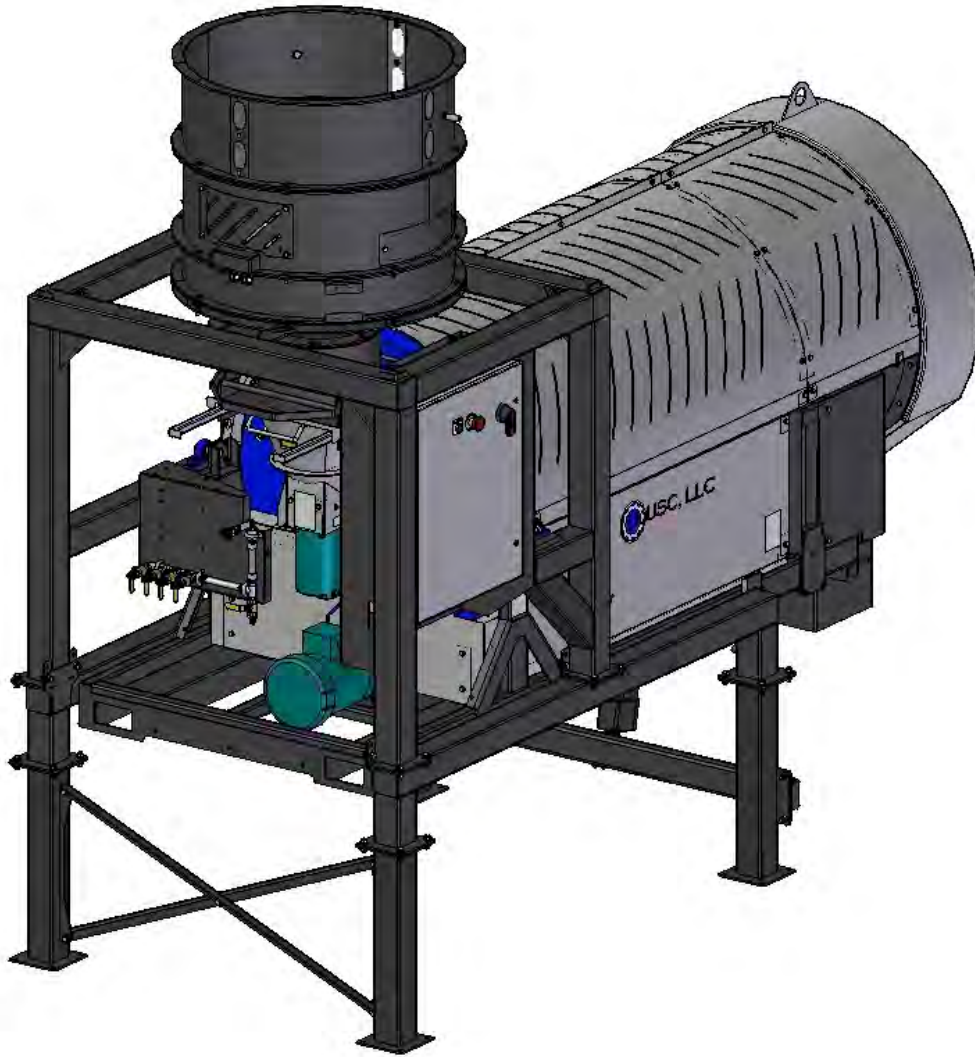




LPV SEED TREATER

Operators Manual



Document: TD-09-06-1028

Revision: D



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 LPV Seed Treater. 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.

LPV SEED TREATER

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 serial number is located on the right side of the control panel mounting bracket.



SERIAL NUMBER: _____

TABLE OF CONTENTS

<u>Section</u>	<u>Contents</u>	<u>Page #</u>
Section A	Safety Instructions	5
	C2D2 Specifications and Labels	18
Section B	Installation	19
	LPV Automated Treater Set-up	20
Section C	Mechanical Operation	36
	LPV Treater with Seed Wheel Overview	36
	Seed Wheel.....	37
	Seed Wheel with Atomizer Chamber.....	38
	LPV Treater with Loss-in-Weight Overview	39
	Loss-in-Weight Scale with Atomizer Chamber	40
	LPV Treater with High Capacity Weigh Belt Overview	41
	Weigh Belt.....	42
	Weigh Belt with Atomizer Chamber.....	43
	High Capacity Weigh Belt with Atomizer and Nebulizer	44
Rotating Drum Overview.....	46	
Section D	Electrical Operation	47
Section E	Calibration	49
	Determining Seed Cup Weight	49
Section F	Troubleshooting	51
	Proximity Switch Adjustment Guide	53
Section G	Maintenance	54
Section H	Storage	64
Section I	Mechanical Drawings	67
Section J	Limited Warranty	197

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.

If any of the required regularly scheduled maintenance is located above the reach of the operator, they should follow the companies normal safe practices of reaching that particular height, utilizing the companies specified equipment and following normal safety precautions.

When working with treatment chemicals, operators should always wear protective gloves, safety glasses, and follow the companies safety precautions in the case of any spillage or operator contamination.

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.

MOTS ET SYMBOLES SÉCURITÉ

Il est très important que les opérateurs et le personnel d'entretien à comprendre les mots et les symboles qui sont utilisés pour communiquer des informations de sécurité. Mots de sécurité, de leur signification et le format, ont été normalisés pour les fabricants américains et publié par l' American National Standards Institute (ANSI). La Communauté européenne (CE) a adopté un format différent sur la base de l'Organisation internationale de normalisation (ISO) et des directives de machines applicables. Les deux formats sont présentés ci-dessous. Les symboles graphiques ne sont pas standardisés, mais la plupart des fabricants utilisent une variante de ceux observés dans ce manuel.



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



Indique une situation extrêmement dangereuse qui, si pas évitée, entraînera la mort ou des blessures graves.



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



Indique une situation potentiellement dangereuse qui, si pas évitée, pourrait entraîner la mort ou des blessures graves.



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



Indique une situation potentiellement dangereuse qui, si pas évitée, peut entraîner des blessures mineures ou modérées et / ou des dommages.



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



Fournit des informations supplémentaires que l'opérateur doit être conscient de d'éviter une situation potentiellement dangereuse.



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



Avis est utilisé pour informer les gens des informations de maintenance qui ne est pas danger lié importante installation, l'exploitation ou.



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

Symbole de puissance verrouillage obligatoire. Débranchez, de verrouillage et de déconsignation énergie électrique et d'autres sources avant d'inspecter, de nettoyage ou de la maintenance de ce panneau.



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.

Sécurité Symbole International Alert . Le point d'exclamation (!) Entouré par un triangle jaune indique que un risque de blessure existe . Cependant, il ne indique pas la gravité des blessures potentielles. Le point d'exclamation (!) Est également utilisé avec les symboles DANGER, AVERTISSEMENT et ATTENTION de sorte que le risque de blessure est indiqué.



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

Symbole de danger d'électrocution . Ce symbole indique qu'un danger d'électrocution existe. Des blessures graves ou la mort pourraient résulter de contact haute tension.



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

Danger d'électrocution international. Ce symbole indique qu'un danger d'électrocution existe. Des blessures graves ou la mort pourraient résulter de contact haute tension.



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

Obligatoire Lire Symbole d'action Manuel. (Format ISO)
Ce symbole indique le personnel de lire le manuel de l'opérateur avant de réparer ou d'utiliser l'équipement.



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

Obligatoire Lire Symbole d'action Manuel . Ce symbole indique le personnel de lire le manuel de l'opérateur avant de réparer ou d'utiliser l'équipement.

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.”

LES PROCEDURES DE VERROUILLAGE / ETIQUETAGE

Verrouillage / étiquetage est le placement d'un verrouillage / tag sur un dispositif d'isolement de l'énergie conformément à une procédure établie. Lors de la prise hors service des équipements pour effectuer la maintenance ou de réparation, toujours suivre les procédures de verrouillage / débranchement comme indiqué dans la norme ANSI Z344.1 et / ou la norme OSHA 1910.147. Cette norme "oblige les employeurs à établir un programme et appliquer des procédures pour la fixation des dispositifs de verrouillage appropriés ou des dispositifs déconsignation à l'énergie dispositifs d'isolement et d' autre machines ou équipements désactiver pour éviter énergisant inattendu, start-up, ou la libération de l'énergie stockée dans le but de prévenir les blessures aux employés."

EMERGENCY STOP



There is an Emergency Stop push button on all LPV Seed Treaters which is located on the Treater Control Panel. The LPV 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.

ARRET D'URGENCE

Il ya un bouton-poussoir d'arrêt d'urgence sur tous les traiteurs de semences LPV qui est situé sur le Panneau de configuration Traiteur. Le LPV automatisé Traiteur dispose d'une autre arrêt d'urgence bouton poussoir sur le panneau de commande principal. Actionneurs de freinage d'urgence doivent être de couleur rouge. Le fond immédiatement autour de l'actionneur de l'appareil doit être de couleur JAUNE. Le dispositif actionné actionneur de bouton-poussoir doit être de la paume ou champignons type de tête.

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.

ARRET CONTROLÉ

Ce est l'arrêt du mouvement de la machine en réduisant le signal de commande électrique à 0 (zéro) dès que le signal d'arrêt a été reconnu.

HAZARD REVIEW

RISQUE EXAMEN



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.

Risque d'électrocution

Les accidents d'électrocution sont les plus susceptibles de se produire lors de la maintenance du système électrique ou pour travailler sur ou à proximité du câblage haute tension exposé. Ne existe pas ce danger lorsque l'alimentation électrique a été déconnecté, bien verrouillé et étiquetés sur.



! WARNING

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.

Démarrer danger automatique

! AVERTISSEMENT

Cet équipement peut être contrôlé par un système automatisé et peut démarrer sans avertissement. Sources de l'équipement contrôlé à distance non débranché correctement, lock-out, et tous déconsignation énergie crée une situation très dangereuse et pourrait causer des blessures ou même la mort. Se IL VOUS PLAÎT rester à l'écart et d'être vigilant.

LPV SEED 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.



LPV SEED 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.

▲ WARNING

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.

! AVERTISSEMENT

Avant de placement de l'équipement, assurez-vous que sol est relativement plat. L'équipement peut tomber ou mal fonctionner si le sol est trop inégale, endommager l'équipement et / ou causer des blessures.

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.



WARNING

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

! AVERTISSEMENT

Situé sur l'équipement USC vous trouverez des étiquettes de sécurité. Veuillez à toujours lire et suivre toutes les instructions sur les étiquettes.



WARNING

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

! AVERTISSEMENT

Gardes fournis avec des équipements USC doivent rester en place pendant le fonctionnement.

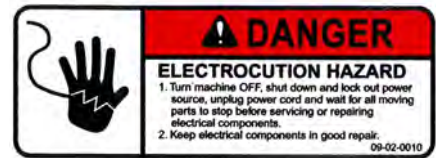
LPV SEED TREATER

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

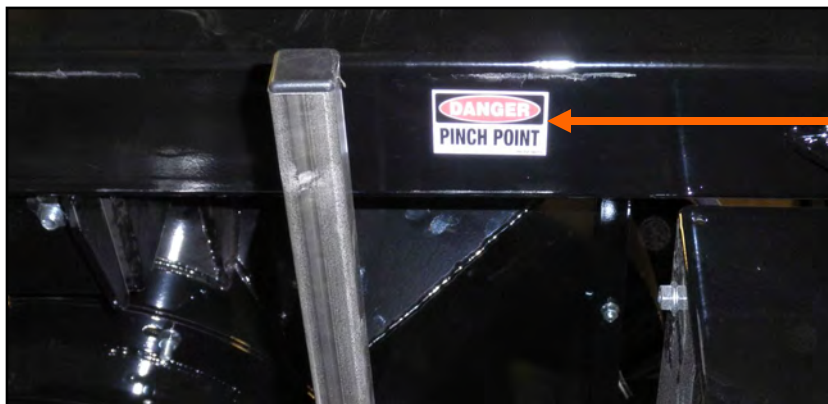
REMEMBER—If Safety Labels have been damaged, removed, become illegible, or parts replaced without safety labels, new labels must be applied. New safety labels are available from USC at (785) 431-7900.



Part # 09-02-0003

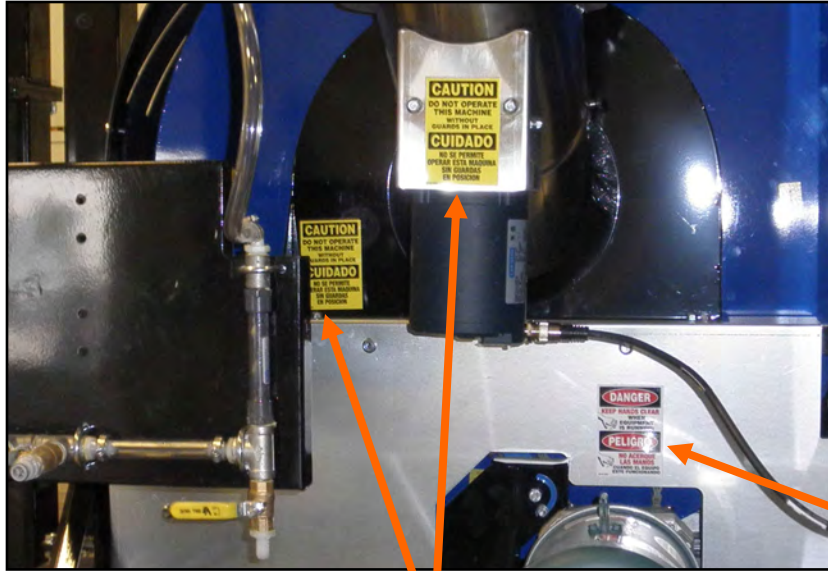


Part # 09-02-0010



Part # 09-02-0015

LPV SEED TREATER



Part # 09-02-0002



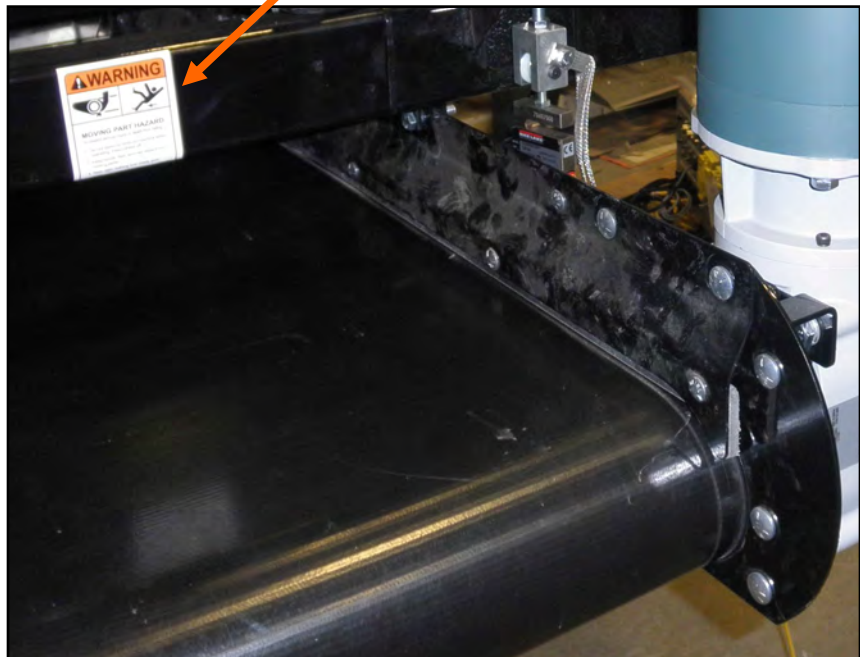
LPV SEED TREATER



Part # 09-02-0001



Part # 09-02-0011



C2D2 SPECIFICATIONS AND LABELS

If any of the panels are located in the hazardous area described in the installation section (see page 19), the following criteria must be met.

1. All 120VAC connections must be hard wired to a listed IP65 rated enclosure in accordance with local electrical codes.
2. The C2D2 certifications are only valid for equipment operating at 60 HZ.
3. The approved operating temperature for this equipment is between 0°C (32°F) and 40°C (104°F).
4. All RJ45 and USB pass-through connector caps must remain closed to achieve a C2D2 rating. Hard wire these connections in accordance with local electrical codes.

The following labels and certification plates must be mounted to the outside of the control panel so that they are in plain view.

MFG. By:  USC
Max Voltage: 240V, 1PH, 60Hz
Total FLA: 61
Largest Motor: 28 Amps
Equipment Model: HV086H41500
Suitable to be used in Class II, Div 2, Group G, T4A Hazardous Locations

!!WARNING!!
DISCONNECT POWER BEFORE REMOVING COVERS. KEEP COVERS/
CONNECTIONS CLOSED WHILE CIRCUITS ARE LIVE. SEE INSTRUCTION MANUAL
!!AVERTISSEMENT!!
DÉBRANCHER L'ALIMENTATION AVANT DE RETIRER LES COUVERCLES. GARDEZ
LES COUVERCLES / CONNEXIONS FERMÉS PENDANT QUE LES CIRCUITS SONT EN
CIRCUIT. VOIR LE MANUEL D'INSTRUCTIONS

!!WARNING!!
EXPLOSION HAZARD. DO NOT REMOVE OR REPLACE CONNECT OR DISCONNECT
WHILE CIRCUIT IS LIVE UNLESS THE AREA IS FREE OF IGNITIBLE
CONCENTRATIONS.
!!AVERTISSEMENT!!
RISQUE D'EXPLOSION. NE PAS ENLEVER OU REMPLACER LA CONNEXION OU LA
DÉCONNEXION TANT QUE LE CIRCUIT EST EN CIRCUIT SAUF SI LA ZONE EST
EXEMPTÉ DE CONCENTRATIONS IGNITIABLES.



INSTALLATION**SECTION
B**

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



HAUTE TENSION ~ Toujours débrancher la source d'alimentation avant de travailler sur ou près du panneau de commande ou les câbles.



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



HAUTE TENSION ~ Utilisez des outils isolés lors des réglages, tandis que les commandes sont sous tension.



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



Installation permanente peut exiger cordons électriques, des tubes supplémentaires chimique, et les conduites d'air, puisque chaque installation est.

USC equipment may operate within a Group II, Division 2, Class G hazardous area which contains seed dust. If so, the equipment must be certified for use in this area. To avoid the possibility of an explosion ignited by static electricity, all USC equipment should be grounded by attaching a bonding strip to the metal frame and securing that strip to the factory ground point.

If labeled accordingly, USC products are designed to comply with CSA 22.1 for use in a Class II, Division 2, Group G environment. When connecting the USC system power cord into a power supply, first determine if the supply is also within the hazardous area where the USC system is located. If so, we recommend that the power be hard wired into the source. Do not use a standard electrical plug for this purpose. For other acceptable methods of connecting to a power source, or any other additional miscellaneous equipment to the USC system within a hazardous location, please consult CSA 22.1, Section 18-200 and 18-274. Review the appropriate section and ensure compliance with one of the options given.

When connecting to USC equipment from a remote location, and the USC equipment is in a hazardous Class II, Group G environment, customers are advised to follow the requirements within CSA 22.2 no. 25. More details may also be found in CSA 22.1 18-252 (wiring methods). There are various options covered within this section for wiring in a Class II, Group G (dust) environment. Select the best method suited for your specific location.

LPV SEED TREATER

équipements USC peut fonctionner dans un Groupe II, Division 2, Classe G zone dangereuse qui contient la poussière des semences. Si oui, l'équipement doit être certifié pour une utilisation dans ce domaine. Pour éviter la possibilité d'une explosion enflammé par l'électricité statique, tous les équipements USC doit être mis à la terre en attachant une bande de liaison à la structure métallique et la sécurisation cette bande au point de masse du fabricant.

Si étiquetés en conséquence, les produits USC sont conçus pour être conformes à la norme CSA 22.1 pour une utilisation dans une Classe II, Division 2, Groupe G environnement. Lors du raccordement du USC alimentation du système cordon dans une alimentation, d'abord déterminer si l'offre est également dans la zone dangereuse où se trouve le système USC. Si oui, nous recommandons que le pouvoir soit câblé dans la source. Ne pas utiliser une prise électrique standard à cet effet. Pour les autres méthodes acceptables de se connecter à une source d'alimentation, ou tout autre matériel divers supplémentaire au système USC dans un endroit dangereux, se il vous plaît consulter la norme CSA 22.1, Section 18-200 et 18-274. Consultez la section appropriée et assurer la conformité avec l'une des options proposées.

Lors de la connexion à l'équipement USC depuis un emplacement distant et l'équipement USC est dans une classe dangereuse II, Groupe G environnement, les clients sont invités à suivre les exigences dans CSA 22.2 no. 25. Plus de détails peuvent également être trouvés dans 22,1 CSA 18-252 (Les méthodes de câblage). Il existe diverses options couvertes dans cette section pour le câblage dans une Classe II, Groupe G (poussière) environnement. Sélectionnez la meilleure méthode adaptée pour votre emplacement spécifique.

LPV AUTOMATED TREATER SET - UP (ALL LPV TREATERS)

The following steps outline the initial set-up of your USC Seed Treating system:

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. Using a forklift, place the seed treater in the desired position on a level surface.

NOTICE

USC highly recommends that the seed treater be set up inside a building or any covered structure to protect the machine from weathering.

AVIS

USC recommande fortement que le traitement de semences être mis en place à l'intérieur d'un bâtiment ou d'une structure couverte pour protéger la machine des intempéries.

4. Remove any boxes and cords from the drum of the treater.

LPV AUTOMATED TREATER SET - UP (ALL LPV TREATERS)



The LPV Treater **CAN NOT** be lifted using the forklift pockets and or transported without all four of the shipping brackets re-installed. Failure to do so may cause damage to the tilting frame.



Le LPV Traiteur **NE PEUT PAS** être soulevée à l'aide des passages de fourches et ou transporté sans les quatre supports de transport ré-installé. Ne pas le faire peut causer des dommages au châssis basculant.

5. Install the drum lift actuator kit (03-17-0111) that is shipped separately using steps one through six.

STEP 1: Support the discharge end of the treater drum using the lift ring at the top of the discharge assembly.



STEP 2: Remove all four of the shipping support brackets.



STEP 3: Lower the drum slowly until the drum frame is resting on the dead stop pins on both sides of the treater frame.

LPV AUTOMATED TREATER SET - UP (ALL LPV TREATERS)



When removing the actuator (03-17-0104) from the box, ensure that you do not allow the shaft to rotate. The actuator was installed and tested at the factory so the shaft is in the correct position before it was disassembled prior to shipping.

STEP 4: Insert a clevis pin (06-09-0058) attaching the bottom of the actuator to the bracket on the treat-er frame cross member.



STEP 5: Insert the second clevis pin (06-09-0058) and the two flat washers (06-05-0005) attaching the end of the actuator piston to the bracket on the drum frame. The washers should be on the outside of the frame bracket.

NOTICE

If the treater drum is setting on the dead stop pins and the shaft mounting hole on the actuator is short of lining up to insert the clevis pin, you may rotate the shaft one half rotation only to lengthen it. **Any more rotation could affect the proper travel length.**



STEP 6: Insert a cotter pin (06-09-0087) in the clevis pins at both ends of the actuator. Then, attach the yellow cable to the motor connector

LPV AUTOMATED TREATER SET - UP (ALL TREATERS)

NOTICE

After the actuator is installed it should move freely by hand. If something is binding, damage to the actuator or the mounting brackets could occur.

AVIS

Après l'actionneur est installé, il doit se déplacer librement à la main. Si quelque chose est obligatoire, les dommages à l'actionneur ou les supports de montage pourrait se produire.

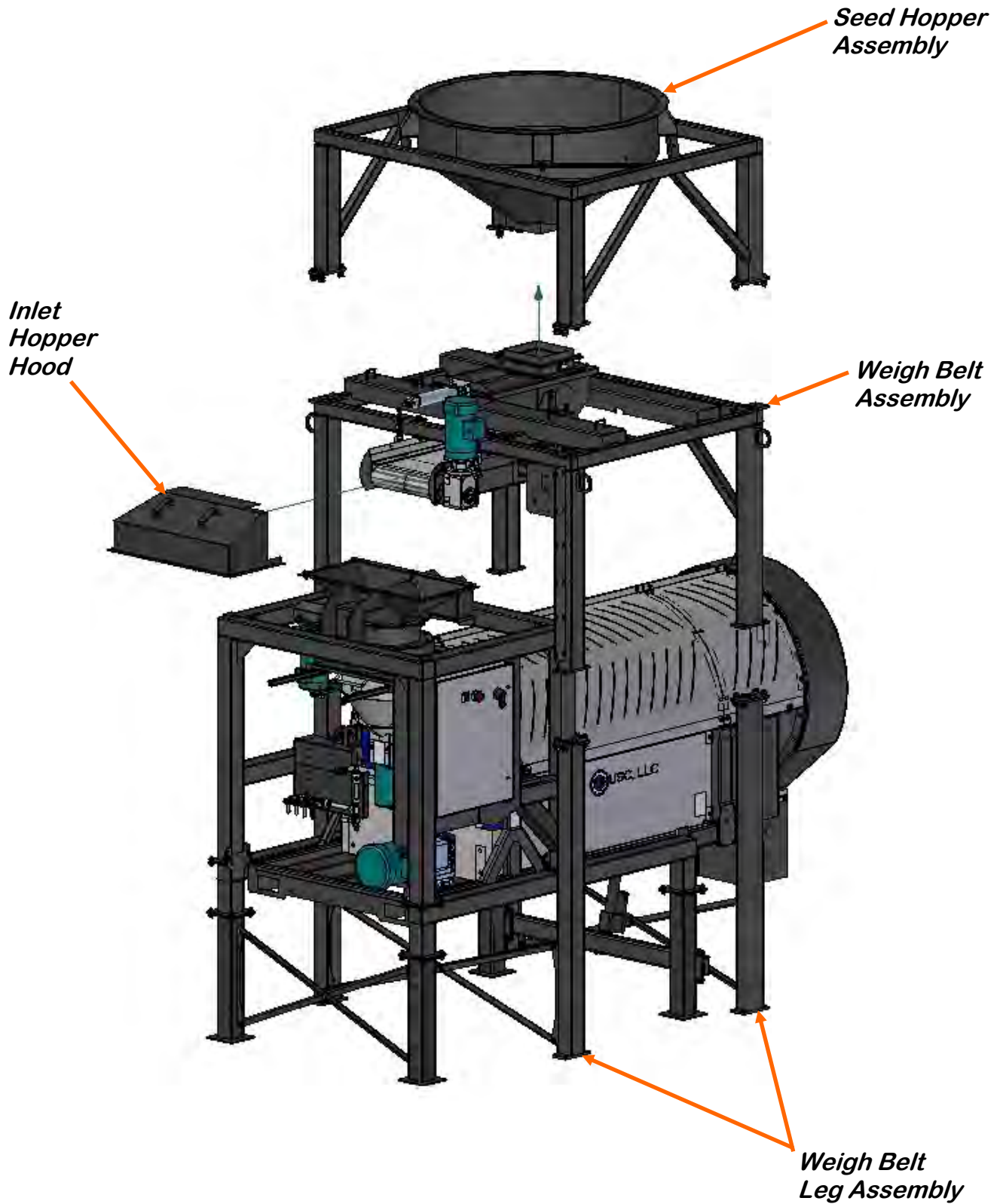
6. Anchor the seed treater in position to prevent the machine from moving during operation.
7. Inspect machine thoroughly for screws, bolts, fittings, etc. which may have come loose during shipping.
8. The pump stand(s) should be placed on level ground close to the seed treater.
9. Attach the chemical tubing from the pump stand(s) to the static mixer on the seed treater (below). Additional tubing may be added or removed to accommodate your installation.



*Static Mixer
Assembly*

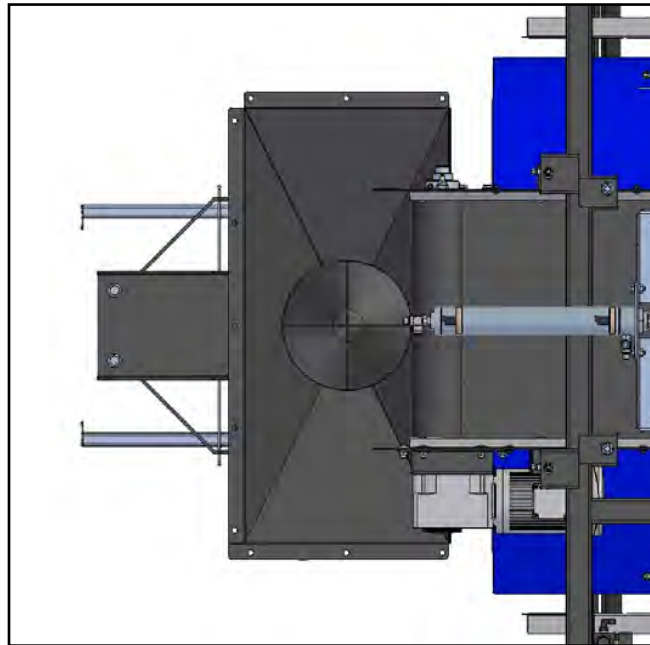
LPV SEED TREATER

LPV AUTOMATED TREATER SET - UP (WEIGH BELT TREATERS)



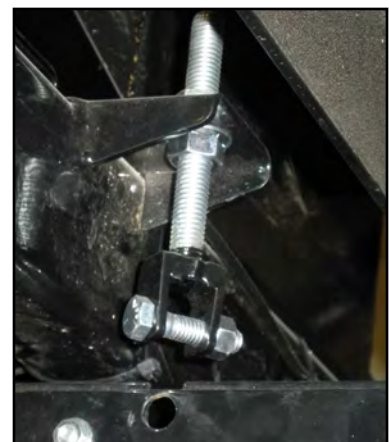
LPV AUTOMATED TREATER SET - UP (WEIGH BELT TREATERS)

1. Remove the inlet hopper hood from the inlet assembly and set it and all of the fasteners aside.
2. Using a forklift, raise the weigh belt assembly and position it so it is centered left to right and the front end of the belt is a few inches past the edge of the inlet as shown in the top view below.



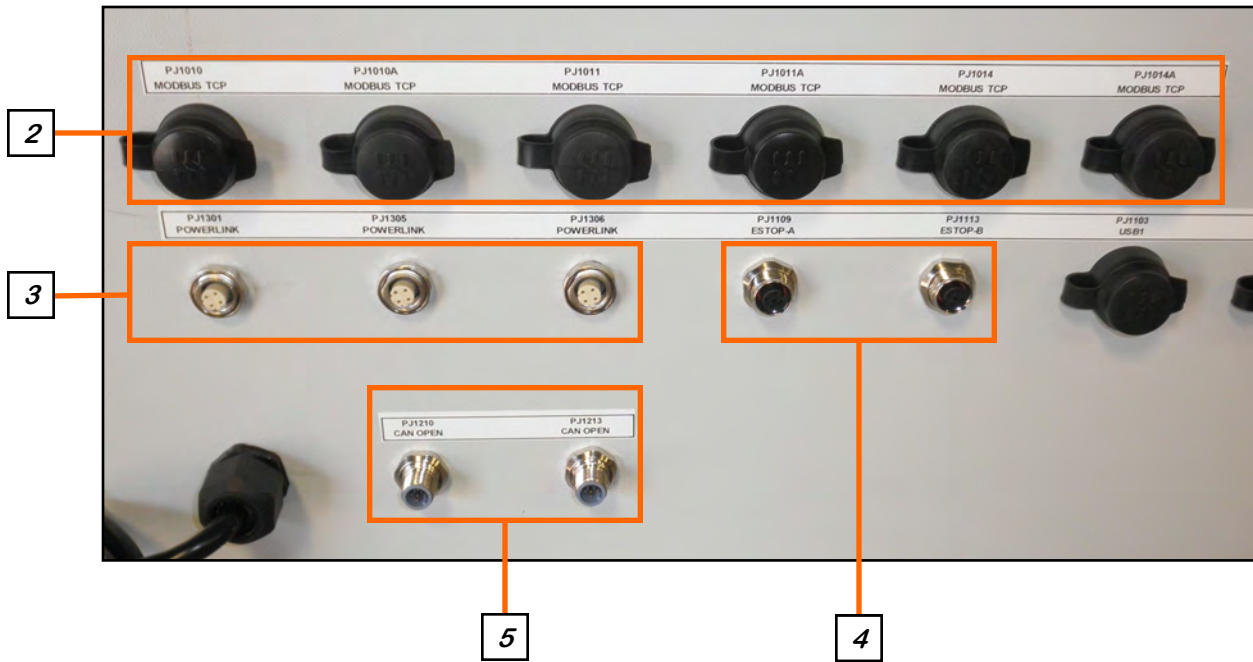
3. Reassemble the inlet hopper hood.
4. Anchor the seed treater and weigh belt in position to prevent the machine from moving during operation.
5. Inspect machine thoroughly for screws, bolts, fittings, etc. which may have come loose during shipping.

7. Disconnect the four shipping brackets from the weigh belt allowing it to hang from the load cells. Reattach them to the frame mounting brackets for future use (right).



LPV TREATER CONNECTIONS (ALL TREATERS)

VERSION 4 MAIN CONTROL PANEL

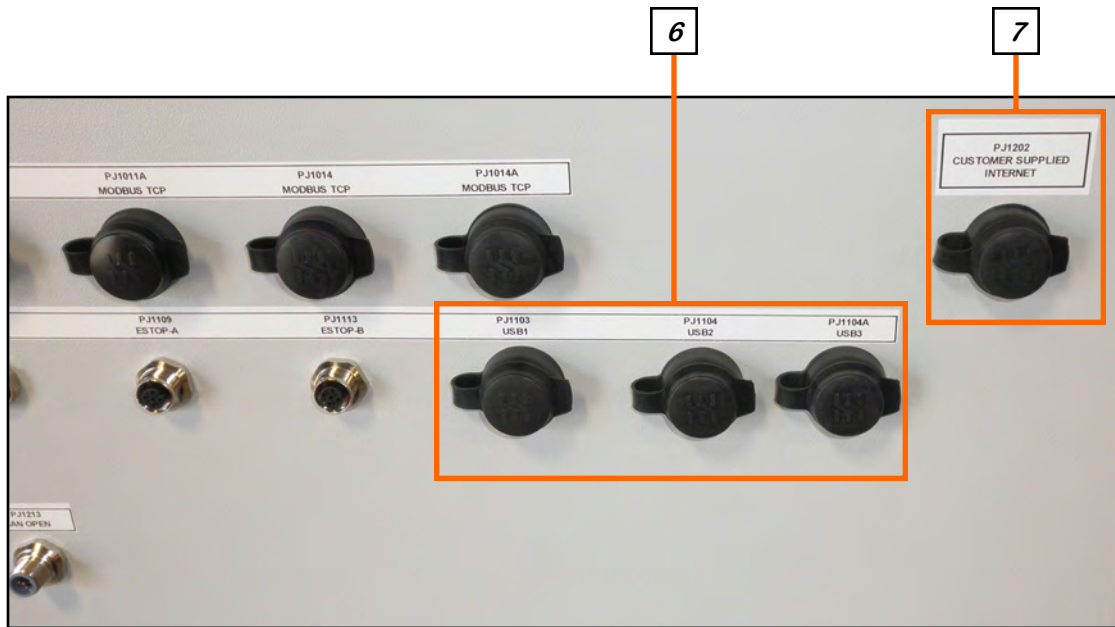


1. Attach the Main Control Panel to the control panel stand using the provided hardware. Determine the permanent location you will be operating the system from, then anchor the stand to the floor. The panel may also be mounted to a wall.
2. There are six MODBUS TCP Ethernet connectors on the Main Control Panel (MCP). If the installation has a version 3 four pump or twelve pump controller panels, connect them using one of the Ethernet Ports. These are also used for connecting scale heads, printers, etc.
3. Connect a cable with four pin connector to one of the three Powerlink connectors on the MCP. Connect the other end to the Powerlink connector on the closest control panel. Repeat this process until all control panels are connected. It may be MCP to Treater to Tri-Flo® to Bin Site panel. The order or number of devices is not important. It is important that all panel are connected. All pump stand control panels will need to connected in a similar configuration.
4. Connect the red cable to the PJESTOPA on the Main Control Panel (MCP) and then to the PJESTOPB on the next panel that is closest to the MCP. Repeat this process until all control panels are connected in a daisy chain configuration. It may be MCP to Treater to Tri-Flo® to Bin Site panel. The order or number of devices is not important. It is important that each cable is ran from an A connection to a B connection (never A to A or B to B), and that no control panel is left out of the chain. Connect the two red plugs onto each of the remaining open PJESTOP connectors on the first and last panel.

LPV TREATER CONNECTIONS (ALL TREATERS)

VERSION 4 MAIN CONTROL PANEL

- 5 For Loss In Weight treaters, connect one gray cable with light blue end to the PJ1210 or PJ1213 CAN OPEN connection. It does not matter which one. Use the plug on the unused connector. Connect the other end of the cable to the PJ-CAN connector on the Loss In Weight treater panel (see page 32). It does not matter which one. Use the other plug on the unused PJ-CAN connector.
- 6 There are three USB ports located on the bottom of the panel that may be used to plug in a mouse, keyboard or download reports to a compact flash device.
- 7 There is also a connector (PJ1202) where the customer supplied internet connection is made. This is required to use the E-Mail Reports function.



NOTICE

If using a scale printer, plug the printer communication cable into one of the available MODBUS Ethernet ports located on the bottom of the main control panel. The printer must be located in a safe area.

Do not use within a hazardous area which contains seed dust.

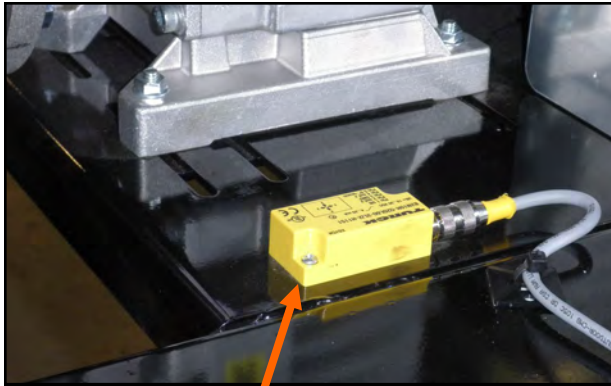
AVIS

Si vous utilisez une imprimante à échelle, branchez le câble de communication de l'imprimante dans l'un des ports Ethernet MODBUS disponibles situés en bas du panneau de commande principal. L'imprimante doit être située dans une zone sécurisée. **Ne pas utiliser dans une zone dangereuse contenant de la poussière.**

LPV SEED TREATER

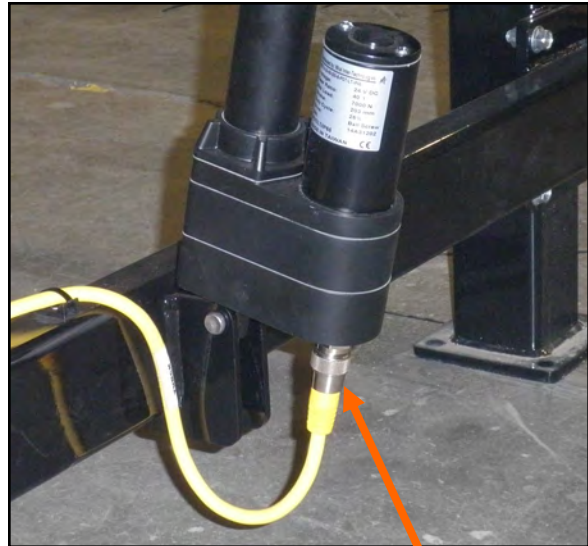
VERSION 4 LPV TREATER CONNECTIONS (Seed Wheel & Weigh Belt)

DRUM LEVELING SENSOR



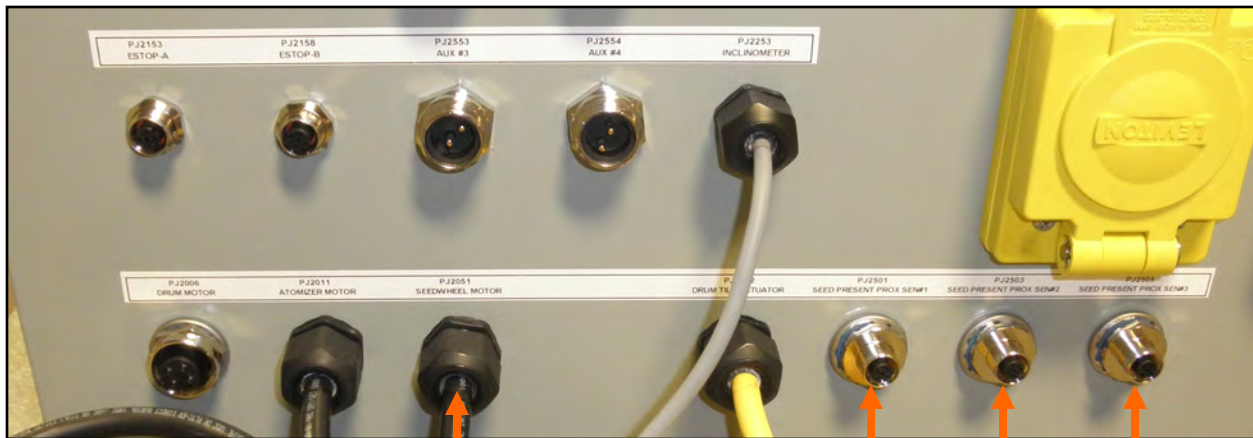
11

DRUM TILT ACTUATOR



12

VERSION 4 LPV TREATER CONNECTIONS (Seed Wheel Only)



15

16

17

18

15. Connect the PJ2051 seed wheel motor cable to the 4 pin connector on the seed wheel.

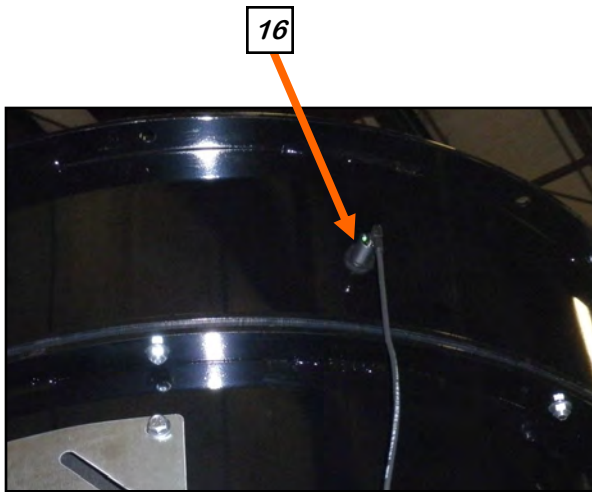
16. Connect the PJ2051 seed wheel motor cable to the 4 pin connector on the seed wheel.

LPV SEED TREATER

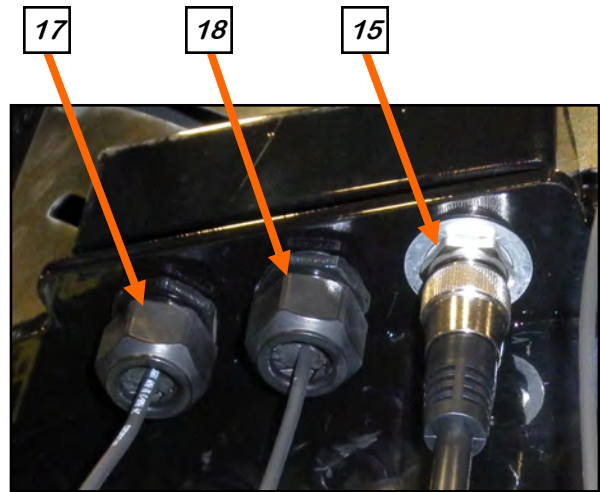
VERSION 4 LPV TREATER CONNECTIONS (Seed Wheel Only)

17. Connect the cable from the left side of the seed wheel cables to PJ2503.

18. Connect the cable from the center of the seed wheel cables to PJ2505.

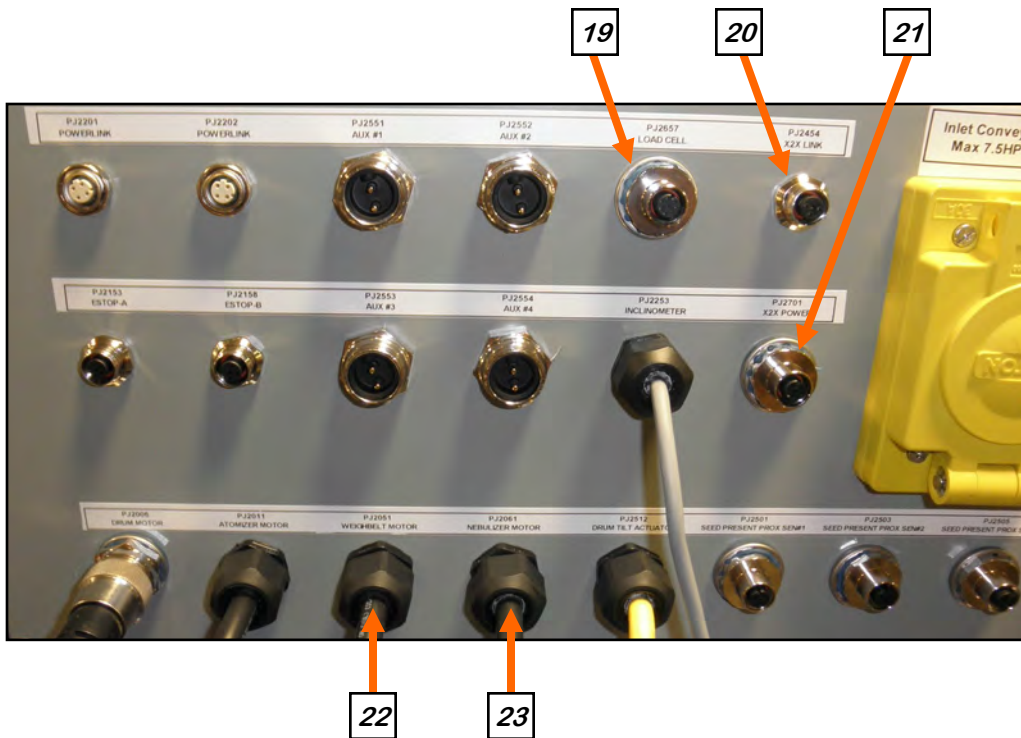


SMW HOPPER PROXIMITY SENSOR



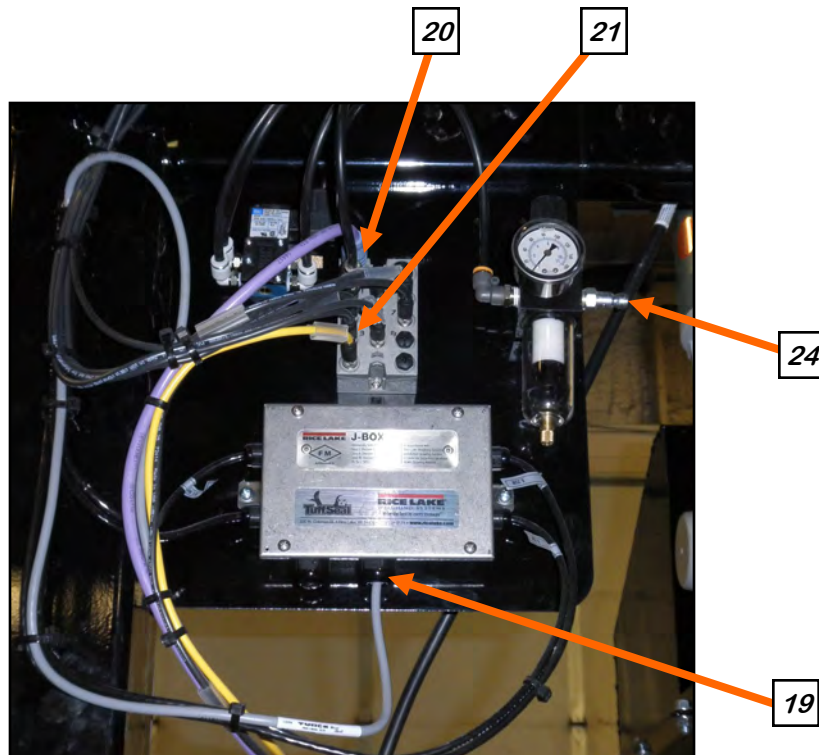
SEED WHEEL

VERSION 4 LPV TREATER CONNECTIONS (Weigh Belt Only)



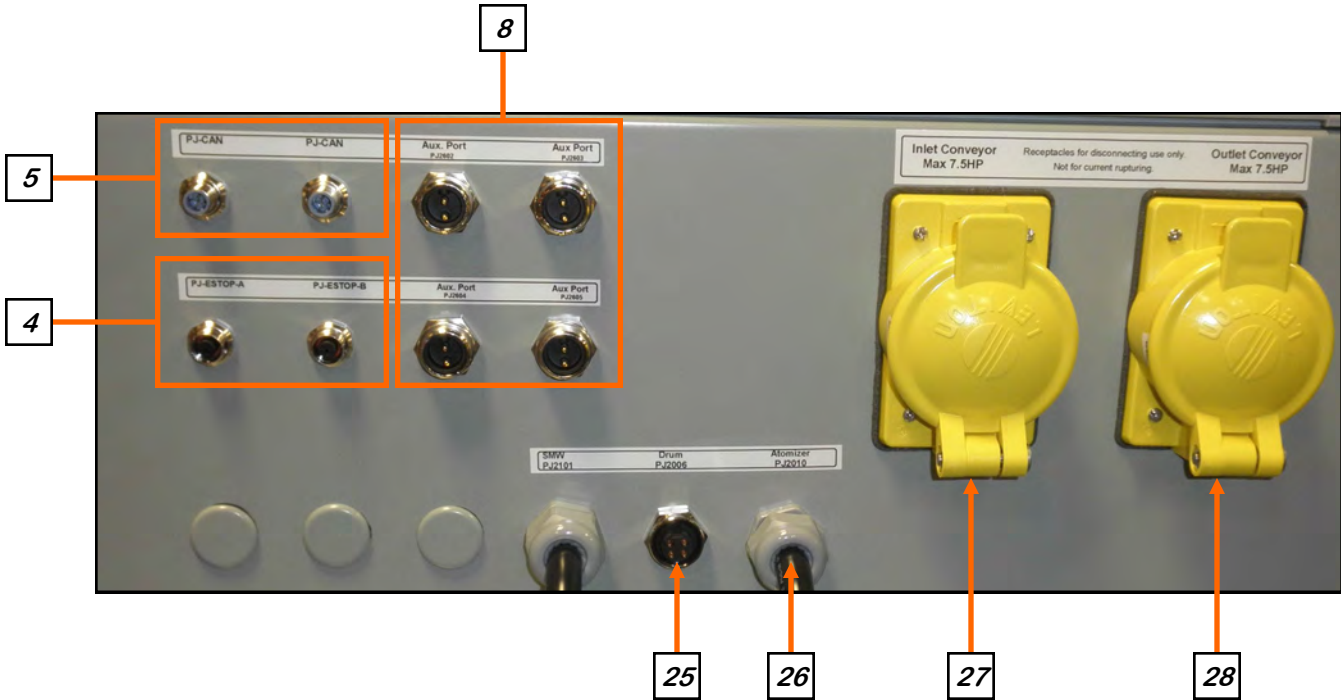
VERSION 4 LPV TREATER CONNECTIONS (Weigh Belt Only)

19. Connect the cable from the bottom of the load cell junction box to the PJ2657 LOAD CELL connector on the control panel.
20. Connect the communications cable at the top of the Remote I/O Block to the PJ2454 X2X LINK connector on the control panel.
21. Connect the power cable at the bottom of the Remote I/O Block to the PJ2701 X2X POWER connector on the control panel.
22. Connect the cable PJ2051 cable to the weigh belt motor.
23. Connect the cable PJ2061 cable to the nebulizer motor. The nebulizer is only available on the high capacity weigh belt.
24. The customer must provide a compressed air supply to the right side of the slide gate air pressure regulator. It is required that the air supply have an in-line customer supplied air dryer to protect the air system from contamination. Supply approximately 100 - 110 pounds of air pressure from the dryer to the regulator (top, left).



VERSION 3 LPV TREATER CONNECTIONS (Loss In Weight Only)

LIW TREATER CONTROL PANEL

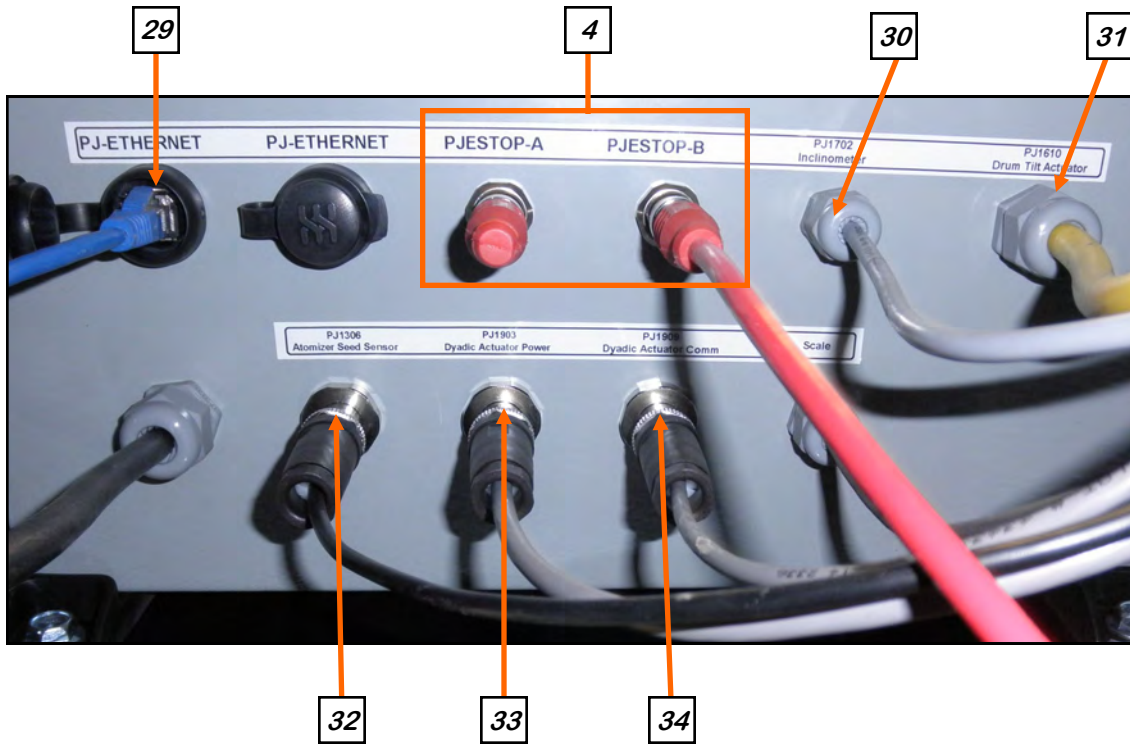


25. Connect the cable from the drum motor to PJ2006 on the treater control panel.
26. Connect the PJ2010 connector from treater panel to the atomizer motor.
27. Connect the treater inlet conveyor to the bottom of the treater control panel.
28. Connect the treater outlet conveyor to the bottom of the treater control panel.
29. Connect an Ethernet cable from the main control panel MODBUS TCP to the I/O control panel.
30. Connect the cable from PJ1702 to the drum leveling sensor mounted next to the drum motor.
31. Connect the cable from PJ1610 to the drum tilt actuator mounted on the lower frame cross member.
32. Connect the cable from proximity sensor mounted in the hopper cone to PJ1306.

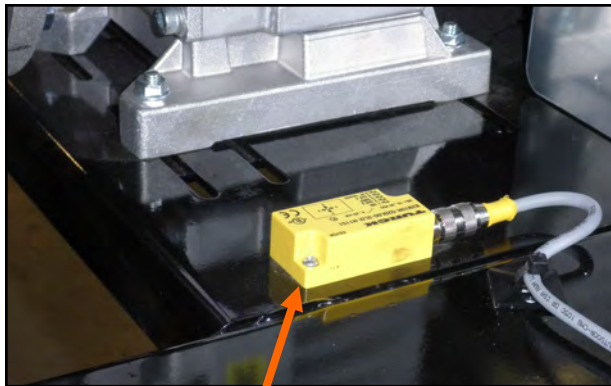
VERSION 3 LPV TREATER CONNECTIONS (Loss In Weight Only)

33. Connect the three pin power cable from the Dyadic Actuator to PJ1903.

34. Connect the four pin communication cable from the Dyadic Actuator to PJ1909.

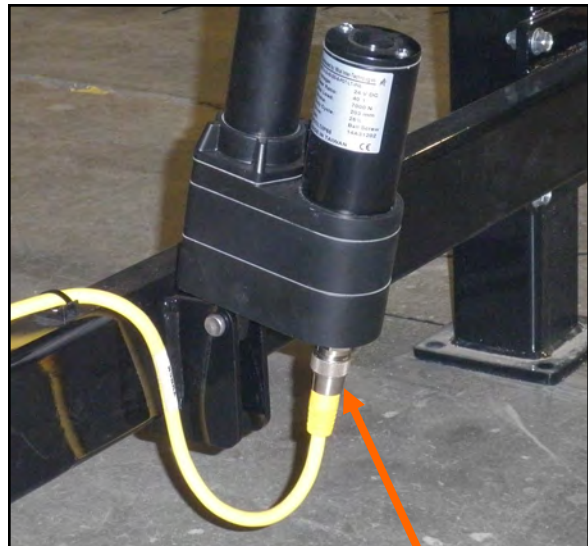


DRUM LEVELING SENSOR



30

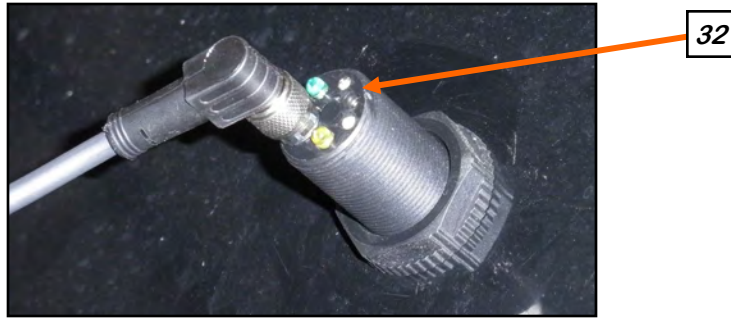
DRUM TILT ACTUATOR



31

VERSION 3 LPV TREATER ELECTRICAL CONNECTIONS (Loss In Weight Only)

LIW CONE PROXIMITY SENSOR



LPV LABELS CONTROL PANEL NAMEPLATES (ALL TREATERS)

35. 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. The USC system must be connected to the same electrical requirements as specified in the main control panel on the power requirement tag, or the electrical schematic shipped with the piece of equipment. This will power the USC LPV seed treater and any attached conveyors.

VERSION 4 MAIN CONTROL PANEL

Tag	Rating	Type
FU1007	4A	300 TL 250VAMP/1000V 120W
FU1204	4A	300 TL 250VAMP/1000V 120W
FU1101	200A	F1207D

VERSION 4 TREATER CONTROL PANEL

Fuse	Line	Size	Type
FU2006	2006, 2007, 2008	20A	CLASS CC 600V TBFS
FU2010	2010, 2011, 2012	5A	CLASS CC 600V TBFS
FU2101	2101, 2102, 2103	5A	CLASS CC 600V TBFS

VERSION 3 TREATER CONTROL PANEL

Fuse	Line	Size	Type
FU2006	2006, 2008	30A	CLASS CC 600V
FU2010	2010, 2012	10A	CLASS CC 600V
FU2101	2101, 2103	10A	CLASS CC 600V

VERSION 3 LIW I/O CONTROL PANEL

NOTICE

Flexible conduit is recommended for main power supply.

AVIS

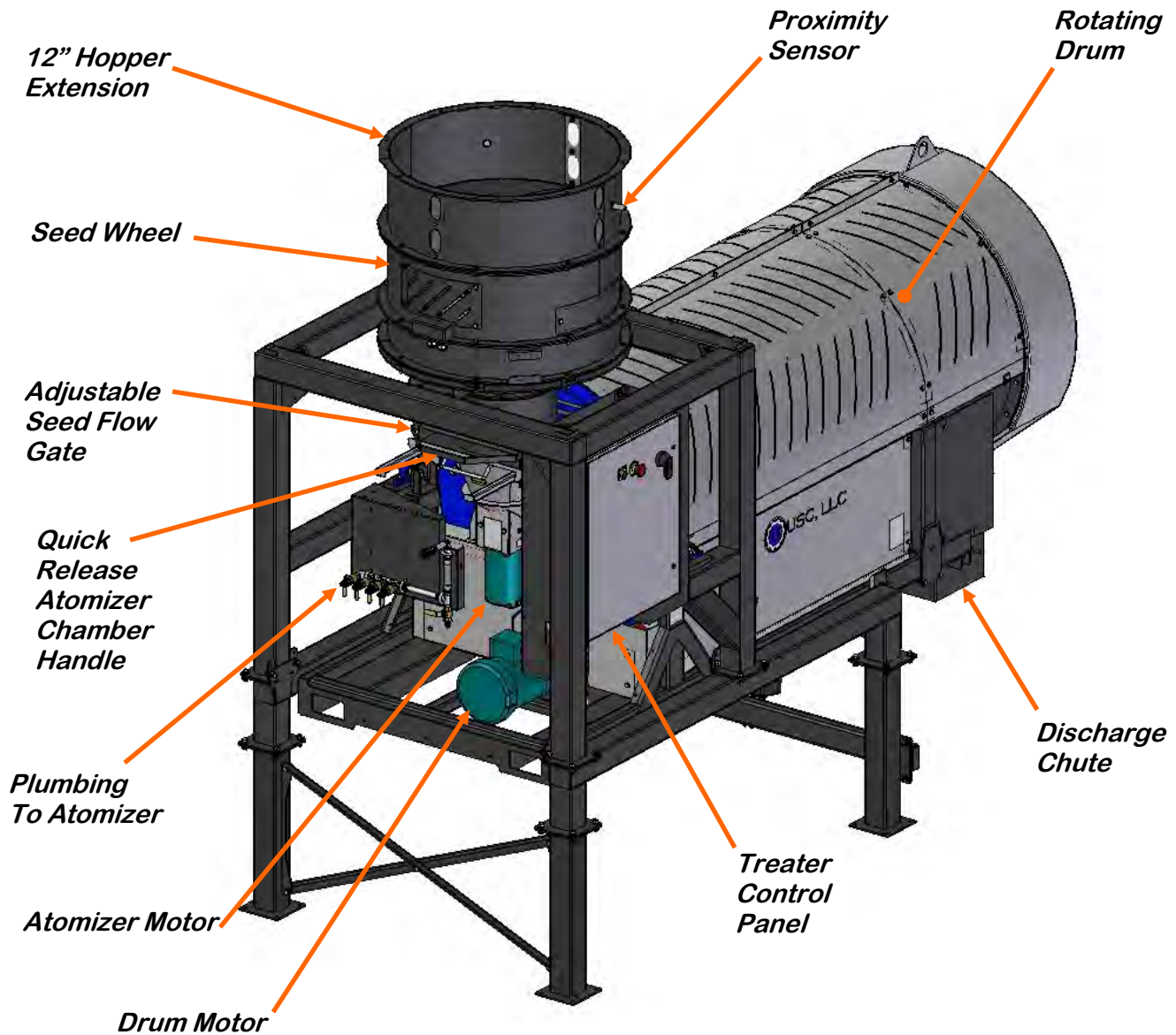
Conduit flexible est recommandé pour l'alimentation principale.

36. Provide 110V single phase power to the main control panel, I/O control panel and the pump stand(s). If any of the panels are located in the hazardous area described in the installation section (see page 19), all 110VAC connections must be hard wired to a listed type 4 rated enclosure.
37. Reverse the previous steps when removing the machine from its working position.

**SECTION
C**

MECHANICAL OPERATION

LPV TREATER WITH SEED WHEEL OVERVIEW



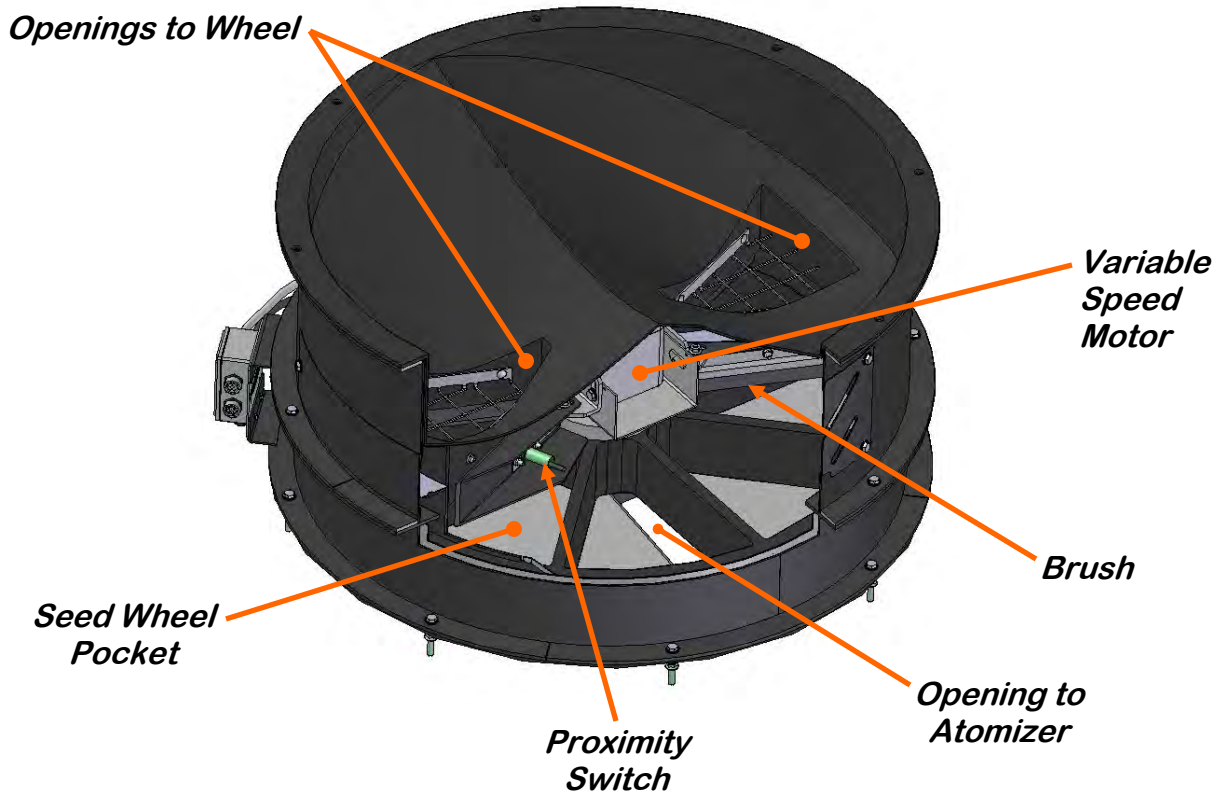
SEED WHEEL

The hopper is equipped with three proximity switches. The top switch controls the inlet conveyor and the lower switches, located in the seed wheel, control the pump(s). Refer to H-O-A Screen in section D. See the Proximity Switch Adjustment Guide in Section F for more in-depth information on these switches.

