

UNDERBIN CONVEYOR



Operators Manual

Document: TD-09-06-1023

Revision: A



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 Underbin Conveyor. It does not hold USC, LLC liable for any accidents or injuries that may occur.

The technical information provided in this document is based on extensive testing under controlled conditions at the USC research and development facility. This information is given without guarantee as the conditions of operation and storage of the equipment are beyond our control. Variables such as temperature, humidity, viscosity of chemical products and changes in seed size or variety may all effect the accuracy of application and seed coverage. Periodically check the equipment calibration while treating and make adjustments as required. This will insure the optimum seed coverage.

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.

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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.

- Disconnect, lockout, and tagout electrical and all other energy sources before inspecting, cleaning, servicing, repairing, or any other activity that would expose you to the hazards of electrical shock.
- 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.
- 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 machine for future reference. The serialization label is located on the head assembly of the conveyor near the belt drive cover.



SERIAL NUMBER: _____

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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.”

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.

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.

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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.



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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.

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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.



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.

UNDERBIN CONVEYOR

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 # 09-02-0010



Part # 09-02-0009



Part # 09-02-0012

UNBERBIN CONVEYOR



Part # 09-02-0007



Part # 09-02-0006



Part # 09-02-0011

UNDERBIN CONVEYOR



Part # 09-02-0001



Part # 09-02-0002



Part # 09-02-0011



INSTALLATION**SECTION
B**

Be sure to use safe working habits when installing your equipment. Installation of the underbin conveyor requires physical strength and strain, make sure you are in healthy physical condition. USC is not liable for any injuries that occur while installing.



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.

Tools Required for Installation

1. 7/16", 1/2", 9/16", 15/16" and 1-1/8" wrenches and or ratchets.
2. Gloves and knee pads are an extra comfort.
3. Safety Glasses.
4. Floor jacks or some form of lifting devise, to set under-bin.
5. Tape measure.
6. Forklift, if at all possible to move equipment for easier install
7. Drill for self tapping screws.
8. Grinder with cut off discs.
9. Silicone gun.
10. Knife.
11. Vise Grips.
12. Pliers.
13. Alignment Bars.

UNDERBIN INSTALLATION

1. If not already completed, align and anchor bins.
2. Install the under-bin conveyor bin transition gate(s). Set the transition gate(s) so that the cylinder is under the bin gate. **Be sure to level the bin gate in.** Set the transition gate(s) to where it is even on all sides and secure with supplied hardware.
3. Now you can start installing you underbin conveyor. Start by laying out the conveyor underneath the bins. The discharge end (10' head section) has the motor and the 10' tail section has two brackets on each side for belt tensioning and alignment purposes. The rest of the conveyor is in 10', 7.5', 5' or even 2.5' sections. Lay out the rest as shown in the prints.
4. After the entire conveyor is laid out go through and remove all lids and valley pans on every body section and place them off to the side. Try to keep the sections together and remember their placement. Some bolt holes only line on certain sections. This portion will require a 9/16 wrench or ratchet.
5. After all lids have been removed, it is advantageous to have each section up off the ground. Lay a 2x4 on edge and set the conveyor on it. Now go through and remove all bolts from the splice sections. There will be a total of 8-3/8"x 1" crg bolts on the sides and 2-1/4"x 3/4" crg bolts on the bottom to remove per section. This portion requires a 9/16 and a 7/16 wrench or ratchet.
6. Begin bolting the conveyor together. Start with the tail section and work your way down the conveyor. Each conveyor section should line up smooth and flush where each galvanized portion meets. **They do not overlap at all.** A pair of vise grip pliers may be helpful during this process. Tighten the bolts starting with the 1/4" bolts on bottom. Then secure the rest.
7. Continue instruction set 6 until all sections, including the head section, are bolted together.
8. Now you should have a long conveyor body lying underneath the bins. At this point, place lifting devise under the body sections. Floor or transmission jacks will work. Be sure NOT to bend the conveyor body.
9. Next, install the belt. This is a crescent belt (little C shape cups). The C's cup open to the head sections of the conveyor. Start with the return side of the belt, starting from the tail section and pull to the head section. Pull the belt up and around the head section drive pulley with about 2 ft of play. Then, lay all the valley pans in their correct locations. **Don't forget the belt transition plate at the tail section.** Lay the rest of the belt on the valley pan. Splice the belt.

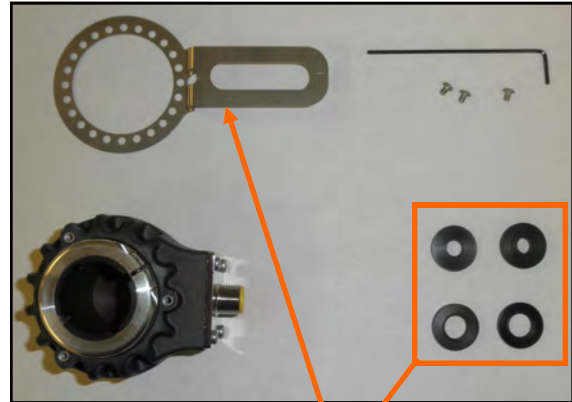
UNDERBIN INSTALLATION

10. Attach all of the conveyor lids. There will be a splice cover for every section of conveyor. Before bolting, silicone under each splice cover and secure bolts. **Make sure conveyor is square and is as level as possible before bolts are secured.**
11. You should now have an assembled under-bin conveyor.
12. Align under-bin from measurements on prints. Normally a measurement from the 16" step down to the end of the discharge chute is indicated.
13. Now you are ready to cut the transition holes. Raise the underbin conveyor till it is touching the bin transition gates. Center the under-bin on the first bin gate and the last. Mark the under-bin lids around each gate. Drop the under-bin enough to cut the holes. Use a straight edge and mark a section one half inch bigger than the marks you made. An angle grinder will work for this; just be aware of the belt and take care not to damage it during this process.
14. Now you are ready to set the underbin conveyor. Clean all metal shavings from surface and place the bin transition plates on the underbin conveyor and rise to the height indicated on the prints.
15. Install stands evenly. Start with one stand close to the discharge end and one close to the tail section. Evenly space the rest. This will require a 1 1/8" wrench.
16. After all stands are set in place, anchor the stands
17. Tighten the belt. Normally there will be no power to the under-bin at this point so use a tape measure and evenly tighten the belt. This is a new belt and will stretch some.
18. If the underbin has the reversing option, remove the standard non-reversing plate underneath tail section of under-bin. Install the funnel brackets on the inside of the tail section. These are pre-drilled on each pulley bracket. Install the reversing chute and new tail section plate.
19. Silicone around each transition gate and your install should be complete!

UNDERBIN ENCODER INSTALLATION

NOTE: Underbin Encoders are only used on USC automated bin site systems. Disregard this section if the conveyor is being used otherwise.

1. The purpose of the underbin encoder is to count the rotation of the non drive roller to assure the belt is not slipping. This helps increase calibration accuracy for the bin site automation software as well as increase the life of the belt.
2. Open the box containing the encoder and you will see the parts in the picture (right, top). You will only need the encoder, three small screws and the allen wrench provided.
3. The encoder may be mounted on either side of the belt roller shaft. Decide which side will provide the best routing for the cable to the bin site control panel and remove the cover (right, middle).
4. Remove the encoder mounting bracket (bottom, left) and attach it to the encoder using the three screws. It should rotate freely. Slide the encoder over the end of the shaft and re-secure the mounting bracket. Tighten the allen bolt on the encoder mounting collar to secure it to the roller shaft. Connect the encoder cable and replace the cover



Discard

Cover

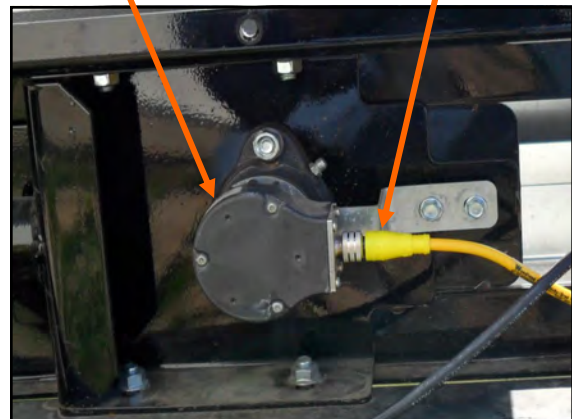


Encoder Mounting Bracket



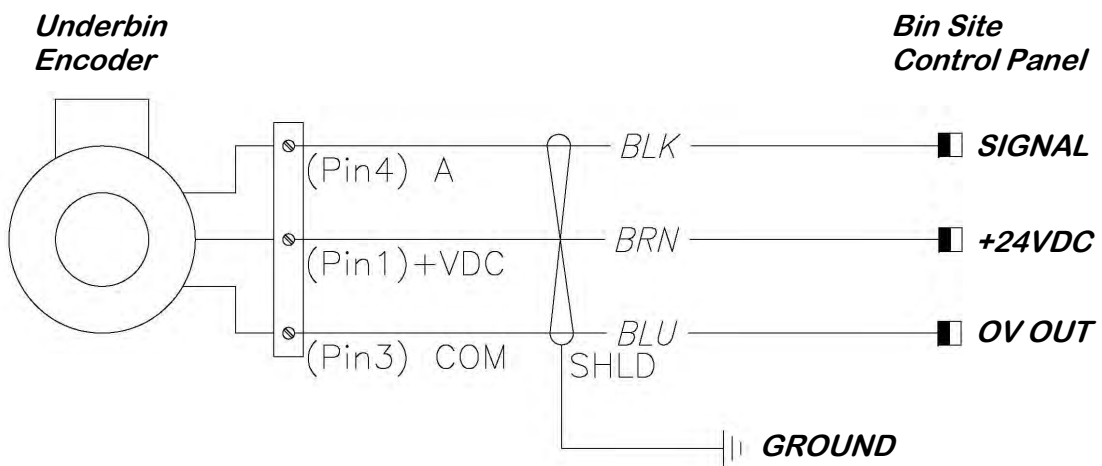
Encoder

Encoder Cable



UNDERBIN ENCODER WIRING

1. Below is an example of the encoder schematic. This schematic will be located on the last page of your bin site schematic pack. **THIS IS ONLY AN EXAMPLE.**
2. The yellow cable that is attached to the encoder has 5 stranded wires coming out of it. As the schematic shows below, the **Brown, Blue, Black and Shield** wires from the yellow cable will be used. Cap off the other wire that is not being used.





OPERATING SAFETY

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Read and understand the Operator's Manual and all safety signs before using. 2. Electric motor drives: 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 machine hazard area. If anyone enters hazard areas, 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. Do not allow riders on the Conveyor or transport vehicle when transporting. | <ol style="list-style-type: none"> 7. Stay away from overhead obstructions and power lines during operation and transporting. Electro-cution can occur without direct contact. 8. Do not operate machine when any guards are removed. 9. Lower Conveyor to its lowest position before moving or transporting or when not in use. 10. Inspect lift cable before using Conveyor. Replace if frayed or damaged. 11. Make certain lift cable is properly seated in cable pulleys. 12. Be sure that conveyor is empty before raising or lowering. |
|--|--|

The USC Underbin Conveyor is designed to efficiently move seed between a storage facility or seed totes to a truck, trailer, wagon or seed treater. Power is provided by an electric motor. Be familiar with the machine before starting.

It is the responsibility of the owner or operator to read this manual and to train all other operators before they start working with the machine. In addition to the design and configuration of equipment, hazard control and accident prevention are dependent upon the awareness, concern, and prudence of personnel involved in the operation, transport, maintenance and storage of equipment or in the use and maintenance of facilities.

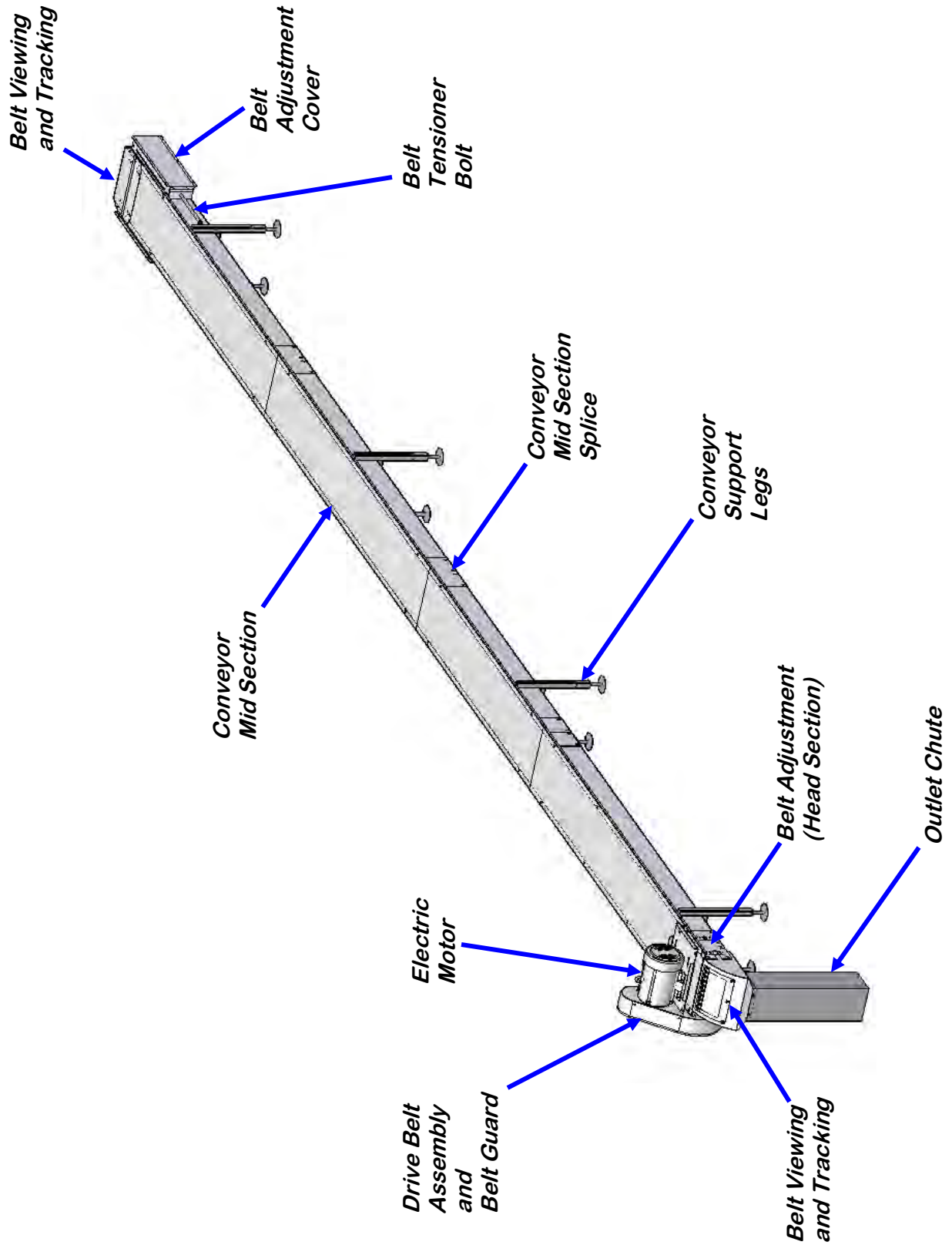
NOTICE

Follow all safety instructions exactly. Safety is everyone's business. By following recommended procedures, a safe working environment is provided for the operator, bystanders and the area around the worksite. Untrained operators are not qualified to operate the machine.

Many features incorporated into this machine are the result of suggestions made by customers like you. Read this manual carefully to learn how to operate the machine safely and how to set it to provide maximum efficiency. By following the operating instructions in conjunction with a good maintenance program, your conveyor will provide many years of trouble free service.

UNBERBIN CONVEYOR

SYSTEM OVERVIEW



UNDERBIN CONVEYOR

CONTROLS

- **Electric Drive:** Have a licensed electrician provide power to the machine per the National Electrical Code ANSI / NFPA 70 and local codes.
- Install an ON / OFF switch for the convenience of the operator. If the underbin conveyor is to be operated in conjunction with an USC automated bin site system, an on/off switch is not necessary but power to the motor must be run through the bin site panel. Refer to the bin site schematic for the correct motor wiring.

PRE-OPERATION CHECKLIST

Efficient and safe operation of the USC, LLC Underbin Conveyor requires that each operator reads and understands the operating procedures and all related safety precautions outlined in this section. A pre-operation checklist is provided for the operator. It is important for both the personal safety and maintaining the good mechanical condition of the conveyor that this checklist is followed.

Before operating the conveyor and each time thereafter, the following areas should be checked off:

1. Service the machine per the schedule outlined in Section E, Maintenance. (Page 26)
2. Use only an electric motor of adequate power to operate the machine.
3. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
4. Check worksite. Clean up working area to prevent slipping or tripping.
5. Check that drive belt and conveying belt are not frayed or damaged and that they are properly adjusted and aligned.
6. Check that discharge chute is free of obstructions.
7. Ensure that the conveyor taking seed away from the underbin conveyor is working properly. If the takeaway conveyor were to fail, the underbin conveyor would back up with seed and flood causing major issues. Extensive time wasted cleaning and possibly repairing the belt and or rollers may be needed.

