Bulk Tender

SEED RUNNER®
MODEL 4955DXL

Serial Number D64210100 & Higher

Part No. 2006415

Foreword

This symbol identifies important safety messages. When you see it, read the message that follows and be alert to the possibility of personal injury.

Remember, safety instructions stated in this manual are for your protection. Read them carefully and follow them closely when working around or using this machine.

Read and study this manual completely before attempting to operate this implement. Take this manual to the field for handy reference when operating, adjusting, or servicing your machine.

When referenced, “Right-Hand” (RH) and “Left-Hand” (LH) side of the machine are determined by standing behind the machine and facing in the direction of travel.

Product Information

When ordering parts or when requesting further information or assistance, always give the following information:

- Machine name
- Serial number

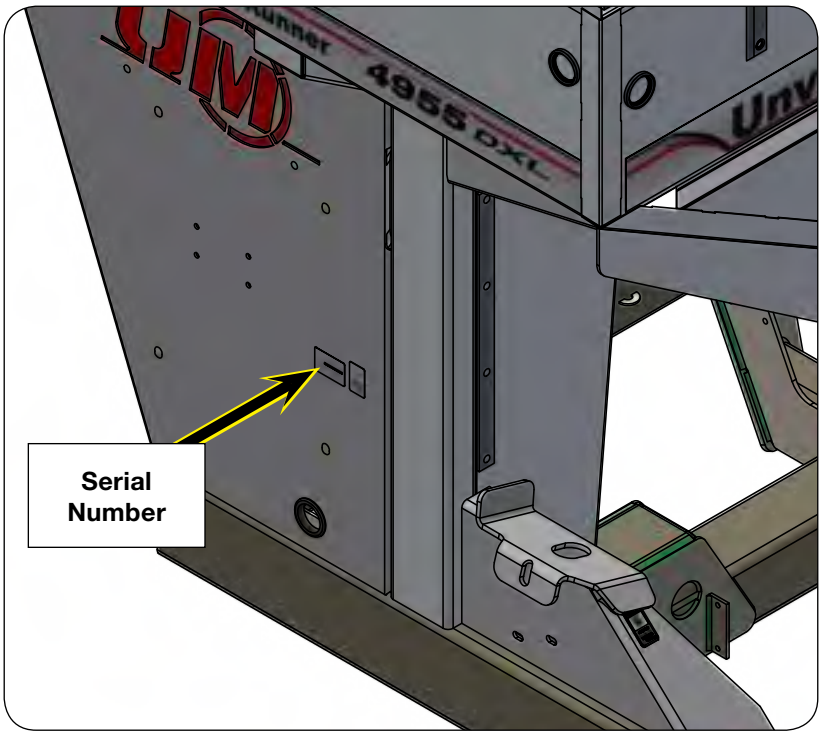
All products manufactured by Unverferth Mfg. Co., Inc. are warranted to be free from material and workmanship defects for one full year from time of consumer delivery. Your local dealer will gladly assist you with any warranty questions.

Please fill out and retain this portion for your records. The serial number plate is located on the frame as shown below.

Purchase Date _____ Model _____Serial No._____

Dealer _____ City _____

Dealer Contact _____ Phone _____



IMPORTANT

The information, specifications, and illustrations in the manual are on the basis of information available at the time it was written. Due to continuing improvements in the design and manufacture of Unverferth products, all specifications and information contained herein are subject to change without notice.

Table of Contents

Foreword 2
Product Information....3

SECTION I
Safety

General Hazard Information 1-2
Safety Decals 1-3
Following Safety Instructions 1-4
Before Servicing or Operating 1-4
During Operation 1-5
Before Transporting 1-6
During Transport.... 1-6
Pressurized Oil 1-7
Preparing for Emergencies.... 1-8
Wearing Protective Equipment 1-8

SECTION II
Set Up

Pre-Delivery Checklist 2-2
Set Up.... 2-3
Gooseneck Assembly.... 2-4
Optional UM2520 Scale Package With Auto Conveyor Shut-Off (#2002941TS) 2-5
Optional Electric Tarp Kit (#27706) 2-6
Optional 5th Wheel Adapter (#33381B).... 2-7
AG Decal Package Placement 2-8

Table of Contents

SECTION III
Operation

Preparing Towing Vehicle 3-2
Preparing Implement 3-3
- Hydraulic System 3-3
- Lubrication 3-3
- Tires/Wheels 3-3

Connecting to Towing Vehicle 3-4
Transport Chains 3-4
Transporting 3-5
Hydraulic Power Unit Operation 3-7
- Before Staring Engine 3-8
- Start Engine Using the 3-Function Remote Radio Controller 3-9
- Raising And Lowering Conveyor 3-11
- Seed Door Operation 3-11
- Filling Planter or Drill 3-12
- Adjusting Hydraulic Relief Valve 3-13

Conveyor Belt Electronic Speed Control 3-15
Pivoting Conveyor Side-to-Side 3-16
Raising and Lowering Conveyor 3-16
Manual Control of Conveyor 3-17
Filling Seed Tender from Another Wagon or Bulk Container (Self-Filling) 3-18
Fill Level Indicator Lights 3-22
Ladder 3-23
Deluxe Ladder (Optional) 3-23
Tarp 3-24
Optional Electrical Tarp Kit 3-25
6-Function Wireless Remote Control Pkg #2007513TS (Option) 3-25
7-Function Wireless Remote Control Pkg #2007514TS (Option) 3-26
Override Box Options 3-26
UM2520 Electronic Scale 3-27
Downloader Module Option 3-31
Auto-Shutoff Feature for UM2520 Scale (Optional) 3-32
UM2520 Scale Weight Calibration (Optional) 3-32

Table of Contents

SECTION IV
Maintenance

Lubrication 4-2
- Conveyor Bearings 4-2
- Pivot Points 4-2
- Hydraulic Power Unit 4-2

Hub Assembly 4-3
Hydraulic System 4-3
- Purge Hydraulic System 4-4
- Relieving Hydraulic Pressure 4-4

Conveyor Belt 4-5
- Belt Tension 4-5
- Belt Tracking 4-6

Manual Control Of Conveyor 4-7
Optional Belt Stretcher 4-8
Brake Cleaning and Inspection 4-10
- Brake Lubrication 4-10
- Magnets 4-10
- Shoes and Linings 4-11

How To Measure Voltage 4-11
How To Measure Amperage 4-12
Brake Drum Inspection 4-13
Bearing Inspection 4-13
Troubleshooting Brakes 4-14
Power Pak 4-14
Battery Warranty 4-17
Wheels and Tires 4-18
- Wheel Nut Torque Requirements 4-18
- Tire Pressure 4-18
- Tire Warranty 4-19

Complete Torque Chart
- Capscrews 4-20

Hydraulic Fittings 4-20
Storage 4-21
Smooth-Start Module Troubleshooting 4-22
Troubleshooting 4-23
Scale Troubleshooting 4-27
Scale “Short Form” Set Up & Calibration 4-28
Auto Conveyor Shut-off Troubleshooting 4-30
Tank Lights and Magnetic Reed Switch 4-30
Adjusting Proximity Switch 4-31
Electrical Schematics & Hydraulic Diagrams 4-32

Table of Contents

SECTION V
Parts

Box Decals & Window Components....5-2
Touch-Up Paint....5-3
Ladder Components....5-4
Deluxe Ladder Components....5-6
Door Components....5-8
Sliding Hopper Components....5-10
Pivot Arm Components....5-12
Pivot Arm Mount to Platform....5-16
Pivot Arm Mount to Conveyor....5-19
Hopper Components - 8" Tube Conveyor....5-22
Hopper Components - 10" Tube Conveyor....5-26
Idler End Components - 8" Tube Conveyor....5-30
Idler End Components - 10" Tube Conveyor....5-32
Discharge Spout Components - 8" Tube Conveyor....5-34
Discharge Spout Components - 10" Tube Conveyor....5-36
Self-Loading Spout....5-40
Hydraulic Components - 3 Function....5-42
Directional Control Valve - Main....5-44
Directional Control Valve - Dual Doors....5-46
Shroud Panel, Valve Cover, Fuel Tank & Tool Box Components....5-48
Pump/Motor Mount, Filter, Access Cover, Battery Components....5-50
Muffler, Cables, Spark Arrester, & Optional EPA CARB Compliant Kit....5-52
Pump, Cold Start Valve, & Shroud Components....5-54
Power Pak Harnesses, Site Gauge & Actuator Components....5-56
Box Electrical Components....5-58
Cable Return Tarp System Components....5-60
Axle Components....5-64
Dual Axle Undercarriage Components....5-66
Undercarriage Electrical Components....5-68
Electrical Breakaway Components....5-69
Non-Scale Components....5-70
Scale Platform for Units Less Undercarriage....5-71
Scale Components (Optional)....5-72
Enclosure, Remote, & Receiver Components - 3 Function....5-74
Gooseneck Hitch Components....5-76
Hydraulic Jack Kit #2002947B for Gooseneck Hitch (Optional)....5-78
Spare Tire (Optional)....5-78
Electric Tarp Kit (#27706) (Optional)....5-79
T&G Applicator (Optional)....5-79
License Plate/Lamp Holder Assembly Kit #25481 (Optional)....5-80
AG Decal Package #2010513 (Option) - SMV, SIS Decals, & Reflectors....5-81
Seed Tender Remote - Override Box....5-82
6-Function Wireless Remote Control Package #2007513TS (Option)....5-83
7-Function Wireless Remote Control Package #2007514TS (Option)....5-83

Notes

SECTION I
Safety

General Hazard Information 1-2
Safety Decals 1-3
Following Safety Instructions 1-4
Before Servicing or Operating 1-4
During Operation 1-5
Before Transporting 1-6
During Transport 1-6
Pressurized Oil 1-7
Preparing for Emergencies 1-8
Wearing Protective Equipment 1-8

General Hazard Information

No accident-prevention program can be successful without the wholehearted cooperation of the person who is directly responsible for the operation of the equipment.

A large number of accidents can be prevented only by the operator anticipating the result before the accident is caused and doing something about it. No power-driven equipment, whether it be transportation or processing, whether it be on the highway, in the field, or in the industrial plant, can be safer than the person who is at the controls. If accidents are to be prevented--and they can be prevented--it will be done by the operators who accept the full measure of their responsibility.

It is true that the designer, the manufacturer, and the safety engineer can help; and they will help, but their combined efforts can be wiped out by a single careless act of the operator.

It is said that, “the best kind of a safety device is a careful operator.” We, at Unverferth Mfg. Co., Inc. ask that you be that kind of operator.

REMEMBER:

THINK SAFETY

A CAREFUL OPERATOR IS THE BEST INSURANCE AGAINST AN ACCIDENT!

SIGNAL WORDS

INDICATES AN EXTREMELY HAZARDOUS SITUATION OR ACTION THAT WILL RESULT IN SERIOUS INJURY OR DEATH.

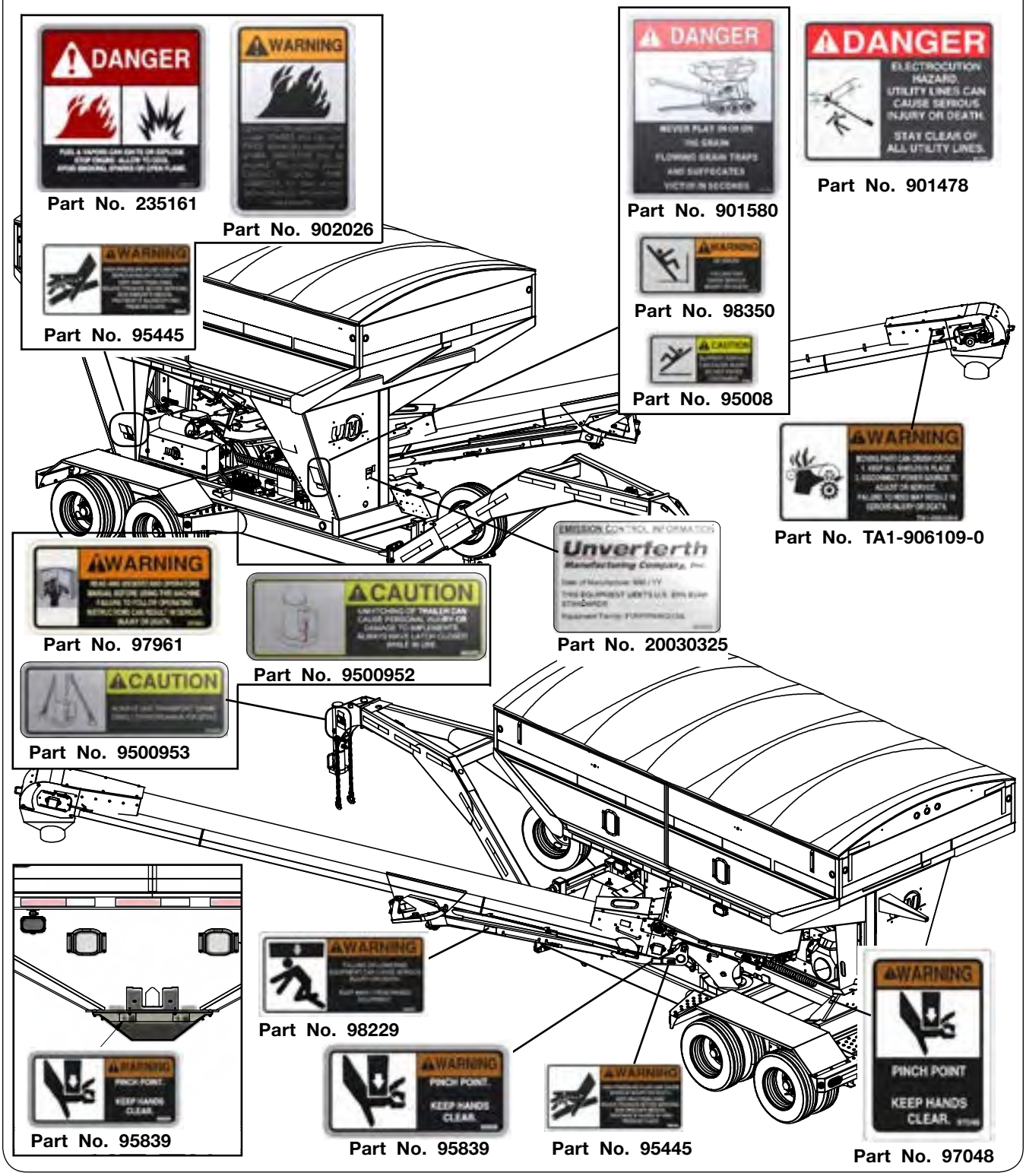
INDICATES A HAZARDOUS SITUATION OR ACTION THAT COULD RESULT IN SERIOUS INJURY OR DEATH.

INDICATES AN UNSAFE SITUATION OR ACTION THAT MAY RESULT IN PERSONAL INJURY.

Is used for instruction on operating, adjusting, or servicing a machine.

Safety Decals

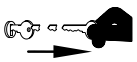
WARNING **REPLACE LOST, DAMAGED, PAINTED, OR UNREADABLE DECALS IMMEDIATELY. IF PARTS THAT HAVE DECALS ARE REPLACED, ALSO MAKE SURE TO INSTALL NEW DECALS. THESE DECALS INFORM AND REMIND THE OPERATOR WITH OPERATIONAL INFORMATION AND SAFETY MESSAGES.**



Following Safety Instructions

- Read and understand this operator's manual before operating.

- All machinery should be operated only by trained and authorized personnel.
- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut power unit and towing vehicle engine off and remove keys before servicing the seed tender.



- Avoid personal attire such as loose fitting clothing, shoestrings, drawstrings, pants cuffs, long hair, etc., that may become entangled in moving parts.
- Do not allow anyone to ride on the implement. Make sure everyone is clear before operating the machine or towing vehicle.

- Never enter a seed tender containing grain. Flowing grain traps and suffocates victims in seconds.

Before Servicing or Operating

- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.

- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.
- To prevent personal injury or death while servicing, always ensure that there are people who remain outside the Seed Tender to assist the person working inside, and that all safe workplace practices are followed. There is restricted mobility and limited exit paths when working inside the implement.
- Verify that all safety shields are in place and properly secured.
- Explosive separation of a tire and rim can cause serious injury or death. Only properly trained personnel should attempt to service a tire and wheel assembly.

During Operation

- Regulate speed to field conditions. Maintain complete control at all times.
- Never service or lubricate equipment when in operation.
- Keep away from overhead power lines. Electrical shock can cause serious injury or death.
- Use extreme care when operating close to ditches, fences, or on hillsides.
- Do not leave towing vehicle or Seed Tender unattended with engine running.
- Carbon monoxide can cause severe nausea, fainting or death. Do not operate engine in closed or confined area.
- Explosive fuel can cause fires and severe burns. Stop engine before filling fuel tank.
- Hot parts can cause severe burns. Do not touch engine while operating or just after stopping.
- Seed being transported may contain seed treatment. Read and follow all requirements for personal protective equipment and first aid as outlined on seed tags.
- Explosive gas from the battery can cause fires and serious acid burns. Charge the battery only in a well ventilated area. Keep sources of ignition away.