The Seed Wheel is designed to simplify and increase seed flow calibration accuracy. A rotating wheel is driven by a variable speed motor, which is set prior to treating the seed. This is mounted above the atomizer. The wheel consists of 8 identical pockets approximately 4 inches deep. As it rotates, the wheel captures a certain amount of seed in each pocket. After the seed is caught, the wheel continues rotation and dispenses the seed into the atomizer chamber. With the constant turn of the wheel, there is a consistent amount of seed always sent through the atomizer.

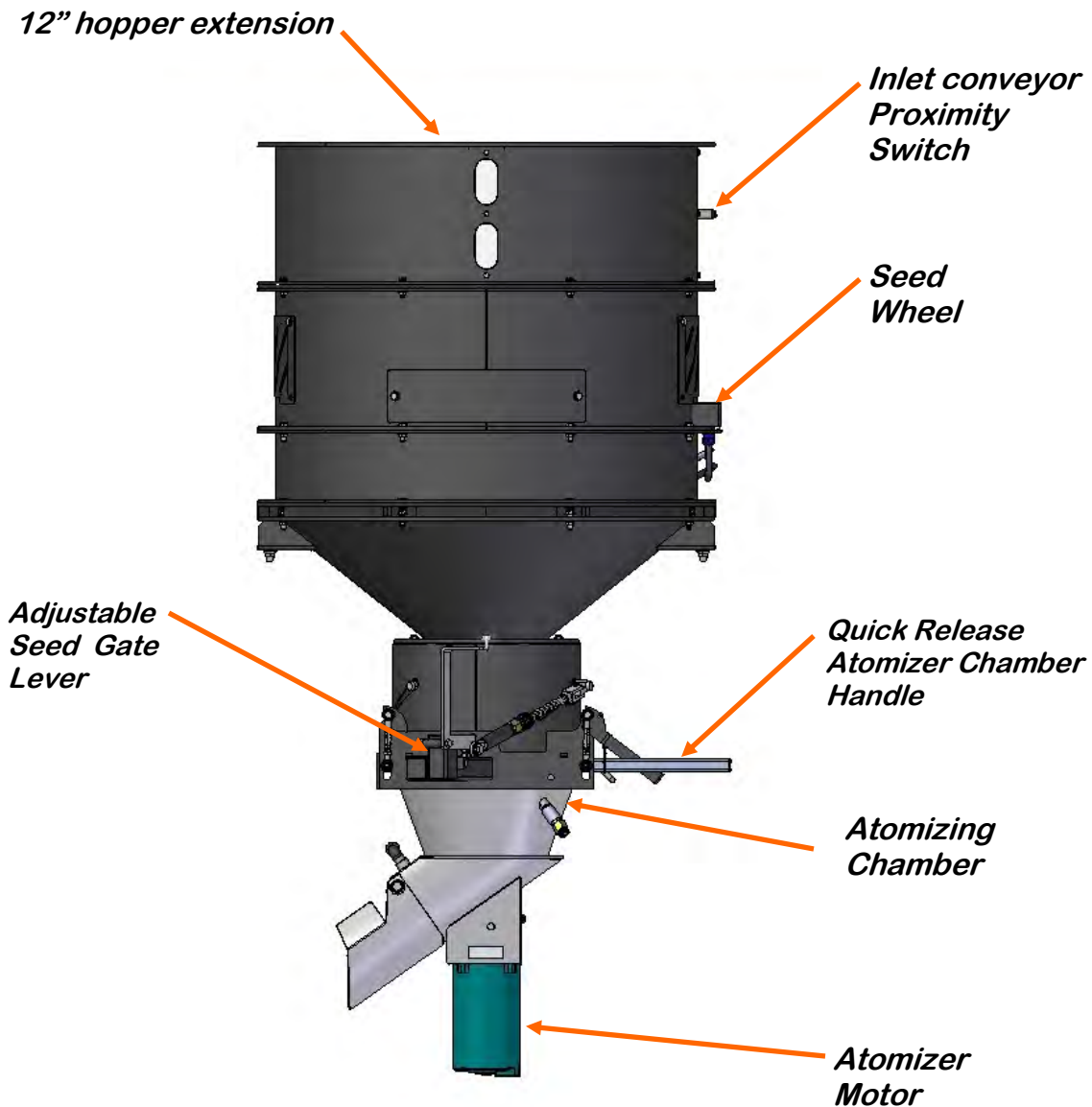
A cup is used to represent a certain percentage of one of the wheels pockets. To calibrate the seed flow, take a sample of the seed to be treated using the cup and weigh it (see page 49). By entering the cup weight of the seed sample the system will automatically adjust the RPM of the Seed Wheel according to the entered target weight.

The purpose of the seed wheel is to simplify calibration and make seed flow calibration more accurate. The seed wheel saves time when switching to different seed sizes and seed types.

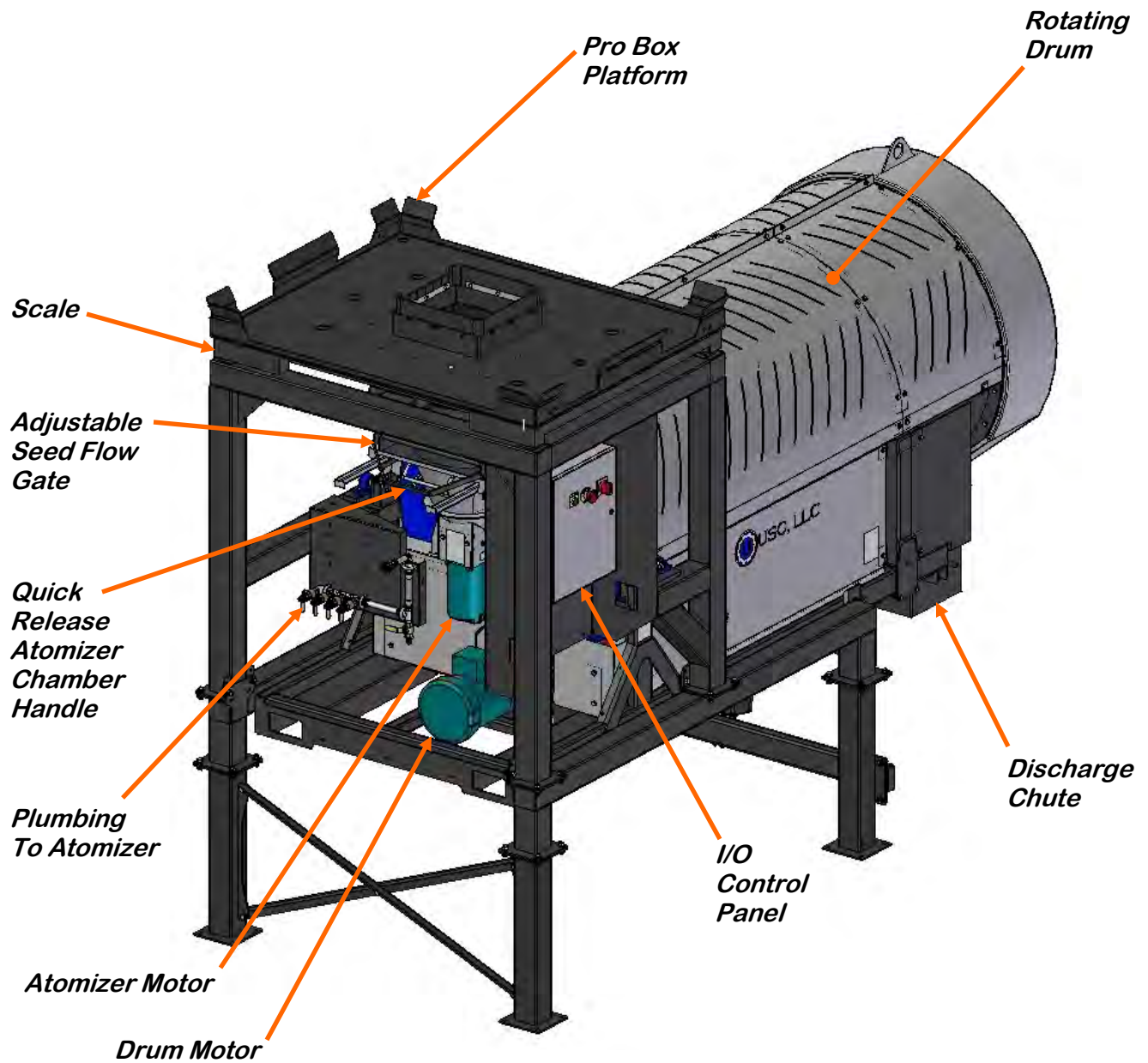


SEED WHEEL WITH ATOMIZER CHAMBER

The atomizer chamber consists of a patented design which disperses treatment evenly to each seed. A motor drives the atomizer head at approximately 1725 RPM's. As treatment is being pumped into the atomizer chamber, it drops into the atomizer head. The centrifugal force of the spinning head forces the treatment to be sprayed out through a screen covering in all 360 degrees. Meanwhile, seed flows down out of the seed wheel and on top of the distribution cone which disperses the seed down around the atomizer head. The adjustable seed gate is set to fully open and the seed wheel determines the seed flow rate based on the RPM it is running at. The atomizer can be easily accessed for cleaning and maintenance by pulling down on the quick release handle and sliding the atomizer away from the treater body (see page 61).

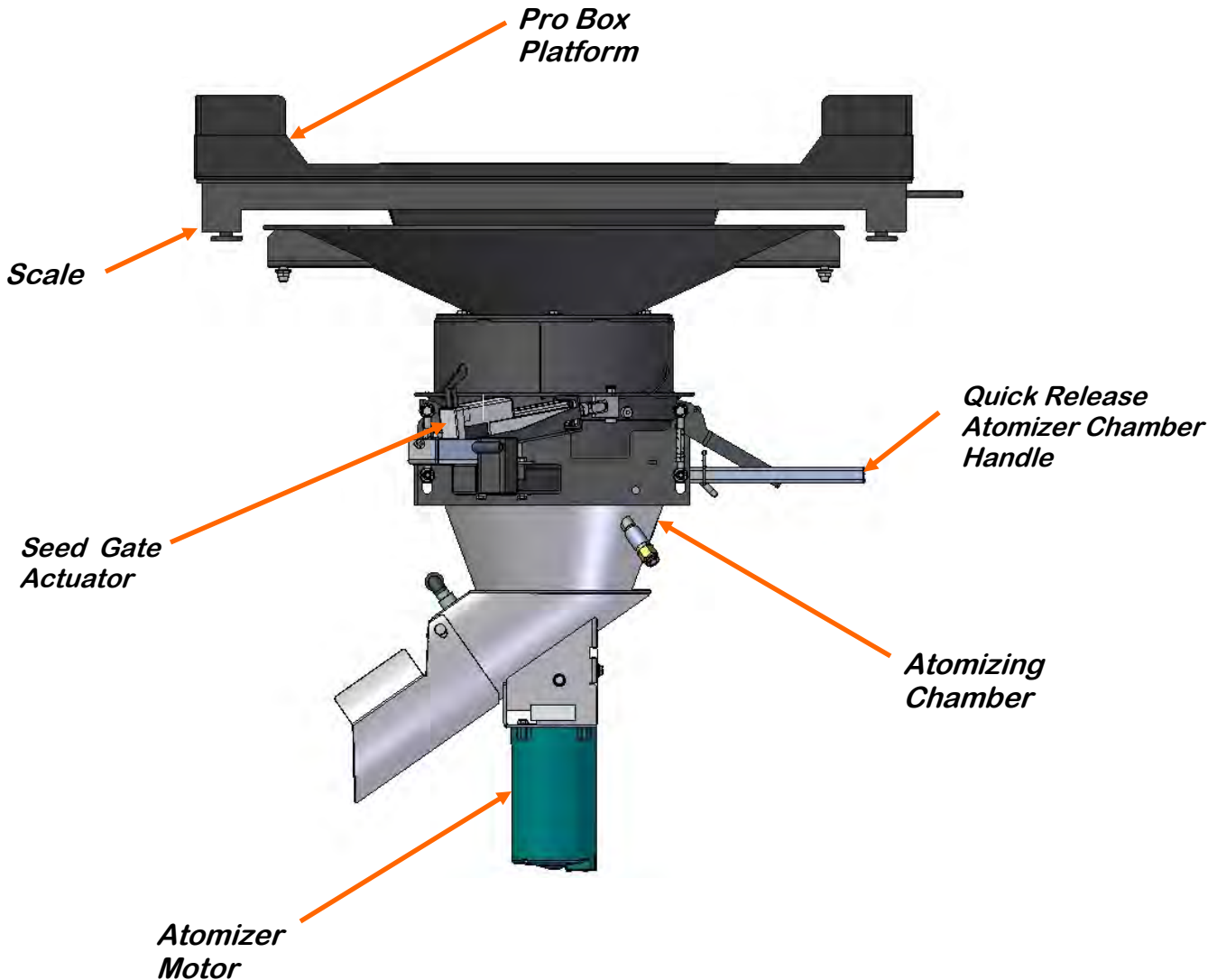


LPV TREATER WITH LOSS-IN-WEIGHT OVERVIEW



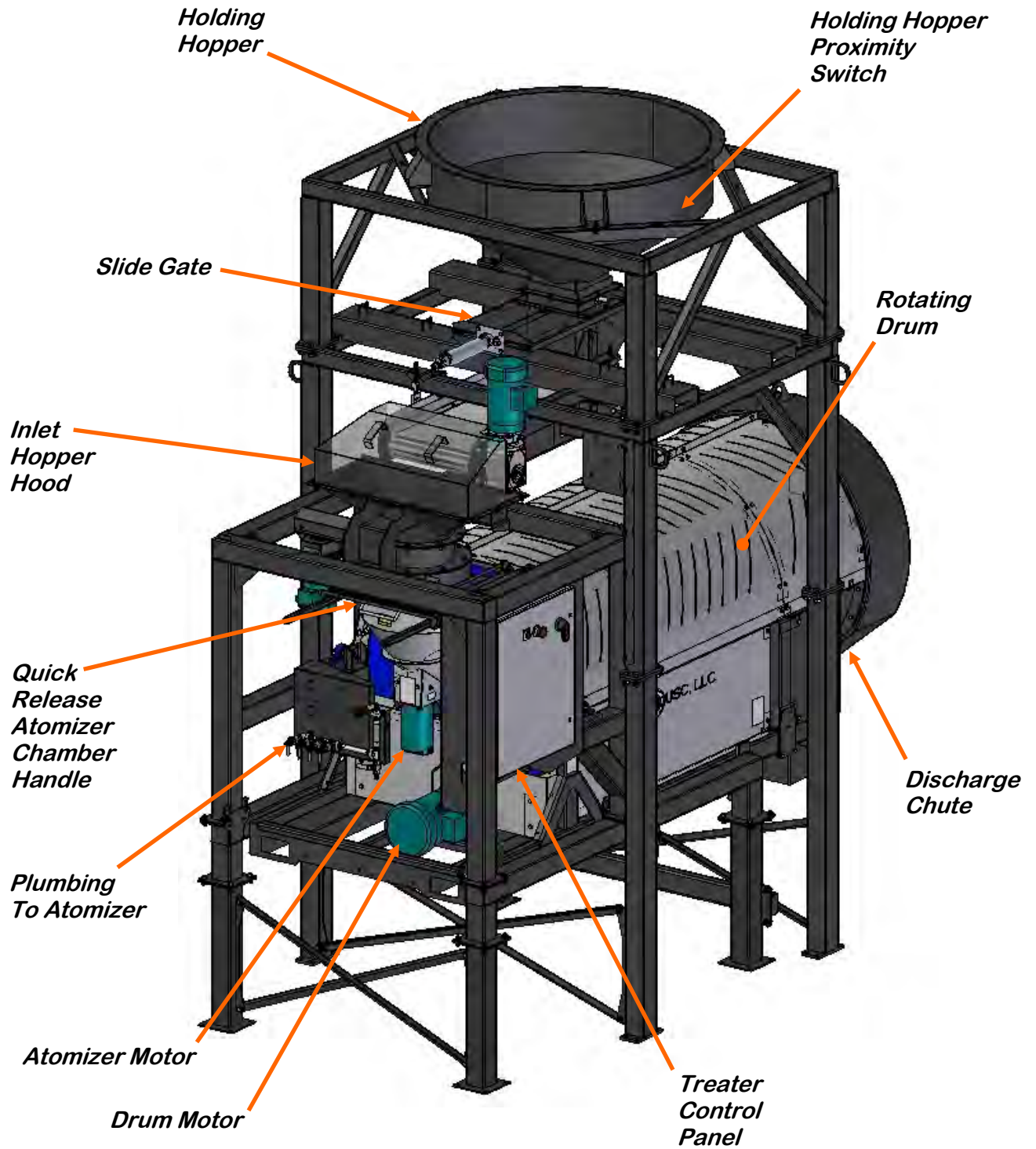
LOSS-IN-WEIGHT WITH ATOMIZER CHAMBER

The atomizer chamber operates the same way with the Loss In Weight version. The difference is the way that the seed flow is regulated. The adjustable gate on the Loss In Weight version is automatically controlled by an actuator that is constantly adjusting the seed flow gate. The actuator is controlled by the U-Treat automation software to determine the flow rate of the seed flowing down on top of the distribution cone which disperses the seed down around the atomizer head. The atomizer can be easily accessed for cleaning and maintenance by pulling down on the quick release handle and sliding the atomizer away from the treater body (see page 61).



LPV SEED TREATER

LPV TREATER WITH HIGH CAPACITY WEIGH BELT OVERVIEW

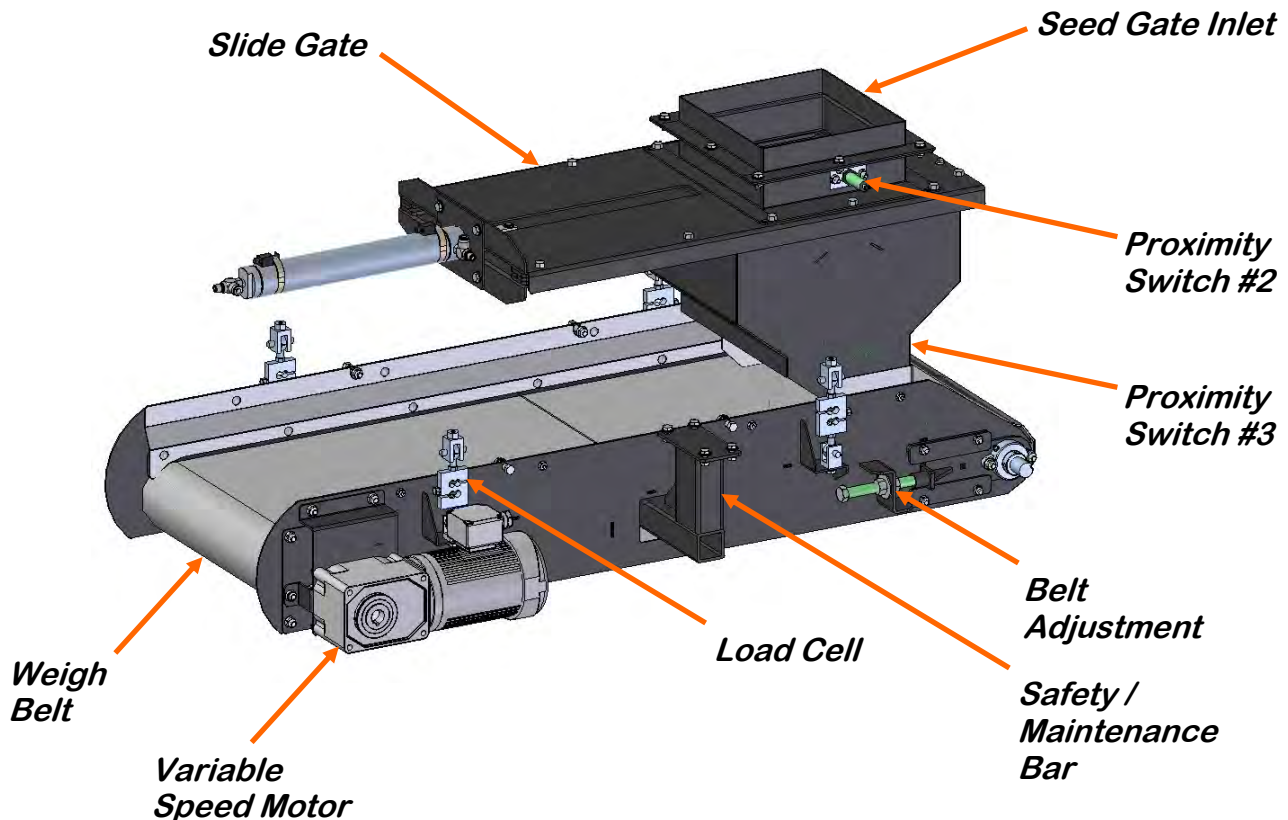


WEIGH BELT

The weigh belt is equipped with four proximity switches. The first switch is located in the holding hopper and controls the inlet conveyor. The second is located above the slide gate. When this switch no longer detects seed it automatically closes the slide gate. The third is located just above the weigh belt. This is active when seed is present on the belt. This and other flow rate variables indicate when seed is exiting from the end of the belt into the inlet hopper. This activates the flow indicator. The flow indicator controls the pump(s) supplying treatment into the atomizer. The fourth is located in the inlet hopper. When this switch detects seed, it stops the weigh belt to prevent seed from overflowing the hopper. The pumps and treater continue to operate for a pre-determined amount of time, then place the entire system in the pause state to prevent the drum from being flooded with untreated seed. The flow rate may then be adjusted and the system may be started again to complete the run. See the Proximity Switch Adjustment Guide in Section E for more information on these switches (see page 53).

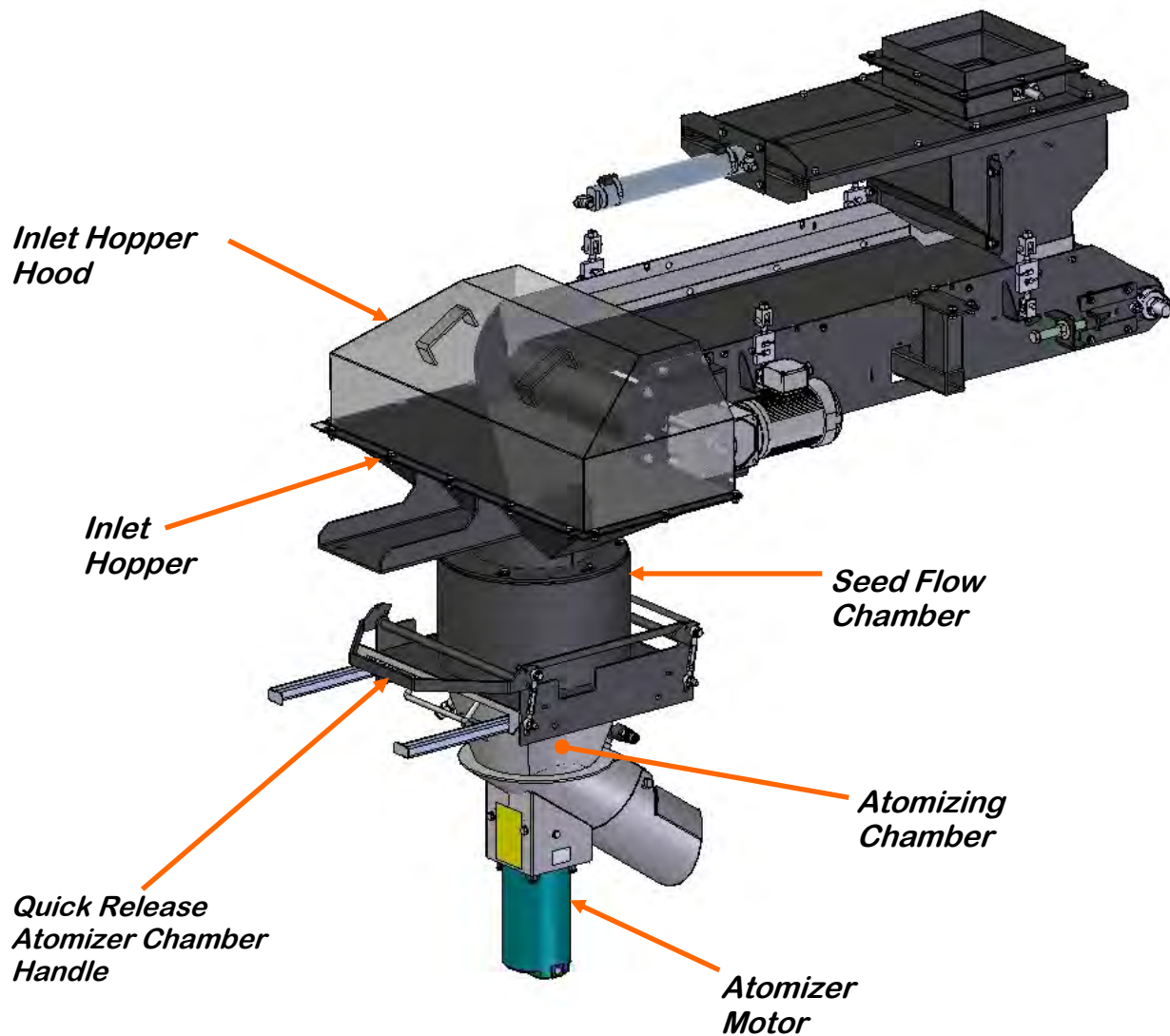
The weigh belt is designed to simplify and increase seed flow calibration accuracy. A belt is driven by a variable speed motor, which is set prior to treating the seed. This is hanging by load cells above the atomizer. The weigh belt rotates and dispenses the seed into the atomizer chamber. With the constant turn of the belt, there is a consistent amount of seed always sent through the atomizer.

The weigh belt saves time when switching to different seed sizes and seed types.



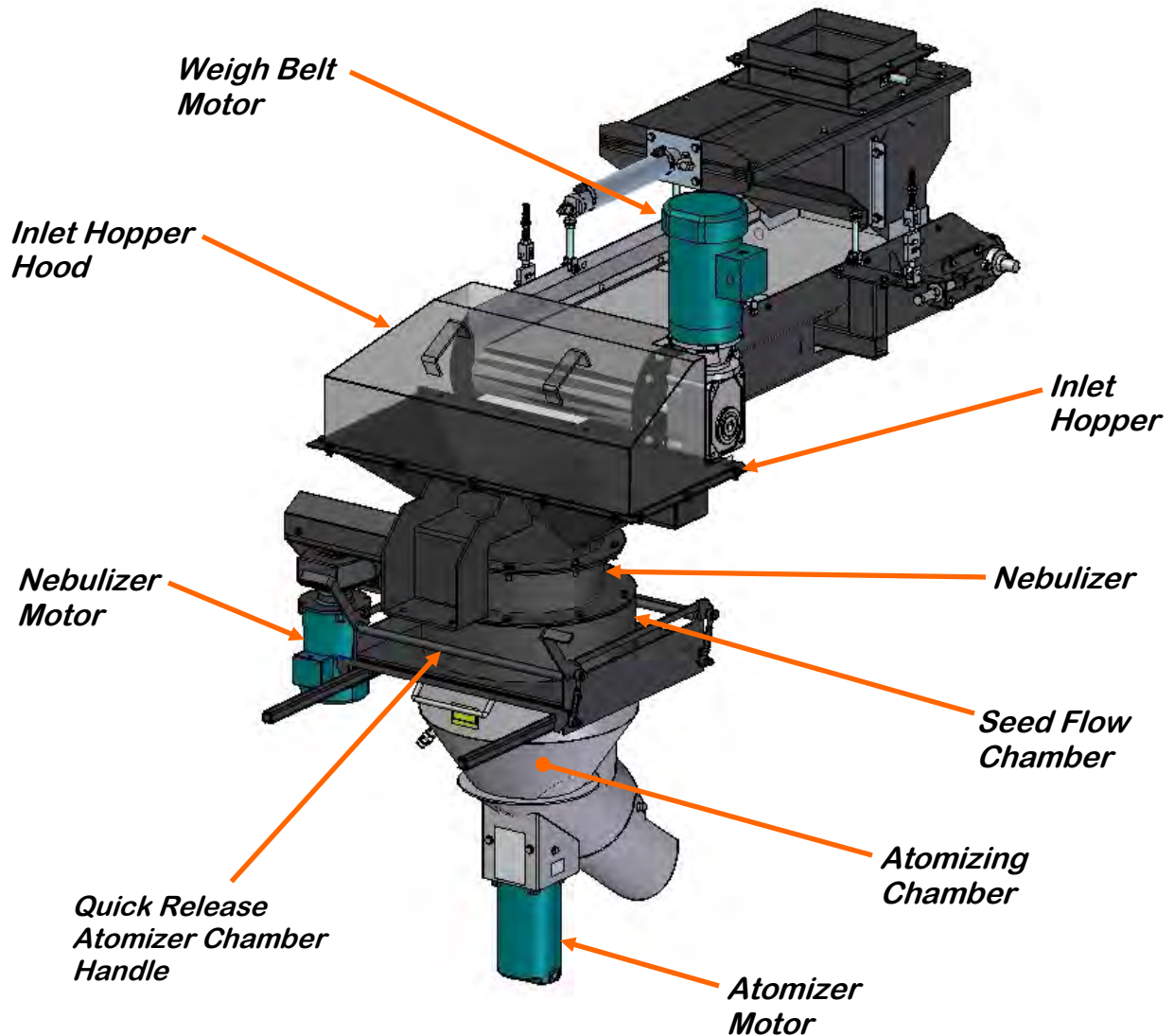
WEIGHT BELT WITH ATOMIZER CHAMBER

The atomizer chamber consists of a patented design which disperses treatment evenly to each seed. A motor drives the atomizer head at approximately 1725 RPM's. As treatment is being pumped into the atomizer chamber, it drops into the atomizer head. The centrifugal force of the spinning head forces the treatment to be sprayed out through a screen covering in all 360 degrees. Meanwhile, seed flows down from the weigh belt and on top of the distribution cone in the seed flow chamber which disperses the seed down around the atomizer head. The weigh belt determines the seed flow rate based on the speed it is running at and how much weight is on it. The atomizer may be easily accessed for cleaning and maintenance by pulling down on the quick release handle and sliding the atomizer away from the treater body (see page 61).



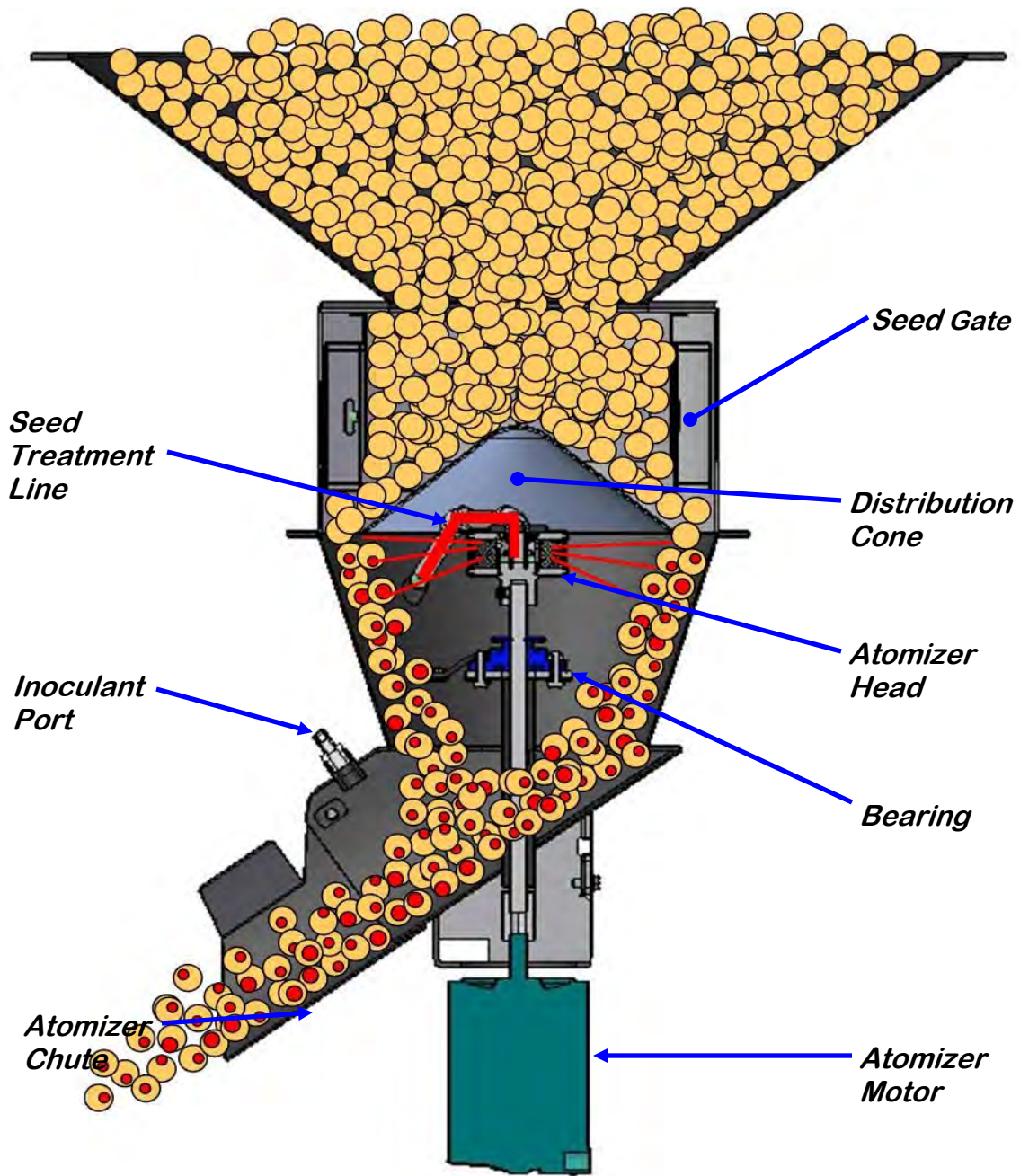
HIGH CAPACITY WEIGH BELT WITH ATOMIZER CHAMBER AND NEBULIZER

The atomizer chamber consists of a patented design which disperses treatment evenly to each seed. A motor drives the atomizer head at approximately 1725 RPM's. As treatment is being pumped into the atomizer chamber, it drops into the atomizer head. The centrifugal force of the spinning head forces the treatment to be sprayed out through a screen covering in all 360 degrees. Meanwhile, seed flows down from the weigh belt and into the Nebulizer. The Nebulizer is a rotating disk that spreads the seed out as it flows into the seed flow chamber providing better separation as it enters the chamber distribution cone. The combination of these steps provide better seed dispersal around the atomizer head. This process provides more complete treatment coverage in the Atomizer chamber. The weigh belt determines the seed flow rate based on the speed it is running at and how much weight is on it. The atomizer may be easily accessed for cleaning and maintenance by pulling down on the quick release handle and sliding the atomizer away from the treater body (see page 61).



LPV SEED TREATER

The illustration below shows how seed passes through the atomizing chamber. The red represents treatment being dispensed to the seed as it passes through the chamber. After the seed passes through the atomizer, it goes into the drum where the coating process is completed.



ROTATING DRUM

The rotating drum is 8 feet long and accepts treated seed through the opening on the hopper end. As seed passes through the length of the drum it is tumbled, producing accurate and uniform seed coating. The seed then exits the seed treater out the discharge end of the machine.

CAUTION

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

! ATTENTION

Ne jamais laisser l'exposition des personnes ou des vêtements à l'arbre d'entraînement, roues libres, ou le tambour pendant le fonctionnement. Toujours avoir les boucliers de sécurité en place pendant le.

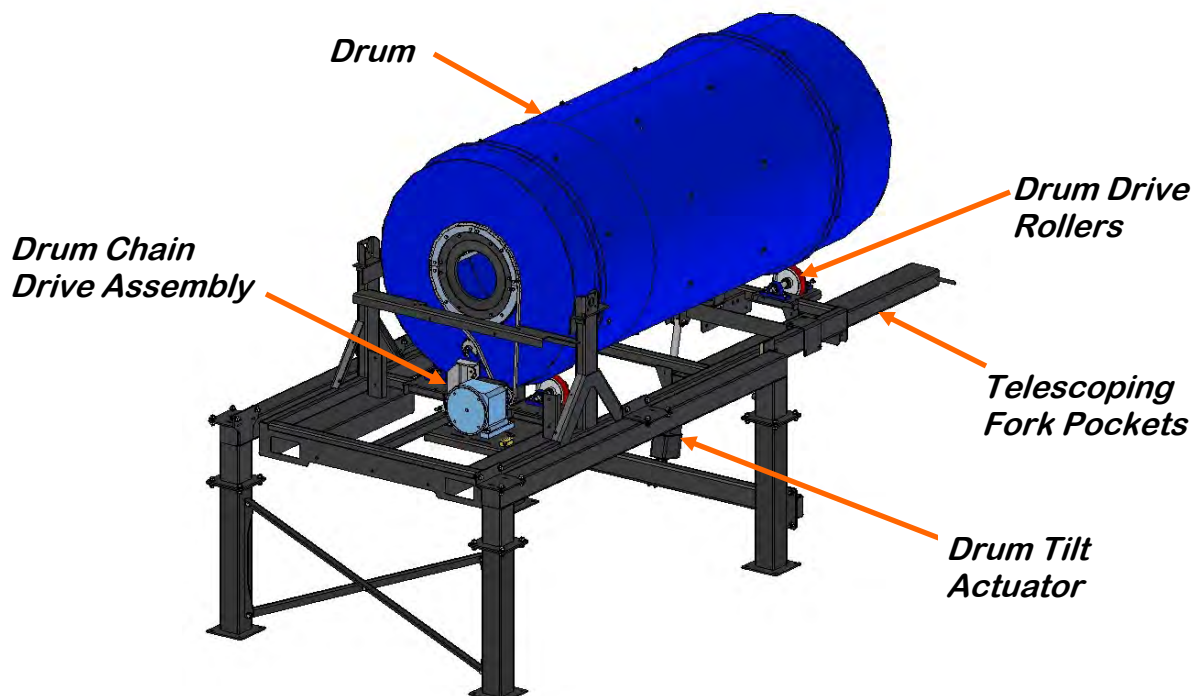
The LPV Treater also comes standard with telescoping fork lift pockets. These pockets may be slid out from underneath the treater to allow a fork lift to pick up the treater from it's discharge end.

DANGER

The rotating drum is grounded to the equipment structure at the factory, to avoid the possibility of generating static electricity, this bonding mechanism should not be tampered with or removed.

! DANGER

Le tambour rotatif est ancré à la structure de l'équipement en usine, afin d'éviter la possibilité de générer de l'électricité statique, ce mécanisme de liaison ne doit pas être altéré ou enlevé.



ELECTRICAL OPERATION

SECTION D



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



HAUTE TENSION ~ Toujours débrancher la source d'alimentation avant de travailler sur ou près du panneau de commande ou les câbles.



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



HAUTE TENSION ~ Utilisez des outils isolés lors des réglages, tandis que les commandes sont sous tension.



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 panels.



Seules personnes autorisées doivent travailler sur le panneau de commande. Ne jamais laisser quelqu'un qui n'a pas lu et se sont familiarisés avec le manuel d'ouvrir ou de travail du propriétaire

For the LPV Automated Treater HMI instructions, see the appropriate U-Treat Automation manual.

This section provides a general overview and description of the operator control panels for the LPV Seed Treater.



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



USC recommande l'utilisation d'un dispositif de protection contre les surtensions avec une cote minimale de 400 joules pour tous les principaux panneaux de contrôle automatisés.

General Panel Descriptions:

- The Automated Main Control Panel is a plug connected enclosure that 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 by a standard 110V plug.
- The LPV Automated Treater Panel is an enclosure that contains the electrical components required to actuate the seed treater. This includes the VFDs for the atomizer and seed wheel. Power for the treater is supplied here. Power to this panel is hard wired.
- The LPV I/O Control Panel is an enclosure that contains the electrical components required to actuate the drum tilt actuator. This includes the proximity sensors for the seed wheel. Power to this panel is supplied by a standard 110V plug.

CALIBRATION

SECTION E

DETERMINING SEED CUP WEIGHT

The following is a list of steps to use when calibrating the seed wheel. A seed calibration cup, funnel, stand, and scale are used to calibrate the seed wheel.

1. Set the empty seed calibration cup on the scale and zero out the weight of the cup.
2. Place the funnel and stand in the seed to be treated or a separate container (see page 50, figure 1). This will help to avoid any unnecessary clean-up while filling and leveling the top of the seed calibration cup.
3. Place your hand under the bottom of the funnel and fill the funnel up with seed.
4. Place the calibration cup under the funnel stand and remove your hand from the bottom of the funnel, and allow the cup to be filled (see page 50, figure 1).
5. After the cup has been filled, strike off the top of the calibration cup with a straight edge (see page 50, figure 2).

**NOTICE**

Do not shake the cup.

AVIS

Ne secouez pas la tasse.

6. Weigh the sample of seed (see page 50, figure 3).

NOTICE

A typical weight of the sample of seed will be anywhere between 2.8 to 4.0 lbs. Anything over or under this range could be caused by not zeroing out the weight of the cup, or the scale may be set on the wrong units.

AVIS

Un poids typique de l'échantillon de semences sera ne importe où entre 2,8 à 4,0 livres. Tout sur ou sous cette fourchette pourrait être causée par la réduction à zéro ne pas le poids de la tasse, ou la balance peut être réglé sur les mauvaises unités.

DETERMINING SEED CUP WEIGHT

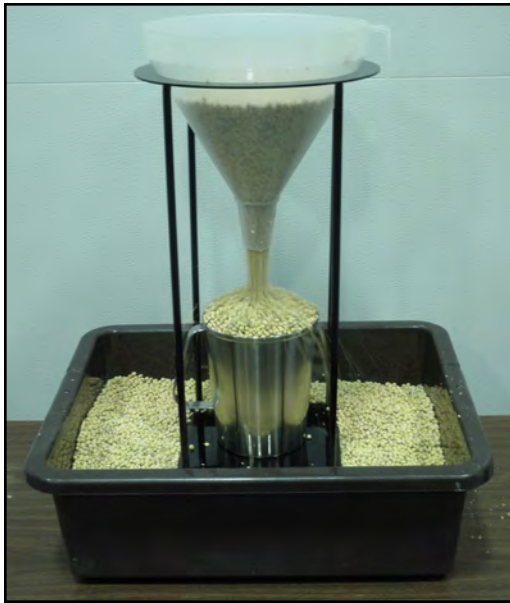


Figure 1



Figure 2



Figure 3

TROUBLESHOOTING SECTION F

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

Problem	Possible Cause	Solution
Inlet Conveyor will not turn on.	<ol style="list-style-type: none"> 1. Inlet conveyor proximity switch is activated. 2. Inlet conveyor proximity switch is too sensitive. 3. Overload is tripped. 4. Conveyor is plugged into wrong outlet on seed treater panel. 	<ol style="list-style-type: none"> 1. Clean proximity switch 2. Adjust the inlet conveyor proximity switch sensitivity by turning the adjustment screw counter-clockwise (page 53). 3. Reset inlet conveyor overload. 4. Check to make sure the inlet conveyor is plugged into the inlet conveyor receptacle.
Inlet conveyor will not shut off when hopper is full.	<ol style="list-style-type: none"> 1. Seed is not hitting proximity switch. 2. Proximity switch is not set sensitive enough. 3. Inlet conveyor is plugged into wrong receptacle. 4. Hopper proximity switch is not connected 	<ol style="list-style-type: none"> 1. Make sure seed is hitting proximity switch. 2. Adjust the inlet conveyor proximity switch by turning the adjustment screw clockwise (page 53). 3. Make sure inlet conveyor is plugged inlet conveyor receptacle. 4. Connect hopper proximity switch.
Pump will not turn on in AUTO	<ol style="list-style-type: none"> 1. Proximity switch is not staying covered. 2. Atomizer is not on. 3. Proximity switch is not sensitive enough. 4. Pump stand two-wire cord is not plugged into to treater main panel. 5. Both the Chemical Pump switch on the Pump Stand and the Pump/Aux Control on the HMI screen need to be set to AUTO. 	<ol style="list-style-type: none"> 1. Make sure proximity switch is staying covered with seed 2. Turn on atomizer. Atomizer must be on to run the pump in Auto. 3. Adjust pump proximity switch sensitivity by turning the adjustment screw clockwise (page 53). 4. Plug the pump stand two-wire cord into the main treater panel. 5. Set both the Pump Stand switch and Pump/Aux on the HOA screen to AUTO.
Pump is fluctuating.	<ol style="list-style-type: none"> 1. Restriction in tubing 2. Filter is plugged or missing gasket. 	<ol style="list-style-type: none"> 1. Flush tubing and check filter for any restrictions. 2. Clean filter and check for gasket.

LPV SEED TREATER

Problem	Possible Cause	Solution
Pump will not turn off in AUTO when seed runs out.	<ol style="list-style-type: none"> 1. Proximity switch is dirty. 2. Proximity switch is set too sensitive. 	<ol style="list-style-type: none"> 1. Clean proximity switch. 2. Adjust the pump proximity switch sensitivity by turning adjustment screw counter-clockwise (page 53).
Seed calibration is fluctuating.	<ol style="list-style-type: none"> 1. Seed treater supply hopper is not staying full. 2. Restriction in the supply hopper or seed wheel. 3. Build-up in the atomizing chamber. 	<ol style="list-style-type: none"> 1. Make sure the supply hopper and seed wheel are staying full. May have to lower seed flow rate in order to have a consistent flow of seed. 2. Check supply hopper and seed wheel for any debris, and remove. 3. Remove atomizing housing and clean out any build-up of material.
Drum is slipping and seed is coming out the inlet side of the drum.	<ol style="list-style-type: none"> 1. Drum is wet. 2. The seed treater is set too level. 3. Chains are too loose. 	<ol style="list-style-type: none"> 1. Dry off any moisture that may have collected on the outside of the drum. 2. Adjust the slope of the seed treater to at least a 3" drop from front to back. If desired, more slope can be applied. 3. Check and tighten the drive chains. Also check the chain alignment.
None of the motors will turn to ON in HAND mode.	<ol style="list-style-type: none"> 1. Processor is faulted. 2. Emergency Stop button is activated. 3. The Emergency Stop RESET button has not been pressed after the Emergency Stop button has been pulled out. 	<ol style="list-style-type: none"> 1. Disconnect power and wait 30 seconds before reconnecting power. 2. Pull out the Emergency Stop button. 3. After the Emergency Stop button has been pulled out, press the Emergency Stop RESET button.
E-stop is flashing.	<ol style="list-style-type: none"> 1. An E-stop may be depressed. 2. Power may not be on to the control panels. 3. One of the control panels may not be connected to all of the others. 	<ol style="list-style-type: none"> 1. Ensure all E-stops are not depressed. 2. Check incoming power to each control panel. 3. Check the wiring and connections to each control panel.

PROXIMITY SWITCH ADJUSTMENT GUIDE

The proximity switches mounted in the extension ring and the seed wheel detect when seed is present.

The proximity switch located in the extension ring is used to automatically shut off the inlet conveyor when the surge hopper is full. This proximity switch is not present on tower systems.

The proximity switches located in the seed wheel automatically shut off the pump when all seed has left the hopper.

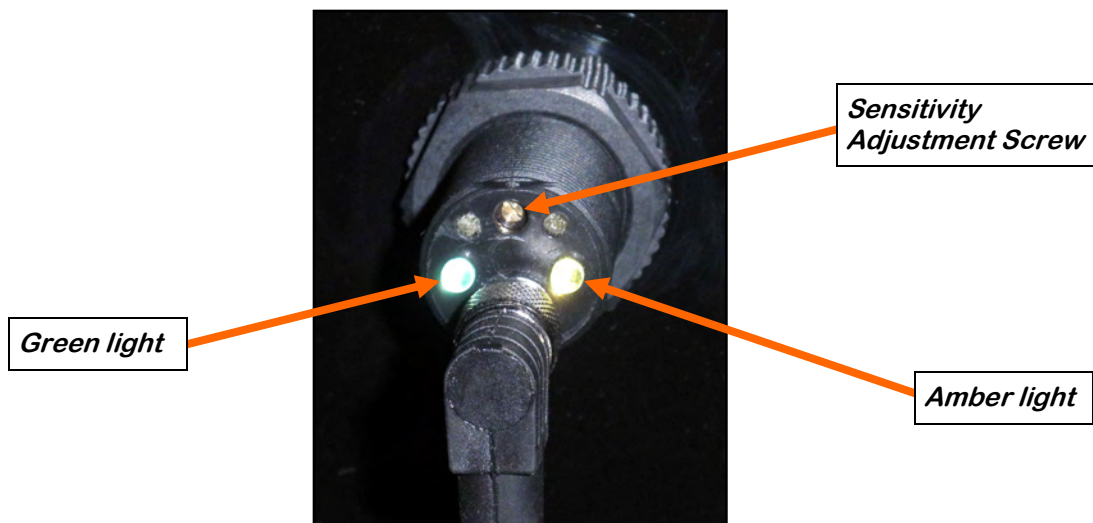
If the proximity switch is not working properly, this can be caused by wear, dust, or even moisture. The first step is to clean the lens of the proximity switch. If this does not solve the problem, the next step would be to adjust the sensitivity of the proximity switch.

The green light indicates the power status. If it is active the device is powered.

The amber light indicates when seed is being detected. If it is active it detects seed, if inactive it does not detect seed.

Using the small screwdriver provided inside the control panel, you can adjust the proximity switch by turning the adjusting screw on the back of the proximity switch.

- Turn Clockwise to make the proximity switch more sensitive.
- Turn Counterclockwise to make the proximity switch less sensitive.



Green light

*Sensitivity
Adjustment Screw*

Amber light



Proximity Switch Screwdriver

SECTION
G**MAINTENANCE**

Proper maintenance of the LPV Seed 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.



Ne pas mettre cet appareil en service avec des pièces douteuse entretenus. La mauvaise performance ou un danger peut survenir.



Do not use compressed air or water under pressure to clean any of the components of the USC equipment.



Ne pas utiliser d'air comprimé ou de l'eau sous pression pour nettoyer l'un des composants de l'équipement USC.

GREASING

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

- 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.

AVIS

Si les raccords ne prendront pas la graisse, enlever et nettoyer. Aussi propre passage de lubrifiant. Remplacer approprié si nécessaire .

ELECTRICAL PANEL

- Check and tighten wire connections.
 - Check quick connects on bottom of control panel.
 - Check to see if starters and/or overloads are tripped.
 - Check to see if relays, timers and/or breakers are tripped.
 - Check and set the proximity switches. (page 53).
 - Check quick connects on end of Auxiliary cord.
 - Check relay and fuse holder.
 - Check power cords for cuts or frays and ensure ground is present.
-

DRIVE AND DRUM

- Remove drum guards and inspect all welds and structural components on the frame and drum for bends, cracks and damage.
- Inspect pillow block bearings and grease every 40 hours of operation.
- Inspect drive wheels for unordinary wear and set screws for tightness.
- Inspect the Neoprene idler wheels for unordinary wear and adjust if necessary.
- Remove drive guards, check tension and lubricate chain every 40 hours of operation. Adjust tension as required.
- Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

SEED WHEEL

- Inspect all welds and structural components for bends, cracks and damage.
- Remove the front and rear shields with the vent slots to inspect wheel, brushes and proximity switches.
- Use a vacuum to clean out any seeds and excess build-up that may have occurred during operation. Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Utilisez un aspirateur pour nettoyer les graines ou accumulation excès qui ont pu se produire pendant le fonctionnement. Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

WEIGH BELT TENSION AND ALIGNMENT - TAIL END

To maintain the belt, follow this procedure:

NOTICE

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

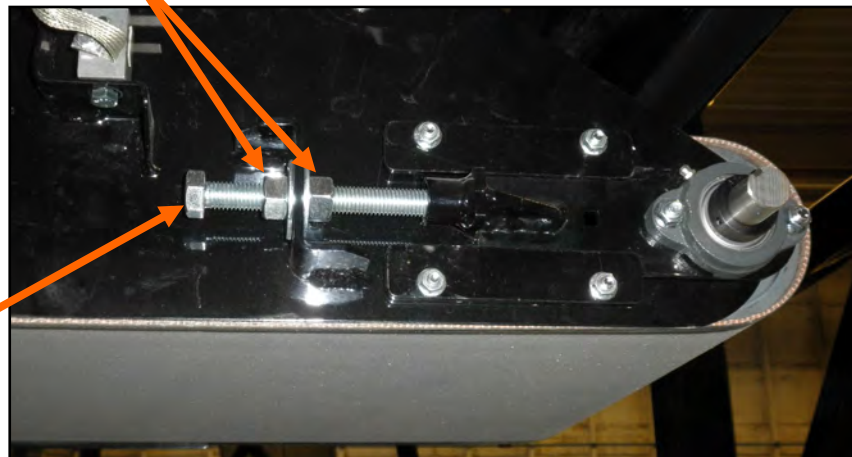
AVIS

Placez toutes les commandes au point mort ou hors tension, arrêter le moteur et désactiver la source d'alimentation en suivant les procédures de verrouillage Tagout avant de travailler sur la ceinture.

1. If the belt needs to be tightened to prevent slippage, use the take-up adjustments on the tail end..
2. The belt is tightened by turning both take-up adjustments an **equal** number of turns.
3. Check the alignment. The belt should be centered.
4. Turn the belt 1/2 revolution when the belt is new and check the 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.
5. 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.
6. 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



WEIGH BELT SERVICING INTERVALS

Every 40 hours or Weekly

1. Check the conveyor belt tension and alignment.
 2. Grease weigh belt 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).
 3. Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

NEBULIZER DRIVE ASSEMBLY

- Check for unusual vibration or sound when the Nebulizer is running.
- Check for leaks coming from the rotary union and supply line fittings.
- Remove the covers and check for any play in the motor drive shafts.
- Check the top of the bearing assembly for any leaking grease. The bearings are sealed units. Any leakage or play in the bearing shaft would indicate a bearing failure. If necessary, remove bearing and disk assembly and replace the bearings.
- Clean any dust or dirt with compressed air and a clean cloth.
- Check the drive belts for excessive wear. Replace if necessary.
- Check the drive belt tension using the methods described on page 60 and if necessary, adjust them accordingly.

ATOMIZER AND NEBULIZER CHAMBER

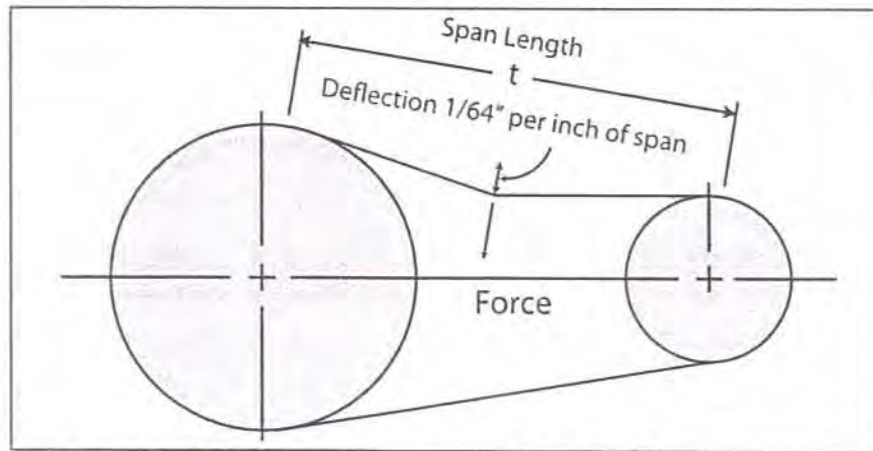
- Pump clean water through supply lines, rotary union and atomizer.
- Unlatch and swing open the Nebulizer housing.
- Unscrew the Atomizer and disassemble. Clean each of the four pieces individually.
- Check the bottom of the bearing assembly for any leaking grease. The bearings are sealed units. Any leakage or play in the bearing shaft would indicate a bearing failure. If necessary, remove bearing and disk assembly and replace the bearings.
- Clean any build-up from the inside of the housing.
- Reinstall the Atomizer head and make sure it turns freely, close and re-latch the housing .
- Clean any dirt or build-up on the outside of the housing.

NEBULIZER SYNCHRONOUS BELTS

High torque, Standard and Metric synchronous belts should be installed to fit pulleys snugly, neither too tight nor too loose. The belts positive grip eliminates the need for high initial tension. When a belt is installed with a snug but not overly tight fit, longer belt life, less bearing wear and more quiet operation will result. Overtight belts may cause early failure and should be avoided. With high torque a loose belt may jump teeth upon startup. If this occurs, the tension should be increased gradually until satisfactory operation is achieved.

To properly tension a synchronous belt, place belt on pulleys and adjust take up until the belt teeth mesh securely with the pulley grooves. Measure belt span T, Then tighten belt so it deflects 1/64-inch for every inch of belt span when a force as specified in the table below is applied to the top of the belt. For belts wider than two inches, a metal or wooden strip 3/4 to 1 inch wide should be placed across the belt between it and the tester to prevent distortion.

The following range of deflection forces are normally adequate for drive installation. Actual installation tension required depends on peak loads, system rigidity, number of teeth in mesh, etc.

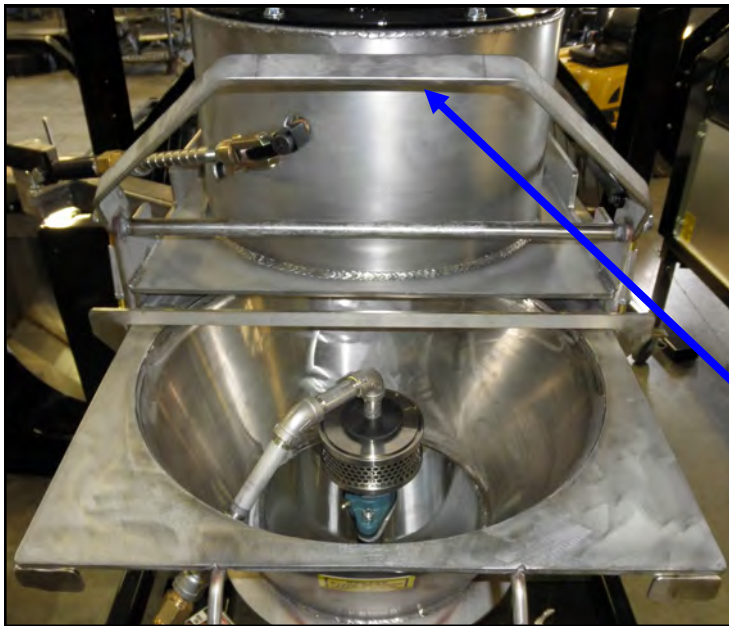


MEASURE THE SPAN LENGTH "T" AS SHOWN IN THE SKETCH ABOVE.

BELT PITCH	BELT WIDTH	DEFLECTION FORCE
L (3/8 Inch)	1/2 Inch	7 Oz
	3/4 Inch	11 Oz
	1 Inch	1 Lb
H (1/2 Inch)	3/4 Inch	2 Lbs
	1 Inch	2-1/2 Lbs
	1-1/2 Inch	4 Lbs

ATOMIZER

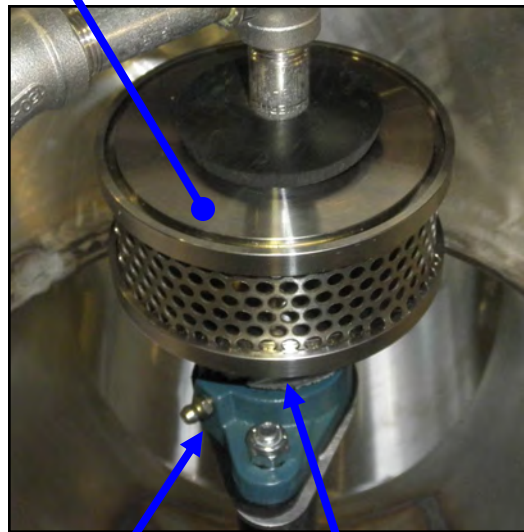
To access the inside of the atomizer housing, disconnect the motor power cable from the atomizer motor, push up on the quick release handle and slide out the atomizer. After completing maintenance, slide the atomizer back into the operating position, pull down quick release handle to lock it in place and reconnect the motor power cord.



Quick-Release Handle

Atomizer Head

1. Slide out atomizer housing and grease bearing inside. Bearing needs just one pump of grease every 40 hours of operation (right).
2. Clean any build up inside the housing and the atomizer head. To remove the atomizer head, loosen the set screw located on the bottom of the head.
3. Check for any play in the atomizer shaft.
4. Make sure the atomizer spins smoothly.
5. Ensure the adjustable chute is fitting completely into the drum opening. Adjust if necessary.



Bearing

Set Screw

ATOMIZER MOTOR

- Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

PUMPS AND PLUMBING

- Check pump in forward and reverse.
- Make sure pump heads open and close smoothly.
- Inspect tubing and for uneven wear. Replace pump tubing often to ensure high flow rates can be met.
- Tighten hose clamps and check filter. Clean filter frequently to avoid blockages
- Flush flow meter with clean water frequently to avoid chemical buildup.
- Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

MIX TANK

- Check motor.
- Check motor for any play in the mix tank shaft.
- Check valves, fittings, and plug on bottom of tank for leaks.
- Check chemical line tubing for abnormal wear.
- Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date. Record the cleaning on the company required documents. If operating in a CSA 22.1, Class II, Division 2, Group G hazardous area, USC recommends this step be performed on a daily basis.
- Essuyez le carter moteur avec un chiffon humide en veillant à éliminer toutes les poussières qui peuvent avoir perçu depuis la dernière date de maintenance. Enregistrez le nettoyage sur la société les documents requis. Si opérant dans un CSA 22.1, Classe II, Division 2, Groupe G zone dangereuse, USC recommande cette étape être effectuée sur une base quotidienne.

SECTION
H**STORAGE**

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



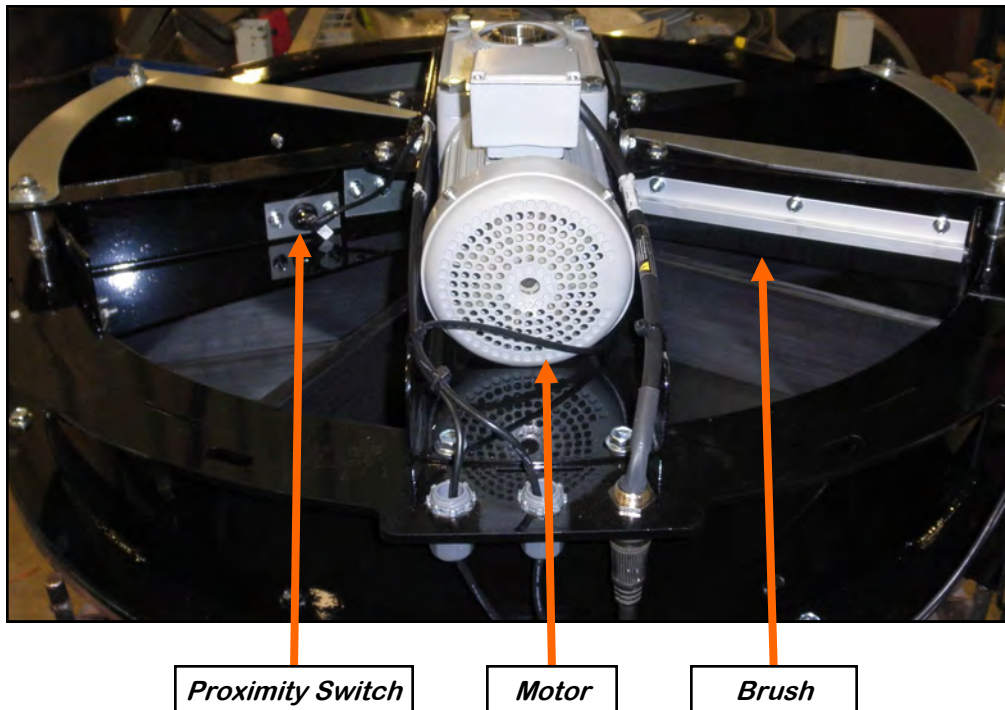
A dust mask and protective rubber gloves shall be used when cleaning the machine.