UNBERBIN CONVEYOR

OPERATION

1. Clear the area of bystanders before starting the equipment.
2. Review the workplace Hazards schematic and use extra care when inside the hazard area. Keep all bystanders out of this area. Should anyone enter this area, stop the machine immediately.
3. Turn the underbin conveyor on and open the bin slide gate to begin conveying seed away from your bin.
4. To stop the conveyor, shut the bin gate and run until the belt is clear of material. Then, turn off the conveyor motor.

OPERATING HINTS

- Always listen for any unusual sounds or noises. If any are heard, stop the machine and determine the source. Correct the problem before resuming work.
- Never allow anyone into the workplace hazard area. If anyone enters, stop immediately. Make them LEAVE before resuming work.
- Do not run the machine for long periods of time with no material on the belt. It increases the belt wear. Try to run the conveyor only when performing maintenance or moving material.
- Always check and make sure the belt is properly aligned. Neglecting your belt may lead to pre-mature wear and possible breakage.
- Make sure that the flow of seed onto the conveyor is not greater than the discharge flow of seed. If so, this could cause the conveyor to plug up and back feed causing time wasted cleaning the conveyor out and possible damage.
- When reversing the underbin conveyor, you need to check the alignment before and after reversing. The alignment may shift when you change drive directions.

EMERGENCY STOPPING

Although it is recommended that the machine be emptied before stopping, in an emergency situation, stop or shutdown the power source immediately. Correct the emergency before resuming work.

RESTARTING

When the machine is shut down inadvertently or for an emergency, the belt may still be covered with material. It may be necessary to tighten the drive belt slightly to handle the heavier-than-normal starting loads.

MACHINE BREAK-IN

Although there are no operational restrictions on the Conveyor when used for the first time, it is recommended that the following mechanical items be checked:

Before Starting

1. Read the Conveyor Operator's Manual.
2. During the conveyors first few minutes of operation, check conveyor belt alignment to ensure belt is tracking correctly when running empty and also during loaded conditions.

After Operating for 1/2 Hour

1. Re-torque fasteners and hardware.
2. Check that all safety decals are installed and legible. Apply new decals if required.
3. Check the drive belt tension and alignment. Tension or align as required.
4. Check the conveying belt tension and alignment. Tension or align as required.
5. Check that all guards are installed and working as intended.

After Operating for 5 Hours and 10 Hours

1. Re-torque all bolts, fasteners and hardware.
2. Check that all guards are installed, secured and functioning as intended. Do not operate with missing or damaged shields.
3. Check safety decals. Install new ones if required.
4. Check the drive belt, and conveying belt tension and alignment. Tension or align as required.
5. Then, begin the normal servicing and maintenance schedule as defined in the Maintenance Section.

TROUBLESHOOTING**SECTION
D**

Below is a table describing the most frequent problems and solutions with the Underbin Conveyor. For further assistance, contact USC at (785) 431-7900.

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

UNPLUGGING

In unusual moisture or material conditions, the machine may plug. When plugging occurs, follow this procedure:

1. Place all controls in neutral or off, stop motor, disable and lock out power source before unplugging.
2. Unbolt and remove the necessary conveyor covers.
3. Unlatch and open the hinged tail cover.
4. Remove plugged material.
5. Install and secure conveyor covers, close and re-latch hinged tail cover.

SECTION
E**MAINTENANCE**

Proper maintenance of the Underbin Conveyor 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.



Failure to maintain the proper belt tension will cause the belt to slip. This will damage the belt and head drive pulley. If the belt is not tracking correctly, it can ride along one edge causing the belt to fray and damage the belt splice. Either problem will cause the belt to burn or wear out prematurely.

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.

1. Use a hand-held grease gun for all greasing.
2. Wipe grease fitting with a clean cloth before greasing to avoid injecting dirt and grit.
3. Replace and repair broken fittings immediately.

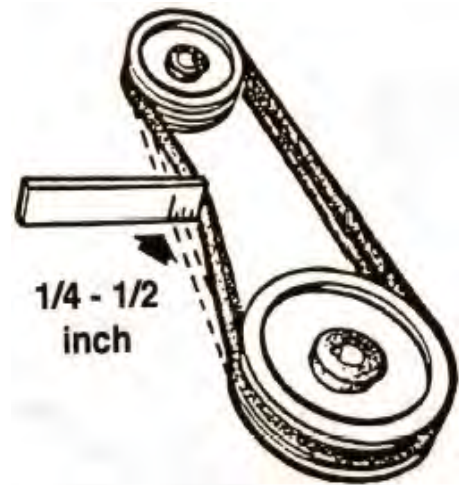


If fittings will not take grease, remove and clean thoroughly. Also clean lubricant passageway. Replace fitting if necessary.

UNBERBIN CONVEYOR
CONVEYOR SERVICING INTERVALS

Every 40 hours or Weekly

1. Check the conveyor belt tension and alignment.
2. Grease conveyor bearings.
 - A. Two bolt flanged bearings, tail roller bearings right and left (2 locations).
 - B. Two bolt flanged bearings, drive roller bearings right and left (2 locations).
 - C. 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. Wash conveyor.
2. Check pulley bushing for wear. To inspect pulley:
 - 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 crescent belt 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

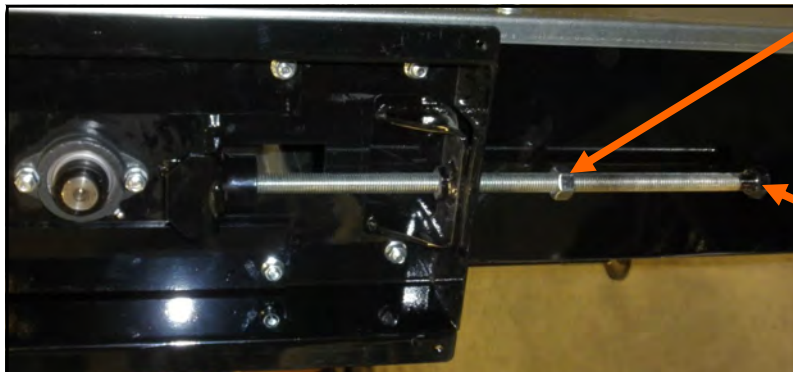
Although it is acceptable to align the belt from either the Head or the Tail end. Tightening the belt may only be done from the Tail end of the conveyor

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 the jam nut before adjusting the bearing position bolt

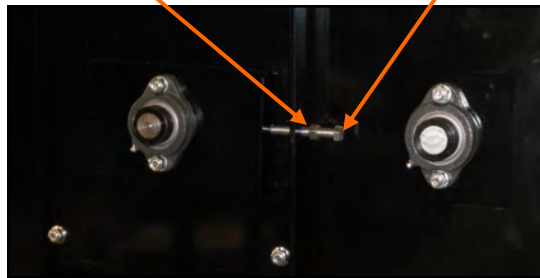
Use this bolt to tighten and align the belt

CONVEYING BELT ALIGNMENT-HEAD END

1. A misaligned belt will track toward the loose side. Set the tracking by loosening the jam nut on the tight side and using the bearing position bolt to move the end of the head roller toward the tail. Tighten the jam nut 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.

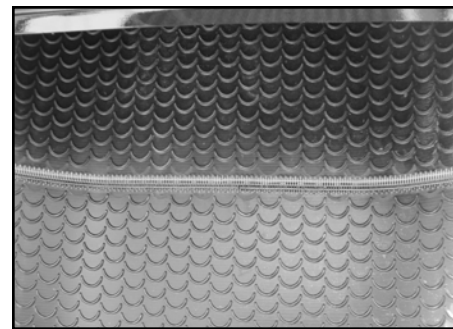
*Tighten jam nut
after adjustment*

*Use this bolt to
align the belt*

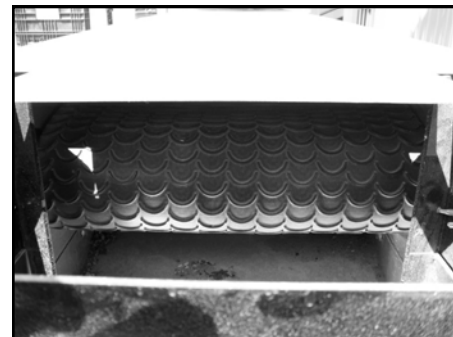


BELT REPLACEMENT

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



Belt Seam



Head Cover removed

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 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

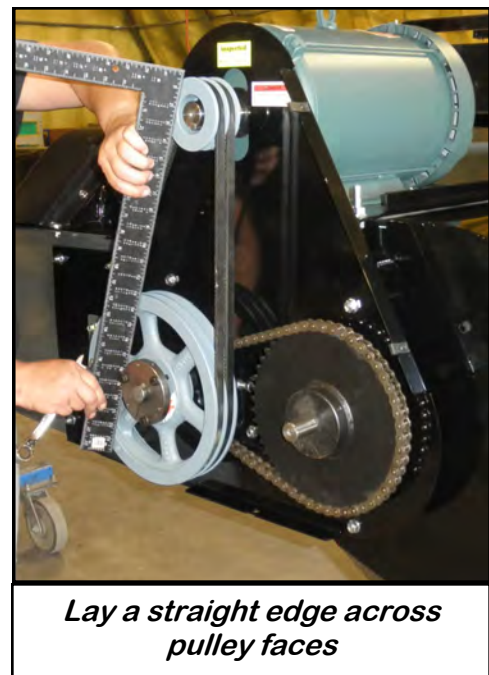
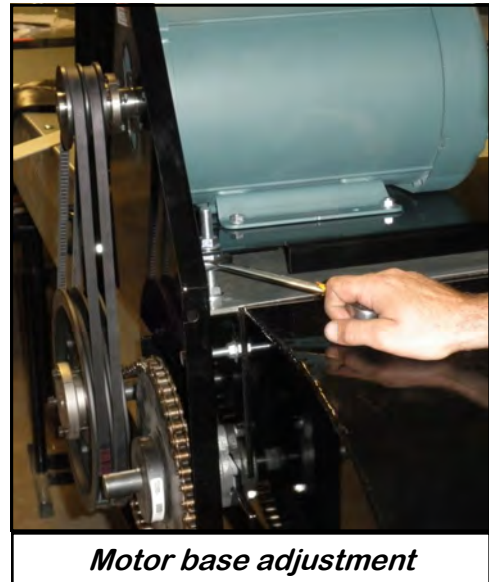
1. Push on the center of the belt span with a force of approximately 5 to 10 lbs.
2. Follow the belt tensioning specification on page 31 to determine proper belt deflection.
3. Move the motor up, using the adjustment bolts, to set drive belt tension (top right).
4. Close and secure guards.

Drive Belt Alignment

1. Lay a straightedge across the pulley faces to check the alignment (bottom 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

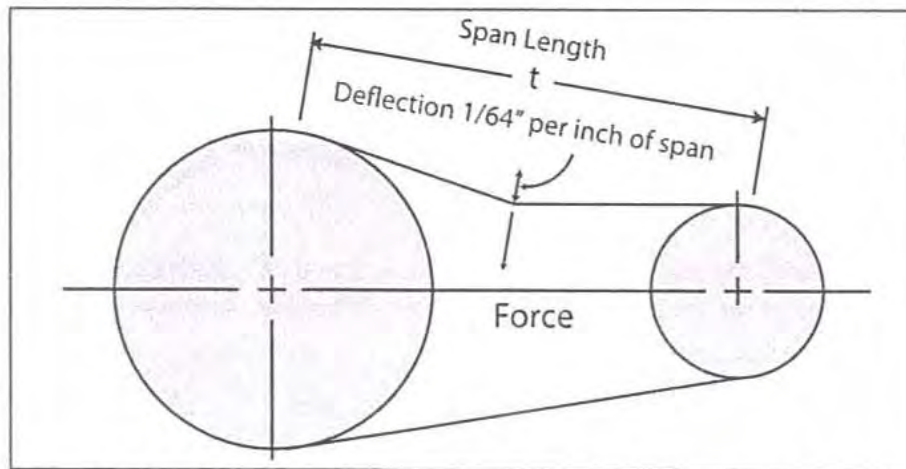
1. Lower motor to its loosest position.
2. Remove old belt and replace with a new one.
3. Raise motor to set the belt tension.
4. Check pulley alignment. Adjust if required.
5. Close and secure guards.



BELT TENSIONING SPECIFICATION

SECTION F

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
G**STORAGE**

When the Underbin Conveyor is not used for long periods of time, the following procedure must be followed to reduce the chance of rust, corrosion and fatigue of the conveyor.



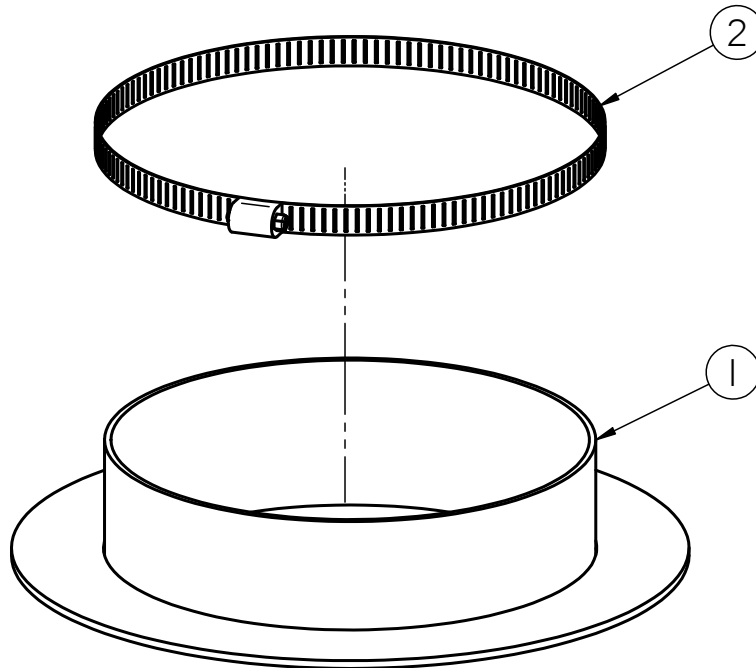
A dust mask and protective rubber gloves shall be used when cleaning the machine.

1. Thoroughly wash the entire machine to remove all dirt, mud, debris or residue.
2. Inspect all moving or rotating parts to see if anything has become entangled in them. Remove the entangled material.
3. 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.
4. Remove drive assembly cover. Clean entire area and ensure drive belt and chain are clean and free of debris. Lubricate drive chain.
5. Touch up all paint nicks and scratches to prevent rusting.
6. Cover the electric motor with a water proof tarpaulin and tie securely in place.
7. Do not allow children to play on or around the machine.

MECHANICAL DRAWINGS SECTION H

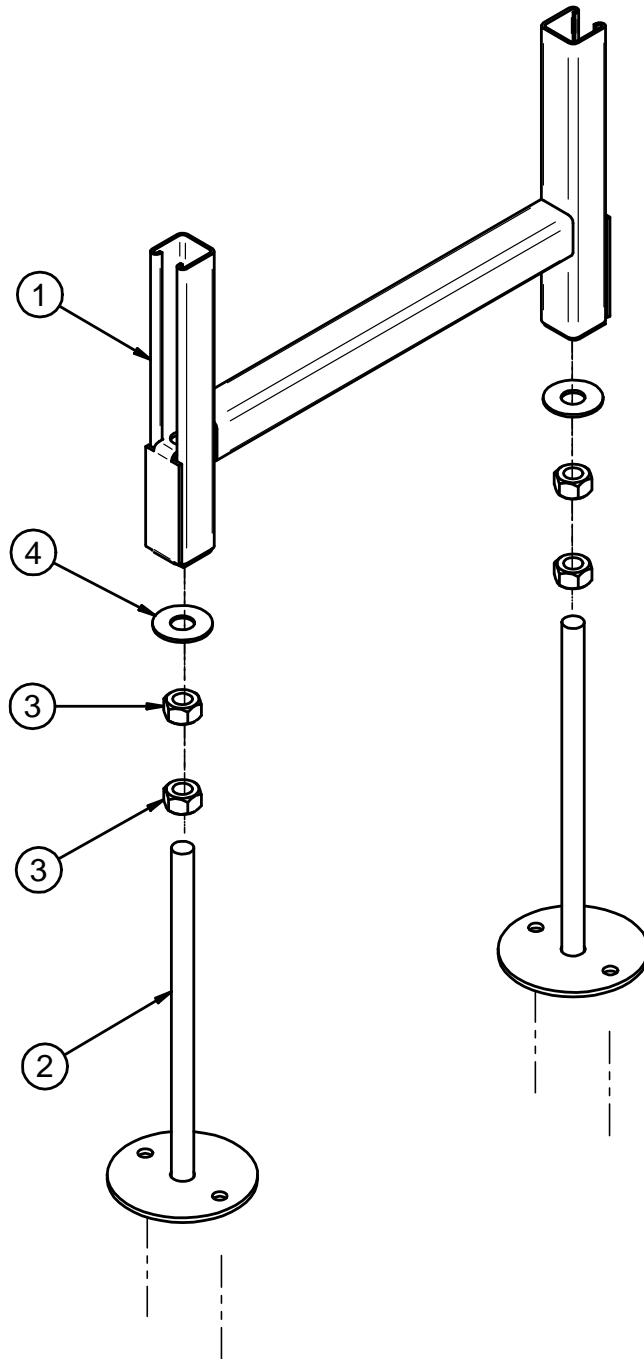
The following pages show the parts for the Underbin Conveyor. Please have the part number ready when ordering parts.

