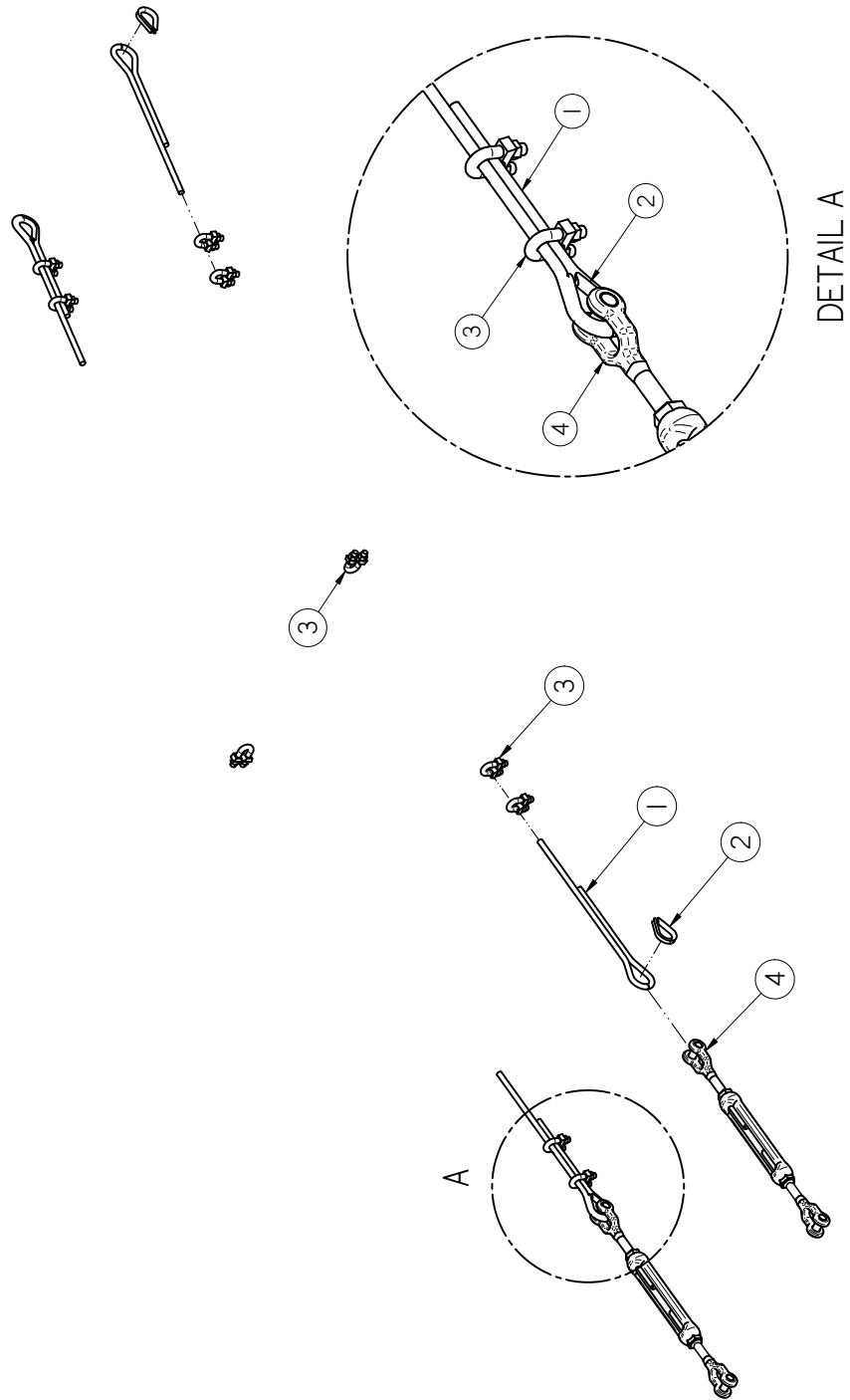
PORTABLE LPX TREATER

**32 FT CONVEYOR 5 FT MID SECTION ASSEMBLY (13-08-0549)**

| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 1      | 05-08-0414 | WDMT TUBE 8.00IN X 60IN                    | 1   |
| 2      | 05-08-0482 | WDMT SPLICE 8IN PORT                       | 1   |
| 3      | 05-08-0540 | WDMT UPRIGHT SUPPORT                       | 2   |
| 4      | 05-10-4323 | FRAME 5FT X 12IN MID SEC                   | 1   |
| 5      | 06-01-0016 | BOLT .375-16 X 1.00 ZP GR5                 | 5   |
| 6      | 06-01-0054 | BOLT .500-13 X 1.75 ZP GR5                 | 2   |
| 7      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5             | 8   |
| 8      | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 8   |
| 9      | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP          | 8   |
| 10     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK        | 32  |
| 11     | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5            | 16  |
| 12     | 06-02-0092 | RIVETNUT .312-18 ZP                        | 8   |
| 13     | 06-03-0004 | NUT NYL LOCK .500-13 ZP GR5                | 2   |
| 14     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATED          | 8   |
| 15     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5                | 45  |
| 16     | 06-05-0005 | WSHR FLAT .500 ZP                          | 2   |
| 17     | 103B9A     | PLT SPLICE COVER                           | 4   |
| 18     | 104920     | STRAP CABLE UPRIGHT                        | 2   |
| 19     | 104921     | STRAP CABLE CROSS                          | 2   |

PORTABLE LPX TREATER

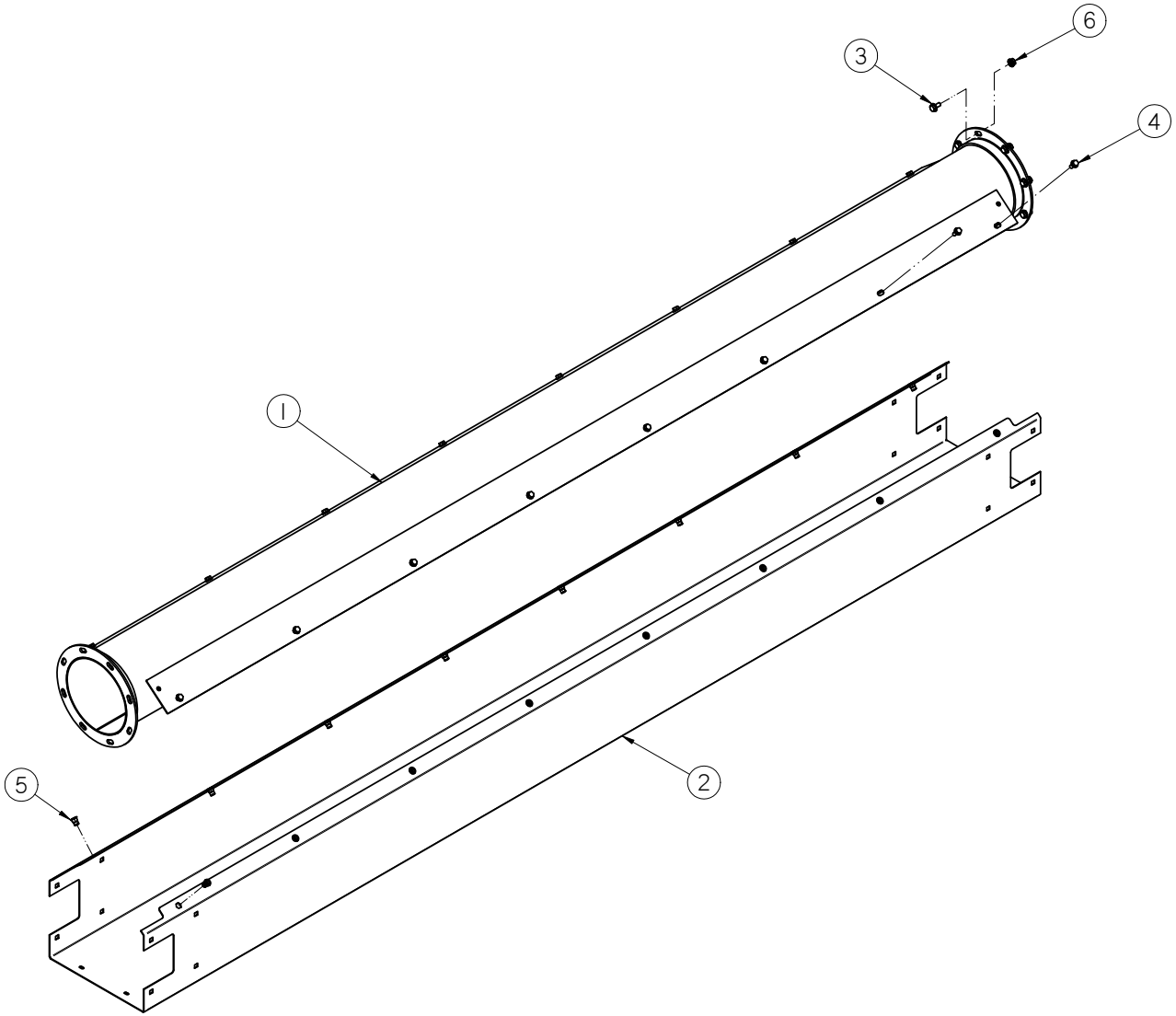
**32 FT CONVEYOR CABLE KIT ASSEMBLY (13-08-0642)**



| Item # | Part #     | Description                       | Qty |
|--------|------------|-----------------------------------|-----|
| 1      | 01-01-0065 | WIRE ROPE .313 DIA X 25FT         | 2   |
| 2      | 06-07-0023 | THIMBLE .250 WIRE ROPE HD         | 4   |
| 3      | 06-07-0026 | CBL CLIP ROPE .313                | 10  |
| 4      | 06-09-0056 | TURNBUCKLE 1/2-13 JAW JAW 6IN ADJ | 2   |