WEIGH BELT

1. Turn power off to the treater and treater components.
2. Inspect all welds and structural components for bends, cracks and damage.
3. Remove the inlet hopper cover and bottom seed gate cover that has the seed on belt proximity switch mounted to it. Inspect belt , pulleys and proximity switch.
4. Use a vacuum to clean out any seeds and excess build-up that may have occurred during operation.
5. Turn power back on to the treater and run weigh belt to help remove any additional debris.
6. Use a vacuum to clean out any seeds and excess build-up that may have occurred during operation.
7. Wipe down the motor casing with a damp cloth making sure to remove all dust that may have collected since the last maintenance date.
8. Wipe off and clean the lens of the proximity switches (below).
9. Disconnect power and mount all guards back in place.
10. Tarp or cover the supply hopper and weigh belt to keep out any dirt or unwanted pests.

SEED WHEEL & SUPPLY HOPPER

1. Turn power off to the treater and treater components.
2. Remove shields from the seed wheel and remove any debris or build-up. Compressed air can be used to blow out any foreign material.
3. Turn power back on to the treater and run seed wheel to help remove any additional debris. Compressed air can be used to blow out any foreign material.
4. Check brushes for wear (below).
5. Wipe off and clean the lens of the proximity switches (below).
6. Disconnect power and mount all guard back in place.
7. Tarp or cover the supply hopper and seed wheel to keep out any dirt or unwanted pests.



LPV SEED TREATER

ATOMIZER CHAMBER

1. Remove and clean the atomizer housing.
2. Remove the atomizer head and stainless steel plumbing. The atomizer head may be disassembled (right), for easier cleaning. It is threaded together and can simply be unscrewed.
3. Reinstall the atomizer head and plumbing. Grease the bearing and spin the atomizer head a few times to ensure all grease has been worked into the bearings.



ROTATING DRUM

1. Remove the shields and clean out any seed that may have fallen underneath the drum.
2. Clean out any residue left on the inside of the drum and around the seed lifters.
3. Lubricate the chain to keep from corroding in storage.

FINAL

1. Disconnect power to the machine.
2. Store the machine inside a protective building to keep it from being exposed to the weather.
3. Ensure all guards and safety labels are in place.

MECHANICAL DRAWINGS

SECTION I

The following pages show the parts of the LPV Seed Treater. Please have the part number ready when ordering parts.

Contents

Page #

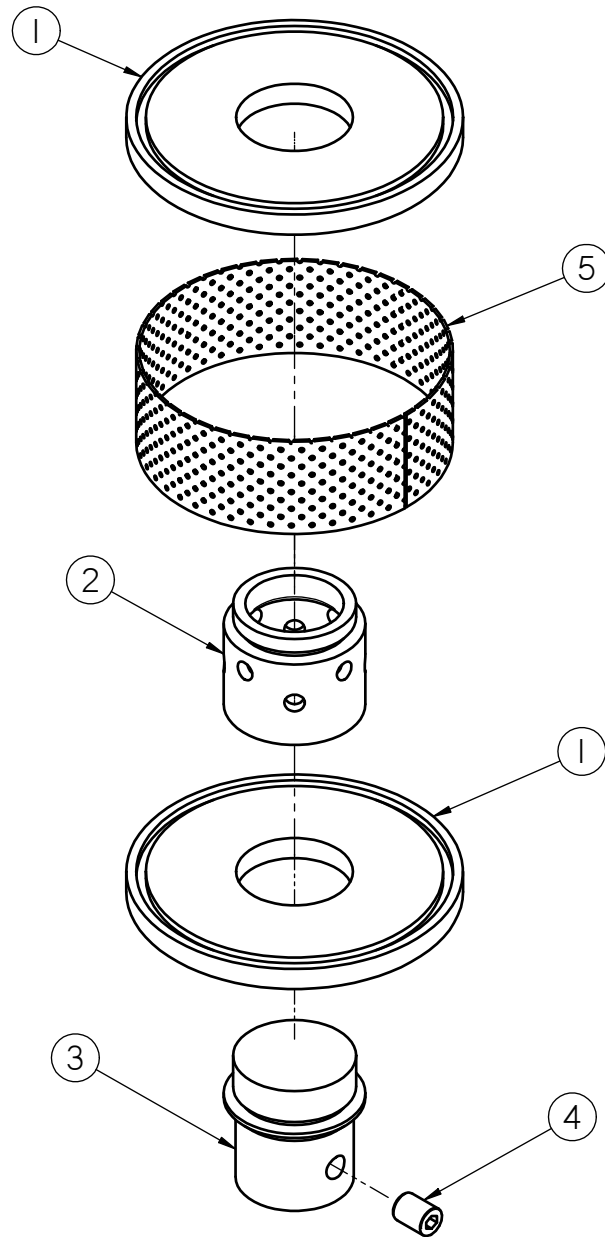
Common to Standard, High Capacity and Portable Treaters68

Common to Standard and High Capacity Treaters Only110

Seed Metering Wheels 124-137

Portable Treater Only181

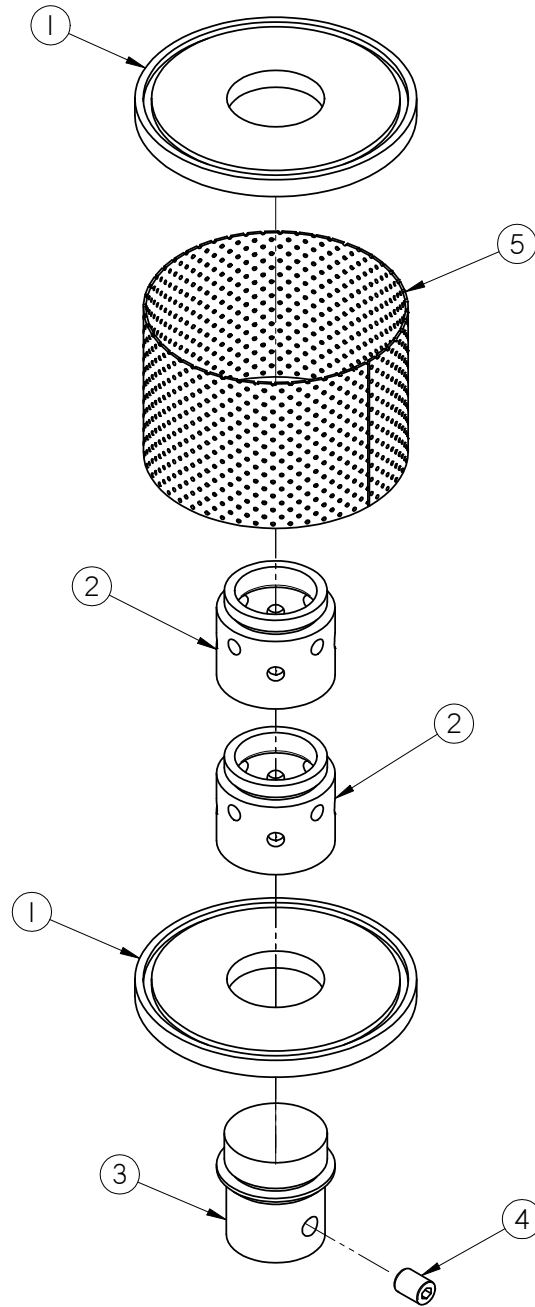
LPV SEED TREATER
ATOMIZER HEAD ASSEMBLY (04-02-0004)



Item #	Part #	Description	Qty
1	05-11-0014	PLT ATMZR CAP	2
2	05-11-0015	ATOMIZER SPACER	1
3	05-11-0016	DRIVE SPUD, BOTTOM	1
4	06-06-0003	SET SCRW, CP, .375-16 18-8 SS .50	1
5	13-05-0032	PERFORATED SCREEN, STD.	1

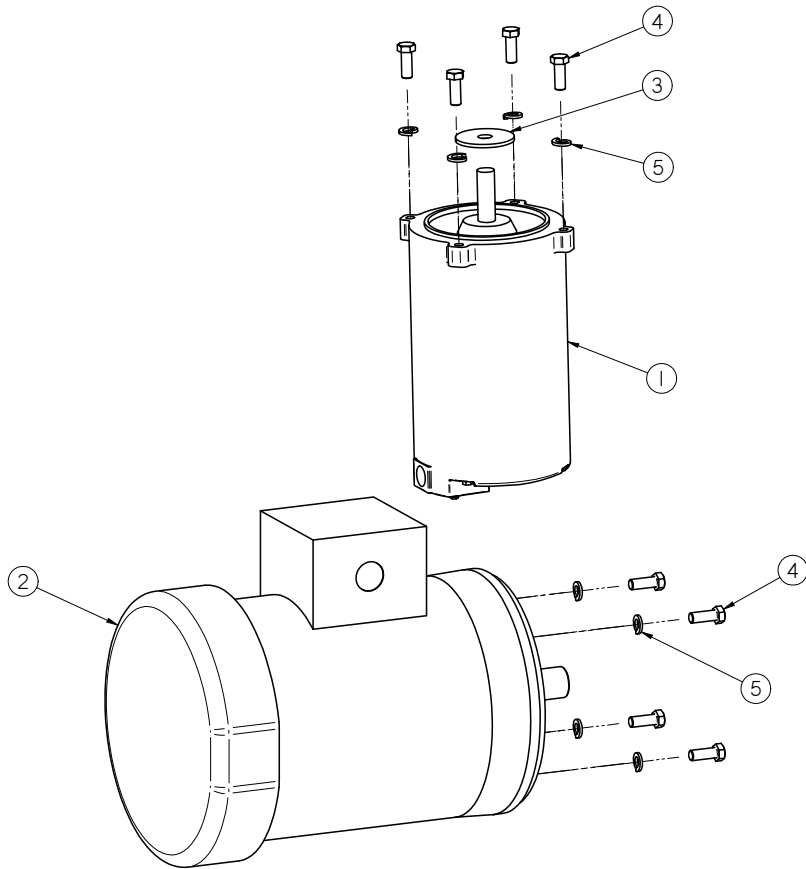
LPV SEED TREATER

HIGH CAPACITY ATOMIZER HEAD ASSEMBLY (04-01-0033)



Item #	Part #	Description	Qty
1	05-11-0014	PLT ATMZR CAP	2
2	05-11-0015	ATOMIZER SPACER	2
3	05-11-0016	DRIVE SPUD, BOTTOM	1
4	06-06-0003	SCRW SCKT .375-16 X .500 SS 18-8	1
5	13-05-0148	PERFORATED SCREEN,STD.	1

LPV SEED TREATER
VERSION 3 MOTOR KIT (03-20-0164)

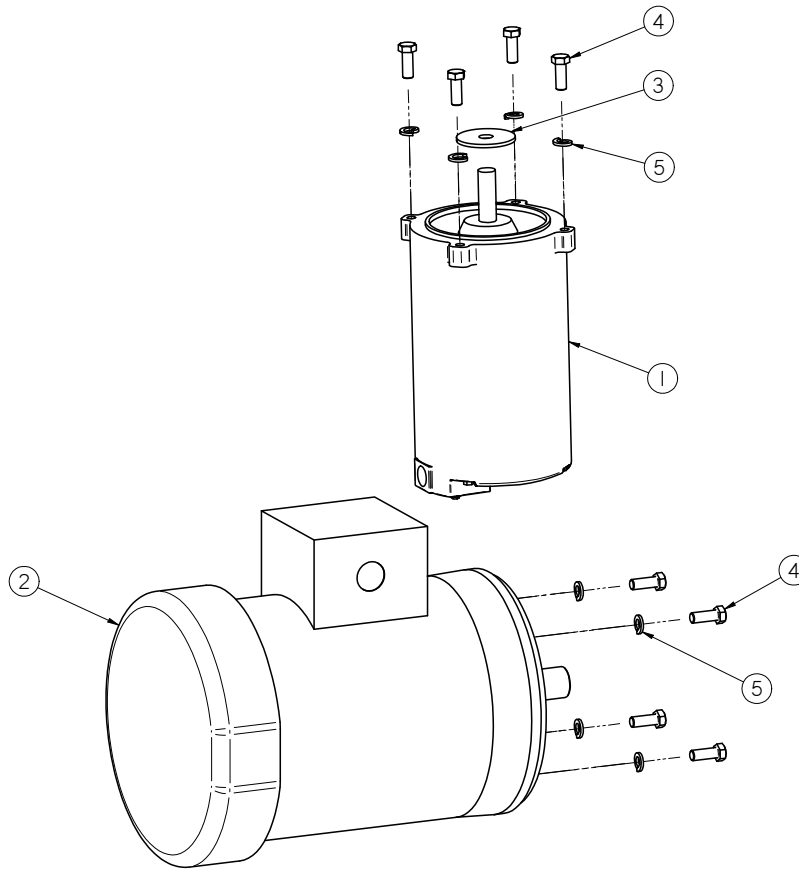


Item #	Part #	Description	Qty
1	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
2	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
3	05-10-0805	DISK ATOMIZER MOTOR	1
4	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
5	06-04-0003	WSHR LOCK SPLT .375 ZP	8

NOTICE The following parts are in the motor kit but do not appear in the drawing view

Item #	Part #	Description	Qty
5	03-06-0101	PLUG TURCK RSF 44-0.5M/NPT	1
6	03-08-0022	CNDT .500 FTTG HUB CONN	1
7	03-08-0299	CONN CG 0.5 NPT .170-.450 3232LTF	1
8	03-08-0345	CONN TRCK RAM 44-8M/S4000	1

LPV SEED TREATER
VERSION 4 MOTOR KIT (03-20-0268)



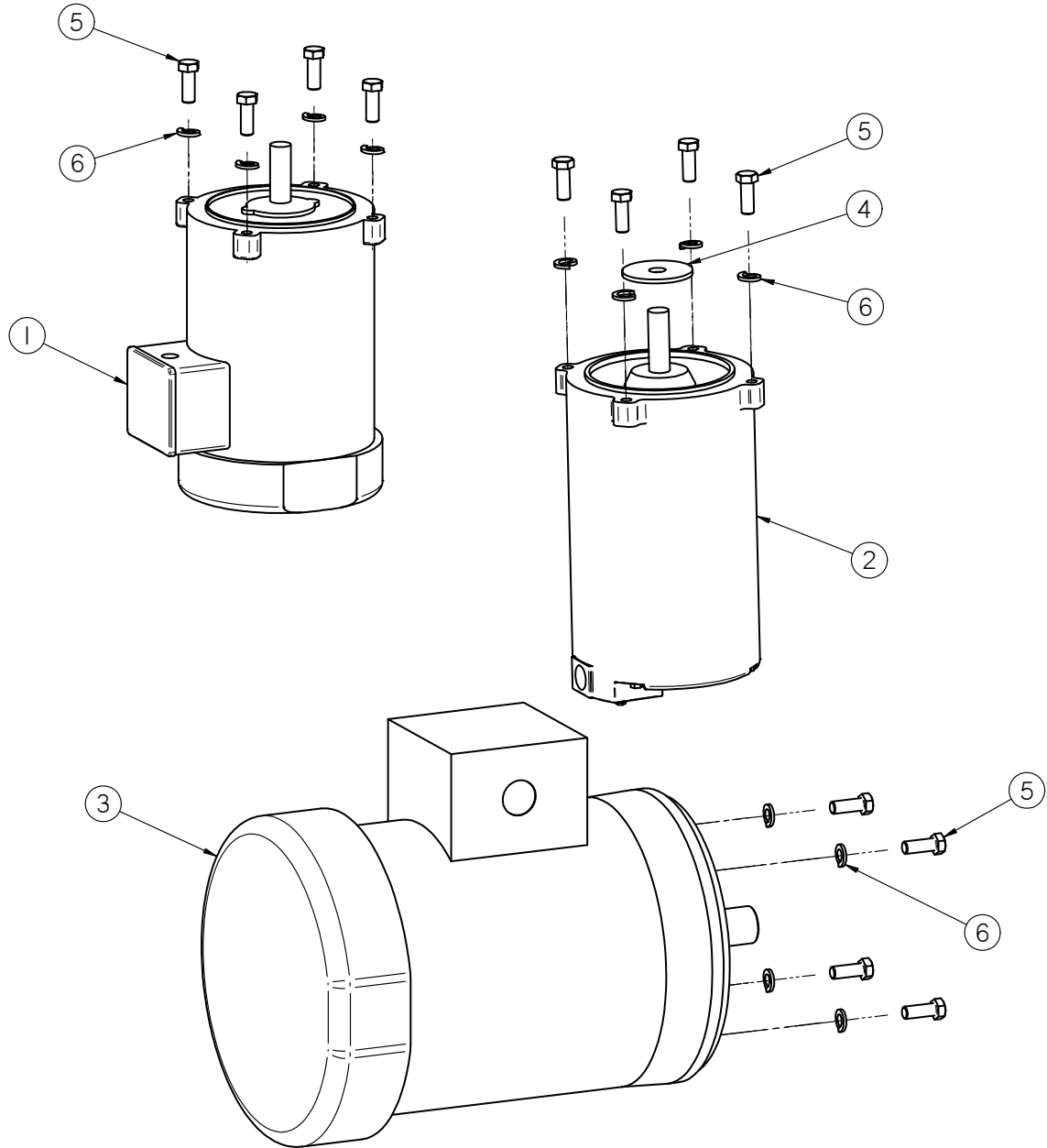
Item #	Part #	Description	Qty
1	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
2	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
3	05-10-0805	DISK ATOMIZER MOTOR	1
4	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
5	06-04-0003	WSHR LOCK SPLT .375 ZP	8

NOTICE The following parts are in the motor kit but do not appear in the drawing view

Item #	Part #	Description	Qty
5	03-06-0101	PLUG TURCK RSF 44-0.5M/NPT	1
6	03-08-0022	CNDT .500 FTTG HUB CONN	1
7	03-08-0283	CONN TRCK RSM 44-2M/S4000	1
8	03-08-0299	CONN CG 0.5 NPT .170-.450 3232LTF	1

LPV SEED TREATER

VERSION 4 HIGH CAPACITY MOTOR KIT (03-20-0249)



LPV SEED TREATER

VERSION 4 HIGH CAPACITY MOTOR KIT (03-20-0249)

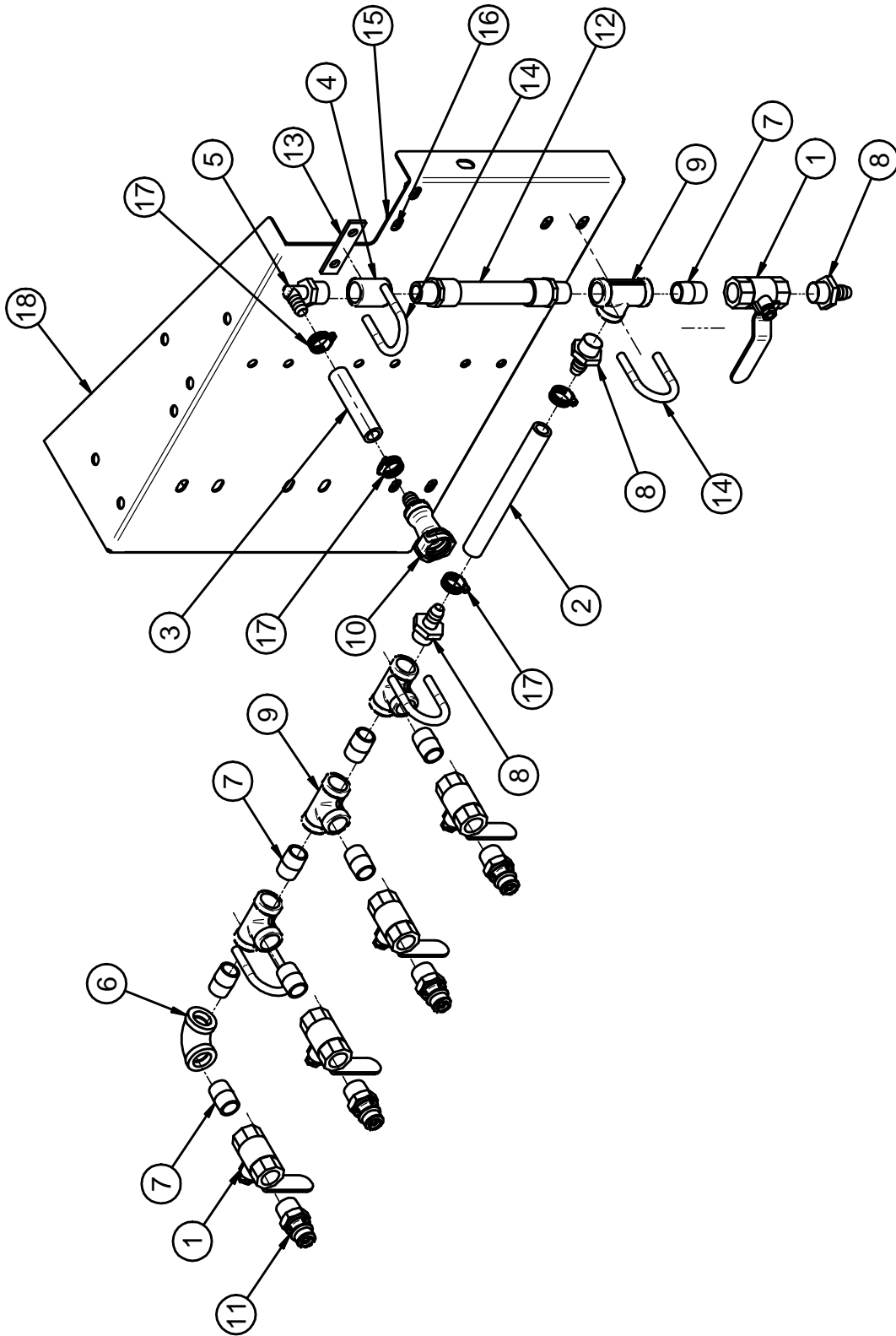
Item #	Part #	Description	Qty
1	01-01-0087	MTR .5HP 1725RPM S56C 3PH INDY	1
2	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
3	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
4	05-10-0805	DISK ATOMIZER MOTOR	1
5	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	12
6	06-04-0003	WSHR LOCK SPLT .375 ZP	12

NOTICE

The following parts are in the motor kit but do not appear in the drawing view

Item #	Part #	Description	Qty
8	03-06-0101	PLUG TURCK RSF 44-0.5M/NPT	2
9	03-08-0022	CNDT .500 FTTG HUB CONN	1
10	03-08-0283	CONN TURCK RSM 44-2M/S4000	1
11	03-08-0299	CONN CG 0.5 NPT .170-.450 3232LTF	1
12	03-08-0308	NUT NYLOC .500 NPT 8464	1

LPV SEED TREATER
4 PORT STATIC MIXER (04-03-0305)

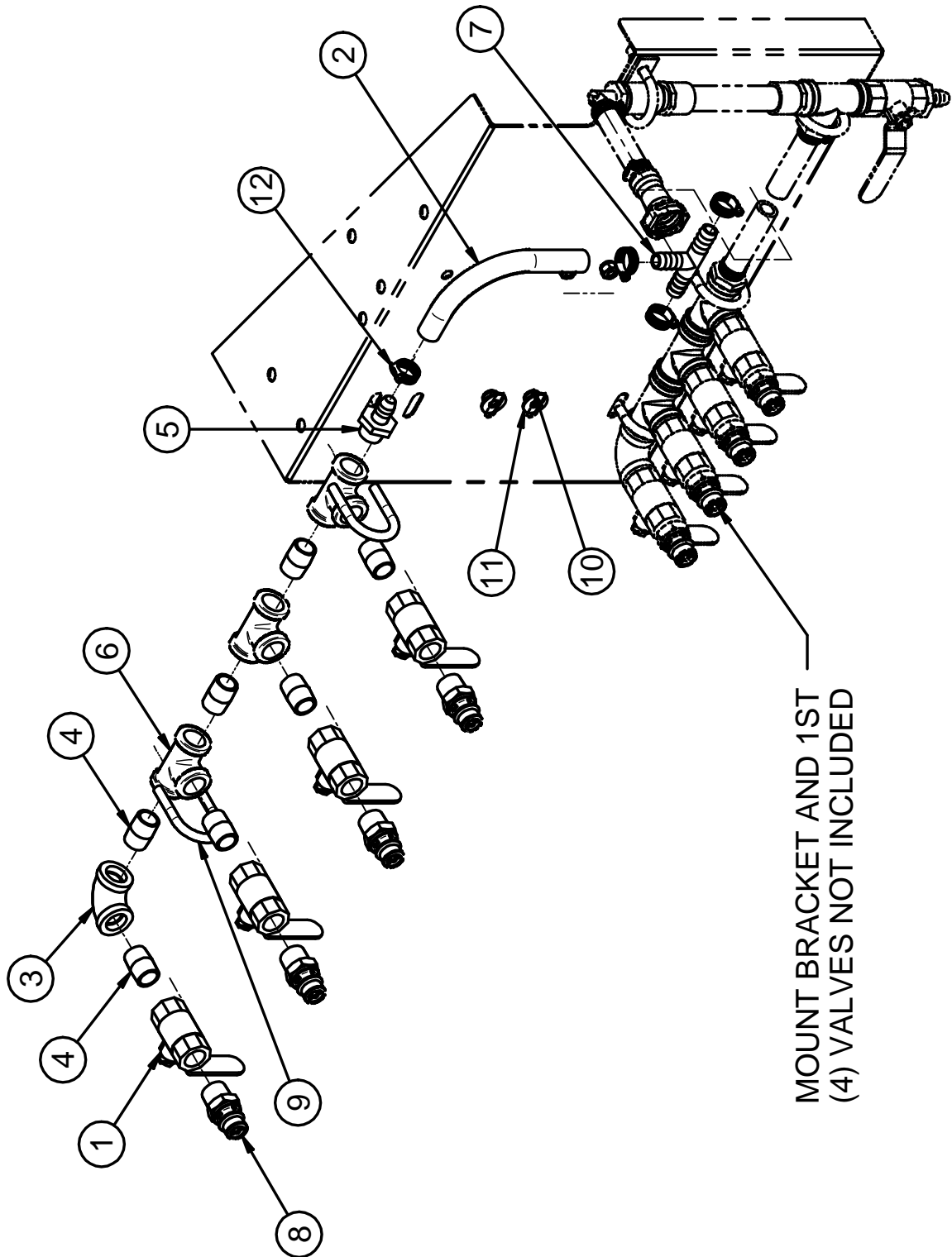


LPV SEED TREATER

4 PORT STATIC MIXER (04-03-0305)

Item #	Part #	Description	Qty
1	02-02-0006	.500-14 NPT X 2-WAY VALVE	5
2	02-03-0005	HOSE RNT .500 CLEAR 6.81" LG	1
3	02-03-0005	STTC MIXER TO ATMZR HOSE	1
4	02-05-0005	FTTG CPLG .500 NPT FM SS	1
5	02-06-0010	FTTG 90 DEG .500HB X .500NPT ML NYL	1
6	02-06-0012	FTTG 90 DEG .500NPT FM SS	1
7	02-07-0007	FTTG NIP .500NPTX1.125 TBE SS CLOSE	8
8	02-08-0007	FTTG STGHT .500HB X .500NPT ML NYL	3
9	02-09-0003	FTTG TEE .500 NPT FM SS	4
10	02-15-0013	FTTG CPLG .500 HB QCK DISC BODY	1
11	02-15-0014	FTTG CPLG .500 NPT QCK DISC INSERT	4
12	04-03-0030	MXR IL PVC 6ELEMENT .500PIPE X 7.00	1
13	05-10-4277	SPCR STTC MXR MNT	1
14	06-01-0037	BOLT U .313-18 X 1.38 X 2.188 ZP	4
15	06-03-0002	NUT NYL LOCK .313-18 ZP GR5	8
16	06-05-0003	WSHR FLAT .313 ZP	6
17	06-07-0006	CLMP HOSE .500 TO .906 X .313W ZP	4
18	105BA4	WDMT STTC MXR MNT 12 PORT	1

8 AND 12 PORT STATIC MIXER ADD ON KIT (04-03-0306)

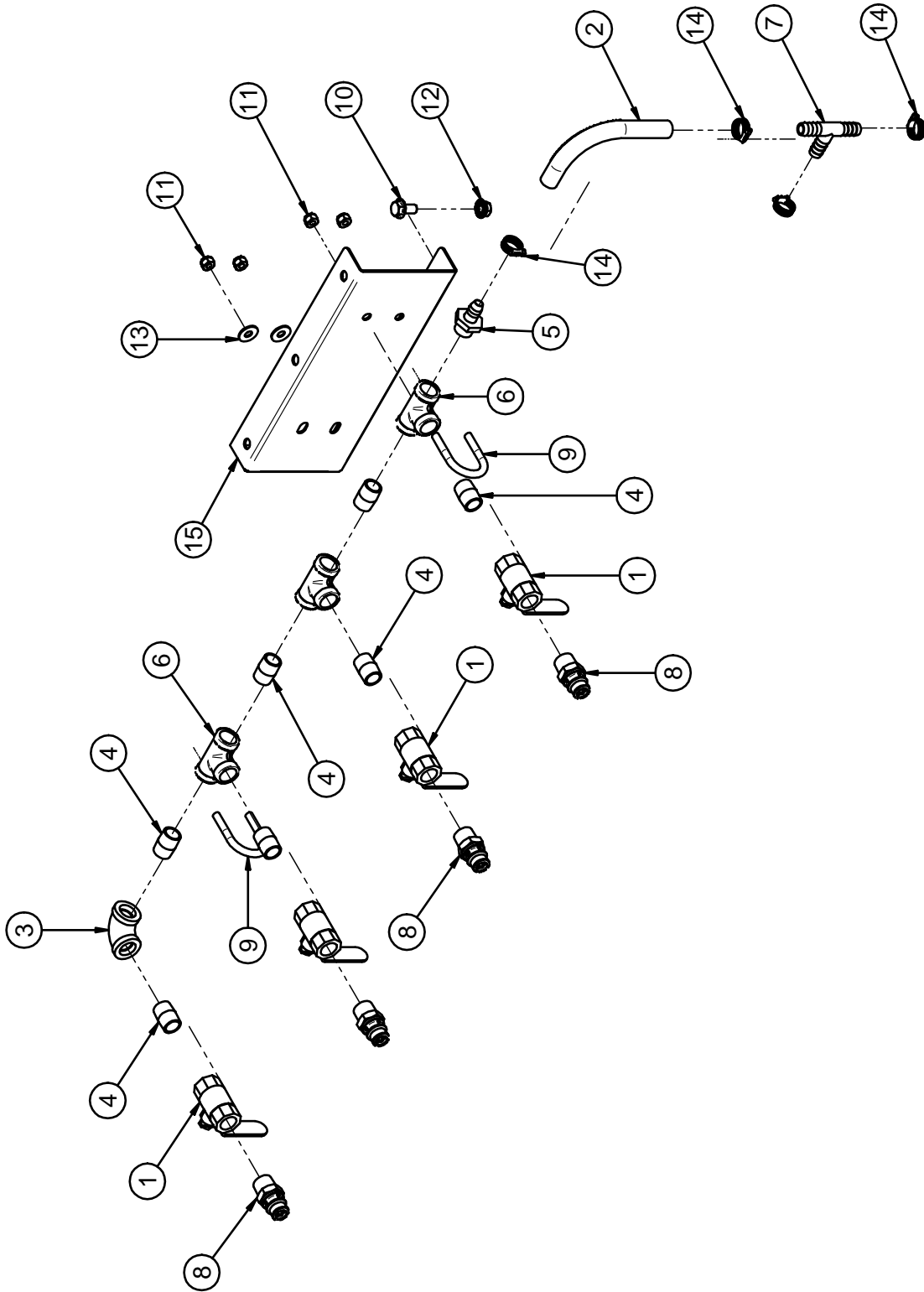


LPV SEED TREATER

8 AND 12 PORT STATIC MIXER ADD ON KIT (04-03-0306)

Item #	Part #	Description	Qty
1	02-02-0006	.500-14 NPT X 2-WAY VALVE	4
2	02-03-0005	HOSE RNT .500 CLEAR 7" LG	1
3	02-06-0012	FTTG 90 DEG .500NPT FM SS	1
4	02-07-0007	FTTG NIP .500NPTX1.125 TBE SS CLOSE	7
5	02-08-0007	FTTG STGHT .500HB X .500NPT ML NYL	1
6	02-09-0003	FTTG TEE .500 NPT FM SS	3
7	02-09-0047	FTTG TEE .500HB	1
8	02-15-0014	FTTG CPLG .500 NPT QCK DISC INSERT	4
9	06-01-0037	BOLT U .313-18 X 1.38 X 2.188 ZP	2
10	06-03-0002	NUT NYL LOCK .313-18 ZP GR5	4
11	06-05-0003	WSHR FLAT .313 ZP	2
12	06-07-0006	CLMP HOSE .500 TO .906 X .313W ZP	4

16 AND 20 PORT STATIC MIXER ADD ON KIT (04-03-0307)

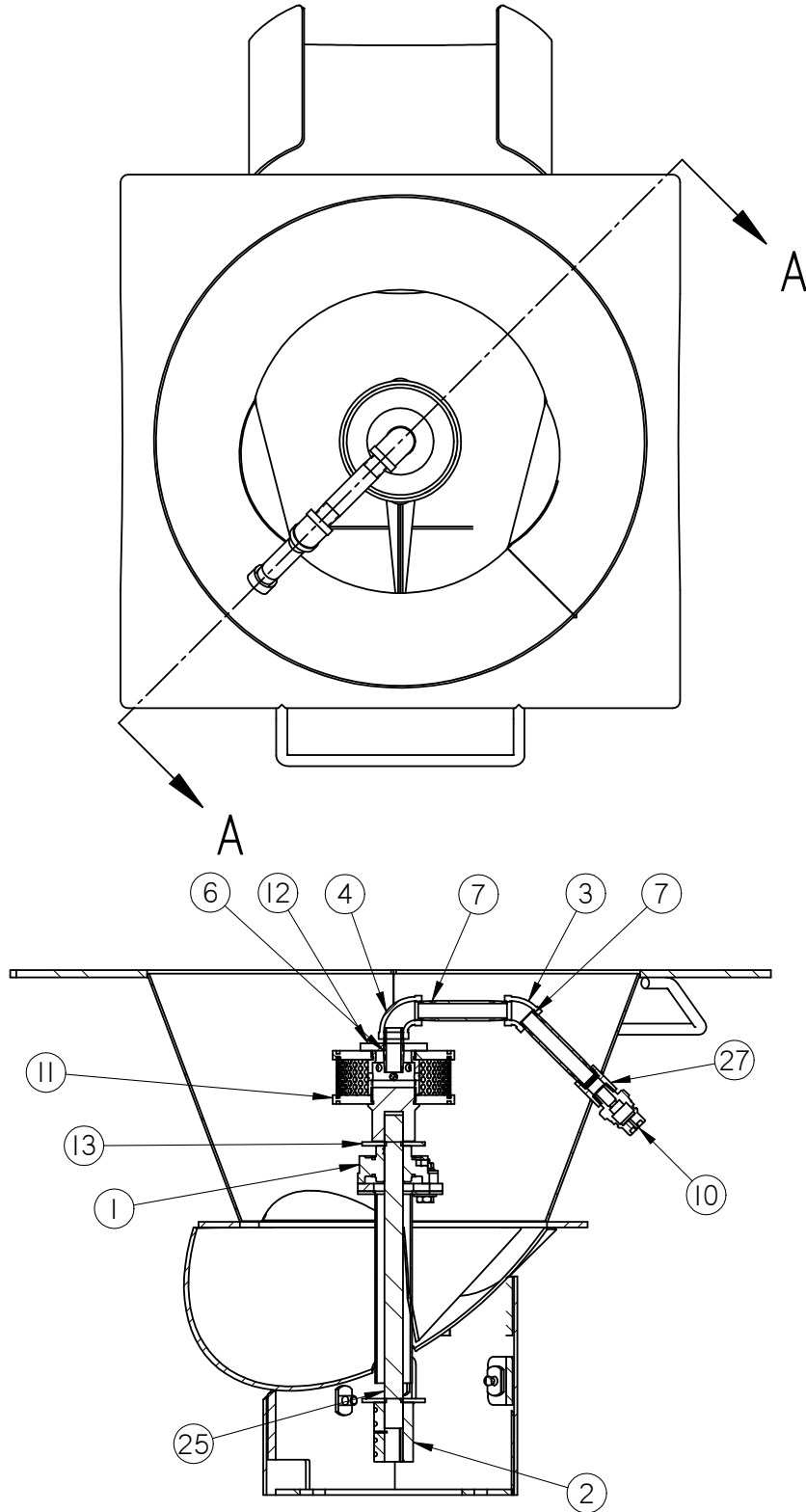


LPV SEED TREATER

16 AND 20 PORT STATIC MIXER ADD ON KIT (04-03-0307)

Item #	Part #	Description	Qty
1	02-02-0006	.500-14 NPT X 2-WAY VALVE	4
2	02-03-0005	HOSE RNT .500 CLEAR 7" LG	1
3	02-06-0012	FTTG 90 DEG .500NPT FM SS	1
4	02-07-0007	FTTG NIP .500NPTX1.125 TBE SS CLOSE	7
5	02-08-0007	FTTG STGHT .500HB X .500NPT ML NYL	1
6	02-09-0003	FTTG TEE .500 NPT FM SS	3
7	02-09-0047	FTTG TEE .500HB	1
8	02-15-0014	FTTG CPLG .500 NPT QCK DISC INSERT	4
9	06-01-0037	BOLT U .313-18 X 1.38 X 2.188 ZP	2
10	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	3
11	06-03-0002	NUT NYL LOCK .313-18 ZP GR5	4
12	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	3
13	06-05-0003	WSHR FLAT .313 ZP	2
14	06-07-0006	CLMP HOSE .500 TO .906 X .313W ZP	4
15	105BFE	BRKT STTC MXR ADDON	1

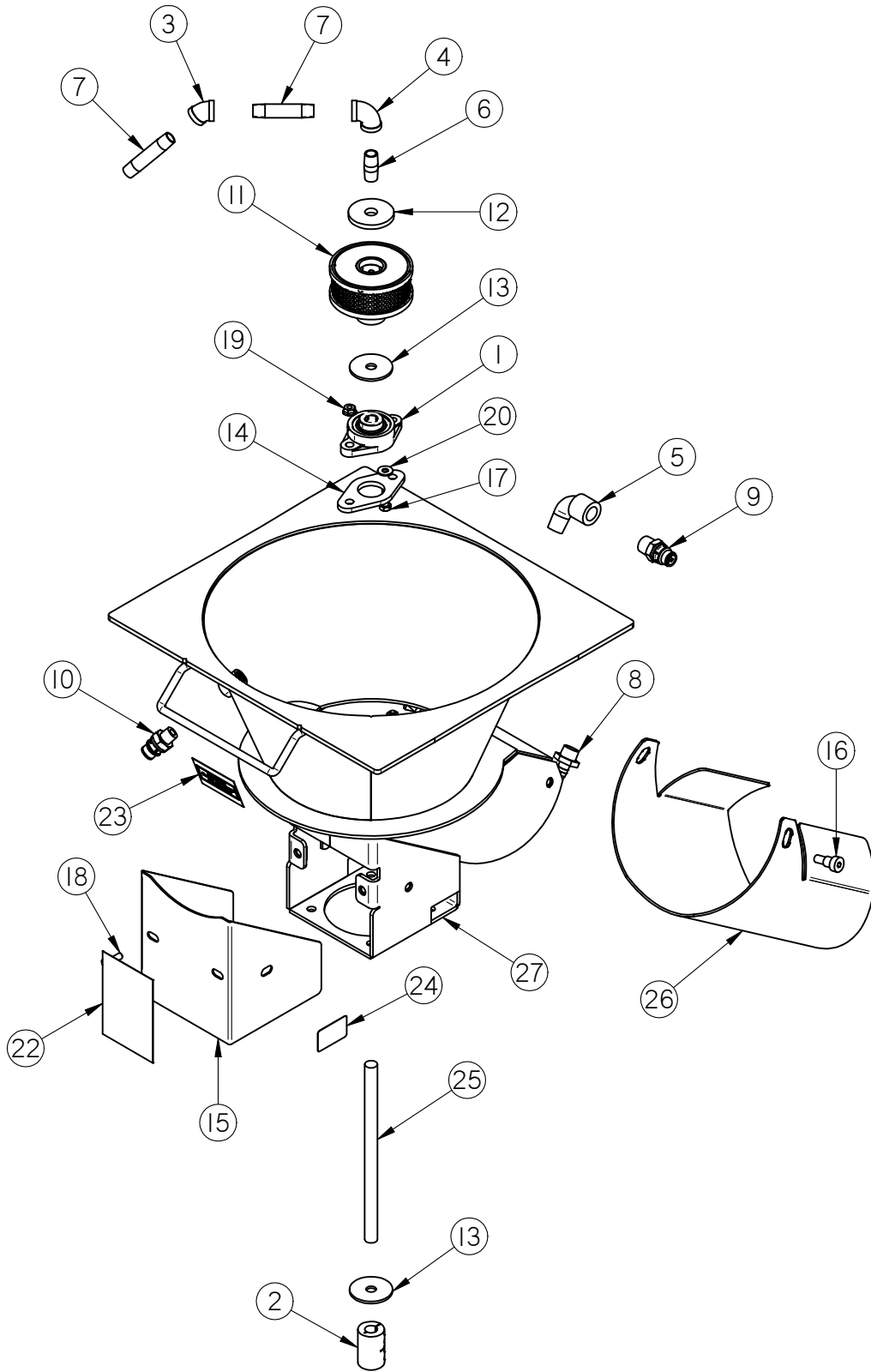
LPV SEED TREATER
ATOMIZER ASSEMBLY (18-01-0359)



SECTION A-A

LPV SEED TREATER

ATOMIZER ASSEMBLY (18-01-0359)

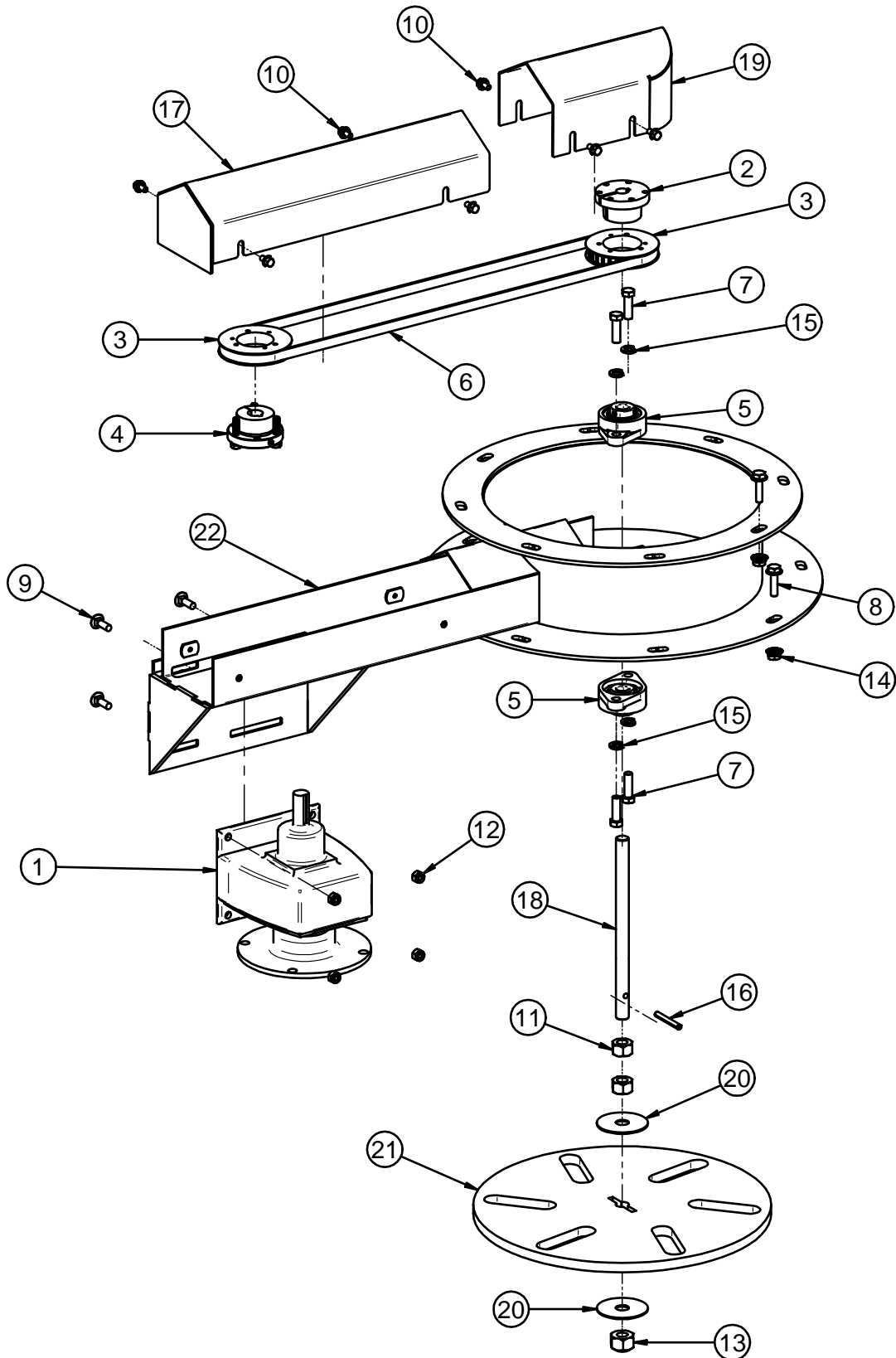


LPV SEED TREATER

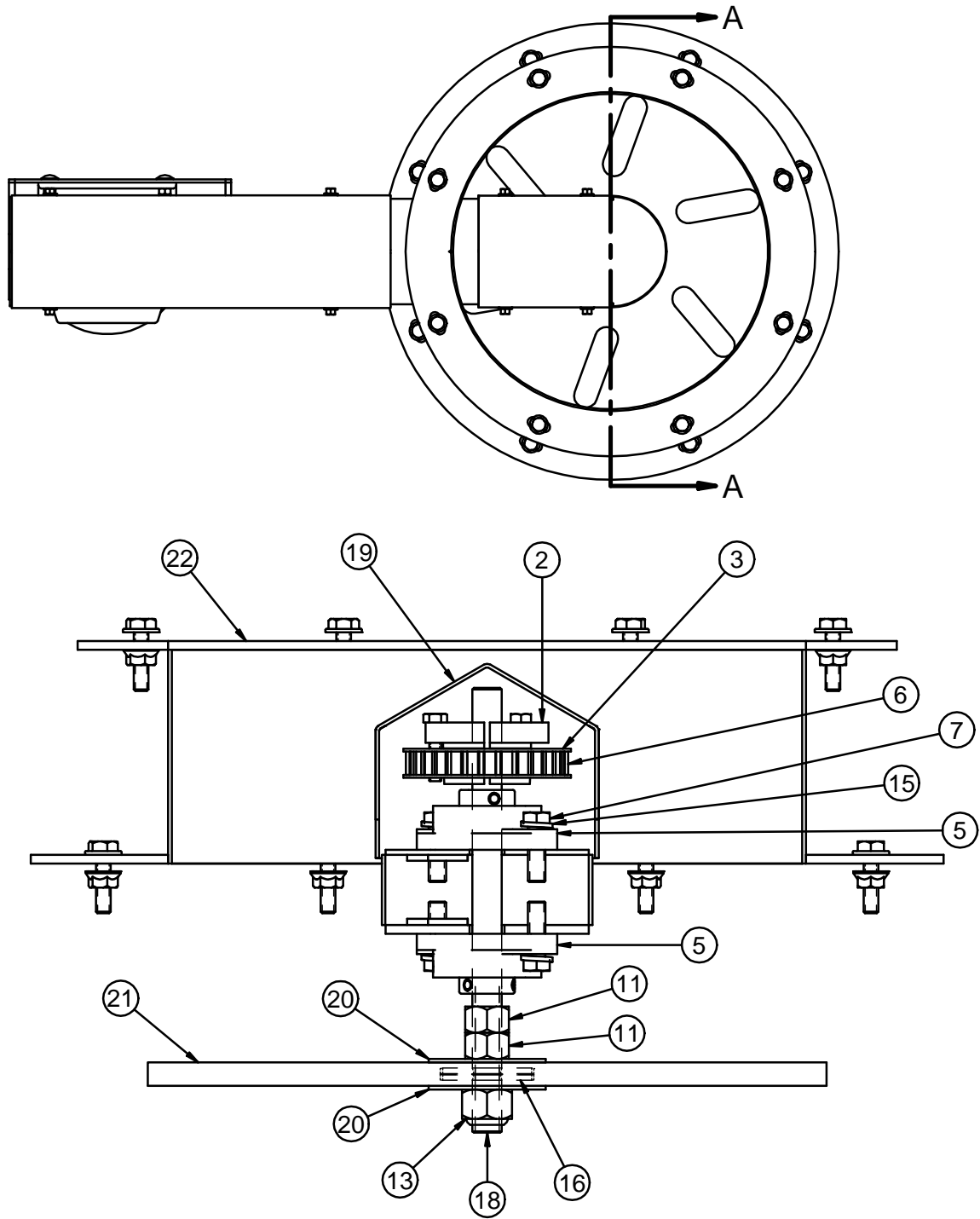
ATOMIZER ASSEMBLY (18-01-0359)

Item #	Part #	Description	Qty
1	01-03-0002	BRG FLG MNT .625ID 3.875 BASE	1
2	01-07-0027	CPLG CLPN .625 X .625 SPLT CS	1
3	02-06-0007	FTTG 45 DEG .375NPT SS	1
4	02-06-0008	FTTG 90 DEG .375NPT FM SS	1
5	02-06-0017	FTTG 90 DEG STRT .500NPT PPE BLK	1
6	02-07-0002	FTTG NIP .375 NPT X 1.50 TBE SS	1
7	02-07-0020	FTTG NIP .375 NPT X 3.00 TBE SS	2
8	02-08-0007	FTTG STGHT .500HB X .500NPT ML NYL	1
9	02-15-0014	FTTG CPLG .500 NPT QCK DISC INSERT	1
10	02-15-0037	FTTG CPLG .375 NPT QCK DISC INSERT	1
11	04-02-0004	ASSY,ATOMIZER HEAD,4" COTTON	1
12	05-10-0360	DISC STD ATMZR HEAD CVR	1
13	05-10-0805	DISK ATOMIZER MOTOR	2
14	05-10-2462	SEAL RBBR .625 FLG BRG	1
15	05-10-4029	GRD ATMZR MTR LPX SS	1
16	06-01-0056	BOLT SHLD .500SHX.375-16X.500 GR5	2
17	06-01-0102	BOLT .313-18 X 1.25 ZP GR5	2
18	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
19	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	2
20	06-05-0001	WASHER, FLAT .250	2
21	09-01-0107	LBL ATWK PATENT DECAL-ATMZR	1
22	09-02-0002	ATWK LBL DANGER GUARDS	1
23	09-02-0004	ATWK LBL GRS 40HRS	1
24	09-02-0013	ATWK LBL ROTATION ARROW	1
25	101FAF	SHAFT DRV ATMZR LPX2000	1
26	103D73	LPV2000 ATMZR EXT CHUTE for Brush	1
27	18-01-0066	WDMT ATMZR LPX2000 SS	1

HIGH CAPACITY NEBULIZER ASSEMBLY (18-01-0432)



HIGH CAPACITY NEBULIZER ASSEMBLY (18-01-0432)



SECTION A-A

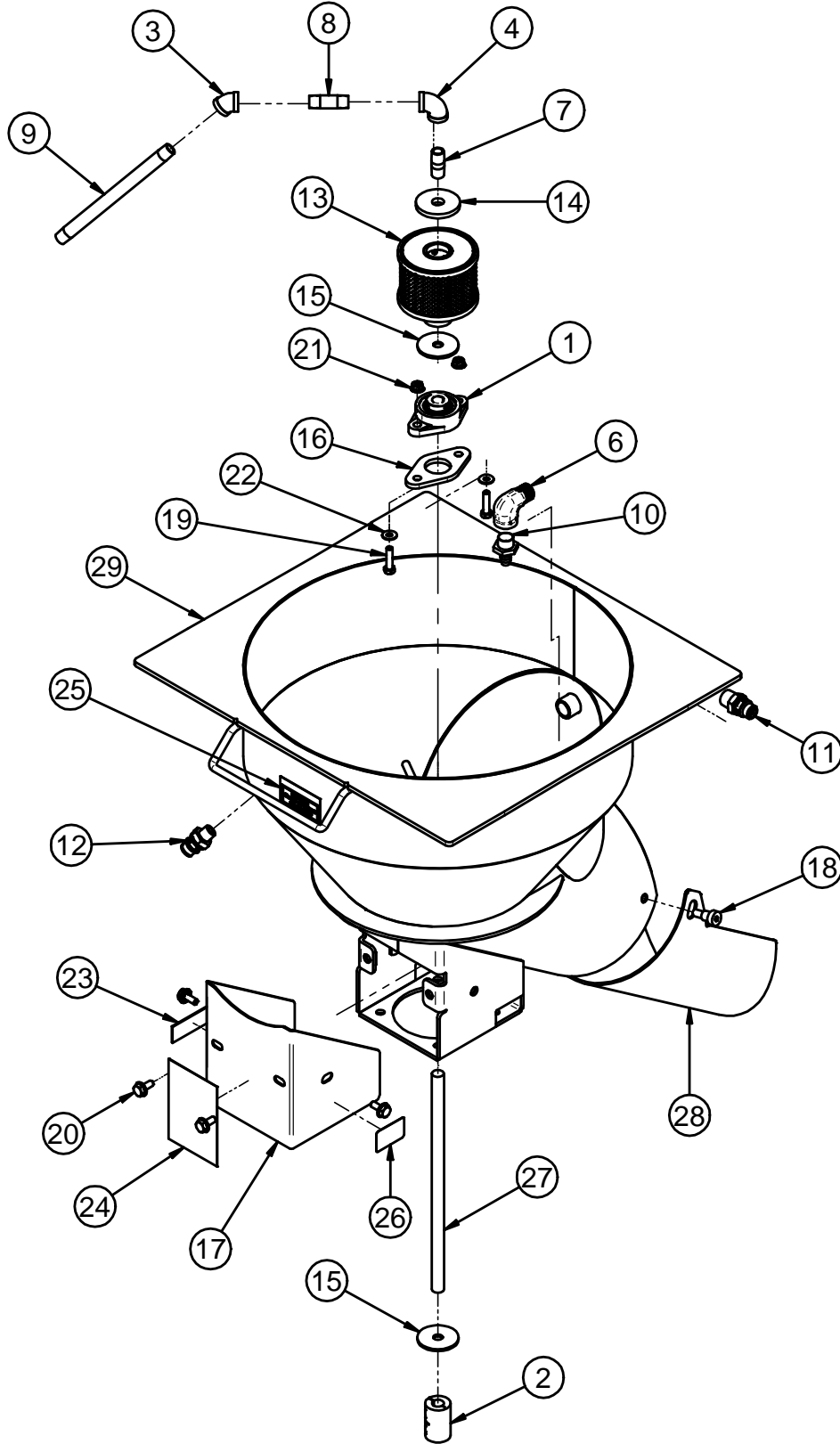
LPV SEED TREATER

HIGH CAPACITY NEBULIZER ASSEMBLY (18-01-0432)

Item #	Part #	Description	Qty
1	01-01-0029	CBN 3012 S B3 18 U 56C	1
2	01-02-0019	BUSHING SH .625	1
3	01-02-0025	TIMING SPRKT 28T L050 H	2
4	01-02-0136	BUSH 0.750IN BORE TYPE SH	1
5	01-03-0002	BRG FLG MNT .625ID 3.875 BASE	2
6	01-04-0027	ATOMIZER DRIVE BELT 540L050	1
7	06-01-0053	BOLT .375-16 X 1.25 ZP GR5	4
8	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	16
9	06-01-0223	BOLT CRG .313-18 X 1.00 ZP GR5	4
10	06-01-0299	BOLT FLG .250-20 X .500 ZP GR5	8
11	06-02-0005	NUT, .625-11 UNC ZP GRADE 5	2
12	06-03-0002	NUT NYL LOCK .313-18 ZP GR5	4
13	06-03-0005	NUT NYL LOCK .625-11 ZP	1
14	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	16
15	06-04-0003	WSHR LOCK SPLT .375 ZP	4
16	06-09-0065	PIN SPG .250 X 2.00 CS PLAIN	1
17	104E3B	WDMT GRD BELT	1
18	1055B4	SHFT NEBULIZER	1
19	105663	COVER 1	1
20	105665	WSHR .625 X 2.5 SS 14 GA	2
21	105A1E	DISK NEBULIZER	1
22	18-01-0433	WDMT MTR SUPT NBLZR LPV3000	1

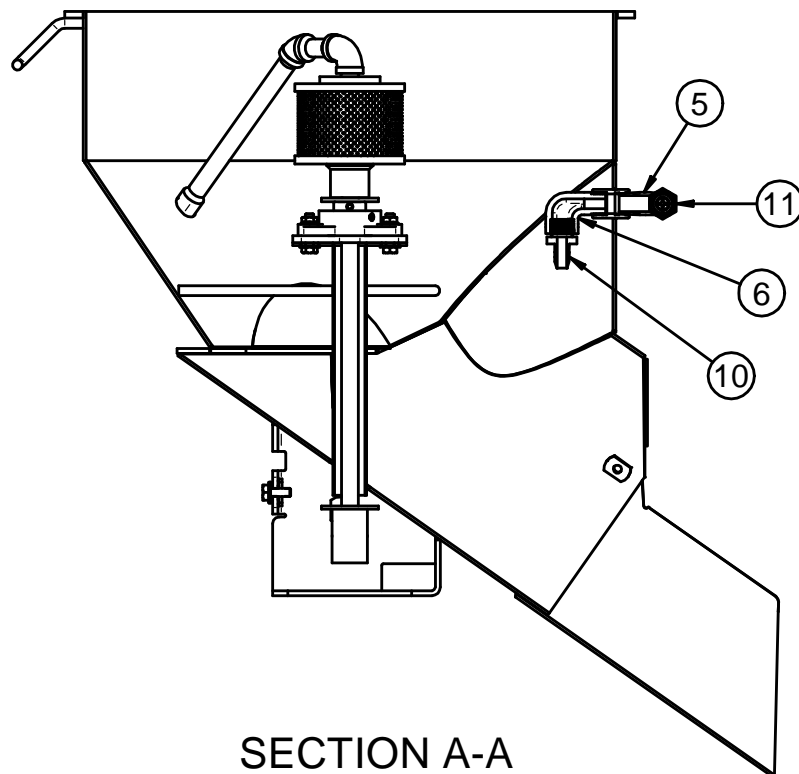
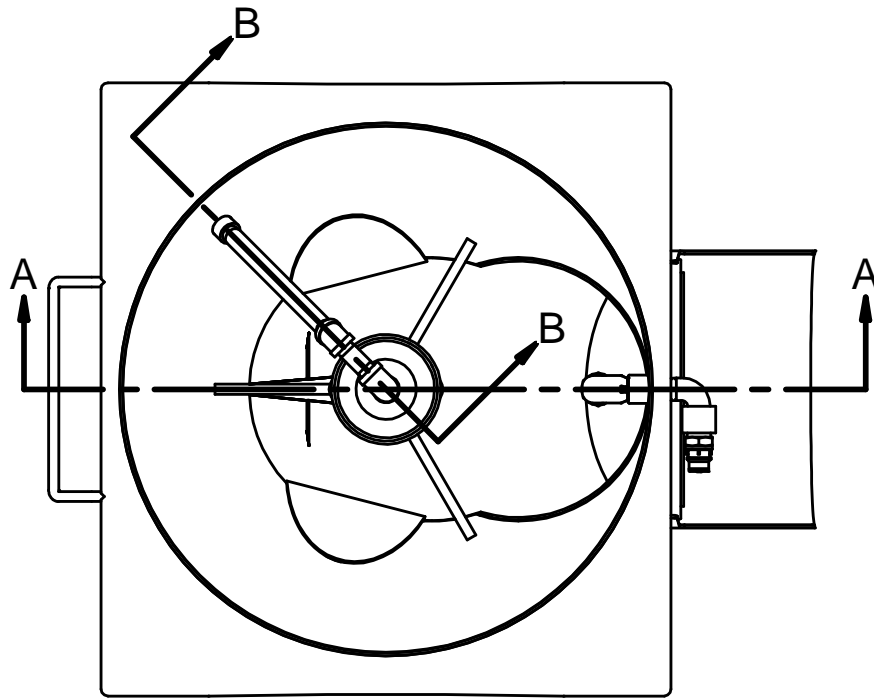
LPV SEED TREATER

HIGH CAPACITY ATOMIZER ASSEMBLY (18-01-0431)



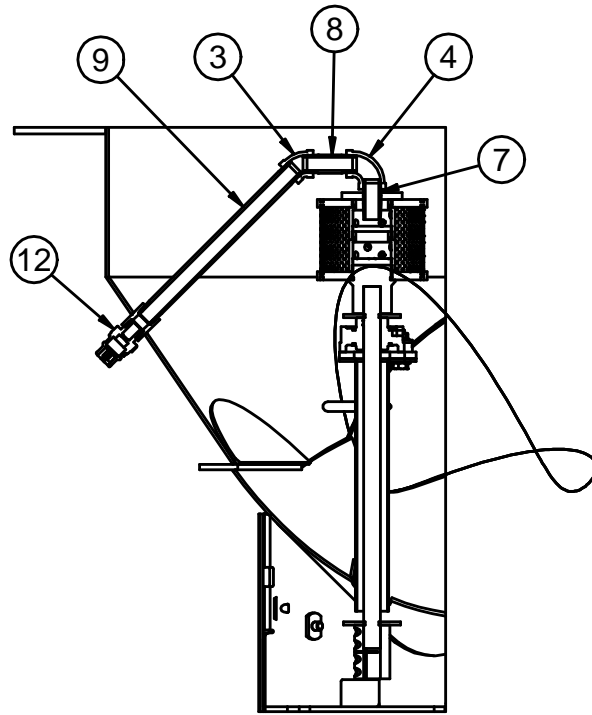
LPV SEED TREATER

HIGH CAPACITY ATOMIZER ASSEMBLY (18-01-0431)



SECTION A-A

HIGH CAPACITY ATOMIZER ASSEMBLY (18-01-0431)



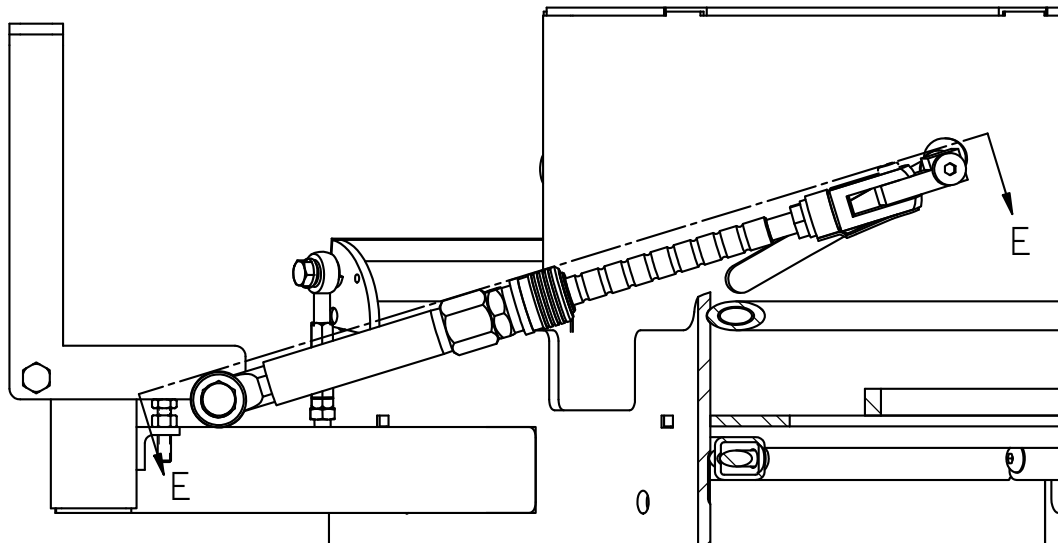
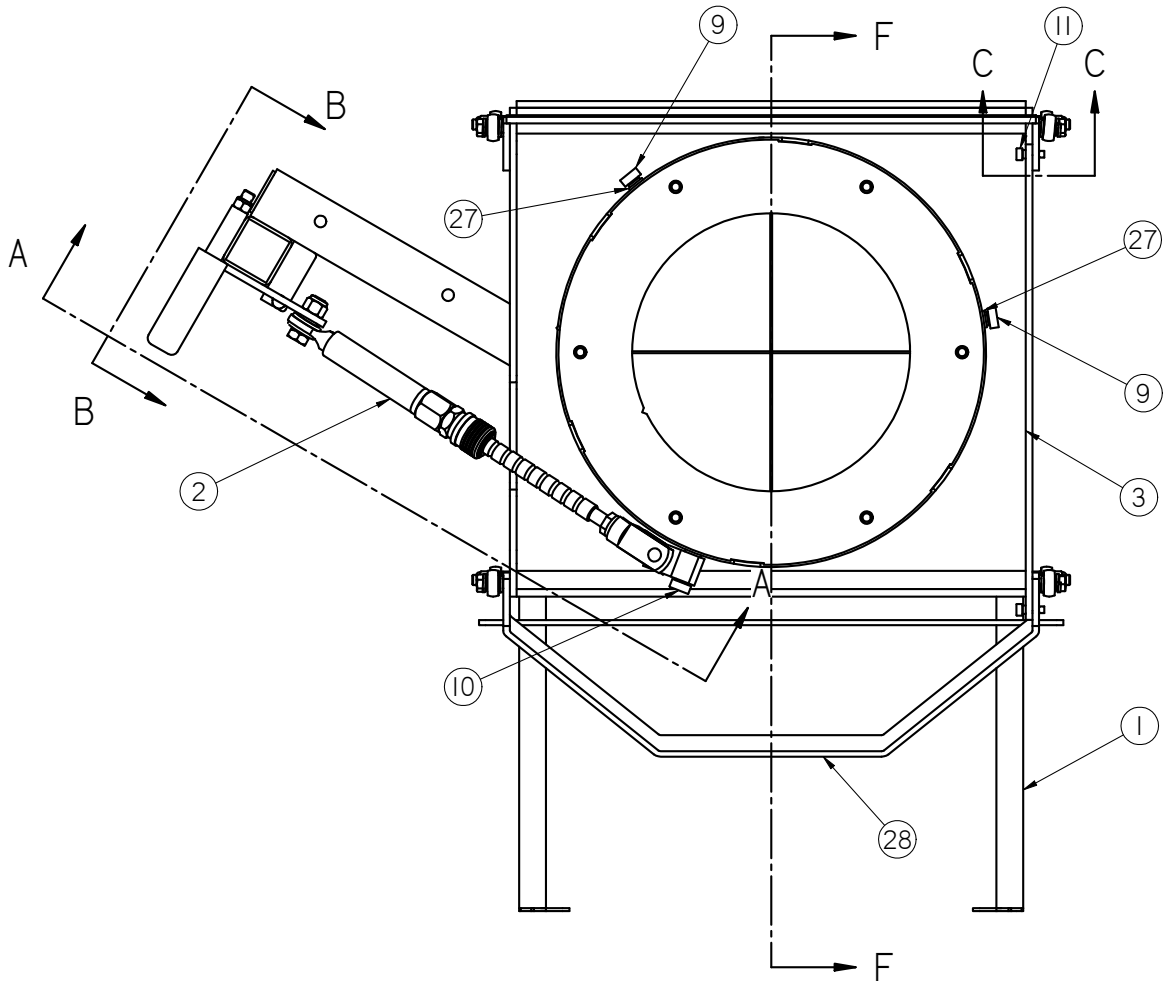
SECTION B-B