Before Transporting

- Secure transport chains to towing vehicle before transporting. DO NOT transport without chains.
- Install transport locks before transporting.
- Check for proper function of all available transport lights. Make sure that all reflectors are clean and in place on machine. Make sure that the SMV emblem and SIS decal are visible to approaching traffic.

During Transport

- Comply with all laws governing highway safety when moving machinery.
- Use transport lights as required by all laws to adequately warn operators of other vehicles.
- Regulate speed to road conditions and maintain complete control.
- Do not transport unit with rear compartment full and front compartment empty. The unit may not be properly balanced, offsetting the trail ability of the implement.
- Slow down before making sharp turns to avoid tipping. Drive slowly over rough ground and side slopes.
- It is probable that this implement is taller, wider and longer than the towing vehicle. Become aware of and avoid all obstacles and hazards in the travel path of the equipment, such as power lines, ditches, etc.

Pressurized Oil

- Relieve the hydraulic system of all pressure before adjusting or servicing. See hydraulic power unit manual for procedure to relieve pressure.

- High-pressure fluids can penetrate the skin and cause serious injury or death. Leaks of high-pressure fluids may not be visible. Use cardboard or wood to detect leaks in the hydraulic system. Seek medical treatment immediately if injured by high-pressure fluids.

- Hydraulic system must be purged of air before operating to prevent serious injury or death.

- Do not bend or strike high-pressure lines. Do not install bent or damaged tubes or hoses.

- Repair all oil leaks. Leaks can cause fires, personal injury, and environmental damage.

- Route hoses and lines carefully to prevent premature failure due to kinking and rubbing against other parts. Make sure that all clamps, guards and shields are installed correctly.

- Check hydraulic hoses and tubes carefully. Replace components as necessary if any of the following conditions are found:
    - o End fittings damaged, displaced, or leaking.
    - o Outer covering chafed/cut or wire reinforcing exposed.
    - o Outer covering ballooning locally.
    - o Evidence of kinking or crushing of the flexible part of a hose.

Preparing for Emergencies

- Keep a first aid kit and properly rated fire extinguisher nearby.


- Keep emergency numbers for fire, rescue, and poison control personnel near the phone.

Wearing Protective Equipment

- Wear clothing and personal protective equipment appropriate for the job.

- Wear steel-toed shoes when operating.

- Wear hearing protection when exposed to loud noises.

- Do not wear additional hearing impairing devices such as radio headphones, etc.

SECTION II
Set Up

Pre-Delivery Checklist 2-2
Set Up 2-3
Gooseneck Assembly 2-4
Optional UM2520 Scale Package With Auto Conveyor Shut-Off (#2002941TS) 2-5
Optional Electric Tarp Kit (#27706) 2-6
Optional 5th Wheel Adapter (#33381B) 2-7
AG Decal Package Placement 2-8

FOR LED WORK LIGHT INFORMATION, PLEASE REFER TO YOUR LED WORK LIGHT MANUAL. FOR ELECTRIC TARP INFORMATION, PLEASE REFER TO YOUR ELECTRIC TARP MANUAL. FOR T&G LUBRICANT APPLICATOR INFORMATION, PLEASE REFER TO YOUR T&G LUBRICANT APPLICATOR MANUAL.

Pre-Delivery Checklist

After the Seed Runner tender has been completely assembled, use the following checklist and inspect the Seed Runner tender. Check off each item as it is found satisfactory or after proper adjustment is made.

- ☐ Torque wheel nuts as specified in Maintenance section.
- ☐ Torque all axle mounting hardware to 200 ft.-lbs.
- ☐ Tires are inflated to specified air pressure.
- ☐ All grease fittings have been lubricated.
- ☐ Verify all safety decals are correctly located and legible. Replace if damaged.
- ☐ Verify all reflective decals are correctly located.
- ☐ Check belt alignment and tension.
- ☐ Verify transport lights are working properly.
- ☐ Transport chains are properly installed and hardware is torqued to specification.
- ☐ Confirm hubs have appropriate amount of oil.
- ☐ Paint all parts scratched in shipment.
- ☐ If applicable, charge the wireless remote control batteries.

Seed Runner Set Up

⚠ WARNING

- **READ AND UNDERSTAND THE SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW THE SAFETY SECTION IN THIS MANUAL, IF NECESSARY.**
- **TIPPING OR MOVEMENT OF THE MACHINE CAN CAUSE SERIOUS INJURY OR DEATH. BE SURE THE MACHINE IS SECURELY BLOCKED.**
- **ENTANGLEMENT WITH MOVING PARTS CAN CAUSE SERIOUS INJURY OR DEATH. USE EXTREME CARE WHEN INSPECTING AND ADJUSTING BELT TRACKING. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC., THAT MAY BECOME ENTANGLED IN MOVING PARTS.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 7,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING THE IMPLEMENT.**

IMPORTANT

- *The procedures for assembling this Seed Runner tender are intended for two or more people.*

Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

See your Unverferth dealer for additional brackets, reflectors, or lights to meet your requirements.

For your safety, and the safety of others, use proper tools and equipment and always use safe working procedures. Refer to these instructions before starting any work on the machine.

For ease of assembly, install all hardware loosely until assembly is complete and then tighten according to Torque Chart in the MAINTENANCE Section of this manual.

Gooseneck Assembly

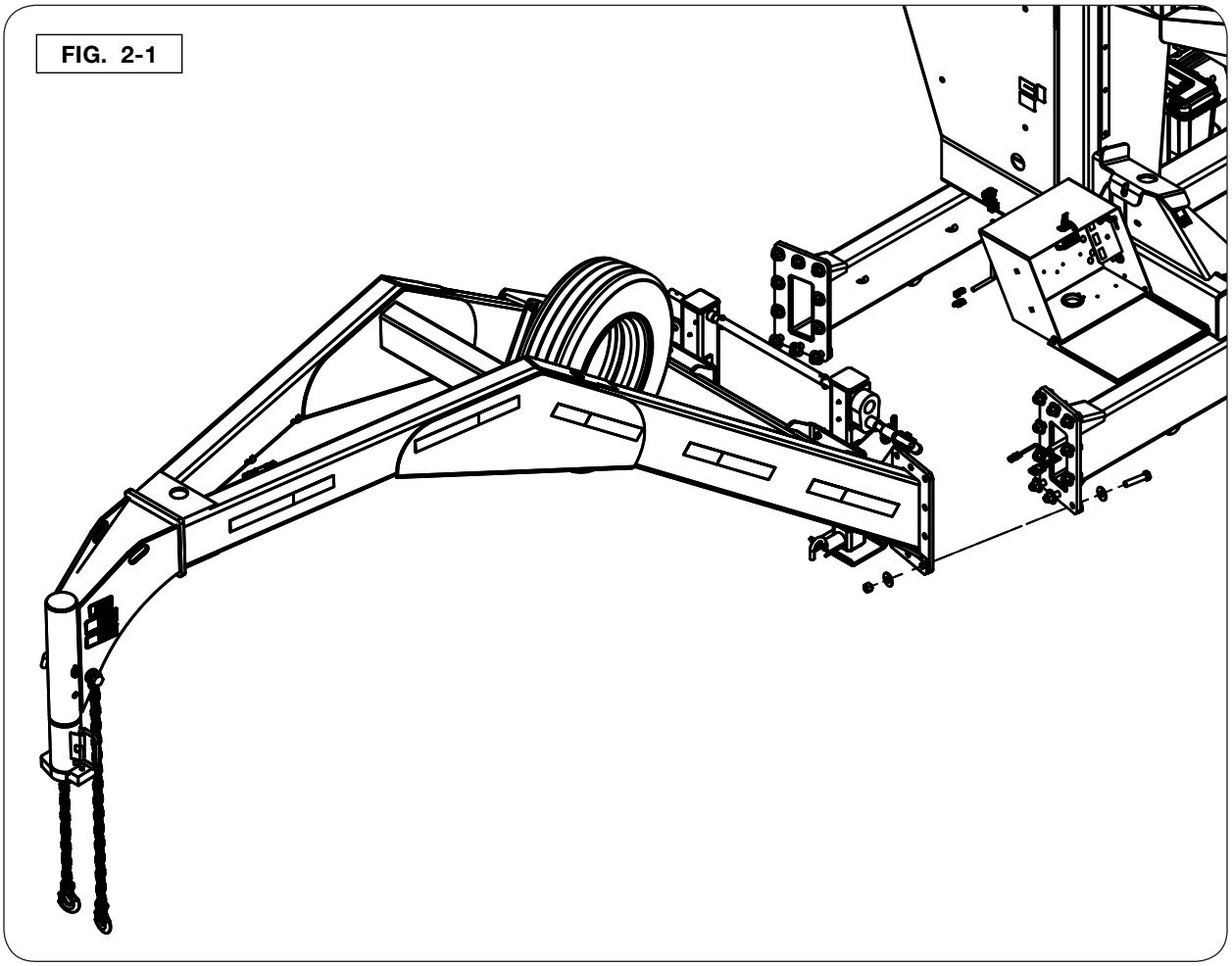
1. Seed Runner tenders shipped with hitch installed:
   A. Torque 3/4”-10UNC retaining hardware to 200-220 ft.-lbs.
   B. Proceed to Ladder Installation section.

   Seed Runner tenders shipped without hitch installed:
   A. Place jack stand rated for minimum 3,000 lbs. capacity under front of undercarriage frame. Using a safe lifting device rated for 3,000 lbs., raise the hitch and place it in line with the undercarriage.

2. Connect the electrical connections, and push extra wire harness into tubes. Move hitch against undercarriage frame being careful not to pinch the wiring harness.

3. Bolt the hitch to undercarriage using 3/4”-10UNC x 2 1/2” capscrews (9390-147), 3/4” stainless steel flat washers (900902-053), and 3/4”-10UNC locknuts (9802). Torque 3/4”-10UNC hardware to 200-220 ft.-lbs.

FIG. 2-1



Optional UM2520 Scale Package (#2002941TS)

⚠ WARNING

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 7,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**
- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

Remove two hold down brackets from one side of the box. Assemble weigh bar (9004902) into scale bracket (2002010TS) using two 3/4"-10UNC x 4 1/2" capscrews (9390-154) and 3/4"-10UNC top locknuts (9802). The weigh bars must be assembled so the arrow on the backside of the weigh bar is pointing down. The serial number decal on the weigh bar will be located on the bottom side. Using a safe lifting device with minimum 7,000 lbs. lift capacity, carefully lift one side of box approximately 1". Slide weigh bar into bushing on inside of box. Fasten bracket down to undercarriage using four 5/8"-11UNC x 2" capscrews (9390-124) and 5/8"-11UNC top locknuts (9801). Repeat this process for all four corners of the box.

Route the cables from weigh bars into opening at bottom of enclosure and connect to the scale indicator (9500374) ports.

Convert the harness (2002132) to work with the 2520 scale. (FIG. 2-7)

1. Remove the female cap from the male plug.
2. Remove the male cap from the female plug.
3. Connect the female plug and male plug. Refer to Fig. 2-7
4. Connect the female cap and male cap. Refer to Fig. 2-7.

FIG. 2-5

FIG. 2-6

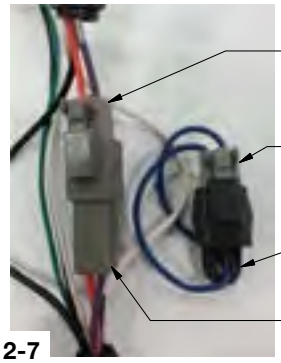


FIG. 2-7

Optional UM2520 Scale Package (#2002941TS) (continued)

Make connections to scale, ignition switch, Smooth-Start Module, light harness, and radio harness (2002126). Fasten indicator into enclosure using two 1/4"-20UNC x 3/4" capscrews (9390-003) and 1/4"-20UNC locknuts (9936). Connect scale harness (2002132) to radio harness (2002126).

FIG. 2-8

Optional Electric Tarp Kit (#27706)

See manual #27951 for complete set up instructions.

FIG. 2-9

Optional 5th Wheel Adapter #33381B

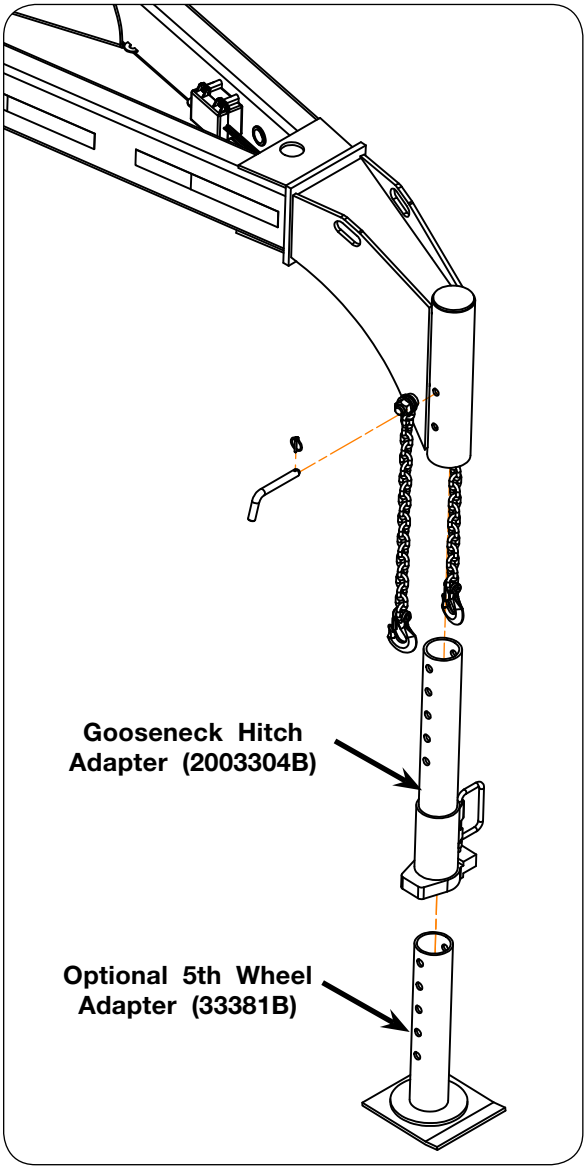
⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**
- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 50 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**
- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

1. Park the empty Seed Runner tender on a firm, level surface. Lower the jack. Block the tires on the machine to keep it from moving. Disconnect the towing vehicle.

2. Using a safe lifting device rated for 50 lbs. remove the gooseneck hitch adapter (2003304B) and install the optional 5th wheel adapter (33381B).

NOTE: When installing 5th wheel adapter the semi-truck must have an electric brake controller installed.



AG Decal Package Placement

1. Center and attach the SMV Emblem (95730) to the rear of the unit 6” from the frame. (FIG. 2-20)

2. Attach the SIS decal (9008714) to the rear of the unit 19 3/4” from the bottom of the SMV Emblem (95730). (FIG. 2-20)

3. Attach the red reflector (9003126) 12 3/4” from the right-hand side of the bumper. (FIG. 2-20)

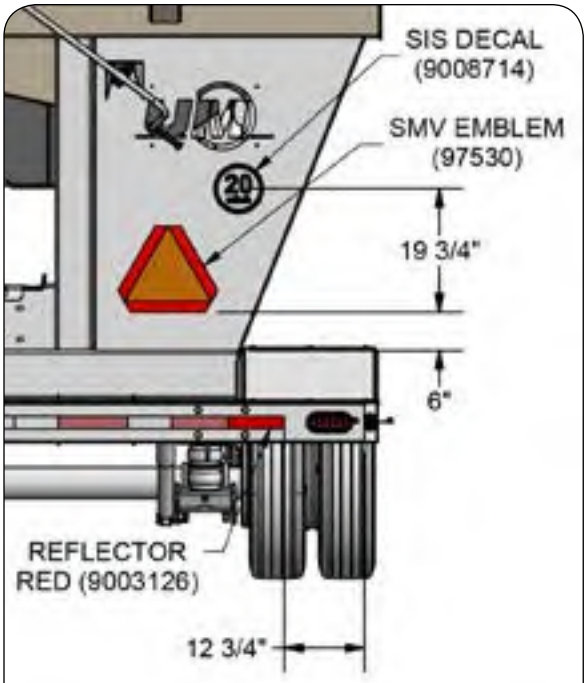


FIG. 2-20 Rear View

4. Attach the SIS decal (9008714) to the front of the unit 44 3/4” from the frame and 4 1/4” from the side of the panel as shown in FIG. 2-21.