PORTABLE LPX TREATER

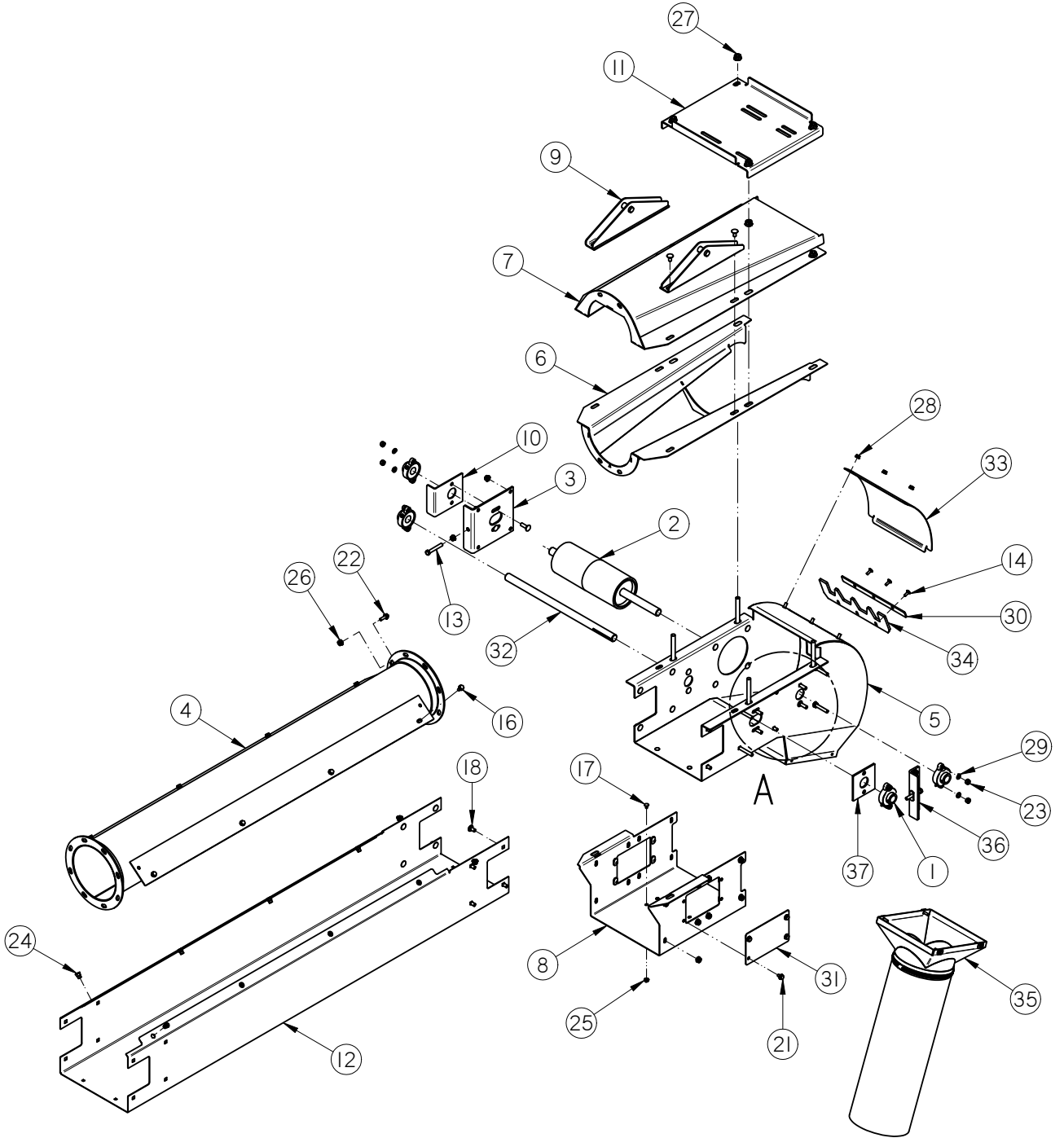
**32 FT CONVEYOR 10 FT MID SECTION ASSEMBLY (13-08-0544)**



| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 1      | 05-08-0415 | WDMT TUBE 8.00IN X 120IN                   | 1   |
| 2      | 05-10-4324 | FRAME 10FT X 12IN MID SEC                  | 1   |
| 3      | 06-01-0124 | BOLT FLG .375-16 X .750 ZP GR5             | 8   |
| 4      | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 16  |
| 5      | 06-02-0092 | RIVETNUT .312-18 ZP                        | 16  |
| 6      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5                | 8   |

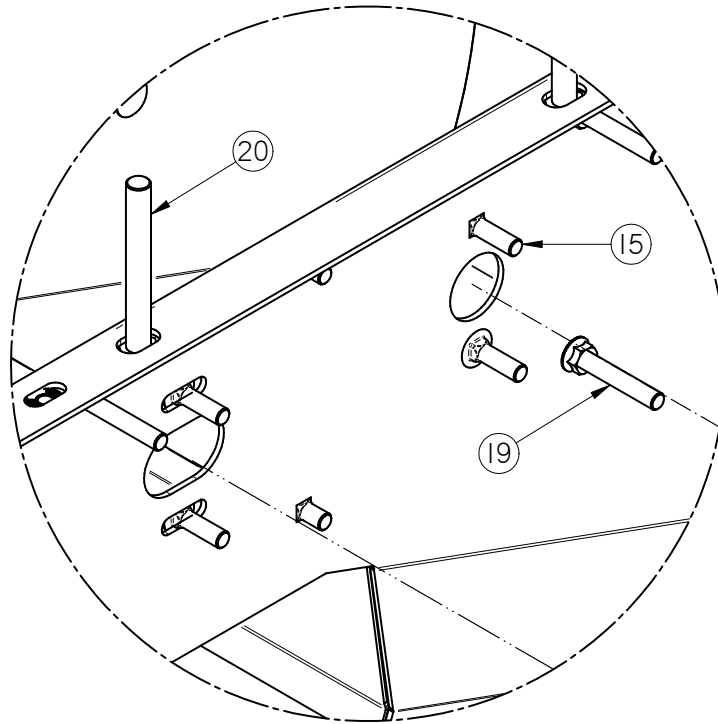
PORTABLE LPX TREATER

**32 FT CONVEYOR HEAD SECTION ASSEMBLY (13-08-0543)**



PORTABLE LPX TREATER

**32 FT CONVEYOR HEAD SECTION ASSEMBLY (13-08-0543)**



DETAIL A

| Item # | Part #     | Description                                | Qty |
|--------|------------|--|-----|
| 1      | 01-03-0042 | BRG FLG MNT 1.000ID 2BOLT ECNTRC           | 4   |
| 2      | 01-08-0109 | PULLEY HEAD VULC TS2500                    | 1   |
| 3      | 05-07-0445 | WDMT ADJ PLT CNVR HEAD SECT                | 1   |
| 4      | 05-08-0414 | WDMT TUBE 8.00IN X 60IN                    | 1   |
| 5      | 05-08-0453 | WDMT DSCGH HD 12IN                         | 1   |
| 6      | 05-08-0501 | WDMT HD TRANS TS25                         | 1   |
| 7      | 05-08-0503 | WDMT TRANS CVR TS25                        | 1   |
| 8      | 05-08-0520 | WDMT HD SPLICE 12IN                        | 1   |
| 9      | 05-08-0541 | WDMT CABLE ANCHOR                          | 2   |
| 10     | 05-10-3947 | PLT BRG ADJ STRIKE                         | 1   |
| 11     | 05-10-4329 | MTR MNT 12IN                               | 1   |
| 12     | 05-10-4360 | FR HEAD SECT PORT 12IN                     | 1   |
| 13     | 06-01-0071 | BOLT .375-16 X 2.50 ZP GR5                 | 2   |
| 14     | 06-01-0122 | BOLT, CARRIAGE, .250-20x.75 G5 ZP          | 3   |
| 15     | 06-01-0127 | BOLT CRG .375-16 X 1.25 ZP GR5             | 8   |
| 16     | 06-01-0138 | BOLT, FLG .3125-18 UNC ZP GRADE 5; 3/4" LG | 8   |