8 DIA INLET STUB ASSEMBLY (13-05-0252)



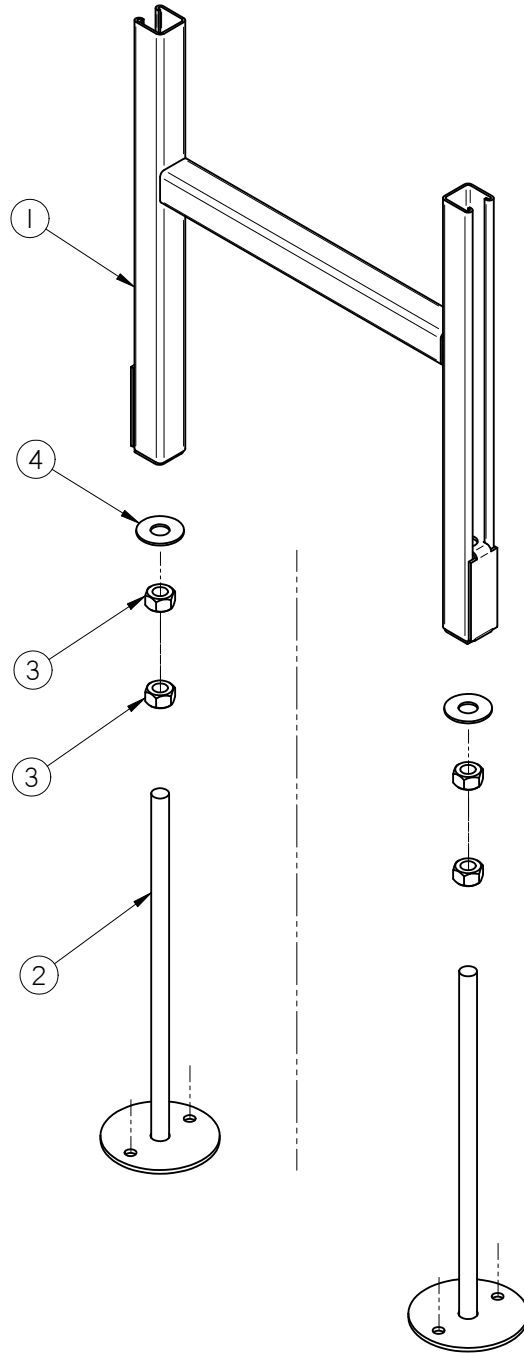
Item #	Part #	Description	Qty
1	05-03-1116	WDMT UB INLET STUB 8 DIA 6 TALL	1
2	06-07-0024	CLMP HOSE 7.125 TO 10 X 9/16 SS	1

UNDERBIN CONVEYOR
SHORT LEG ASSEMBLY (05-05-0011)



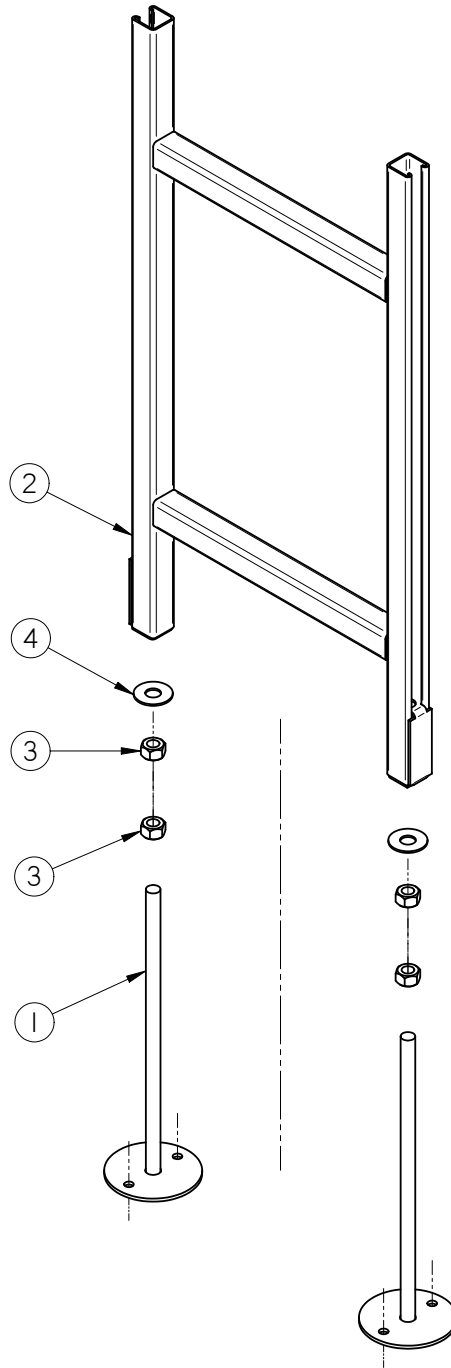
Item #	Part #	Description	Qty
1	05-05-0028	UB CNVR LEGS TOP WDMT	1
2	05-05-0157	WDMT LOWER LEG SHORT	2
3	06-02-0006	NUT FULL .750-10 ZP GR5	4
4	06-05-0007	WASHER, .750 FLAT ZP	2

UNBERBIN CONVEYOR
STANDARD LEG ASSEMBLY (05-05-0007)



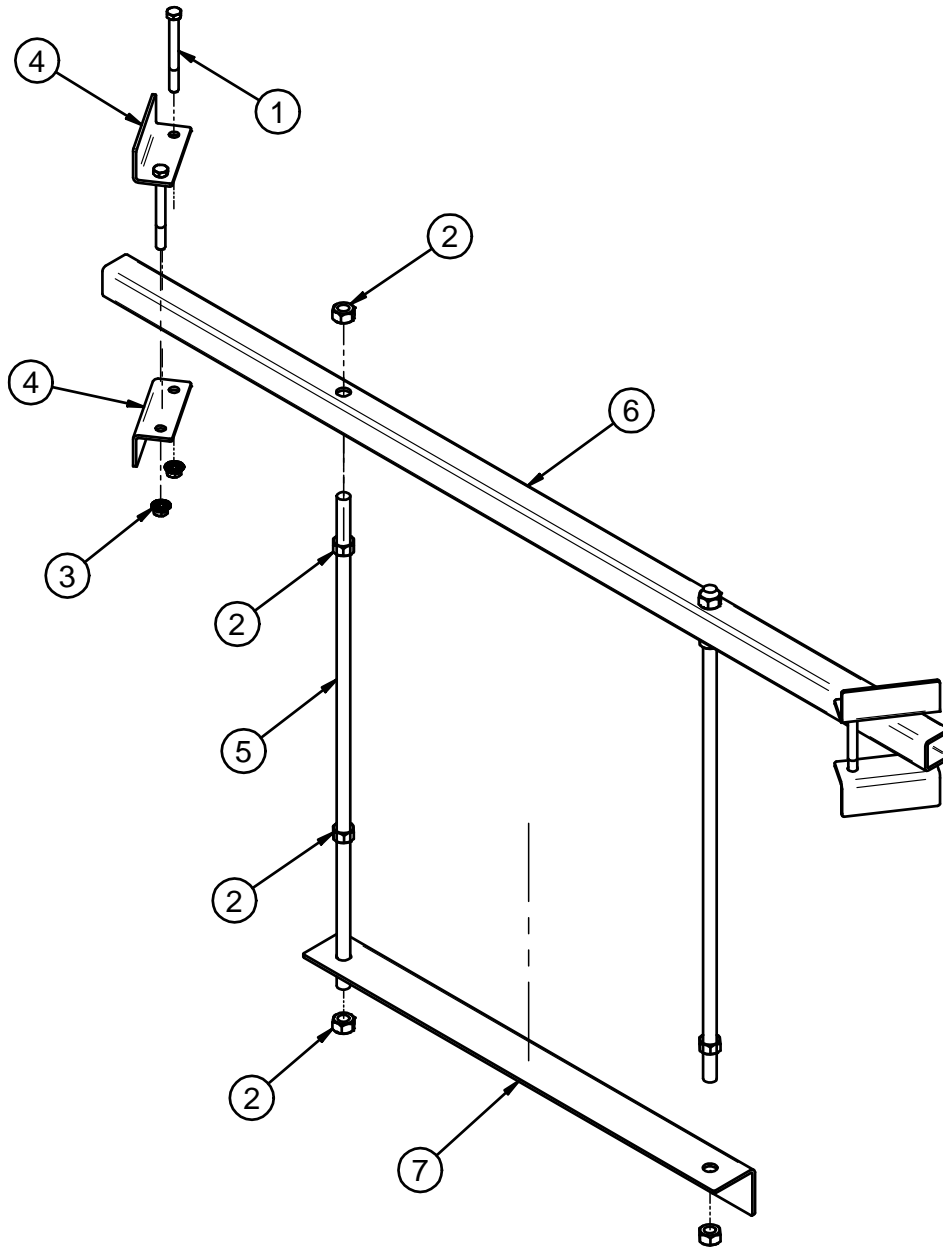
Item #	Part #	Description	Qty
1	05-05-0008	WDMT UB CNVR LEGS TOP	1
2	05-05-0009	WDMT LOWER LEG	2
3	06-02-0006	NUT FULL .750-10 ZP GR5	4
4	06-05-0007	WASHER, .750 FLAT ZP	2

UNDERBIN CONVEYOR
LONG LEG ASSEMBLY (05-05-0044)



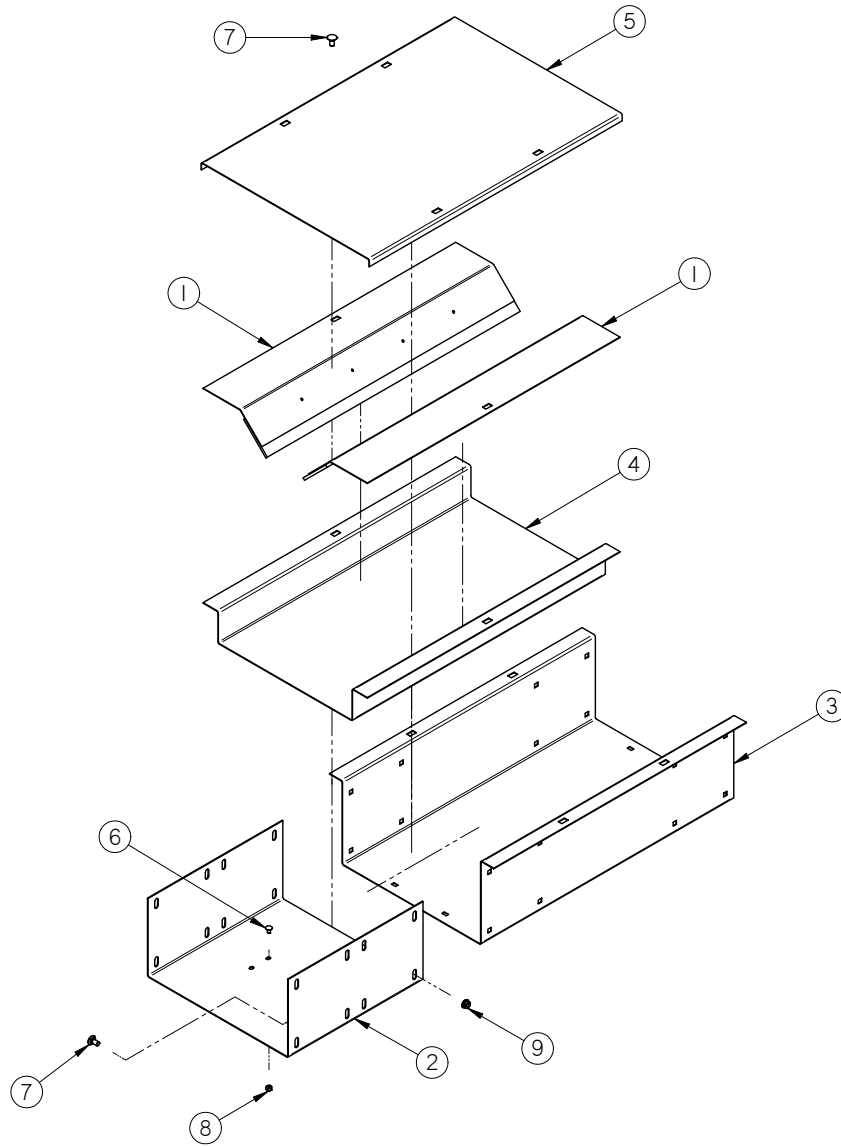
Item #	Part #	Description	Qty
1	05-05-0009	WDMT LOWER LEG	2
2	05-05-0045	UB CNVR LEGS TOP WDMT EXTD 16IN	1
3	06-02-0006	NUT FULL .750-10 ZP GR5	4
4	06-05-0007	WASHER, .750 FLAT ZP	2

UNBERBIN CONVEYOR
HANGER ASSEMBLY (05-05-0112)



Item #	Part #	Description	Qty
1	06-01-0119	BOLT, .500-13 X 5.00" UNC ZP GRADE 5	4
2	06-02-0006	NUT FULL .750-10 ZP GR5	8
3	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	4
4	1035A4	ANGLE UB SHORT	4
5	1035A6	ROD UB HANGER	2
6	105B61	TUBE UB HANGER LG	1
7	105B62	ANGLE UB LONG	1

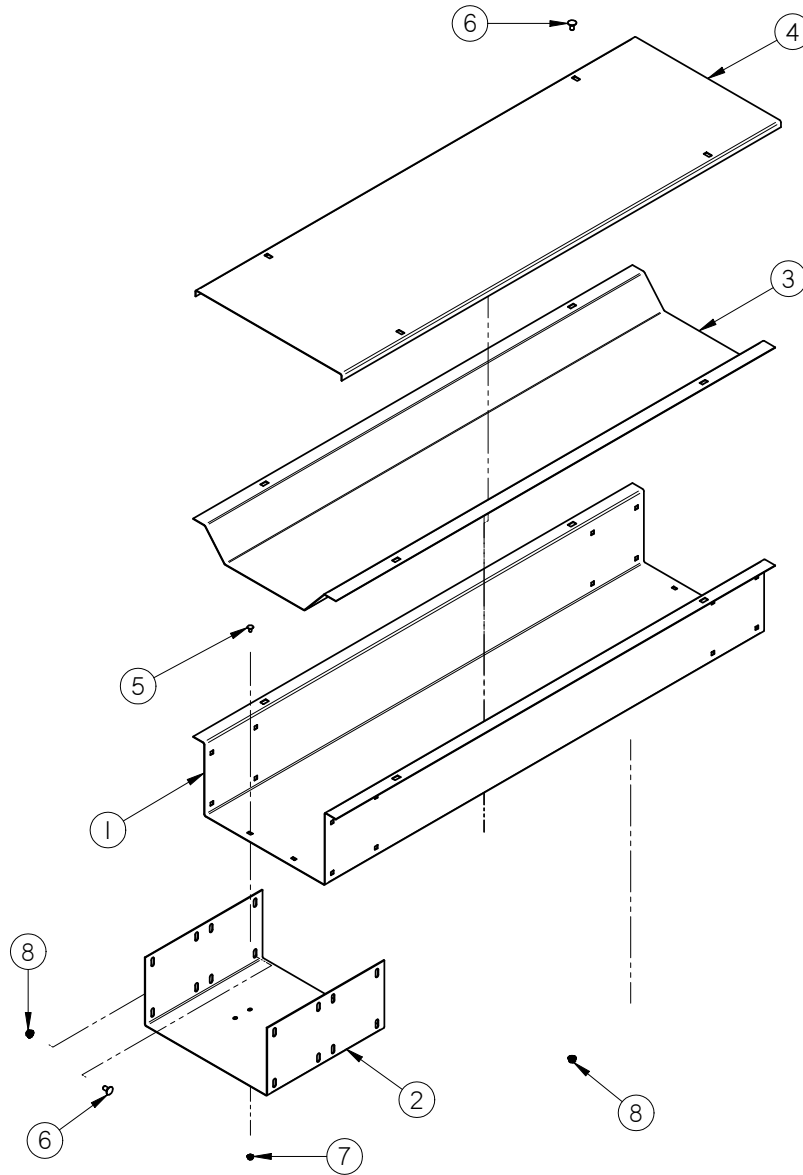
UNDERBIN CONVEYOR
2.5 FT INTERMEDIATE SECTION ASSEMBLY (13-08-0036)