Front View

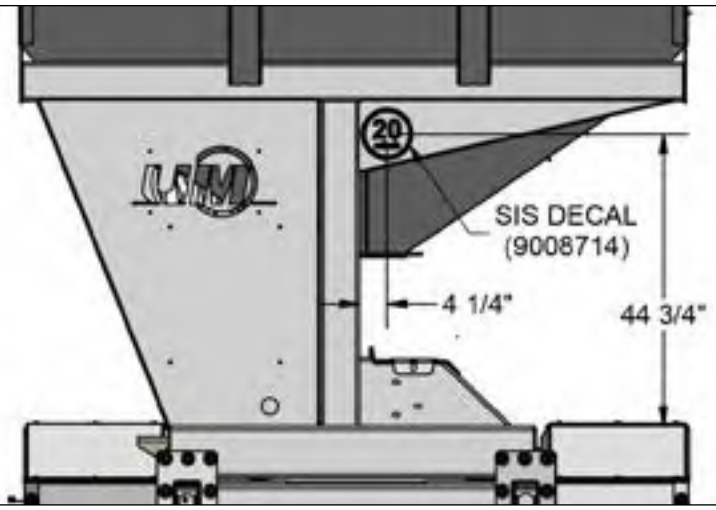


FIG. 2-21

AG Decal Package Placement (continued)

5. Place the amber reflector (9003127) 4” down on the frame on the right-hand side of the unit. (FIG. 2-22)

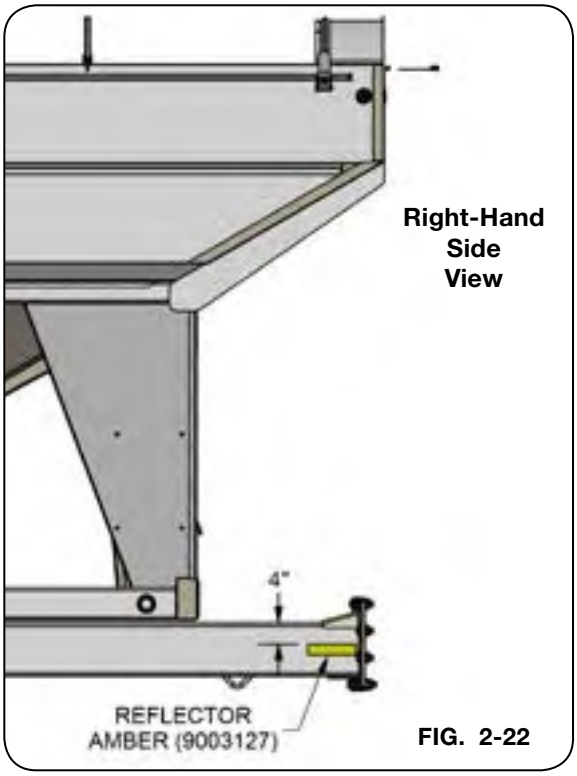


FIG. 2-22

6. Place the amber reflector (9003127) 4” down on the frame on the left-hand side of the unit. (FIG. 2-23)

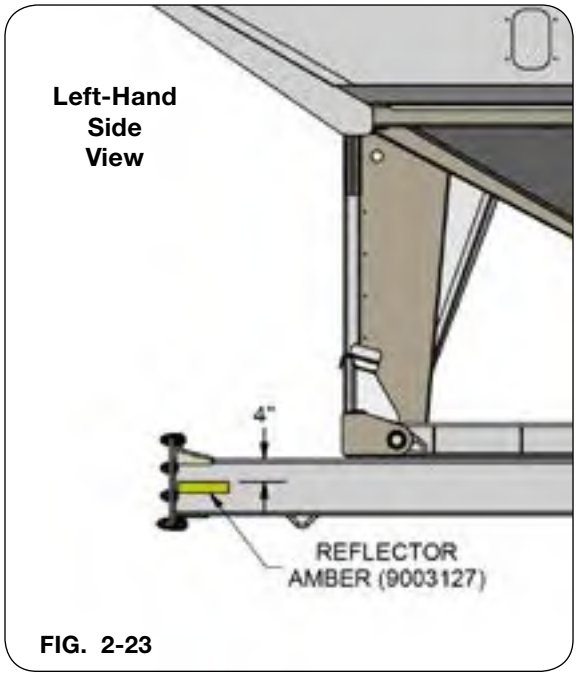


FIG. 2-23

Notes

SECTION III
Operation

Preparing Towing Vehicle 3-2
Preparing Implement 3-3
Hydraulic System 3-3
Lubrication 3-3
Tires/Wheels 3-3
Connecting to Towing Vehicle 3-4
Transport Chains 3-4
Transporting 3-5
Hydraulic Power Unit Operation 3-7
Before Staring Engine 3-8
Start Engine Using the 3-Function Remote Radio Controller 3-9
Raising And Lowering Conveyor 3-11
Seed Door Operation 3-11
Filling Planter or Drill 3-12
Adjusting Hydraulic Relief Valve 3-13
Conveyor Belt Electronic Speed Control 3-15
Pivoting Conveyor Side-to-Side 3-16
Raising and Lowering Conveyor 3-16
Manual Control of Conveyor 3-17
Filling Seed Tender from Another Wagon or Bulk Container (Self-Filling) 3-18
Fill Level Indicator Lights 3-22
Ladder 3-23
Deluxe Ladder (Optional) 3-23
Tarp 3-24
Optional Electrical Tarp Kit 3-25
6-Function Wireless Remote Control Pkg #2007513TS (Option) 3-25
7-Function Wireless Remote Control Pkg #2007514TS (Option) 3-26
Override Box Options 3-26
UM2520 Electronic Scale 3-27
Downloader Module Option 3-31
Auto-Shutoff Feature for UM2520 Scale (Optional) 3-32
UM2520 Scale Weight Calibration (Optional) 3-32

Preparing Towing Vehicle

NOTE: Unverferth Manufacturing has designed the transport lighting and marking kit to meet United States federal law and ASABE standards at the time of manufacture. Machine modifications, including additional features or changes to the intended configurations, may require updates to the lighting and marking as well.

Compliance with all lighting and marking laws is the responsibility of the operator at the time of travel.

See federal regulation 49 CFR 562; available at www.govinfo.gov for US federal law requirements.

See your Unverferth dealer for additional brackets, reflectors, or lights to meet your requirements.

Before operating implement, refer to towing vehicle's operator's manual for information concerning safe methods of operation, hitch capacities, hitch adjustments, tire inflation, and undercarriage braking operation.

Vehicle must be equipped with proper electric undercarriage braking components and mating electrical connector. if towing vehicle is not equipped with the proper components, see towing vehicle manufacturer, or respective dealer for proper setup. Check vehicle and undercarriage brakes and transport lights. Make sure they are in proper working order.

IMPORTANT

- *This implement is equipped with LED lights. The towing vehicle may require a flasher upgrade for lights to function properly. For flasher upgrade, please see towing vehicle manufacturer for assistance.*

Do not exceed towing vehicle's GVWR (Gross Vehicle Weight Rating) or GCWR (Gross Combination Weight Rating), or the maximum hitch load.

Estimated weights of the fully loaded Seed Runner tender are:

Model 4955DXL

- Gross Vehicle Weight Rating is 35,000 lbs.
- Loaded tongue weight is 6,700 lbs.

These are estimates. The loaded tongue weight will vary greatly based on the height of the hitch, and the variation in terrain that the Seed Runner tender is being pulled across.

Towing vehicle hitch – ball or 5th wheel, must be heavy enough to carry the load of the Seed Runner tender.

Preparing Implement

Hydraulic System

Check routing of all hydraulic hoses. Hoses should not be kinked, twisted, or rubbing against sharp edges.

Check hoses and fittings for hydraulic leaks. Tighten and/or repair or replace as required. Refer to "Torque Chart" in SERVICE section.

Lubrication

Lubricate the implement as outlined in the MAINTENANCE SECTION of this manual.

Refer to the engine operator's manual for proper fluid levels in engine.

Tires/Wheels

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. WHEEL NUTS/BOLTS MUST BE CHECKED REGULARLY. SEE TORQUE PAGE IN MAINTENANCE SECTION FOR PROPER WHEEL NUT/BOLT SPECIFICATIONS. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

Check tire pressures and maintain at recommended values listed in the MAINTENANCE section of this manual. Check wheel nuts/bolts torque as specified in the MAINTENANCE section.

For questions regarding new tire warranty, please contact your local original equipment tire dealer. Used tires carry no warranty. Tire manufacturers' phone numbers and web sites are listed in the "Maintenance" Section of this manual for your convenience.

Connecting to Towing Vehicle

⚠ WARNING

- **CRUSHING CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT STAND BETWEEN THE TOWING VEHICLE AND IMPLEMENT WHEN HITCHING. ALWAYS ENGAGE THE PARKING BRAKE AND STOP THE ENGINE BEFORE INSERTING THE HITCH PINS OR SECURING THE LATCHES.**

The Seed Runner Undercarriage is designed to be connected to a towing vehicle utilizing a 2 5/16" gooseneck hitch or 5th wheel hitch.

Back the towing vehicle up to the undercarriage and align the vehicle's ball with the coupler on the undercarriage. Lower jack to set gooseneck down on ball. Latch coupler so the connection is secure. Raise jack to transport.

Connect electrical plug from undercarriage to towing vehicle. Check routing of the electrical cord to be certain it is long enough to pivot when turning, but not too long to touch or rub the ground during transport.

Connect undercarriage brake breakaway cable to towing vehicle. Do not connect this directly to hitch. It needs to be connected in a place that will still be attached, even if the coupler fails.

Transport Chains

⚠ CAUTION

- **ALWAYS USE TRANSPORT CHAIN WHEN TRANSPORTING IMPLEMENTS. FAILURE TO USE A TRANSPORT CHAIN COULD CAUSE PERSONAL INJURY IF IMPLEMENT BECOMES DISENGAGED.**
- **REPLACE TRANSPORT CHAIN IF ANY LINK OR END FITTING IS BROKEN, STRETCHED, DAMAGED OR NOT FUNCTIONING. DO NOT WELD TRANSPORT CHAIN.**
- **USE ONLY AN UNVERFERTH DOT TRANSPORT CHAIN WITH A WEIGHT RATING EXCEEDING THE GROSS COMBINED WEIGHT OF ALL TOWED IMPLEMENTS. CONTACT YOUR UNVERFERTH DEALER FOR ADDITIONAL INFORMATION.**

Transport chains should have a minimum rating equal to the gross weight of implement and all attachments. Allow no more slack in chains than necessary to permit turning.

FIG. 3-1

Transporting

DANGER

- **ELECTROCUTION WILL CAUSE SERIOUS INJURY OR DEATH. ELECTROCUTION CAN OCCUR WITHOUT DIRECT CONTACT. KEEP AWAY FROM ALL UTILITY LINES AND DEVICES.**

WARNING

- **THE REAR HOPPER OF THE SEED TENDER BOX SHOULD ALWAYS BE EMPTIED FIRST. THIS WILL MAINTAIN WEIGHT ON THE HITCH OF THE TOWING VEHICLE. EMPTYING THE FRONT HOPPER FIRST WITH THE REAR HOPPER FULL COULD RESULT IN NEGATIVE TONGUE WEIGHT ON THE UNDERCARRIAGE AND REDUCED CONTROL OF THE UNDERCARRIAGE WHEN TOWING.**
- **ALWAYS TRAVEL AT A SPEED THAT PERMITS COMPLETE CONTROL OF TOWING VEHICLE AND IMPLEMENT.**

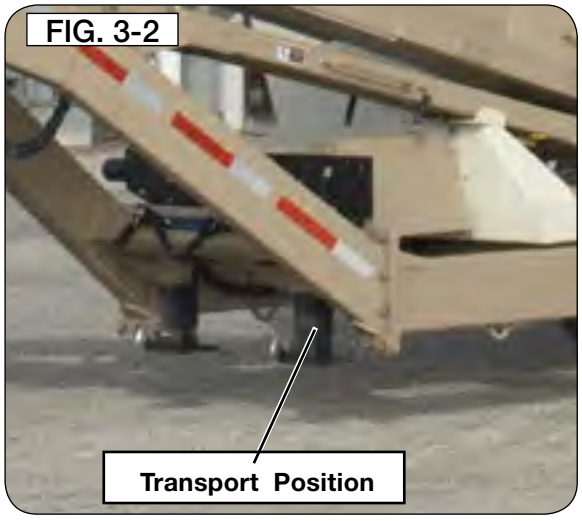
CAUTION

- **USE APPROVED ACCESSORY LIGHTS AND REFLECTORS WHEN TRANSPORTING AT NIGHT, DURING PERIODS OF POOR VISIBILITY AND AS REQUIRED BY LOCAL LAW.**

IMPORTANT

- *Before transporting, be sure the jack stand is in the 'Transport Position'.*
- *Conveyor must be latched in the unloading position. The pivoting arm must be latched in the transport position with klik pin installed before moving Seed Runner. Refer to photo on following page.*
- *This implement is equipped with LED lights. The towing vehicle may require a flasher upgrade for lights to function properly. For flasher upgrade, please see towing vehicle manufacturer for assistance.*

FIG. 3-2



Transporting (continued)

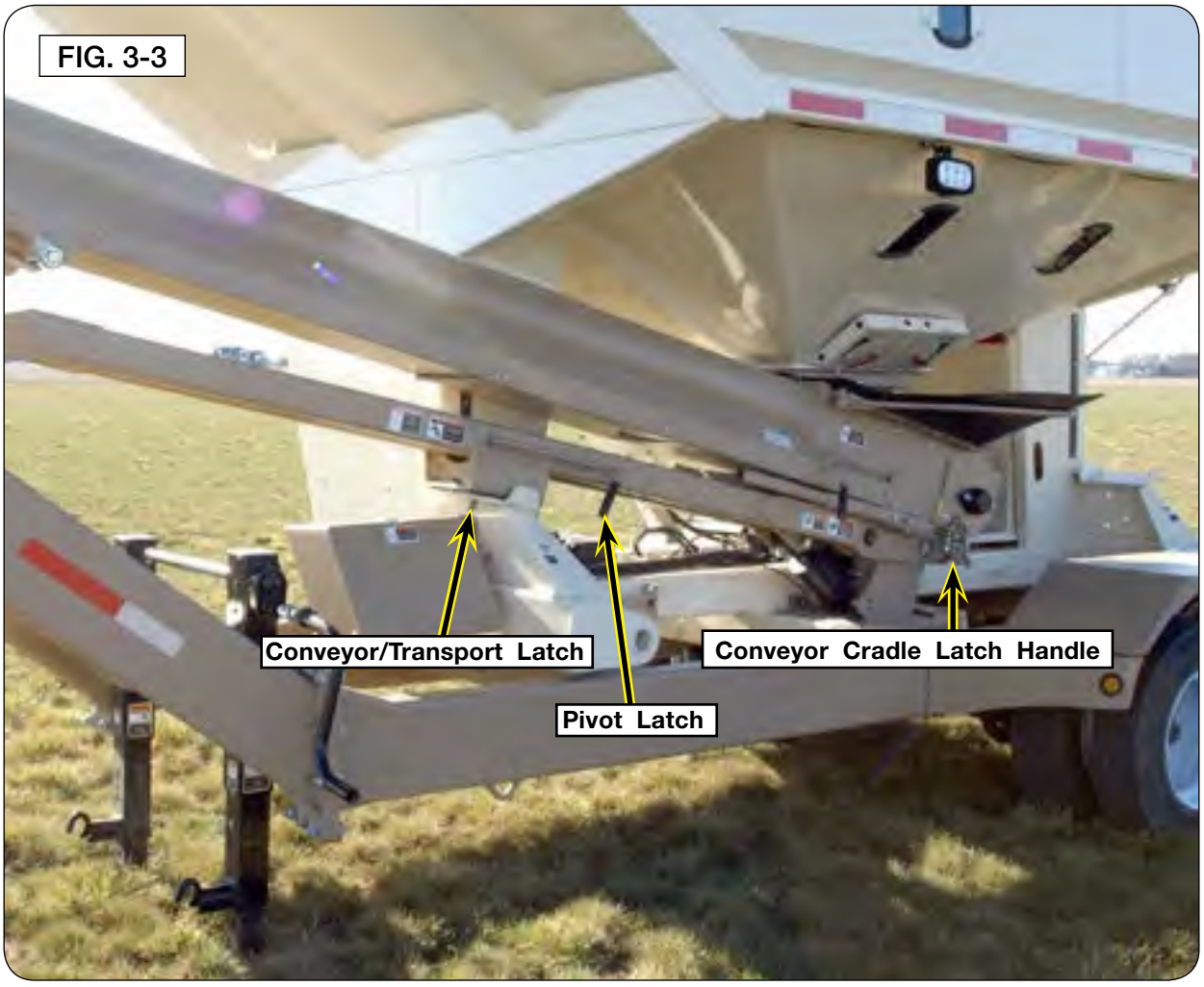
When transporting on public roads, the conveyor needs to be latched in the forward position, extending over the tongue of the undercarriage. Transporting implement with conveyor latched in the rearward position does not comply with lighting and conspicuity marking requirements.

The center of gravity on the seed tender box is higher than a typical undercarriage. Use extreme caution when making turns and entering/exiting fields.

Comply with all laws governing highway safety and regulation when moving machinery on public roads.

Be sure reflectors and lights are in place and clearly visible to approaching traffic.