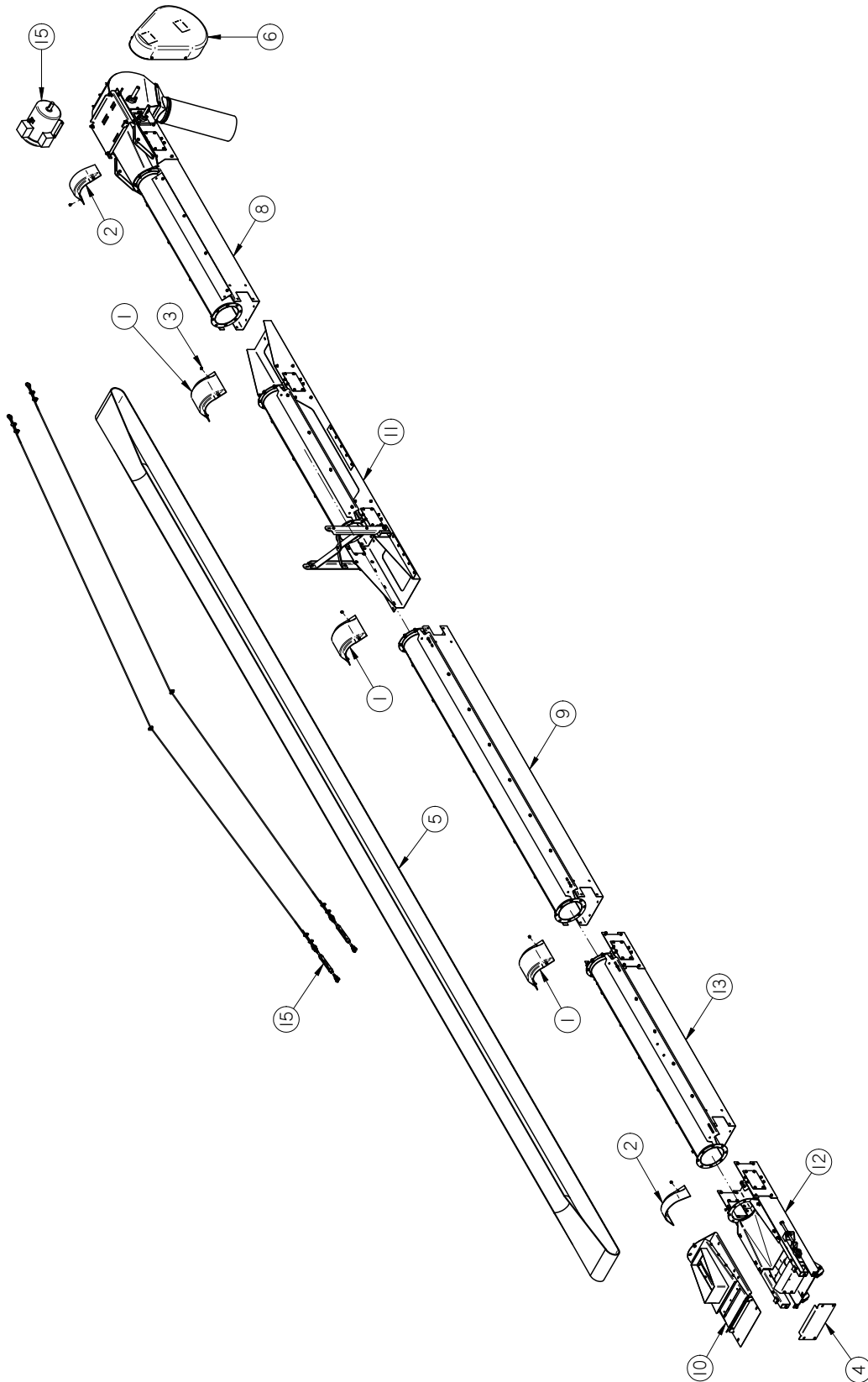
PORTABLE LPX TREATER

**32 FT CONVEYOR HEAD SECTION ASSEMBLY (13-08-0543)**

| Item # | Part #     | Description                           | Qty |
|--------|------------|---------------------------------------|-----|
| 17     | 06-01-0150 | BOLT, CARRIAGE, .250-20x.50 G5 ZP     | 4   |
| 18     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK   | 24  |
| 19     | 06-01-0154 | BOLT CRG .375-16 X 2.50 FTH ZP GR5    | 4   |
| 20     | 06-01-0157 | BOLT, .500-13 X 4" UNC ZP GRADE 5 fth | 4   |
| 21     | 06-01-0261 | BOLT FLG .3125-18 X .500 ZP GR5       | 8   |
| 22     | 06-01-0273 | BOLT FLG .3125-24 X 1.00 ZP GR5       | 4   |
| 23     | 06-02-0003 | NUT FULL .375-16 ZP GR5               | 8   |
| 24     | 06-02-0092 | RIVETNUT .312-18 ZP                   | 8   |
| 25     | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATTED    | 7   |
| 26     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5           | 34  |
| 27     | 06-03-0015 | NUT LOCK FLG .500-13 ZP GR5           | 12  |
| 28     | 06-03-0019 | NUT LOCK FLG .3125-18 ZP GR5          | 3   |
| 29     | 06-04-0003 | WSHR LOCK SPLT .375 ZP                | 8   |
| 30     | 103B39     | PLT SCRAPER HLDR 12IN CNVR            | 1   |
| 31     | 103B9A     | PLT SPLICE COVER                      | 2   |
| 32     | 103C88     | SHAFT JACK-HEAD 12IN CNVR             | 1   |
| 33     | 103DAF     | PLT INSP CVR 12IN DSCHG               | 1   |
| 34     | 104259     | RBBR SCRAPER 12IN FILL                | 1   |
| 35     | 13-05-0227 | ASSY 8ID FLEX SPOUT S2000             | 1   |
| 36     | 280-2-0016 | TRACKING ANGLE WELDMENT               | 1   |
| 37     | 280-3-0112 | BEARING SPACER PLATE                  | 1   |

PORTABLE LPX TREATER

**32 FT OUTLET CONVEYOR ASSEMBLY (17-13-0018)**



PORTABLE LPX TREATER

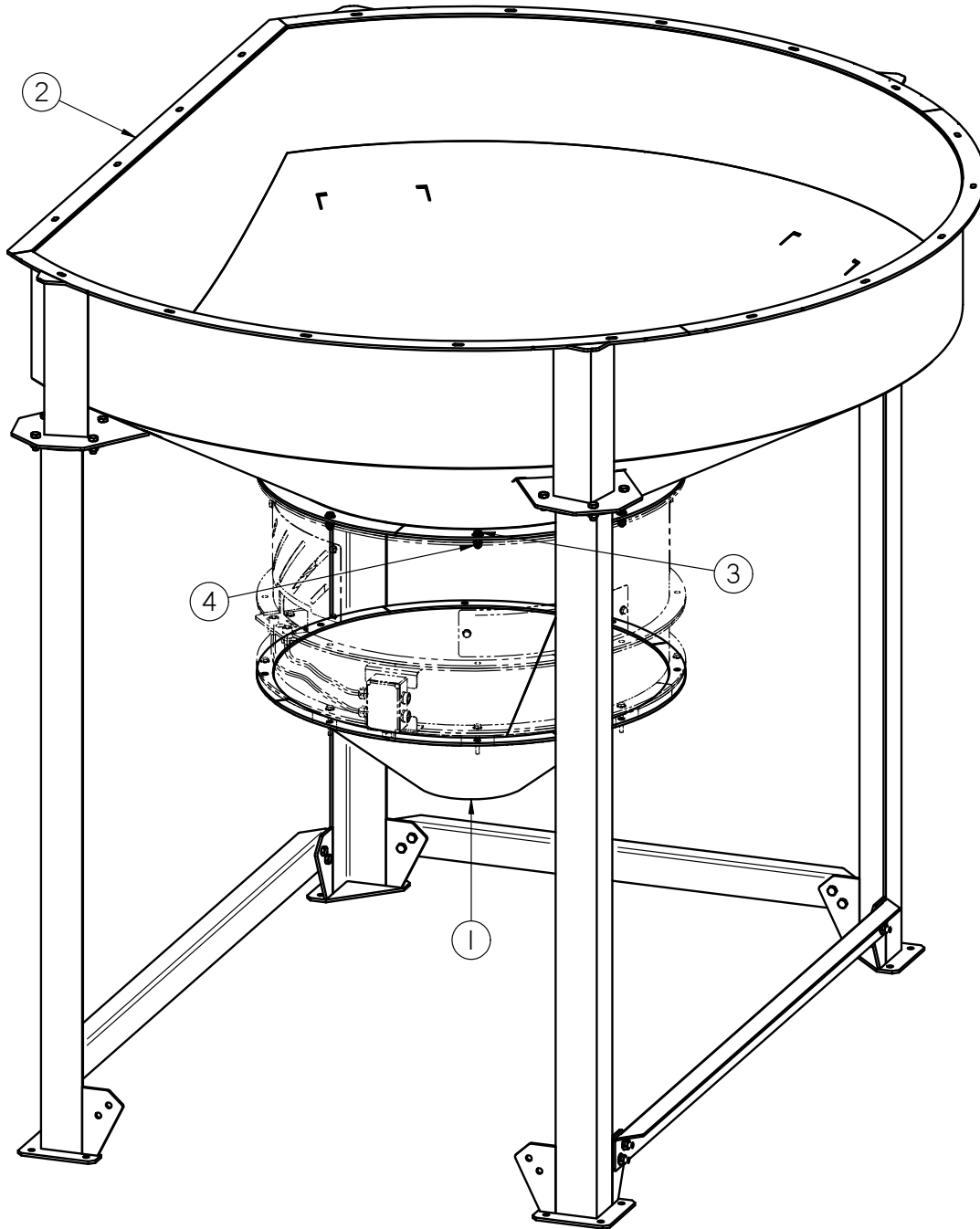
**32 FT OUTLET CONVEYOR ASSEMBLY (17-13-0018)**

| Item # | Part #       | Description                     | Qty |
|--------|--------------|---------------------------------|-----|
| 1      | 05-06-0111   | CVR SPLICE RND CNVR 8IN         | 3   |
| 2      | 05-06-0112   | CVR SPLICE INLET RND CNVR 8IN   | 2   |
| 3      | 06-01-0261   | BOLT FLG .3125-18 X .500 ZP GR5 | 16  |
| 4      | 103B89       | PLT REAR CVR                    | 1   |
| 5      | 11-02-0138   | BELT CNVR CLTS 3212 PORT        | 1   |
| 6      | 13-05-0210   | KIT DRV 5HP CONVEYOR            | 1   |
| 7      | 13-05-0353   | DECAL PKG TS CNVRS              | 1   |
| 8      | 13-08-0543   | ASSY HEAD SECT 8IN PORT         | 1   |
| 9      | 13-08-0544   | ASSY MID SECT 10FT              | 1   |
| 10     | 13-08-0545-B | ASSY INLET TS25 PORT            | 1   |
| 11     | 13-08-0549   | ASSY MID SECT 5FT REINF         | 1   |
| 12     | 13-08-0553   | ASSY INLET SECT PORT            | 1   |
| 13     | 13-08-0555   | ASSY INLET EXT PORT             | 1   |
| 14     | 13-08-0642   | ASSY CABLE KIT TS2532 PORT      | 1   |
| 15     | SEE TABLE 1  | CONVEYOR MOTOR                  | 1   |

TABLE 1

| Conveyor Part # | Motor Part # | Conveyor Description                    |
|-----------------|--------------|---|
| 17-13-0018      | 01-01-0107   | PORTABLE TREATER CONVEYOR 32FT 230V 1PH |
| 17-13-0019      | 01-01-0151   | PORTABLE TREATER CONVEYOR 32FT 230V 3PH |
| 17-13-0021      | 01-01-0209   | PORTABLE TREATER CONVEYOR 32FT 460V 3PH |
| 17-13-0023      | 01-01-0143   | PORTABLE TREATER CONVEYOR 32FT 575V 3PH |