Item #	Part #	Description	Qty
1	05-07-0220	ASSY TROUGH GUIDE TAIL 1	2
2	5/10/2935	SPLICE PLATE-FORMED UB	1
3	5/10/2949	FRAME-2.5 FT MID SECTION UB CNVR	1
4	5/10/2951	TROUGHING PAN-2.5 FT HEAD SECTION	1
5	5/10/2953	TOP COVER 2.5 FT MID SECTION UB	1
6	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	4
7	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	18
8	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	4
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	18

UNBERBIN CONVEYOR

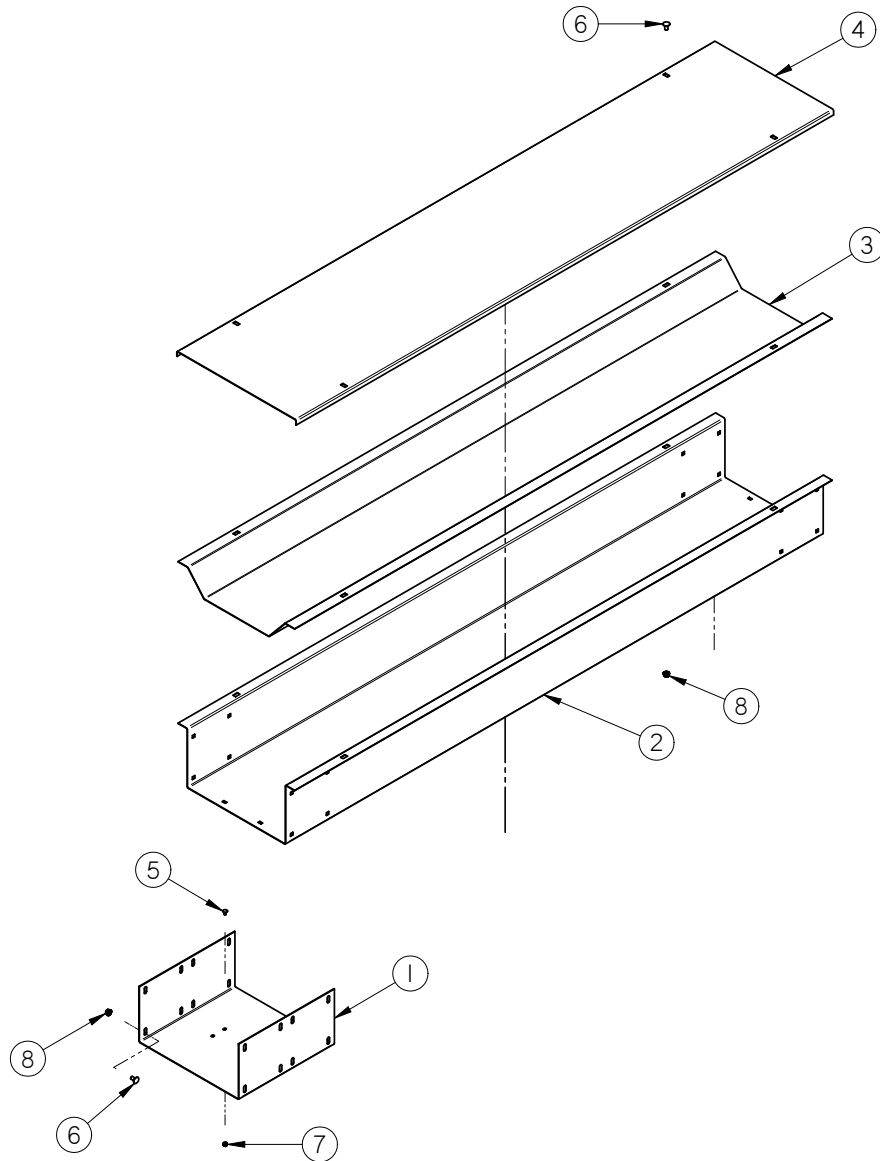
5 FT INTERMEDIATE SECTION ASSEMBLY (13-08-0037)



Item #	Part #	Description	Qty
1	05-10-2931	FRAME-5 FT MID SECTION UB CNVR	1
2	05-10-2935	SPLICE PLATE-FORMED UB	1
3	05-10-2950	TROUGHING PAN-5 FT HEAD SECTION	1
4	05-10-2954	TOP COVER 10FT MID SECTION UB	1
5	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	4
6	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	20
7	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATTED	4
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	20

UNDERBIN CONVEYOR

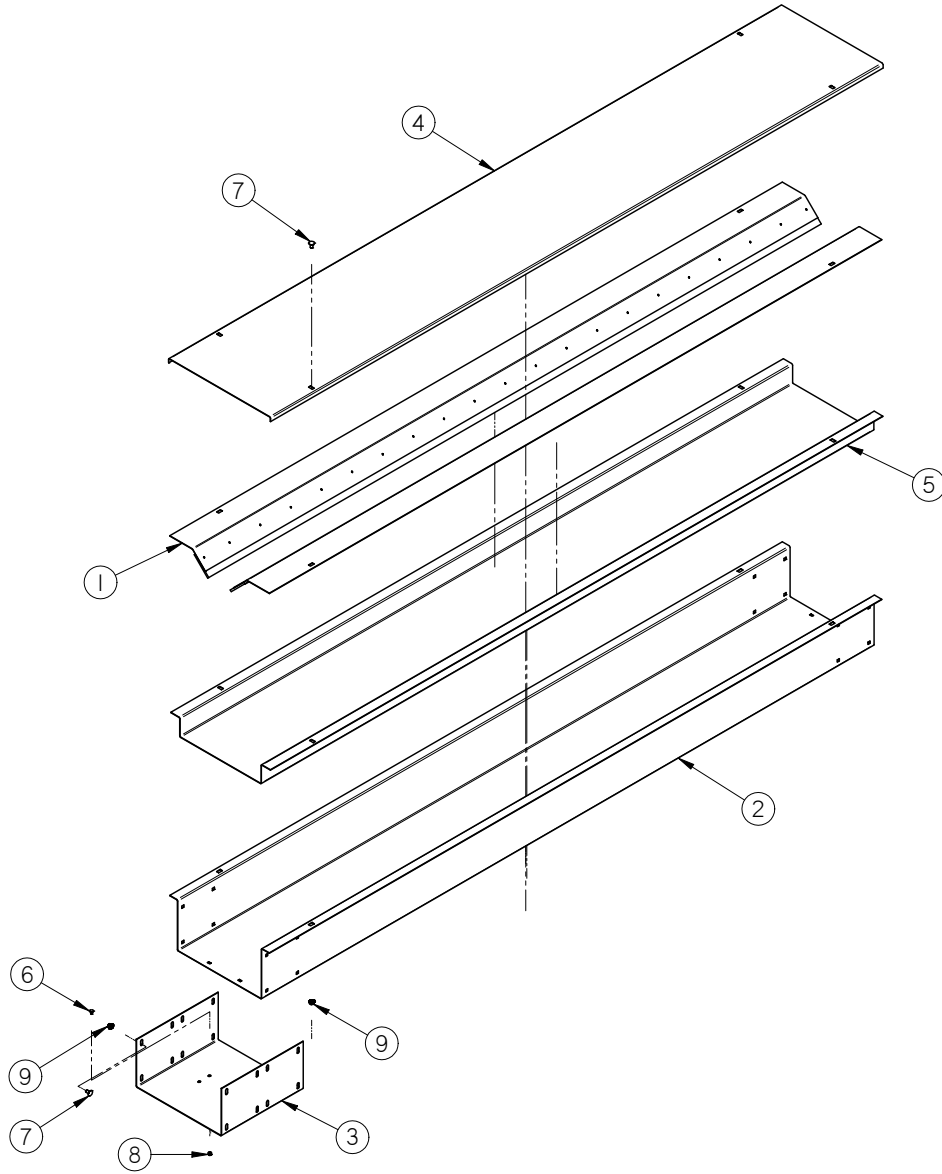
7.5 FT INTERMEDIATE SECTION ASSEMBLY (13-08-0038)



Item #	Part #	Description	Qty
1	05-10-2935	SPLICE PLATE-FORMED UB	1
2	05-10-2948	FRAME-7.5 FT MID SECTION UB CNVR	1
3	05-10-2952	TROUGHING PAN-7.5 FT HEAD SECTION	1
4	05-10-2955	TOP COVER 7.5 FT MID SECTION UB	1
5	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	4
6	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	20
7	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	4
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	20

UNBERBIN CONVEYOR

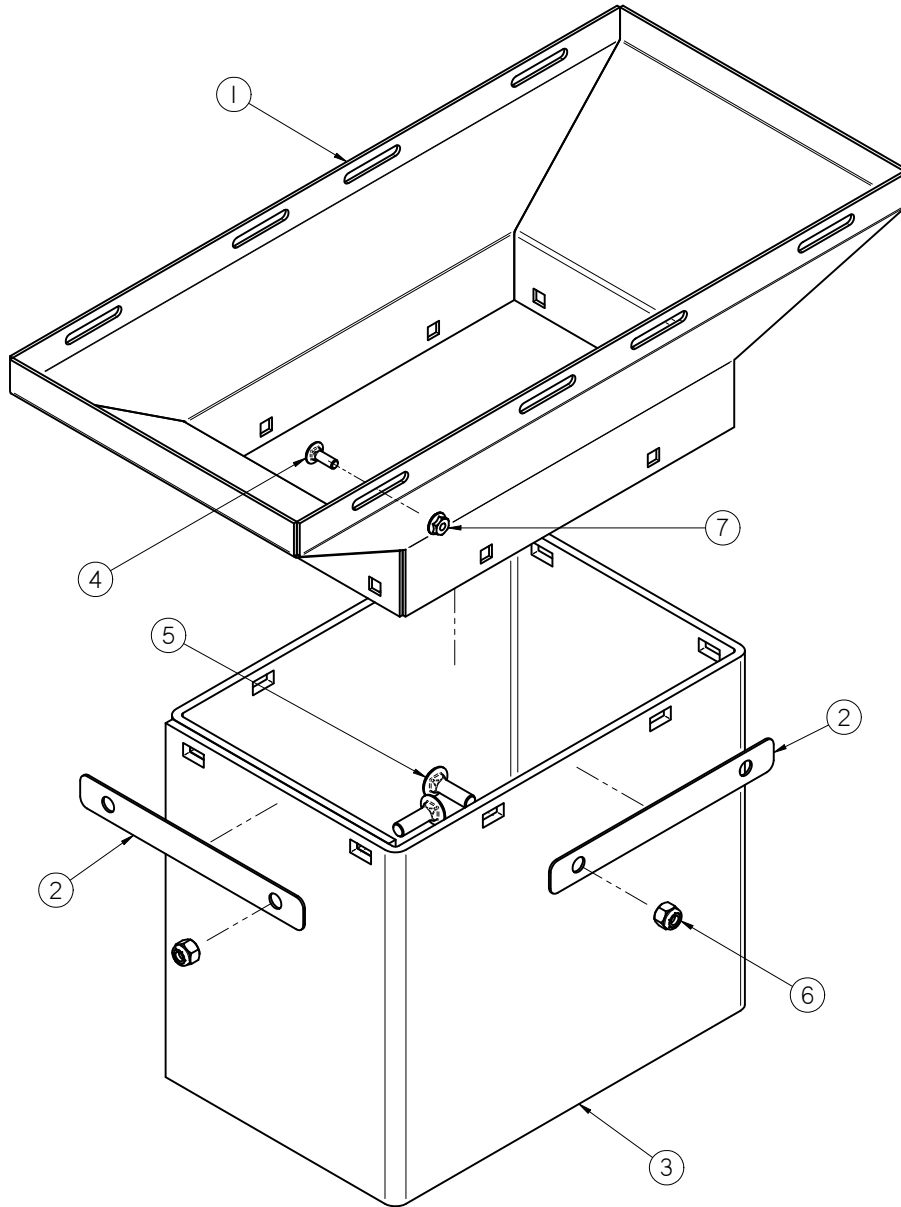
10 FT INTERMEDIATE SECTION ASSEMBLY (13-08-0035)



Item #	Part #	Description	Qty
1	05-07-0213	ASSY TROUGH GUIDE TAIL 1	2
2	05-10-2916	FRAME-10FT MID SECTION UB CNVR	1
3	05-10-2935	SPLICE PLATE-FORMED UB	1
4	05-10-2956	TOP COVER 10 FT SECTION UB	1
5	05-10-3187	PLT TROUGH UB 10 FT	1
6	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	4
7	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	20
8	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	4
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	20

UNDERBIN CONVEYOR

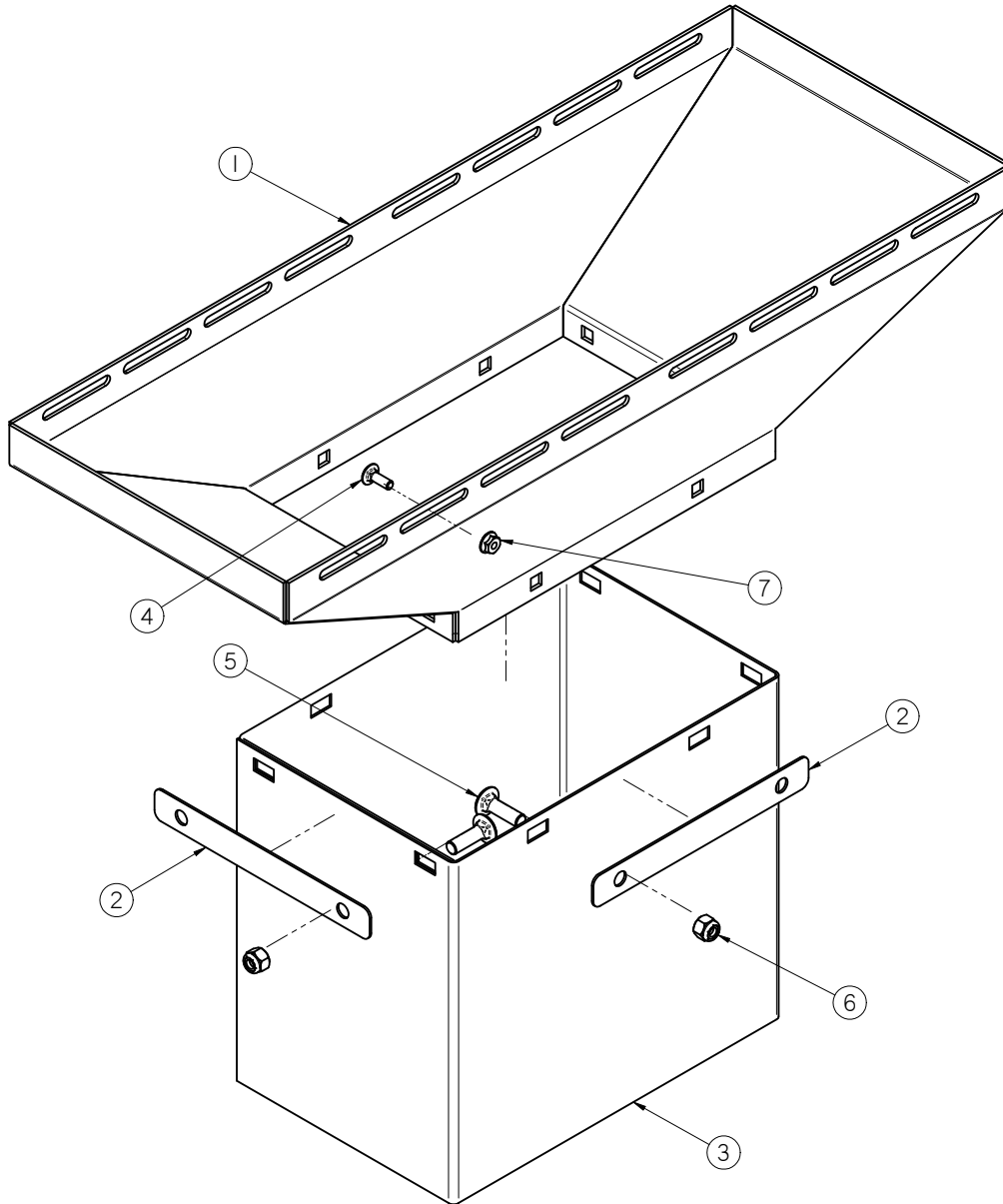
HORIZONTAL DUEL DISCHARGE ASSEMBLY (05-07-0317)



Item #	Part #	Description	Qty
1	05-03-0832	WDMT UB HORIZ DUAL DSCHG HOPP	1
2	05-10-3311	PLT UB DUAL DSCHG HOPP EXT HLDR	4
3	05-10-3565	PLT HORIZ UB DUAL DSCHG EXT RBBR	1
4	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	8
5	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	8
6	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	8
7	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	8