FIG. 3-3



Hydraulic Power Unit Operation

⚠ WARNING

- **EXPLOSIVE FUEL CAN CAUSE FIRES AND SEVERE BURNS. STOP ENGINE BEFORE FILLING FUEL TANK.**

- **CARBON MONOXIDE CAN CAUSE SEVERE NAUSEA, FAINTING OR DEATH. DO NOT OPERATE ENGINE IN A CLOSED OR CONFINED AREA.**

- **HOT PARTS CAN CAUSE SEVERE BURNS. DO NOT TOUCH ENGINE WHILE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

- **EXPLOSIVE GAS FROM BATTERY CAN CAUSE FIRES AND SEVERE ACID BURNS. CHARGE BATTERY ONLY IN A WELL VENTILATED AREA. KEEP SOURCES OF IGNITION AWAY.**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE “RELIEVING HYDRAULIC PRESSURE” IN “MAINTENANCE” SECTION OF THIS MANUAL.**

- **OPERATION OF THIS EQUIPMENT MAY CREATE SPARKS THAT CAN START FIRES AROUND DRY VEGETATION. A SPARK ARRESTOR MAY BE REQUIRED. THE OPERATOR SHOULD CONTACT LOCAL FIRE AGENCIES FOR LAWS OR REGULATIONS RELATING TO FIRE PREVENTION REQUIREMENTS. THE SPARK ARRESTOR MUST BE PURCHASED SEPARATELY AND CAN BE FOUND IN THE PARTS SECTION NEAR THE END OF THIS MANUAL.**

IMPORTANT

- *For units being operated in California, they are required to have a CARB compliant kit (2001309) installed in the fuel system.*

Hydraulic Power Unit Operation (continued)

IMPORTANT

- *Make certain hoses are all connected, and everyone is clear of conveyor before starting engine.*
- *Conveyor must be turned off before starting engine. Starting engine with conveyor turned on will result in hard starting, or failure to start.*
- *When engine is not in use, rotate the red knob so the tab is horizontal to turn the fuel <OFF>. Leaving the fuel valve on could cause carburetor flooding, fuel in crankcase, or fuel leakage. See photo for location of the fuel shut off lever.*
- *Do not use ether or other starting aids to start the engine. Damage to the engine will occur.*
- *Use only clean fuel. Contaminates in the fuel may cause damage to the engine or loss of performance.*

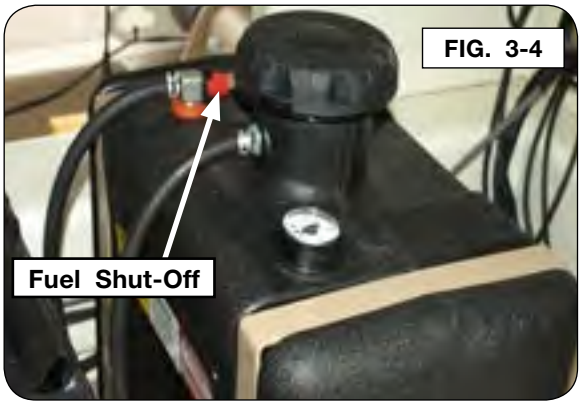


FIG. 3-4

NOTE: Installation instructions for the spark arrestor (#9500704) can be found in the Honda engine manual.

Before Starting Engine

Inspect that all fittings and hardware are in place and secure. Check for any potential hydraulic leaks. Check fluid levels in engine and sight gauge on reservoir. Be sure all valves are switched to neutral position.

Determine which conveyor control system is being used.


3-Function Remote


6-Function Remote


7-Function Remote

Hydraulic Power Unit Operation (continued)

Start Engine Using the 3-Function Remote Radio Controller

1. Turn fuel shut-off valve to <ON> position.
2. With the unit attached to the towing vehicle, park the unit on a firm, level surface.
3. Open the control box lid.
4. Remove the hand-held transmitter from the control box. On grey transmitter, twist the “E-STOP” RED BUTTON on the hand-held transmitter clockwise to release the button. On yellow transmitter, “E-STOP” RED BUTTON engages when momentarily pushed and then releases because it is spring loaded to be out.

IMPORTANT

- *In case of an emergency, push in the “E STOP” to stop all functions and shut the engine off.*

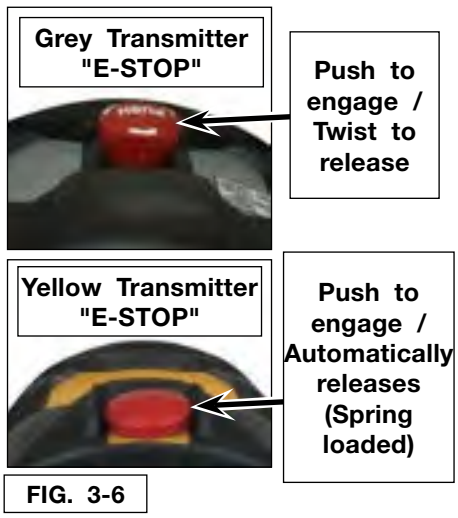
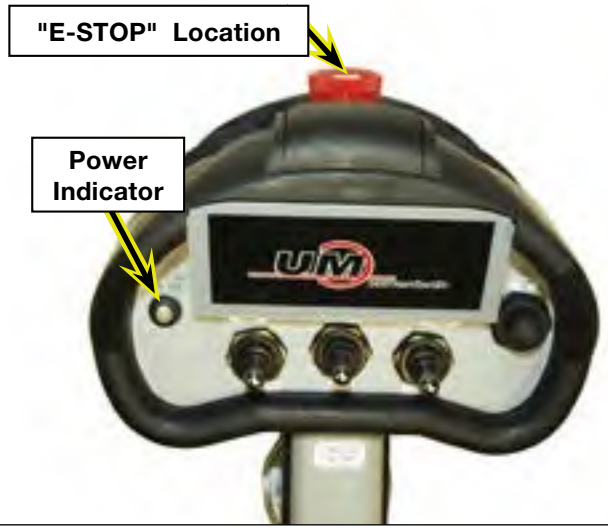


FIG. 3-6



5. Insert the key and rotate it to the right one position.

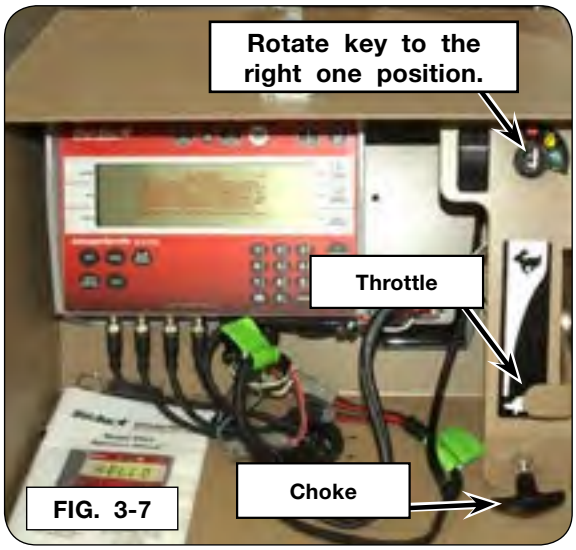


FIG. 3-7

Hydraulic Power Unit Operation (continued)

6. Press the power button "PWR". The "Power Indicator" is shown on the left-hand side. (FIG. 3-5)

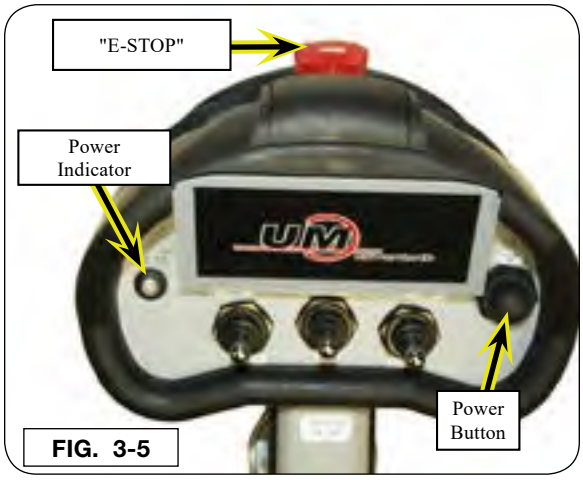
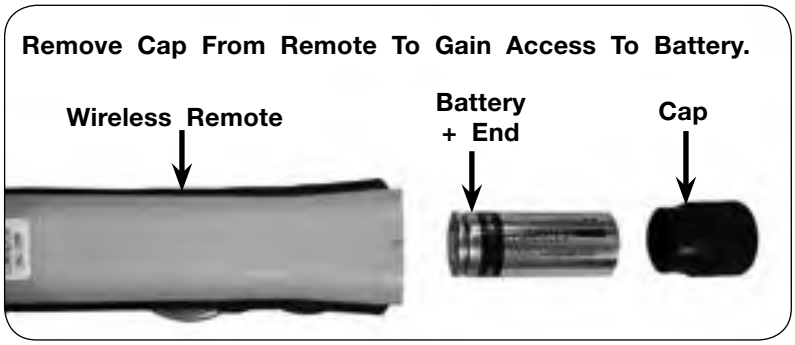


FIG. 3-5

If the “Power Indicator” on the hand-held transmitter is not shown, recharge your battery.



In extremely cold weather, it is best to allow engine and hydraulics to warm up before operating at full throttle speed.

NOTE: If hydraulic leaks become apparent, turn engine <OFF> immediately and take appropriate actions.

⚠ WARNING

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

See Engine operator’s manual for more detailed information on engine operation.

Hydraulic Power Unit Operation (continued)

7. Place cold start ball valve to OPEN (handle in line with valve body) COLD START position. (FIG. 3-6)

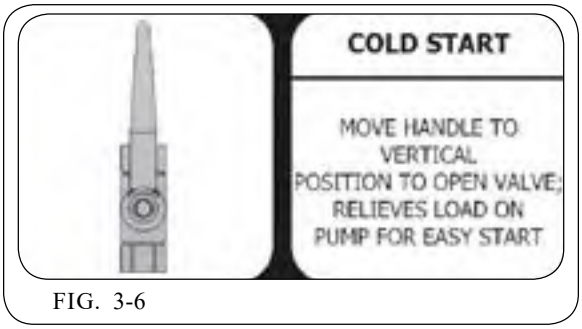


FIG. 3-6

8. Turn key to start engine (FIG. 3-8). Apply the choke as needed to start the engine. Once running, turn the choke off and increase the throttle speed. (FIG. 3-7)

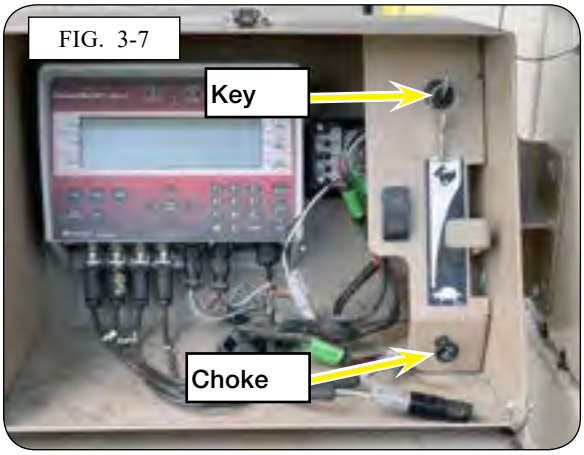


FIG. 3-7

9. Run the engine until the engine and hydraulic system have sufficiently warmed, then change cold start ball valve to CLOSED (handle 90° to the valve body) WORKING POSITION. (FIG. 3-8)

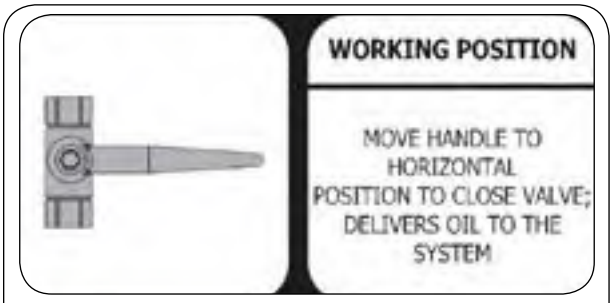


FIG. 3-8

Hydraulic Power Unit Operation (continued)

Raising And Lowering Conveyor

Conveyor height is adjusted by using the toggle switch to <RAISE/LOWER> the conveyor that actuates the cylinder on the pivoting arm.

IMPORTANT

- *Always remove klik pin from pivot transport lock before raising conveyor.*

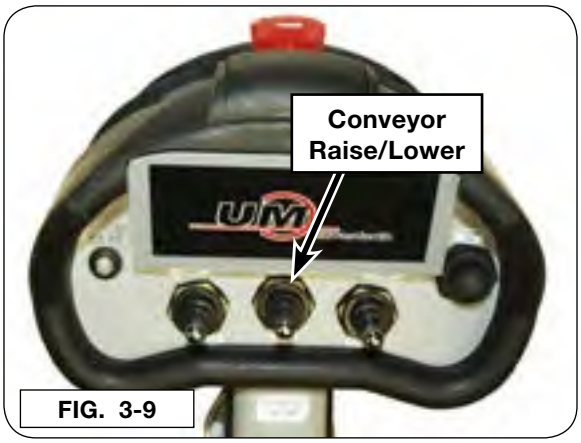


FIG. 3-9

Seed Door Operation

⚠ WARNING

- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

1. Use the switches on the remote to operate the front or rear door.

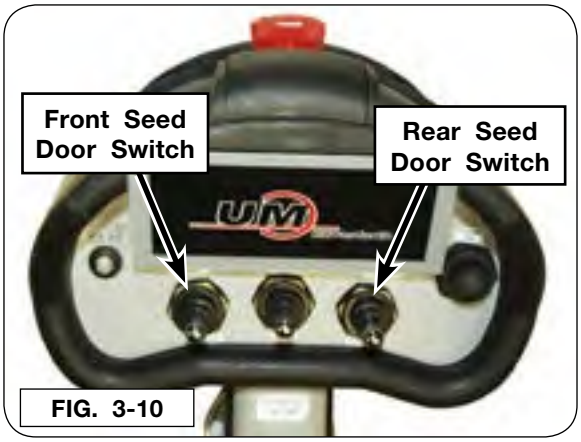


FIG. 3-10

Hydraulic Power Unit Operation (continued)

Filling Planter Or Drill

Position the seed tender next to planter so conveyor discharge will be over planter box. Using the remote control, start engine on hydraulic power unit and increase throttle speed. Raise conveyor to desired discharge height, and pivot to location over planter. Place telescoping spout over planter box. Open door(s) on seed tender box to begin flow of seed. Press and release the trigger on the remote to turn the conveyor on.

NOTE: Each time you press the trigger on the remote it cycles the conveyor between on and off.

Fill box to desired level then press and release the trigger on the remote to turn conveyor off. Repeat process until each box/hopper is filled. Conveyor speed can be adjusted using the conveyor speed control, see seed tender manual for adjustment instructions.

IMPORTANT

- *Do not let telescoping spout rest in bottom of seed box. Seed will rapidly build up and plug conveyor, resulting in potential damage to belt.*

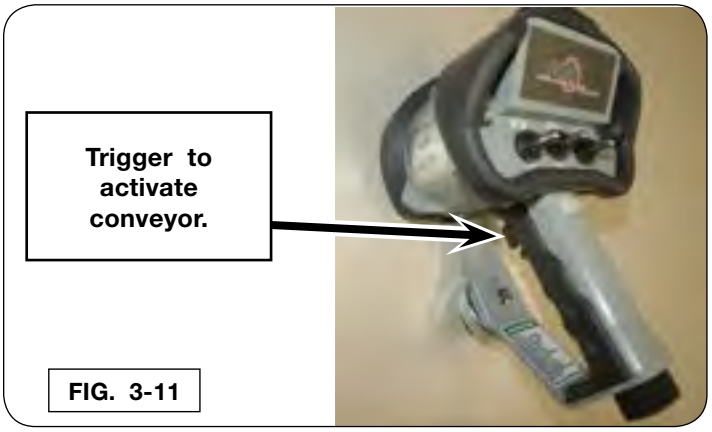


FIG. 3-11

It is recommended that the conveyor be emptied once planter is filled. Do this by closing door(s) on seed tender box shortly before last planter box is full, and let conveyor empty out.

NOTE: When using the 8” conveyor to fill individual planter boxes, the cover plate must be installed over grate. This will slow grain flow to an acceptable level for ease of use. Failure to do so will result in over-filling conveyor and potential damage to seed or conveyor.

Leaving seed in the conveyor for short periods of time will not damage conveyor, nor will it hinder starting/stopping conveyor when it is full, but over time seed could begin to settle resulting in hard starting of the conveyor.

⚠ WARNING

- **THE REAR HOPPER OF THE SEED TENDER BOX SHOULD ALWAYS BE EMPTIED FIRST. THIS WILL MAINTAIN WEIGHT ON THE HITCH OF THE TOWING VEHICLE. EMPTYING THE FRONT HOPPER FIRST WITH THE REAR HOPPER FULL COULD RESULT IN NEGATIVE TONGUE WEIGHT ON THE UNDERCARRIAGE AND REDUCED CONTROL OF THE UNDERCARRIAGE WHEN TOWING.**

Hydraulic Power Unit Operation (continued)

Adjusting Hydraulic Pressure Relief Valve

A. The Seed Runner tender has an adjustable relief valve on the direction control valve which can be adjusted for optimum operation. It is pre-set at the factory to by-pass the system once the hydraulic fluid pressure exceeds 2250 psi. This is the optimum setting. Adjusting the relief to higher settings may give unsatisfactory results.