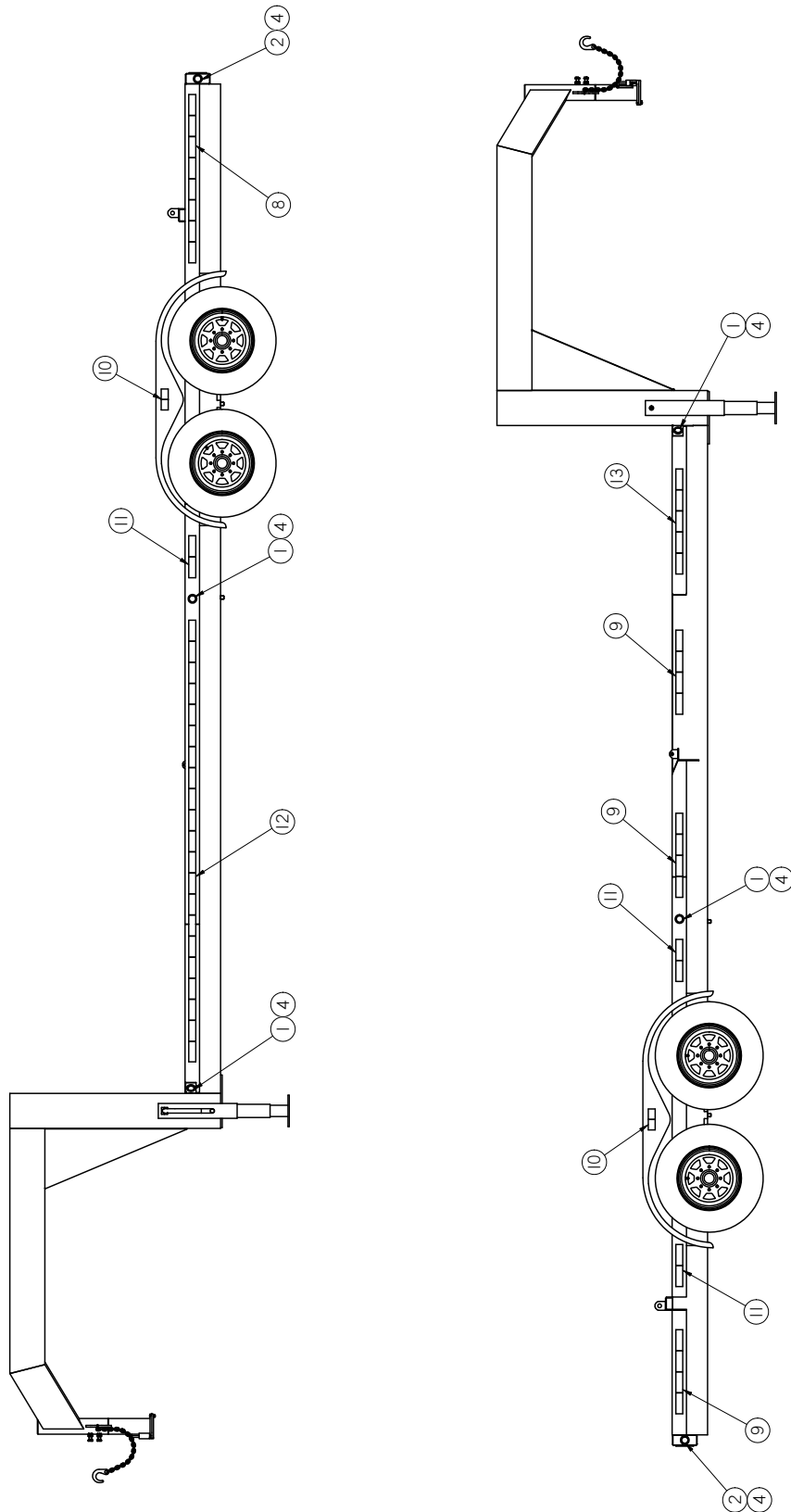
PORTABLE LPX TREATER  
**FILL HOPPER ASSEMBLY (13-04-0127)**



| Item # | Part #     | Description                     | Qty |
|--------|------------|---------------------------------|-----|
| 1      | 05-03-0282 | WDMT HOPP SMW DSCHG             | 1   |
| 2      | 05-07-0080 | HOPP S2000 PORT FOR SMW         | 1   |
| 3      | 06-01-0189 | BOLT FLG .375-16 X 1.250 ZP GR5 | 8   |
| 4      | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5     | 8   |

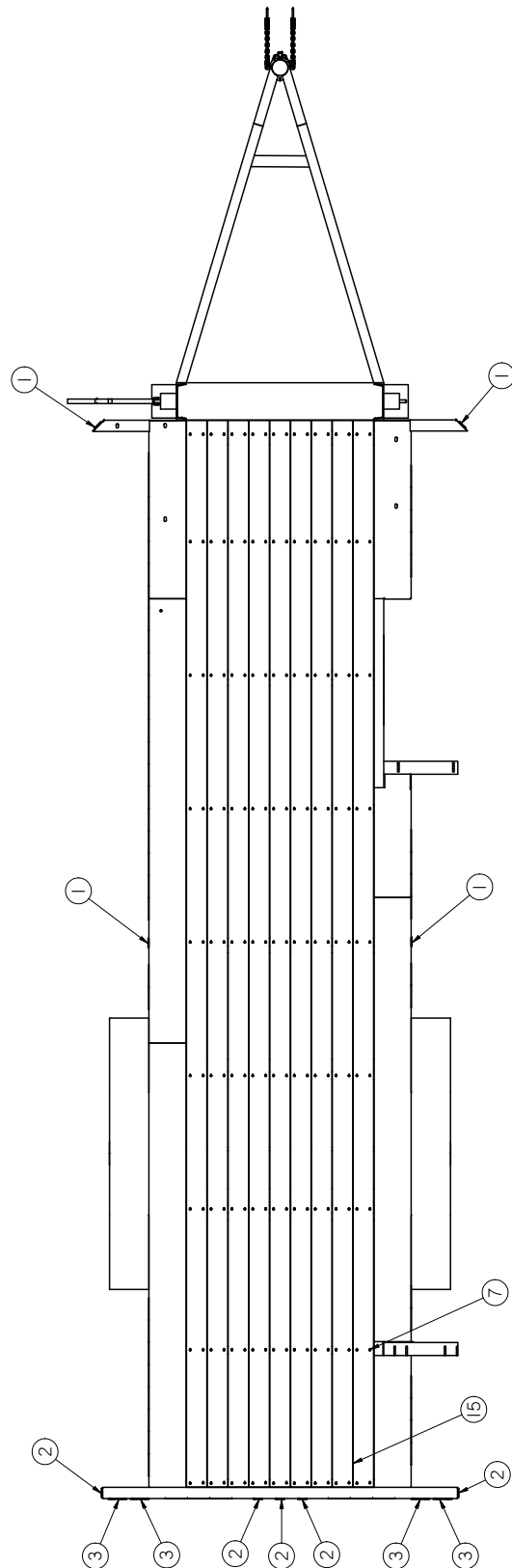
PORTABLE LPX TREATER

**PORTABLE TRAILER COMPONENTS KIT (13-05-0356)**



PORTABLE LPX TREATER

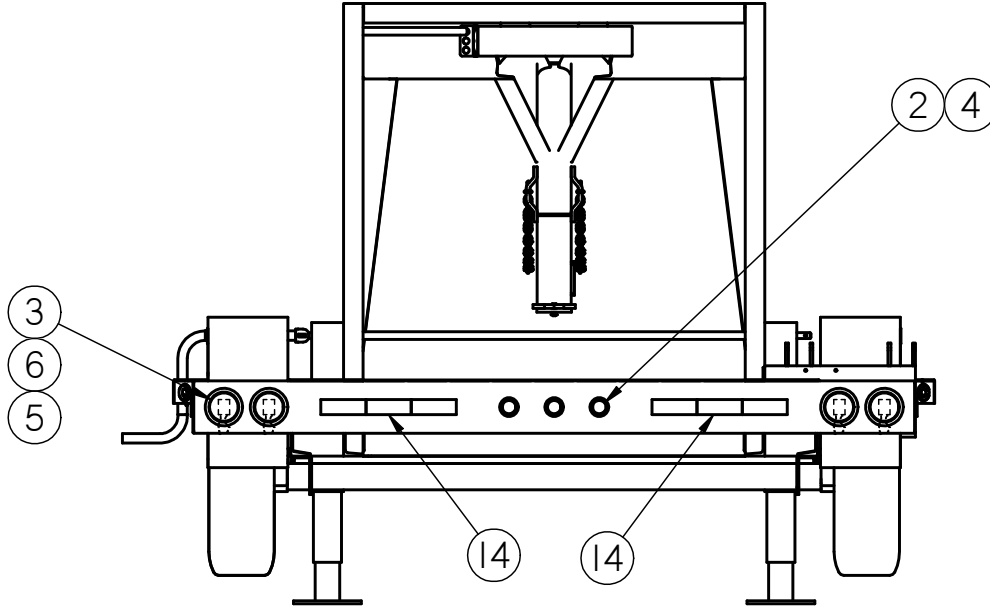
**PORTABLE TRAILER COMPONENTS KIT (13-05-0356)**