LPV SEED TREATER

HIGH CAPACITY ATOMIZER ASSEMBLY (18-01-0431)

Item #	Part #	Description	Qty
1	01-03-0002	BRG FLG MNT .625ID 3.875 BASE	1
2	01-07-0027	CPLG CLPN .625 X .625 SPLT CS	1
3	02-06-0007	FTTG 45 DEG .375NPT SS	1
4	02-06-0008	FTTG 90 DEG .375NPT FM SS	1
5	02-06-0017	FTTG 90 DEG STRT .500NPT PPE BLK	1
6	02-06-0020	FTTG 90 DEG STRT.500NPTX .500NPT SS	1
7	02-07-0002	FTTG NIP .375 NPT X 1.50 TBE SS	1
8	02-07-0003	FTTG NIP .375 NPT X 2.00 TBE SS	1
9	02-07-0022	FTTG NIP .375 NPT X 8.00 TBE SS	1
10	02-08-0007	FTTG STGHT .500HB X .500NPT ML NYL	1
11	02-15-0014	FTTG CPLG .500 NPT QCK DISC INSERT	1
12	02-15-0037	FTTG CPLG .375 NPT QCK DISC INSERT	1
13	04-01-0033	ASSY ATMZR LP4000	1
14	05-10-0360	DISC STD ATMZR HEAD CVR	1
15	05-10-0805	DISK ATOMIZER MOTOR	2
16	5/10/2462	SEAL RBBR .625 FLG BRG	1
17	5/10/4029	GRD ATMZR MTR LPX SS	1
18	06-01-0056	BOLT SHLD .500SHX.375-16X.500 GR5	2
19	06-01-0102	BOLT .313-18 X 1.25 ZP GR5	2
20	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
21	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	2
22	06-05-0001	WASHER, FLAT .250	2
23	09-01-0107	LBL ATWK PATENT DECAL-ATMZR	1
24	09-02-0002	ATWK LBL DANGER GUARDS	1
25	09-02-0004	ATWK LBL GRS 40HRS	1
26	09-02-0013	ATWK LBL ROTATION ARROW	1
27	1059C4	SHAFT DRV ATMZR LPV3000	1
28	105A97	LPV3000 ATMZR EXT CHUTE	1
29	18-01-0427	WDMT ATMZR LPV3000	1

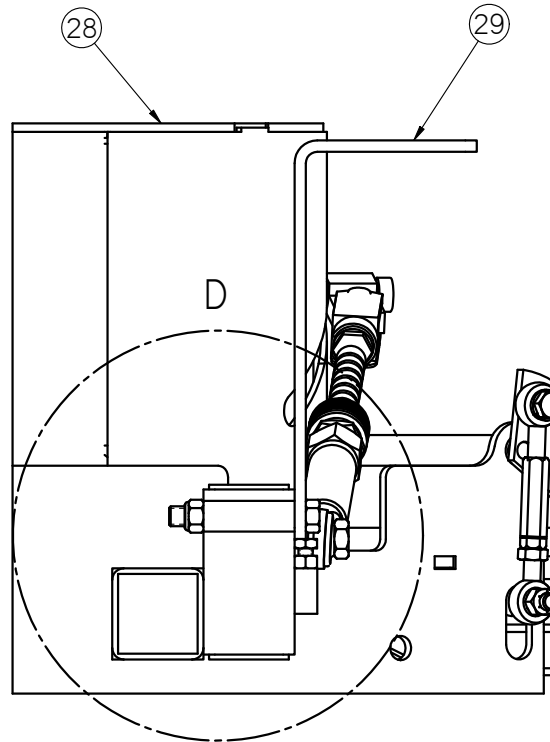
STANDARD ADJUSTABLE CHAMBER ASSEMBLY (18-01-0062)



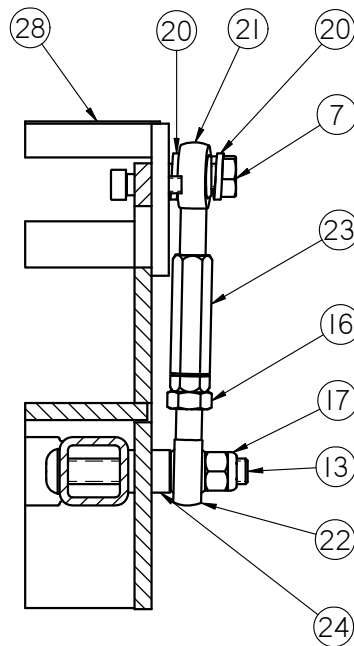
SECTION A-A

LPV SEED TREATER

STANDARD ADJUSTABLE CHAMBER ASSEMBLY (18-01-0062)

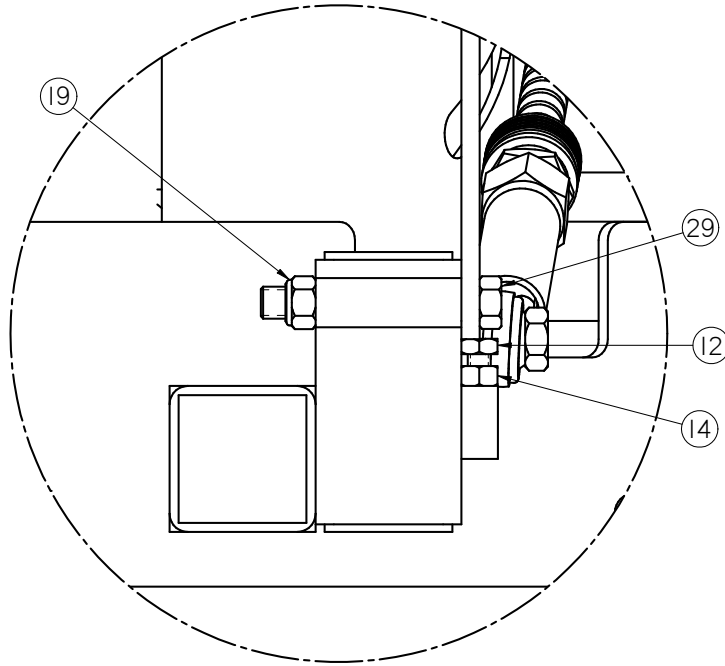


SECTION B-B

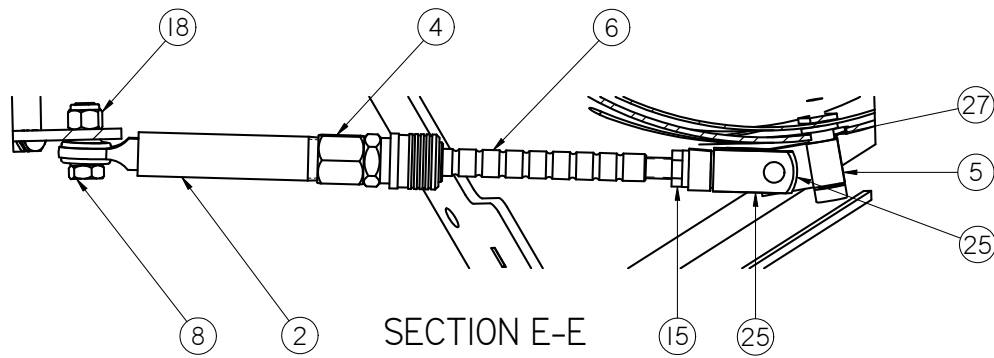


SECTION C-C

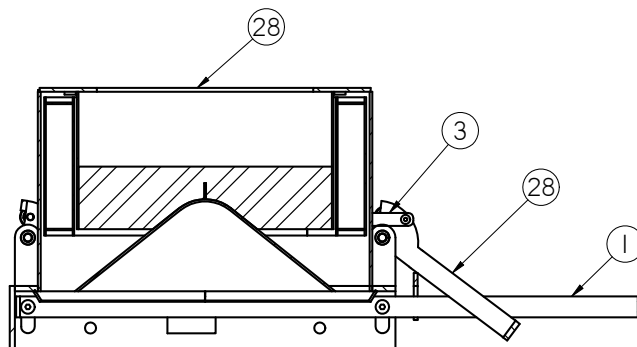
STANDARD ADJUSTABLE CHAMBER ASSEMBLY (18-01-0062)



DETAIL D



SECTION E-E



SECTION F-F

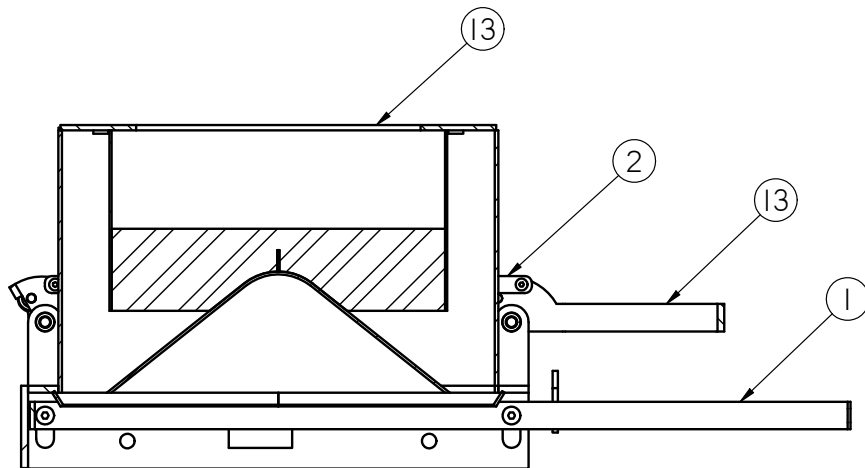
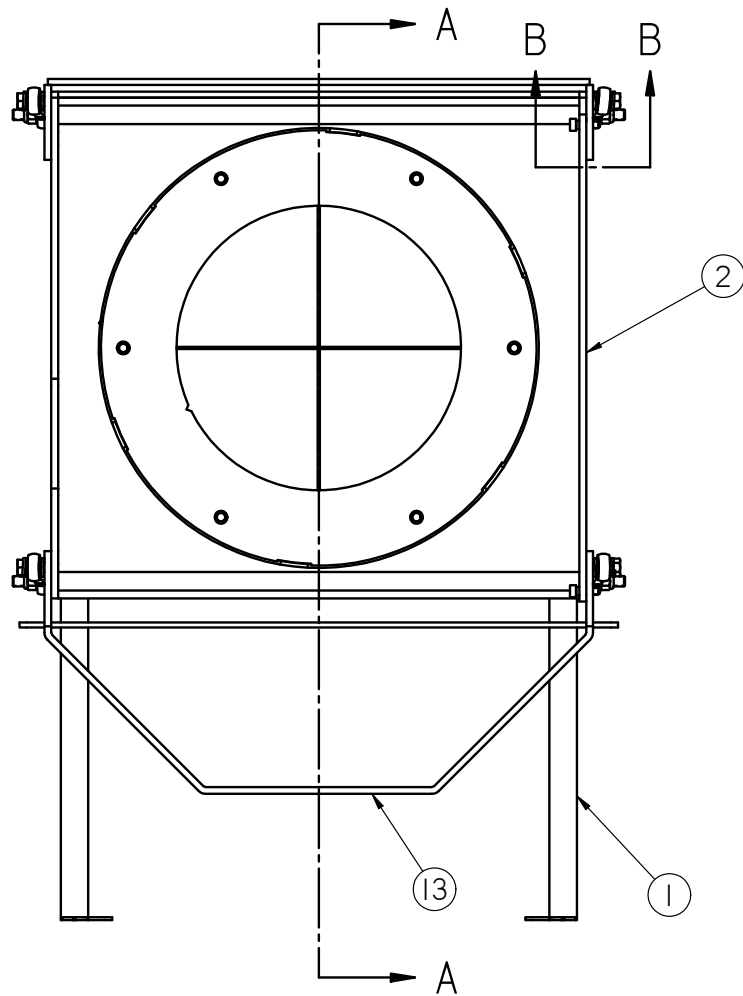
LPV SEED TREATER

STANDARD ADJUSTABLE CHAMBER ASSEMBLY (18-01-0062)

Item #	Part #	Description	Qty
1	05-03-0336	WDMT,CHAMBER SUPPORT BRK SS	1
2	05-04-0012	WDMT FLOW SLV ROD END TUBE	1
3	05-10-2062	BAR ECNTRC CONNECTING CS	1
4	05-11-0029	CPLG QCK CONNECT MACH	1
5	05-11-0030	BRKT FLOW CNTL CLEVIS	1
6	05-11-0034	ROD FLOW STOP ADJ	1
7	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
8	06-01-0025	BOLT .500-13 X 1.50 ZP GR5	1
9	06-01-0056	BOLT SHLD .500SHX.375-16X.500 GR5	2
10	06-01-0057	BOLT SHLD .500SHX.375-16X1.50 GR5	1
11	06-01-0081	BOLT SHLD .313SHX.250-20X.375 GR5	2
12	06-01-0102	BOLT .313-18 X 1.25 ZP GR5	1
13	06-02-0002	NUT FULL .313-18 ZP GR5	1
14	06-02-0015	NUT JAM .500-20 ZP GR5	1
15	06-02-0035	NUT JAM .375-24 ZP GR5	4
16	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	4
17	06-03-0004	NUT NYL LOCK .500-13 ZP GR5	1
18	06-03-0006	NUT NYL LOCK .438-14 ZP GR5	1
19	06-04-0003	WSHR LOCK SPLT .375 ZP	8
20	06-06-0087	SCRW BTN SCKT HD .375-16X2.75 ZP	4
21	06-12-0002	REND .375-24 BALL RH	4
22	06-12-0003	REND .375-24 BALL RH	4
23	06-12-0006	ROD CTNG .375-24 X 2.00 LH RH FM	4
24	06-12-0007	BUSH DRILL.375ID X .625OD X .375	4
25	06-12-0008	CLVS .500-20 X .500	1
26	06-12-0009	PIN CLIP SPRING .500	1
27	06-12-0012	BUSH FLG BRZ .500ID X .625OD X .375	3
28	18-01-0060	WDMT ADJ CHMBR LPX2000 CS	1
29	18-01-0108	WDMT FLOW SLV HNDL LPX	1

LPV SEED TREATER

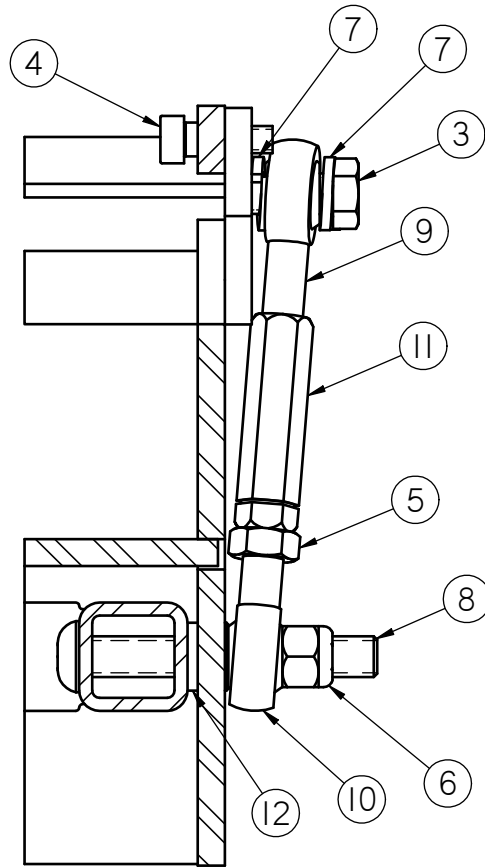
STANDARD FLOW CHAMBER ASSEMBLY (18-01-0350)



SECTION A-A

LPV SEED TREATER

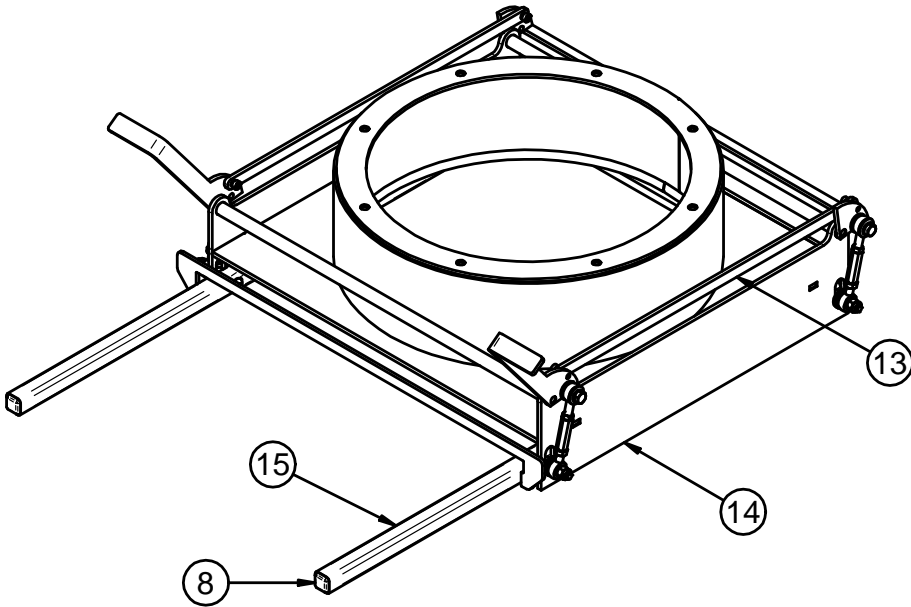
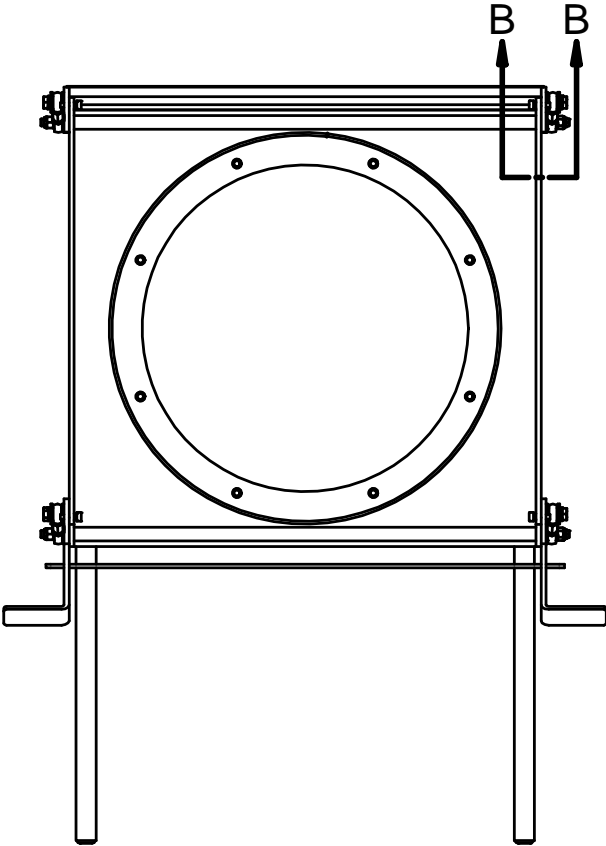
STANDARD FLOW CHAMBER ASSEMBLY (18-01-0350)



SECTION B-B

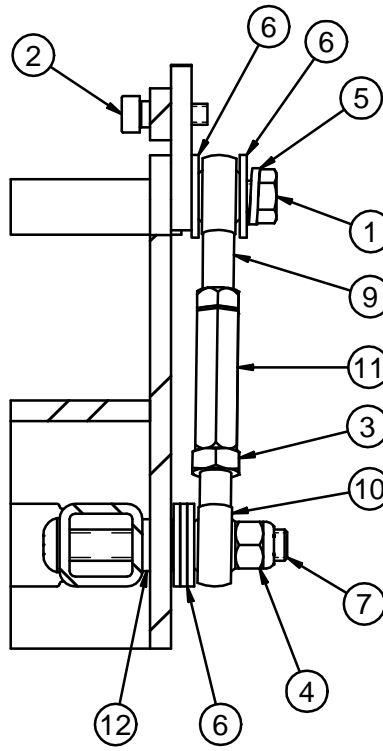
Item #	Part #	Description	Qty
1	05-03-0336	WDMT,CHAMBER SUPPORT BRK SS	1
2	05-10-2062	BAR ECNTRC CONNECTING CS	1
3	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
4	06-01-0081	BOLT SHLD .313SHX.250-20X.375 GR5	2
5	06-02-0035	NUT JAM .375-24 ZP GR5	4
6	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	4
7	06-04-0003	WSHR LOCK SPLT .375 ZP	8
8	06-06-0087	SCRW BTN SCKT HD .375-16X2.75 ZP	4
9	06-12-0002	REND .375-24 BALL RH	4
10	06-12-0003	REND .375-24 BALL RH	4
11	06-12-0006	ROD CTNG .375-24 X 2.00 LH RH FM	4
12	06-12-0007	BUSH DRILL.375ID X .625OD X .375	4
13	18-01-0351	WDMT FLOW CHMBR LPX2000 CS	1

LPV SEED TREATER
HIGH FLOW CHAMBER ASSEMBLY (18-01-0430)



LPV SEED TREATER

HIGH FLOW CHAMBER ASSEMBLY (18-01-0430)

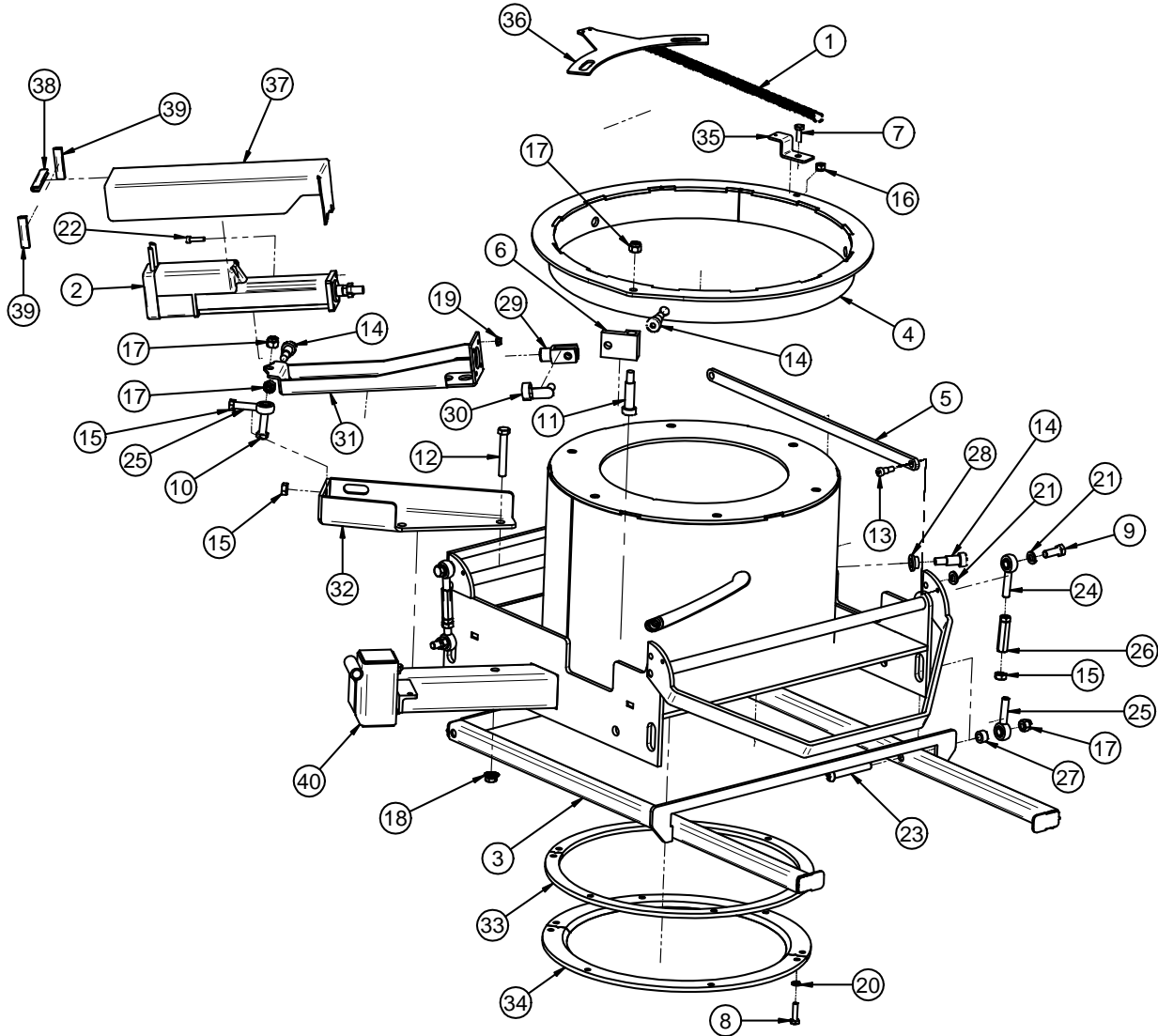


SECTION B-B

Item #	Part #	Description	Qty
1	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
2	06-01-0081	BOLT SHLD .313SHX.250-20X.375 GR5	4
3	06-02-0035	NUT JAM .375-24 ZP GR5	4
4	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	4
5	06-04-0003	WSHR LOCK SPLT .375 ZP	4
6	06-05-0004	WSHR FLAT .375 ZP	20
7	06-06-0087	SCRW BTN SCKT HD .375-16X2.75 ZP	4
8	06-10-0027	RIBBED POLYE 1X1 TBG PLUG	2
9	06-12-0002	REND .375-24 BALL LH	4
10	06-12-0003	REND .375-24 BALL RH	4
11	06-12-0006	ROD CTNG .375-24 X 2.00 LH RH FM	4
12	06-12-0007	BUSH DRILL.375ID X .625OD X .375	4
13	1059CB	BAR ECNTRC CONNECTING LPV3000 CS	2
14	18-01-0428	WDMT FLOW CHMBR LPV3000 CS	1
15	18-01-0429	WDMT MAIN CHMBR SUPP BRKT LPV3000 SS	1

LPV SEED TREATER

STANDARD LOSS-IN-WEIGHT ADJUSTABLE CHAMBER ASSEMBLY (18-01-0283)



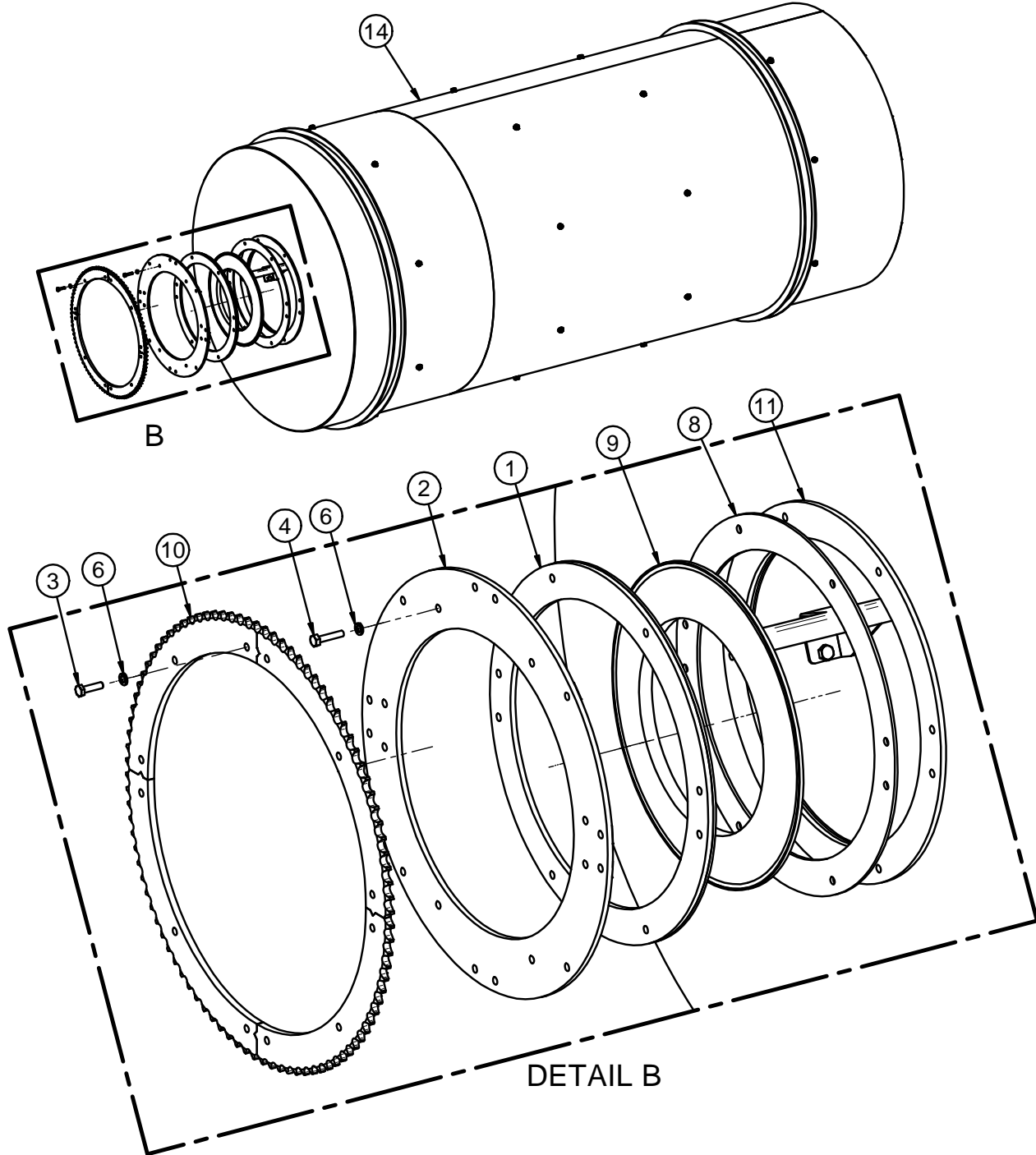
Item #	Part #	Description	Qty
1	01-04-0093	SPG EXT .50OD .055 WIRE 5.0IN LG	1
2	03-20-0162	KIT ACTR W CONNECTORS	1
3	05-03-0336	WDMT,CHAMBER SUPPORT BRK SS	1
4	05-04-0169	WDMT RING DRV LIW SLEEVE	1
5	05-10-2062	BAR ECNTRC CONNECTING CS	1

LPV SEED TREATER

STANDARD LOSS-IN-WEIGHT ADJUSTABLE CHAMBER ASSEMBLY (18-01-0283)

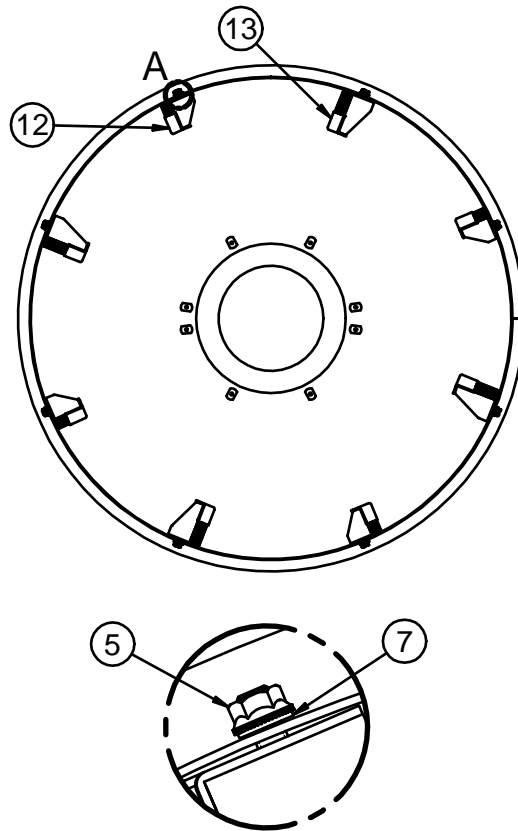
Item #	Part #	Description	Qty
6	05-11-0394	BRKT FLOW CNTL CLVS 10 MM	1
7	06-01-0006	BOLT .250-20 X .750 ZP GR5	1
8	06-01-0007	BOLT, .250-20 X 1 UNC ZP GRADE 5	8
9	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
10	06-01-0053	BOLT .375-16 X 1.25 ZP GR5	1
11	06-01-0057	BOLT SHLD .500SHX.375-16X1.50 GR5	1
12	06-01-0071	BOLT .375-16 X 2.50 ZP GR5	2
13	06-01-0081	BOLT SHLD .313SHX.250-20X.375 GR5	2
14	06-01-0278	BOLT SHLD .500SHX.375-16X.750 GR5	4
15	06-02-0035	NUT JAM .375-24 ZP GR5	6
16	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	1
17	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	7
18	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	2
19	06-03-0031	NUT LOCK FLG M5-0.8 GR8.8	4
20	06-04-0001	WSHR LOCK SPLT .250 ZP	8
21	06-04-0003	WSHR LOCK SPLT .375 ZP	8
22	06-06-0083	SCRW SH M5-0.8 X 20MM BO	4
23	06-06-0087	SCRW BTN SCKT HD .375-16X2.75 ZP	4
24	06-12-0002	REND .375-24 BALL RH	4
25	06-12-0003	REND .375-24 BALL RH	5
26	06-12-0006	ROD CTNG .375-24 X 2.00 LH RH FM	4
27	06-12-0007	BUSH DRILL.375ID X .625OD X .375	4
28	06-12-0012	BUSH FLG BRZ .500ID X .625OD X .375	3
29	06-12-0043	CLVS 10-1.25 X 10MM	1
30	06-12-0044	PIN CLIP SPRING 10MM	1
31	102EEA	BRKT DYATIC SCN5-010-150 ACTUATOR	1
32	102EEB	BRKT CYL BASE	1
33	1044AB	SPACER	2
34	1044EB	SEAL	2
35	10501D	SPRING BRKT	1
36	105020	SPRING BRKT	1
37	105172	CVR ACTR LIW ADJ CHMBR	1
38	1056F1	ACTR CVR EDGING	1
39	1056F2	ACTR CVR EDGING	2
40	18-01-0060	WDMT ADJ CHMBR LPX2000 CS	1

LPV SEED TREATER
CARBON STEEL 8 FOOT DRUM ASSEMBLY (18-01-0384)



LPV SEED TREATER

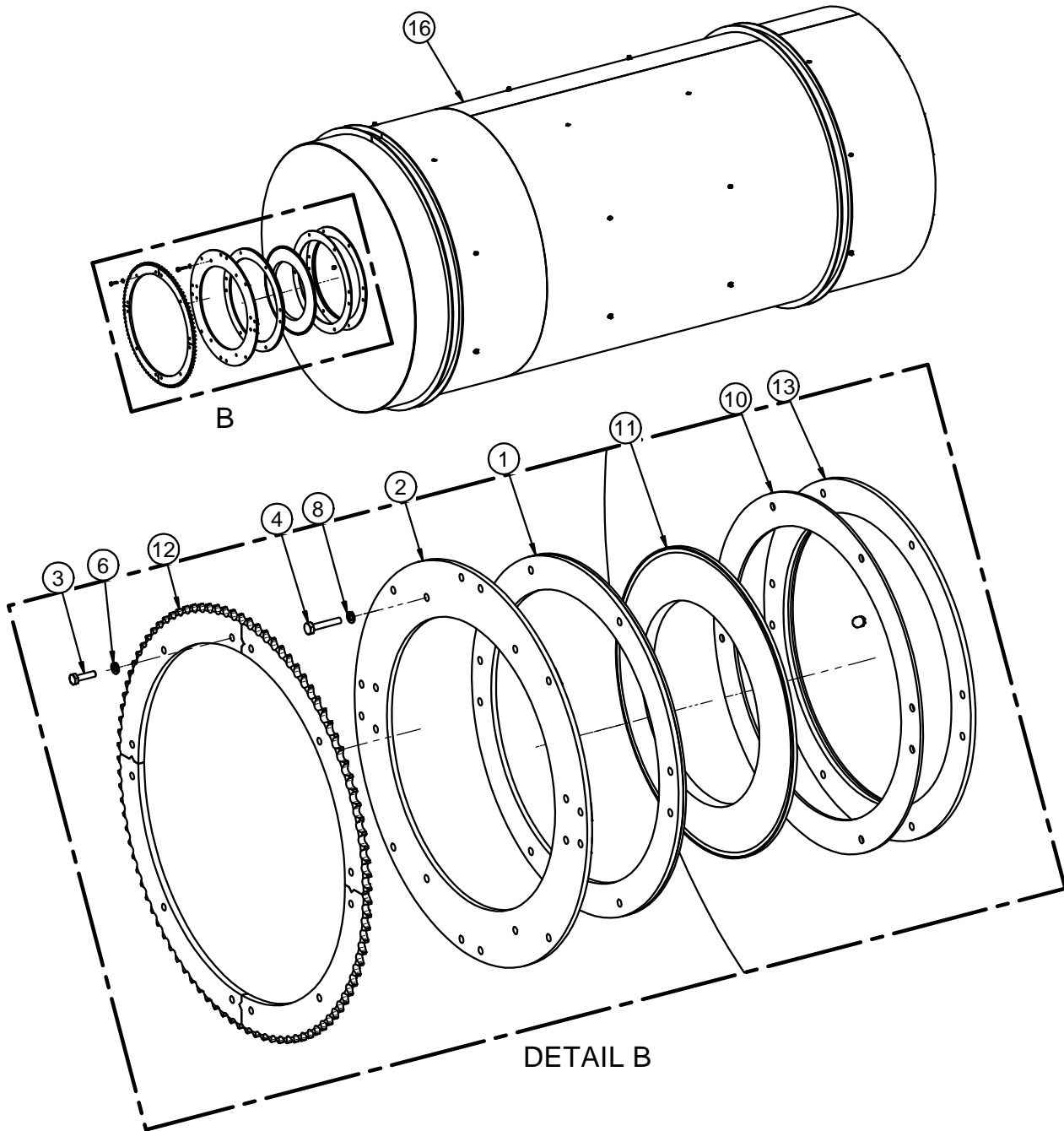
CARBON STEEL 8 FOOT DRUM ASSEMBLY (18-01-0384)



DETAIL A

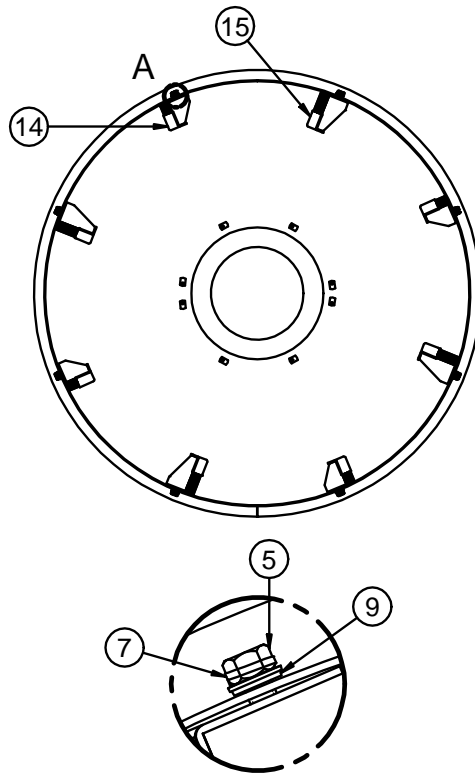
Item #	Part #	Description	Qty
1	05-03-1680	WDMT DRM INLET BRSH HOLDER CHN DRV	1
2	05-03-1681	WDMT FLG LPV SPKT MNT	1
3	06-01-0007	BOLT, .250-20 X 1 UNC ZP GRADE 5	12
4	06-01-0008	BOLT, .250-20 X 1 1/4" UNC ZP GRADE 5	8
5	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	32
6	06-04-0001	WSHR LOCK SPLT .250 ZP	20
7	06-04-0013	WSHR SS BONDED SEALING .375 ID	32
8	103CDF	BRUSH HOLDER	1
9	103CE1	DRUM INLET BRUSH	1
10	1053AF	SPKT LPV DRM DRV #50 96T	4
11	1053BD	BRUSH HOLDER	1
12	18-01-0192	WDMT DRUM PDL SHORT 8FT CS	4
13	18-01-0194	WDMT DRUM PDL TALL 8FT CS	4
14	18-01-0385	WDMT DRUM LPV 8FT CS CHN DRV	1

STAINLESS STEEL 8 FOOT DRUM ASSEMBLY (18-01-0443)



LPV SEED TREATER

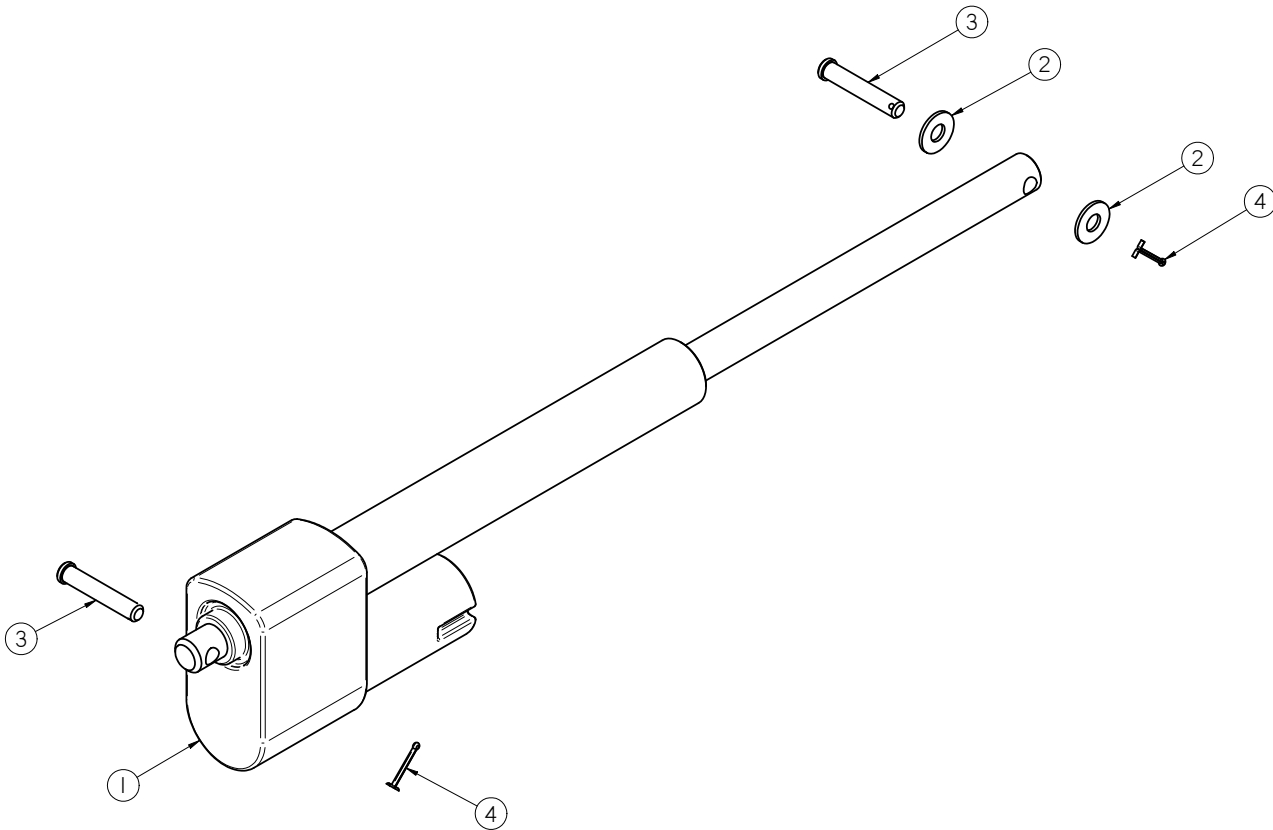
STAINLESS STEEL 8 FOOT DRUM ASSEMBLY (18-01-0443)



DETAIL A

Item #	Part #	Description	Qty
1	05-03-1680	WDMT DRM INLET BRSH HOLDER CHN DRV	1
2	05-03-1681	WDMT FLG LPV SPKT MNT	1
3	06-01-0007	BOLT, .250-20 X 1 UNC ZP GRADE 5	12
4	06-01-0092	BOLT .250-20 X 1.50 SS 18-8	8
5	06-02-0010	NUT FULL .375-16 SS 18-8	32
6	06-04-0001	WSHR LOCK SPLT .250 ZP	12
7	06-04-0008	WSHR LOCK SPLT .375 SS 18-8	32
8	06-04-0009	WSHR LOCK SPLT .250 SS 18-8	8
9	06-04-0013	WSHR SS BONDED SEALING .375 ID	32
10	103CDF	BRUSH HOLDER	1
11	103CE1	DRUM INLET BRUSH	1
12	1053AF	SPKT LPV DRM DRV #50 96T	4
13	1053BD	BRUSH HOLDER	1
14	18-01-0193	WDMT DRUM PDL SHORT 8FT SS	4
15	18-01-0195	WDMT DRUM PDL TALL 8FT SS	4
16	18-01-0442	WDMT DRUM LPV 8FT SS	1

LPV SEED TREATER
DRUM ACTUATOR KIT ASSEMBLY (03-17-0111)

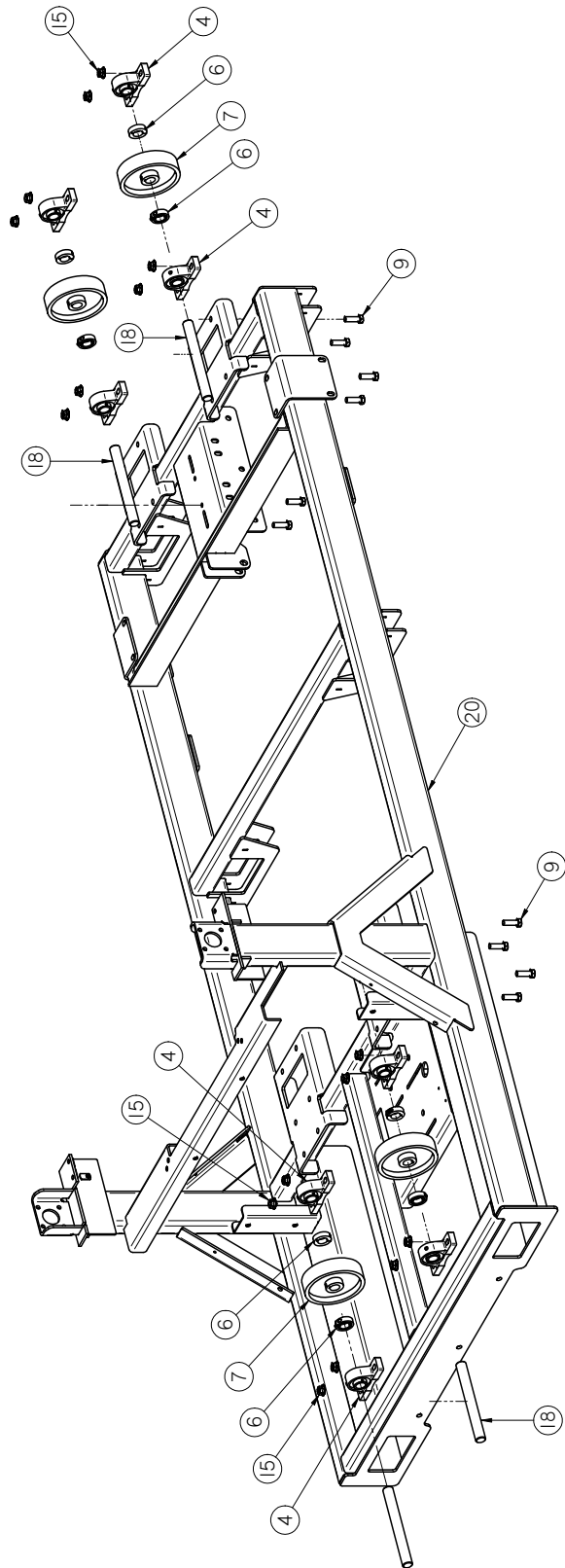


Item #	Part #	Description	Qty
1	03-17-0104	ACTR 8" STRK 24VDC MDC10-24-40-203-3	1
2	06-05-0005	WSHR FLAT .500 ZP	1
3	06-09-0058	WSHR FLAT .500 ZP	2
4	06-09-0087	PIN CLVS .500 X 2.75 PLN	2

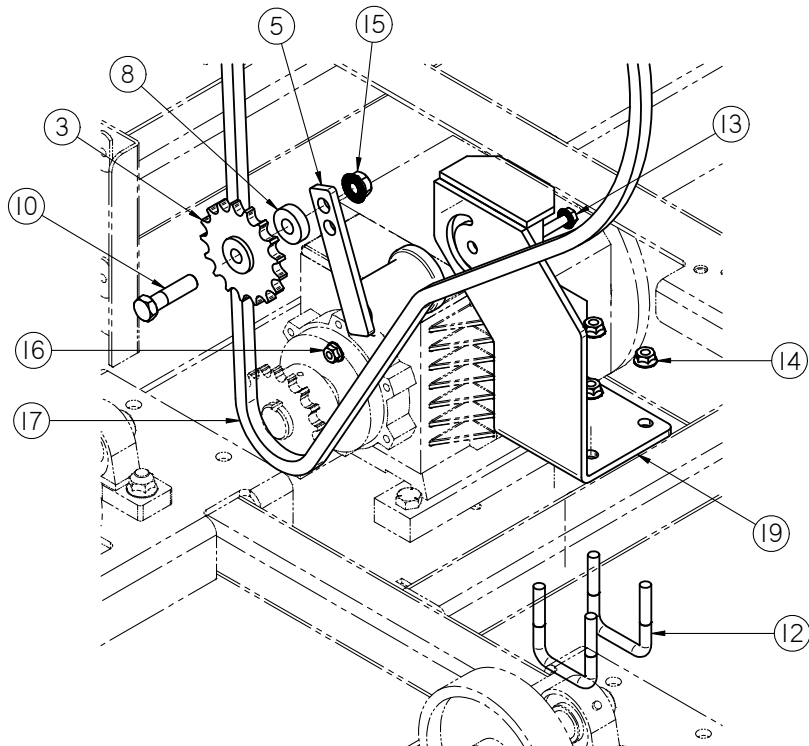
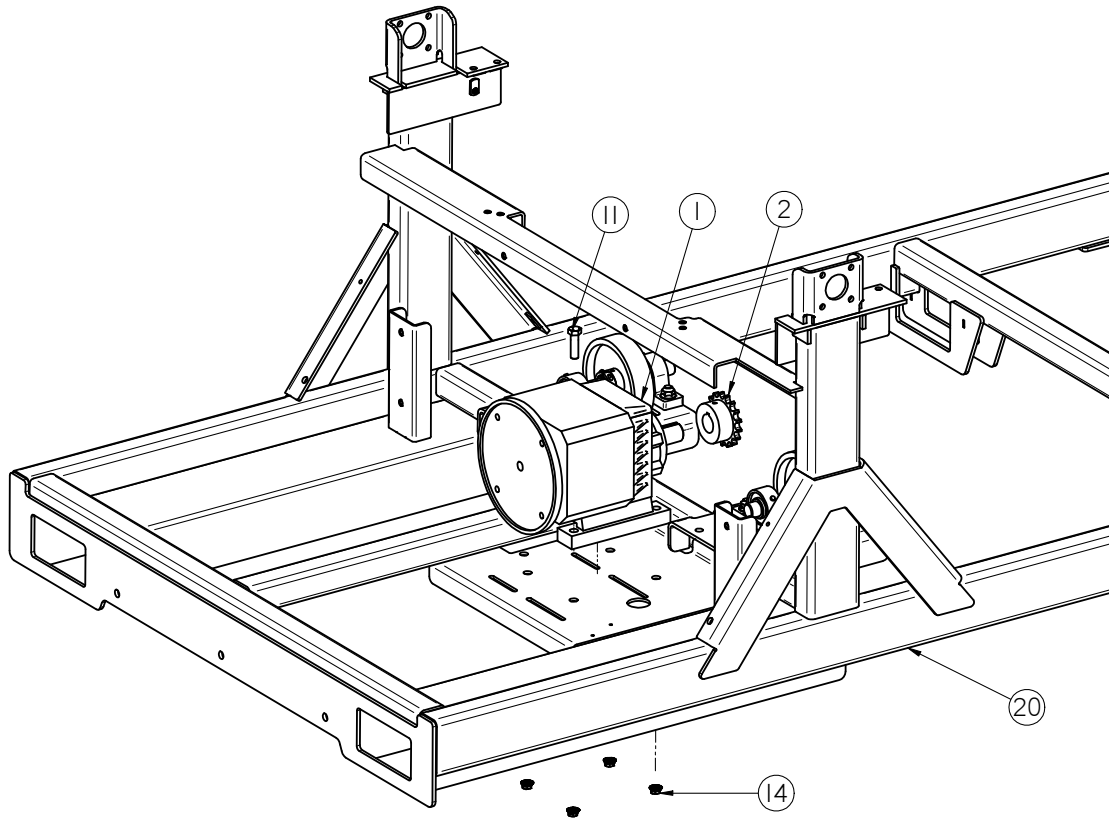
NOTICE The following parts are in the motor kit but do not appear in the drawing view

Item #	Part #	Description	Qty
5	03-08-0246	CONN TURCK RSF-26-2M	1
6	03-08-0268	CONN COMPACT TNML BLK 2-CON 222-412	1
7	03-08-0269	CONN COMPACT TNML BLK 3-CON 222-413	1
8	06-03-0024	NUT LOCK 0.5 NPT FITTING	1

LPV SEED TREATER
BASE FRAME ASSEMBLY (18-01-0439)



LPV SEED TREATER
BASE FRAME ASSEMBLY (18-01-0439)

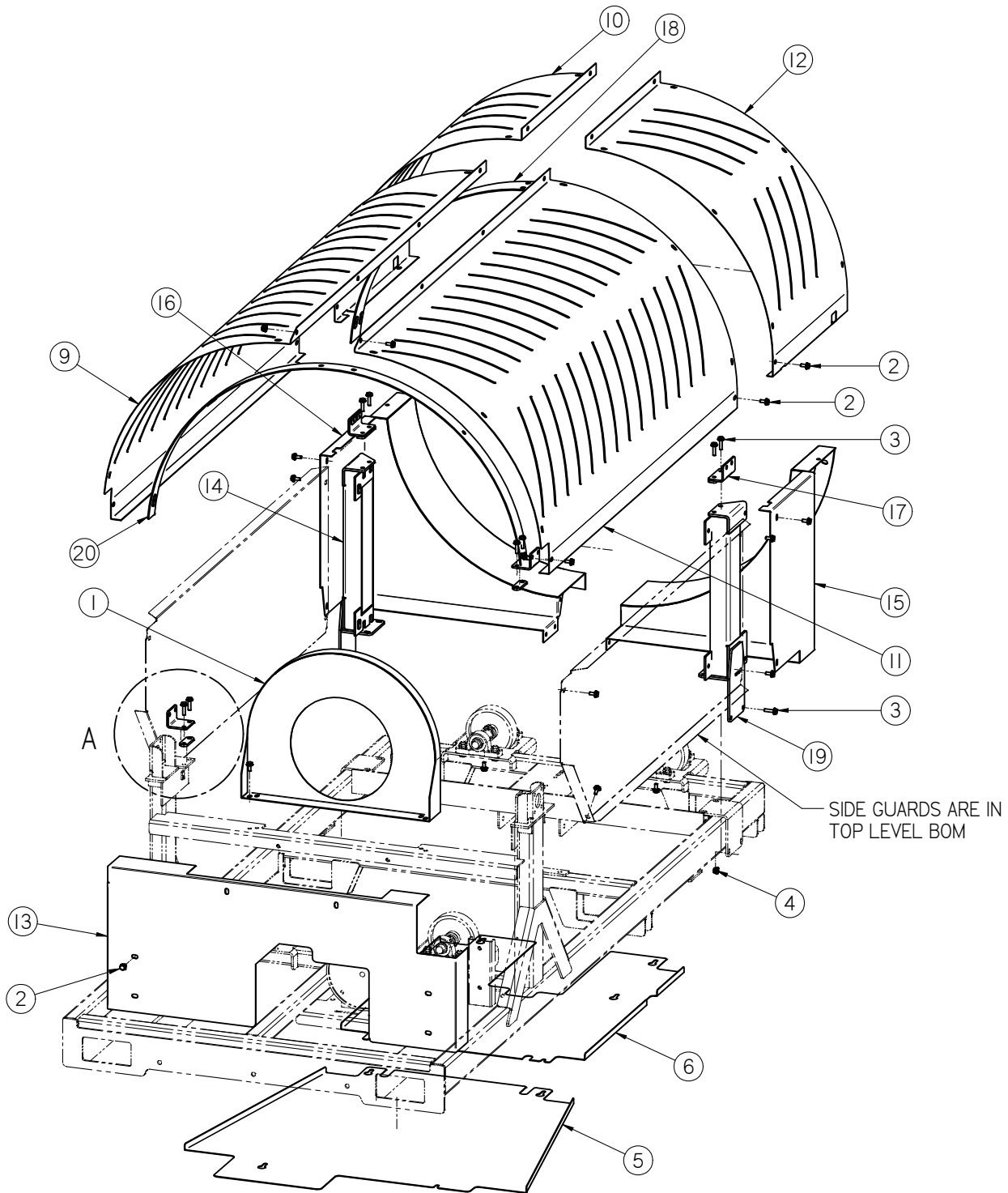


LPV SEED TREATER

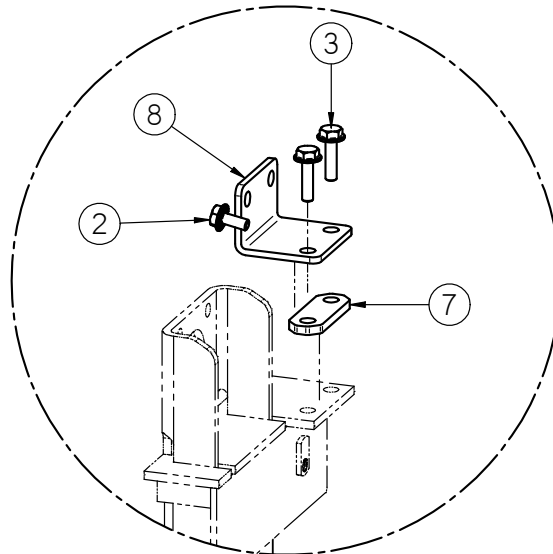
BASE FRAME ASSEMBLY (18-01-0439)

Item #	Part #	Description	Qty
1	01-01-0167	GBOX IL 182-4TC 16.6:1 GR B1 FT MNT	1
2	01-02-0086	SPKT 17T 50P 1.250 ID	1
3	01-02-0095	SPKT 17T 50P .500 ID IDLER	1
4	01-03-0036	BRG PLW 1.00ID STSC SEALED	8
5	01-04-0026	TNSNR ROSTA SE18	1
6	01-05-0008	SHAFT CLR 1.00ID SPLIT	8
7	01-06-0166	WHL DRV 6 X 1.5 X 1.00ID .250KWY	4
8	05-10-3811	WSHR .500 ID X 1.25 OD X .375 THK	1
9	06-01-0025	BOLT .500-13 X 1.50 ZP GR5	16
10	06-01-0027	BOLT .500-13 X 2.00 ZP GR5	1
11	06-01-0054	BOLT .500-13 X 1.75 ZP GR5	4
12	06-01-0121	BOLT U .375-16 X 2.00 X 2.625 ZP	2
13	06-01-0343	BOLT FLG .3125-18 X 1.25 ZP GR5	1
14	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	8
15	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	21
16	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	1
17	1053D0	CHAIN LPV DRM DRV	1
18	1053DC	DRUM DRV SHAFT LPV CHN DRV	4
19	105A75	WDMT LPV CHAIN IDLER MNT	1
20	18-01-0438	WDMT BASE FR 8 FT CHAIN DRV V4 PNL	1

LPV SEED TREATER
DRUM GUARDS ASSEMBLY (18-01-0437)



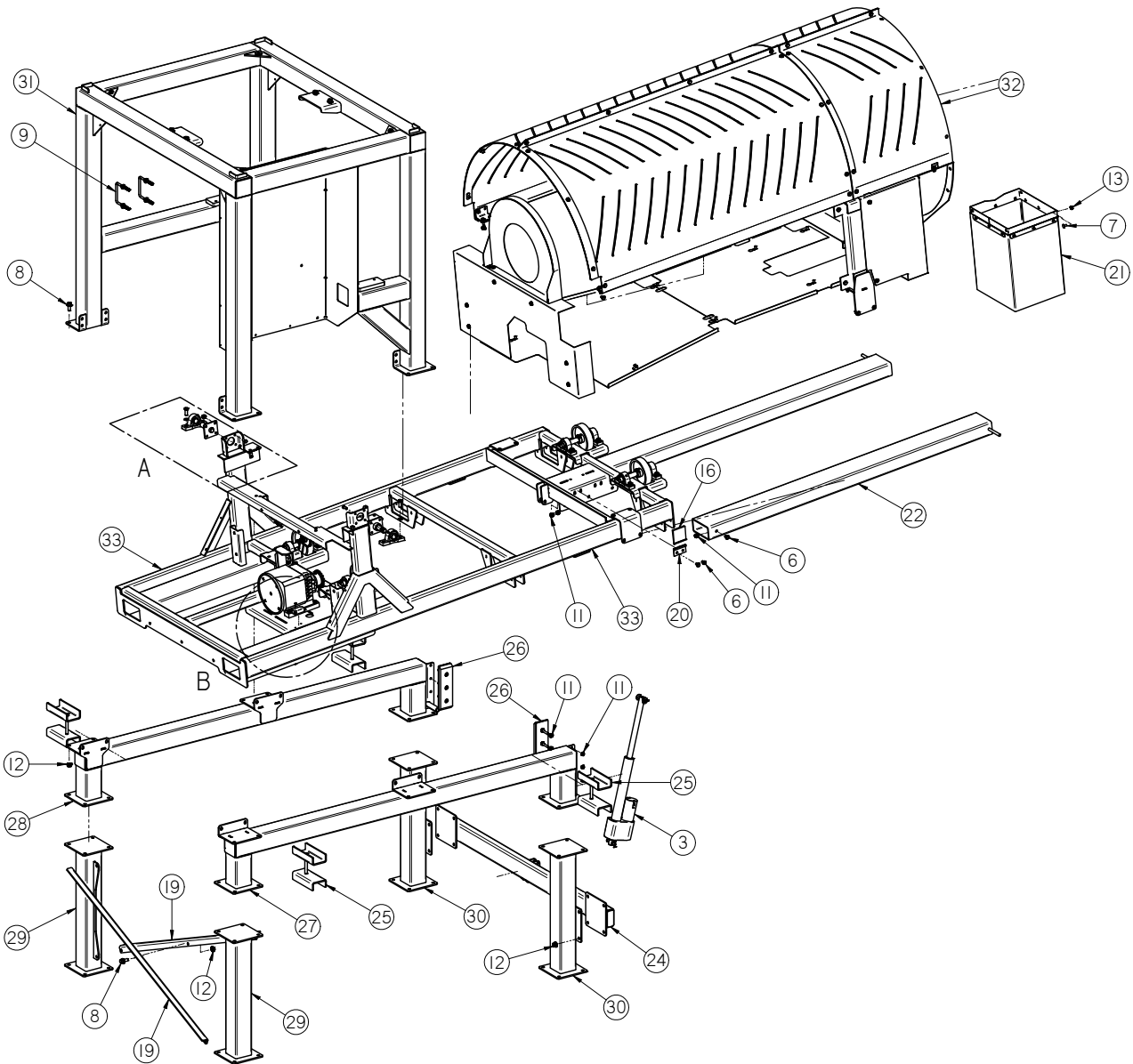
LPV SEED TREATER
DRUM GUARDS ASSEMBLY (18-01-0437)