⚠ WARNING

- **FAILURE TO REPLACE THE CAP BEFORE STARTING THE ENGINE WILL CAUSE THE OIL TO ESCAPE FROM THE CARTRIDGE.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**

IMPORTANT

- *This Seed Runner tender can be adjusted to provide system pressures from 1,000 PSI up to 2,500 PSI. When adjusting the relief to allow the system to exceed 2,250 PSI, the engine will tend to bog down due to the load and in high load applications, may cause the engine to stall.*

Hydraulic Power Unit Operation (continued)

IMPORTANT

- *It will be necessary to install a pressure gauge into the hydraulic system to accurately adjust the relief valve.*

B. Remove the cap from the relief valve on the directional control valve with an allen wrench (FIG. 3-12).

NOTE: Do not start engine with cap removed.

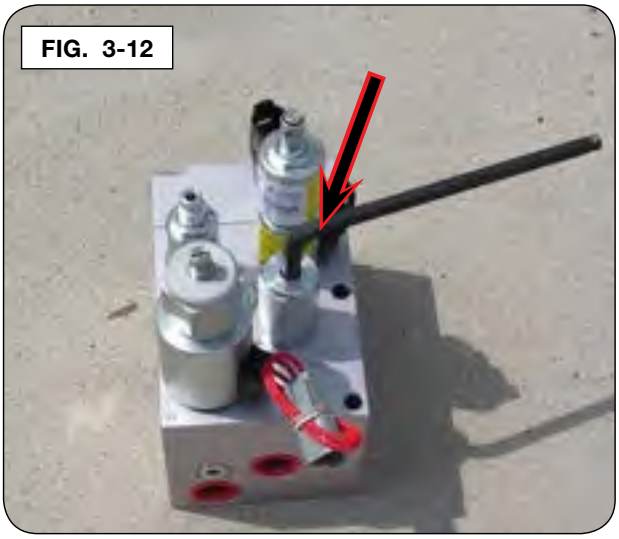


FIG. 3-12

C. **To increase the pressure,** insert allen wrench into pressure adjusting screw and turn the wrench clockwise.
To decrease the pressure, insert allen wrench into pressure adjusting screw and turn the wrench counter-clockwise. (FIG. 3-13)

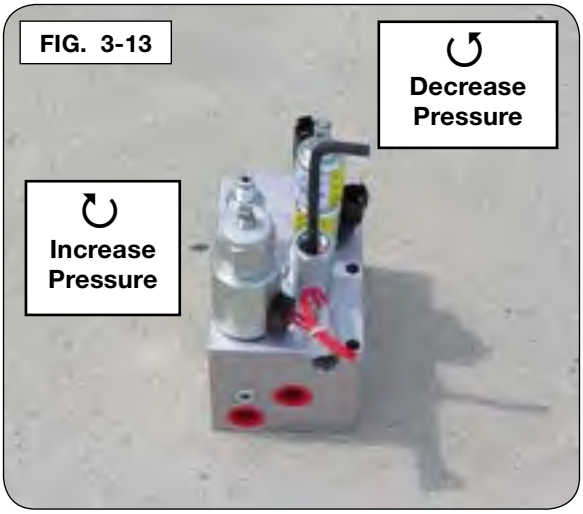


FIG. 3-13

D. Replace the cap on the relief valve and tighten (FIG. 3-14).

E. Start engine, fully raise the conveyor then read the system pressure while the conveyor raise control is engaged. Repeat steps B through D until the desired relief pressure is achieved.

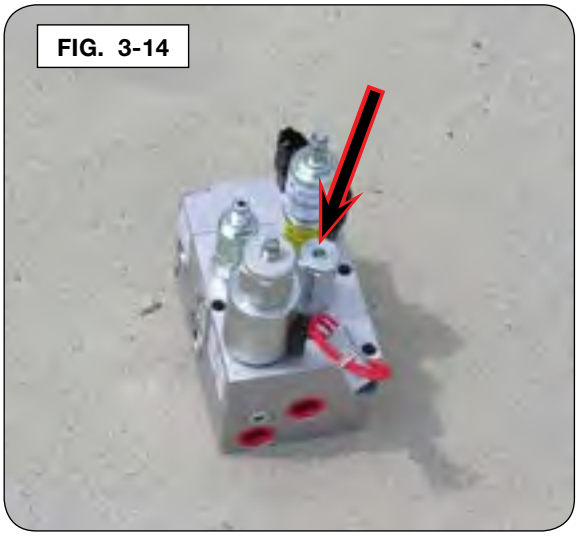


FIG. 3-14

Conveyor Belt Electronic Speed Control

The smooth-start module speed control is simply two push buttons; one to increase the conveyor speed and one to decrease the conveyor speed. Each time a button is pressed the conveyor speed changes by 10%. The speed can be varied from 20% to 100% The speed is shown by a series of LEDs, the LEDs indicate 10% steps by flashing and 20% increments by being on continuously.

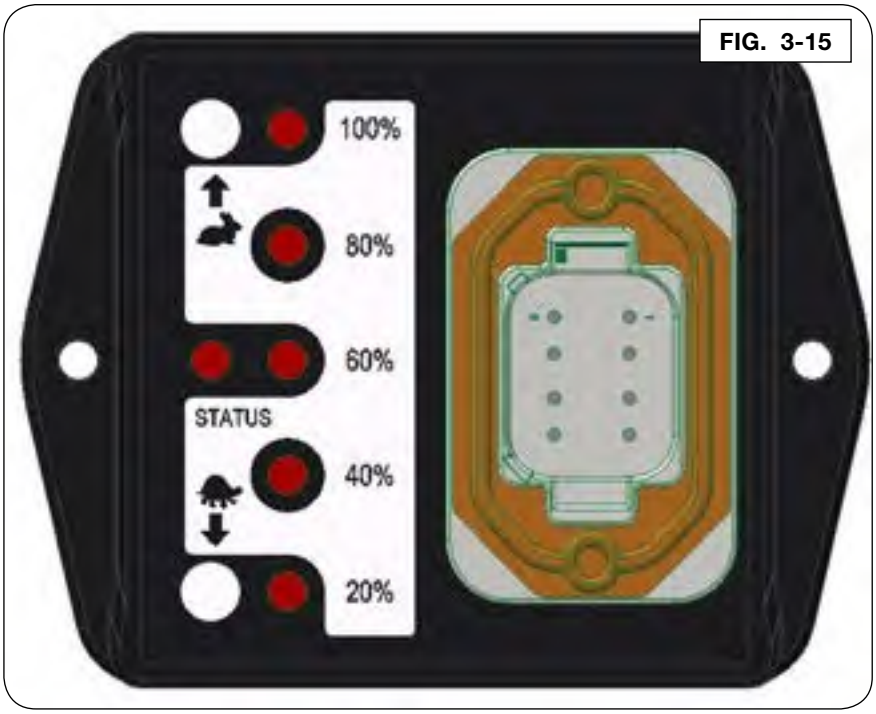


FIG. 3-15

Pivoting Conveyor Side-To-Side

⚠ CAUTION

- **WHEN THE SEED RUNNER TENDER IS PARKED ON AN INCLINE, THE CONVEYOR MAY PIVOT AS SOON AS THE LATCH IS RELEASED. INADVERTENT MOVEMENT OF THE CONVEYOR MAY CAUSE PERSONAL INJURY.**

Remove klik pin from pivot transport lock. Start engine on hydraulic power unit and increase throttle speed. Operate hydraulic valve to raise conveyor so that it clears the transport cradle. Turn lever to release pivot latch, and swing conveyor out to desired position (FIG. 3-16).

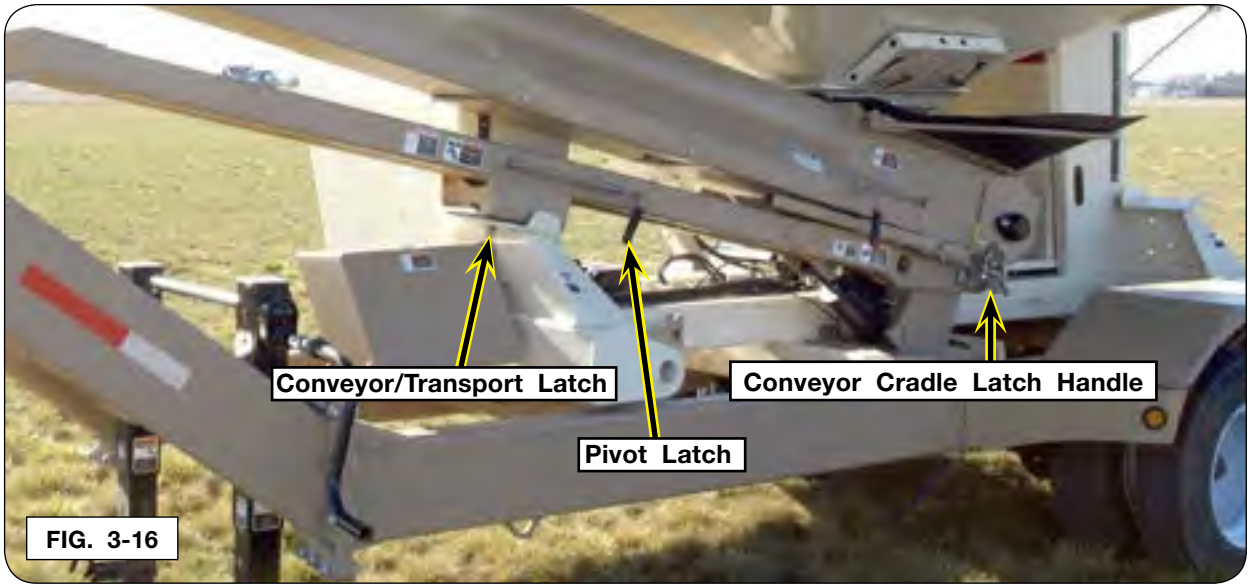


FIG. 3-16

Conveyor pivot can be left to swing freely, or it can be latched in place at various points along the track.

Raising and Lowering Conveyor

Conveyor height is adjusted by an electric switch on the remote control. This switch activates the solenoid on the spool valve to raise or lower the conveyor.

IMPORTANT

- *Always remove klik pin from pivot transport lock before raising conveyor.*

Activate switch to raise or lower conveyor to desired height. A check valve in the system requires hydraulic pressure for both raising and lowering the conveyor.

Manual Control Of Conveyor

For units equipped with an Override Box, refer to remote override box instructions for installation and usage.

Should the remote control not work to operate the conveyor, use the override buttons on the valve for operation. These are the knurled buttons located on top of the solenoids. The operations are performed by either pushing in the button and holding in place, or pulling the button up and holding in place.

Valve 1 = By pushing this button in and holding in position, it will raise the conveyor. Pull this button up and hold in position, to lower the conveyor (FIG. 3-17).

Valve 2 = To override, turn screw clockwise to turn conveyor on. To return to normal valve function, turn screw counterclockwise until it stops (FIG. 3-17).

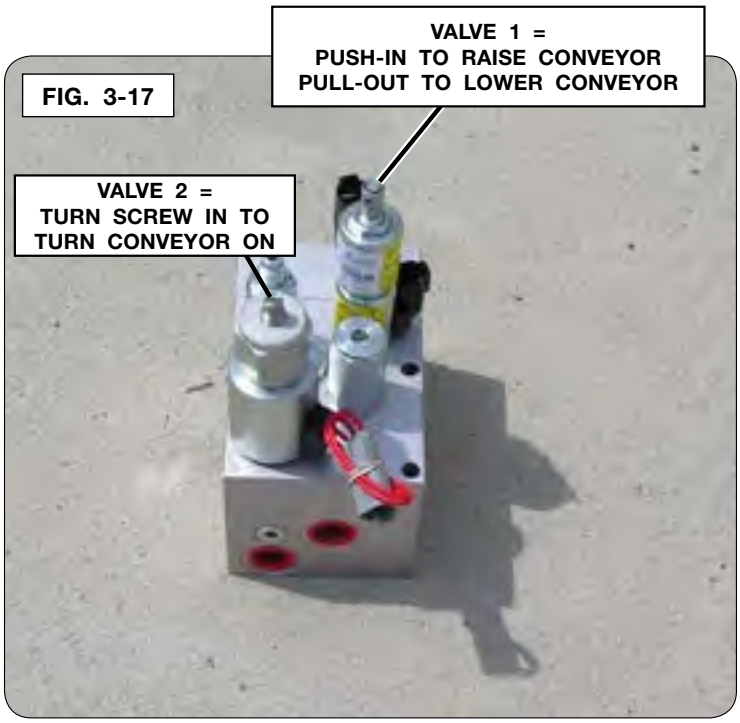


FIG. 3-17

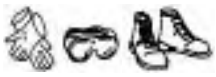
Note: To pull-out on Valve 1, push in on the button and pull up on the knurled sleeve.

Filling Seed Tender From Another Wagon or Bulk Container (Self-Filling)

WARNING

- **THE SEED RUNNER TENDER MUST BE ATTACHED TO THE TOWING VEHICLE WHEN BEING FILLED AND THE BRAKES ON THE TOWING VEHICLE MUST BE SET.**
- **FILL THE FRONT COMPARTMENT OF THE SEED RUNNER TENDER FIRST BEFORE THE REAR COMPARTMENT TO HELP PREVENT INSTABILITY OF SEED RUNNER TENDER.**
- **WHEN WORKING AROUND THE MACHINE, BE SURE IT IS SECURELY BLOCKED; FAILURE TO DO SO COULD RESULT IN TIPPING OR MOVEMENT OF MACHINE, CAUSING SEVERE BODILY HARM.**

- **EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.**



- **KEEP HANDS CLEAR OF PINCH POINT AREAS.**

1. Pivot conveyor out of transport position to about a 45 degree angle from the tongue and lower completely. (FIG. 3-18)
2. Remove upper spout from conveyor by releasing latch and sliding spout off of conveyor. (FIG. 3-18)
3. Install self-filling spout assembly (8” conveyor - 2004942TS; 10” conveyor - 2003114TS).

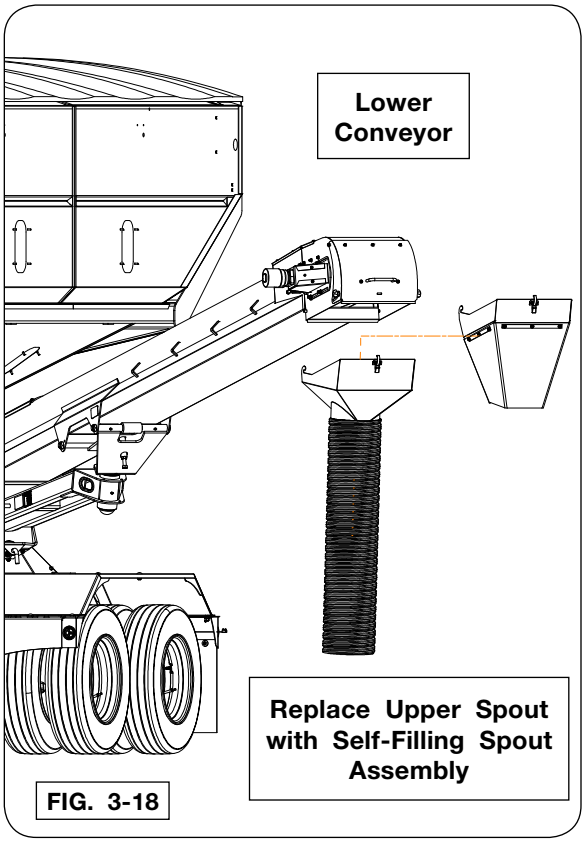


FIG. 3-18

Filling Seed Runner From Another Wagon or Bulk Container (Self-Filling) (continued)

4. To simplify movement of conveyor out from under the Seed Runner tender to a self-load position, the chute on the bottom of the tank can be slid back (FIG. 3-19). This is done by removing the hairpin cotter holding it in place, and pulling it back away from conveyor (FIG. 3-20). Once conveyor is back under the tank, it is important to slide chute back into place and secure with hairpin cotter prior to use for filling planter.