PORTABLE LPX TREATER

**PORTABLE TRAILER COMPONENTS KIT (13-05-0356)**

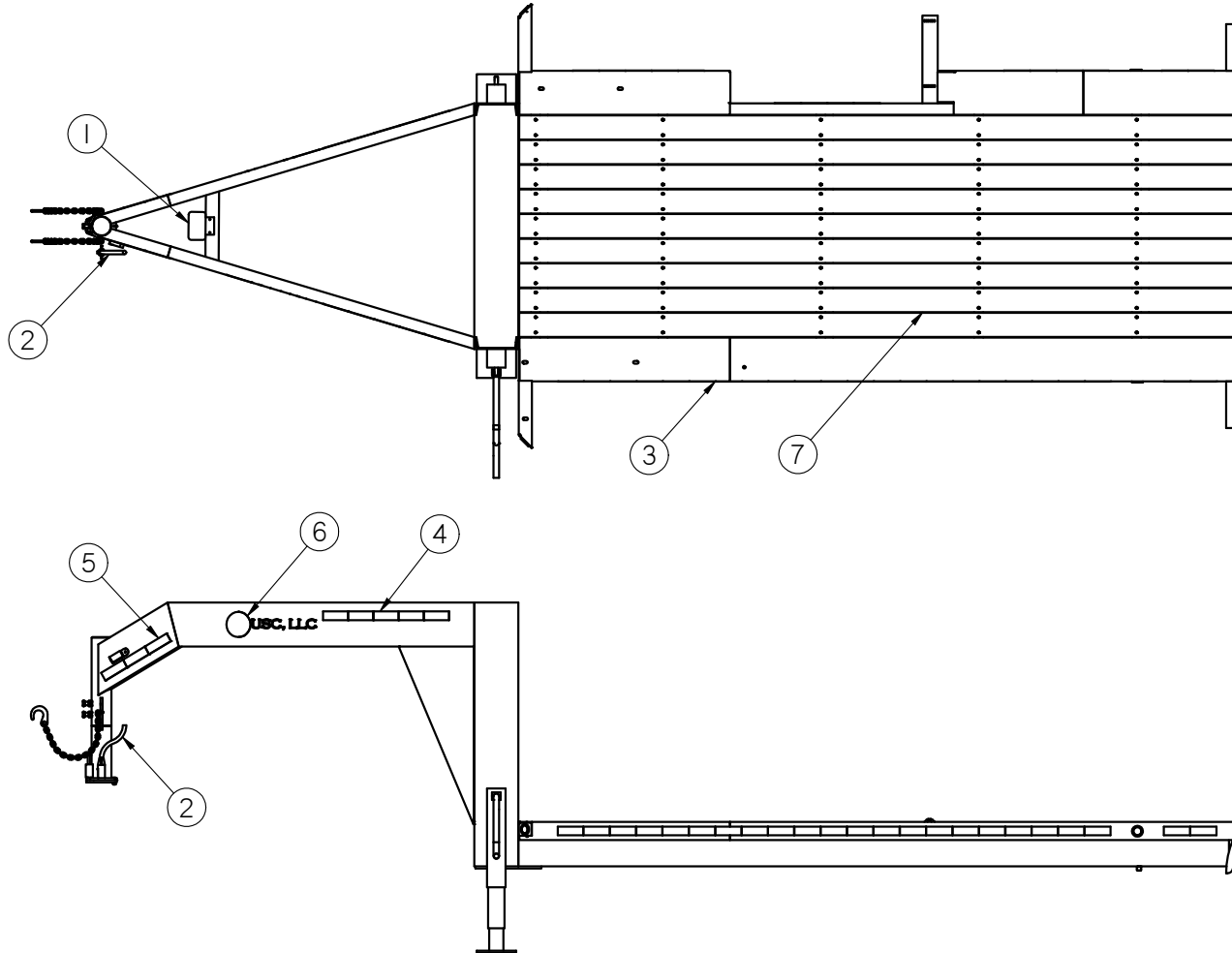


All components are the same for gooseneck and bumper style trailers.

| Item # | Part #     | Description                             | Qty |
|--------|------------|---|-----|
| 1      | 03-10-0013 | 2" dia amber light                      | 4   |
| 2      | 03-10-0014 | 2" dia red light                        | 5   |
| 3      | 03-10-0015 | TRLR LGHT BRAKE RND RED 4.00IN LED      | 4   |
| 4      | 03-14-0005 | TRLR LGHT GRMT AND PGTL*                | 9   |
| 5      | 03-14-0006 | TRLR LGHT PGTL FOR 4.00IN RND LED       | 4   |
| 6      | 03-14-0007 | TRLT LGHT GRMT RBBR FOR 4.00 RND        | 4   |
| 7      | 06-06-0001 | SCREW,SELF DRILLING REAMER, 1/4-20 X 3" | 162 |
| 8      | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 1   |
| 9      | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 3   |
| 10     | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 2   |
| 11     | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 3   |
| 12     | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 1   |
| 13     | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 1   |
| 14     | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE      | 2   |
| 15     | 11-01-0004 | LUMB TRTD CCA 2.00 X 6.00 X 24FT        | 9   |

PORTABLE LPX TREATER

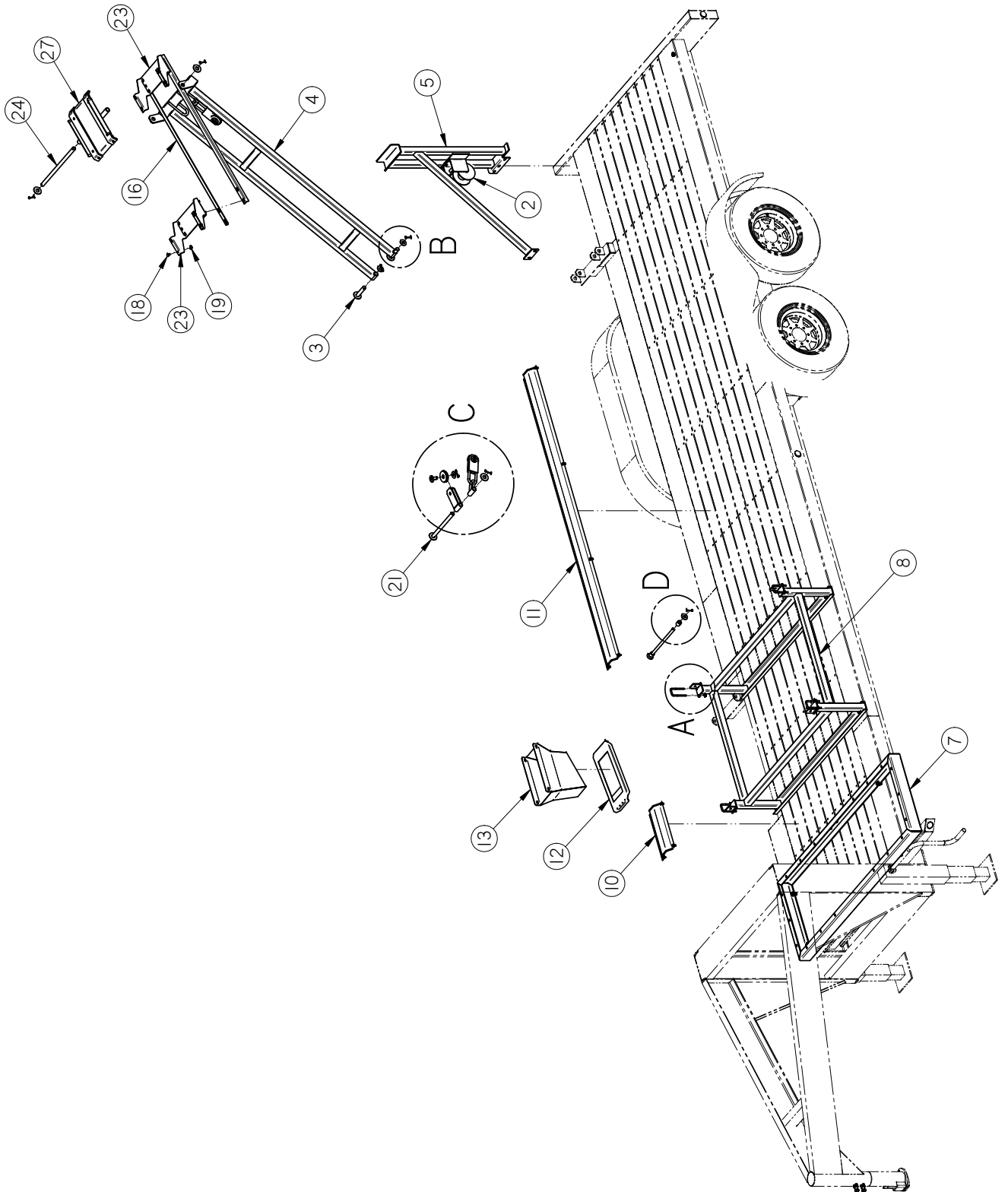
**PORTABLE GOOSENECK TRAILER COMPLETE (12-02-0012)**



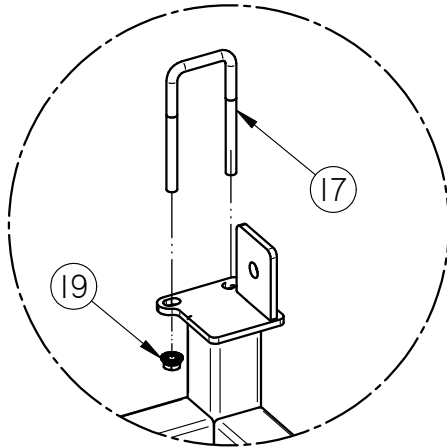
| Item # | Part #     | Description                        | Qty |
|--------|------------|------------------------------------|-----|
| 1      | 03-14-0002 | TRAILER BREAK AWAY CONTROL BOX     | 1   |
| 2      | 03-14-0008 | TRLR CORD 8FT WITH 7 POLE PLUG     | 1   |
| 3      | 05-03-1484 | WDMT 24FT GN TRLR FRAME            | 1   |
| 4      | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE | 2   |
| 5      | 09-01-0012 | TRLR TAPE REFLECTIVE RED AND WHITE | 2   |
| 6      | 09-01-0043 | ATWL LBL USC, LLC 6" X 19" PRO-CUT | 2   |
| 7      | 13-05-0356 | KIT PORT TRLR COMPONENTS USC TRLR  | 1   |

PORTABLE LPX TREATER

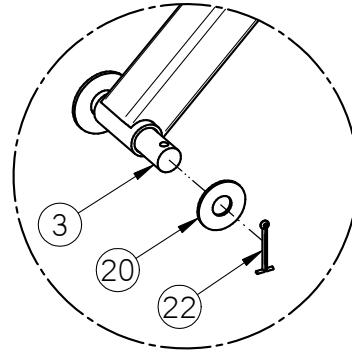
**PORTABLE TREATER COMPONENTS KIT (13-05-0384)**



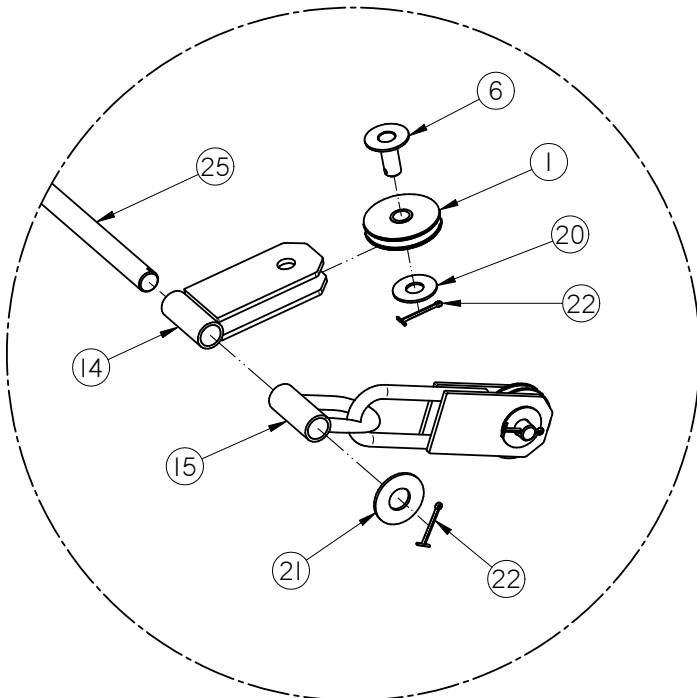
**PORTABLE TREATER COMPONENTS KIT (13-05-0384)**