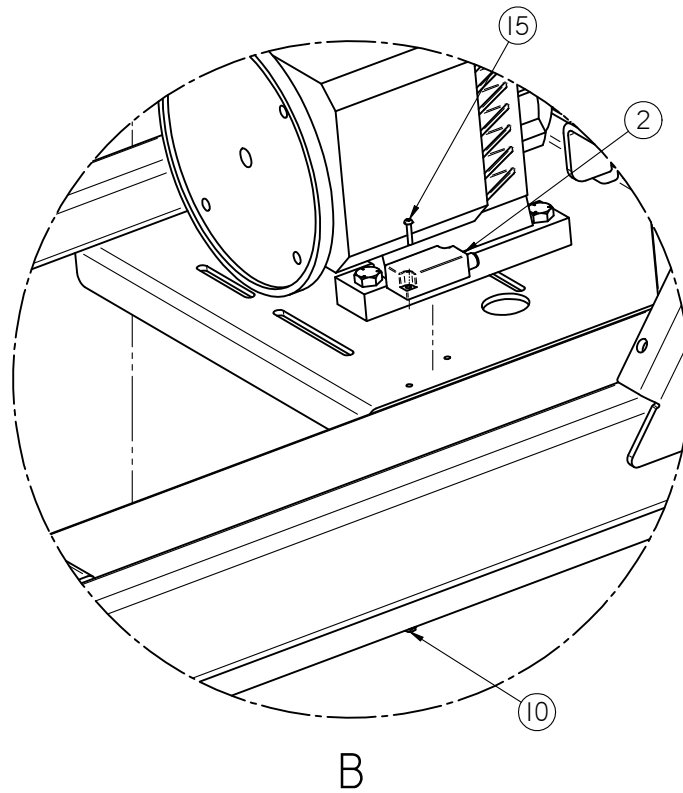
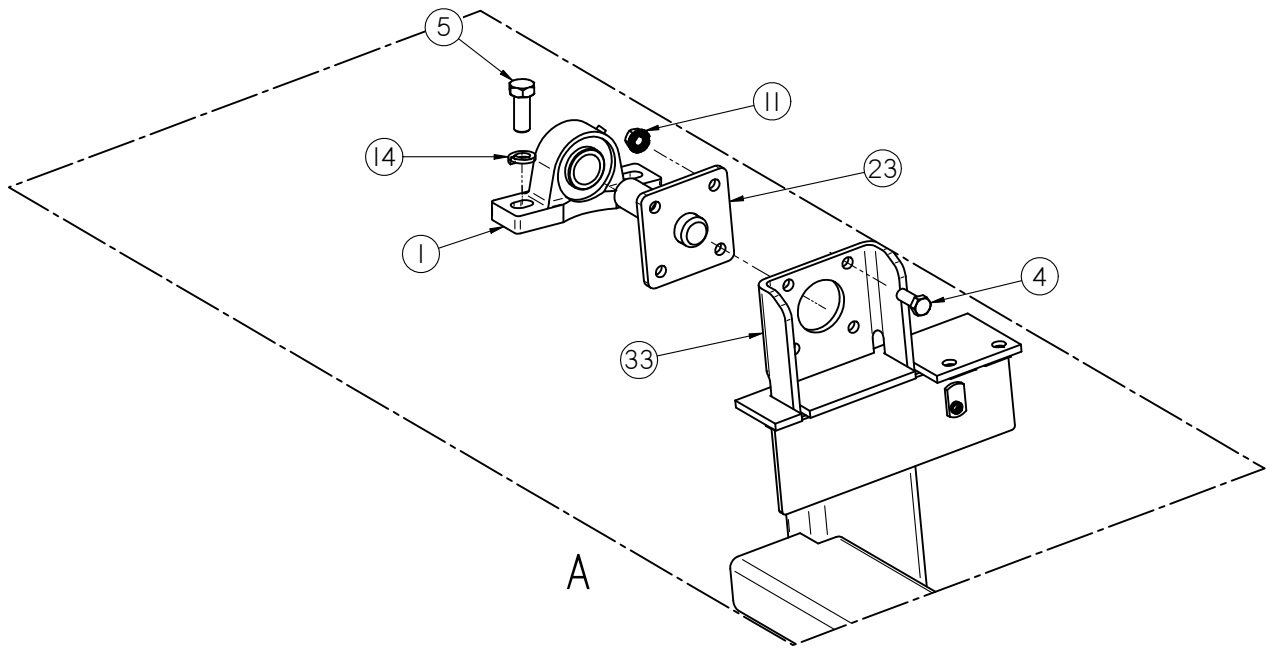
DETAIL A

Item #	Part #	Description	Qty
1	05-06-0137	WDMT LPV DRM CHAIN GRD	1
2	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	65
3	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	16
4	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	21
5	103615	GRD DRUM BTM FRNT HALF LPV 8FT	1
6	103616	GRD DRUM BTM REAR HALF LPV 8FT	1
7	103BD4	SPACER	2
8	103BD7	BRKT	2
9	103BED	GRD	1
10	103BEE	GRD	1
11	103BF1	GRD	1
12	103BF2	GRD	1
13	105B67	GRD BTM LPV CHAIN DRV V4 PNL	1
14	18-01-0306	WDMT GRD SUPP	1
15	18-01-0307	WDMT GRD	1
16	18-01-0308	WDMT GRD	1
17	18-01-0310	WDMT BRKT	2
18	18-01-0311	WDMT GRD CONNECTOR	1
19	18-01-0312	WDMT GRD SUPP	1
20	18-01-0317	WDMT GRD STIFFENER	1

LPV SEED TREATER
STANDARD TREATER BASE ASSEMBLY (18-01-0434)



LPV SEED TREATER
STANDARD TREATER BASE ASSEMBLY (18-01-0434)



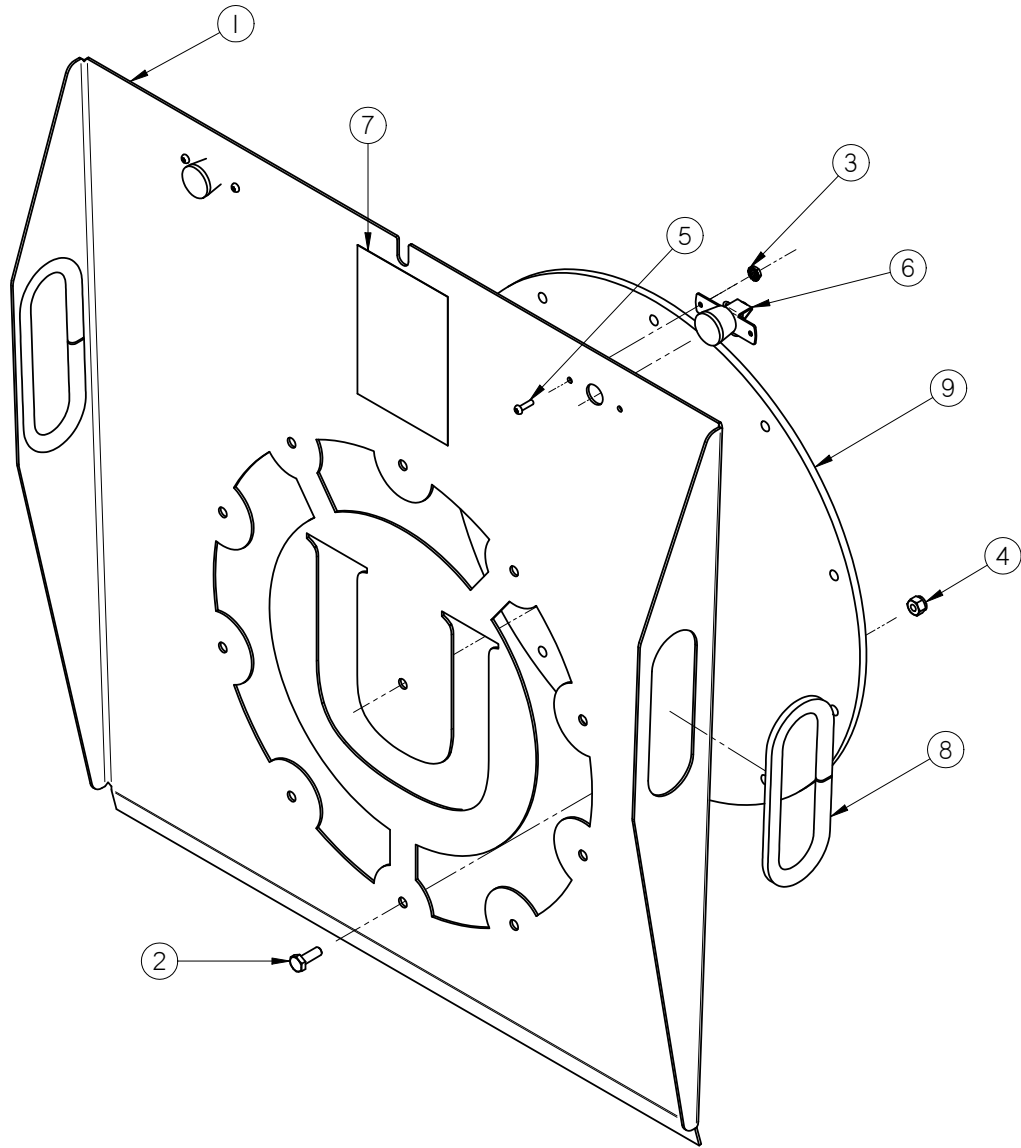
LPV SEED TREATER

STANDARD TREATER BASE ASSEMBLY (18-01-0434)

Item #	Part #	Description	Qty
1	01-03-0060	BRG PLW SEALED 1.00ID STSC	2
2	03-17-0105	TRCK INCLMTR B2N-10H-Q20L60-2LI2-	1
3	03-17-0111	ACTR 8"STRK 24VDC LPV TRTR DRUM KIT	1
4	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
5	06-01-0080	BOLT .500-13 X 1.25 ZP GR5	4
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	18
7	06-01-0171	BOLT CRG .3125-18X.750 ZP SHORT NECK	4
8	06-01-0232	BOLT FLG .500-13 X 1.250 ZP GR5	49
9	06-01-0286	BOLT U .375-16 4.0 X 4.625 SQ	2
10	06-02-0033	NUT 6-32 K-LOCK ZP	2
11	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	24
12	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	49
13	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	4
14	06-04-0004	WSHR LOCK SPLT .500 ZP	4
15	06-06-0088	SCRW MACH 6-32 X .750 PHLP RDHD ZP	2
16	06-10-0059	STATIC DISSIPATIVE BRUSH	1
17	09-02-0001	ATWK LBL DANGER FINGERS	3
18	09-02-0002	ATWK LBL DANGER GUARDS	1
19	103614	ANGLE CROSS BRACE	2
20	103D7E	BRUSH HOLDER	1
21	18-01-0072	ASSY END CHUTE EXT LPX	1
22	18-01-0107	WDMT FORKLIFT PCKT EXT 8FT	2
23	18-01-0254	WDMT PIVOT PIN AVR	2
24	18-01-0304	WDMT ACTUATOR MNT	1
25	18-01-0315	ASSY LPV DRM SHIPPING BRKT	4
26	18-01-0316	ASSY DRUM STABILIZER PAD	2
27	18-01-0339	WDMT LOWER LEG RH	1
28	18-01-0340	WDMT LOWER LEG LH	1
29	18-01-0341	WDMT LOWER LEG EXT X-BRACE MNT	2
30	18-01-0342	WDMT LOWER LEG EXT ACTR MNT	2
31	18-01-0435	WDMT FR STAND LPV V4 PNL	1
32	18-01-0437	KIT LPV DRUM GUARDS CHN DRV V4 PNL	1
33	18-01-0439	ASSY BASE FR LPV 8FT CHN DRV V4 PNL	1

LPV SEED TREATER

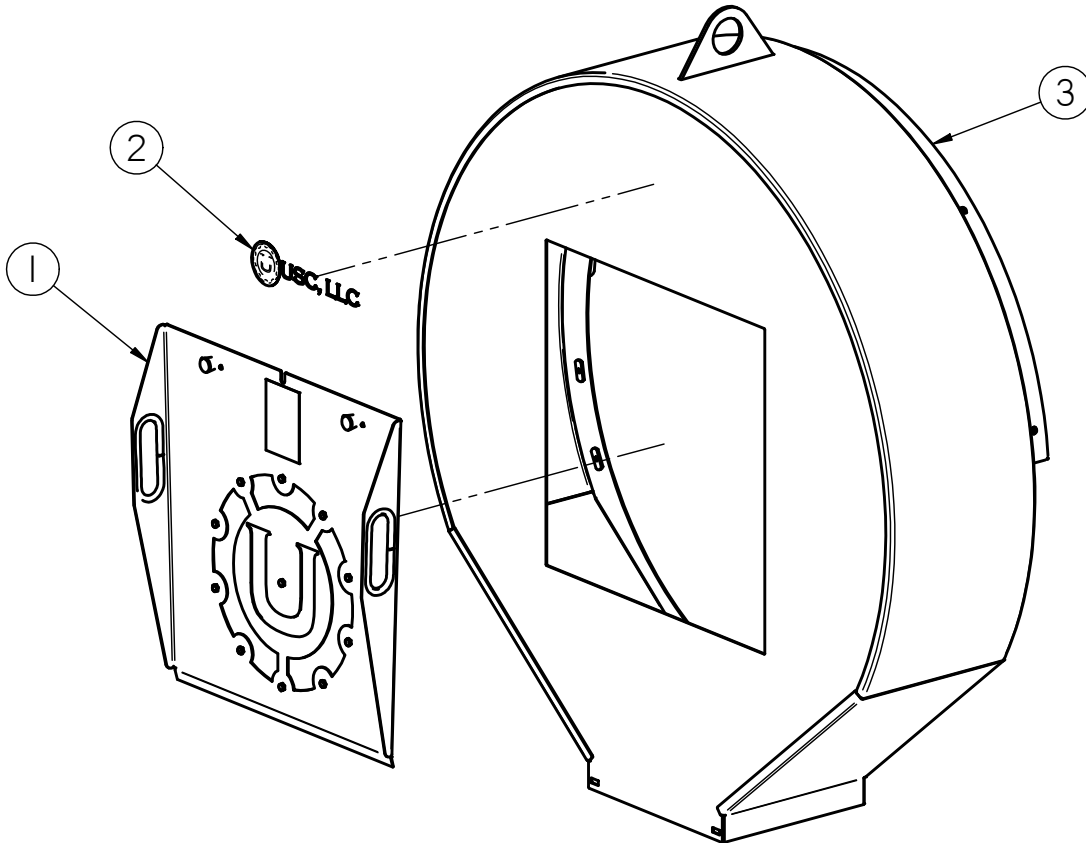
END CHUTE DOOR ASSEMBLY (05-07-0198)



Item #	Part #	Description	Qty
1	05-10-3919	PLT DSCHG CHUTE DOOR GALV W LOGO	1
2	06-01-0006	BOLT, .250-20 X .75 UNC ZP GRADE 5	11
3	06-02-0033	NUT 6-32 K-LOCK ZP	4
4	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	11
5	06-06-0032	SCRW MACH 6-32 X .500 PHLP RDHD ZP	4
6	06-09-0028	LATCH SPRING SOUTHCO 57-10-401-10	2
7	09-02-0002	ATWK LBL DANGER GUARDS	1
8	1008C4	EDGING	2
9	102098	COVER	1

LPV SEED TREATER

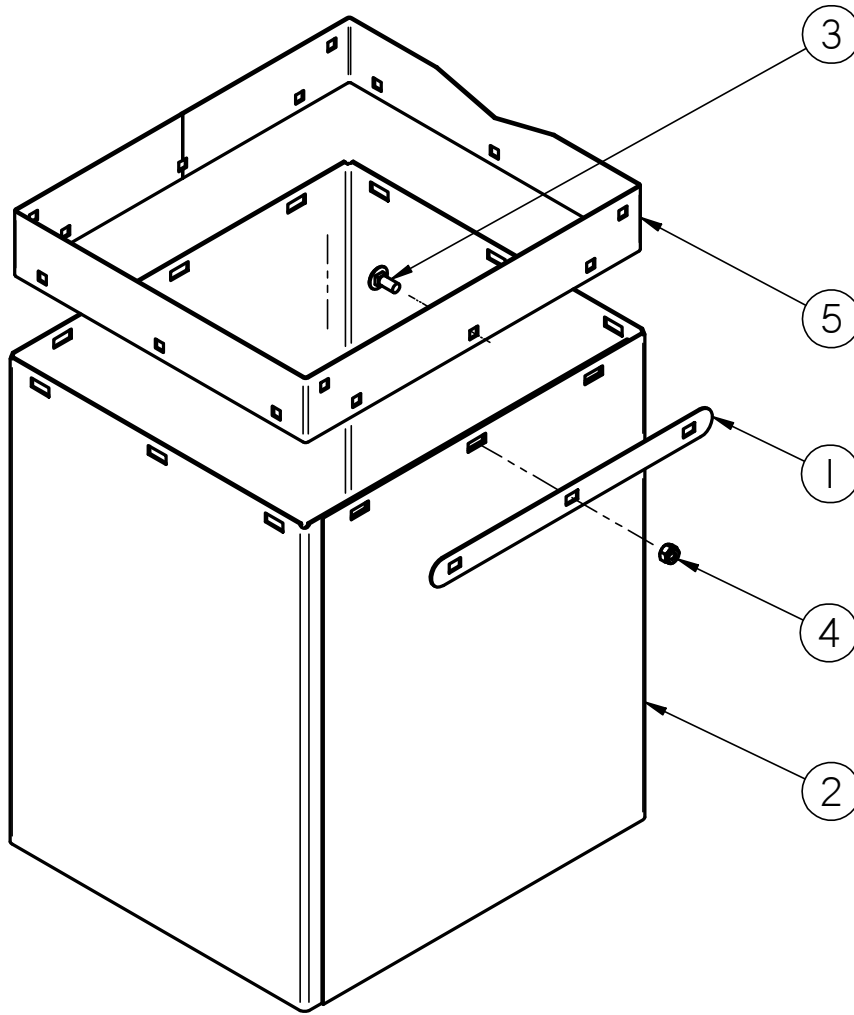
STANDARD TREATER END CHUTE ASSEMBLY (18-01-0270)



Item #	Part #	Description	Qty
1	05-07-0198	ASSY END CHUTE DOOR GALV	1
2	09-01-0042	ATWL LBL USC, LLC 3" X 15" PRO-CUT	1
3	18-01-0268	WDMT END CHUTE	1

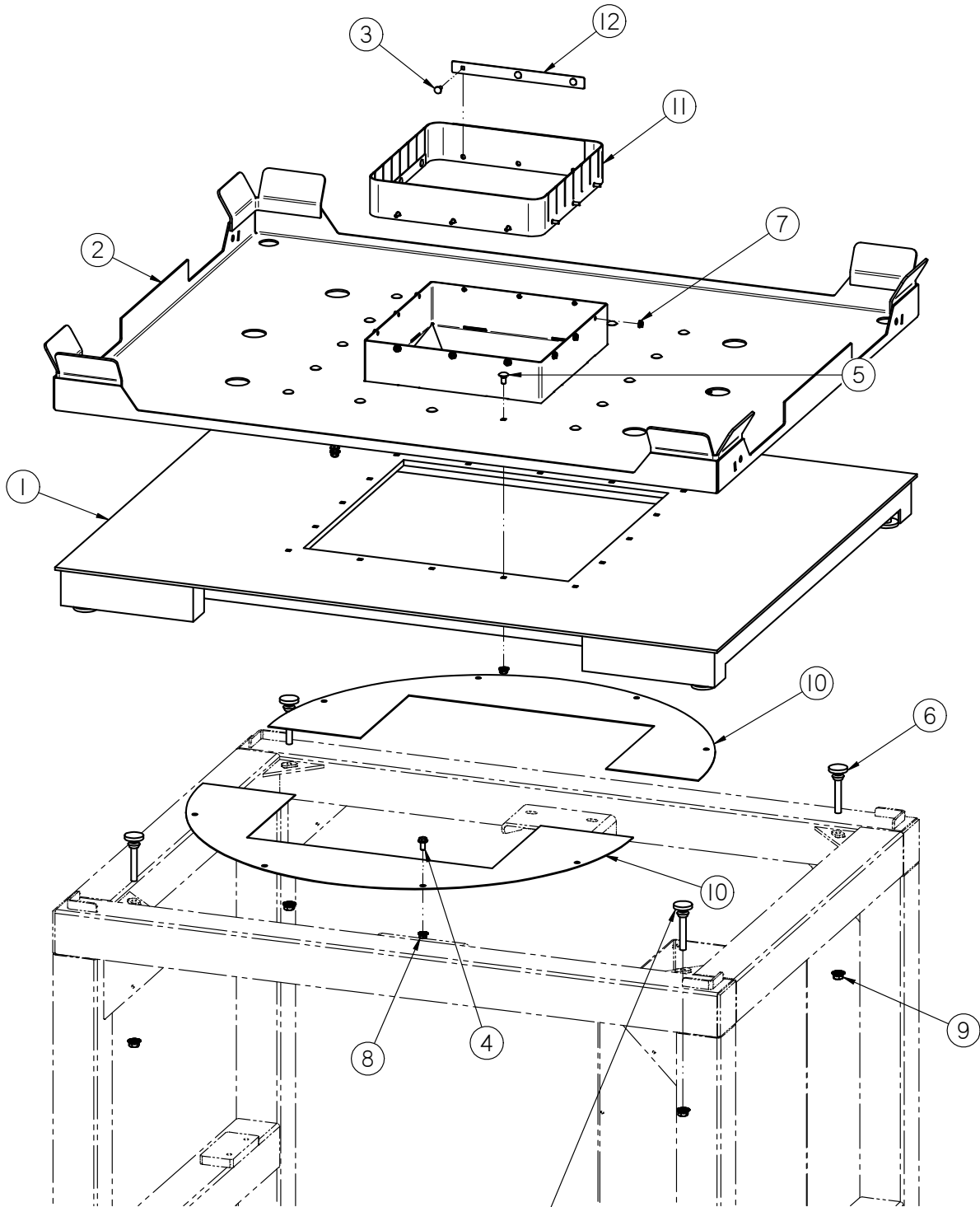
LPV SEED TREATER

STANDARD DISCHARGE CHUTE ASSEMBLY(18-01-0072)



Item #	Part #	Description	Qty
1	05-10-3400	PLT DSCHG TRTR	4
2	05-10-3886	SKIRT DSCHG TRTR LPV2000	1
3	06-01-0171	BOLT CRG .3125-18X.750 ZP SHORT NECK	12
4	06-03-0002	NUT NYL LOCK .313-18 ZP GR5	12
5	101FB5	ADPT END CHUTE EXT LPV2000	1

STANDARD PRO BOX WITH SCALE ASSEMBLY 18-01-0319



LEVELING PADS TO TAKE THE WEIGHT
OFF THE LOADCELLS FOR SHIPPING

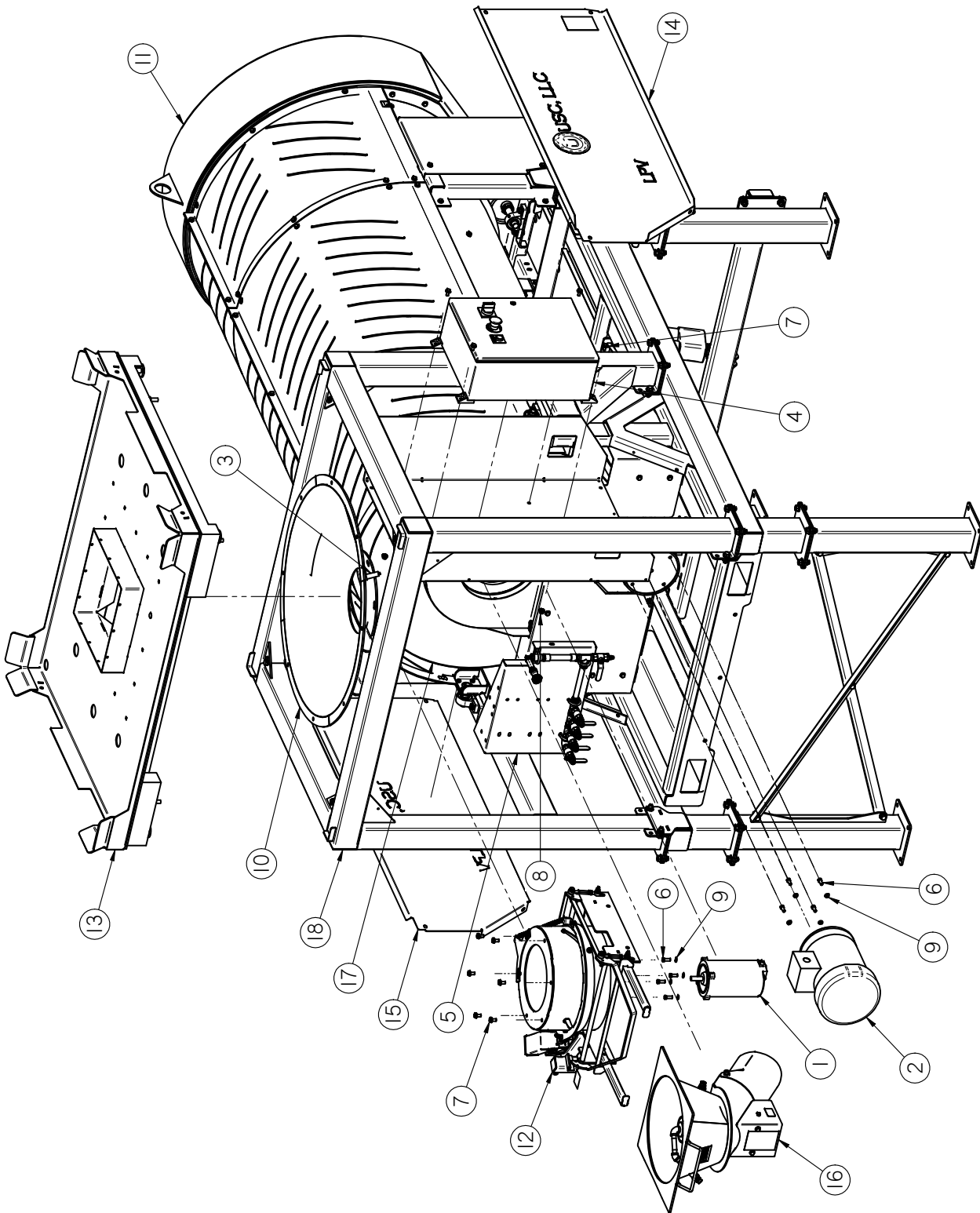
LPV SEED TREATER

STANDARD PRO BOX WITH SCALE ASSEMBLY 18-01-0319

Item #	Part #	Description	Qty
1	03-19-0066	SCL 5X4FT 5K 2FT CTR CUTOUT*	1
2	05-07-0987	WDMT HOPP SCL GUIDE LPV	1
3	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	12
4	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	8
5	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	16
6	06-01-0176	LEVELING MNT CUSHION .500-13 200LB	4
7	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	12
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	24
9	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	4
10	103EA2	COVER	2
11	105B36	SKIRT BOX SEAL	1
12	105B37	PLT SKIRT RETAINER	4

LPV SEED TREATER

STANDARD TREATER WITH LOSS-IN-WEIGHT TOP ASSEMBLY



LPV SEED TREATER

STANDARD TREATER WITH LOSS-IN-WEIGHT TOP ASSEMBLY

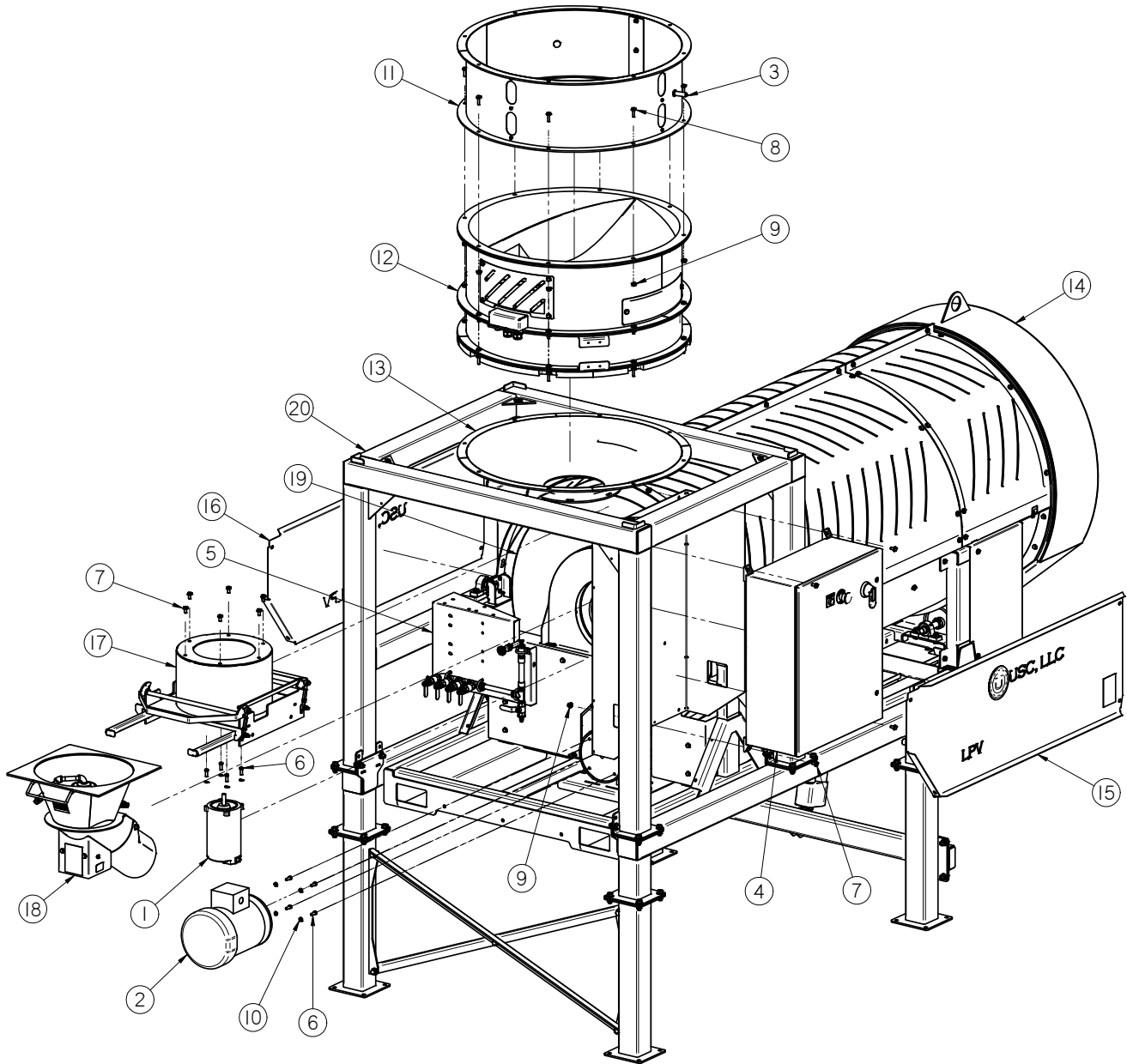
Item #	Part #	Description	Qty
1	SEE TABLE 1	ATOMIZER MOTOR	1
2	SEE TABLE 2	DRUM MOTOR	1
3	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
4	03-12-0379	LPV LIW I/O Panel	1
5	04-03-0305	ASSY STTC MXR & VLVS 4 PORT	1
6	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
7	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	10
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
9	06-04-0003	WSHR LOCK SPLT .375 ZP	8
10	18-01-0252	WDMT INLET HOPP	1
11	18-01-0270	ASSY END CHUTE LPV2000	1
12	18-01-0283	ASSY ADJ CHMBR LIW SO ATMZR 2000 CS	1
13	18-01-0319	ASSY SCALE W BOX MNT AND TRANS	1
14	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
15	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
16	18-01-0359	ASSY ATMZR LPV SS QD	1
17	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
18	18-01-0434	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

TABLE 1	
Part #	Description
01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV
01-01-0144	MTR .50 HP 1725 RPM 56C 575V TENV

TABLE 2	
Part #	Description
01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH
01-01-0175	MTR 3HP 1800 RPM 182TC TEFC 575V

LPV SEED TREATER

STANDARD TREATER WITH SEED WHEEL TOP ASSEMBLY



LPV SEED TREATER

STANDARD TREATER WITH SEED WHEEL TOP ASSEMBLY

Item #	Part #	Description	Qty
1	SEE TABLE 1	MTR .33HP 1725RPM 56C 3PH TENV	1
2	SEE TABLE 2	MTR 3HP 1740RPM 182TC TEFC 3PH	1
3	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
4	SEE TABLE 3	PANEL CONTROL LPV TREATER SMW C2D2	1
5	04-03-0305	ASSY STTC MXR & VLVS 4 PORT	1
6	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
7	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	10
8	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	8
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	12
10	06-04-0003	WSHR LOCK SPLT .375 ZP	8
11	SEE TABLE 4	ASSY INLET HOPPER EXTENSION	1
12	SEE TABLE 5	ASSY SEED METER WHL LPV UL	1
13	18-01-0252	WDMT INLET HOPP	1
14	18-01-0270	ASSY END CHUTE LPV2000	1
15	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
16	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
17	18-01-0350	ASSY FLOW CHMBR LPX2000 CS	1
18	18-01-0359	ASSY ATMZR LPV SS QD	1
19	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
20	18-01-0434	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

TABLE 1

Part #	Description
01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV
01-01-0144	MTR .50 HP 1725 RPM 56C 575V TENV

TABLE 2

Part #	Description
01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH
01-01-0175	MTR 3HP 1800 RPM 182TC TEFC 575V



LPV SEED TREATER

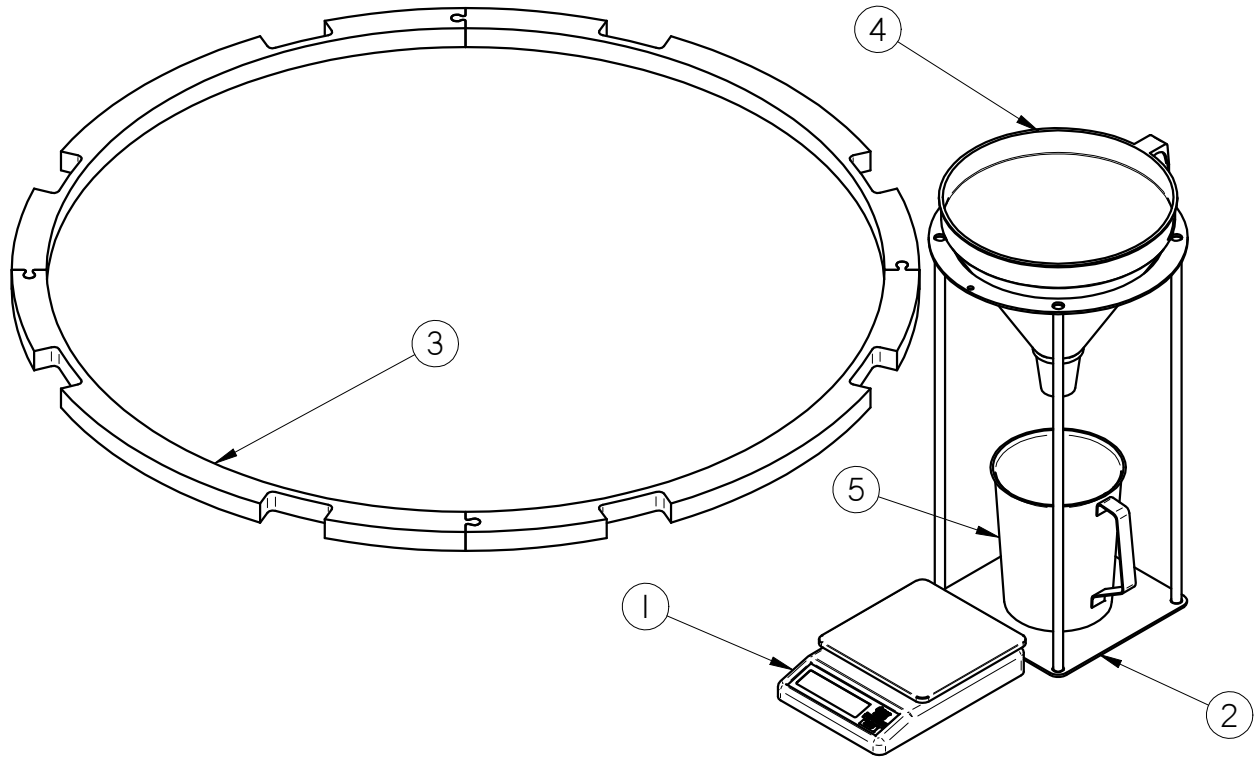
STANDARD TREATER WITH SMW TOP ASSEMBLY

TABLE 3	
Part #	Description
03-12-0491	PNL CNTL LPV TRTR SMW 230V 1PH - C2D2
03-12-0497	PNL CNTL LPV TRTR SMW 230V 1PH
03-12-0499	PNL CNTL LPV TRTR SMW 230V 3PH - C2D2
03-12-0501	PNL CNTL LPV TRTR SMW 460V 3PH - C2D2
03-12-0503	PNL CNTL LPV TRTR SMW 575V 3PH - C2D2
03-12-0505	PNL CNTL LPV TRTR SMW 380V 3PH

TABLE 4	
Part #	Description
13-04-0043	INLET EXTENSION HOPPER - 12 INCH
13-04-0121	INLET EXTENSION HOPPER - 6 INCH

TABLE 5	
Part #	Description
13-04-0201	ASSY SEED METER WHL LPX /LPV 2000
13-04-0222	ASSY SEED METER WHL LPX /LPV 2000 575V
13-04-0226	ASSY SEED METER WHL LPX /LPV 300
13-04-0227	ASSY SEED METER WHL LPX /LPV 300 575V

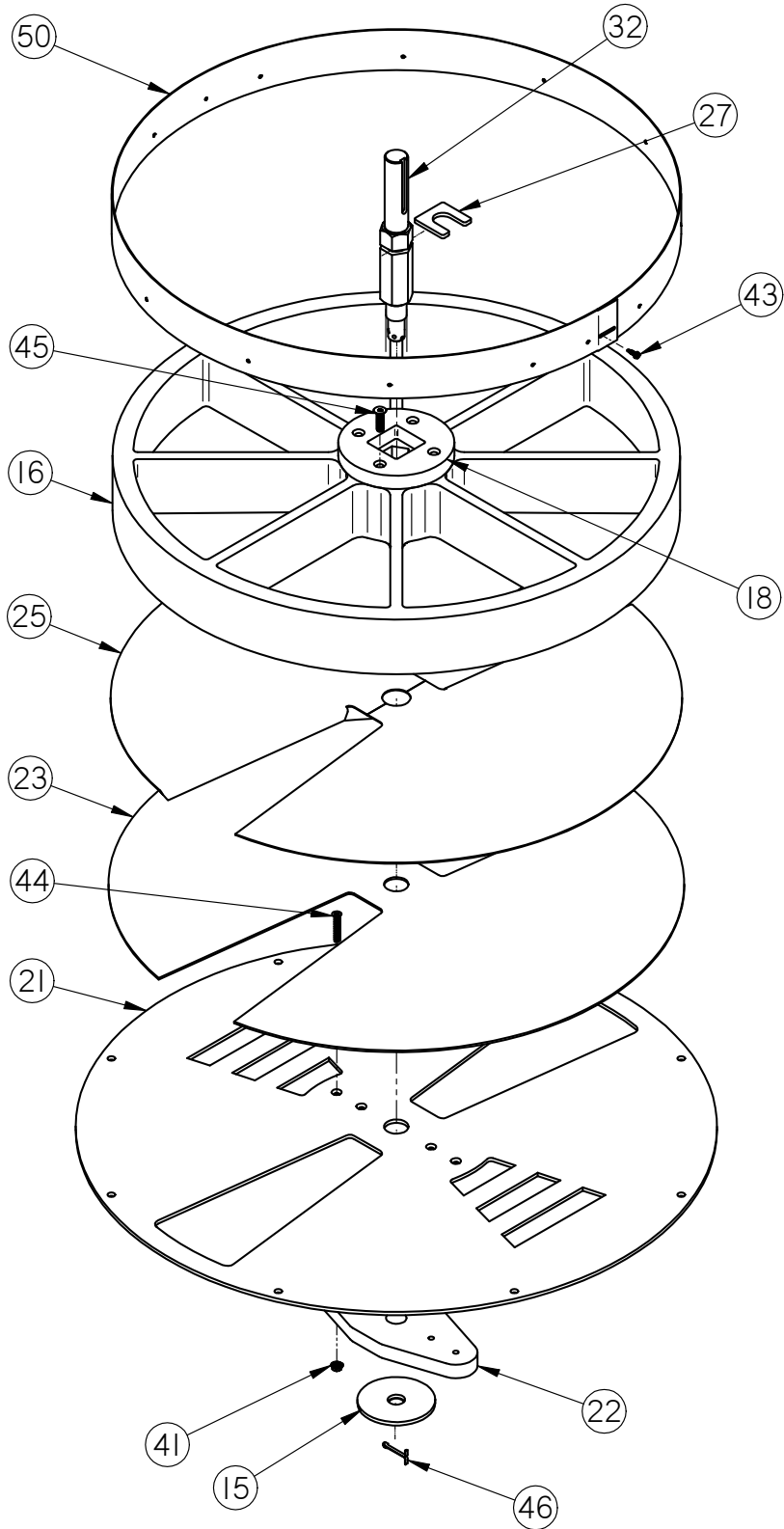
LPV SEED TREATER
SEED WHEEL SCALE KIT (13-04-0058)



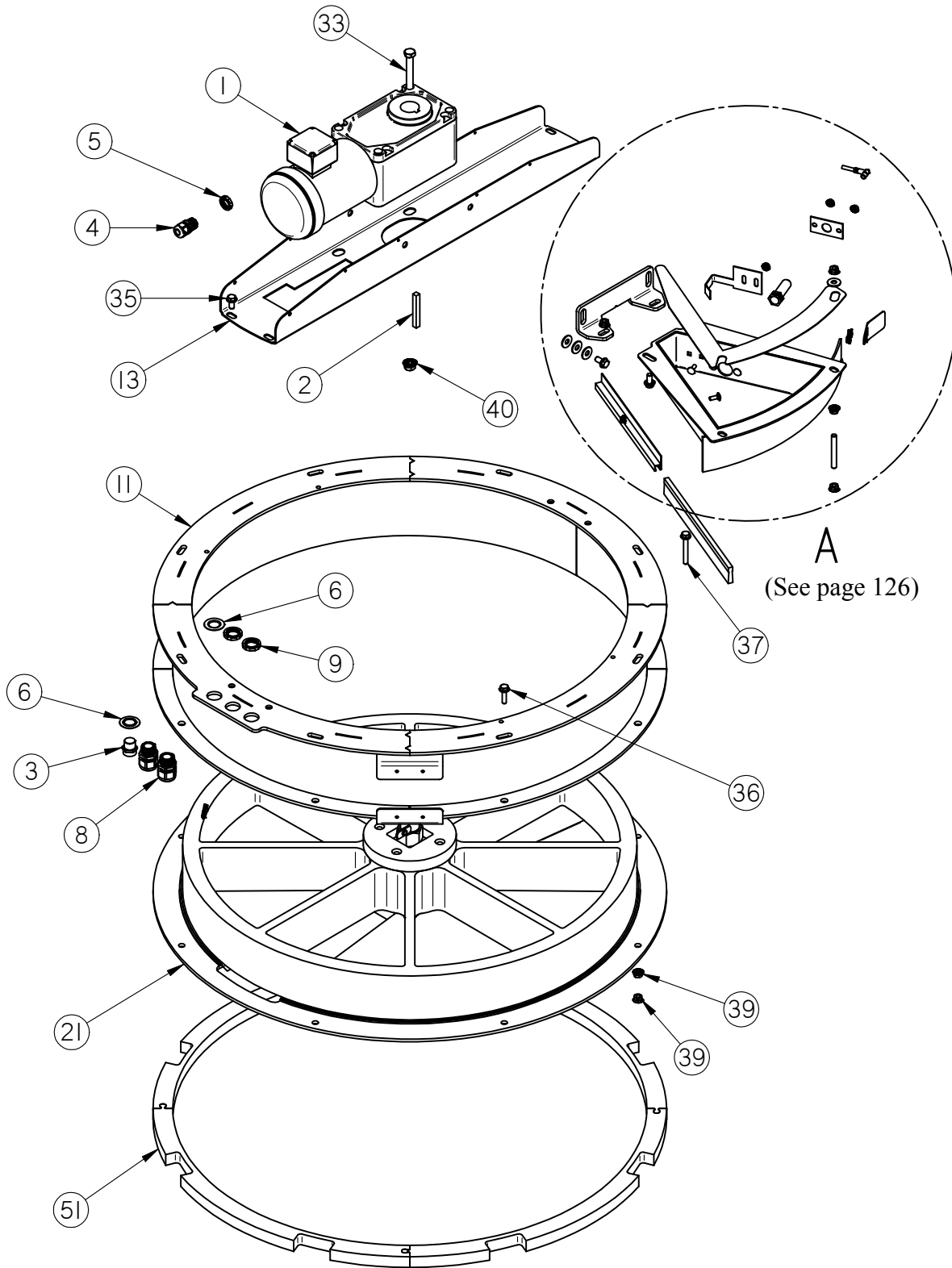
Item #	Part #	Description	Qty
1	03-19-0051	SCALE, CARDINAL 6.89 X 6.5 11 LBS	1
2	05-03-0248	WDMT CAL CUP FILL FR	1
3	05-10-2463	SEAL BETWEEN FLANGES SMW TO TRTR	4
4	05-11-0123	FUNNEL SMW CALB CUP FILL	1
5	07-02-0008	CUP MEASURE 64OZ SS GRADUATED	1

LPV SEED TREATER

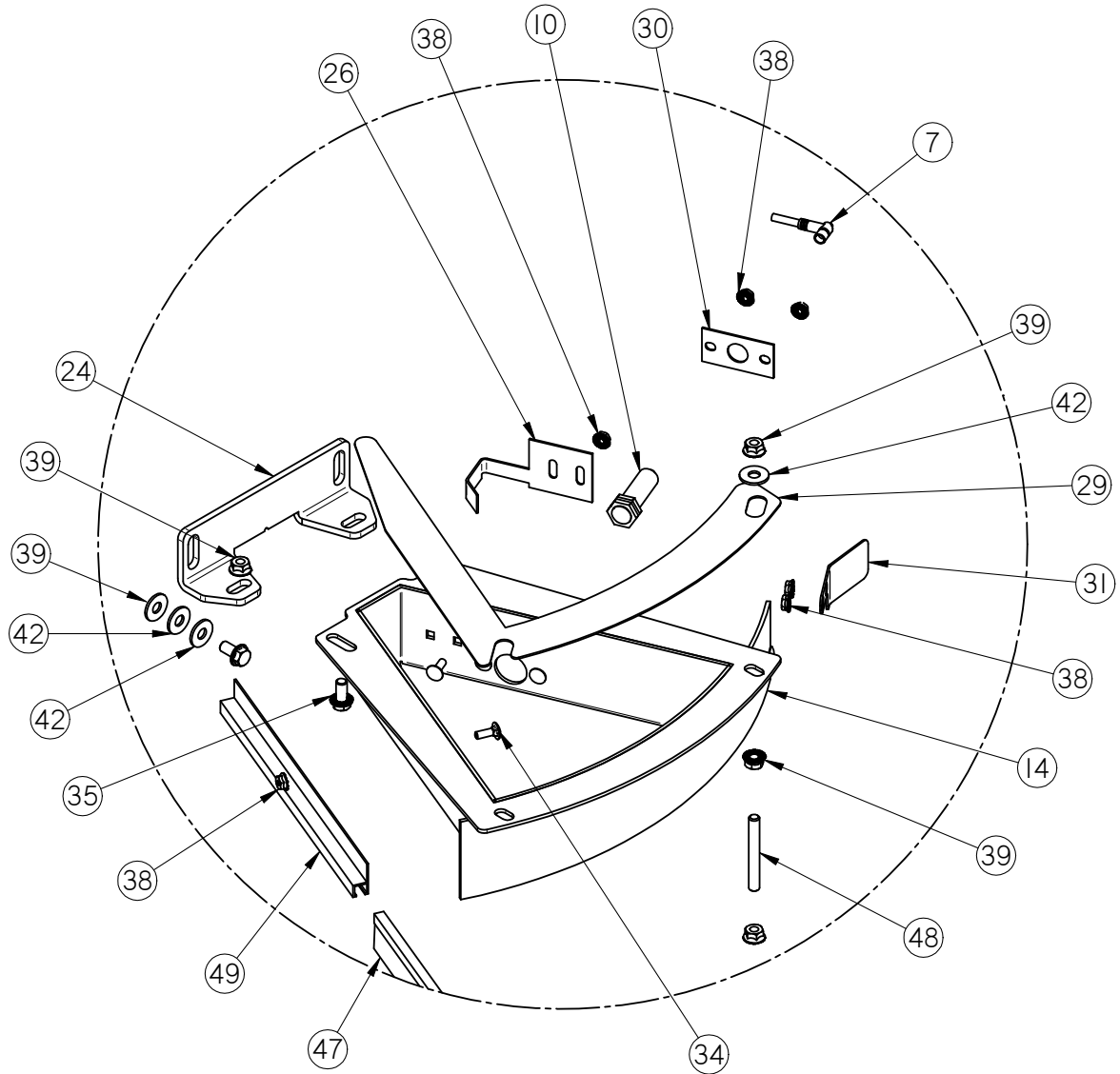
LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)



LPV SEED TREATER
LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)

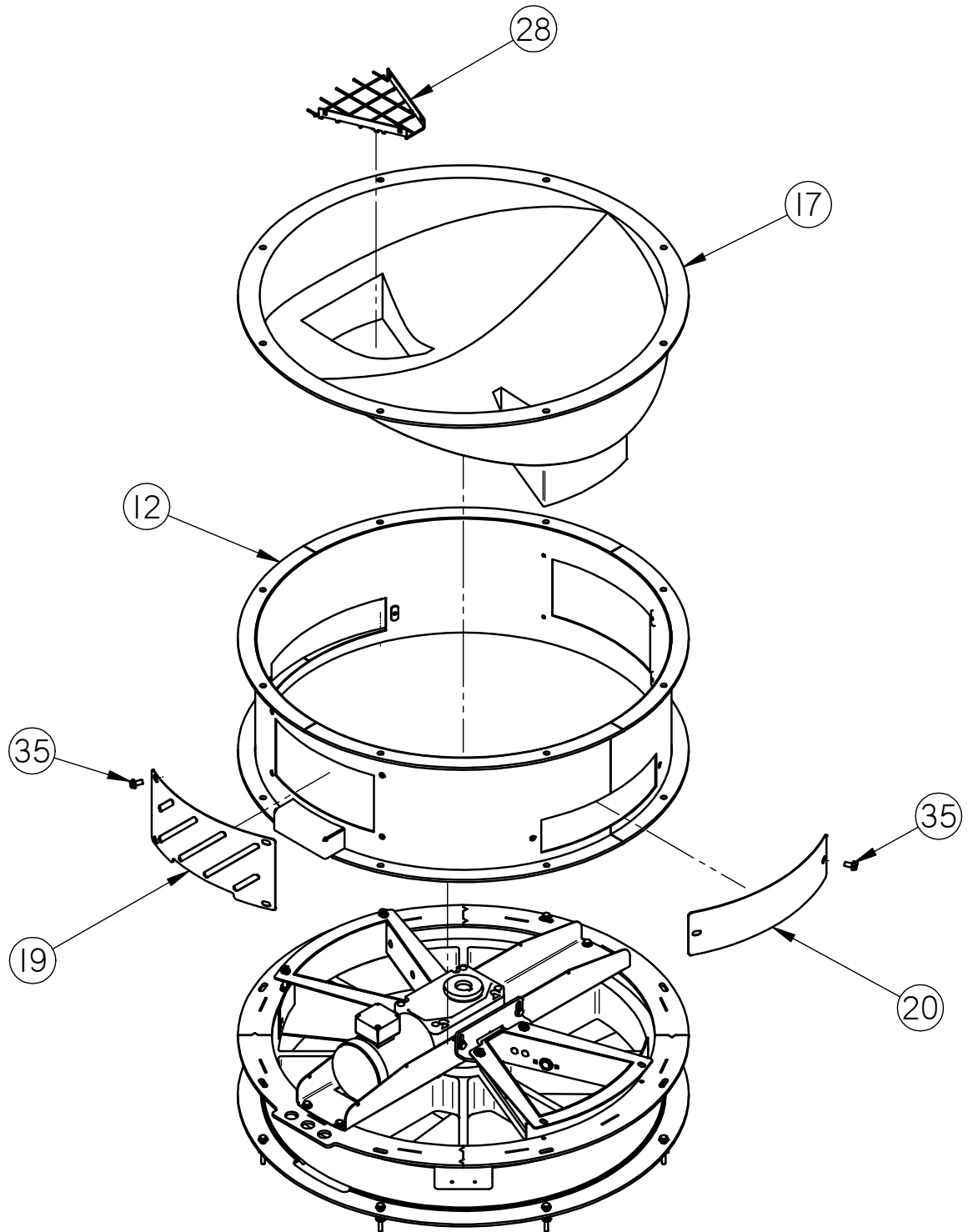


LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)



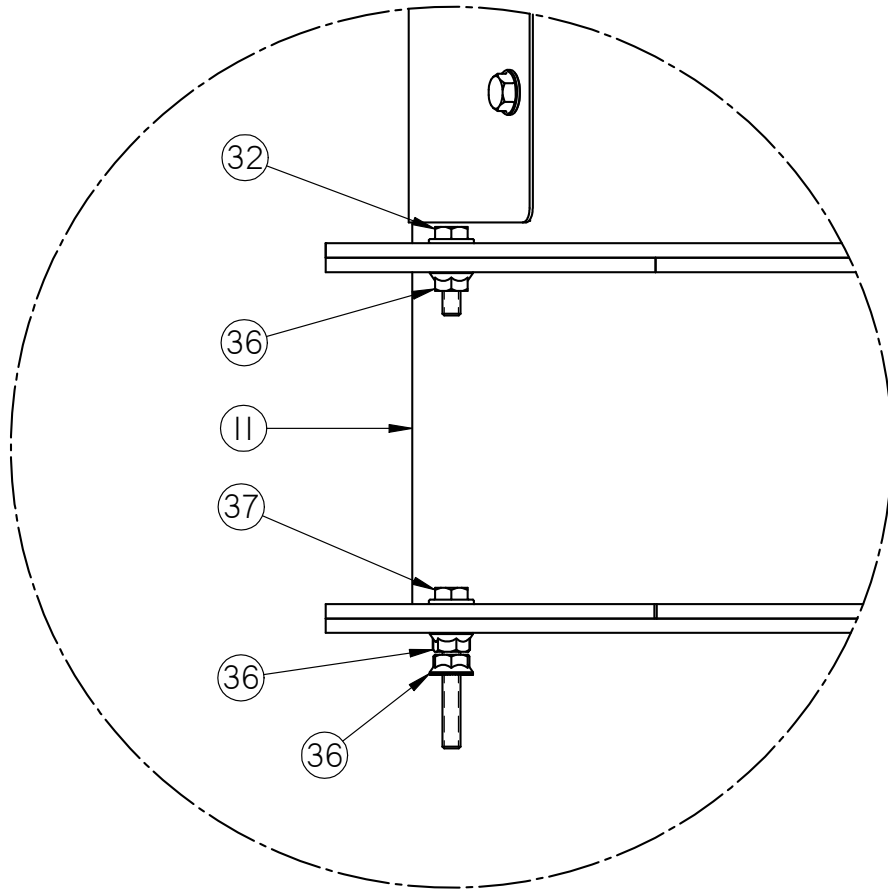
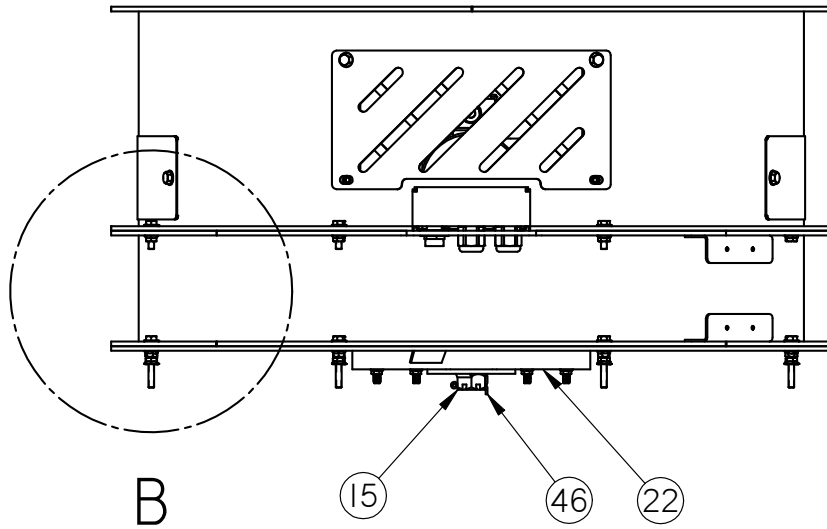
DETAIL A

LPV SEED TREATER
LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)



LPV SEED TREATER

LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)



DETAIL B

LPV SEED TREATER

LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)

Item #	Part #	Description	Qty
1	01-01-0229	GMTR RA .50 HP 11RPM 3PH HLLW SHAFT	1
2	01-10-0017	KEY 3/8 X 3.0 CS	1
3	03-06-0111	RECP TURCK RSF 44-1/M20/S717/S4000	1
4	03-08-0299	CONN CG 0.5NPT .170-.450 3232LTF	1
5	03-08-0308	NUT NYLOC .500 NPT 8464	1
6	03-08-0348	WSHR RDCG CNDT .75 X .5	2
7	03-08-0355	CONN TRCK PKW 3M-5-RS 4/S760/S771	2
8	03-08-0356	CONN CG .75 NPT M3234GBJ LTCG	2
9	03-08-0357	NUT NYLON.75 NPT 8465	2
10	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	2
11	05-03-0164	WDMT SEED METER BODY EXTEN	1
12	05-03-0169	WDMT SEED METER EXTENSION	1
13	05-03-0232	WDMT SMW UPPER BRG BRKT	1
14	05-03-0240	WDMT SMW BRSH PCKT	2
15	05-04-0049	WDMT SEED WHEEL SHAFT NUT	1
16	05-07-0196	MOLDED SEED WHEEL INSERT	1
17	05-07-0197	HPPR SMW DUAL DSCHG ROTO-MLDD	1
18	05-07-0203	MOLDED SEED WHEEL INSERT TOP	1
19	05-10-0890	CVR #1 SEED METER	2
20	05-10-0891	CVR #2 SEED METER	2
21	05-10-0893	PLATE SUPPORT SEED METER STEEL	1
22	05-10-1213	SUPP BTM BRG UHMW SEED METER	1
23	05-10-1306	PAD SEED WHL FOAM RBBR FLOATING	1
24	05-10-1392	BRKT SMW BRSH PCKT HLDR	2
25	05-10-1426	14GA WEAR SPLATE HALF	2
26	05-10-1449	PLT SMW CTR HUB WIPER	2
27	05-10-1588	PLT SHAFT CLIP SMW	1
28	05-10-1872	GRD SMW INLET HOPP PCKT	2
29	5/10/2166	CVR TEST	2
30	5/10/3316	SMW PROX SW HOLDER	2
31	5/10/4192	PLT SMW POCKET SCRAPER	2
32	05-11-0075	DRIVE SHAFT 1.4375 SHAFT	1
33	06-01-0106	BOLT .500-13 X 5.50 ZP GR5	1
34	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	18
35	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	18

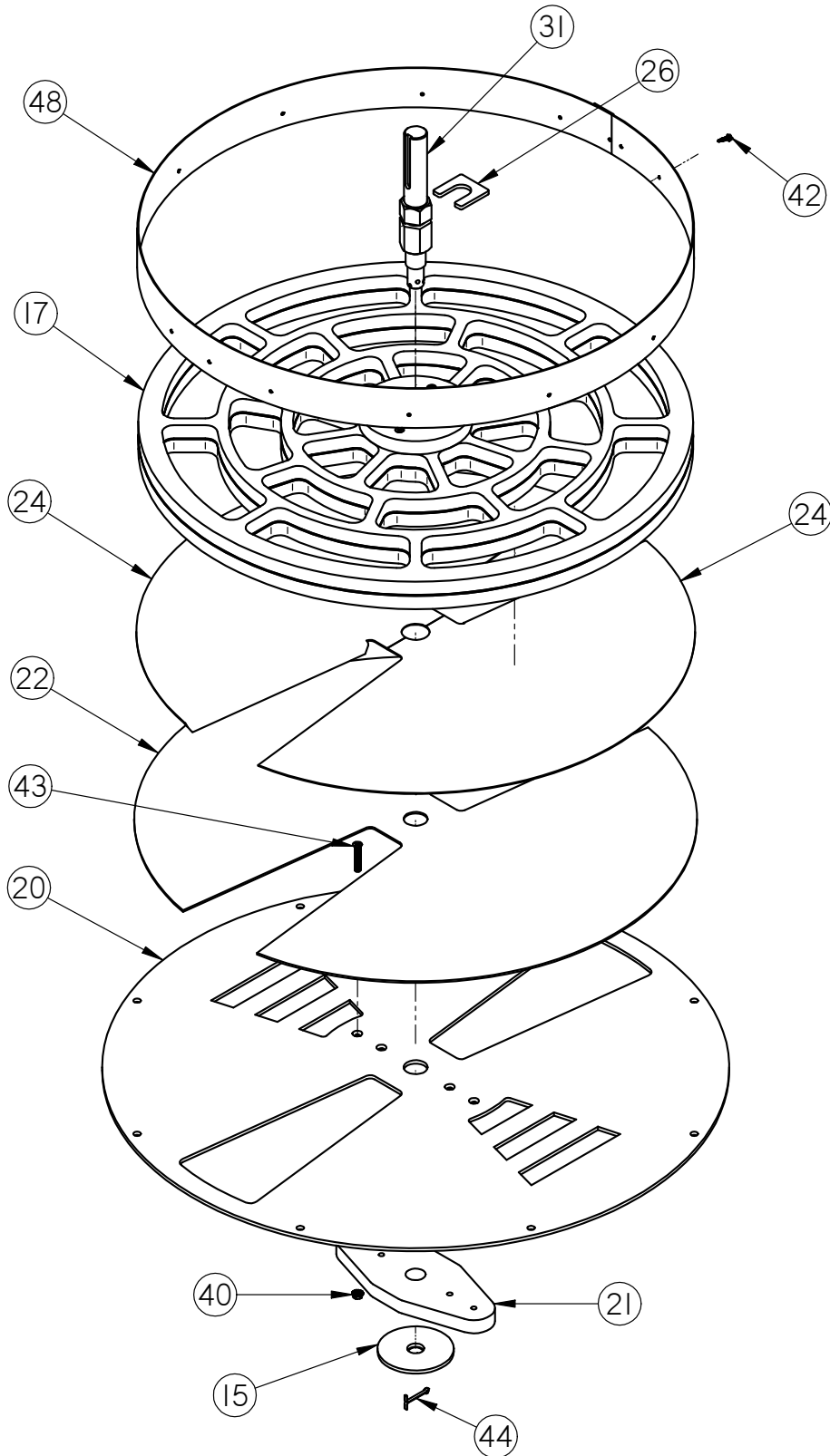
LPV SEED TREATER

LPV 2000 SEED WHEEL ASSEMBLY (13-04-0201)