UNBERBIN CONVEYOR

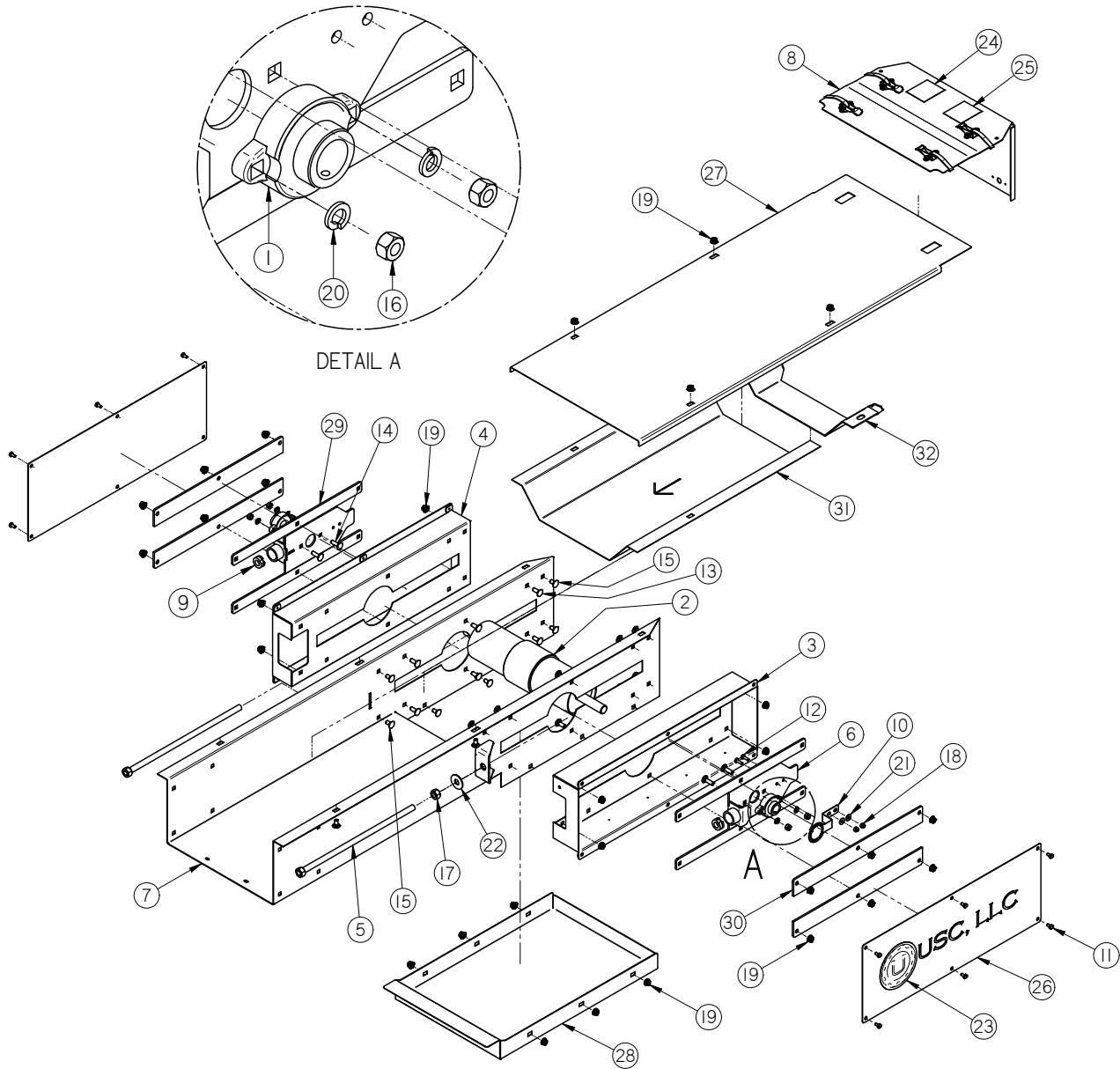
HORIZONTAL DISCHARGE ASSEMBLY (05-07-0474)



Item #	Part #	Description	Qty
1	05-03-1061	WDMT UB HORIZ DSCHG CONN	1
2	05-10-3311	PLT UB DUAL DSCHG HOPP EXT HLDR	4
3	05-10-3565	PLT HORIZ UB DUAL DSCHG EXT RBBR	1
4	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	8
5	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	8
6	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	8
7	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	8

UNDERBIN CONVEYOR

REVERSE TAIL SECTION ASSEMBLY (13-08-0331)



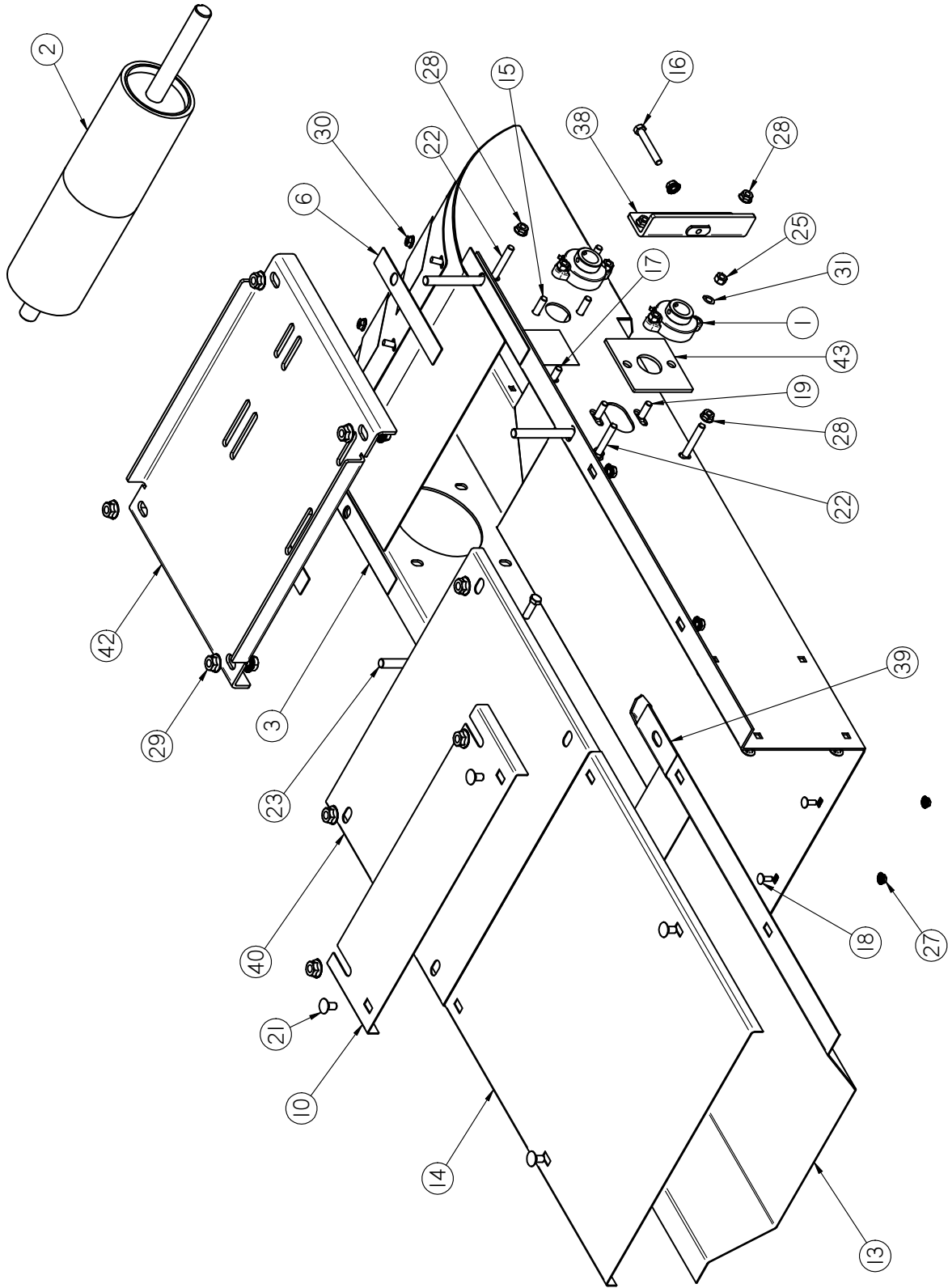
UNBERBIN CONVEYOR

REVERSE TAIL SECTION ASSEMBLY (13-08-0331)

Item #	Part #	Description	Qty
1	01-03-0042	BRG FLG MNT 1.000ID 2BOLT ECNTRC	2
2	01-08-0095	PULLEY TAIL W-LAGGING	1
3	05-03-1034	WDMT ECDR SD HSG TAIL UBC RVRS HD	1
4	05-03-1035	WDMT PLN SD HSG TAIL UBC RVRS HD	1
5	05-03-1036	WDMT TNSNR BOLT TAIL UBC RVRS HD	2
6	05-03-1037	WDMT TNSNR SLD TAIL UBC RVRS HD	2
7	05-03-1038	WDMT FR TAIL UBC RVRS HD	1
8	05-06-0048	ASSY CLEANOUT CVR S2000 CNVR	1
9	05-08-0290	WDMT TKUP BLT GUIDE	2
10	05-10-3508	BRKT ENCODER 25T TETHER ARM UB	1
11	06-01-0004	BOLT, .250-20 X .500 UNC ZP GRADE 5	12
12	06-01-0006	BOLT, .250-20 X .75 UNC ZP GRADE 5	2
13	06-01-0115	BOLT CRG .375-16 X 1.00 ZP GR5	12
14	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	4
15	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	18
16	06-02-0003	NUT FULL .375-16 ZP GR5	4
17	06-02-0005	NUT, .625-11 UNC ZP GRADE 5	2
18	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	2
19	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	30
20	06-04-0003	WSHR LOCK SPLT .375 ZP	4
21	06-05-0001	WASHER, FLAT .250	2
22	06-05-0006	WASHER, .625 FLAT ZP	2
23	09-01-0043	ATWL LBL USC, LLC 6" X 19" PRO-CUT	2
24	09-02-0006	ATWK LBL CAUTION SAFETY	1
25	09-02-0011	ATWK LBL WARNING MOVING PARTS	1
26	102161	PLT TNSNR HSG TAIL UBC RVRS HD	2
27	102171	PSM CVR 5FT TAIL UBC RVRS HD	1
28	102173	PSM DSCHG PAN TAIL UBC RVRS HD	1
29	102176	PSM MID SPCR TAIL UBC RVRS HD	4
30	102177	PSM TOP SPCR TAIL UBC RVRS HD	4
31	102260	PSM TRF 5FT TAIL UBC RVRS HD	1
32	280-3-0010	TROUGH TRANSITION PLATE	1

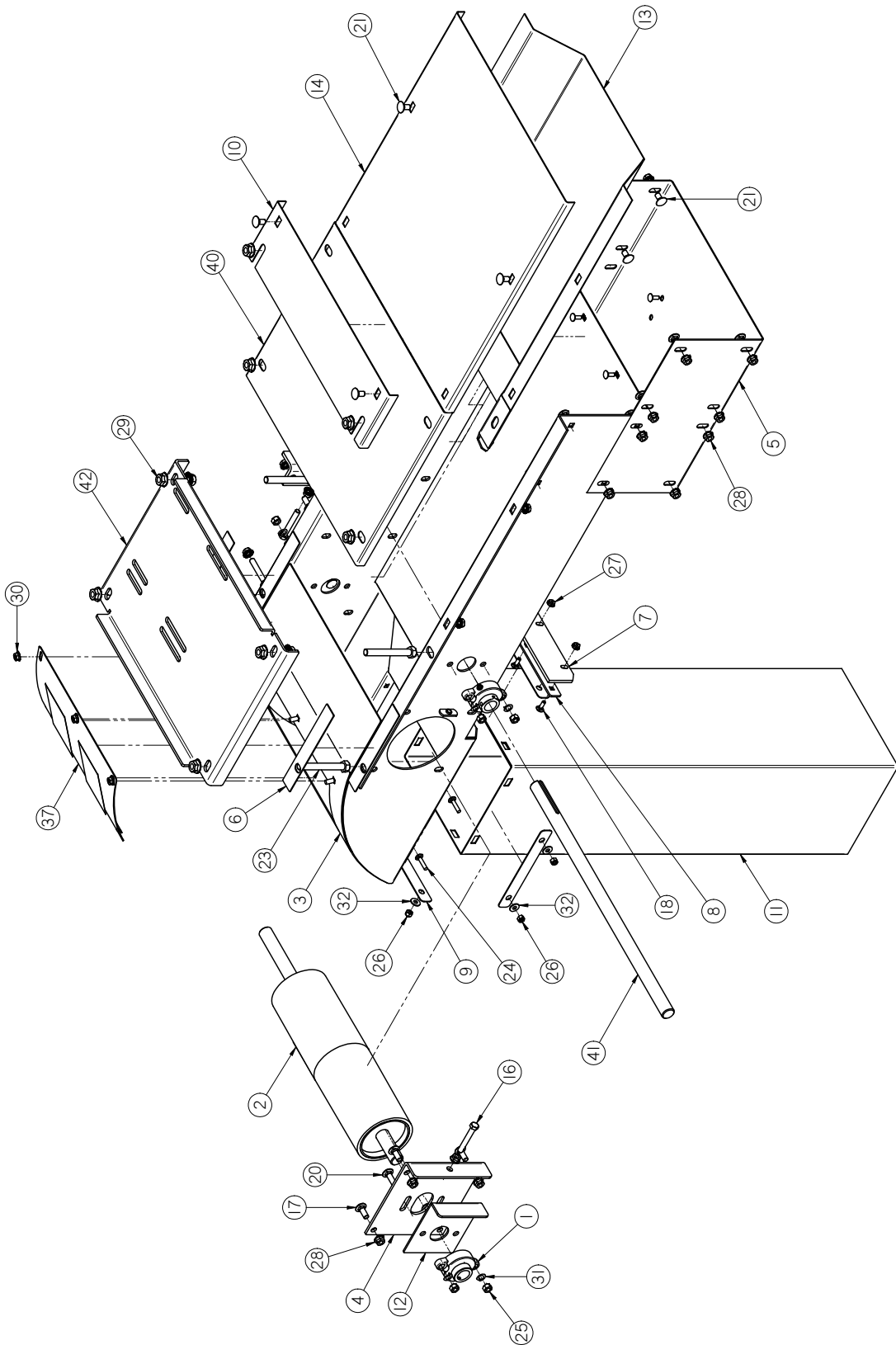
UNDERBIN CONVEYOR

HEAD SECTION ASSEMBLY (13-08-0332)



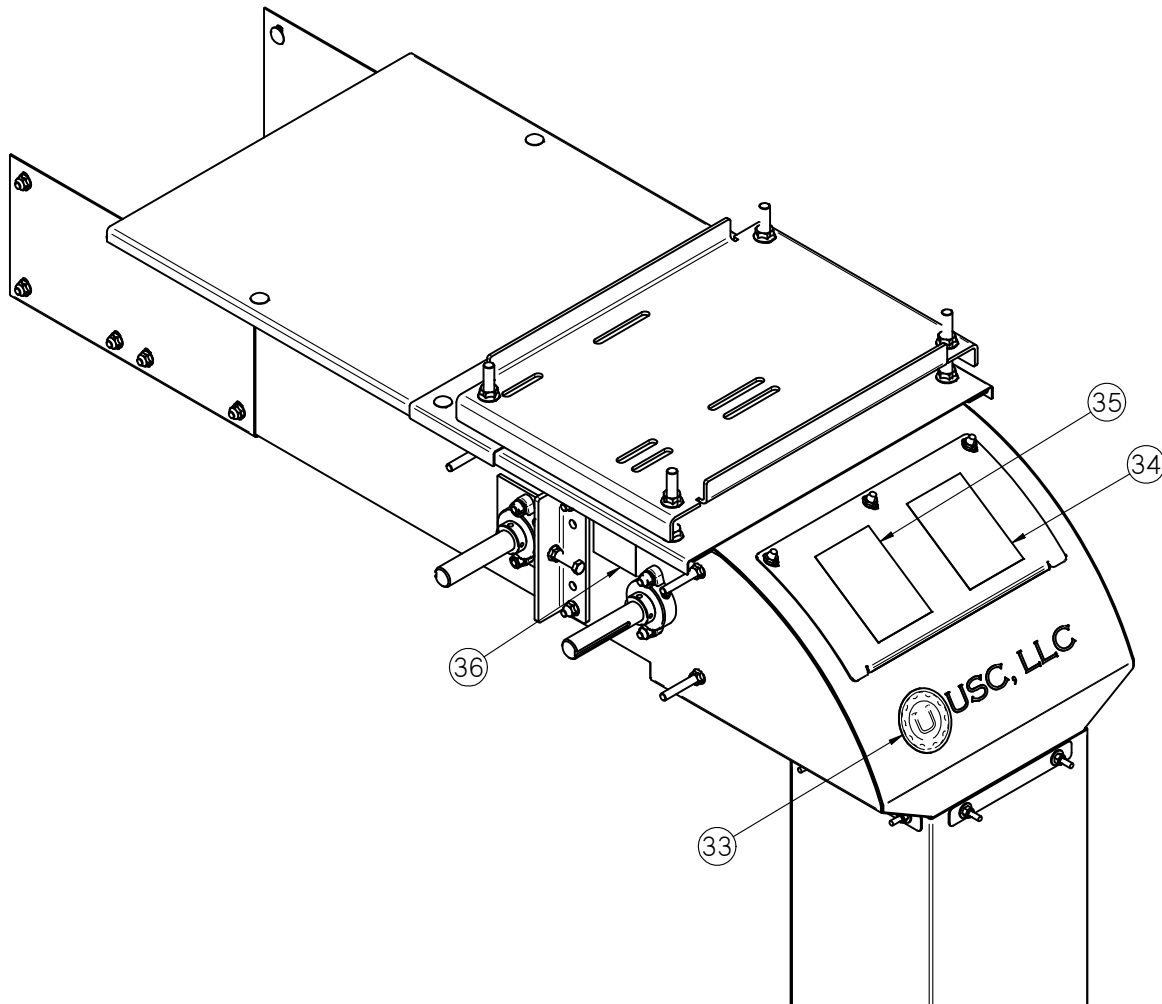
UNBERBIN CONVEYOR

HEAD SECTION ASSEMBLY (13-08-0332)