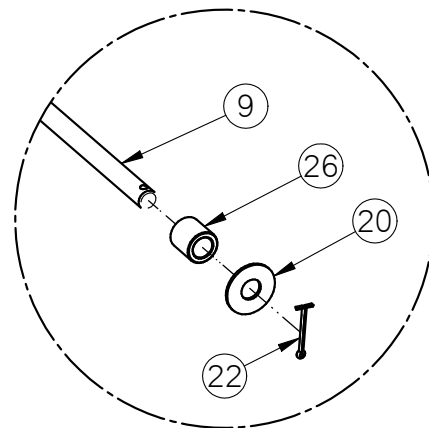
DETAIL A



DETAIL B



DETAIL C



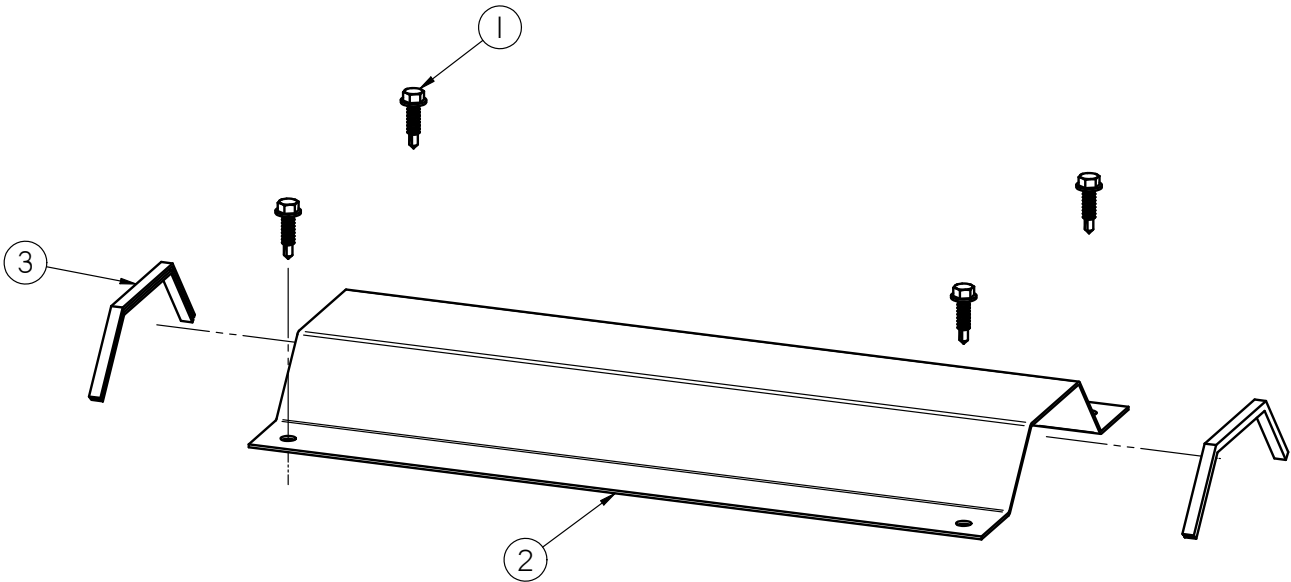
DETAIL D

PORTABLE LPX TREATER

**PORTABLE TREATER COMPONENTS KIT (13-05-0384)**

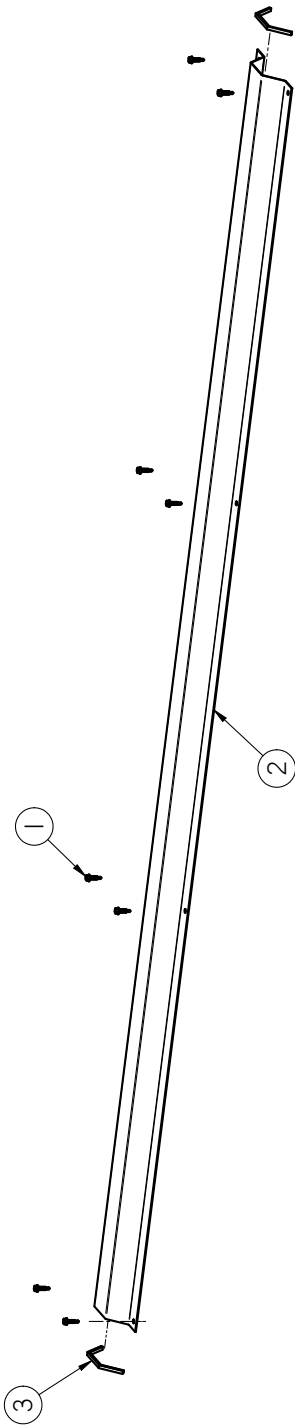
| Item # | Part #     | Description                              | Qty |
|--------|------------|--|-----|
| 1      | 01-02-0074 | PLY WIRE ROPE 3 IN DIA                   | 3   |
| 2      | 01-08-0017 | HAND WINCH 1500#                         | 1   |
| 3      | 05-03-0042 | WDMT REAR PIVOT ROD 13-5-75 KIT          | 2   |
| 4      | 05-03-0331 | WDMT CNVR LIFT FR S2000 PORT 13-5-75 KIT | 1   |
| 5      | 05-03-0332 | WDMT CNVR SUPP FR                        | 1   |
| 6      | 05-03-0942 | WDMT PIN SHV BRKT                        | 3   |
| 7      | 05-03-1161 | WDMT PORT TRTR PUMP MNT                  | 1   |
| 8      | 05-03-1583 | WDMT TRTR SUPP FRM TS25 PORT             | 1   |
| 9      | 05-04-0016 | WDMT,FRONT CONVEYOR PIVOT ROD            | 2   |
| 10     | 05-06-0109 | ASSY CVR WIRE/HOSE GRD                   | 1   |
| 11     | 05-06-0110 | ASSY CVR WIRE/HOSE GRD                   | 1   |
| 12     | 05-07-0323 | ASSY PORT TRANS CHUTE SEAL               | 1   |
| 13     | 05-07-0816 | WDMT DSCHG CHUTE EXT TS25 PORT           | 1   |
| 14     | 05-08-0069 | WDMT CABLE SHEAVE BRKT PORT S2000        | 1   |
| 15     | 05-08-0070 | WDMT CABLE SHV FLX BRKT PORT S2000       | 1   |
| 16     | 05-10-4101 | TRANSPORT SLIDE TRAP 54IN                | 2   |
| 17     | 06-01-0111 | BOLT U .375-16 X 2.00 X 4.625 ZP         | 4   |
| 18     | 06-01-0153 | BOLT CRG .375-16X.750 ZP SHORT NECK      | 16  |
| 19     | 06-03-0014 | NUT LOCK FLG .375-16 ZP GR5              | 26  |
| 20     | 06-05-0007 | WASHER, .750 FLAT ZP                     | 7   |
| 21     | 06-05-0010 | WASHER, 1.00 FLAT ZP                     | 4   |
| 22     | 06-09-0023 | .188 X 2.00 ZP COTTER PIN                | 11  |
| 23     | 103C36     | TRANSPORT SLIDE STOP 12IN                | 2   |
| 24     | 104040     | PIN SLIDE TS25 PORT                      | 1   |
| 25     | 104041     | PIN CABLE TS25 PORT                      | 1   |
| 26     | 1045E0     | SPACER OUTLET CNVR TS25 PORT             | 2   |
| 27     | 13-08-0535 | ASSY TRANSPORT SLIDE 12IN                | 1   |

PORTABLE LPX TREATER  
**WIRE & HOSE GUARD (05-06-0109)**



| Item # | Part #     | Description                     | Qty |
|--------|------------|---------------------------------|-----|
| 1      | 06-06-0037 | SCRW SDST .250-14 X 1.000 HH ZP | 4   |
| 2      | 103CB1     | CVR WIRE/HOSE GRD               | 1   |
| 3      | 103CE5     | EDGE GRD                        | 2   |

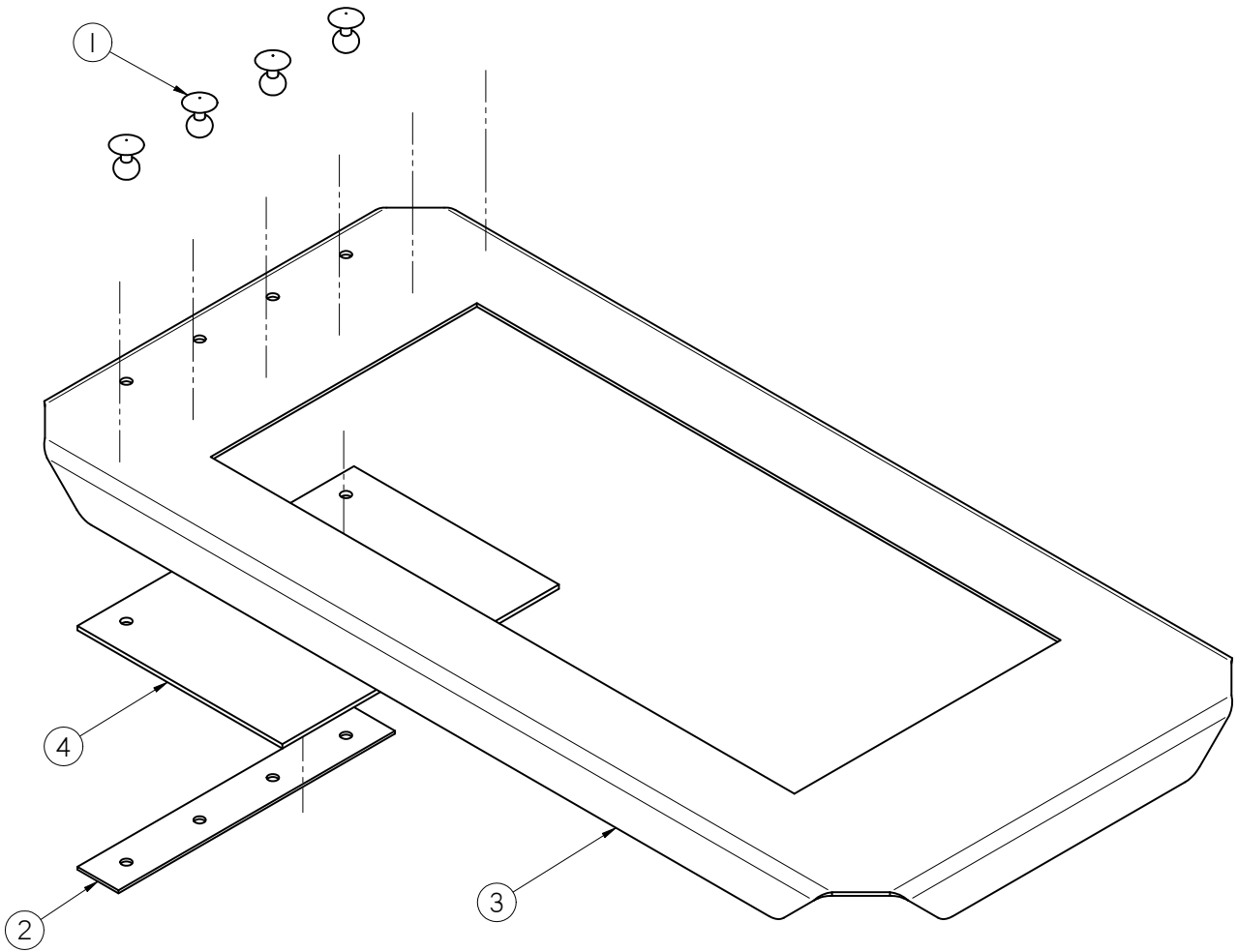
PORTABLE LPX TREATER  
**WIRE & HOSE GUARD (05-06-0110)**