FIG. 3-19

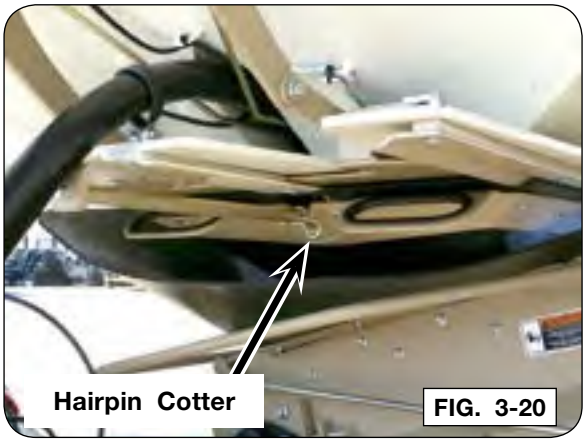


FIG. 3-20

5. Unlatch conveyor from lower cradle. (FIG. 3-21)

FIG. 3-21

Filling Seed Runner From Another Wagon or Bulk Container (Self-Filling) (continued)

7. Lower flexible hopper using the handle shown in FIG. 3-22 or FIG. 3-23.

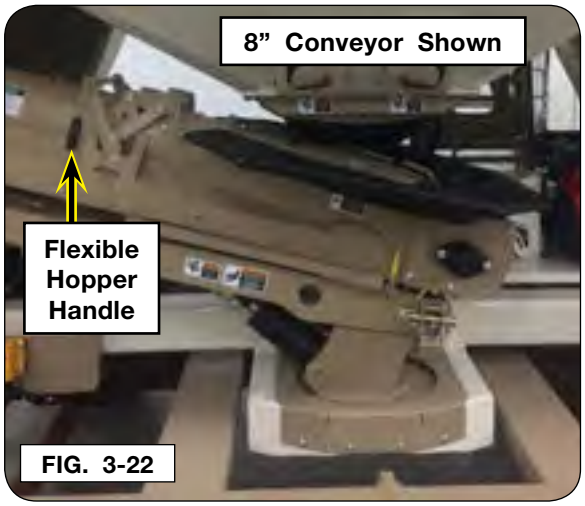


FIG. 3-22

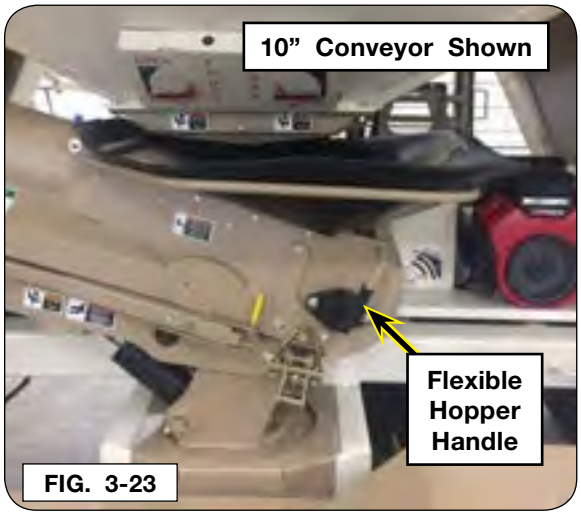


FIG. 3-23

5. Raise conveyor about half way up and position it at a 45 degree angle from the box. (FIG. 3-24)

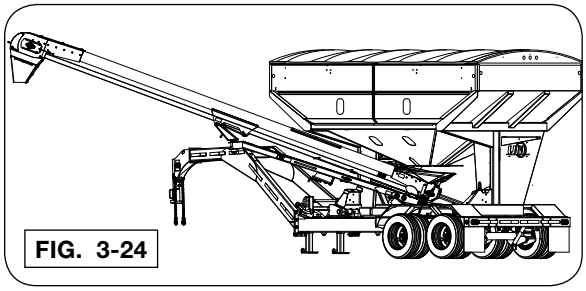


FIG. 3-24

8. Pull hopper end of conveyor out from under the seed tender box.

IMPORTANT

- *Whenever possible, use the stand on the bottom of the conveyor to keep the hopper off the ground. Maximum conveyor performance and easier access to discharge point on bulk seed containers will result.*


FIG. 3-25

Filling Seed Runner From Another Wagon or Bulk Container (Self-Filling) (continued)

9. Raise flexible hopper by sliding lever to the upright position. Locate wagon or bulk seed container over conveyor hopper and operate conveyor to fill seed tender box.

10. When finished loading seed into the seed tender, move wagon or bulk seed container away from conveyor. Pivot conveyor hopper back under the seed tender box, and latch in place. Conveyor should be placed back in the transport position and secured with the klik pin. Slide chute back in place.

IMPORTANT

- *When pivoting conveyor, be certain to pivot back in the direction it originally came from. Do not pivot conveyor round and around. Doing so will twist hydraulic hoses at pivot point resulting in damage to hoses and potential hydraulic failure.*

IMPORTANT

- *Conveyor must always be latched in cradle except when self-filling seed tender box.*

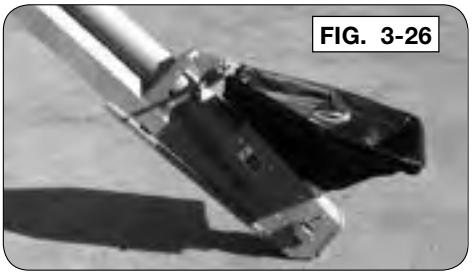
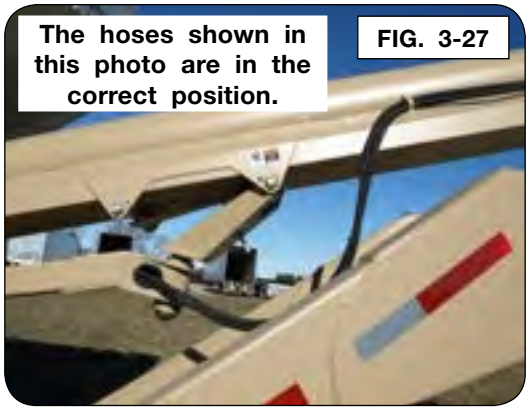


FIG. 3-26



The hoses shown in this photo are in the correct position.

FIG. 3-27

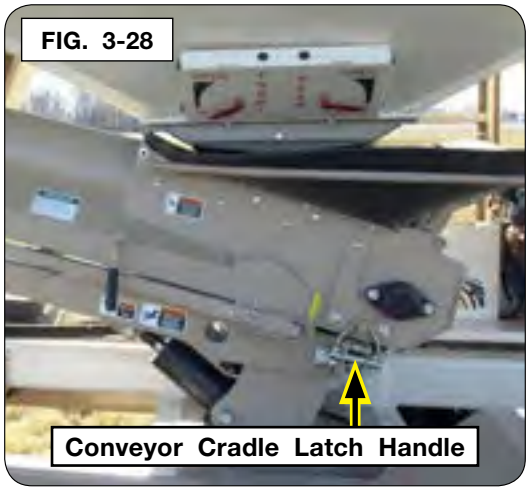


FIG. 3-28

Conveyor Cradle Latch Handle

Fill Level Indicator Lights

Unit is equipped with fill level indicator lights to let the operator know the amount of seed in the unit. These are especially helpful when self-filling to let the operator know when unit is nearly full. Light will be on when seed reaches that level or higher. These are operational any time the key switch is in the “on” position.

FIG. 3-29

Unit is equipped with Door closed indicator lights to let the operator know that the doors are completely closed. The lights will be on when the doors are closed. These are operational any time the key switch is in the “on” position.

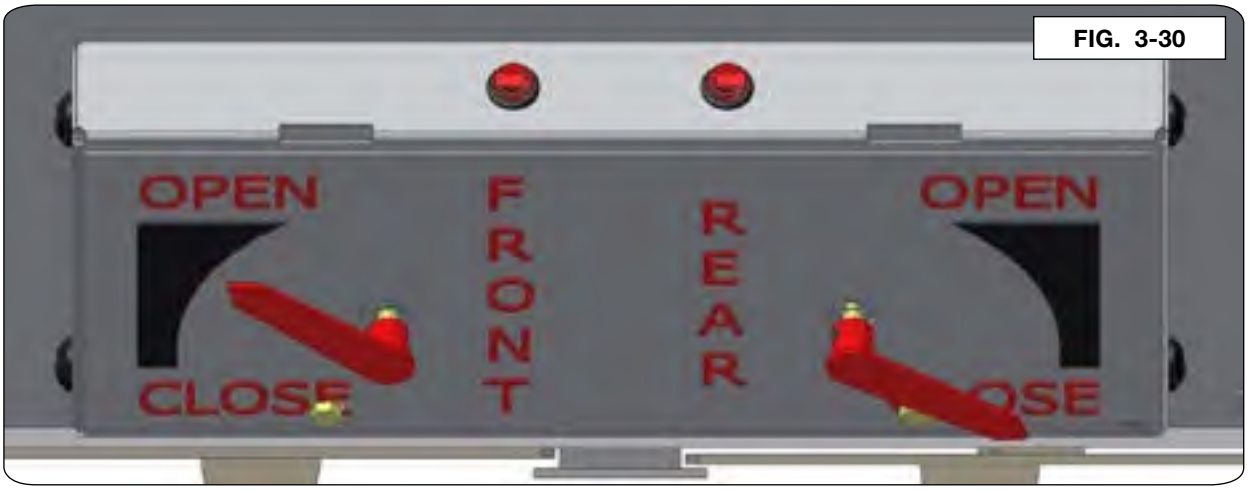


FIG. 3-30

Ladder

1. To use ladder, lift lever shown in FIG. 3-31 to release the lower extension ladder from transport position.

2. When not using ladder be sure to raise lower extension ladder and latch into the transport position.

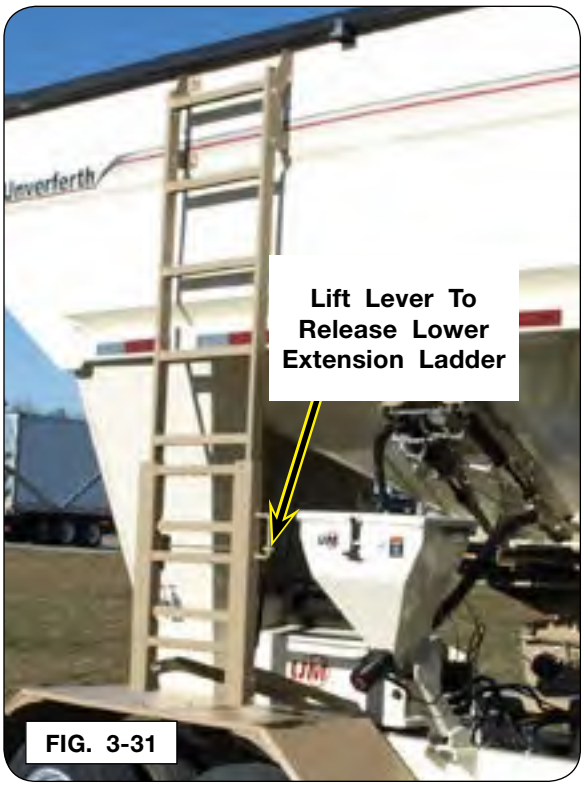


FIG. 3-31

Deluxe Ladder (Optional)

1. To use ladder, lift lever shown in FIG. 3-32 to release the lower extension ladder from transport position.

2. When not using ladder be sure to raise lower extension ladder and latch into the transport position.

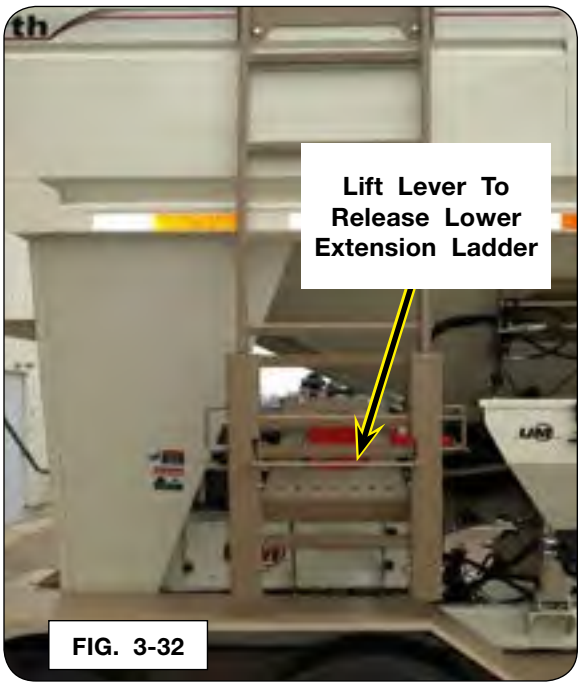


FIG. 3-32

Tarp

IMPORTANT

- *Do not release tension from ratchets once they are set. They should only be released when removing the tarp from box.*

1. To operate tarp, remove retaining pin from crank holder. With both hands, carefully remove crank from the holder. Extend crank handle assembly to a comfortable operating position at back of box. Roll tarp entirely to the open or closed position. Proceed by placing crank in holder and reinsert pins.

2. Always use adequate caution when operating tarp.

3. Make sure no one is on or near the tarping system while operating tarp.

4. Always use both hands with feet on a solid surface while operating the tarp.

5. Do not exert extreme force to roll tarp open or closed. If tarp is covered with grain or snow, it must be removed before operating.

6. End caps must be free from grain that may be piled on them.

7. Tarp should be fully closed when in transport.

8. Insert snap pins whenever removing or placing crank in holders.

9. Periodic preventive maintenance should be practiced to maintain the tarp's ability to function and prolong its life. Inspect tarp and hardware often for abrasions or loosened bolts that may need to be adjusted and/or repaired. Check cables for wear and adjust tension whenever needed. Make all appropriate repairs or adjustments immediately before serious damage occurs.

FIG. 3-33

Shown in closed position ready for transport.

Optional Electric Tarp Kit (#27706)

See manual #27951 for complete operating procedures.

FIG. 3-34

6-Function Wireless Remote Control Pkg #2007513TS (Option)

See manual #2010520 for complete operating procedures.

7-Function Wireless Remote Control Pkg #2007514TS (Option)

See manual #2010521 for complete setup instructions and parts listing.

Override Box Options

For units equipped with an Override Box, refer to remote override box instructions for installation and usage.

Override Box
2 & 3 Function
(2009341)

Override Box
6 Function
(2009333)

Override Box
7 Function
(2010504)

UM2520 Electronic Scale

Basic Operation

To ensure that the maximum error is within the scale manufacturer's accuracy of +/- 1%, the Seed Runner tender must be stationary and on level ground when using the scale.

NOTE: Scale turns on as soon as power is applied.

1. Zero balance scale by pushing and holding the "Zero" button. This should be done where Seed Runner tender is going to be unloaded (on level ground if possible).

2. Load Seed Runner tender and let scale total up weight. When Seed Runner tender is full, drive up to planter wagon or truck and stop. After scale settles on a number, push the "Tare" button. Scale indicator will show zero.

3. Start unloading Seed Runner tender. When planter wagon or truck is full or Seed Runner tender is empty, the negative amount shown on scale is actual product in planter wagon or truck.

4. Push the "Net/Gross" button. This will put the scale back into the gross weighing mode again. If the Seed Runner tender has grain in it yet, it will tell you how much weight is left on the Seed Runner tender. You can now load the Seed Runner tender again and repeat the same unloading process.

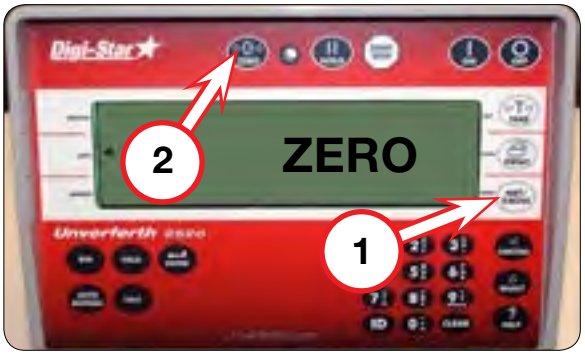
5. It is recommended to periodically fully empty the Seed Runner tender and rebalance the scale.

NOTE: Refer to your scale indicator manual for additional operating information.

UM2520 Electronic Scale (continued)

Detailed Procedures

To Zero / Balance the Scale



1. Press the [NET/GROSS] key and within three seconds,

2. Press the [ZERO] key.

   The [ZERO] key will "balance off" empty undercarriage, bin, or platform weight.

   The "ZERO" message is displayed and the scale is placed in the GROSS mode.

   Pressing only the [ZERO] key will cause the message "TO ZERO / BALANCE PRESS NET/GROSS -- THEN ZERO" to be displayed.

If the supply power is below the "low battery threshold" (10.5 Volts), the message "INDICATOR CANNOT BE ZERO/BALANCED -- LOW BATTERY VOLTAGE" is displayed. The message "LO BAT" will be periodically shown on the display (approx. every five seconds) to alert the operator of the low battery condition.

Loss of power does not affect the ZERO/BALANCE or "Set Up/Calibration" values.

UM2520 Electronic Scale (continued)

Detailed Procedures (continued)

To Select Gross Mode

GROSS mode displays the weight change since it was last **ZERO/BALANCED**.

1. Press **[NET / GROSS]**.

The scale is in **GROSS** mode if there is a flashing arrow pointing toward the word **GROSS**, next to the display.

To Select Net Mode

NET mode displays the weight change after a TARE has been performed. TARE is a temporary "zero" or reference point.

1. Press **[TARE]** key for 3 seconds to set a temporary "zero" point and enter the **NET** mode.

2. If in Gross mode, press **[NET / GROSS]** key.

   The **[NET/GROSS]** key is an alternating action key. If the scale is in the **GROSS** mode, pressing the **[NET/GROSS]** key will place it in the **NET** mode. If the scale is in the **NET** mode, pressing the **[NET/GROSS]** key will place it in the **GROSS** mode.