UNDERBIN CONVEYOR

HEAD SECTION ASSEMBLY (13-08-0332)



Item #	Part #	Description	Qty
1	01-03-0042	BRG FLG MNT 1.000ID 2BOLT ECNTRC	4
2	01-08-0096	PULLEY HEAD VULC S2000	1
3	05-03-1039	WDMT HORIZ DSCHG SPOUT UB	1
4	05-07-0445	WDMT ADJ PLT CNVR HEAD SECT	1
5	05-10-2935	SPLICE PLATE-FORMED UB	1
6	05-10-3267	SPCR UB HEAD CVR 16GA	4
7	05-10-3292	PLT S2000 CNVR BLT SCRAPER RBBR	1
8	05-10-3293	PLT UB CNVR BLT SCRAPER HLDR	1
9	05-10-3311	PLT UB DUAL DSCHG HOPP EXT HLDR	4
10	05-10-3514	PLT CNVR SPLICE HEAD CVR S2000 & UB	1

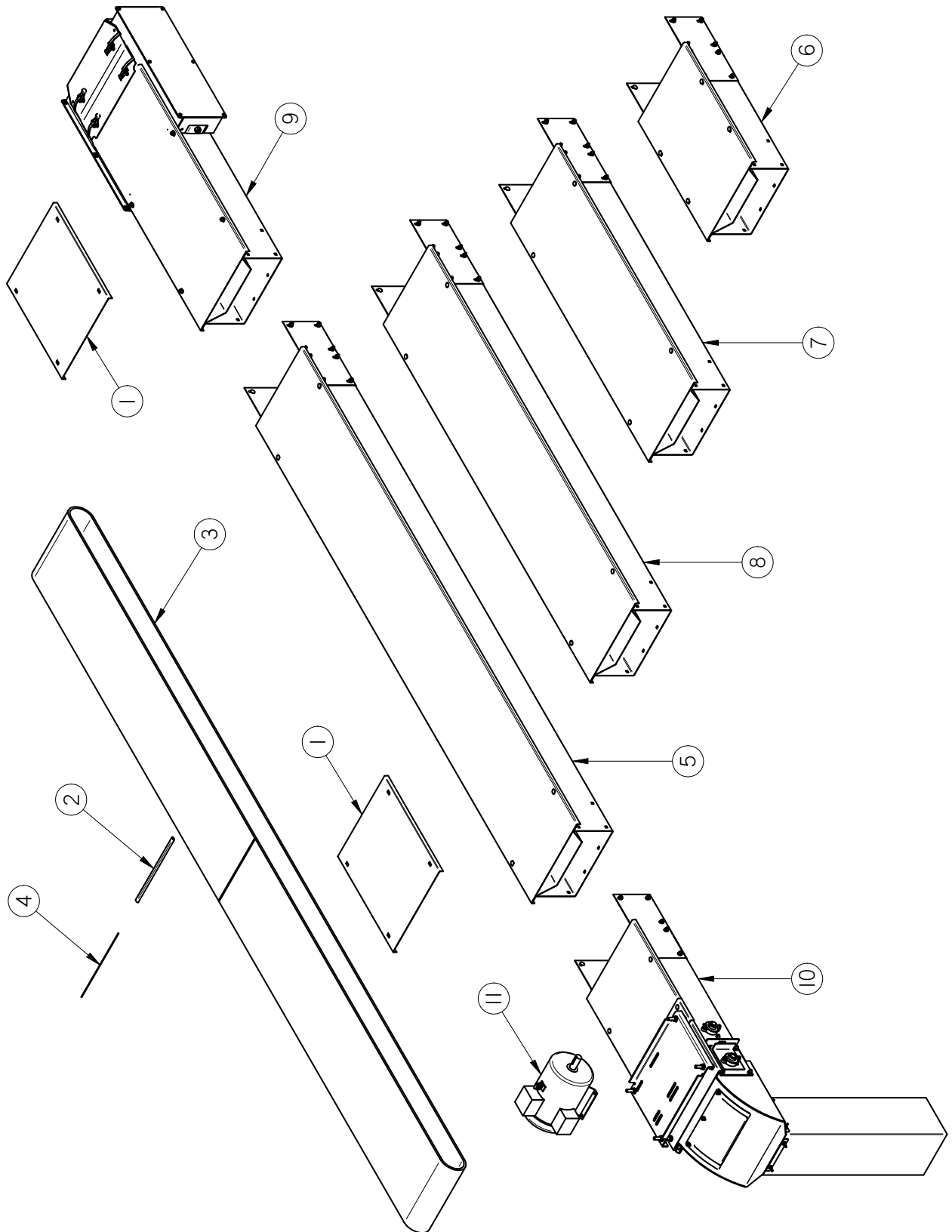
UNBERBIN CONVEYOR

HEAD SECTION ASSEMBLY (13-08-0332)

Item #	Part #	Description	Qty
11	05-10-3534	PLT UB HORIZ DSCHG EXT RBBR	1
12	05-10-3947	PLT BRG ADJ STRIKE	1
13	05-10-3954	TROUGHING PAN-10FT HEAD SECTION	1
14	05-10-3955	TOP COVER 10FT HEAD SECTION UB	1
15	06-01-0053	BOLT .375-16 X 1.25 ZP GR5	4
16	06-01-0071	BOLT .375-16 X 2.50 ZP GR5	2
17	06-01-0115	BOLT CRG .375-16 X 1.00 ZP GR5	6
18	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	8
19	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	2
20	06-01-0128	BOLT CRG .375-16 X 1.50 ZP GR5	2
21	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	20
22	06-01-0154	BOLT CRG .375-16 X 2.50 FTH ZP GR5	4
23	06-01-0157	BOLT, .500-13 X 4" UNC ZP GRADE 5 fth	4
24	06-01-0159	BOLT CRG .25-20 X 1.25 ZP GR5	8
25	06-02-0003	NUT FULL .375-16 ZP GR5	8
26	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	8
27	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	10
28	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	32
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	06-05-0001	WASHER, FLAT .250	8
33	09-01-0042	ATWL LBL USC, LLC 3" X 15" PRO-CUT	1
34	09-02-0001	ATWK LBL DANGER FINGERS	1
35	09-02-0002	ATWK LBL DANGER GUARDS	1
36	09-02-0011	ATWK LBL WARNING MOVING PARTS	1
37	10478E	PLT INSP CVR UB	1
38	280-2-0016	TRACKING ANGLE WELDMENT	1
39	280-3-0010	TROUGH TRANSITION PLATE	1
40	280-3-0036	TOP COVER DISCHARGE	1
41	280-3-0048	24 X 1 INCH JACK-HEAD SHAFT	1
42	280-3-0052	MTR MNT	1
43	280-3-0112	BEARING SPACER PLATE	1

UNDERBIN CONVEYOR

CONFIGURABLE TOP ASSEMBLY



UNBERBIN CONVEYOR

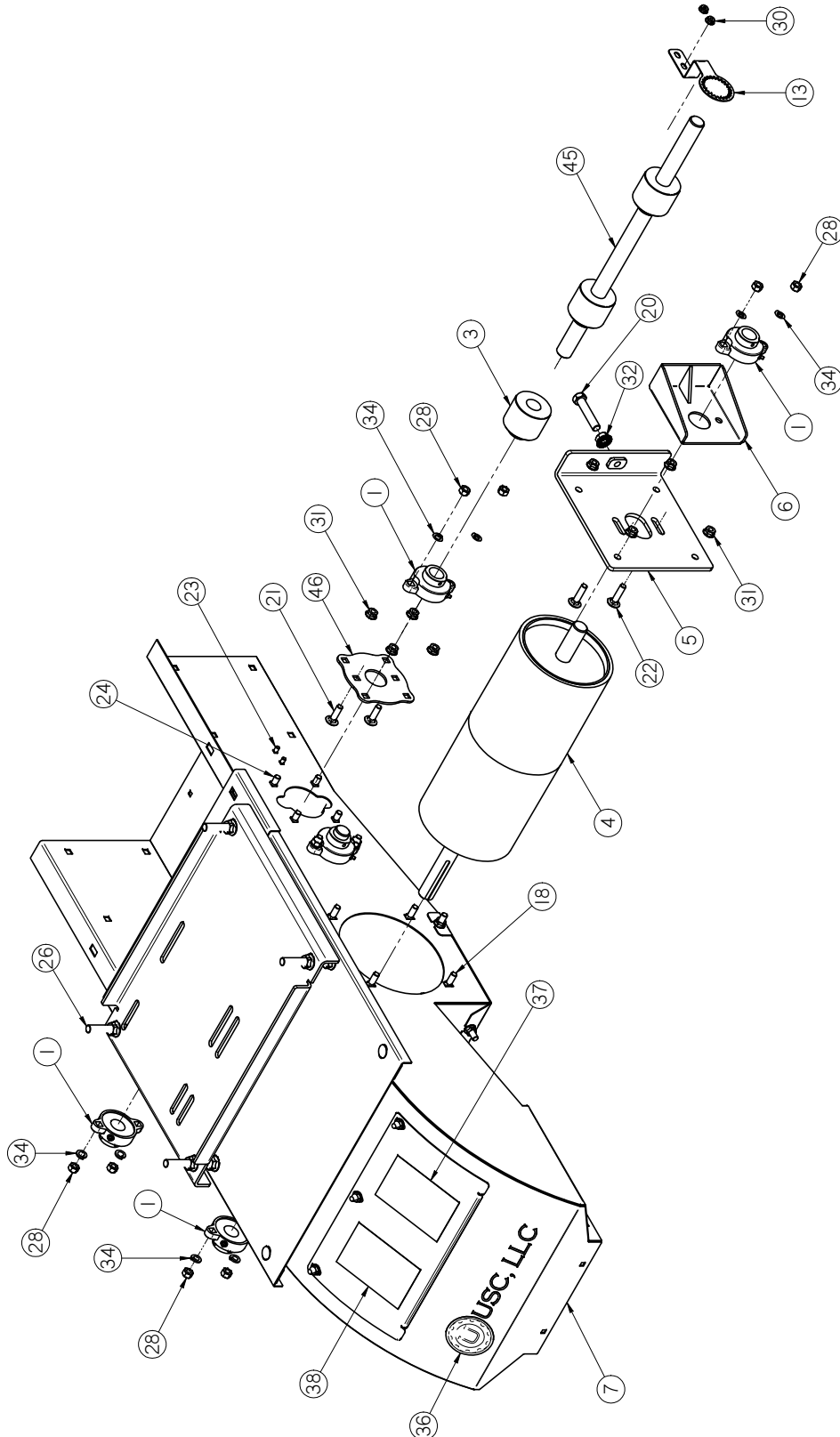
CONFIGURABLE TOP ASSEMBLY

Item #	Part #	Description	Qty
1	05-10-3510	PLT CNVR SPLICE CVR	2
2	11-02-0064	SPLICE BELT U2 UNIBAR 15.75IN LG	1
3	11-02-0101	BELT - CUT TO LENGTH	1
4	11-02-0161	CABLE BELT SPLICE NYL COATED STEEL	1
5	13-08-0035	ASSY UB INTERMEDIATE 10 FT	A/R
6	13-08-0036	ASSY UB INTERMEDIATE 2.5 FT	A/R
7	13-08-0037	ASSY UB INTERMEDIATE 5.0 FT	A/R
8	13-08-0038	ASSY UB INTERMEDIATE 7.5 FT	A/R
9	13-08-0331	CNVR UB RVRS TAIL SECT HD	1
10	13-08-0332	ASSY UB HEAD	1
11	SEE TABLE 1	CONVEYOR MOTOR	1

TABLE 1	
Part #	Description
01-01-0107	MOTOR 5HP 1PH
01-01-0131	MOTOR 10HP 1PH
01-01-0151	MOTOR 5HP 3PH 230V, 460V
01-01-0152	MOTOR 10HP 3PH 230V, 460V
01-01-0143	MOTOR 5HP 3PH 575V
01-01-0173	MOTOR 10HP 3PH 575V

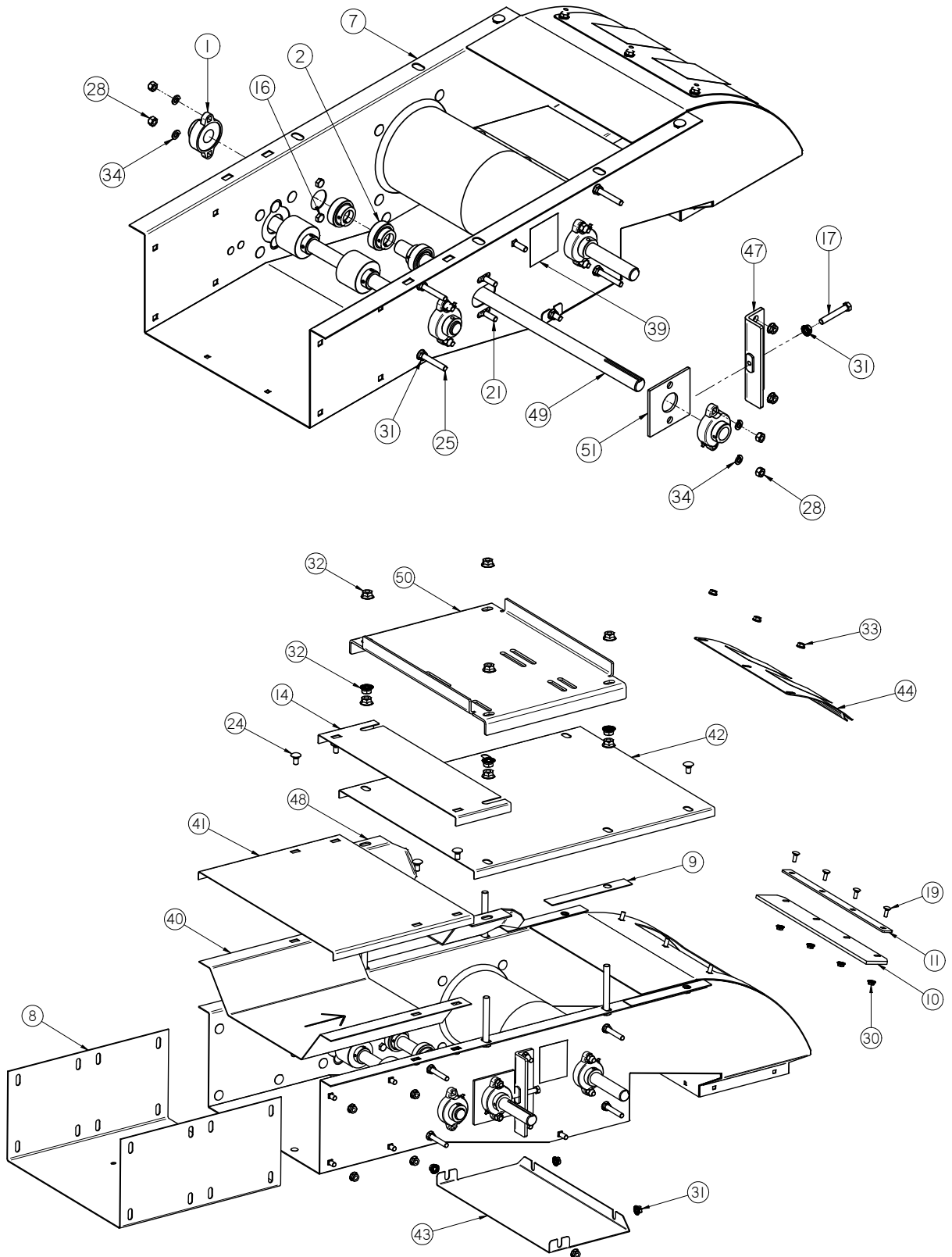
UNDERBIN CONVEYOR

DUEL DRIVE HEAD SECTION ASSEMBLY (13-08-0749)