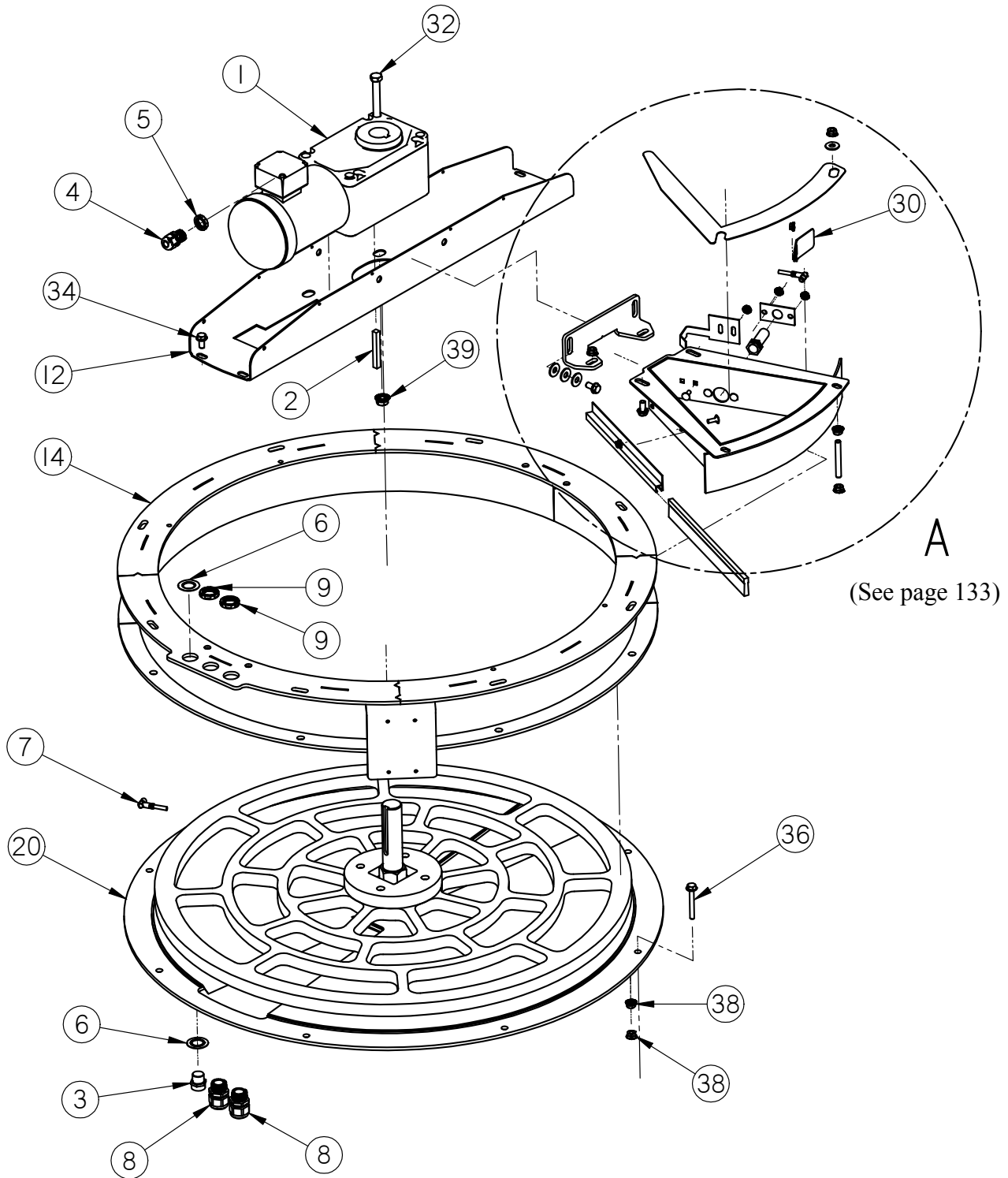
Item #	Part #	Description	Qty
36	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	1
37	06-01-0204	BOLT FLG .375-16 X 2.50 ZP GR5 FTH	8
38	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	26
39	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	39
40	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	1
41	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	1
42	06-05-0004	WSHR FLAT .375 ZP	10
43	06-06-0023	SCRW, SELF TAPPING, 10-16 ZP X .750	14
44	06-06-0046	SCRW .313-18 X 2.0 ZP FLAT HD PHLP	1
45	06-06-0070	SCRW MACH .375-16 X 1.50 SH FLHD BO	1
46	06-09-0023	PIN CTTR .188 X 2.00 ZP	1
47	06-10-0019	SEAL BRSH 12.75 OAL 1IN EXP LG	2
48	06-14-0013	STUD .375-16 ZP X 3 IN LG ZP	3
49	100118	HOLDER BRUSH SMW	2
50	101BC9	PSM SMW GALV RING	1
51	13-04-0058	KIT SMW SCL CALB	1
52	13-04-0058	KIT SMW SCL CALB	1

LPV SEED TREATER

LPV300 SEED WHEEL ASSEMBLY (13-04-0226)

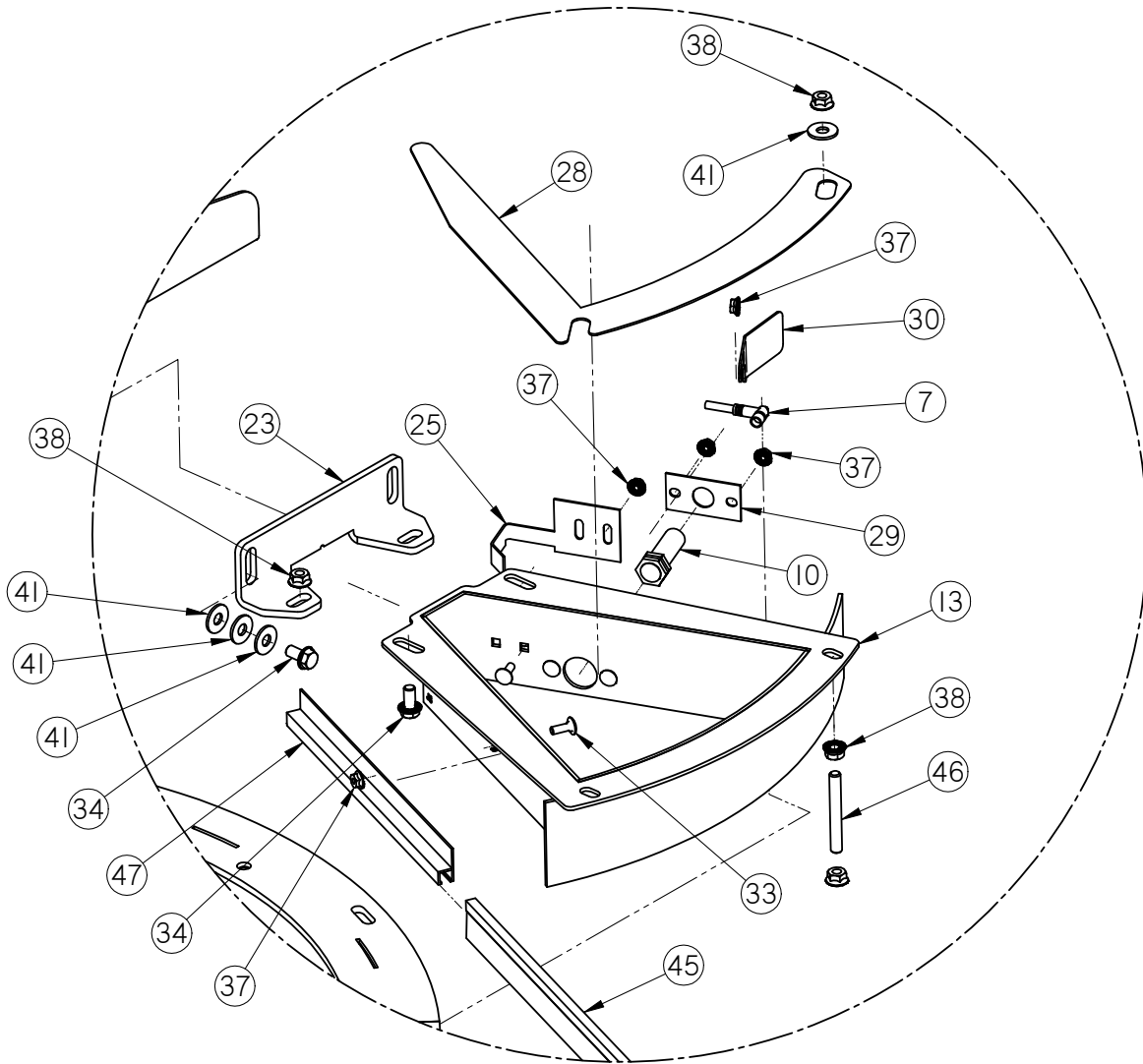


LPV SEED TREATER
LPV300 SEED WHEEL ASSEMBLY (13-04-0226)



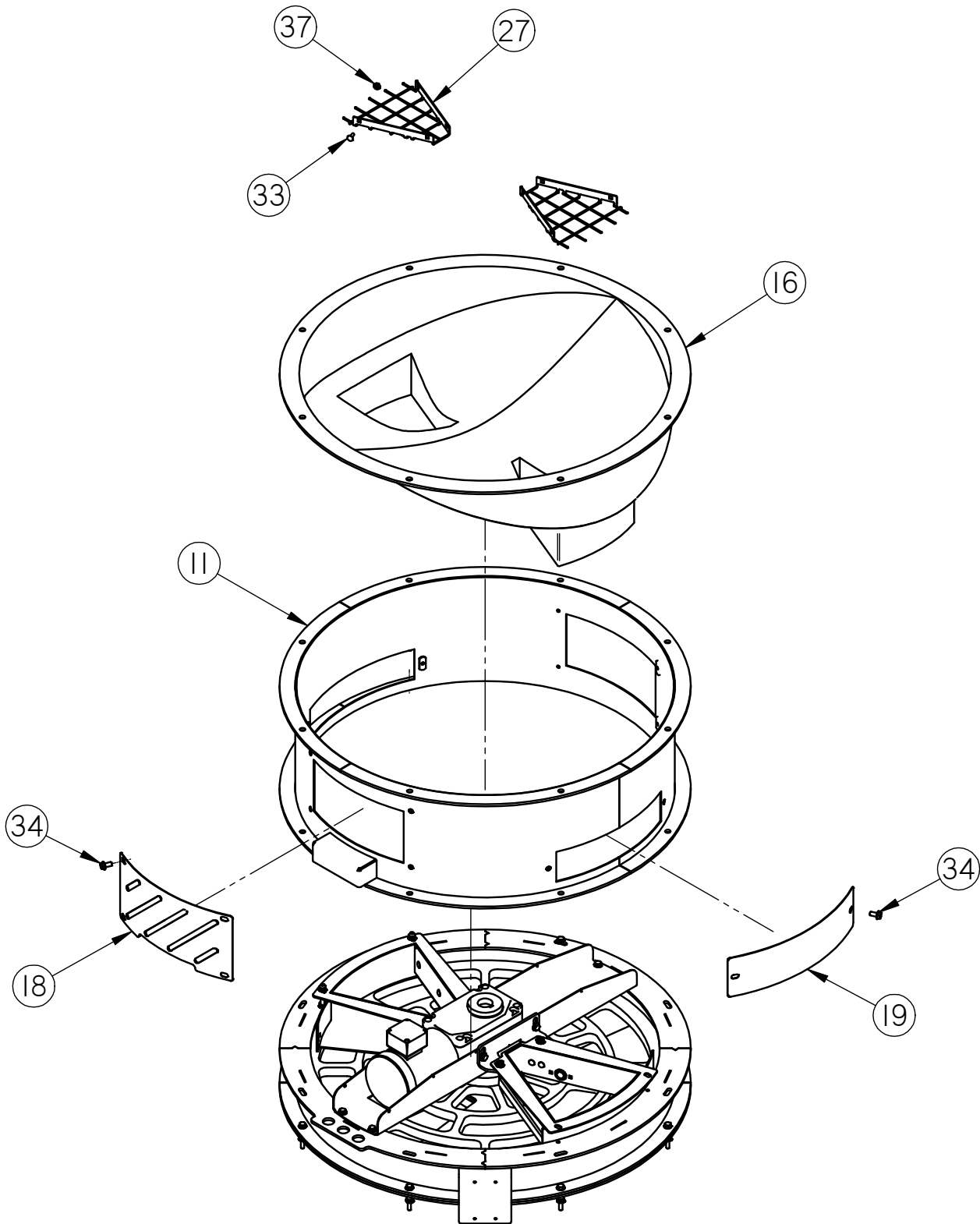
(See page 133)

LPV300 SEED WHEEL ASSEMBLY (13-04-0226)

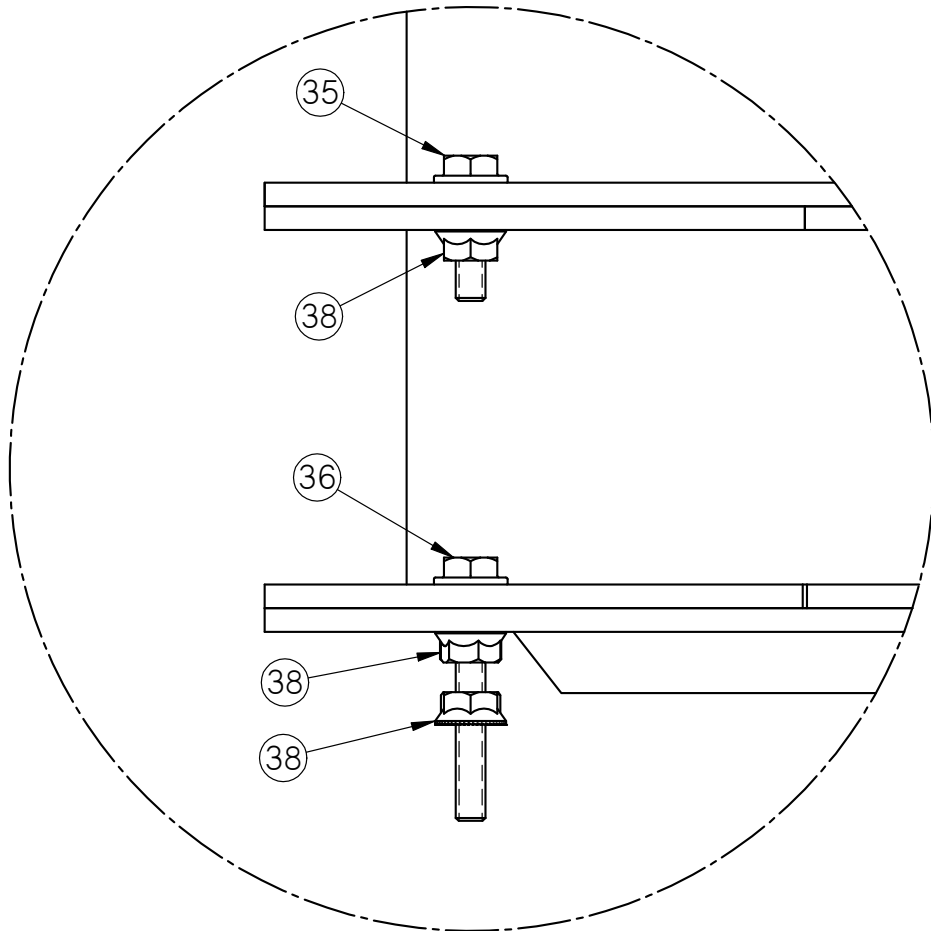
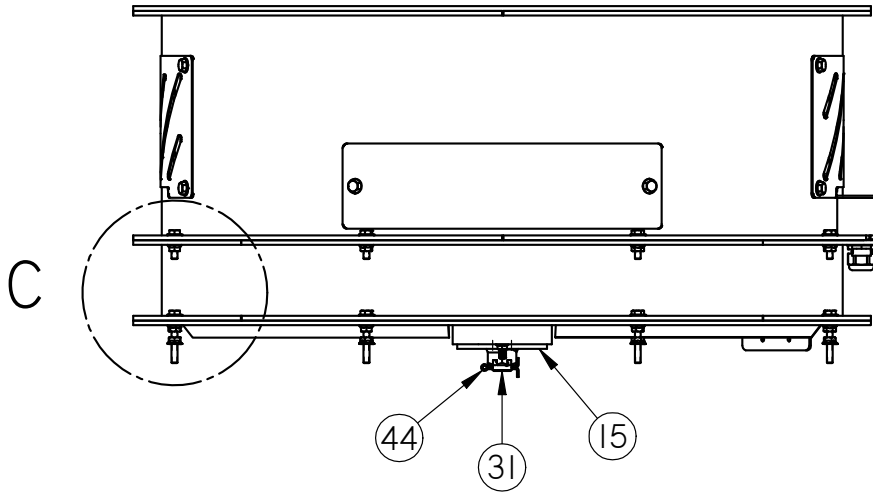


DETAIL A

LPV SEED TREATER
LPV300 SEED WHEEL ASSEMBLY (13-04-0226)



LPV SEED TREATER
LPV300 SEED WHEEL ASSEMBLY (13-04-0226)



DETAIL C

LPV SEED TREATER

LPV300 SEED WHEEL ASSEMBLY (13-04-0226)

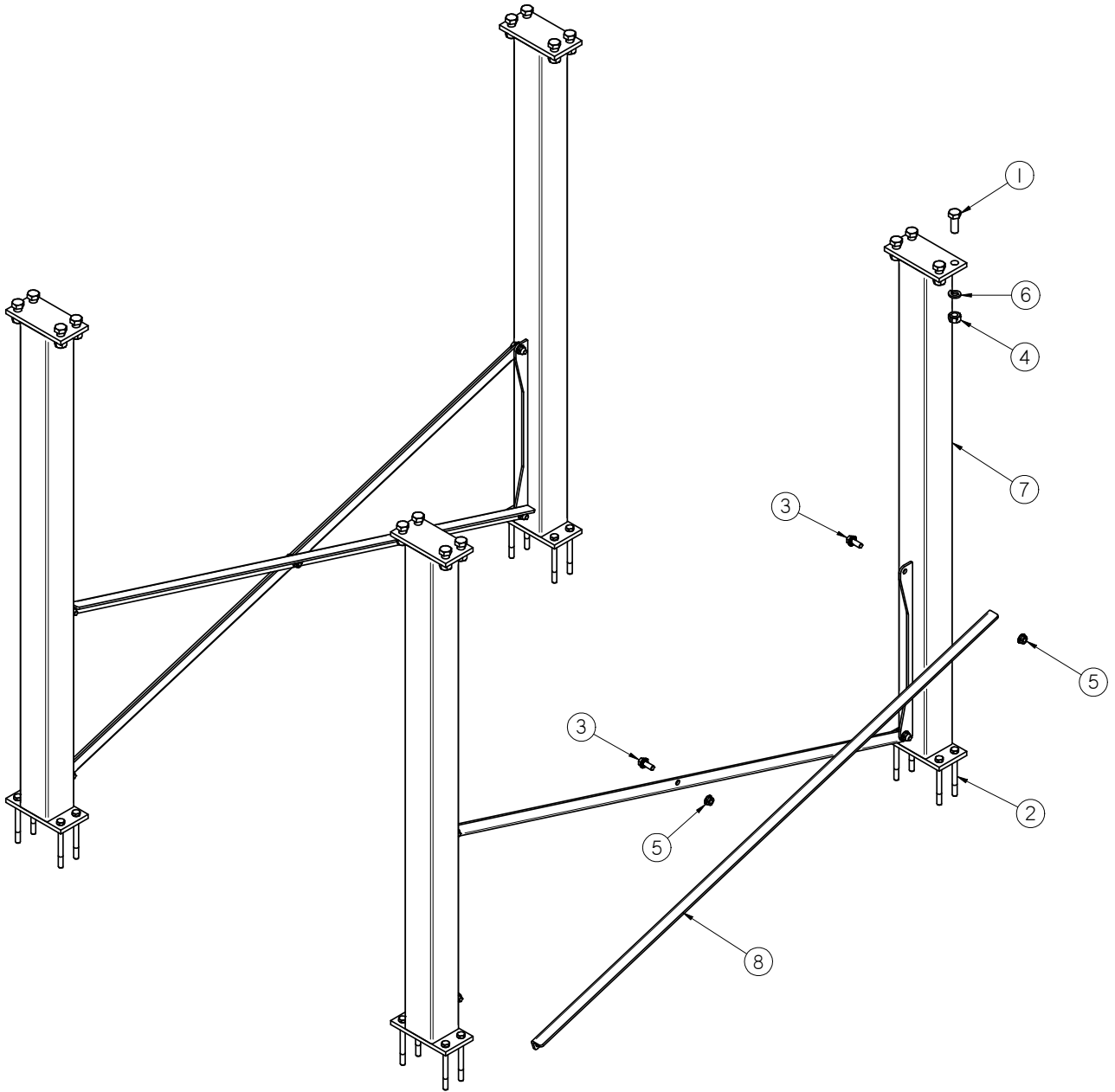
Item #	Part #	Description	Qty
1	01-01-0229	GMTR RA .50 HP 11RPM 3PH HLLW SHAFT	1
2	01-10-0017	KEY 3/8 X 3.0 CS	1
3	03-06-0111	RECP TURCK RSF 44-1/M20/S717/S4000	1
4	03-08-0299	CONN CG 0.5NPT .170-.450 3232LTF	1
5	03-08-0308	NUT NYLOC .500 NPT 8464	1
6	03-08-0348	WSHR RDCG CNDT .75 X .5	2
7	03-08-0355	CONN TRCK PKW 3M-5-RS 4/S760/S771	2
8	03-08-0356	CONN CG .75 NPT M3234GBJ LTCG	2
9	03-08-0357	NUT NYLON.75 NPT 8465	2
10	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	2
11	05-03-0169	WDMT SEED METER EXTENSION	1
12	05-03-0232	WDMT SMW UPPER BRG BRKT	1
13	05-03-0240	WDMT SMW BRSH PCKT	2
14	05-03-0608	WDMT SEED METER BODY EXTEN	1
15	05-04-0049	WDMT SEED WHEEL SHAFT NUT	1
16	05-07-0197	HPPR SMW DUAL DSCHG ROTO-MLDD	1
17	05-07-0590	ASSY SMW 1.75 HEX DRV 2IN TALL	1
18	05-10-0890	CVR #1 SEED METER	2
19	05-10-0891	CVR #2 SEED METER	2
20	05-10-0893	PLATE SUPPORT SEED METER STEEL	1
21	05-10-1213	SUPP BTM BRG UHMW SEED METER	1
22	05-10-1306	PAD SEED WHL FOAM RBBR FLOATING	1
23	05-10-1392	BRKT SMW BRSH PCKT HLDR	2
24	05-10-1426	14GA WEAR SPLATE HALF	2
25	05-10-1449	PLT SMW CTR HUB WIPER	2
26	05-10-1588	PLT SHAFT CLIP SMW	1
27	05-10-1872	GRD SMW INLET HOPP PCKT	2
28	05-10-2166	CVR TEST	2
29	05-10-3316	SMW PROX SW HOLDER	2
30	05-10-4192	PLT SMW POCKET SCRAPER	2
31	05-11-0224	DRIVE SHAFT 1.4375 SHAFT	1
32	06-01-0106	BOLT .500-13 X 5.50 ZP GR5	4
33	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	18
34	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	24
35	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	8

LPV SEED TREATER

LPV300 SEED WHEEL ASSEMBLY (13-04-0226)

Item #	Part #	Description	Qty
36	06-01-0204	BOLT FLG .375-16 X 2.50 ZP GR5 FTH	8
37	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	26
38	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	40
39	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	4
40	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	4
41	06-05-0004	WSHR FLAT .375 ZP	10
42	06-06-0023	SCRW, SELF TAPPING, 10-16 ZP X .750	14
43	06-06-0046	SCRW .313-18 X 2.0 ZP FLAT HD PHLP	4
44	06-09-0023	PIN CTTR .188 X 2.00 ZP	1
45	06-10-0019	SEAL BRSH 12.75 OAL 1IN EXP LG	2
46	06-14-0013	STUD .375-16 ZP X 3 IN LG ZP	4
47	100118	HOLDER BRUSH SMW	2
48	101BC9	PSM SMW GALV RING	1
49	13-04-0058	KIT SMW SCL CALB	1

LPV SEED TREATER
WEIGH BELT LEG ASSEMBLY (13-05-0520)



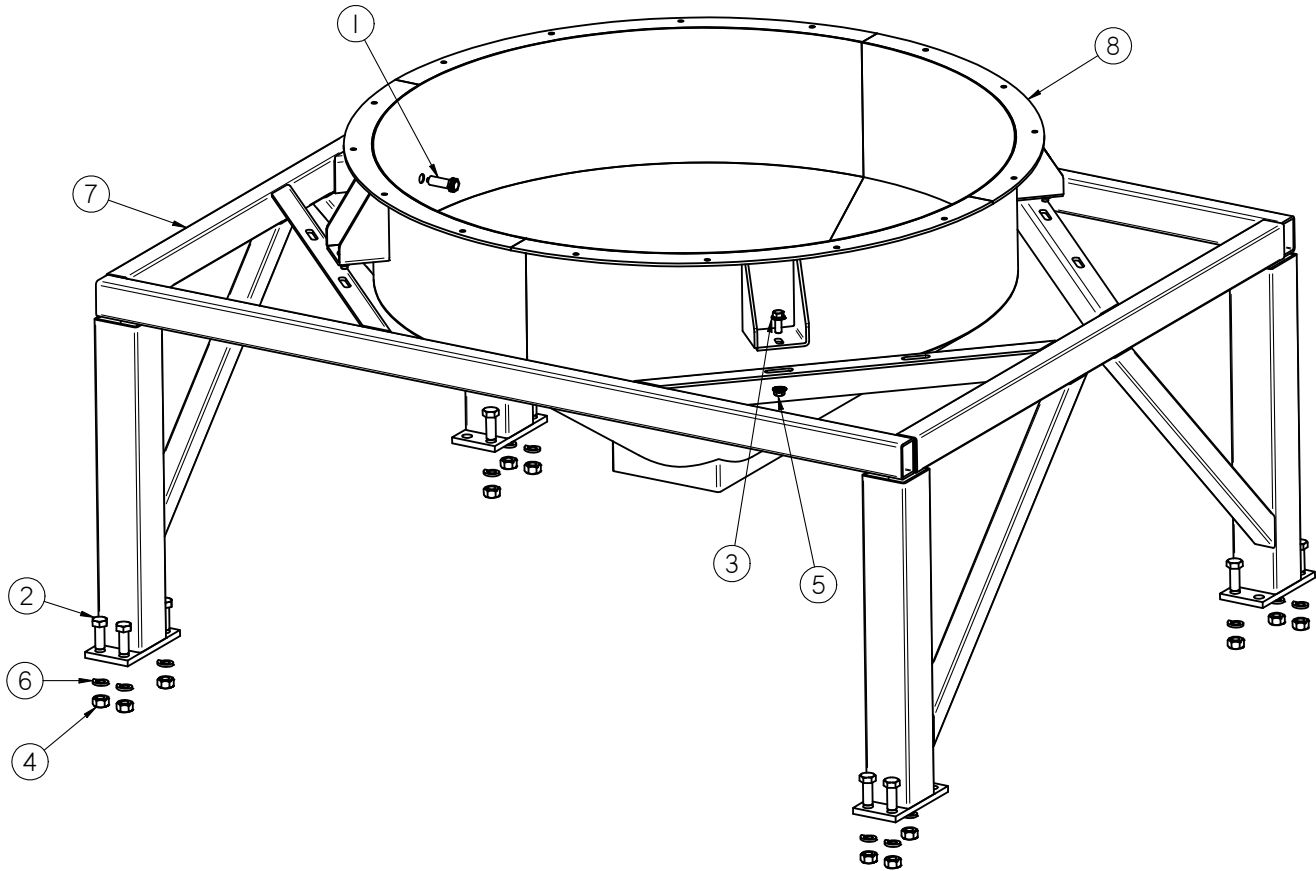
LPV SEED TREATER

WEIGH BELT LEG ASSEMBLY (13-05-0520)

Item #	Part #	Description	Qty
1	06-01-0065	BOLT, .750-10 X 2.0 UNC ZP GRADE 5	16
2	06-01-0179	BOLT,.500-13 CONC ANCHOR ZP 5.5 LONG	16
3	06-01-0232	BOLT FLG .500-13 X 1.250 ZP GR5	10
4	06-02-0006	NUT FULL .750-10 ZP GR5	16
5	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	10
6	06-04-0006	WASHER, .750 LOCK ZP	16
7	104C43	WDMT WB LEG	4
8	104C44	WB LEG X BRACE	4

LPV SEED TREATER

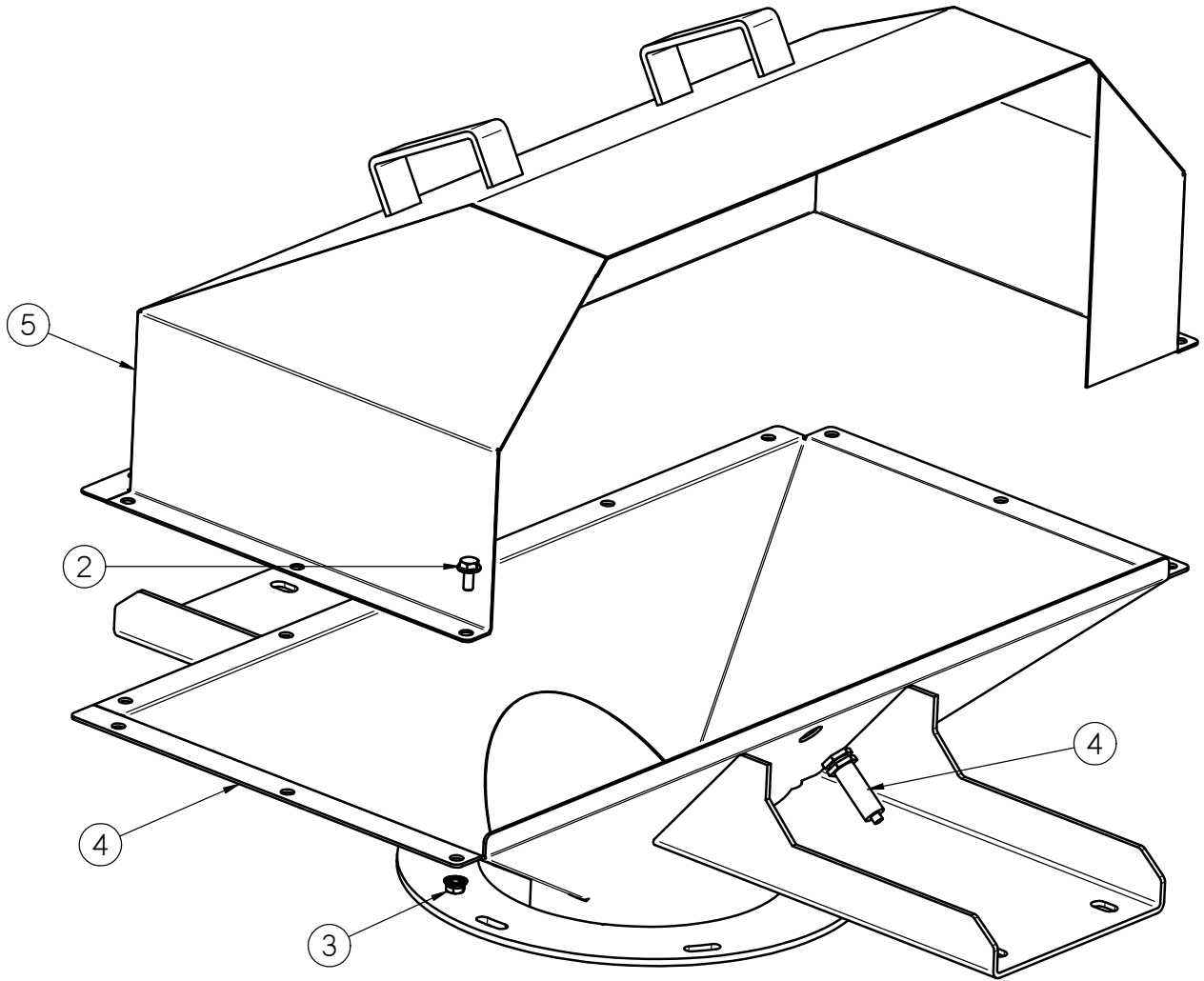
HOLDING HOPPER ASSEMBLY (13-05-0516)



Item #	Part #	Description	Qty
1	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
2	06-01-0065	BOLT, .750-10 X 2.0 UNC ZP GRADE 5	12
3	06-01-0232	BOLT FLG .500-13 X 1.250 ZP GR5	4
4	06-02-0006	NUT FULL .750-10 ZP GR5	12
5	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	4
6	06-04-0006	WASHER, .750 LOCK ZP	12
7	104C32	WDMT WB TOP FRM	1
8	104C91	WDMT USE HOPP	1

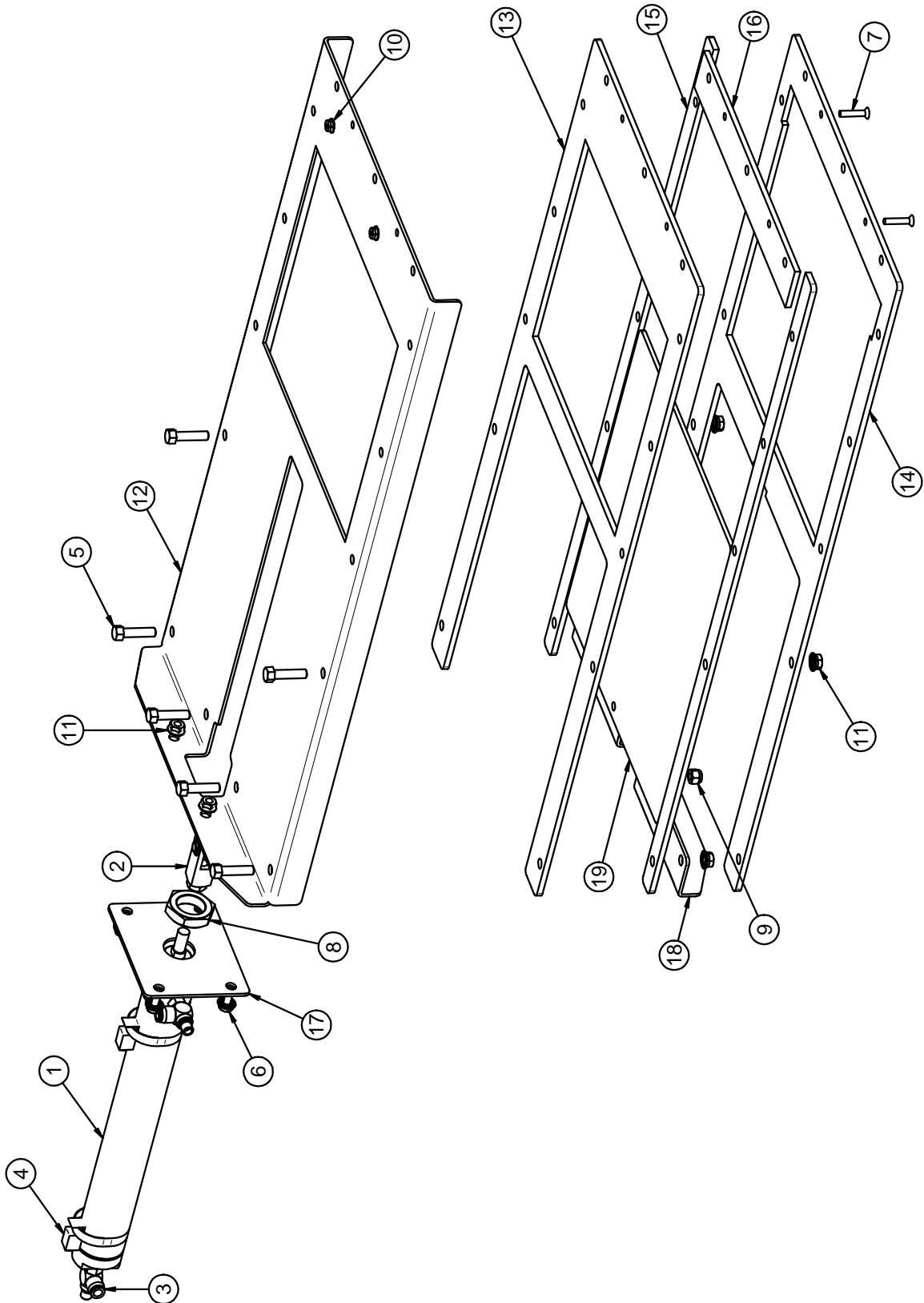
LPV SEED TREATER

STANDARD WEIGH BELT TREATER INLET ASSEMBLY (13-05-0519)



Item #	Part #	Description	Qty
1	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
2	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	11
3	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	11
4	104C53	WDMT WD TRTR CONE	1
5	104C58	WDMT WB TRTR HOOD	1

STANDARD WEIGH BELT SLIDE GATE ASSEMBLY (12-04-0041)

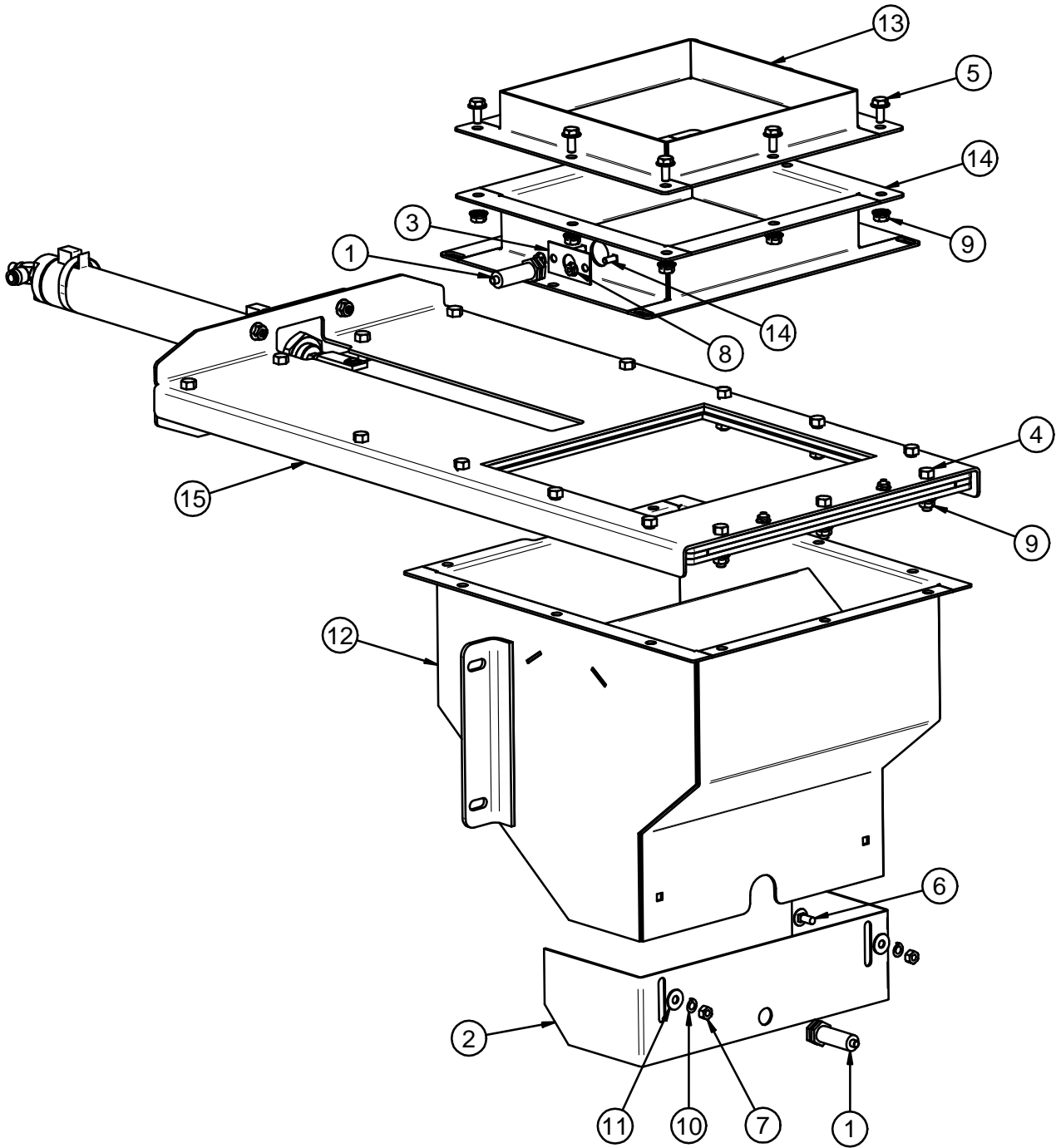


LPV SEED TREATER

STANDARD WEIGH BELT SLIDE GATE ASSEMBLY (12-04-0041)

Item #	Part #	Description	Qty
1	03-17-0040	CYLINDER AIR 12" STROKE 2" BORE	1
2	03-17-0041	CLEVIS ASSY BIMBA D-8313-A	1
3	03-17-0068	VLV NEDL .250OD X .250NPT FQP44	2
4	03-17-0121	SW MAG REED MRS-.087-BLQ-31	2
5	06-01-0018	BOLT .375-16 X 1.50 ZP GR5	6
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
7	06-01-0155	SCRW MACH .250-20 X 1.25 SH FLHD	2
8	06-02-0064	06-02-0064 BINBA D-508 NUT	1
9	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	2
10	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATTED	2
11	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	8
12	105218	GATE FRAME	1
13	105219	GATE TOP SLIDE	1
14	10521A	GATE BTM SLIDE	1
15	10521B	GATE SIDE SPCR	2
16	10521C	GATE END SPCR	1
17	10521D	POWER PLATE	1
18	10521E	CYL MNT PLT	1
19	10521F	GATE SLIDE WB	1

STANDARD WEIGH BELT SEED GATE ASSEMBLY (13-05-0515)

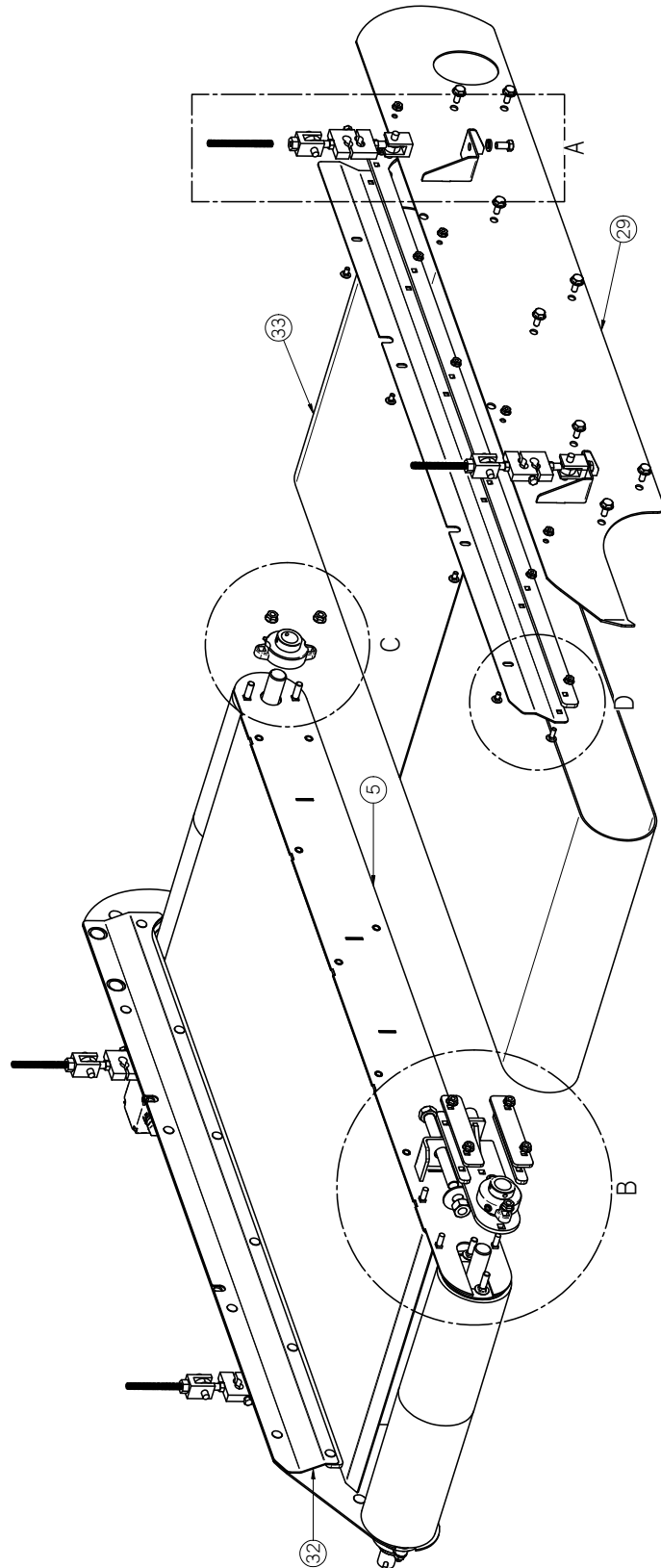


LPV SEED TREATER

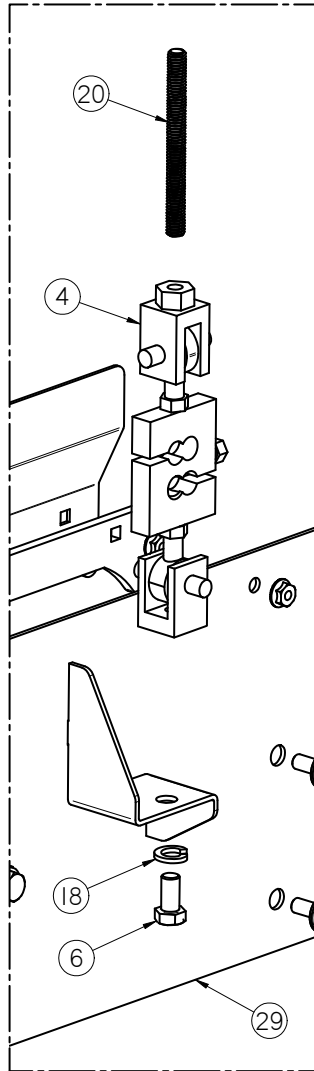
STANDARD WEIGH BELT SEED GATE ASSEMBLY (13-05-0515)

Item #	Part #	Description	Qty
1	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	2
2	05-10-1977	PLT SEED LDDR ADJ OTLT	1
3	05-10-3316	SMW PROX SW HOLDER	1
4	06-01-0018	BOLT .375-16 X 1.50 ZP GR5	10
5	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	8
6	06-01-0171	BOLT CRG .3125-18X.750 ZP SHORT NECK	2
7	06-02-0002	NUT FULL .313-18 ZP GR5	2
8	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	2
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	17
10	06-04-0002	WSHR LOCK SPLT .313 ZP	2
11	06-05-0003	WSHR FLAT .313 ZP	2
12	104C27	WDMT SD LAD CS	1
13	104C8D	WDMT HOPP ADPT	1
14	105222	WDMT SLD GATE TRAN WB	1
15	12-04-0041	SLIDE GATE	1

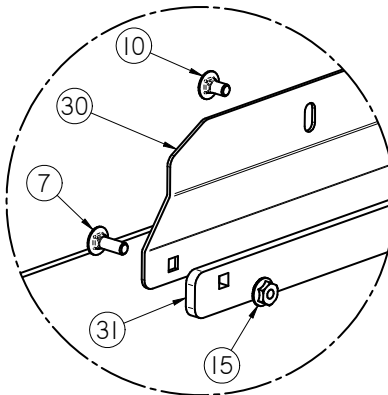
STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)



STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)



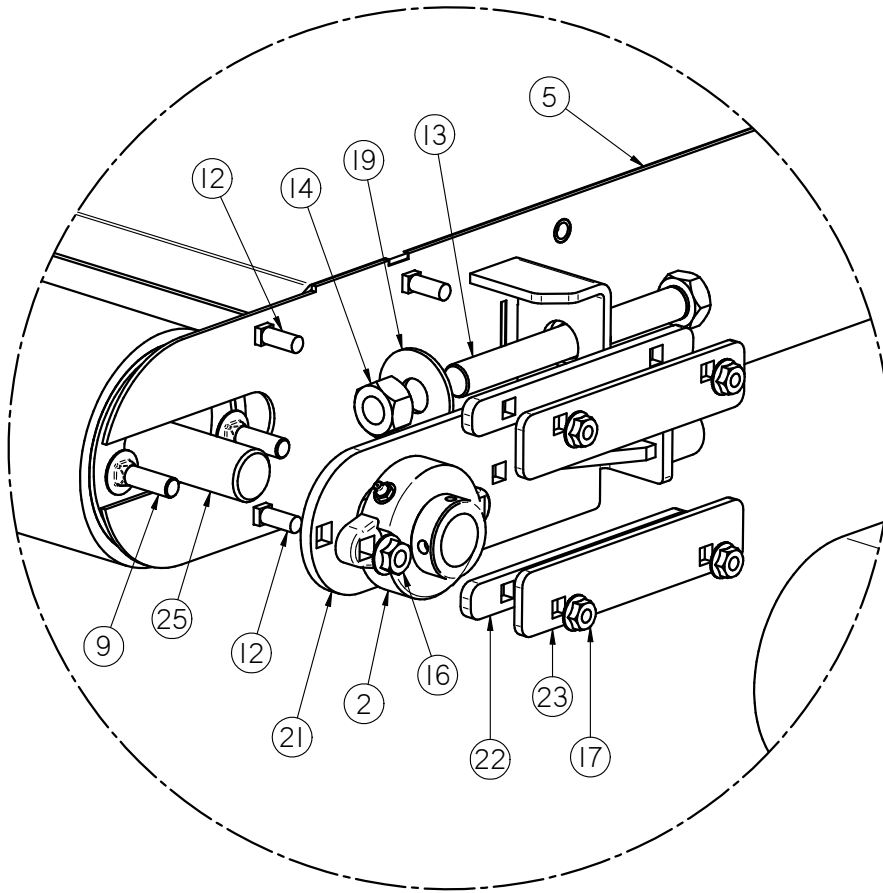
DETAIL A



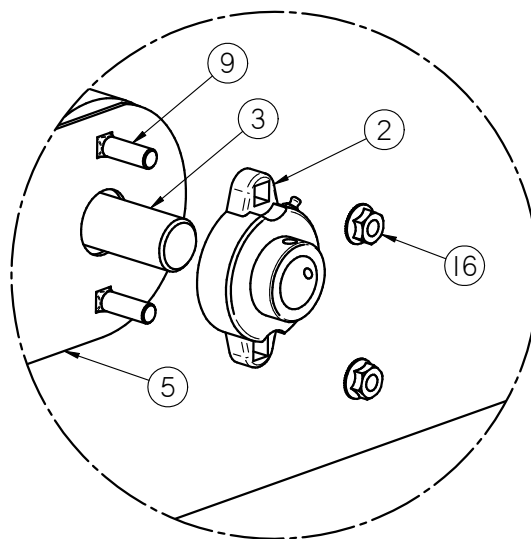
DETAIL D

LPV SEED TREATER

STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)



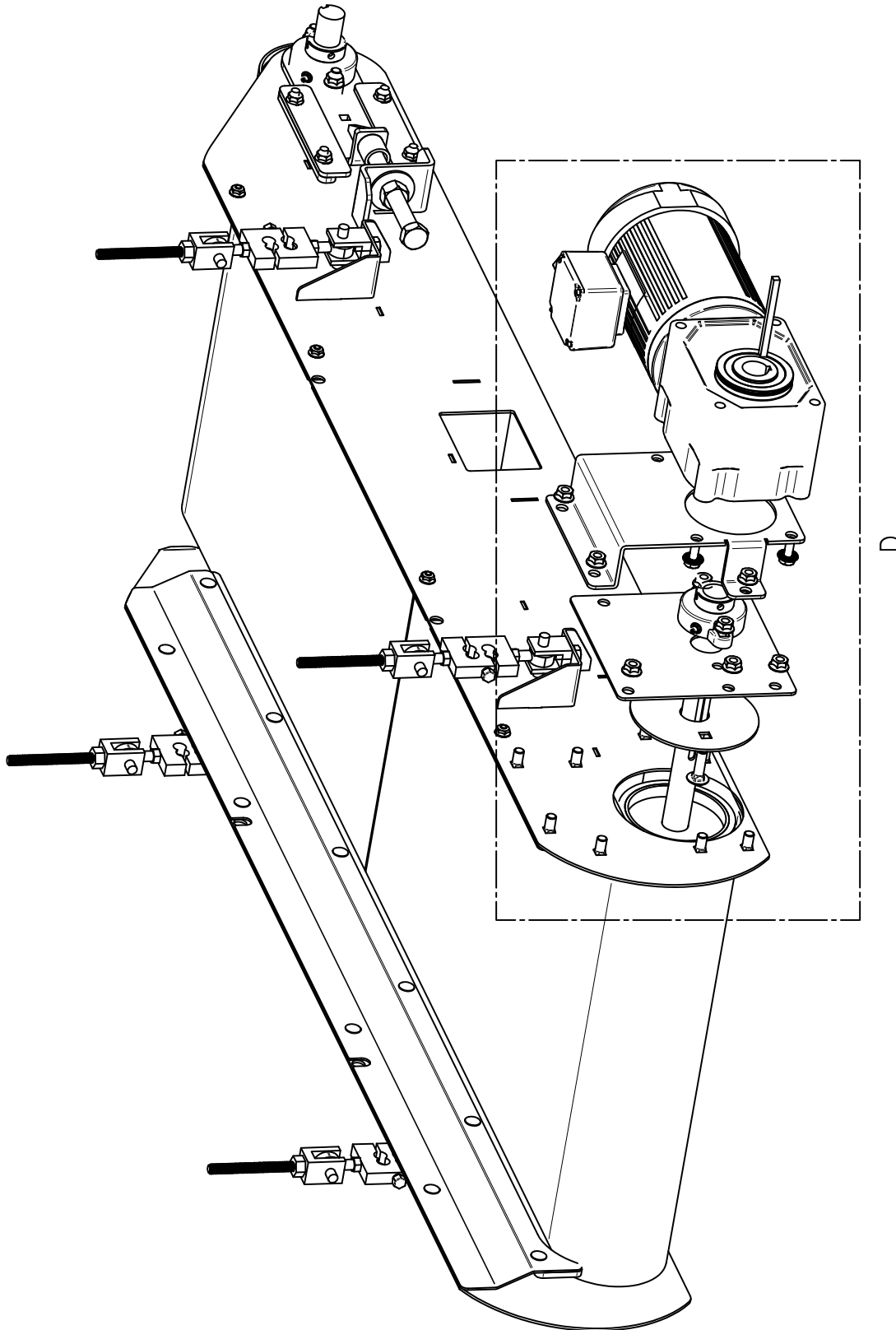
DETAIL B



DETAIL C

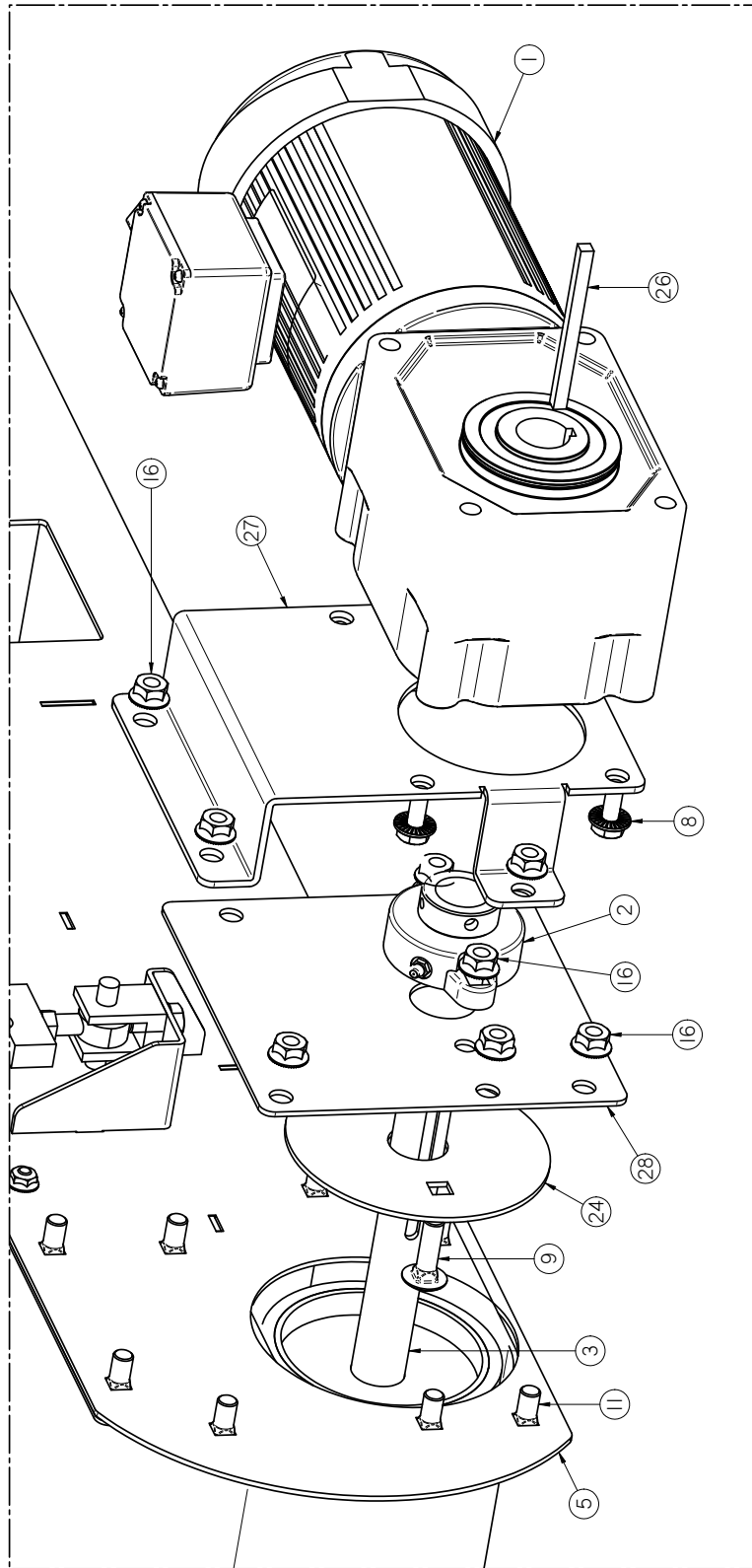
LPV SEED TREATER

STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)



LPV SEED TREATER

STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)



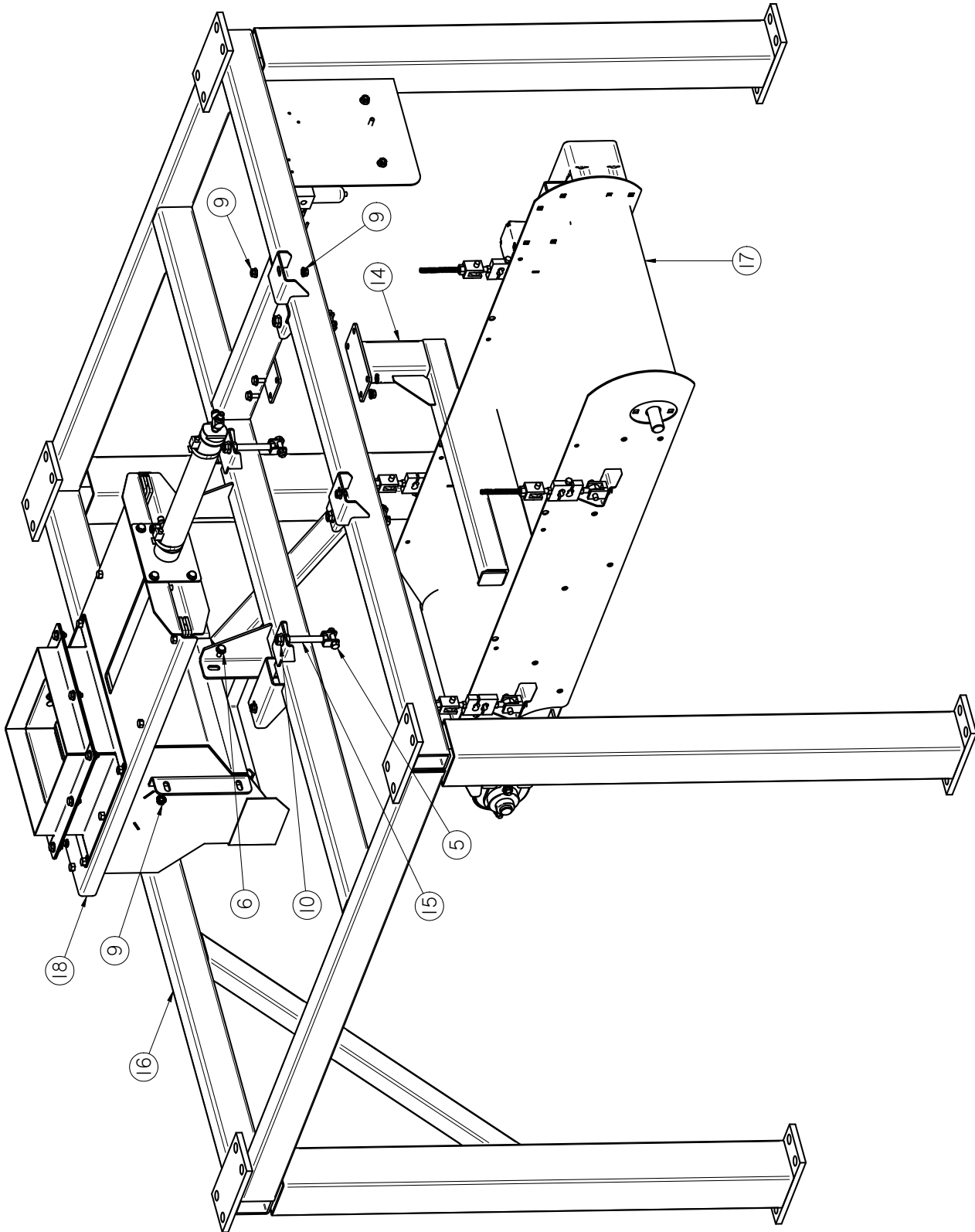
DETAIL D

LPV SEED TREATER

STANDARD WEIGH BELT BASE ASSEMBLY (13-05-0514)

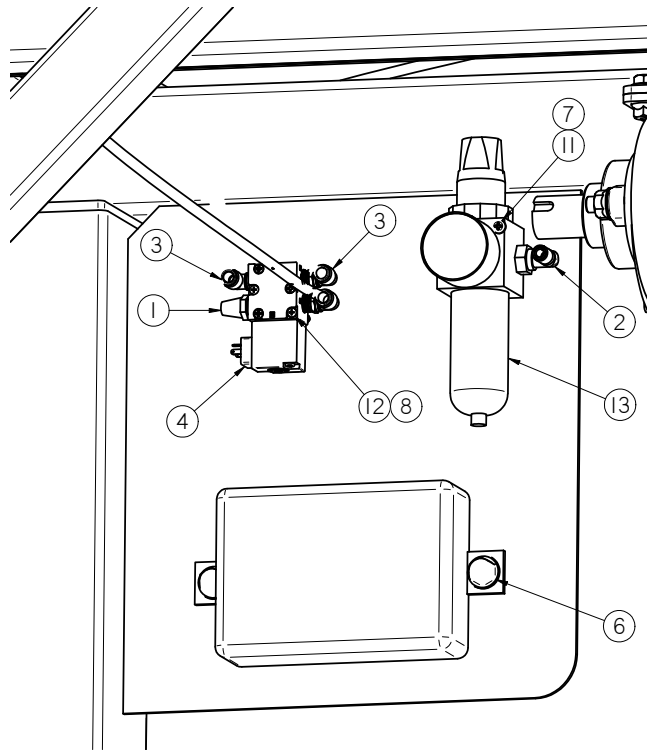
Item #	Part #	Description	Qty
1	01-01-0225	GMTR RA .50 HP 72RPM 3PH HLLW 1.0 SHAFT	1
2	01-03-0042	BRG FLG MNT 1.000ID 2BOLT ECNTRC	4
3	01-08-0098	PULLEY HEAD VULC S3000	1
4	03-19-0093	ITCM 4 CELL KIT 1000LB	1
5	05-03-1656	WDMT WEIGH BELT FRAME	1
6	06-01-0015	BOLT .375-16 X 0.75 ZP GR5	4
7	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	12
8	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	12
9	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	8
10	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	8
11	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	8
12	06-01-0223	BOLT CRG .313-18 X 1.00 ZP GR5	8
13	06-01-0269	BOLT .625-11 X 6.00 ZP GR5 FTH	2
14	06-02-0005	NUT, .625-11 UNC ZP GRADE 5	4
15	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATTED	20
16	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	16
17	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	8
18	06-04-0003	WSHR LOCK SPLT .375 ZP	4
19	06-05-0006	WASHER, .625 FLAT ZP	4
20	06-14-0023	STUD .375-16 ZP X 4 IN LG ZP	4
21	10418D	WDMT TAKE UP WEIGH BELT	2
22	10418E	PLT TAKE UP PLT SPCR	4
23	10418F	PLT TAKE UP CLMP	4
24	104195	PLT PLY SPCR	1
25	104245	TAIL PULLEY WEIGH BELT	1
26	10425D	KEY	1
27	104C02	PLT MTR MNT WEIGH BELT	1
28	104C03	PLT BRG MNT	1
29	104C06	WDMT WEIGH BELT SIDE	1
30	105124	WEIGH BELT SKIRT RH	1
31	105125	WEIGH BELT SEAL	2
32	105126	WEIGH BELT SKIRT LH	1
33	11-02-0163	BELT CNVR WEIGH BELT	1

STANDARD WEIGH BELT TOP ASSEMBLY (13-05-0518)