| Item # | Part #     | Description                     | Qty |
|--------|------------|---------------------------------|-----|
| 1      | 06-06-0037 | SCRW SDST .250-14 X 1.000 HH ZP | 8   |
| 2      | 103CB2     | CVR WIRE/HOSE GRD               | 1   |
| 3      | 103CE5     | EDGE GRD                        | 2   |

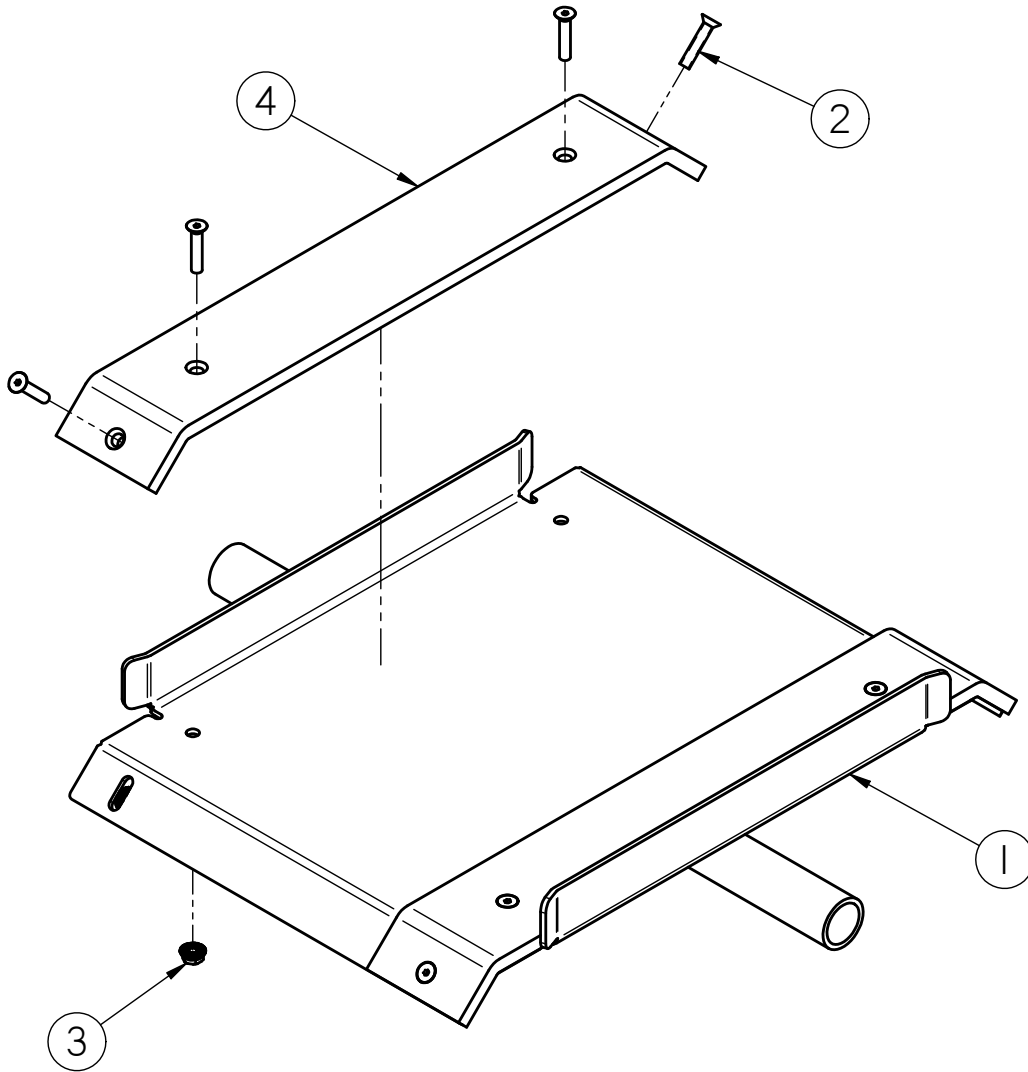


PORTABLE LPX TREATER  
**DISCHARGE CHUTE SEAL (05-07-0323)**



| Item # | Part #     | Description                         | Qty |
|--------|------------|-------------------------------------|-----|
| 1      | 06-12-0022 | RIVET POP .188 X .312 GRIP SS .65HD | 4   |
| 2      | 101BB0     | CLAMP SEAL PORT TRANS CHUTE         | 1   |
| 3      | 103A4A     | PLT CVR SEAL INLET PORT CNVR S2000  | 1   |
| 4      | 103A4B     | SEAL PORT TRANS CHUTE               | 1   |

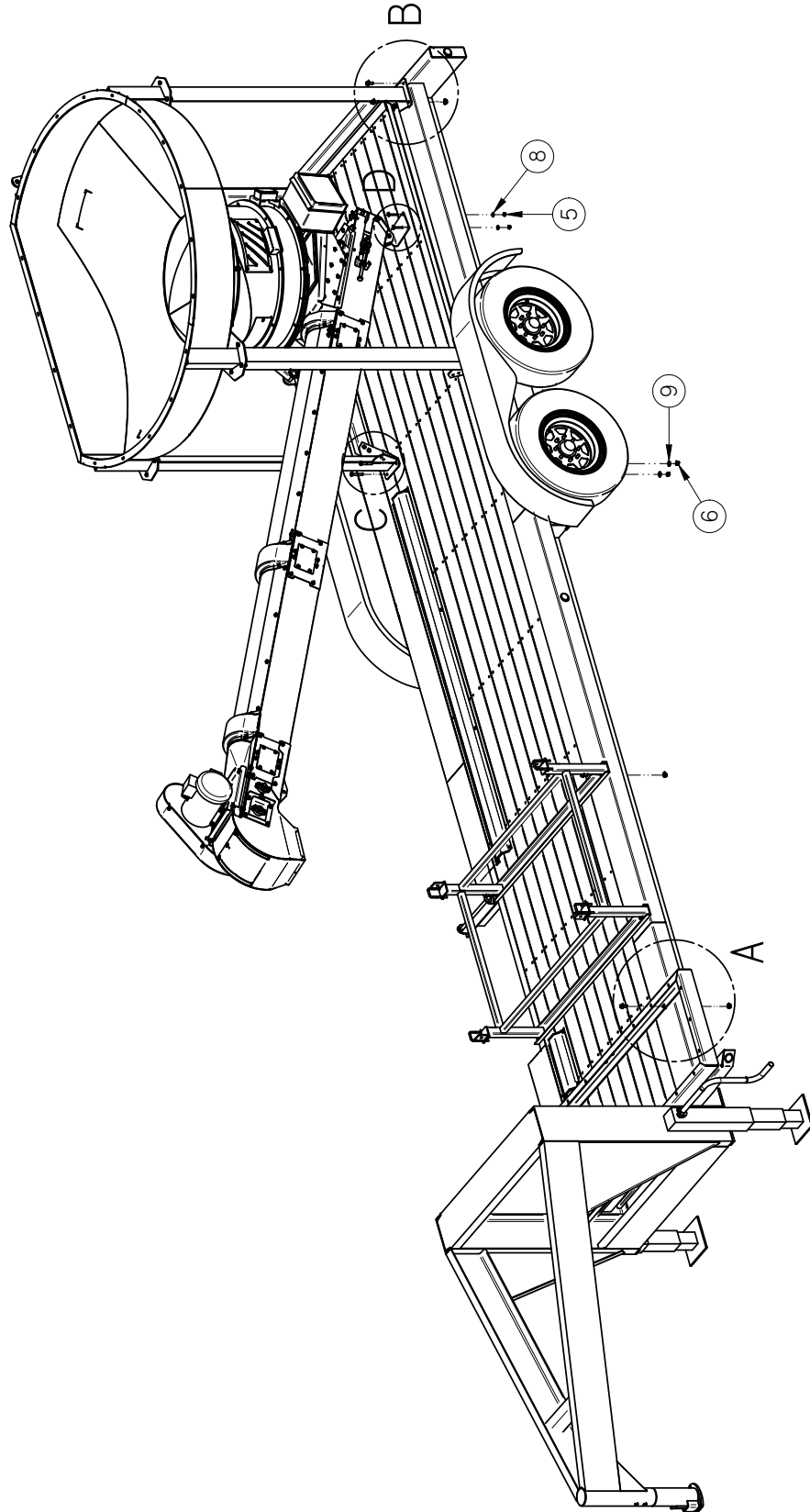
PORTABLE LPX TREATER  
**OUTLET CONVEYOR SLIDE (13-08-0535)**