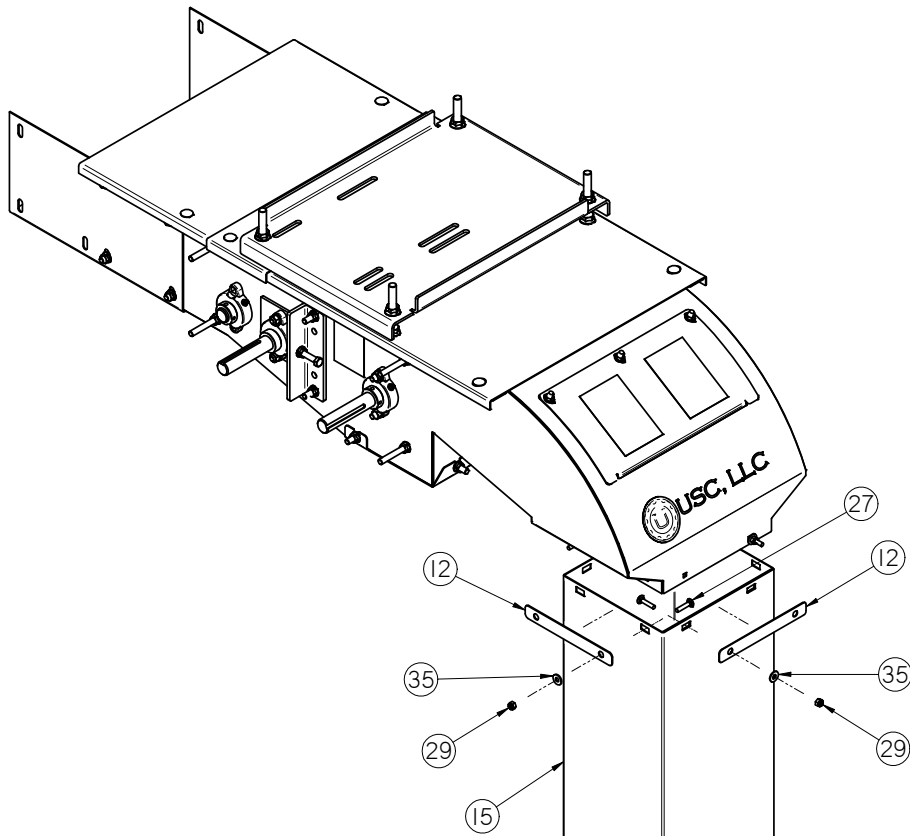
UNBERBIN CONVEYOR

DUEL DRIVE HEAD SECTION ASSEMBLY (13-08-0749)



UNDERBIN CONVEYOR

DUEL DRIVE HEAD SECTION ASSEMBLY (13-08-0749)



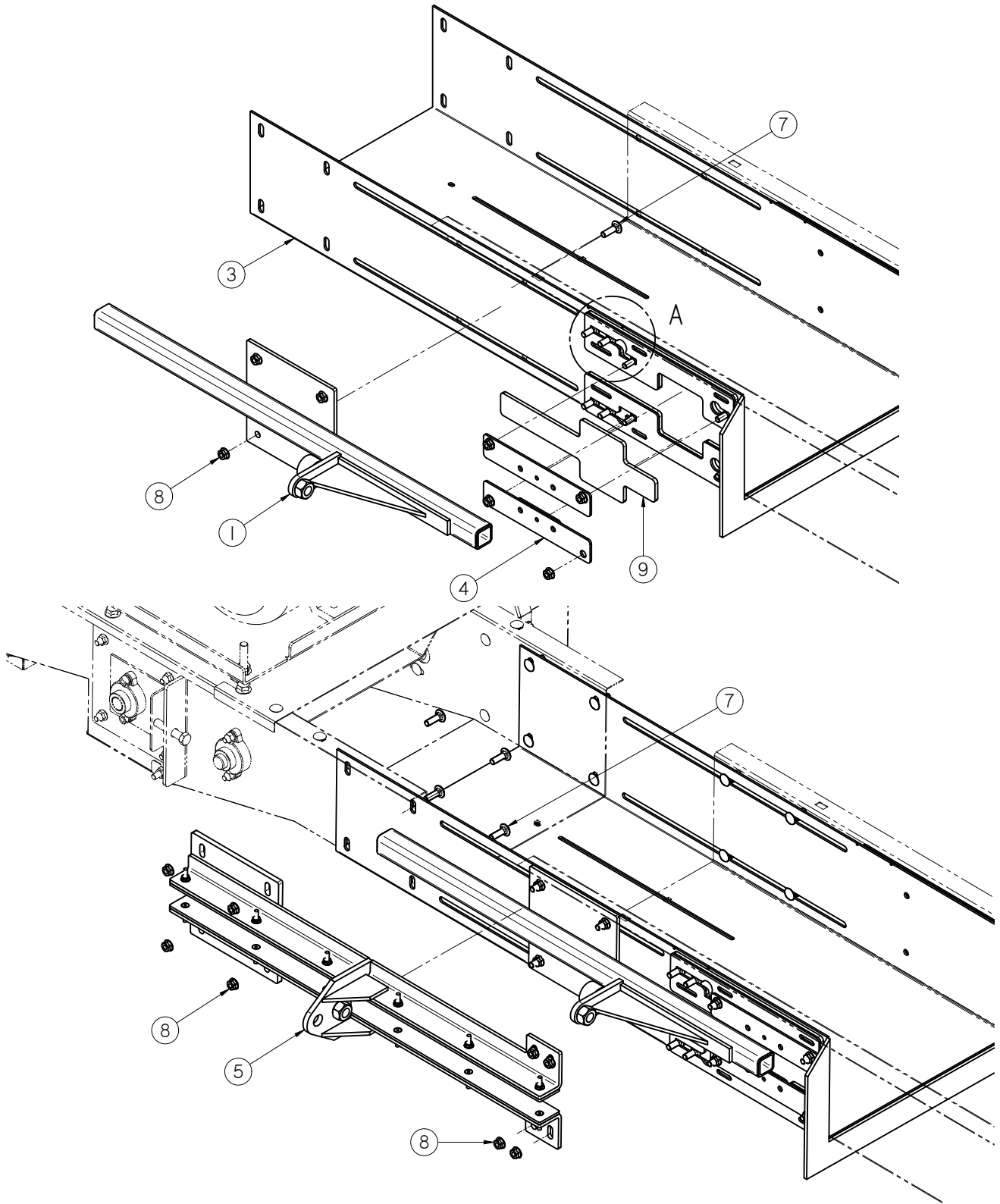
Item #	Part #	Description	Qty
1	01-03-0042	BRG FLG MNT 1.000ID 2BOLT ECNTRC	6
2	01-03-0080	BRG BALL 1.00ID X .2047OD	4
3	01-06-0176	WHL DRV 2.50 X 2 X 1.00ID	3
4	01-08-0106	PULLEY HEAD VULC S2000 6.5 OD	1
5	05-03-1489	WDMT ADJ PLT CNVR HEAD SECT	1
6	05-03-1490	WDMT BRG ADJ STRIKE	1
7	05-03-1727	WDMT UB HEAD SECT 6IN DRV W/ENC	1
8	05-10-2935	SPLICE PLATE-FORMED UB	1
9	05-10-3267	SPCR UB HEAD CVR 16GA	4
10	05-10-3292	PLT S2000 CNVR BLT SCRAPER RBBR	1
11	05-10-3293	PLT UB CNVR BLT SCRAPER HLDR	1
12	05-10-3311	PLT UB DUAL DSCHG HOPP EXT HLDR	4
13	05-10-3508	BRKT ENCODER 25T TETHER ARM UB	1
14	05-10-3514	PLT CNVR SPLICE HEAD CVR S2000 & UB	1
15	05-10-3534	PLT UB HORIZ DSCHG EXT RBBR	1
16	06-01-0053	BOLT .375-16 X 1.25 ZP GR5	4

UNBERBIN CONVEYOR

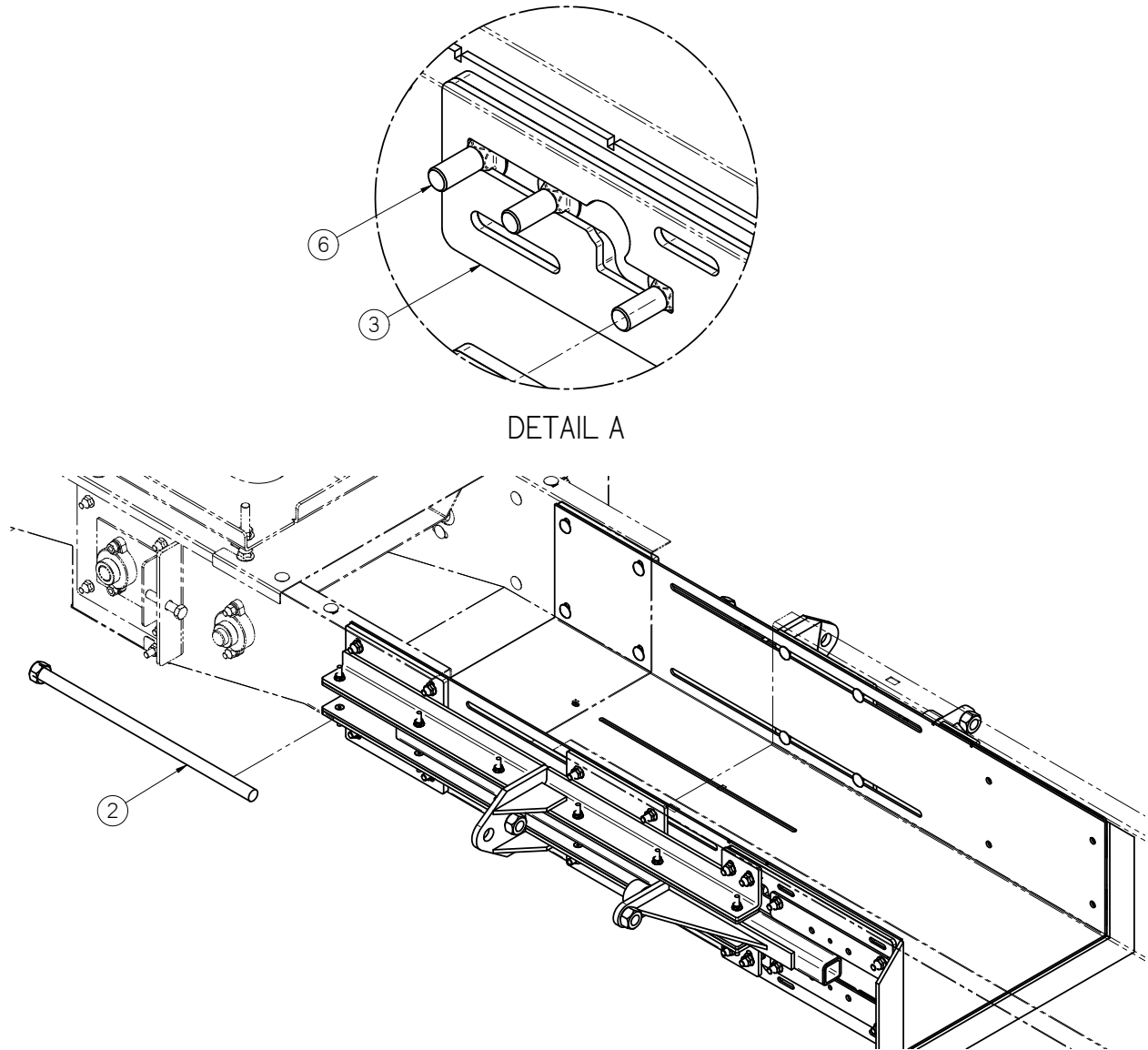
DUEL DRIVE HEAD SECTION ASSEMBLY (13-08-0749)

Item #	Part #	Description	Qty
17	06-01-0071	BOLT .375-16 X 2.50 ZP GR5	1
18	06-01-0115	BOLT CRG .375-16 X 1.00 ZP GR5	4
19	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	6
20	06-01-0125	BOLT .500-13 X 2.50 ZP GR5 FTH	1
21	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	8
22	06-01-0128	BOLT CRG .375-16 X 1.50 ZP GR5	2
23	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	2
24	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	18
25	06-01-0154	BOLT CRG .375-16 X 2.50 FTH ZP GR5	4
26	06-01-0157	BOLT, .500-13 X 4" UNC ZP GRADE 5 fth	4
27	06-01-0159	BOLT CRG .25-20 X 1.25 ZP GR5	8
28	06-02-0003	NUT FULL .375-16 ZP GR5	12
29	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	8
30	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	8
31	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	33
32	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	13
33	06-03-0019	NUT, FLG .3125-18 UNC ZP GRADE 5	3
34	06-04-0003	WSHR LOCK SPLT .375 ZP	12
35	06-05-0001	WASHER, FLAT .250	8
36	09-01-0042	ATWL LBL USC, LLC 3" X 15" PRO-CUT	1
37	09-02-0001	ATWK LBL DANGER FINGERS	1
38	09-02-0002	ATWK LBL DANGER GUARDS	1
39	09-02-0011	ATWK LBL WARNING MOVING PARTS	1
40	1036BF	TROUGHING PAN HEAD SECTION	1
41	1036C0	TOP COVER HEAD SECTION UB	1
42	1036C1	TOP COVER DISCHARGE	1
43	1036CA	PAN CVR	1
44	10478E	PLT INSP CVR UB	1
45	105B3B	SHAFT ENCODER DRV	1
46	105B3C	PLT BRG MNT	1
47	280-2-0016	TRACKING ANGLE WELDMENT	1
48	280-3-0010	TROUGH TRANSITION PLATE	1
49	280-3-0048	24 X 1 INCH JACK-HEAD SHAFT	1
50	280-3-0052	MTR MNT	1
51	280-3-0112	BEARING SPACER PLATE	1

UNDERBIN CONVEYOR
DUEL DRIVE TAKE-UP SPLICE ASSEMBLY (13-08-0462)



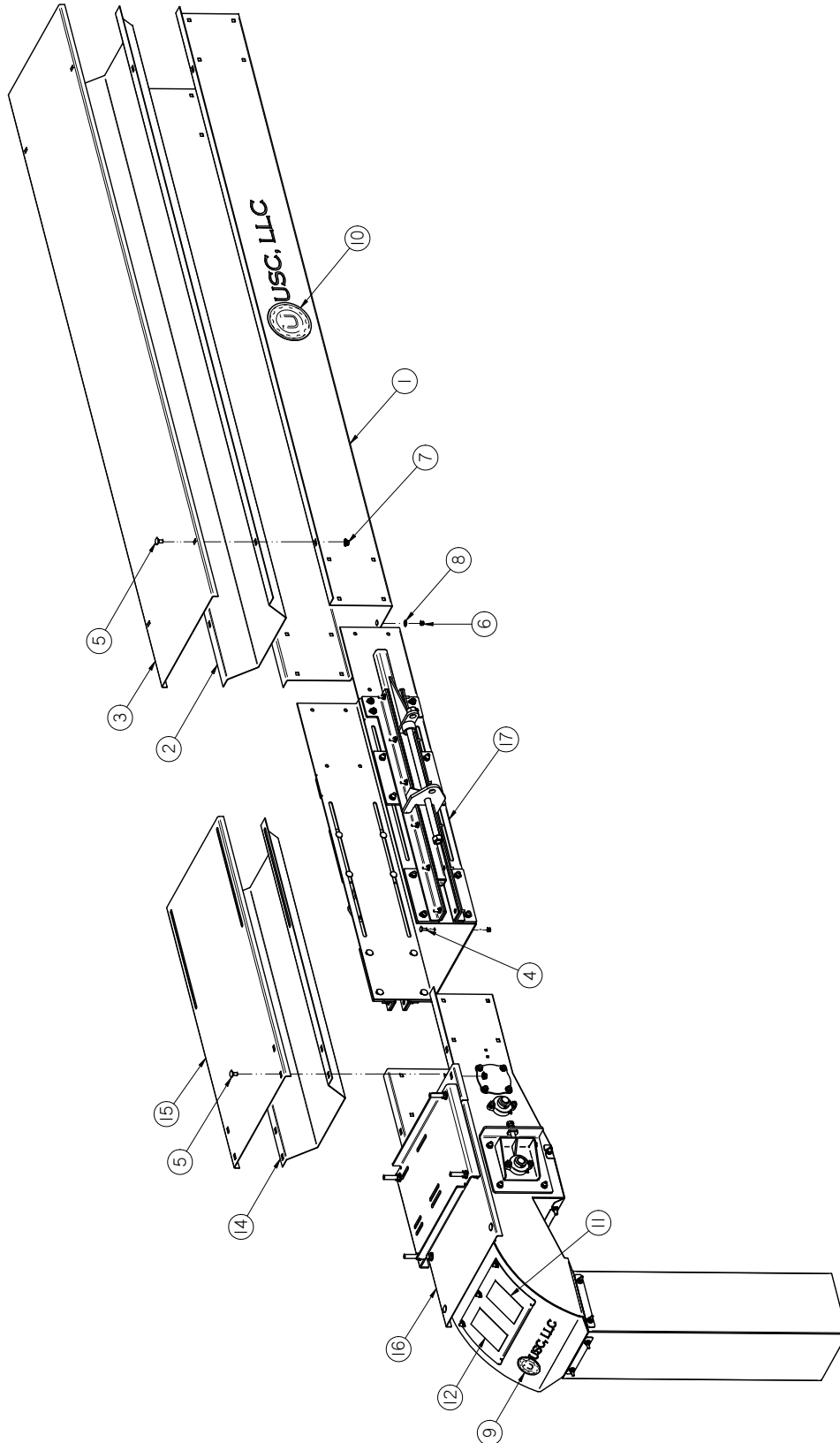
UNBERBIN CONVEYOR
DUEL DRIVE TAKE-UP SPLICE ASSEMBLY (13-08-0462)