LPV SEED TREATER

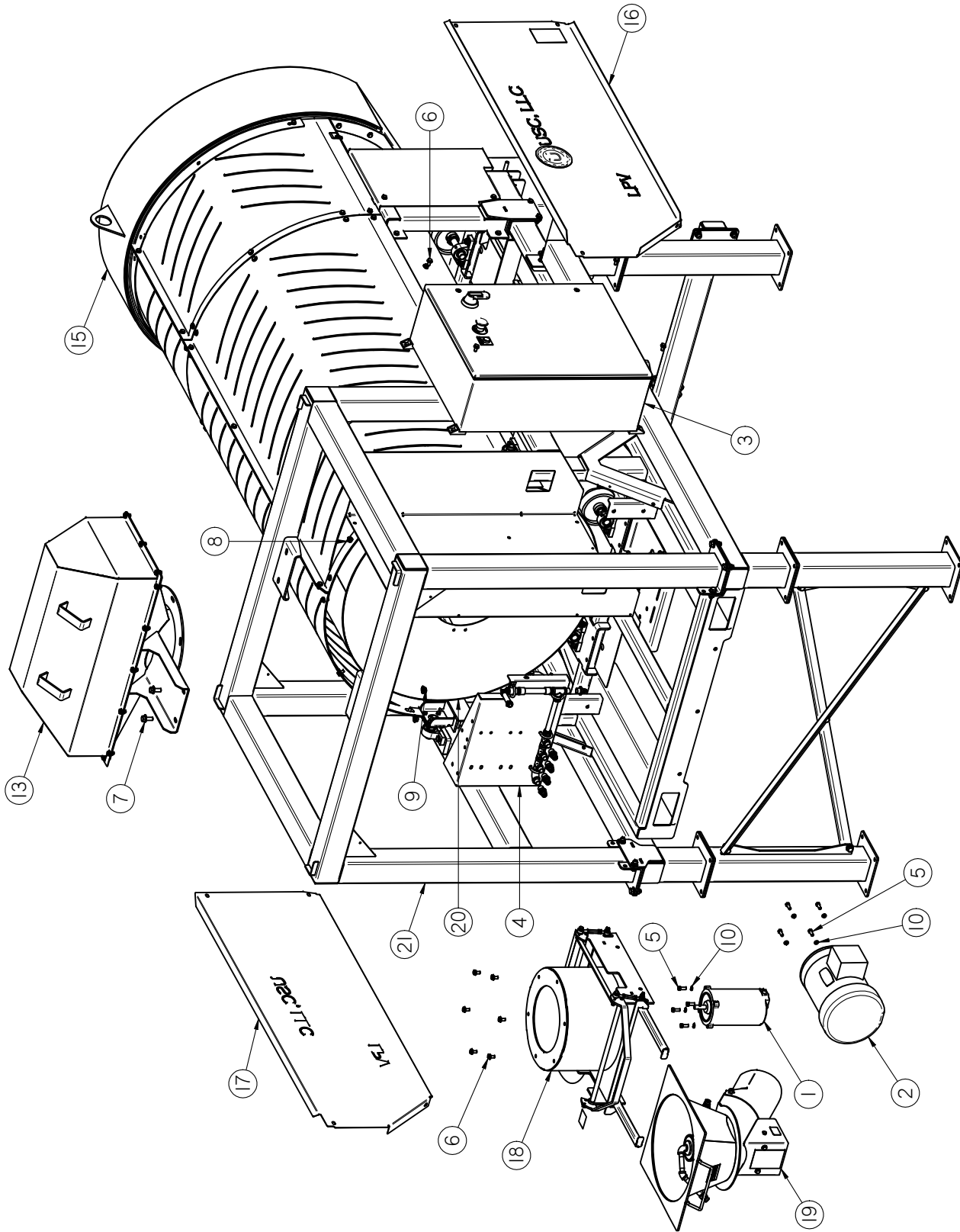
STANDARD WEIGH BELT TOP ASSEMBLY (13-05-0518)



Item #	Part #	Description	Qty
1	02-02-0049	FLTR EXHAUST BRZ .125 NPT	1
2	02-16-0044	FTTG PUSH 90 DEG .250OD X .250 NPT	1
3	02-16-0046	FTTG PUSH 90 DEG .250 OD X .125 NPT	3
4	03-17-0080	VLV SOL MAC 45A-AA1-DDAJ-1KJ	1
5	06-01-0018	BOLT .375-16 X 1.50 ZP GR5	4
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	10
7	06-02-0034	NUT 8-32 K-LOCK ZP	2
8	06-02-0052	NUT LOCK 4-40 CS MMC# 90675A005	2
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	22
10	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	8
11	06-06-0047	SCRW MACH 8-32 X 1.750 PHLP RDHD ZP	2
12	06-06-0079	SCRW MACH 4-40 X1.25 PHLP PHD	2
13	07-03-0011	VALVE,REGULATOR	1
14	104C19	WDMT WB SUPP	1
15	104C24	WDMT SHIPPING BRKT TAKE UP	4
16	104C39	WDMT WB MNT FRAME	1
17	13-05-0514	ASSY WEIGH BELT BASE	1
18	13-05-0515	ASSY WB METER GATE	1

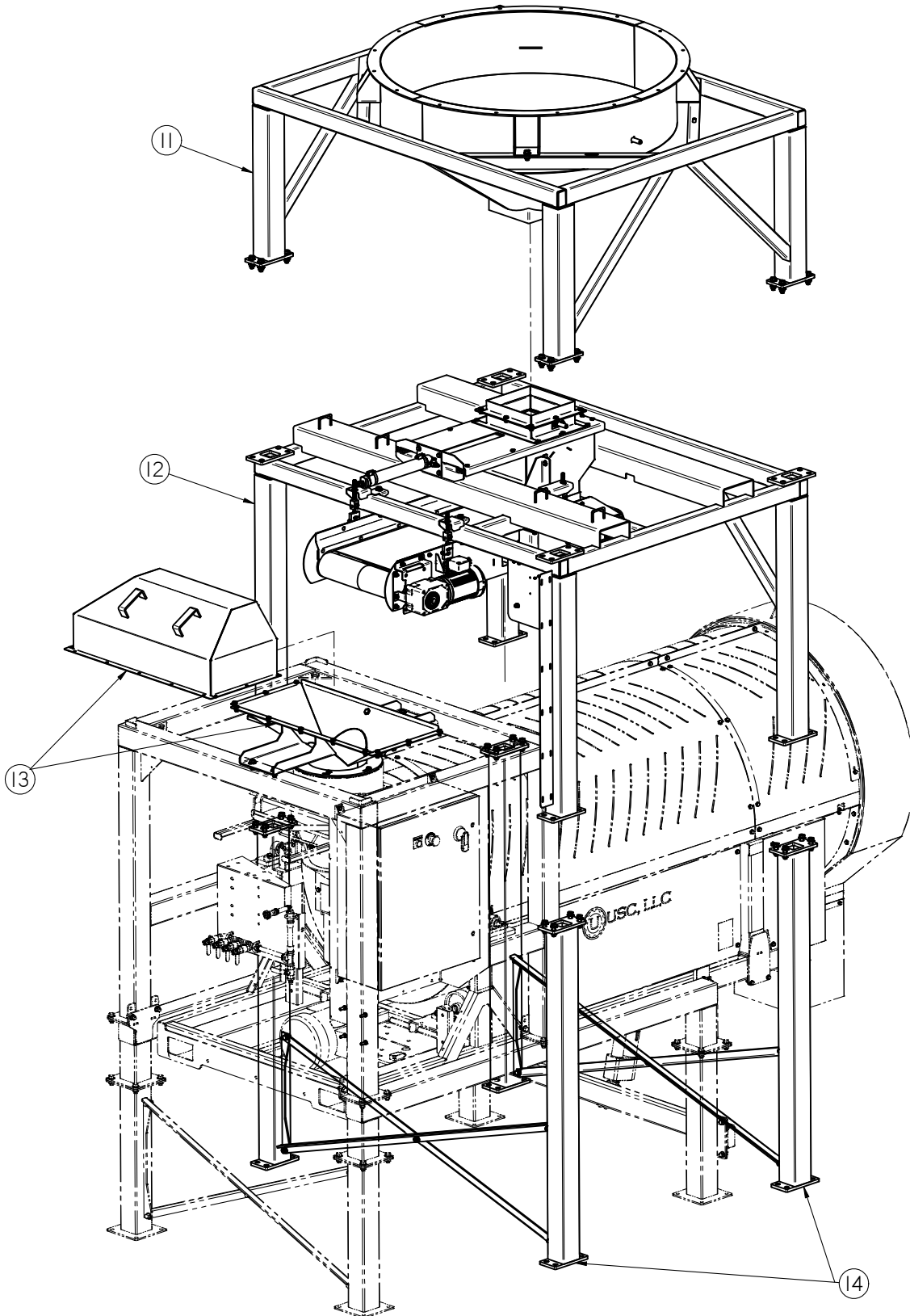
LPV SEED TREATER

STANDARD TREATER WITH WEIGH BELT TOP ASSEMBLY



LPV SEED TREATER

STANDARD TREATER WITH WEIGH BELT TOP ASSEMBLY



LPV SEED TREATER

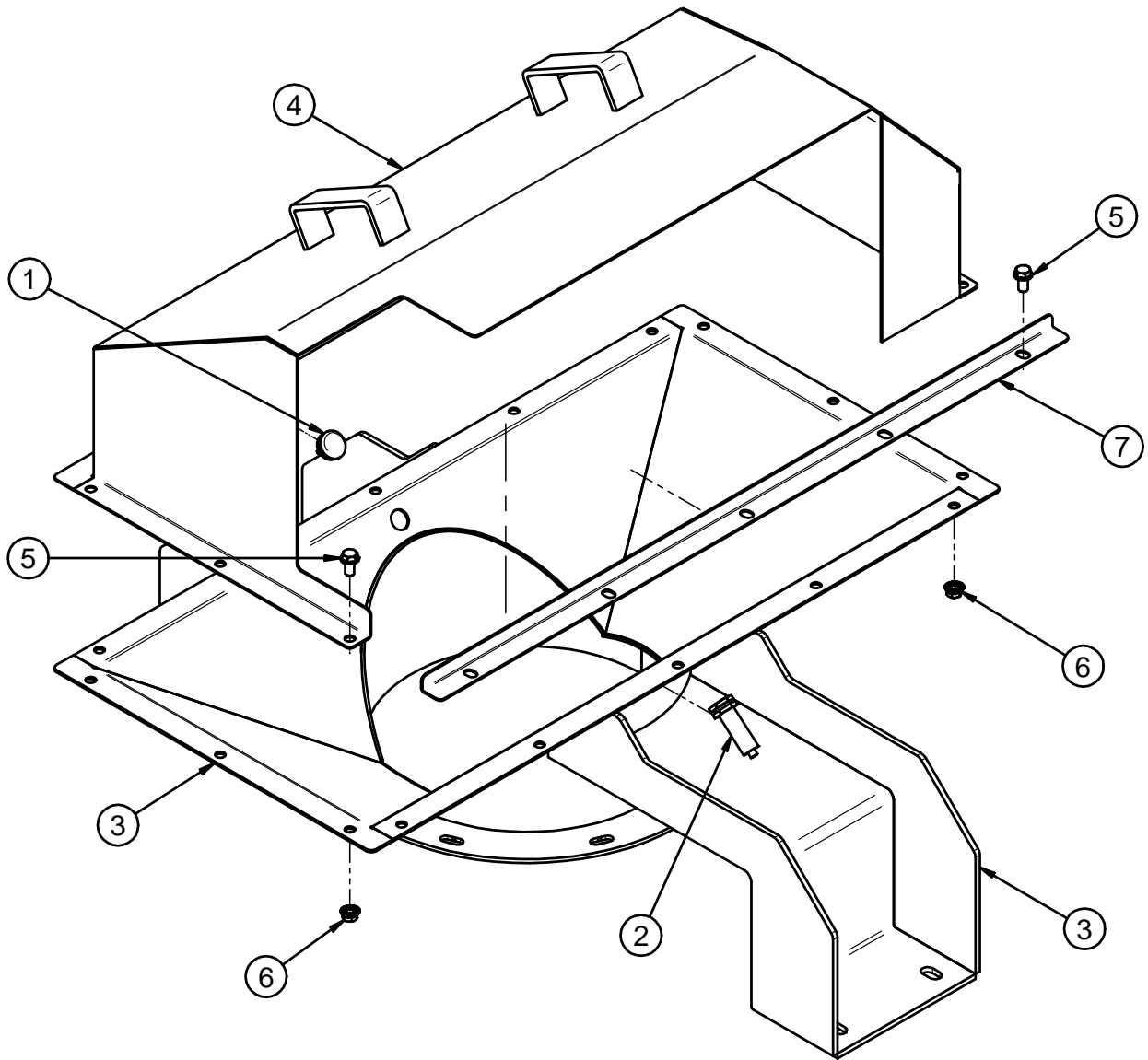
STANDARD TREATER WITH WEIGH BELT TOP ASSEMBLY

Item #	Part #	Description	Qty
1	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
2	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
3	SEE TABLE 1	PANEL CONTROL LPV TREATER WB	1
4	04-03-0305	ASSY STTC MXR & VLVS 8 PORT PPT	1
5	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	10
7	06-01-0232	BOLT FLG .500-13 X 1.250 ZP GR5	4
8	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
9	06-03-0032	NUT LOCK FLG .500-13 GR8	4
10	06-04-0003	WSHR LOCK SPLT .375 ZP	8
11	13-05-0516	ASSY WB USE HOPP	1
12	13-05-0518	ASSY WB 20IN CS	1
13	13-05-0519	ASSY WB TRTR HOOD	1
14	13-05-0520	LEG KIT WB OVER LPV	1
15	18-01-0270	ASSY END CHUTE LPV2000	1
16	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
17	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
18	18-01-0350	ASSY FLOW CHMBR LPX2000 CS	1
19	18-01-0359	ASSY ATMZR LPV SS QD	1
20	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
21	18-01-0434	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

TABLE 1	
Part #	Description
03-12-0498	PNL CNTL LPV TRTR 230V 1PH NO/SMW
03-12-0500	PNL CNTL LPV TRTR 230V 3PH NO/SMW
03-12-0502	PNL CNTL LPV TRTR 460V 3PH NO/SMW
03-12-0504	PNL CNTL LPV TRTR 575V 3PH NO/SMW
03-12-0506	PNL CNTL LPV TRTR 380V 3PH NO/SMW

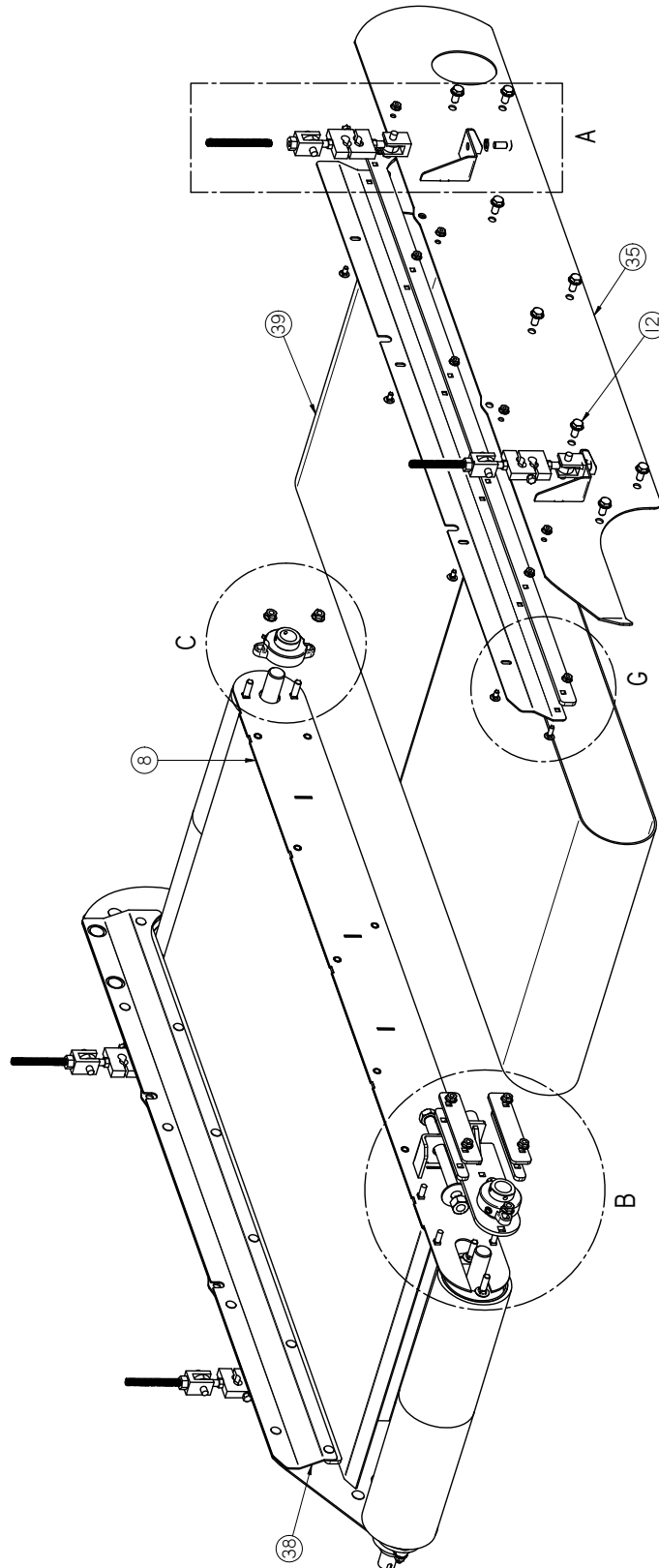
LPV SEED TREATER

HIGH CAPACITY WEIGH BELT TREATER INLET ASSEMBLY (05-07-0946)

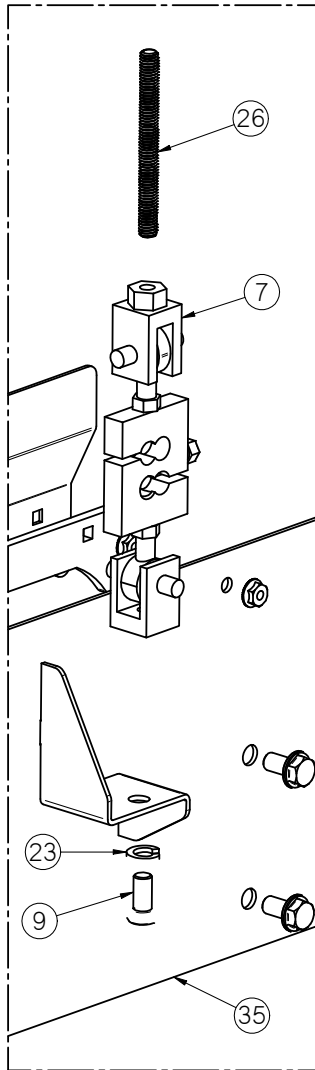


Item #	Part #	Description	Qty
1	03-08-0130	PLUG STEEL 22MM	1
2	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
3	05-07-0945	WDMT WB TRTR CONE LPV3000	1
4	05-07-0961	WDMT WB TRTR HOOD LPV3000	1
5	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	16
6	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	16
7	105C75	PLT SPACER	1

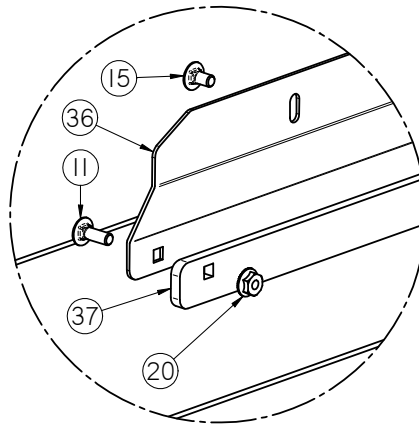
HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)



HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)

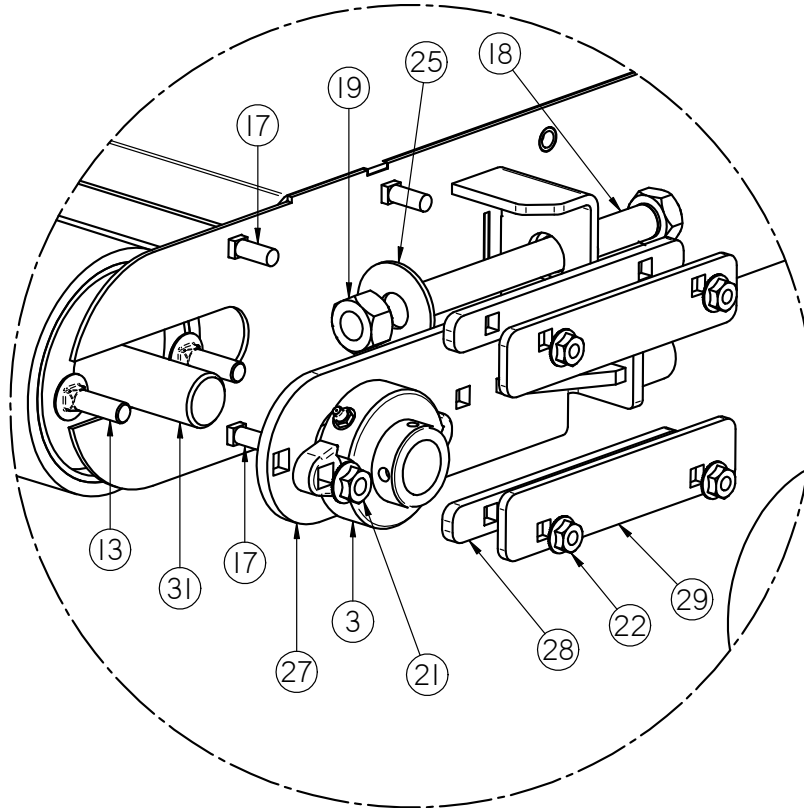


DETAIL A

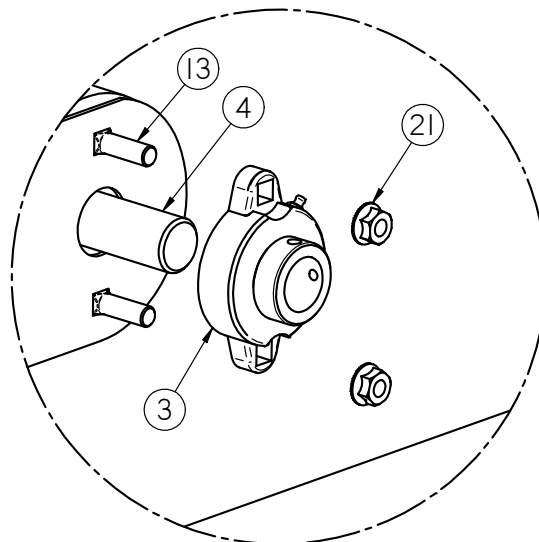


DETAIL G

HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)

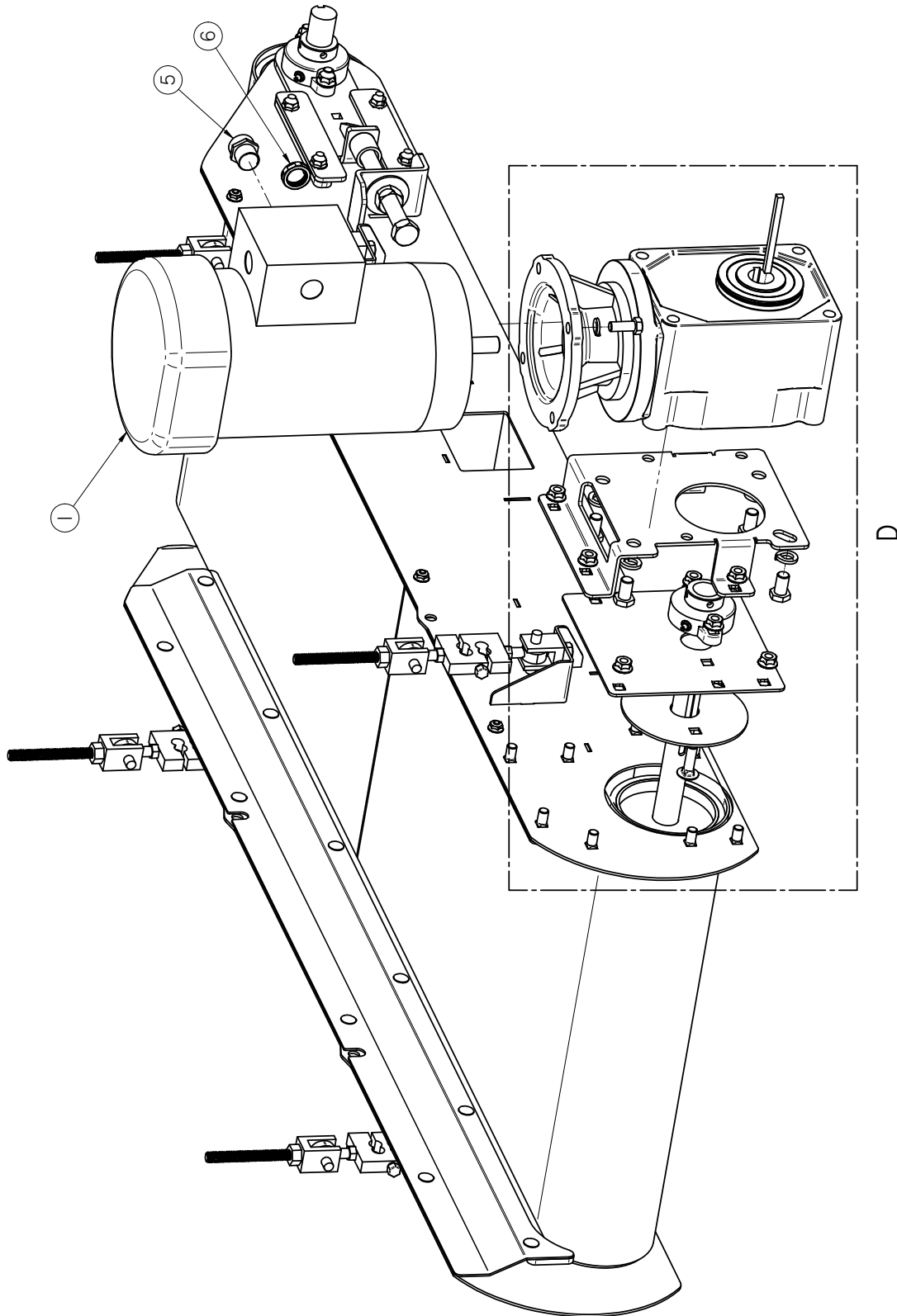


DETAIL B



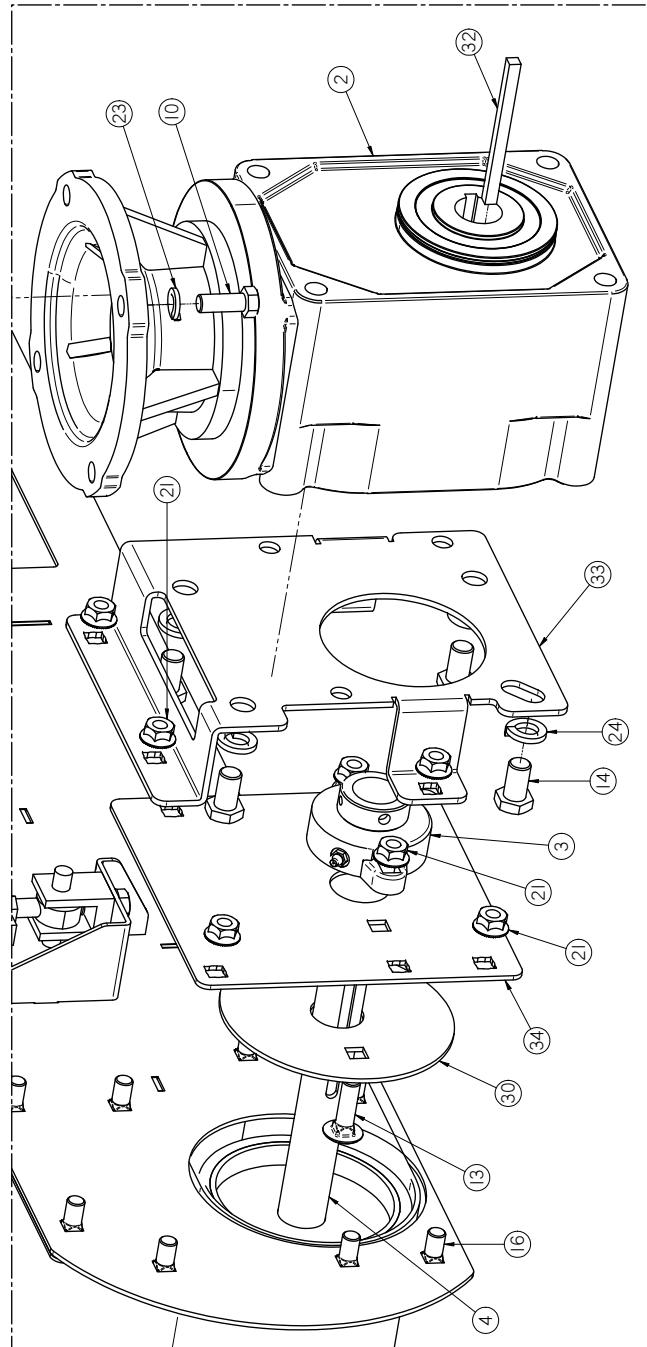
DETAIL C

HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)



LPV SEED TREATER

HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)



DETAIL D

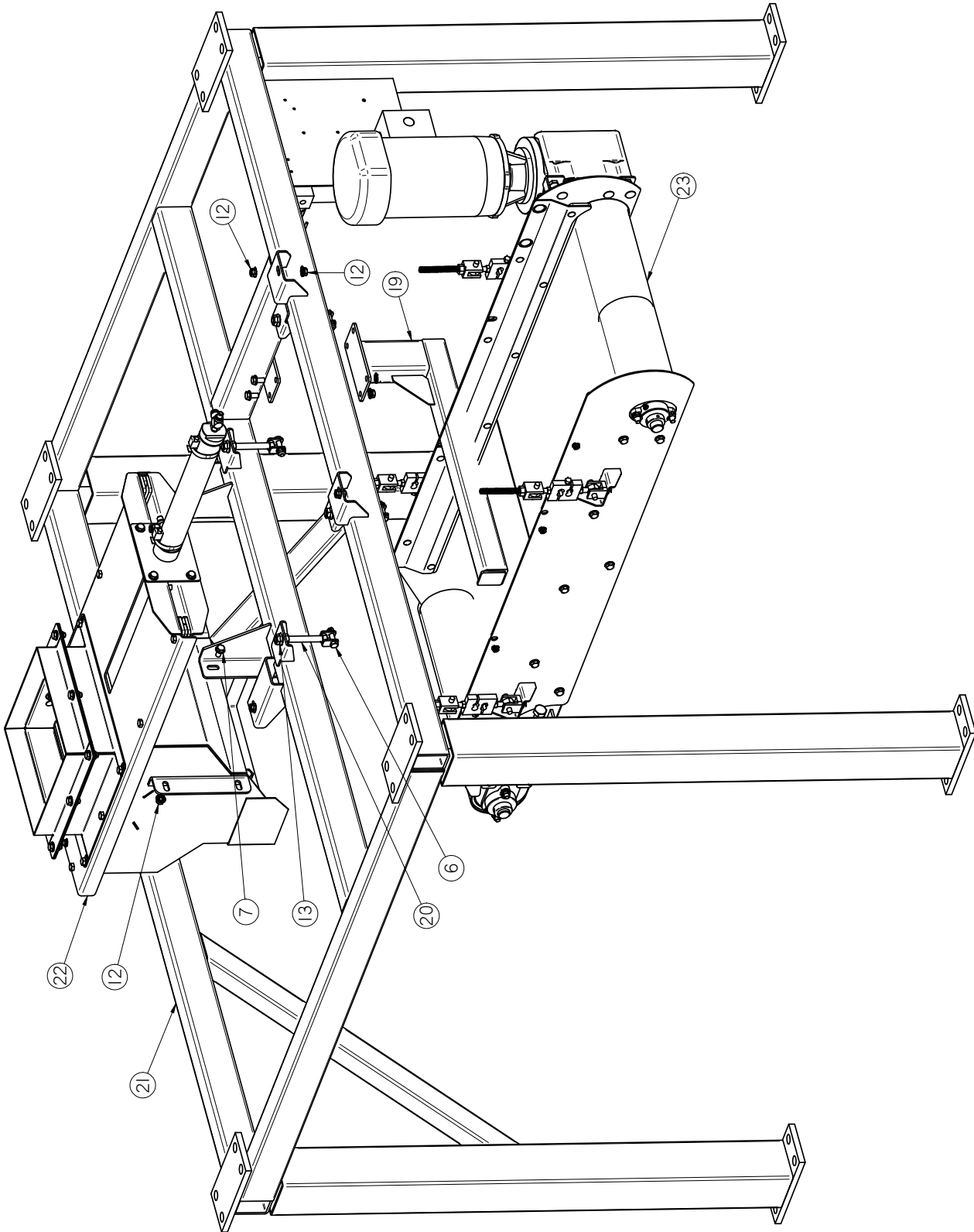
Item #	Part #	Description	Qty
1	01-01-0095	MTR 1.5HP 1725RPM TEFC 56C 3PH	1
2	01-01-0268	GBOX RA HB 15:1 56C 1IN BORE	1
3	01-03-0042	BRG FLG MNT 1.000ID 2BOLT ECNTRC	4
4	01-08-0098	PULLEY HEAD VULC S3000	1

LPV SEED TREATER

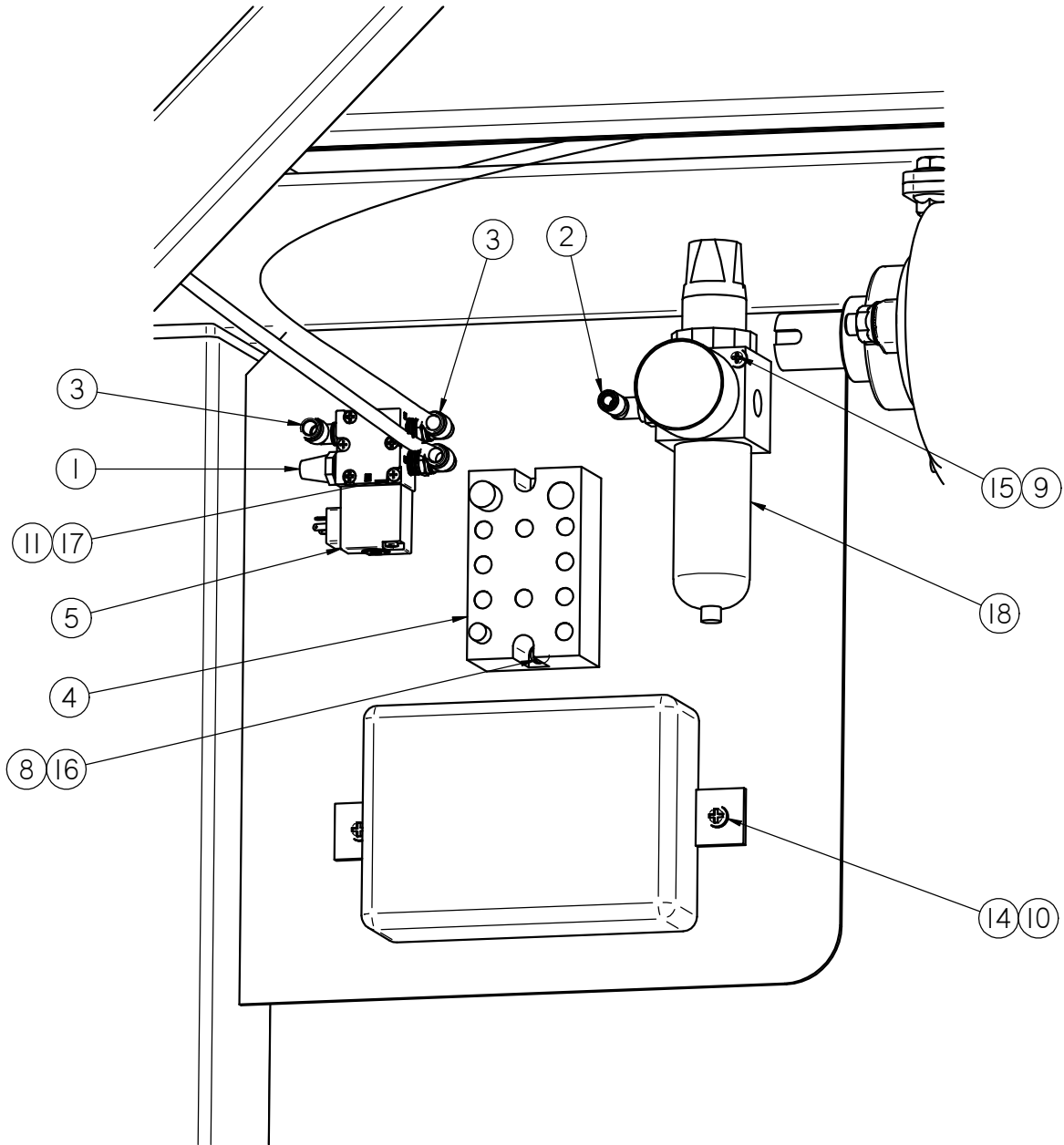
HIGH CAPACITY WEIGH BELT BASE ASSEMBLY (13-05-0638)

Item #	Part #	Description	Qty
5	03-06-0101	PLUG TURCK RSF 44-0.5M/NPT	1
6	03-08-0308	NUT NYLOC .500 NPT 8464	1
7	03-19-0093	ITCM 4 CELL KIT 1000LB	1
8	05-03-1656	WDMT WEIGH BELT FRAME	1
9	06-01-0015	BOLT .375-16 X 0.75 ZP GR5	4
10	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
11	06-01-0122	BOLT, CARRIAGE, .250-20x.75 G5 ZP	12
12	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	8
13	06-01-0127	BOLT CRG .375-16 X 1.25 ZP GR5	8
14	06-01-0145	BOLT M12-1.75 X 20MM FTH	4
15	06-01-0150	BOLT, CARRIAGE, .250-20x.50 G5 ZP	8
16	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	8
17	06-01-0223	BOLT CRG .313-18 X 1.00 ZP GR5	8
18	06-01-0269	BOLT .625-11 X 6.00 ZP GR5 FTH	2
19	06-02-0005	NUT, .625-11 UNC ZP GRADE 5	4
20	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATTED	20
21	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	15
22	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	8
23	06-04-0003	WSHR LOCK SPLT .375 ZP	8
24	06-04-0004	WSHR LOCK SPLT .500 ZP	4
25	06-05-0006	WASHER, .625 FLAT ZP	4
26	06-14-0023	STUD .375-16 ZP X 4 IN LG ZP	4
27	10418D	WDMT TAKE UP WEIGH BELT	2
28	10418E	PLT TAKE UP PLT SPCR	4
29	10418F	PLT TAKE UP CLMP	4
30	104195	PLT PLY SPCR	1
31	104245	TAIL PULLEY WEIGH BELT	1
32	10425D	KEY	1
33	104C02	PLT MTR MNT WEIGH BELT HC	1
34	104C03	PLT BRG MNT	1
35	104C06	WDMT WEIGH BELT SIDE	1
36	105124	WEIGH BELT SKIRT RH	1
37	105125	WEIGH BELT SEAL	2
38	105126	WEIGH BELT SKIRT LH	1
39	11-02-0163	BELT CNVR WEIGH BELT	1

HIGH CAPACITY WEIGH BELT ASSEMBLY (13-05-0652)



HIGH CAPACITY WEIGH BELT ASSEMBLY (13-05-0652)



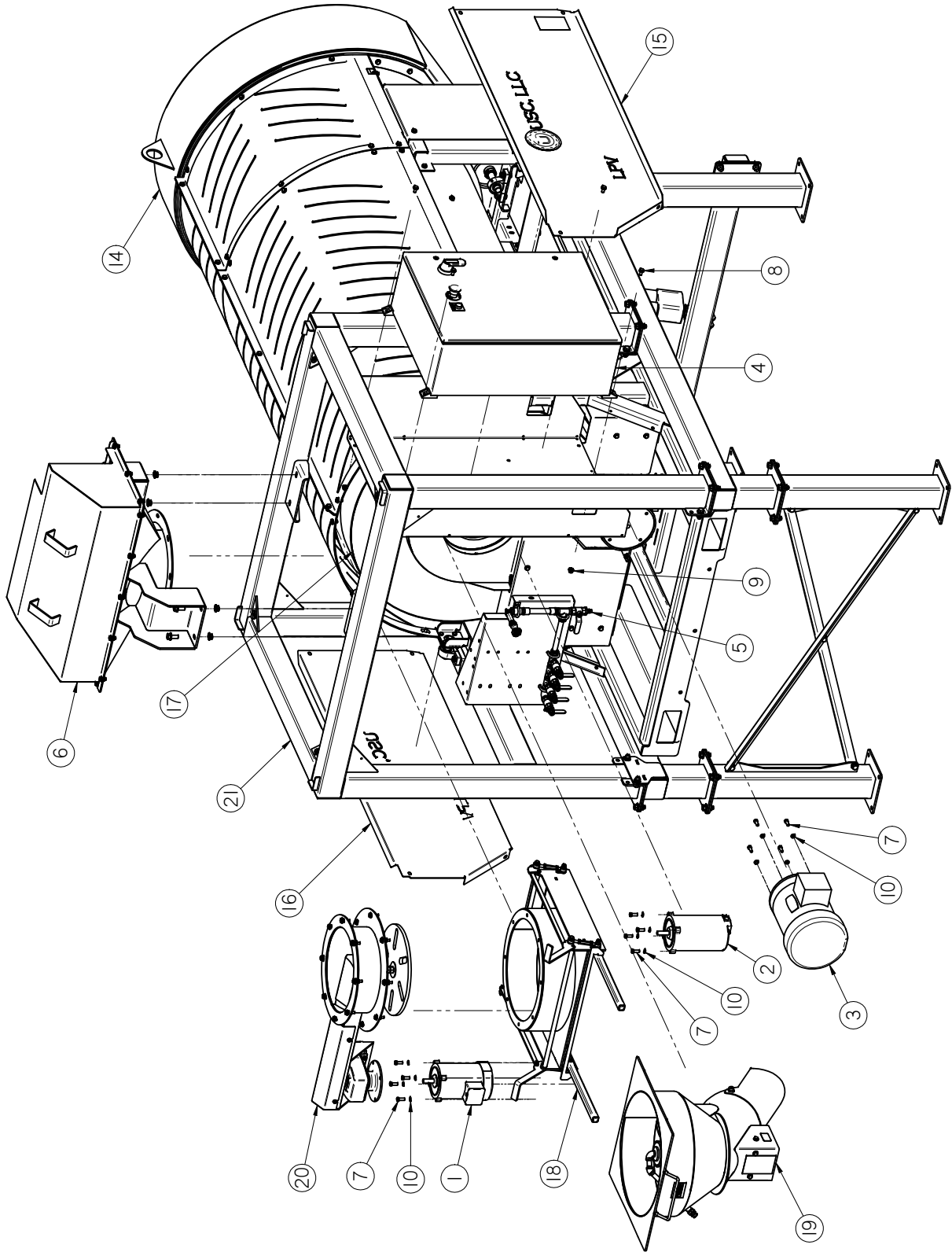
LPV SEED TREATER

HIGH CAPACITY WEIGH BELT ASSEMBLY (13-05-0652)

Item #	Part #	Description	Qty
1	02-02-0049	FLTR EXHAUST BRZ .125 NPT	1
2	02-16-0044	FTTG PUSH 90 DEG .250OD X .250 NPT	1
3	02-16-0046	FTTG PUSH 90 DEG .250 OD X .125 NPT	3
4	03-16-0286	PLC BUS MOD X67DM9321	1
5	03-17-0080	VLV SOL MAC 45A-AA1-DDAJ-1KJ	1
6	06-01-0018	BOLT .375-16 X 1.50 ZP GR5	4
7	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	8
8	06-02-0033	NUT 6-32 K-LOCK ZP	2
9	06-02-0034	NUT 8-32 K-LOCK ZP	2
10	06-02-0043	NUT,LOCK, #10-24 ZP NYLON INSERT	2
11	06-02-0052	NUT LOCK 4-40 CS MMC# 90675A005	2
12	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	20
13	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	8
14	06-06-0029	SCRW MACH 10-24 X .375 PHLP PHD ZP	2
15	06-06-0047	SCRW MACH 8-32 X 1.750 PHLP RDHD ZP	2
16	06-06-0074	SCRW MACH 6-32 X .500 PHLP RDHD SS	2
17	06-06-0079	SCRW MACH 4-40 X1.25 PHLP PHD	2
18	07-03-0011	VALVE,REGULATOR	1
19	104C19	WDMT WB SUPP	1
20	104C24	WDMT SHIPPING BRKT TAKE UP	4
21	104C39	WDMT WB MNT FRAME	1
22	13-05-0515	ASSY WB METER GATE	1
23	13-05-0638	ASSY WEIGH BELT BASE HC	1

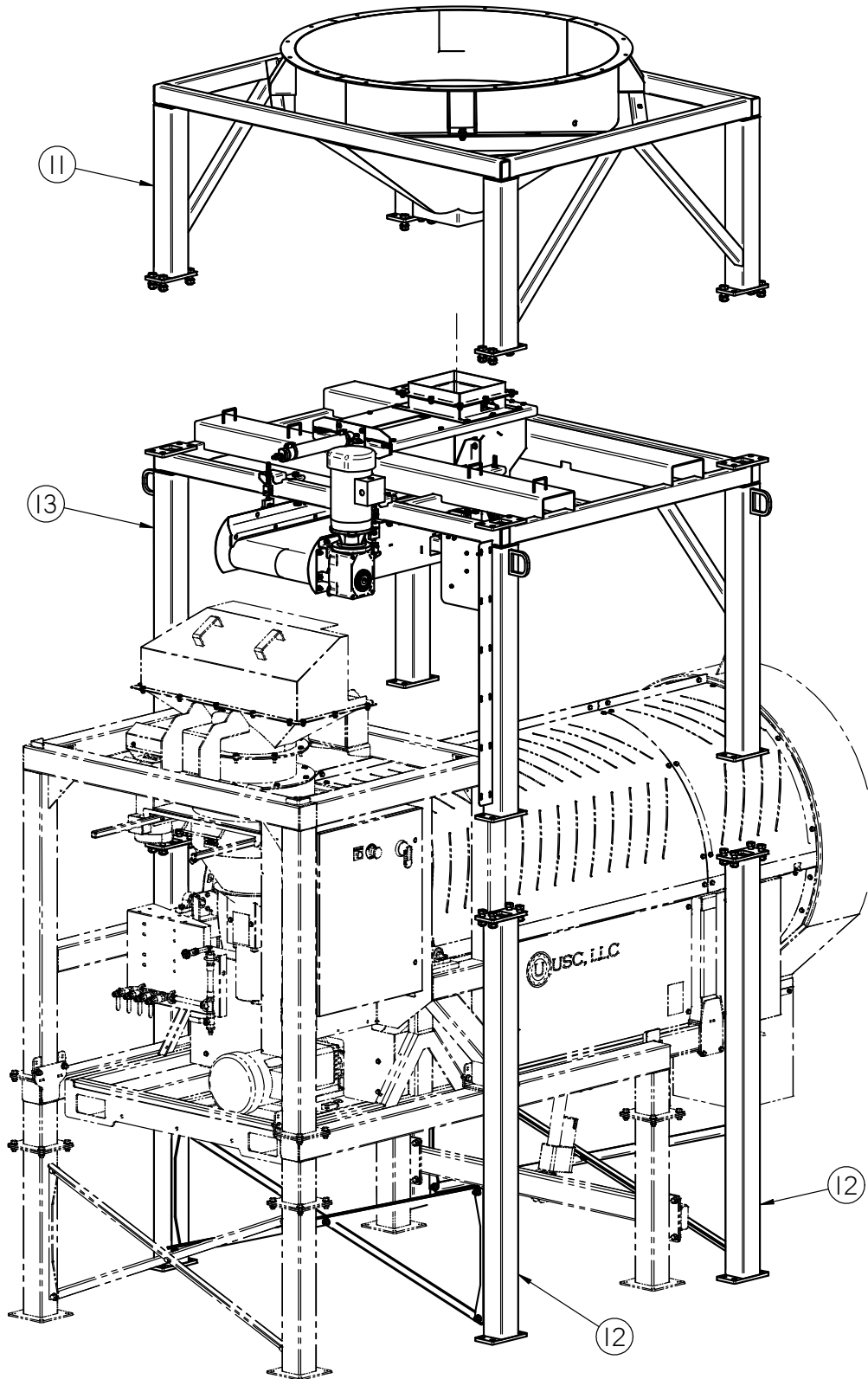
LPV SEED TREATER

HIGH CAPACITY TREATER WITH WEIGH BELT TOP ASSEMBLY



LPV SEED TREATER

HIGH CAPACITY TREATER WITH WEIGH BELT TOP ASSEMBLY



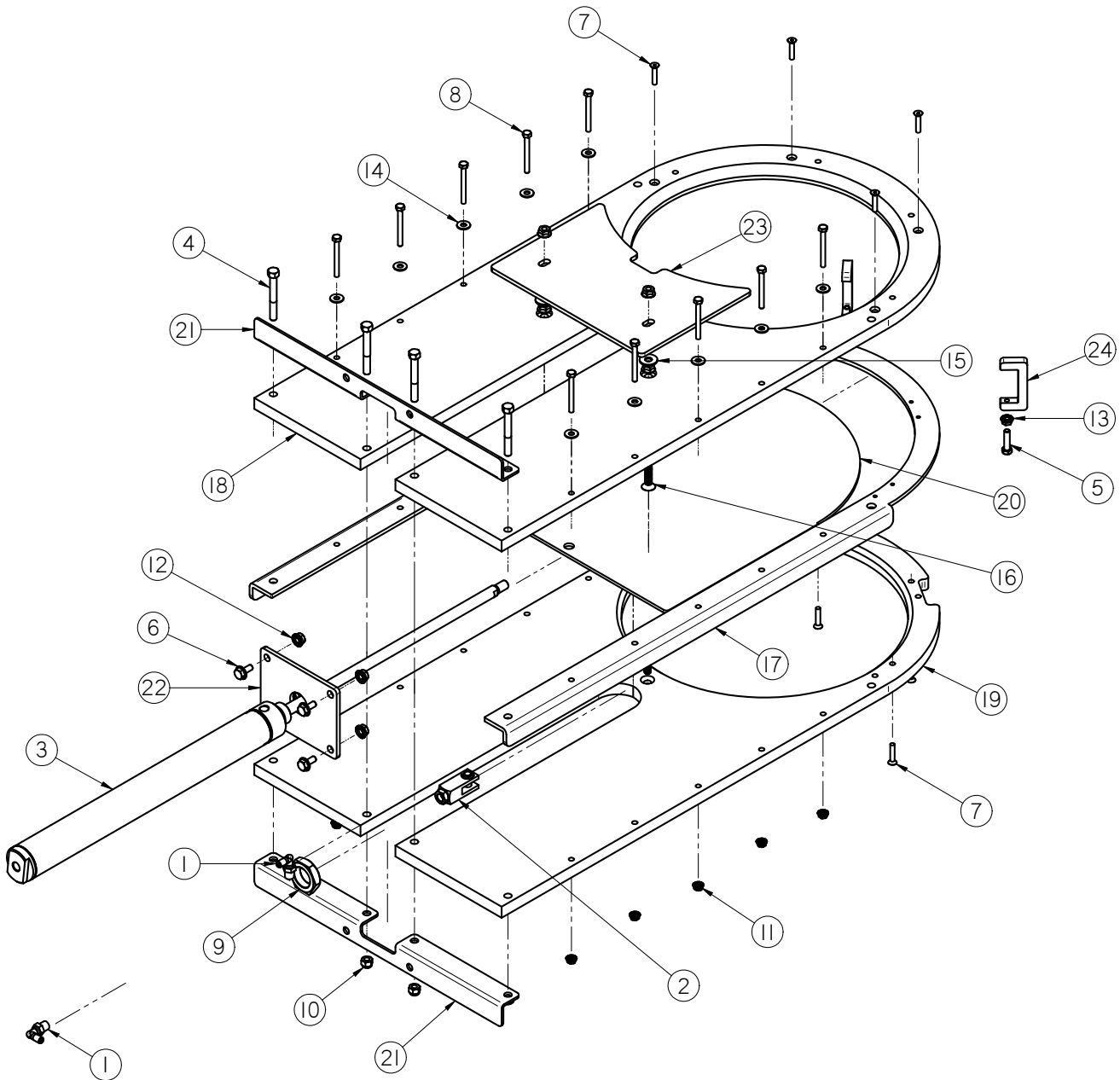
LPV SEED TREATER

HIGH CAPACITY TREATER WITH WEIGH BELT TOP ASSEMBLY

Item #	Part #	Description	Qty
1	01-01-0087	MTR .5HP 1725RPM S56C 3PH INDY	1
2	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
3	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
4	03-12-0498	PANEL CONTROL LPV TREATER WB	1
5	04-03-0305	ASSY STTC MXR & VLVS 4 PORT	1
6	05-07-0946	ASSY WB TRTR HOOD LPV3000	1
7	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	12
8	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
9	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
10	06-04-0003	WSHR LOCK SPLT .375 ZP	12
11	13-05-0516	ASSY WB USE HOPP	1
12	13-05-0640	LEG KIT WB OVER LPV HC	1
13	13-05-0652	ASSY WB 20IN CS HC	1
14	18-01-0270	ASSY END CHUTE LPV2000	1
15	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
16	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
17	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
18	18-01-0430	ASSY FLOW CHMBR LPV3000	1
19	18-01-0431	ASSY ATMZR LPV3000	1
20	18-01-0432	ASSY NBLZR LPV3000	1
21	18-01-0434	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

LPV SEED TREATER

WEIGH HOPPER SLIDE GATE ASSEMBLY (05-07-0603)

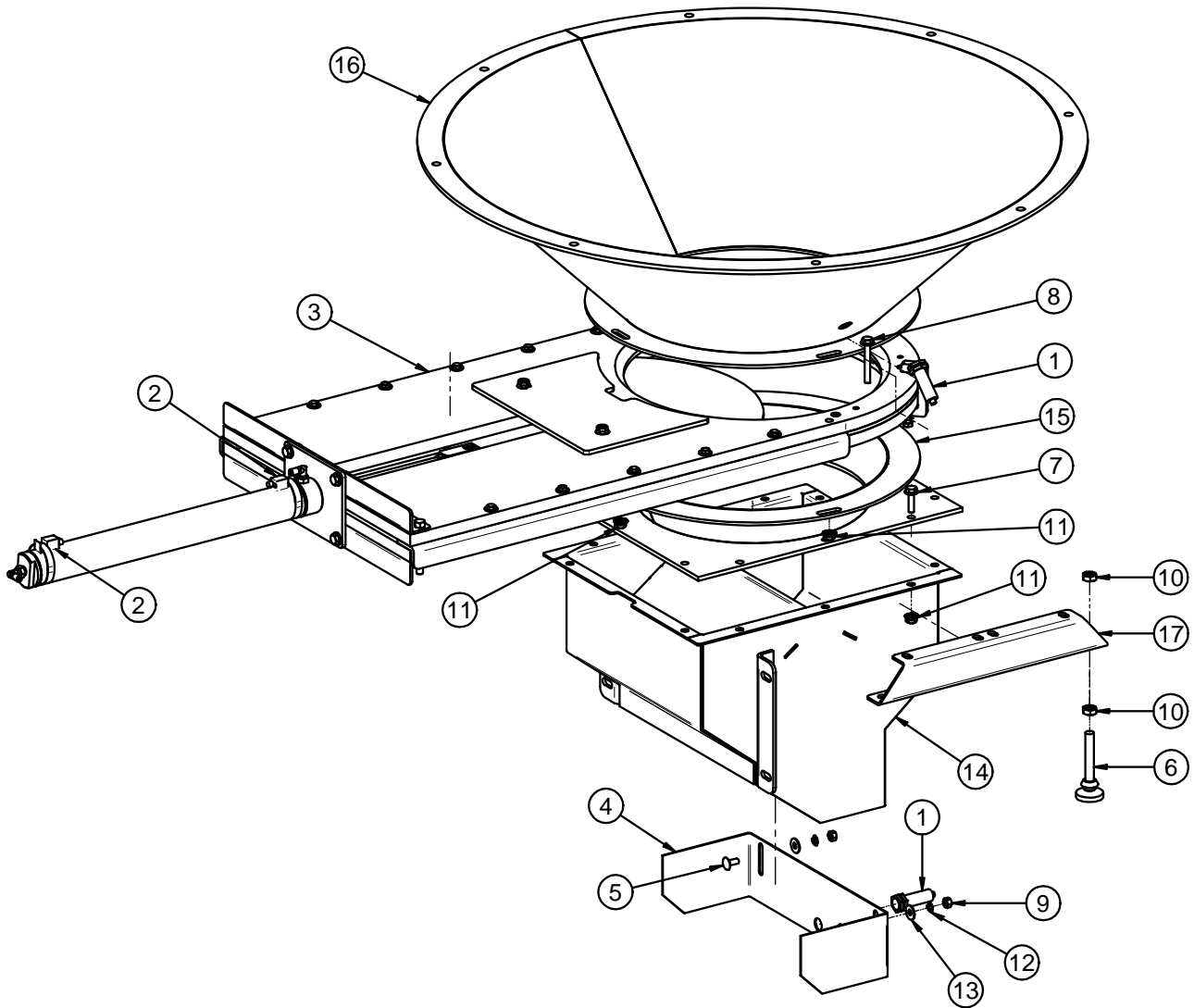


LPV SEED TREATER

WEIGH HOPPER SLIDE GATE ASSEMBLY (05-07-0603)

Item #	Part #	Description	Qty
1	02-16-0044	FTTG PUSH 90 DEG .250OD X .250 NPT	2
2	03-17-0041	CLEVIS ASSY BIMBA D-8313-A	1
3	03-17-0092	BIMBA CYL 2" BORE 16.5" STROKE	1
4	06-01-0021	BOLT .375-16 X 3.00 ZP GR5	4
5	06-01-0102	BOLT .313-18 X 1.25 ZP GR5	2
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
7	06-01-0155	SCRW MACH .250-20 X 1.25 SH FLHD	8
8	06-01-0192	BOLT .250-20 X 2.50 ZP GR5	10
9	06-02-0064	06-02-0064 BIMBA D-508 NUT	1
10	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	2
11	06-03-0013	NUT,LOCK, FLG .250-20 ZP SERRATED	10
12	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	11
13	06-03-0019	NUT, FLG .3125-18 UNC ZP GRADE 5	2
14	06-05-0001	WASHER, FLAT .250	10
15	06-05-0004	WSHR FLAT .375 ZP	2
16	06-06-0070	SCRW MACH .375-16 X 1.50 SH FLHD BO	3
17	102ABC	SLD GATE SPCR 80U	1
18	102ABD	SLD GATE TOP FLG 80U	1
19	102ABE	SLD GATE BTM FLG 80U	1
20	102ABF	SLD GATE SLD 80U	1
21	102AC0	SLD GATE POWER ANGLE 80U	2
22	102AC1	SLD GATE POWER PLT 80U	1
23	102AC3	SLD GATE FLG RET 80U	1
24	103CAE	CLIP	2

WEIGH BELT OVERHEAD WEIGH DEVICE SEED GATE ASSEMBLY (13-05-0671)

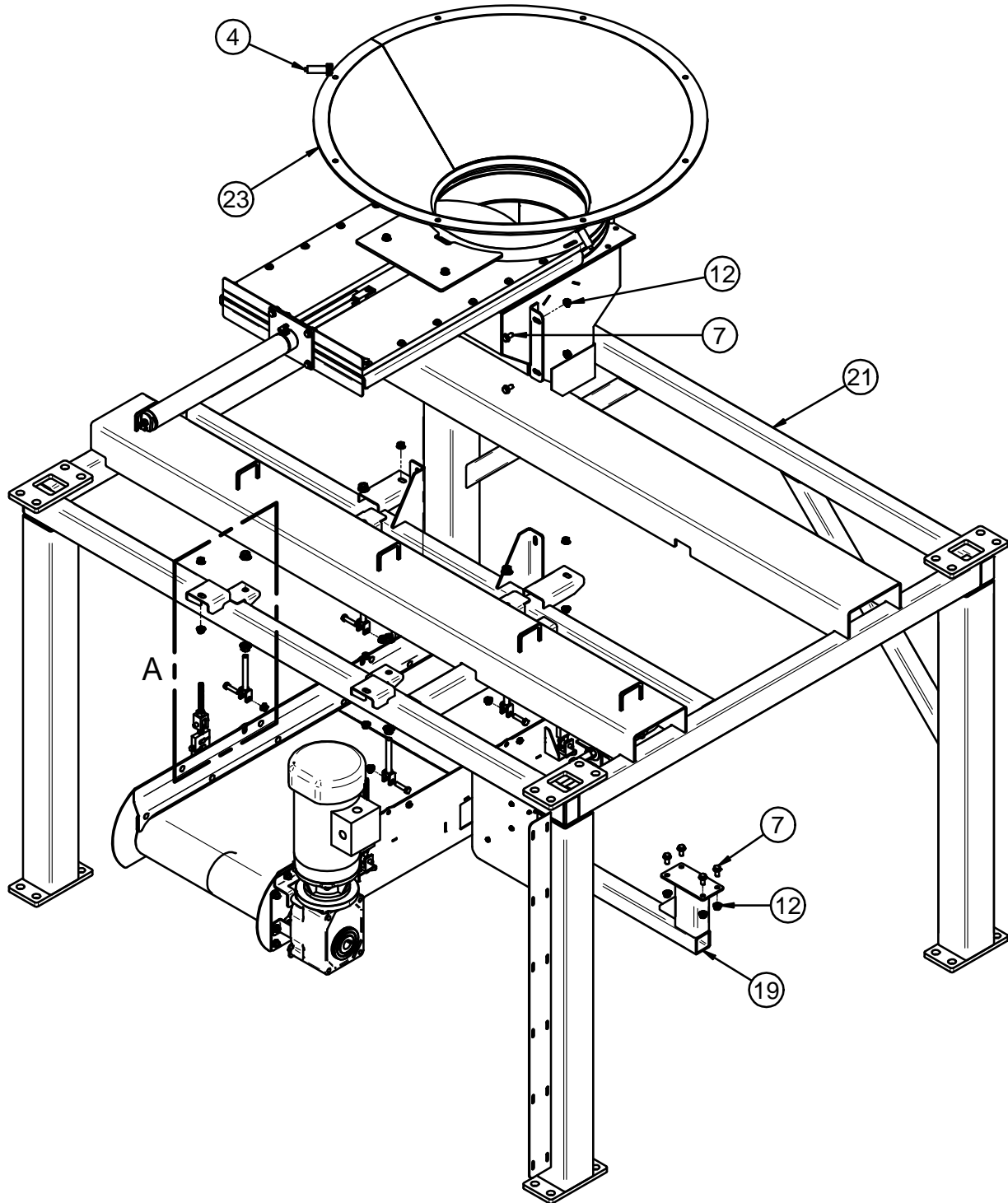


LPV SEED TREATER

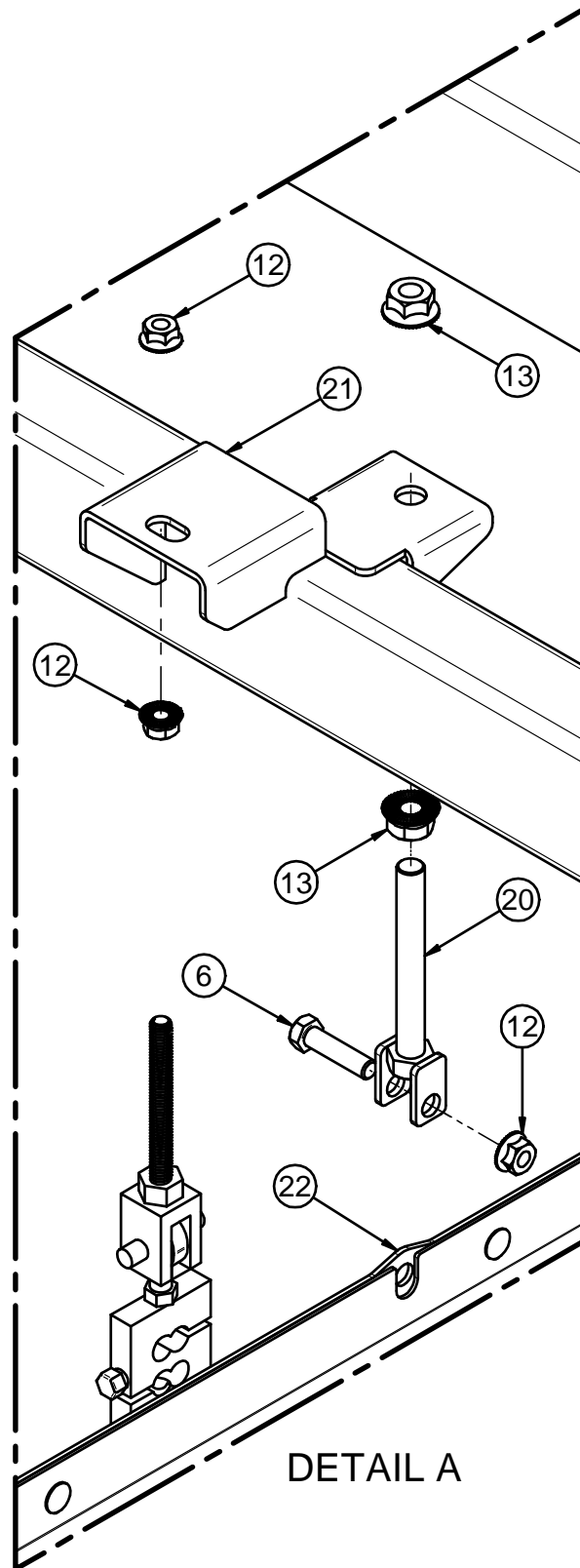
WEIGH BELT OVERHEAD WEIGH DEVICE SEED GATE ASSEMBLY (13-05-0671)

Item #	Part #	Description	Qty
1	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	2
2	03-17-0121	SW MAG REED MRS-.087-BLQ-31	2
3	05-07-0603	ASSY AIR GATE 80U	1
4	05-10-1977	PLT SEED LDDR ADJ OTLT	1
5	06-01-0171	BOLT CRG .3125-18X.750 ZP SHORT NECK	2
6	06-01-0176	LEVELING MNT CUSHION .500-13 200LB	2
7	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	11
8	06-01-0204	BOLT FLG .375-16 X 2.50 ZP GR5 FTH	2
9	06-02-0002	NUT FULL .313-18 ZP GR5	2
10	06-02-0098	NUT .500-13 ZP JAM	4
11	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	14
12	06-04-0002	WSHR LOCK SPLT .313 ZP	2
13	06-05-0003	WSHR FLAT .313 ZP	2
14	104C27	WDMT SD LAD CS	1
15	1059FC	WDMT CONE	1
16	1059FD	WDMT CONE	1
17	105C37	SUPPT BRKT SD LDR	2