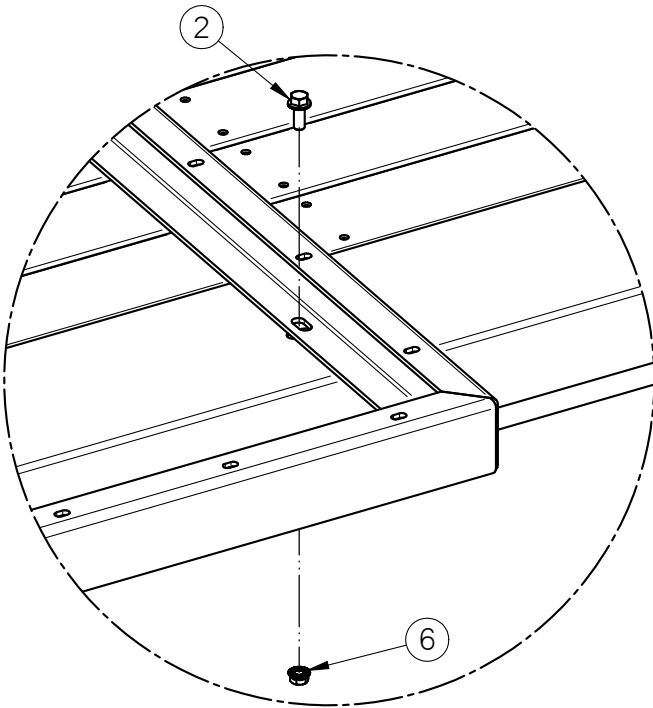
| Item # | Part #     | Description                       | Qty |
|--------|------------|-----------------------------------|-----|
| 1      | 05-08-0455 | WDMT TRANS SLIDE 12IN             | 1   |
| 2      | 06-01-0155 | SCRW MACH .250-20 X 1.25 SH FLHD  | 8   |
| 3      | 06-03-0013 | NUT,LOCK, FLG .250-20 ZP SERRATED | 8   |
| 4      | 280-3-0038 | PLASTIC SLIDE                     | 2   |

PORTABLE LPX TREATER

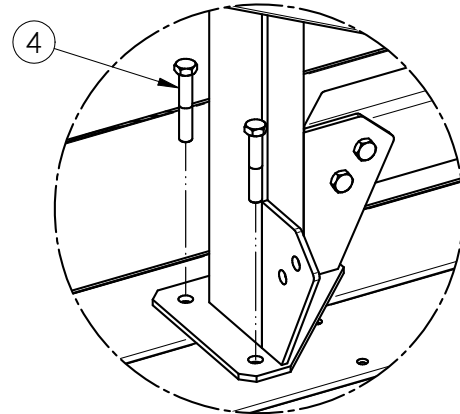
**PORTABLE TREATER HARDWARE KIT (13-10-0043)**



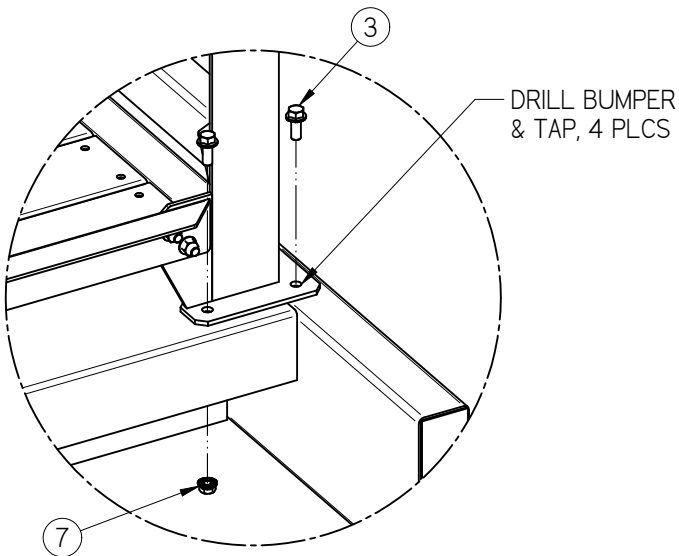
**PORTABLE TREATER HARDWARE KIT (13-10-0043)**



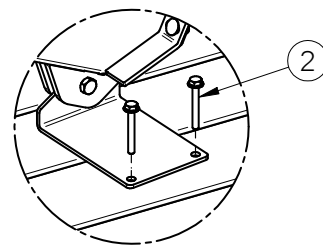
DETAIL A



DETAIL C



DETAIL B



DETAIL D

PORTABLE LPX TREATER

**PORTABLE TREATER HARDWARE KIT (13-10-0043)**

| Item # | Part #     | Description                        | Qty |
|--------|------------|------------------------------------|-----|
| 1      | 01-04-0031 | WIRE ROPE .250 DIA X 456 IN        | 1   |
| 2      | 06-01-0204 | BOLT FLG .375-16 X 2.50 ZP GR5 FTH | 4   |
| 3      | 06-01-0232 | BOLT FLG .500-13 X 1.250 ZP GR5    | 16  |
| 4      | 06-01-0252 | BOLT .500-13 X 3.00 ZP GR5         | 4   |
| 5      | 06-03-0003 | NUT NYL LOCK .375-16 ZP GR5        | 4   |
| 6      | 06-03-0004 | NUT NYL LOCK .500-13 ZP GR5        | 4   |
| 7      | 06-03-0015 | NUT LOCK FLG .500-13 ZP GR5        | 11  |
| 8      | 06-05-0004 | WSHR FLAT .375 ZP                  | 4   |
| 9      | 06-05-0005 | WSHR FLAT .500 ZP                  | 4   |

The following parts are not shown on the face of the drawing.

| Part #     | Description                         | Qty |
|------------|-------------------------------------|-----|
| 03-09-0026 | CBL TIE PAD .250 BOLT ON            | 1   |
| 06-06-0091 | SCRW SDST 10-16 X .750 HH CASE HARD | 4   |
| 06-07-0001 | CLIP .25 WIRE ROPE                  | 2   |
| 06-07-0023 | THIMBLE .250 WIRE ROPE HD           | 1   |

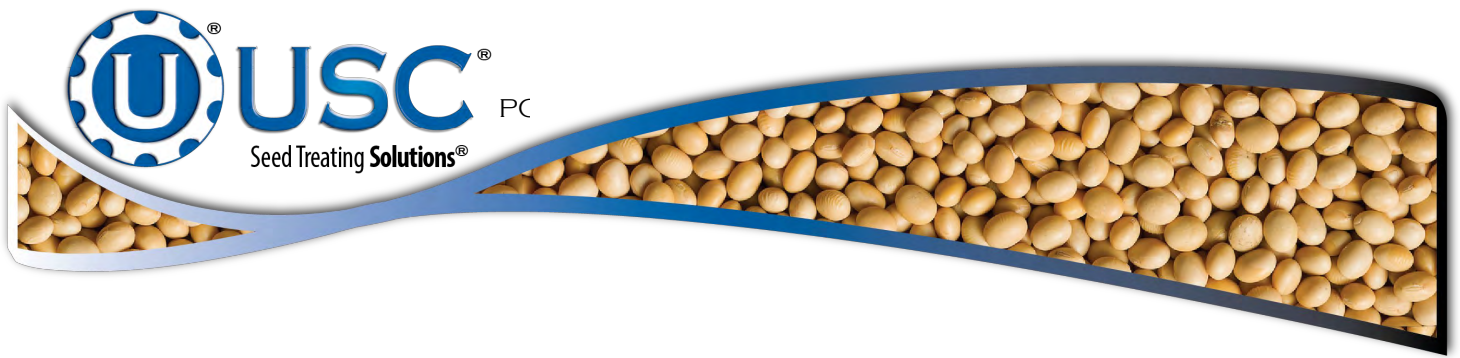
**USC LIMITED WARRANTY****SECTION  
J**

USC, LLC, (Manufacturer) warrants its seed treating equipment as follows:

1. **Limited Warranty:** Manufacturer warrants that the Products sold hereunder will be free from defects in material and workmanship for a period of 18 months from date of shipment. If the Products do not conform to this Limited Warranty during the warranty period, Buyer shall notify Manufacturer in writing of the claimed defects and demonstrate to Manufacturer satisfaction that said defects are covered by this Limited Warranty. If the defects are properly reported to Manufacturer within the warranty period, and the defects are of such type and nature as to be covered by this warranty, Manufacturer shall, at its expense, furnish replacement Products or, at Manufacturer's option, replacement parts for the defective products. Shipping and installation of the replacement Products or replacement parts shall be at the Buyer's expense.
2. **Other Limits:** THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Manufacturer does not warrant against damages or defects arising from improper installation (where installation is by persons other than Manufacturer), against defects in products or components not manufactured by Manufacturer, or against damages resulting from such non-Manufacturer made products or components. Manufacturer passes on to the Buyer the warranty it received (if any) from the maker of such non-Manufacturer made products or components. This warranty also does not apply to Products upon which repairs and / or modifications have been effected or attempted by persons other than pursuant to written authorization by Manufacturer. This includes any welding on equipment which could damage electrical components. Manufacturer does not warrant against casualties or damages resulting from misuse and / or abuse of Products, improper storage or handling, acts of nature, effects of weather, including effects of weather due to outside storage, accidents, or damages incurred during transportation by common carrier.
3. **Exclusive Obligation:** THIS WARRANTY IS EXCLUSIVE. The sole and exclusive obligation of Manufacturer shall be to repair or replace the defective Products in the manner and for the period provided above. Manufacturer shall not have any other obligation with respect to the Products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Limited Warranty or otherwise, shall Manufacturer be liable for lost profits, lost revenue, lost sales (whether direct or indirect damages), incidental, special, punitive, indirect or consequential damages.
4. **Other Statements:** Manufacturer's employees or representatives' oral or other written statements do not constitute warranties, shall not be relied upon by Buyer, and are not a part of the contract for sale or this limited warranty.
5. **Return Policy:** Approval is required prior to returning goods to Manufacturer. A restocking fee will apply.
6. **Entire Obligation:** This Limited Warranty states the entire obligation of Manufacturer with respect to the Products. If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

US / Canada Non-Exclusive 2016





**USC, LLC**

2320 124th road

Sabetha, KS 66534

PHONE: (785) 431-7900

FAX: (785) 431-7950

EMAIL: [sales-team@uscllc.com](mailto:sales-team@uscllc.com)

WEB: [www.uscllc.com](http://www.uscllc.com)