Item #	Part #	Description	Qty
1	05-03-1492	WDMT TNSNR SLIDE	2
2	05-03-1501	WDMT TNSNR BOLT TAIL UBC .75 DIA	2
3	05-03-1662	WDMT DUAL UB SPLICE PAN	1
4	05-03-1663	WDMT CLAMP UB SPLICE	4
5	05-08-0401	ASSY SUPP RAIL	2
6	06-01-0115	BOLT CRG .375-16 X 1.00 ZP GR5	16
7	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	16
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	32
9	104FB6	SKID PLATE	2

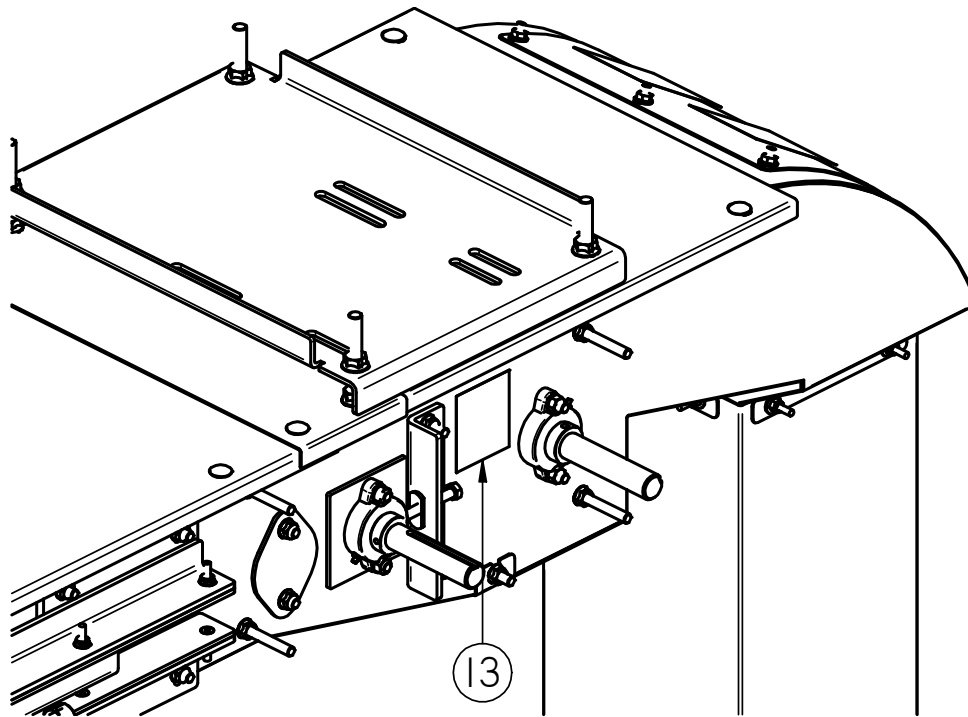
UNDERBIN CONVEYOR

DUEL DRIVE REVERSE DISCHARGE SECTION ASSEMBLY (13-08-0463)



UNBERBIN CONVEYOR

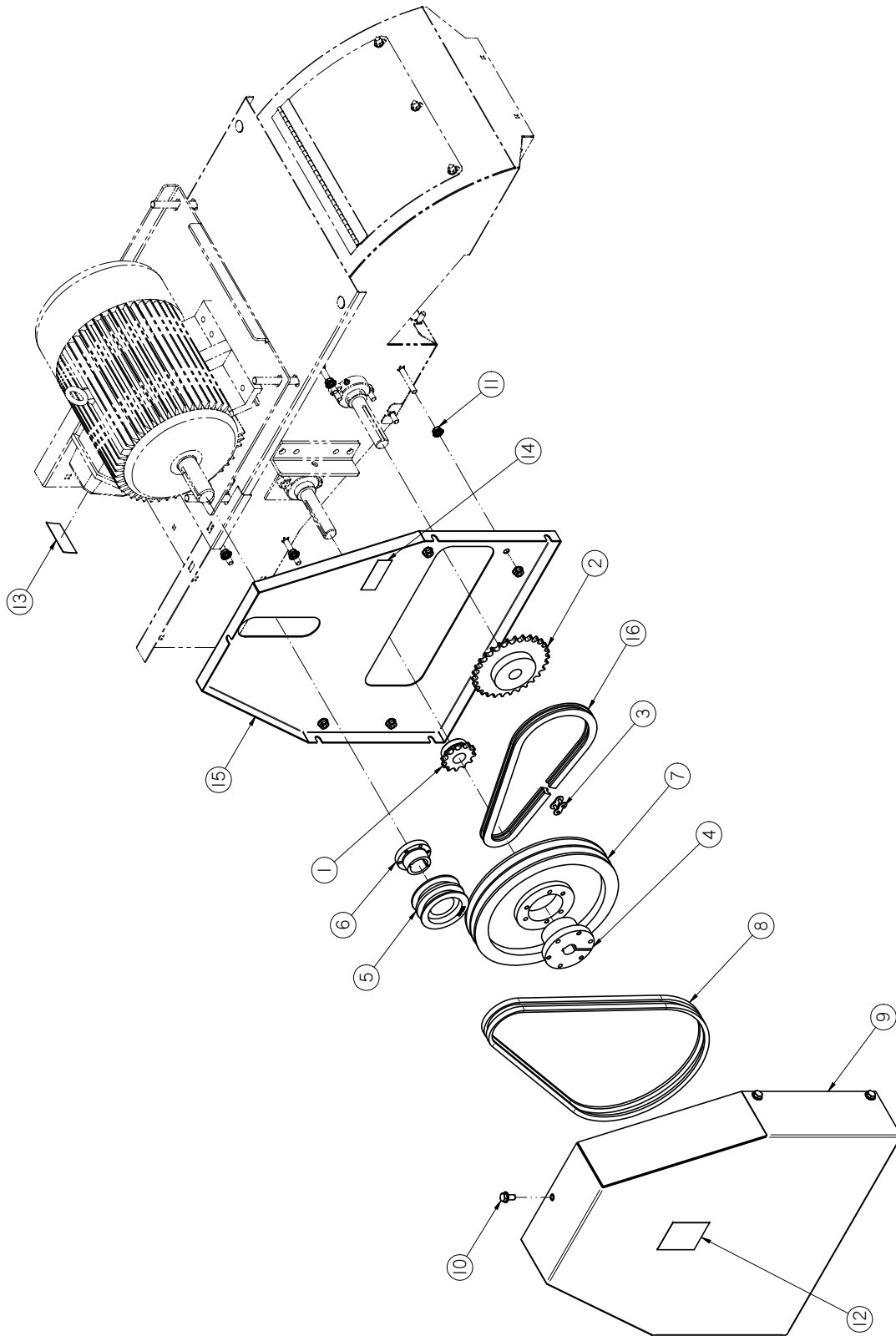
DUEL DRIVE REVERSE DISCHARGE SECTION ASSEMBLY (13-08-0463)



Item #	Part #	Description	Qty
1	05-10-2948	FRAME-7.5 FT MID SECTION UB CNVR	1
2	05-10-2952	TROUGHING PAN-7.5 FT HEAD SECTION	1
3	05-10-2955	TOP COVER 7.5 FT MID SECTION UB	1
4	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	4
5	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	6
6	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	4
7	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	6
8	06-05-0001	WASHER, FLAT .250	2
9	09-01-0042	ATWL LBL USC, LLC 3" X 15" PRO-CUT	1
10	09-01-0043	ATWL LBL USC, LLC 6" X 19" PRO-CUT	2
11	09-02-0001	ATWK LBL DANGER FINGERS	1
12	09-02-0002	ATWK LBL DANGER GUARDS	1
13	09-02-0011	ATWK LBL WARNING MOVING PARTS	1
14	10370B	TROUGHING PAN UB DUAL DRV	1
15	10370C	TOP COVER DUAL DRV UB	1
16	13-08-0461	ASSY UB HEAD SECT 6IN DRV	1
17	13-08-0462	ASSY DUAL UB TAKE-UP SPLICE	1

UNDERBIN CONVEYOR

7.5 HP - 10HP DRIVE ASSEMBLY (13-05-0329)



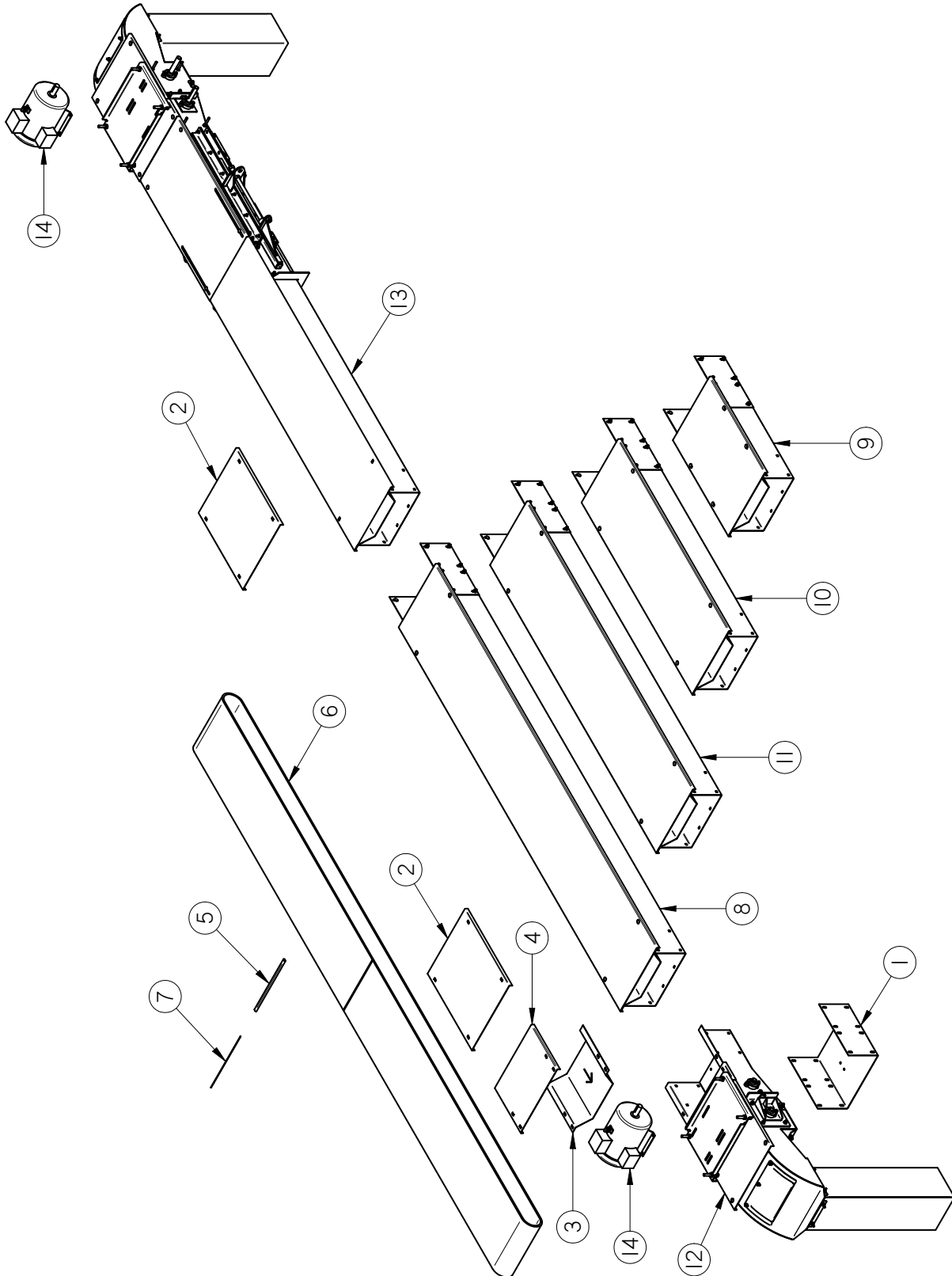
UNBERBIN CONVEYOR

7.5 HP - 10HP DRIVE ASSEMBLY (13-05-0329)

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	CHAIN CTNG LINK 50P	1
4	01-08-0037	BUSH 1.000IN BORE TYPE SK	1
5	01-08-0076	SHV 2BLT PD 3.4 2B3.4SH SH BUSH	1
6	01-08-0081	BUSH 1.375IN BORE TYPE SH	1
7	01-08-0087	SHV 2B110SK	1
8	01-08-0107	BELT BX48	2
9	05-06-0104	WDMT GRD FRNT	1
10	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	5
11	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	8
12	09-02-0009	ATWK LBL WARNING ROTATING PARTS	1
13	09-02-0010	ATWK LBL DANGER ELECTROCUTION	1
14	09-02-0012	ATWK LBL DANGER MISSING SHIELD	1
15	1036C2	GRD BACK	1
16	280-3-0119	CHAIN #50 31IN	1

UNDERBIN CONVEYOR

DUEL DRIVE CONFIGURABLE TOP ASSEMBLY



UNBERBIN CONVEYOR

DUEL DRIVE CONFIGURABLE TOP ASSEMBLY

Item #	Part #	Description	Qty
1	05-10-2935	SPLICE PLATE-FORMED UB	X
2	05-10-3510	PLT CNVR SPLICE CVR	X
3	1036BF	TROUGHING PAN HEAD SECTION	X
4	1036C0	TOP COVER HEAD SECTION UB	X
5	11-02-0064	SPLICE BELT U2 UNIBAR 15.75IN LG	X
6	11-02-0101	BELT - CUT TO LENGTH	X
7	11-02-0161	CABLE BELT SPLICE NYL COATED STEEL	X
8	13-08-0035	ASSY UB INTERMEDIATE 10 FT	X
9	13-08-0036	ASSY UB INTERMEDIATE 2.5 FT	X
10	13-08-0037	ASSY UB INTERMEDIATE 5.0 FT	X
11	13-08-0038	ASSY UB INTERMEDIATE 7.5 FT	X
12	13-08-0461	ASSY UB HEAD SECT 6IN DRV	X
13	13-08-0463	ASSY DUAL UB RVRS DSCHG	X
14	SEE TABLE 1	CONVEYOR MOTOR	X

TABLE 1	
Part #	Description
01-01-0151	MOTOR 5HP 3PH 230V, 460V
01-01-0152	MOTOR 10HP 3PH 230V, 460V
01-01-0143	MOTOR 5HP 3PH 575V
01-01-0173	MOTOR 10HP 3PH 575V

UNDERBIN CONVEYOR

NOTES:

USC LIMITED WARRANTY

SECTION I

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.

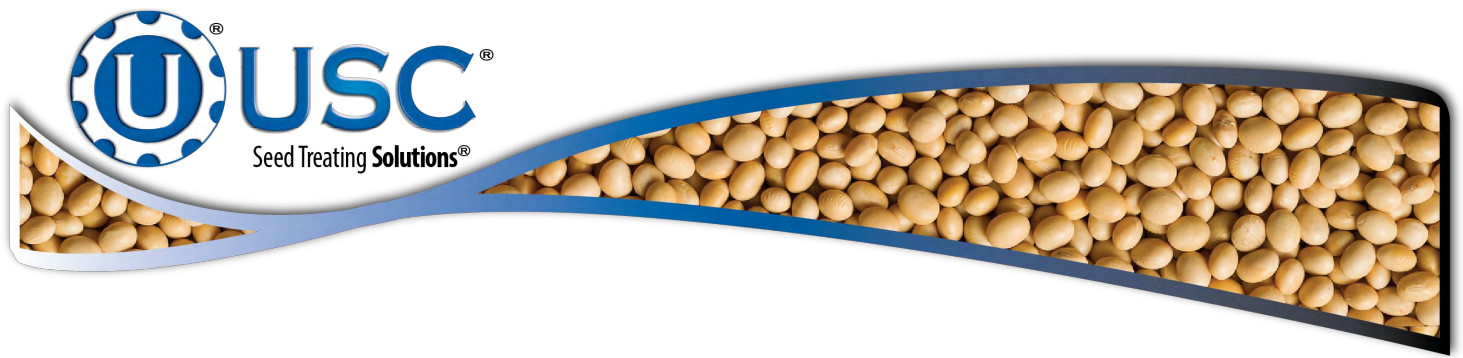
2. **Other Limits:** THE FOREGOING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Manufacturer does not warrant against damages or defects arising from improper installation (where 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.



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