WEIGH BELT WITH OVERHEAD WEIGH DEVICE ASSEMBLY (13-05-0670)



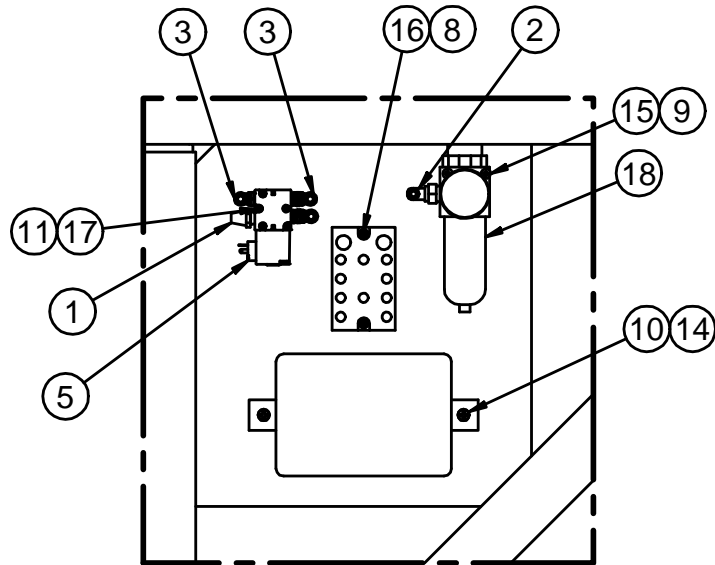
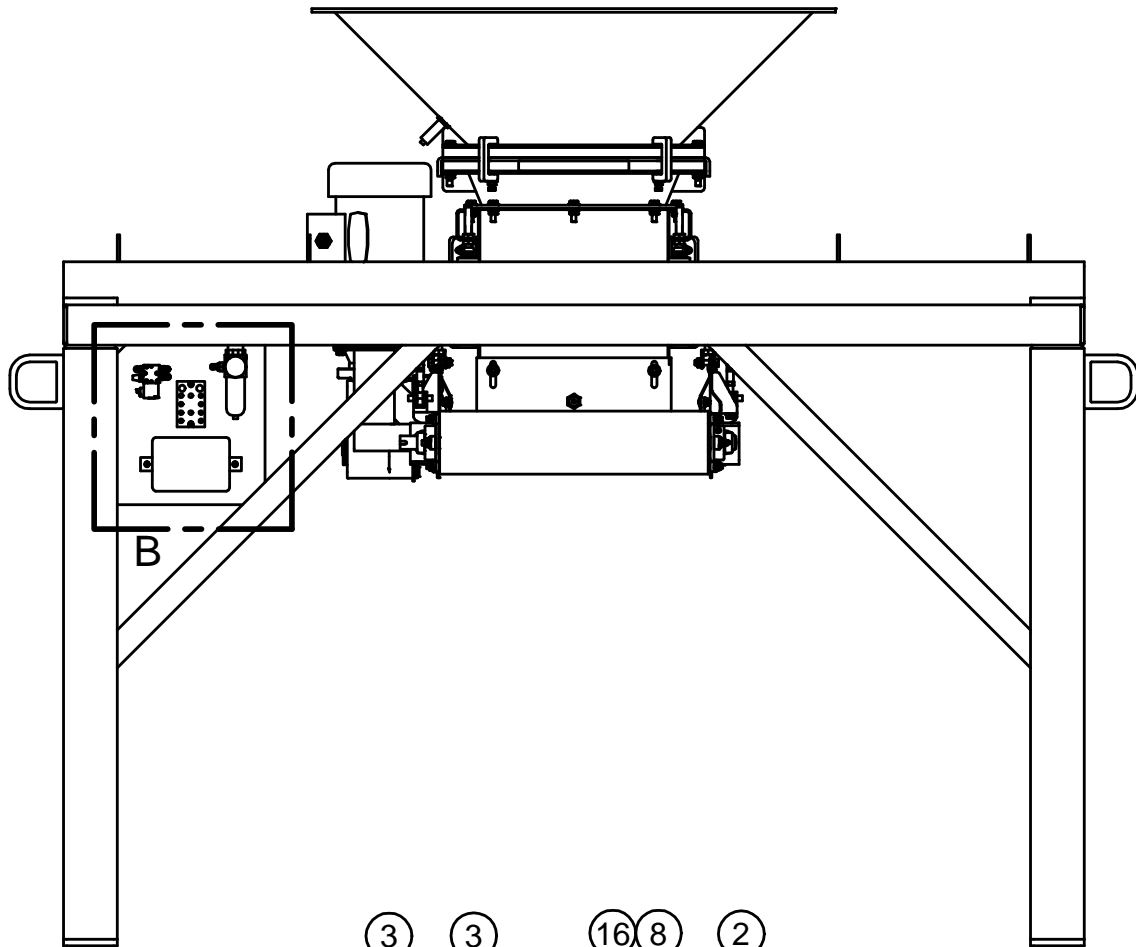
WEIGH BELT WITH OVERHEAD WEIGH DEVICE ASSEMBLY (13-05-0670)



DETAIL A

LPV SEED TREATER

WEIGH BELT WITH OVERHEAD WEIGH DEVICE ASSEMBLY (13-05-0670)



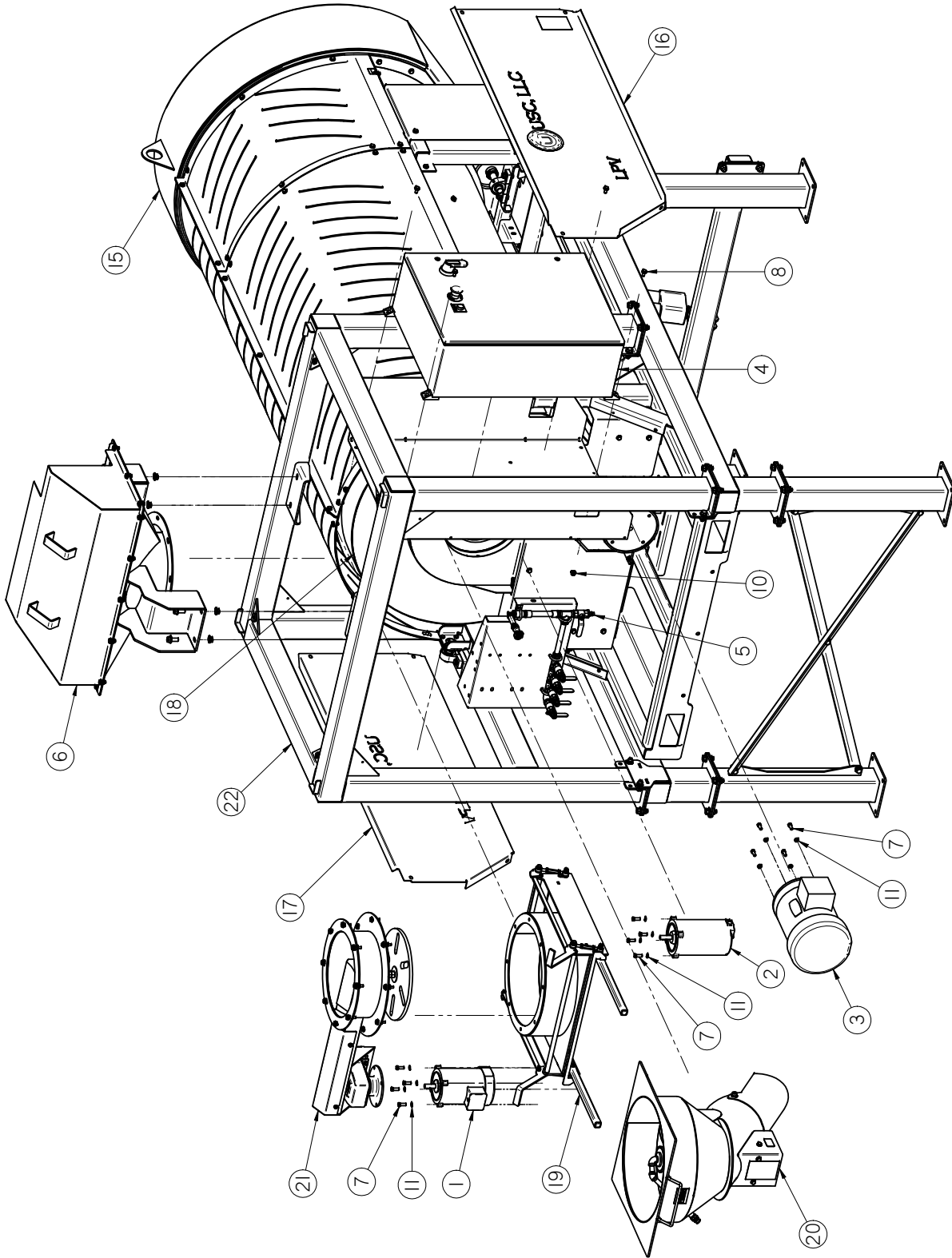
View B

LPV SEED TREATER

WEIGH BELT WITH OVERHEAD WEIGH DEVICE ASSEMBLY (13-05-0670)

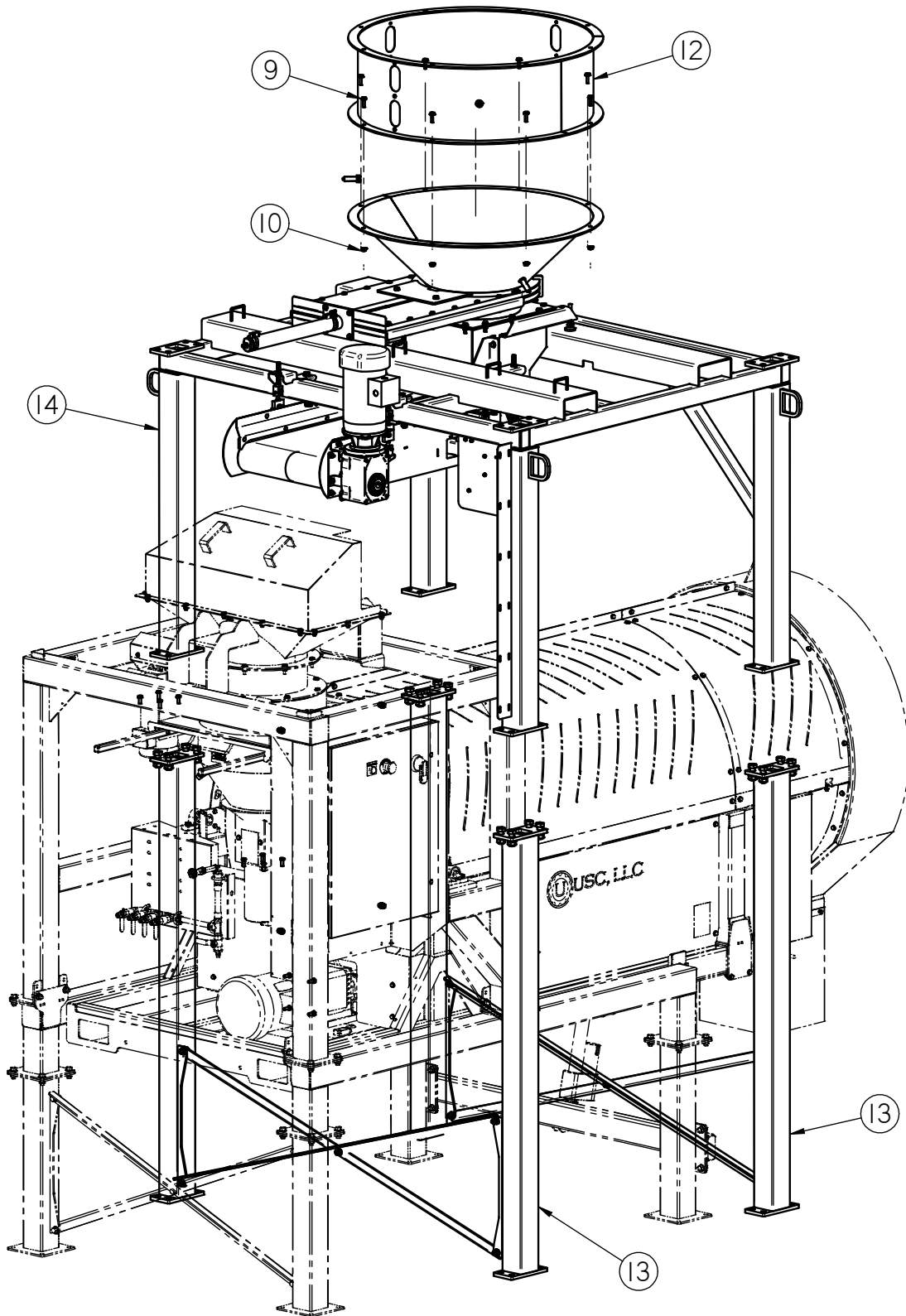
Item #	Part #	Description	Qty
1	02-02-0049	FLTR EXHAUST BRZ .125 NPT	1
2	02-16-0044	FTTG PUSH 90 DEG .250OD X .250 NPT	1
3	02-16-0046	FTTG PUSH 90 DEG .250 OD X .125 NPT	3
4	03-10-0147	SENS PROX 24VDC AB QC 875CPN8NP18P3	1
5	03-17-0080	VLV SOL MAC 45A-AA1-DDAJ-1KJ	1
6	06-01-0018	BOLT .375-16 X 1.50 ZP GR5	4
7	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	8
8	06-02-0033	NUT 6-32 K-LOCK ZP	2
9	06-02-0034	NUT 8-32 K-LOCK ZP	2
10	06-02-0043	NUT,LOCK, #10-24 ZP NYLON INSERT	2
11	06-02-0052	NUT LOCK 4-40 CS MMC# 90675A005	2
12	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	20
13	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	8
14	06-06-0029	SCRW MACH 10-24 X .375 PHLP PHD ZP	2
15	06-06-0047	SCRW MACH 8-32 X 1.750 PHLP RDHD ZP	2
16	06-06-0074	SCRW MACH 6-32 X .500 PHLP RDHD SS	2
17	06-06-0079	SCRW MACH 4-40 X1.25 PHLP PHD	2
18	07-03-0011	VALVE,REGULATOR	1
19	104C19	WDMT WB SUPP	1
20	104C24	WDMT SHIPPING BRKT TAKE UP	4
21	104C39	WDMT WB MNT FRAME	1
22	13-05-0638	ASSY WEIGH BELT BASE HC	1
23	13-05-0671	ASSY WB METER GATE WH	1

HIGH CAPACITY WEIGH BELT WITH OVERHEAD WEIGH DEVICE TOP ASSEMBLY



LPV SEED TREATER

HIGH CAPACITY WEIGH BELT WITH OVERHEAD WEIGH DEVICE TOP ASSEMBLY

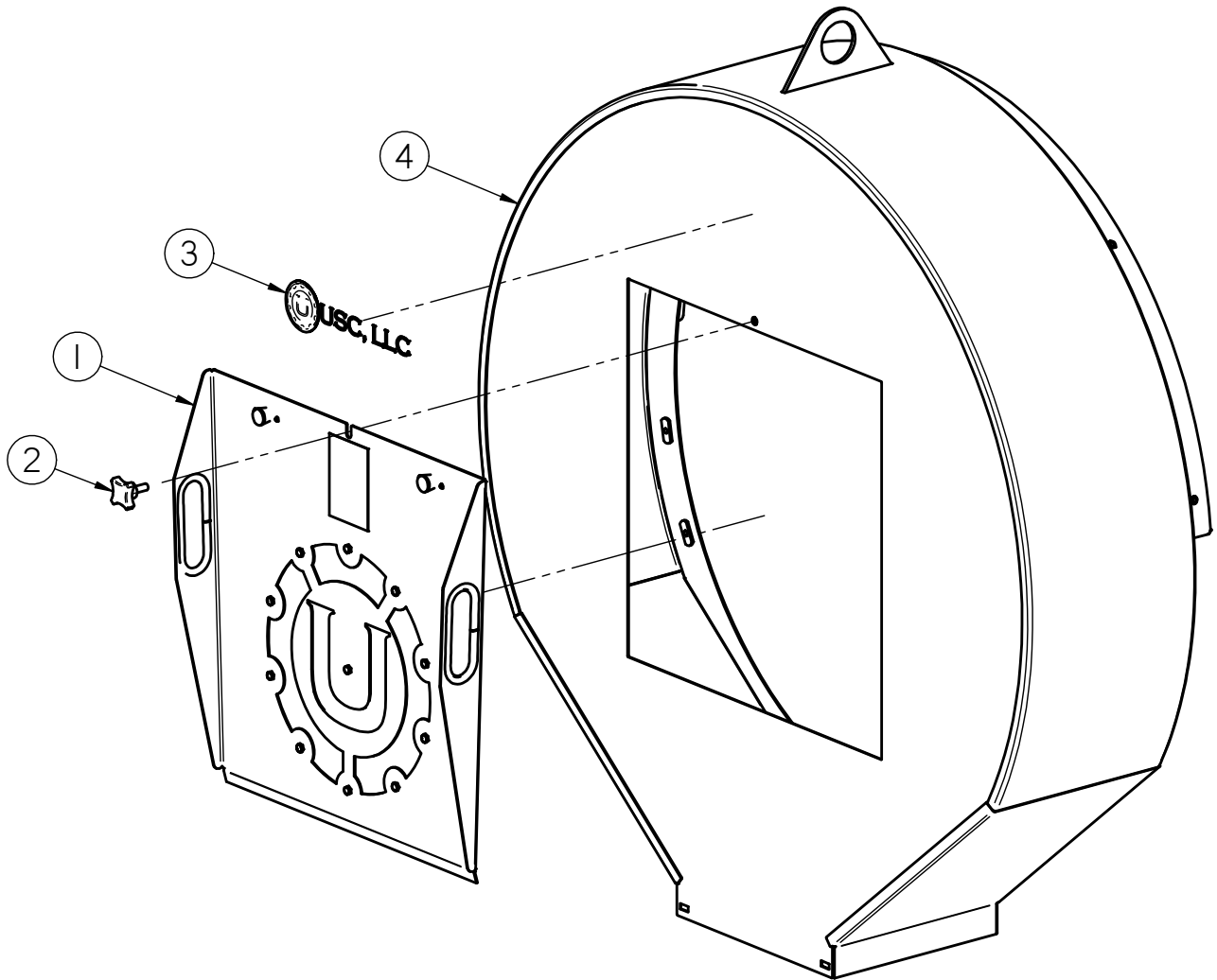


LPV SEED TREATER

HIGH CAPACITY WEIGH BELT WITH OVERHEAD WEIGH DEVICE TOP ASSEMBLY

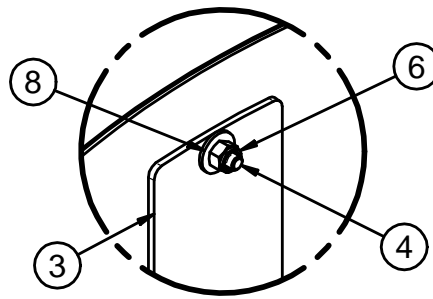
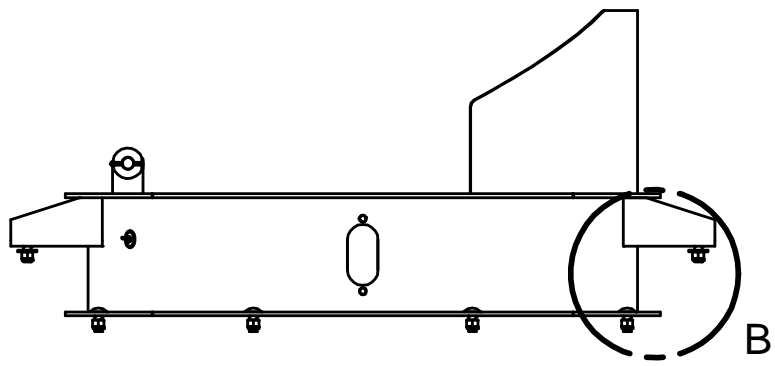
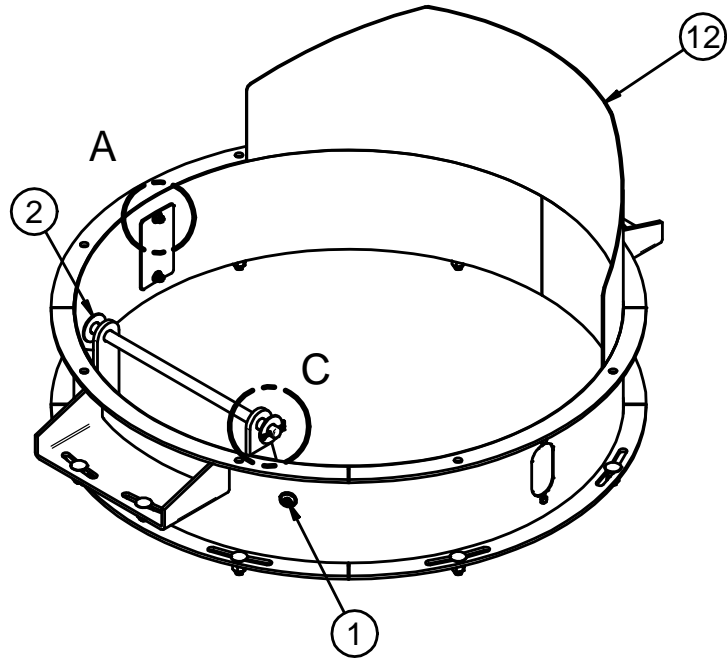
Item #	Part #	Description	Qty
1	01-01-0087	MTR .5HP 1725RPM S56C 3PH INDY	1
2	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
3	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
4	03-12-0498	PANEL CONTROL LPV TREATER WB	1
5	04-03-0305	ASSY STTC MXR & VLVS 4 PORT	1
6	05-07-0946	ASSY WB TRTR HOOD LPV3000	1
7	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	12
8	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
9	06-01-0189	BOLT FLG .375-16 X 1.250 ZP GR5	8
10	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	12
11	06-04-0003	WSHR LOCK SPLT .375 ZP	12
12	13-04-0043	ASSY EXT HOPP LP800-2000 12IN	1
13	13-05-0640	LEG KIT WB OVER LPV HC	1
14	13-05-0670	ASSY WB 20IN CS HC WH	1
15	18-01-0270	ASSY END CHUTE LPV2000	1
16	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
17	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
18	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
19	18-01-0430	ASSY FLOW CHMBR LPV3000	1
20	18-01-0431	ASSY ATMZR LPV3000	1
21	18-01-0432	ASSY NBLZR LPV3000	1
22	18-01-0434	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

LPV SEED TREATER
PORTABLE END CHUTE ASSEMBLY (18-01-0399)



Item #	Part #	Description	Qty
1	05-07-0198B	ASSY END CHUTE DOOR GALV	1
2	06-09-0066	KNOB .375 -16 X 1. 4 LUG PLASTIC	1
3	09-01-0042	ATWL LBL USC, LLC 3" X 15" PRO-CUT	1
4	18-01-0400	WDMT END CHUTE PORT	1

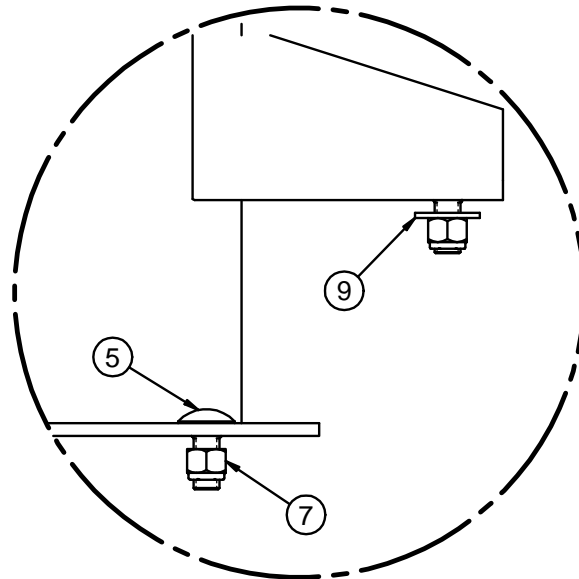
LPV SEED TREATER
PORTABLE INLET HOPPER EXTENSION ASSEMBLY (10550E)



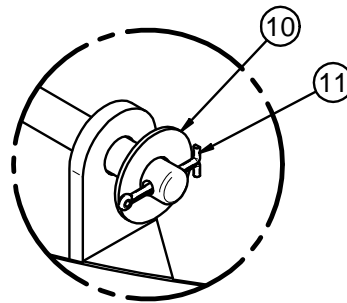
DETAIL A

LPV SEED TREATER

PORTABLE TREATER INLET HOPPER EXTENSION ASSEMBLY (10550E)



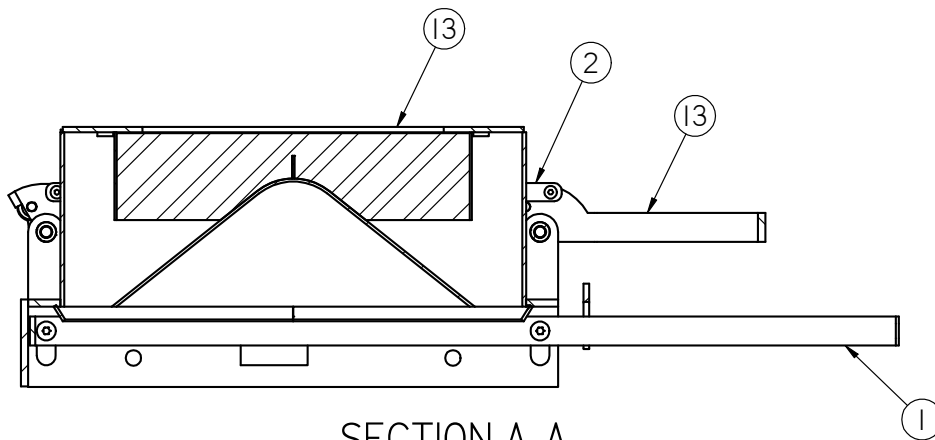
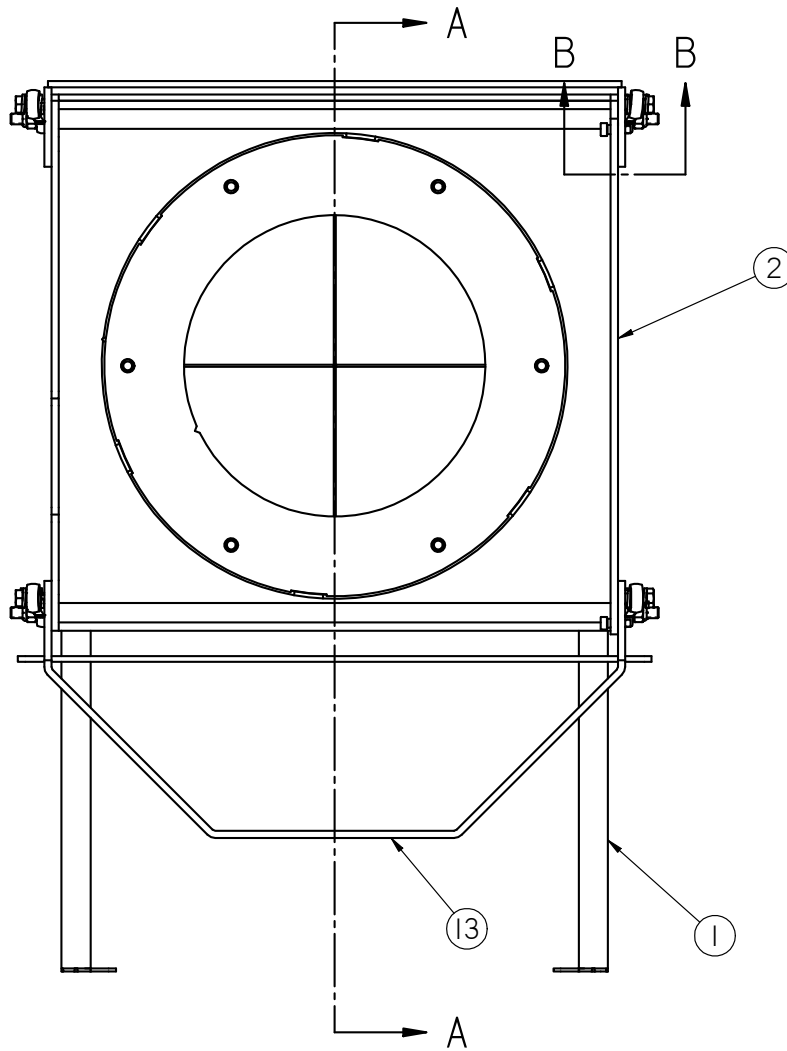
DETAIL B



DETAIL C

Item #	Part #	Description	Qty
1	03-08-0130	PLUG STEEL 22MM	1
2	05-04-0016	WDMT FRONT PIVOT ROD	1
3	05-10-4064	PLT HOPP 6IN EXT VIEW	2
4	06-01-0006	BOLT, .250-20 X .75 UNC ZP GRADE 5	4
5	06-01-0062	BOLT CRG .500-13 X 1.25 ZP GR5	12
6	06-03-0001	NUT,LOCK, .250-20 ZP G5 NYLON INSERT	4
7	06-03-0004	NUT NYL LOCK .500-13 ZP GR5	12
8	06-05-0001	WASHER, FLAT .250	4
9	06-05-0005	WSHR FLAT .500 ZP	4
10	06-05-0007	WASHER, .750 FLAT ZP	1
11	06-09-0023	.188 X 2.00 ZP COTTER PIN	1
12	105510	WDMT 36ID X 8 INLET HOPP EXT CS	1

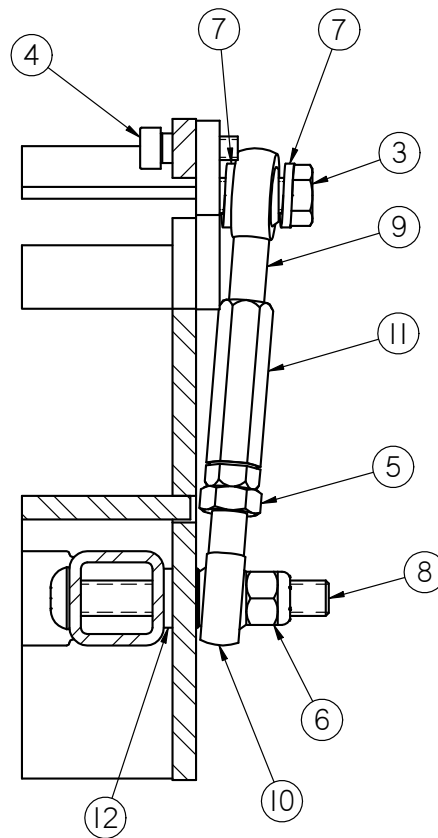
PORTABLE ADJUSTABLE CHAMBER ASSEMBLY (105503)



SECTION A-A

LPV SEED TREATER

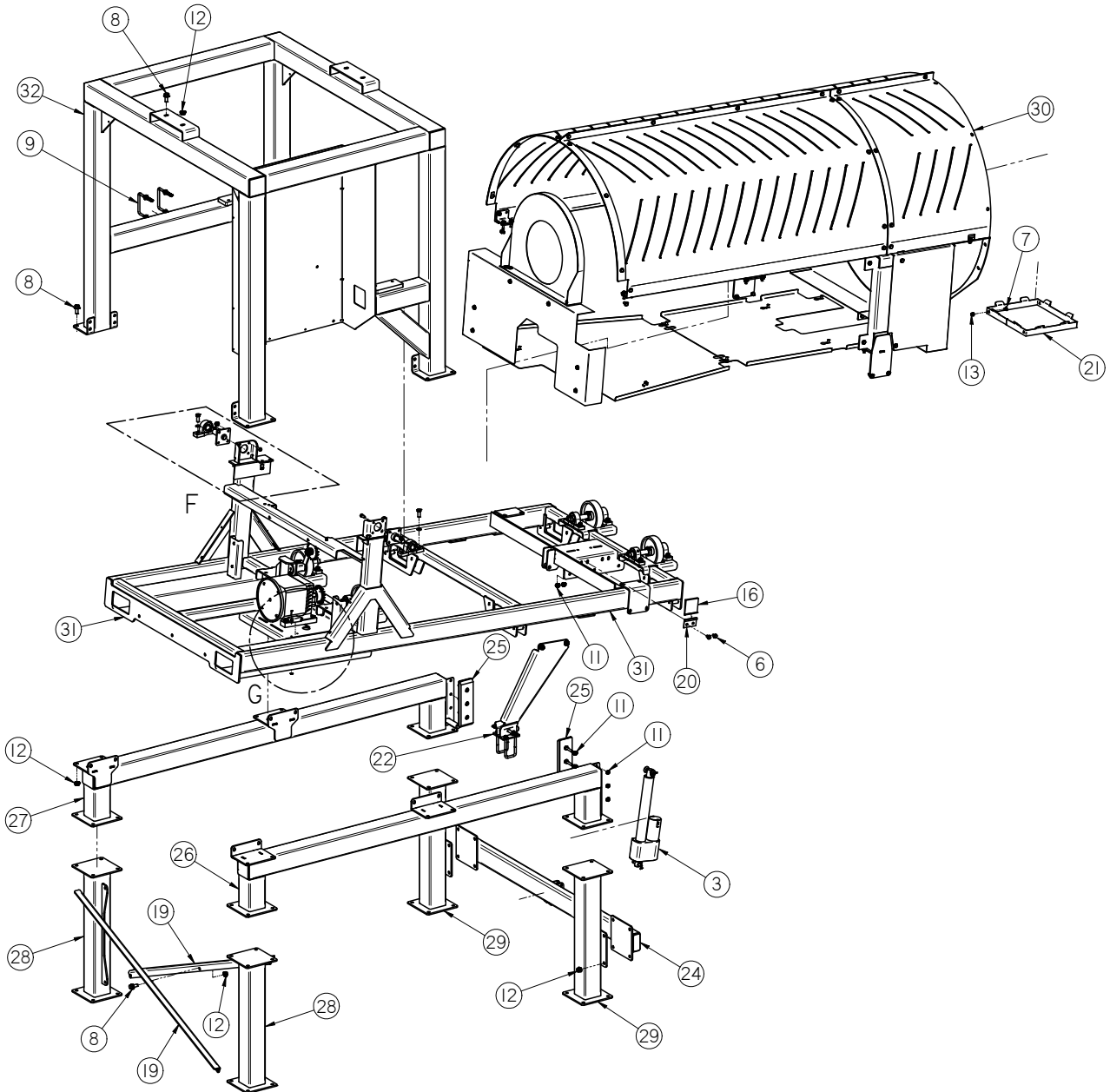
PORTABLE ADJUSTABLE CHAMBER ASSEMBLY (105503)



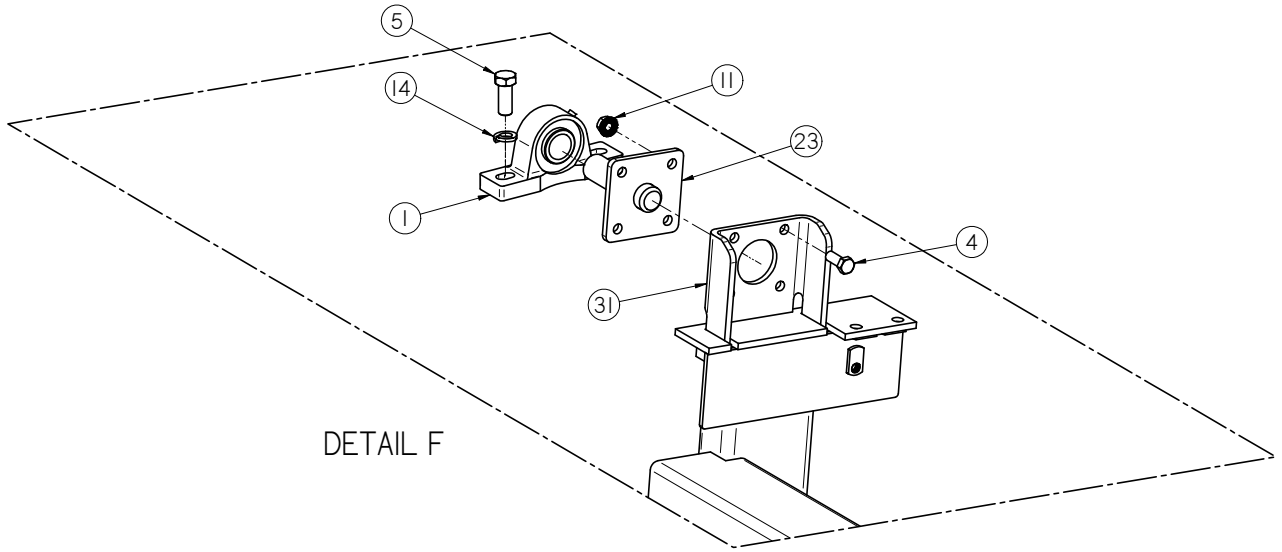
SECTION B-B

Item #	Part #	Description	Qty
1	05-03-0336	WDMT,CHAMBER SUPPORT BRK SS	1
2	05-10-2062	BAR ECNTRC CONNECTING CS	1
3	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	4
4	06-01-0081	BOLT SHLD .313SHX.250-20X.375 GR5	2
5	06-02-0035	NUT JAM .375-24 ZP GR5	4
6	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	4
7	06-04-0003	WSHR LOCK SPLT .375 ZP	8
8	06-06-0087	SCRW BTN SCKT HD .375-16X2.75 ZP	4
9	06-12-0002	REND .375-24 BALL LH	4
10	06-12-0003	REND .375-24 BALL RH	4
11	06-12-0006	ROD CTNG .375-24 X 2.00 LH RH FM	4
12	06-12-0007	BUSH DRILL.375ID X .625OD X .375	4
13	105505	WDMT FLOW CHMBR LPV PORT	1

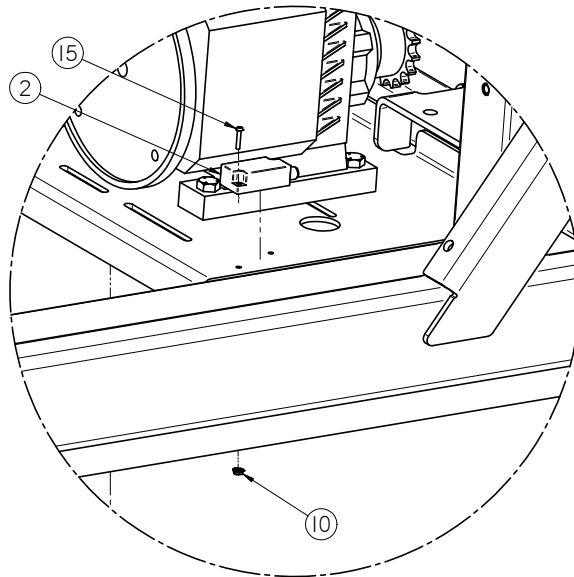
LPV SEED TREATER
PORTABLE TREATER BASE ASSEMBLY (18-01-0450)



LPV SEED TREATER
PORTABLE TREATER BASE ASSEMBLY (18-01-0450)



DETAIL F



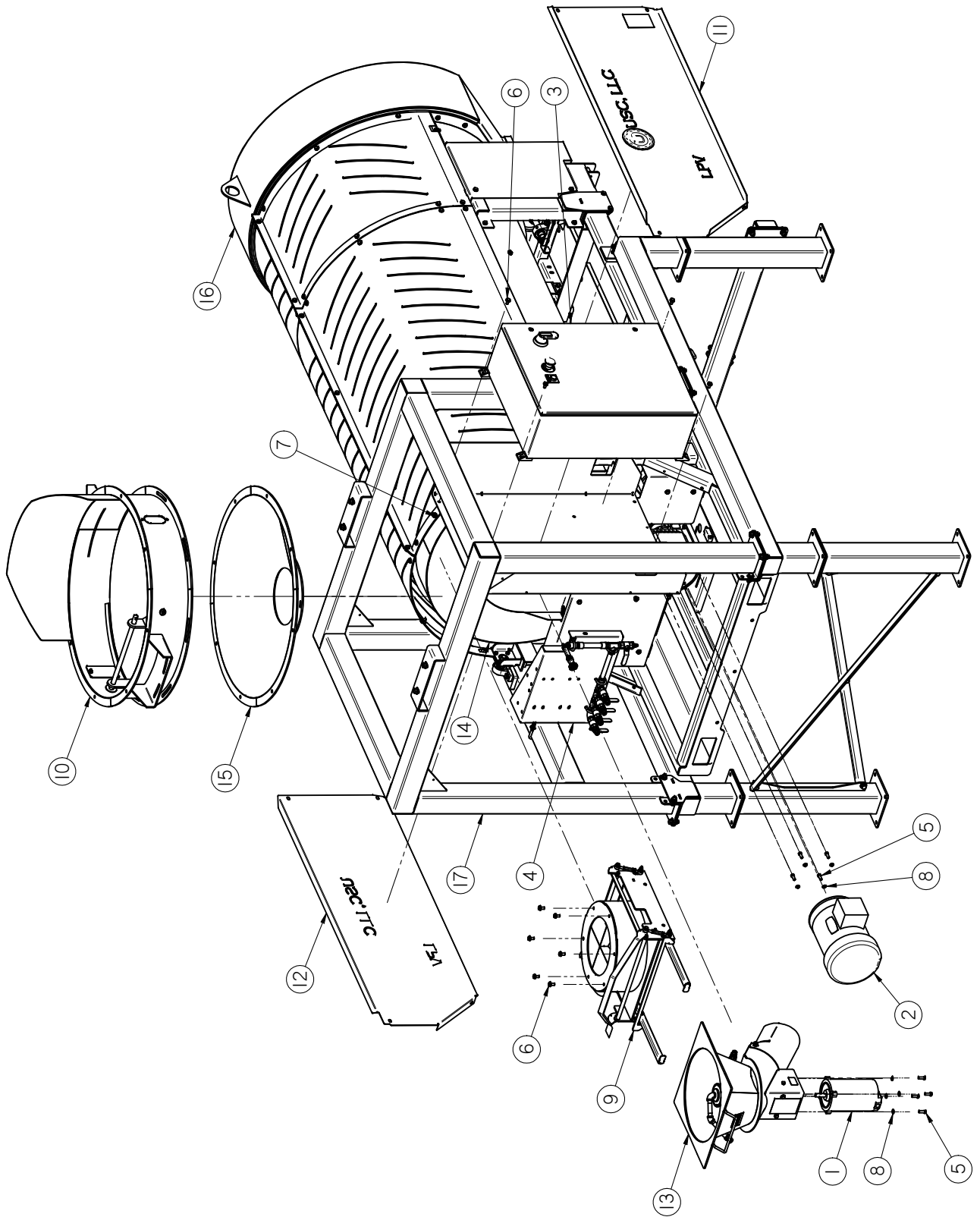
DETAIL G

LPV SEED TREATER

PORTABLE TREATER BASE ASSEMBLY (18-01-0450)

Item #	Part #	Description	Qty
1	01-03-0060	BRG PLW SEALED 1.00ID STSC	2
2	03-17-0105	TRCK INCLMTR B2N-10H-Q20L60-2LI2-	1
3	03-17-0111	ACTR 8"STRK 24VDC LPV TRTR DRUM KIT	1
4	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
5	06-01-0080	BOLT .500-13 X 1.25 ZP GR5	4
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	16
7	06-01-0129	BOLT CRG .313-18 X .50 ZP GR5	4
8	06-01-0232	BOLT FLG .500-13 X 1.250 ZP GR5	49
9	06-01-0286	BOLT U .375-16 4.0 X 4.625 SQ	2
10	06-02-0033	NUT 6-32 K-LOCK ZP	2
11	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	22
12	06-03-0015	NUT LOCK FLG .500-13 ZP GR5	49
13	06-03-0019	NUT LOCK FLG .3125-18 ZP GR5	4
14	06-04-0004	WSHR LOCK SPLT .500 ZP	4
15	06-06-0088	SCRW MACH 6-32 X .750 PHLP RDHD ZP	2
16	06-10-0059	STATIC DISSIPATIVE BRUSH	1
17	09-02-0001	ATWK LBL DANGER FINGERS	3
18	09-02-0002	ATWK LBL DANGER GUARDS	1
19	103614	ANGLE CROSS BRACE	2
20	103D7E	BRUSH HOLDER	1
21	10576F	HLDR SKIRT LPV END CHUTE	1
22	13-05-0608	ASSY TRTR TRANS LOCK	1
23	18-01-0254	WDMT PIVOT PIN AVR	2
24	18-01-0304	WDMT ACTUATOR MNT	1
25	18-01-0316	ASSY DRUM STABILIZER PAD	2
26	18-01-0339	WDMT LOWER LEG RH	1
27	18-01-0340	WDMT LOWER LEG LH	1
28	18-01-0341	WDMT LOWER LEG EXT X-BRACE MNT	2
29	18-01-0342	WDMT LOWER LEG EXT ACTR MNT	2
30	18-01-0437	KIT LPV DRUM GUARDS CHN DRV V4 PNL	1
31	18-01-0439	ASSY BASE FR LPV 8FT CHN DRV V4 PNL	1
32	18-01-0451	WDMT FR STAND LPV V4 PNL PORT	1

LPV SEED TREATER
PORTABLE TREATER TOP ASSEMBLY



LPV SEED TREATER

PORTABLE TREATER TOP ASSEMBLY

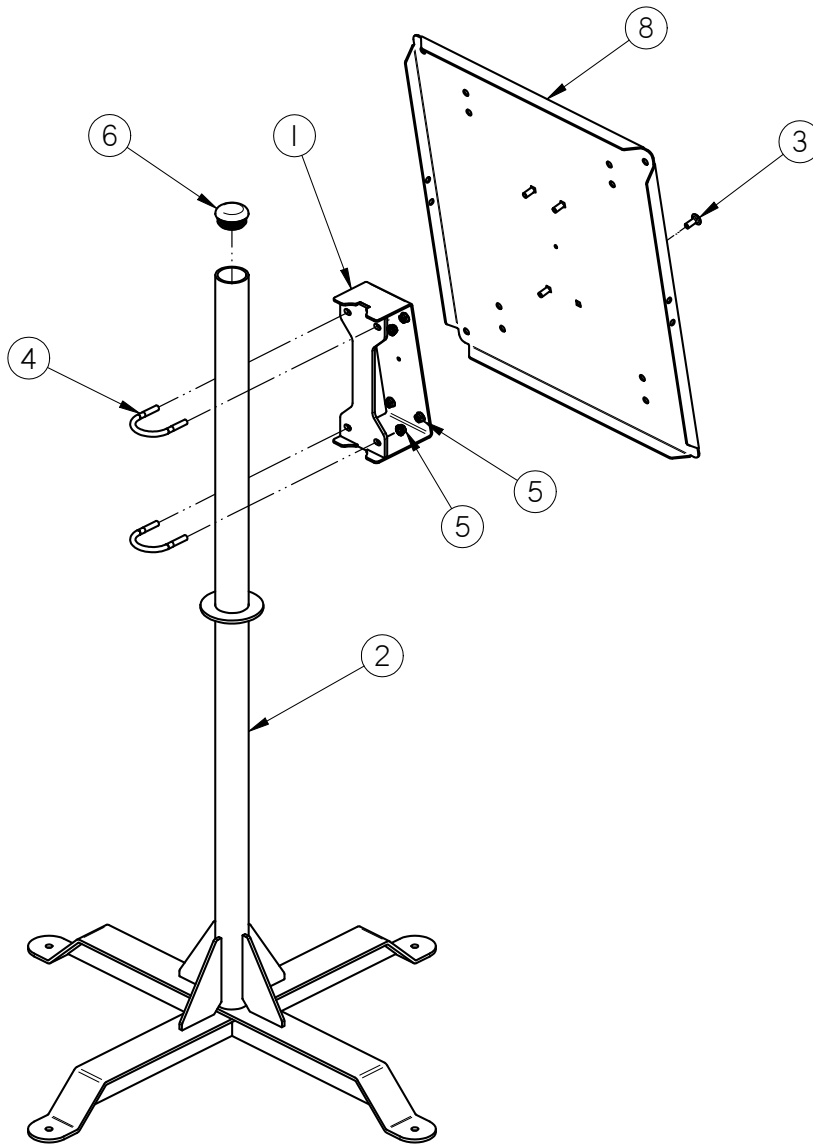
Item #	Part #	Description	Qty
1	01-01-0105	MTR .33HP 1725RPM 56C 3PH TENV	1
2	01-01-0166	MTR 3HP 1740RPM 182TC TEFC 3PH	1
3	03-12-0556	PNL CNTL V4 PORTABLE TREATER	1
4	04-03-0305	ASSY STTC MXR & VLVS 8 PORT PPT	1
5	06-01-0016	BOLT .375-16 X 1.00 ZP GR5	8
6	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	10
7	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
8	06-04-0003	WSHR LOCK SPLT .375 ZP	8
9	105503	ASSY FLOW CHMBR LPV PORT	1
10	10550E	ASSY EXT HOPP 8IN	1
11	18-01-0322	ASSY GRD DRUM LPV RT 8FT GALV	1
12	18-01-0325	ASSY GRD DRUM LPV LT 8FT GALV	1
13	18-01-0359	ASSY ATMZR LPV SS QD	1
14	18-01-0384	ASSY DRUM LPV 8FT CS CHN DRV	1
15	18-01-0398	WDMT INLET HOPP	1
16	18-01-0399	ASSY END CHUTE LPV CS PORT	1
17	18-01-0450	ASSY LPV COMMON BASE 8FT CHN DRV V4 PNL	1

TABLE 3

Part #	Description
03-12-0556	PNL CNTL LPV V4 TRTR 240V 1PH
03-12-0558	PNL CNTL LPV V4 TRTR 240V 3PH
03-12-0560	PNL CNTL LPV V4 TRTR 480V 3PH

LPV SEED TREATER

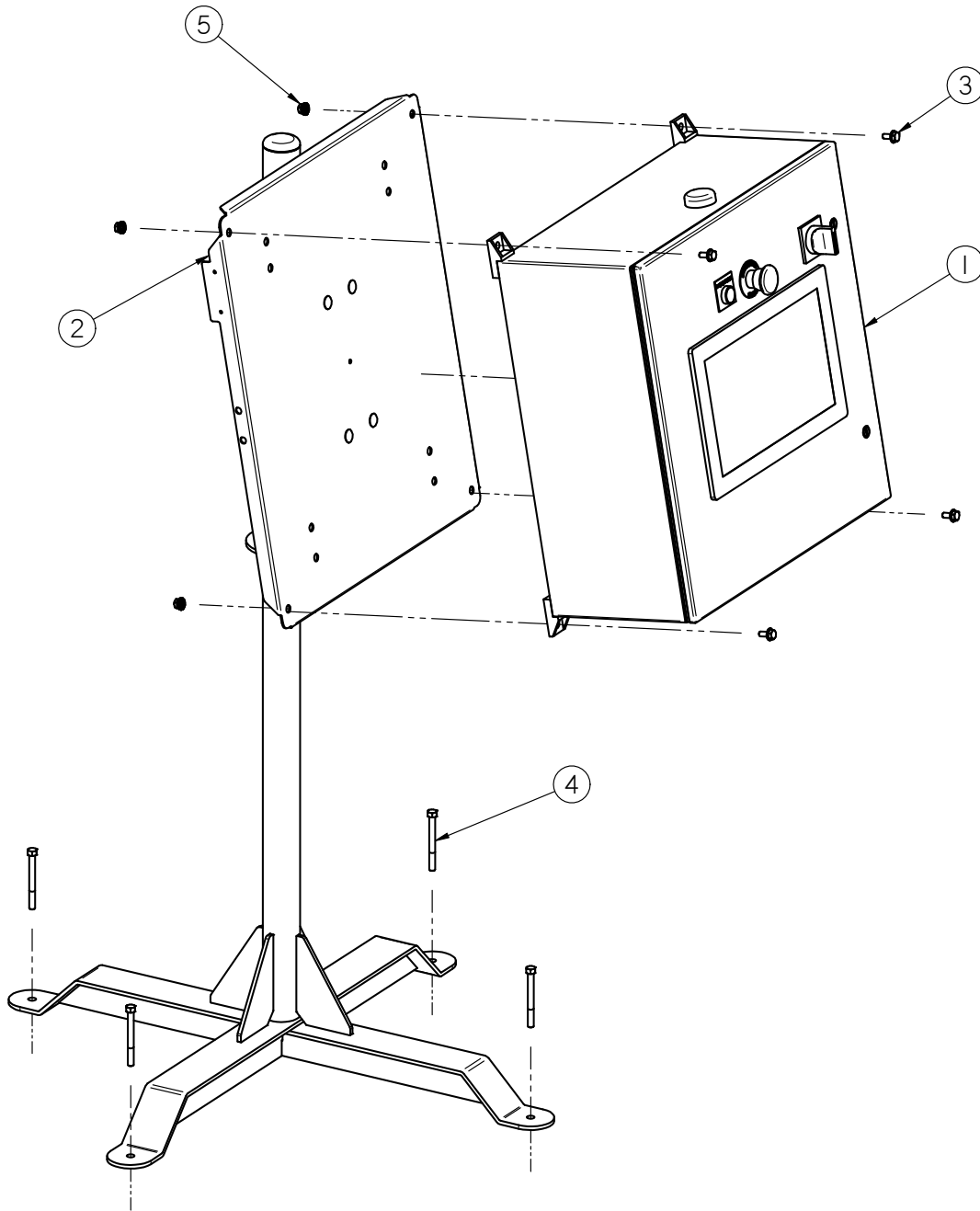
ADJ STAND - STANDARD MAIN CONTROL PANEL ASSEMBLY (05-03-1471)



Item #	Part #	Description	Qty
1	05-03-1479	WDMT PNL ADJ	1
2	05-03-1545	WDMT PANEL STAND	1
3	06-01-0153	BOLT CRG .375-16X.750 ZP SHORT NECK	4
4	06-01-0287	BOLT U .375-16 X 2.50 X 3.125 ZP	2
5	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	7
6	06-10-0056	PLUG TBG RD RIB POLY 2.38 X .156W	1
7	103651	PLT PNL MT	1

LPV SEED TREATER

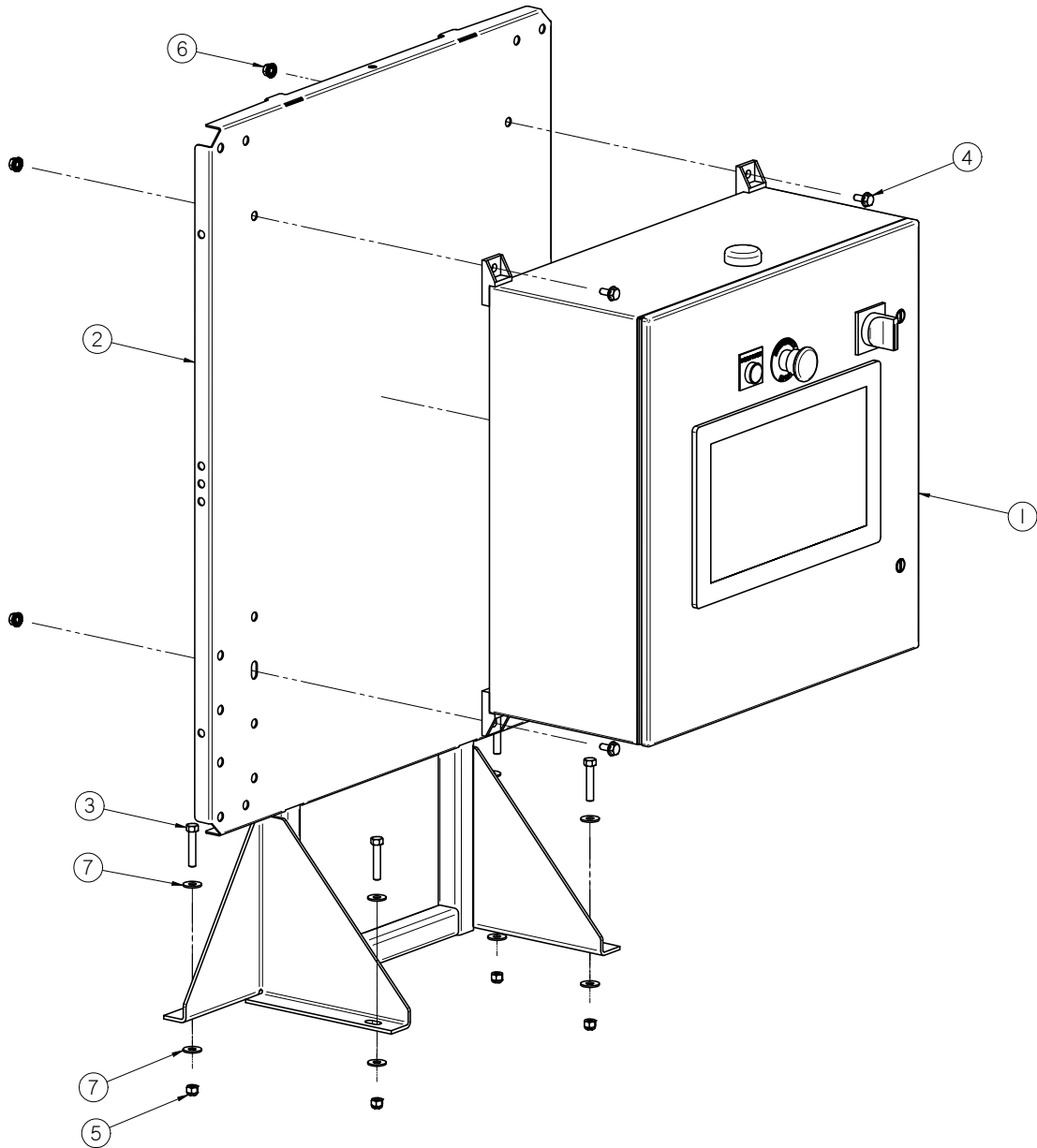
VERSION 4 MAIN CONTROL PANEL ASSEMBLY (13-12-0159)



Item #	Part #	Description	Qty
1	03-12-0529	CSA COMPLIANT MCP U-TREAT	1
2	05-03-1471	ASSY PNL FRM 4PUMP SAP	1
3	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
4	06-01-0220	BOLT 3/8-16 CONC ANCHOR ZP 3.75	4
5	06-03-0033	NUT LOCK FLG .375-16 GR8	4

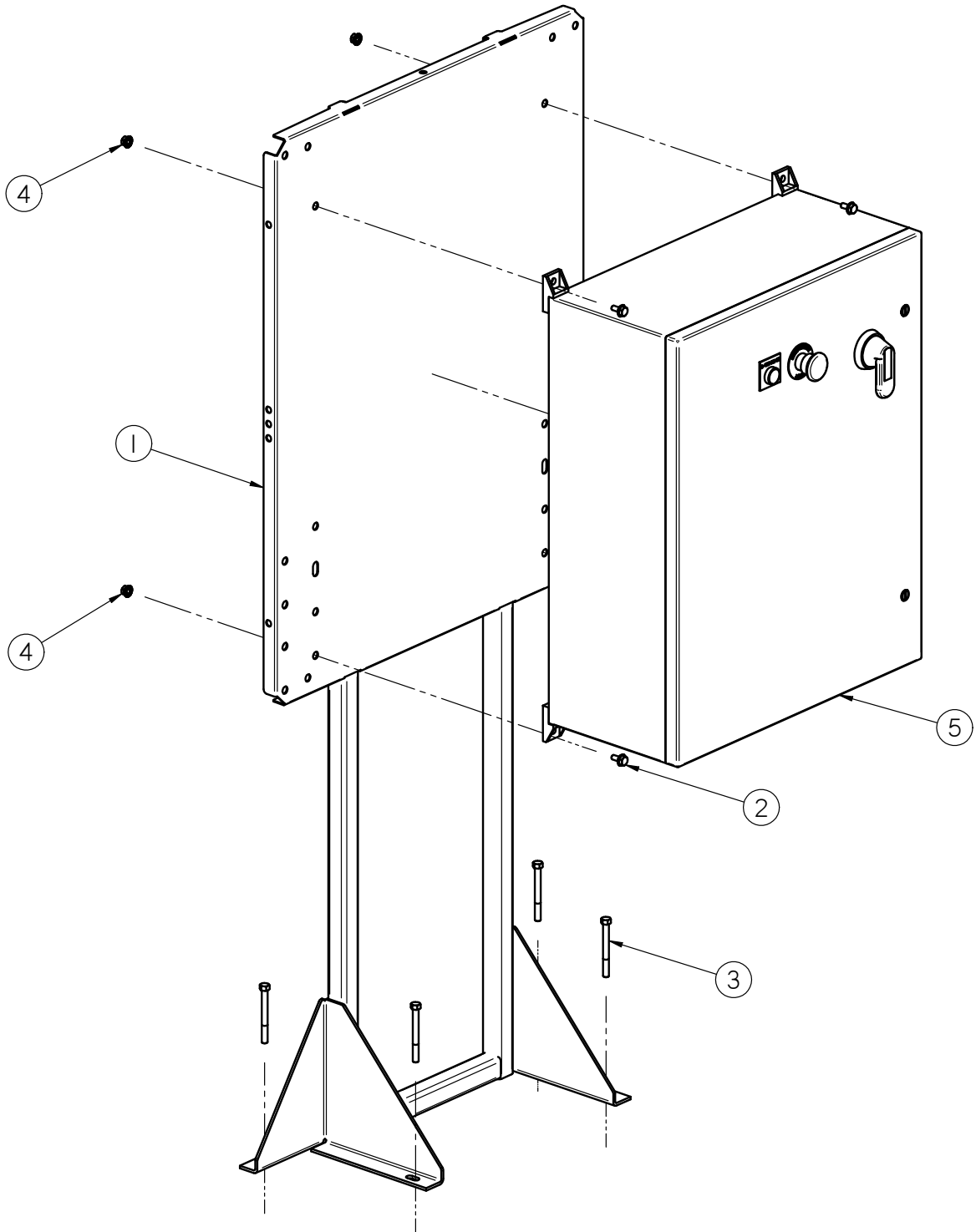
LPV SEED TREATER

VERSION 4 PORTABLE MAIN CONTROL PANEL ASSEMBLY (13-12-0158)



Item #	Part #	Description	Qty
1	03-12-0529	CSA COMPLIANT MCP U-TREAT	1
2	05-03-1313	BIN SITE MAIN CNTL PNL FR	1
3	06-01-0020	BOLT .375-16 X 2.00 ZP GR5	4
4	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
5	06-03-0003	NUT NYL LOCK .375-16 ZP GR5	4
6	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
7	06-05-0004	WSHR FLAT .375 ZP	8

VERSION 3 LOSS IN WEIGHT TREATER CONTROL PANEL ASSEMBLY



VERSION 3 LOSS IN WEIGHT TREATER CONTROL PANEL ASSEMBLY

Item #	Part #	Description	Qty
1	05-03-0580	BIN SITE MAIN CNTL PNL STAND	1
2	06-01-0124	BOLT FLG .375-16 X .750 ZP GR5	4
3	06-01-0220	BOLT 3/8-16 CONC ANCHOR ZP 3.75	4
4	06-03-0014	NUT LOCK FLG .375-16 ZP GR5	4
5	SEE TABLE 1	PANEL CONTROL LPV TREATER	1

TABLE 1	
03-12-0498	PNL CNTL LPV TRTR 230V 1PH no-SMW
03-12-0500	PNL CNTL LPV TRTR 230V 3PH no-SMW
03-12-0502	PNL CNTL LPV TRTR 460V 3PH no-SMW
03-12-0504	PNL CNTL LPV TRTR 575V 3PH no-SMW
03-12-0506	PNL CNTL LPV TRTR 380V 3PH no-SMW

LPV SEED TREATER

NOTES:

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.

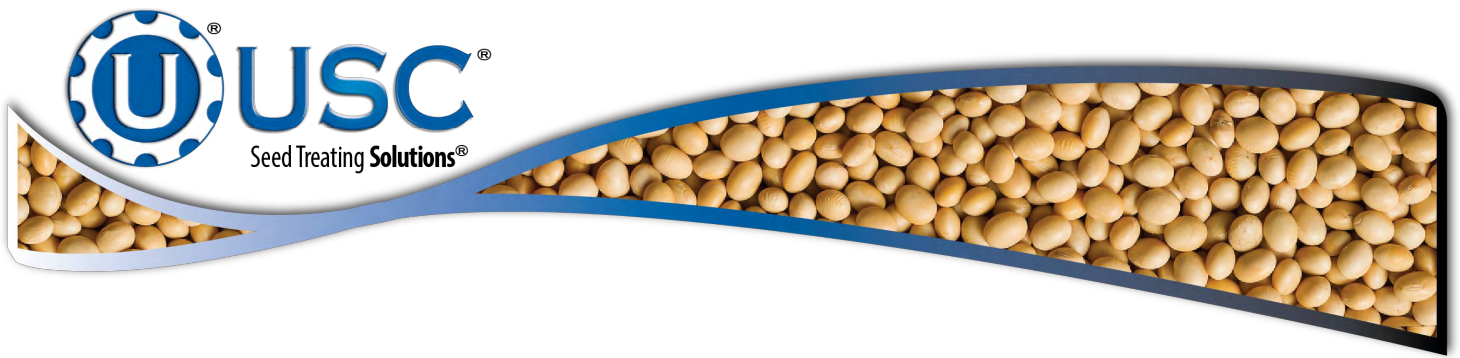
4. **Other Statements:** Manufacturer's employees or representatives' oral or other written statements do not constitute warranties, shall not be relied upon by Buyer, and are not a part of the contract for sale or this limited warranty.

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

WEB: www.uscllc.com