   If the **TARE** function has not been previously performed, the Seed Runner will stay in the GROSS mode and the message **"FOR NET MODE PRESS TARE"** will scroll across the display.

   The scale is in **NET** mode if there is a flashing arrow pointing toward the word **NET**, next to the display.

To Print (Optional Feature)

Press the **PRINT** key. Scale data will be sent to the printer or data downloader.

UM2520 Electronic Scale (continued)

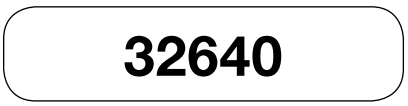
Detailed Procedures (continued)

To Change the Set Up & Calibration Numbers

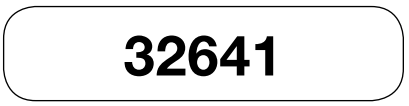
1. Press **[ON]** to turn on the scale.
2. To enter Short Form Calibration & Set Up press and hold the **[ZERO]** key, then press the **[ON]** key and hold until the message displayed is **"SET UP"**.

3. Next, the actual **SET UP** number is displayed. (NOTE: Factory **SET UP** number is 146040.)

4. Press the **[ZERO]** key for additional help information during Set Up and Calibration.
5. If the correct **SET UP** number is displayed, press the **[ON]** key to advance to the **CAL** number. (NOTE: Factory **CAL** number is 32640.)



   A. Press the [SELECT] key to cause the "flashing" digit to count upward.



   B. Press the [FUNCTION] key to select which digit is flashing.

6. When the correct SET UP number is displayed, press the **[ON]** key to advance to the **CAL** number.

   This displays the **CAL** message, followed by the **CAL** number.

The **CAL** number is not a weight. It is a reference value the indicator uses to determine the weight. This number directly affects the accuracy of the scale system.

Change the **CAL** number using the same method described in step 5. When the display shows the correct number, press the **[ON]** key. This causes the number to be stored permanently in the indicator and returns the indicator to the weighing mode.

To Return to Weigh Mode

1. To exit set up without changing any values, press and hold the **[TARE]** key, then press the **[ON]** key.

Downloader Module Option

Getting Started

Load the DTU (Data Transfer Utilities) software on your PC. Instructions are included with the CD-Rom Software.

1. **System Requirements for Computer**
   - Windows 98/2000/NT operating system: Pentium 100 PC or better
   - Serial Port: 100 MB of free disk space
   - CD-Rom Drive: 32 MB of RAM

2. **Connect Cable to Computer**
   The cable included with your DDL Kit, connects to the serial port on your computer. The serial port is referred to as "COM port." If your computer has more than one COM port, they will usually be named COM1, COM2, etc. This cable has a 9-pin D-sub connector. The cable must be securely connected to a COM port to function.

3. **Connect DDL to Indicator**
   Connect DDL to Serial/Printer port (J904) on Digi-Star indicator, which is located on bottom panel. Press the "Print Key." When indicator printing is completed, remove DDL.

   3a. DDL Set Up Requirements
   Use of the DDL (Data Downloader) with the EZII series indicators requires the latest software version. It is recommended that you call the Digi-Star Service Department for the latest software version and upgrade, if necessary to become current, before attaching and using a DDL.

   Menu 2 in the long form set up contains some features that must be set for the DDL to function properly. They are:

   SCOREM 0
   COM IN DOWNLD
   C1 DLY .10

4. **Connect DDL to Cable**
   Simply fasten module on the black circular plastic connector opposite computer connector. The module will lock on the cable connection with a twist of the fastener on module. Be sure that the module is secured on cable.

5. **Operate the DDL from Computer**
   Follow Data Transfer Utilities (DTU) software instructions included with the CD-Rom software.

Refer to the Manufacturer's Operation and Installation Manual for complete instructions, trouble-shooting, and scale set up/configuration guide or visit www.digi-star.com.

Opt. Auto-Shutoff Feature for UM2520 Scale

1. Turn on the UM2520 Electronic Scale. The scale only allows increments of 10 lbs. Enter the desired amount of product to be dispensed, then press [Enter].

2. The scale will flash “PRESET”. Use the radio remote to turn on the conveyor. Once the conveyor has dispensed the programmed amount of product it will automatically turn off.

3. To dispense the preset amount again press the conveyor control button once to automatically reset the indicator to the previously programmed unload weight. Press the button again turning the conveyor on. This cycle can be repeated as many times as necessary.

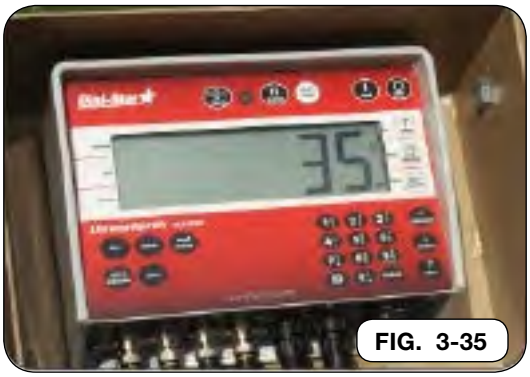


FIG. 3-35

NOTE: If the conveyor is shut off in the middle of a weighing cycle it will stop the preset function and the scales will return to normal manual operation.

UM2520 Scale Weight Calibration (Optional)

⚠ WARNING

- **KNOW AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REFER TO YOUR OPERATOR’S MANUALS FOR ADDITIONAL WARNINGS AND SERVICE INSTRUCTIONS.**

- **WHEN WORKING AROUND THE MACHINE, BE SURE IT IS SECURELY BLOCKED; FAILURE TO DO SO COULD RESULT IN TIPPING OR MOVEMENT OF MACHINE, CAUSING SEVERE BODILY HARM.**

IMPORTANT

- *External force applied to conveyor during “Auto Conveyor Shut-off” mode will cause scale to miss the target weight. Position the conveyor in the optimum location prior to unloading.*

Note: These calibration steps are to quantify the amount of grain in the downspout when the conveyor turns off.

UM2520 Scale Weight Calibration (Optional) (continued)

Filling a Central Fill System or Larger Quantity

1. Turn on the UM2520 Electronic Scale Indicator. Enter the desired amount of seed to be unloaded (Example: 300 lbs.), then press “ENTER”.

2. The scale will flash “PRESET”. With the Seed Runner engine running, turn on the conveyor.

3. Increase the throttle so the engine is at a desired constant speed that will be used during normal operation.

4. Open the flow door(s) of the Seed Runner tender to a desired amount that will be used during normal operation.

5. Once the conveyor turns off, record the number displayed on the indicator (Example: 50, 60, etc.).

6. To verify the unload amount, perform the procedure again. Press the conveyor control button to reset the indicator. Press the conveyor control button again to restart the conveyor.

7. Record the number displayed on the indicator (Example: 50, 60, etc.).

8. Repeat steps #5 and #6 approximately 6 more times. Record the displayed number after each cycle.

9. If the indicator displays a “0”, the preset weight does not need to be adjusted.

10. If the indicator displays, for example, a “50” that means 50 lbs. extra were unloaded.
    a. Adjust the preset weight to compensate for the extra 50 lbs. that were unloaded.
    b. Enter the new preset weight 50 lbs. lower than the desired amount.

11. When the conveyor auto shut-off is calibrated, refer to the operator’s manual for normal operation.

SECTION IV
Maintenance

Lubrication 4-2
Conveyor Bearings 4-2
Pivot Points 4-2
Hydraulic Power Unit 4-2
Hub Assembly 4-3
Hydraulic System 4-3
Purge Hydraulic System 4-4
Relieving Hydraulic Pressure 4-4
Conveyor Belt 4-5
Belt Tension 4-5
Belt Tracking 4-6
Manual Control Of Conveyor 4-7
Optional Belt Stretcher 4-8
Brake Cleaning and Inspection 4-10
Brake Lubrication 4-10
Magnets 4-10
Shoes and Linings 4-11
How To Measure Voltage 4-11
How To Measure Amperage 4-12
Brake Drum Inspection 4-13
Bearing Inspection 4-13
Troubleshooting Brakes 4-14
Power Pak 4-14
Battery Warranty 4-17
Wheels and Tires 4-18
Wheel Nut Torque Requirements 4-18
Tire Pressure 4-18
Tire Warranty 4-19
Complete Torque Chart
Capscrews 4-20
Hydraulic Fittings 4-20
Storage 4-21
Smooth-Start Module Troubleshooting 4-22
Troubleshooting 4-23
Scale Troubleshooting 4-27
Scale “Short Form” Set Up & Calibration 4-28
Auto Conveyor Shut-off Troubleshooting 4-30
Tank Lights and Magnetic Reed Switch 4-30
Adjusting Proximity Switch 4-31
Electrical Schematics & Hydraulic Diagrams 4-32

Lubrication

Lubricate with an SAE multi-purpose grease. All fittings must be free from dirt and paint to insure entry of lubricant inside bearing.

Conveyor Bearings

Lubricate these bearings every 8 hours of operation and at the end of each season before storage. Use only one stroke of grease per bearing.


FIG. 4-1

IMPORTANT

- *Do not use a high-pressure grease gun to lubricate conveyor bearings, as damage to bearing seal could occur.*
- *These bearings are shipped from our manufacturer full of grease. It is possible they will not take grease on a new machine.*

NOTE: Excessive lubrication of these bearings will result in premature failure.

Pivot Points

Lubricate pivot points on pivoting arm every 50 hours of operation and at the end of each season.

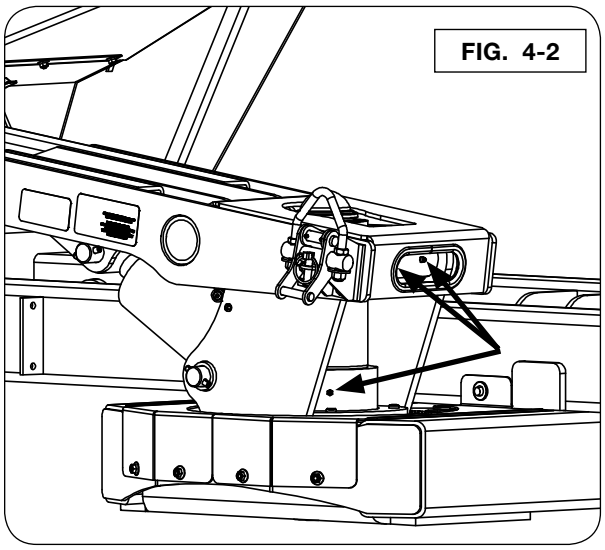


FIG. 4-2

Hydraulic Power Unit

Inspect hydraulic oil level in reservoir daily. The level should be 1" to 1 1/2" from the top of the sight gauge. Add the appropriate amount of **Chevron 1000 THF** hydraulic oil as needed. Most farm tractor type hydraulic oils are acceptable. **DO NOT** use Automatic Transmission Fluid! **DO NOT** mix different oils when topping off the tank.

Check motor oil level in engine daily. See Engine operator's manual for details on oil levels, oil types, and service intervals.

Hub Assembly

The wheel bearings should be cleaned, lubricated and adjusted every 12 months or 12,000 miles, whichever comes first. Use an SAE 80W90 oil to lubricate bearings. If the hub has been removed or bearing adjustment is required, the following procedure must be followed:

1. Clean spindle of all rust/corrosion, etc. The area where bearings and especially seal surface must be smooth and free of all rust and imperfections.
2. Apply a thin coating of oil to the inner seal surface, spindle bearing, and seal surface.
3. Carefully install hub/drum assembly onto the spindle.
4. Install outer bearing, washer, and nut.
5. Rotate hub while tightening spindle nut to 100 ft.-lbs.
6. Loosen nut, do not move hub.
7. Hand tighten nut until snug.
8. Begin to rotate hub and hand tighten more if necessary.
9. Advance the slotted nut to the nearest hole in spindle (horizontal or vertical) and tighten just enough to align with that hole.
10. Check hub for end play. (There should not be any). Hub should rotate freely with essentially no drag.
11. Install cotter pin and bend prong over.
12. Apply a thin layer of oil to hub cap o-ring.
13. Install the o-ring onto cap, being sure the o-ring is fully seated on the cap and not twisted.
14. Thread hub cap onto hub, and torque to 20-30 ft.-lbs. max.
15. Fill hub with oil. Rotate and ensure oil level is up to fill line.
16. Install rubber plug.

Hydraulic System

Refer to parts section for hydraulic component detail listing.

When properly assembled and maintained, the hydraulic system of the Seed Runner requires little maintenance.

Replacing Hoses/Fittings/Cylinders:

1. Use replacement hoses, fittings, and cylinders from your Unverferth Manufacturing dealer which are rated for 3000 psi.
2. Do not use hoses, fittings and cylinders that have pipe threads.
3. Do not use Teflon tape or thread sealant on JIC or O-ring fittings. Tighten fittings according to “Torque Chart” in this section.
4. When replacing hoses, always allow sufficient slack to permit hoses to move through the full range of motion of the cylinders.
5. Always purge the hydraulic system after servicing.

Hydraulic System (continued)

Purge Hydraulic System

⚠ WARNING

- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE "RELIEVING HYDRAULIC PRESSURE" IN THE MAINTENANCE SECTION OF THIS MANUAL.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

Purge air from system as follows:

A. Clear all personnel and objects from the area, including where the machine will have full range of motion during the hydraulic movement. Remove transport locks from the machine.
B. Pressurize the system and maintain the system at full pressure for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
C. Check oil reservoir in the hydraulic power source and refill as needed.
D. Pressurize the system again to reverse the motion of step B. Maintain pressure on the system for at least 5 seconds after the cylinder rods stop moving, or hydraulic motors have completed the required movement. Check that all movements are fully completed.
E. Check for hydraulic oil leaks using cardboard or wood. Tighten connections according to directions in the Torque Specifications in the MAINTENANCE section.
F. Repeat steps in B, C, D, and E 10-12 times.

IMPORTANT

- *Machine damage will occur if the cylinder is incorrectly installed.*

Check for and correct any leaks. Make sure hoses are not kinked, stretched, or twisted. Secure hoses to prevent cuts or chafing during operation.

Relieving Hydraulic Pressure

To relieve hydraulic pressure in the system, be sure hydraulic motor is disengaged and/or hydraulic cylinder is not exerting force on the system. Next, turn off engine and actuate valve in hydraulic system to all positions of actuation and to the neutral position. This should relieve all pressure in the system. If there is a need to remove hydraulic fittings or hoses, slowly loosen the appropriate connections. If there appears to be pressure in the system, retighten fitting and at the top of this section and perform all procedures again until pressure if relieved.

Conveyor Belt

WARNING

- **ENTANGLEMENT WITH MOVING PARTS CAN CAUSE SERIOUS INJURY OR DEATH. USE EXTREME CARE WHEN INSPECTING AND ADJUSTING BELT TRACKING. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC., THAT MAY BECOME ENTANGLED IN MOVING PARTS.**

IMPORTANT

- *Proper belt tension and correct 'tracking' of the belt are critical to maintaining the belt for years of worry-free use. Belt tension and tracking should be checked after the first initial use and second use and then after the 2 hours of initial use. Thereafter, belt tension and tracking should be checked at the beginning of each season and every 8 hours of use. Belt tracking will also need to be checked anytime the belt tension is adjusted.*

Belt Tension

1. Belt tension is inspected by removing the lower cover panel from conveyor. Apply pressure to the center of the belt and it should spring back when pressure is released. The belt should not slip on startup or when grain is applied. (FIG. 4-4)

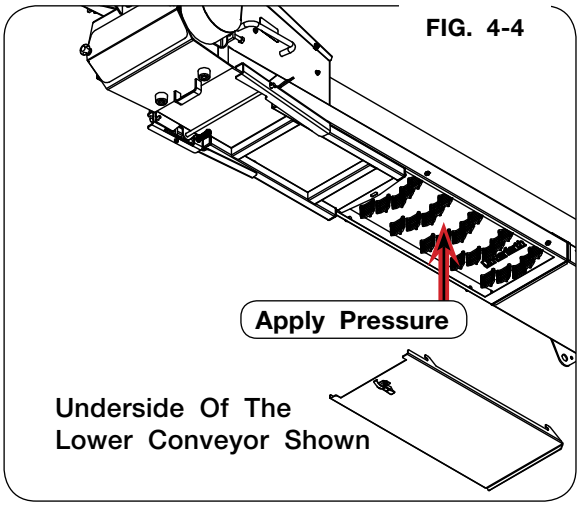


FIG. 4-4

2. Belt tension is adjusted at the discharge end of the conveyor. Loosen, **DO NOT REMOVE**, the four 3/8" bolts on each side of the conveyor. Use the two adjusting bolts to adjust the belt to the proper tension. (FIG. 4-5)

3. It is important to move both sides the same distance. Too much tension on the belt will stretch the splice link and greatly reduce belt life. Too little tension on the belt could result in belt slipping on drive pulley. Replace the bottom cover panel and continue to check belt tracking before re-tightening the four bolts on each side of the conveyor.

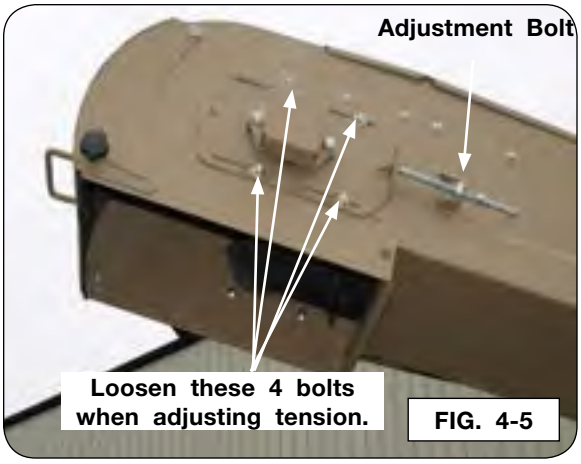


FIG. 4-5

IMPORTANT

- *Belt tracking must be done every time tension is adjusted.*

Conveyor Belt (continued)

Belt Tracking

Conveyor belt must always run at the center of the pulley on both the intake and discharge end. Improper tracking of the belt will result in excessive wear to the edge of the belt, and will greatly reduce belt life. Check belt tracking every 25 hours of use, and every time belt tension is adjusted.

Inspect tracking of belt at discharge end by removing lower spout, pivoting deflector up, and looking up at the belt and pulley. Belt should be in center of pulley.

FIG. 4-6

Adjust by loosening, DO NOT REMOVE, the four bolts on the side of the conveyor. Operate conveyor at slow speed, and tighten or loosen the adjustment bolt until belt is running in the center of the pulley.

⚠ WARNING

- **MOVING OR ROTATING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. USE EXTREME CARE WHEN INSPECTING AND ADJUSTING BELT TRACKING.**

Tighten all bolts on side of conveyor, and lock adjustment bolts into place.

Inspect tracking of belt at intake end by opening bottom inspection door on conveyor. Belt should be in the center of the pulley.

Manual Control Of Conveyor

If the Seed Runner is equipped with a wireless control, refer to "Override Box" instruction sheet #2009490 included with the override box on how to connect and operate the override box.

Should the wired switch not work to operate the conveyor, use the override buttons on the valve for operation. These are the knurled buttons located on top of the solenoids. The operations are performed by either pushing in the button and holding in place or pulling the button up and holding in place.

Valve 1 = By pushing this button in and holding in position, it will raise the conveyor. Pull this button up and hold in position, to lower the conveyor (FIG. 4-11).

Valve 2 = To override, use a flat screwdriver and screw in so the valve remains open. To return to normal valve function, use a flat screwdriver and screw completely out. (FIG. 4-11).

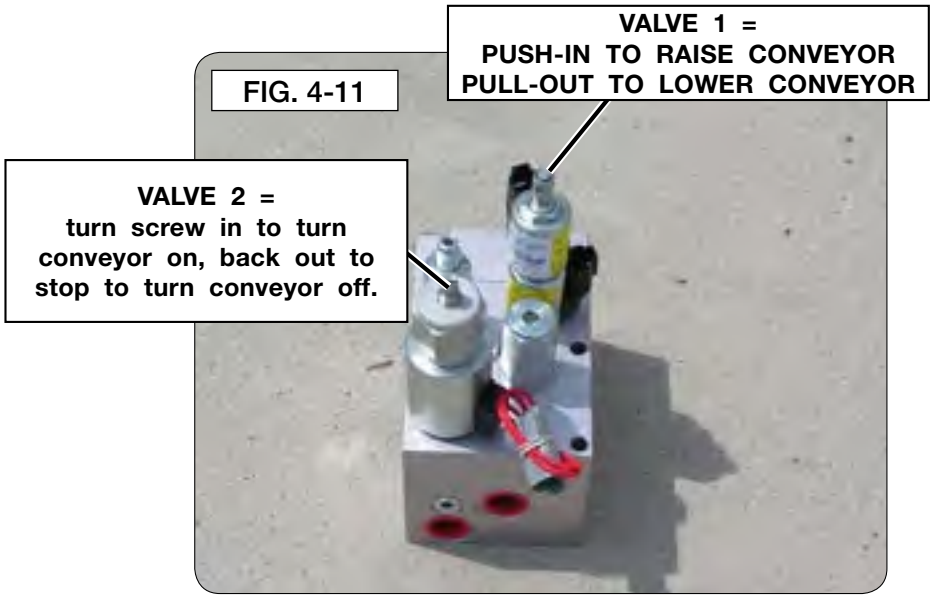
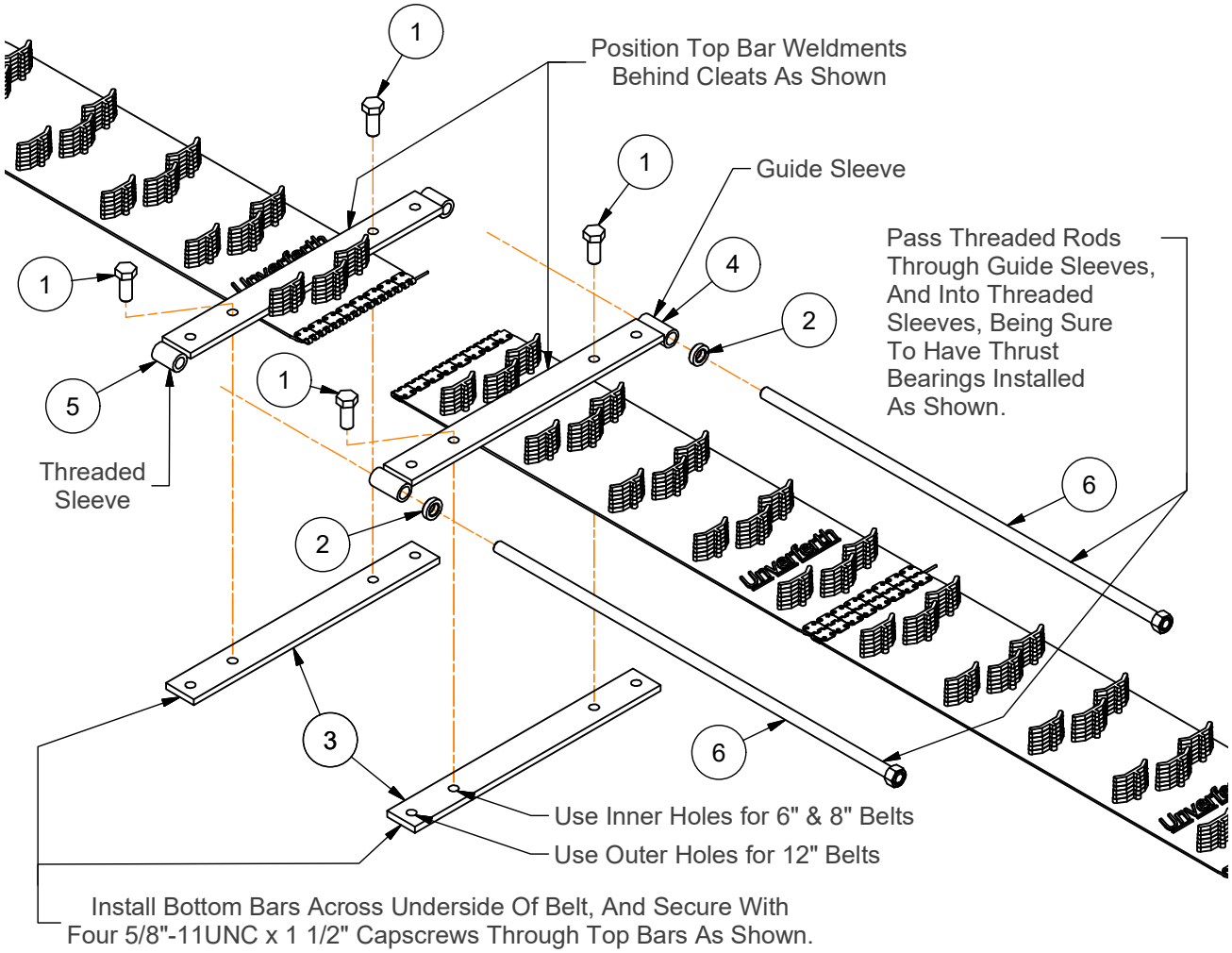


FIG. 4-11

NOTE: To pull-out on Valve 1, push in on the button and pull up on the knurled sleeve.

Belt Stretcher (Optional)

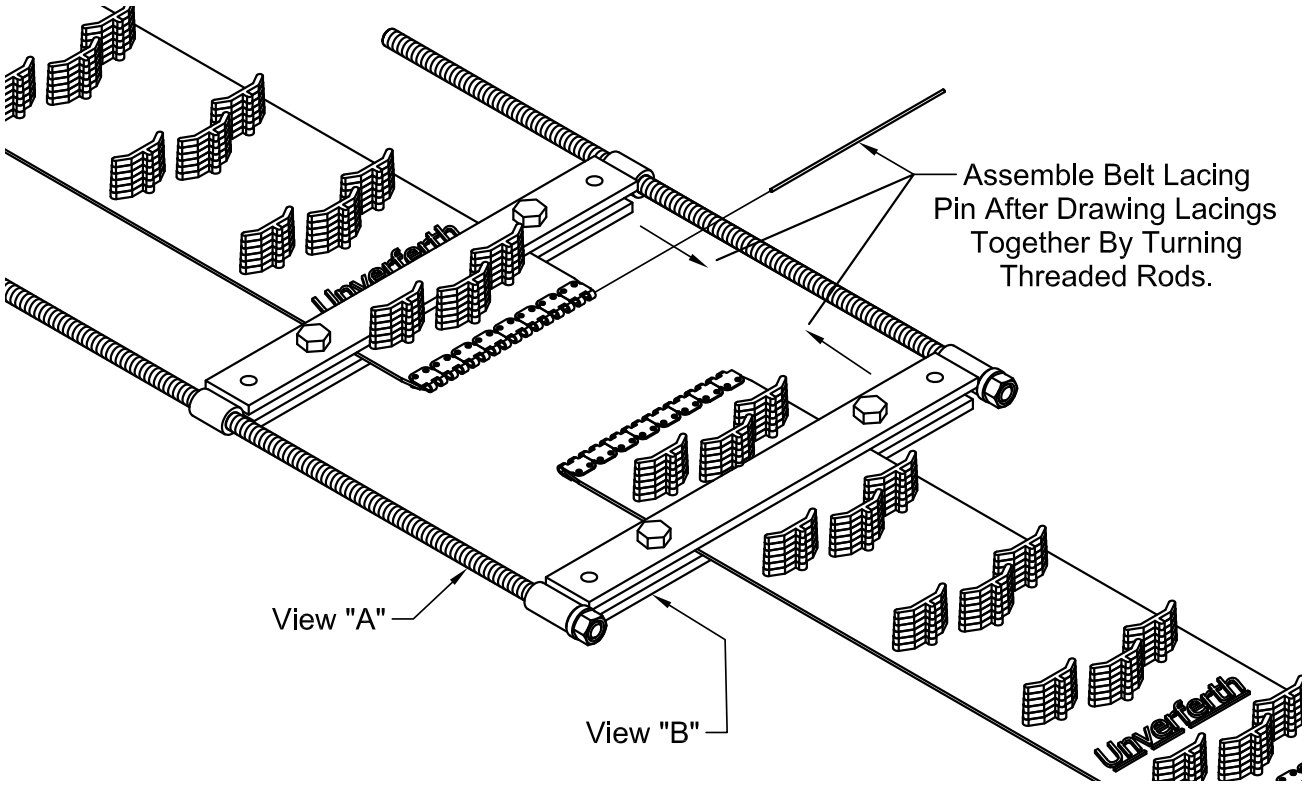


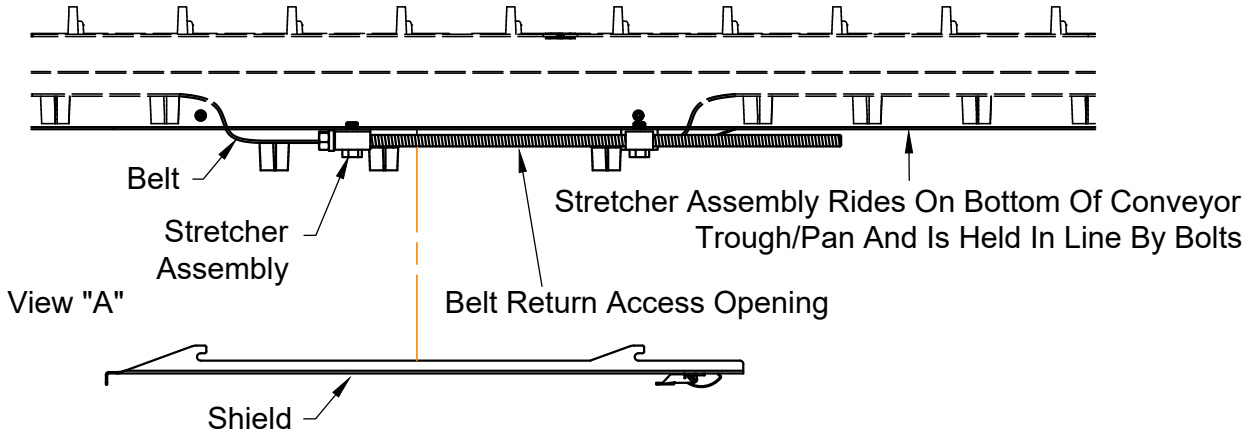
ITEM	PART NO.	QTY	DESCRIPTION
	TA4-114400-0	1	BELT INSTALLATION TOOL
1	9390-122	4	CAPSCREW, 5/8-11UNC x 1 1/2 LG. GRADE 5
2	TA0-903118-0	2	BEARING, BALL THRUST, 5/8" I.D.
3	TA1-114401-0	2	BOTTOM BAR
4	TA2-114404-0	1	PLAIN TOP BAR WELDMENT
5	TA2-114406-0	1	THREADED TOP BAR WELDMENT
6	TA2-114408-0	2	THREAD ROD WELDMENT

Belt Stretcher (Optional) (Continued)

Stretcher Assembled to Belt

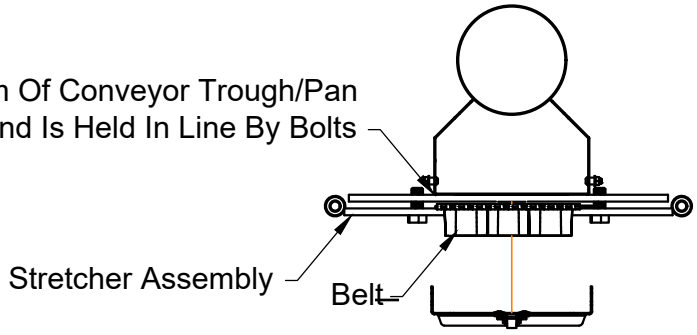
FOR ILLUSTRATION ONLY





View "B"

Stretcher Assembly Rides On Bottom Of Conveyor Trough/Pan And Is Held In Line By Bolts



Brake Cleaning and Inspection

Your undercarriage brakes must be inspected and serviced immediately if a loss of performance is experienced. With normal use, servicing at one year intervals is usually adequate. With increased usage, this work should be performed more frequently as required. Magnets and shoes must be changed when they become excessively worn or scored, a condition which can reduce vehicle braking. Clean the backing plate, magnet arm, magnet, and brake shoes. Make certain that all the parts removed are replaced in the same brake and drum assembly. Inspect for any loose or worn parts, stretched or deformed springs and replace as necessary.

⚠ WARNING

- **POTENTIAL ASBESTOS DUST HAZARD - SOME BRAKE LININGS MAY CONTAIN ASBESTOS DUST, WHICH HAS BEEN LINKED TO SERIOUS OR FATAL ILLNESSES. CERTAIN PRECAUTIONS NEED TO BE TAKEN WHEN SERVICING BRAKES:**

1. Avoid creating or breathing dust.
2. Avoid machining, filing or grinding the brake linings.
3. Do not use compressed air or dry brushing for cleaning (dust can be removed with a damp brush).

Brake Lubrication

Before reassembling, apply a light film of grease or anti-seize compound on the brake anchor pin, the actuating arm bushing and pin, and the areas on the backing plate that are in contact with the brake shoes and magnet lever arm. Apply a light film of grease on the actuating block mounted on the actuating arm.

NOTE: Do not get grease or oil on the brake linings, drums or magnets.

Magnets

Your electric brakes are equipped with high quality electromagnets that are designed to provide the proper input force and friction characteristics. Your magnets should be inspected and replaced if worn unevenly or abnormally. Use a straightedge to check magnet condition. For best results, the magnet should be flat. Even if wear is normal as indicated by your straightedge, the magnets should be replaced if any part of the magnet coil has become visible through the friction material facing of the magnet. It is also recommended that the drum armature surface be refaced when replacing magnets. Magnets should also be replaced in pairs - both sides of an axle.

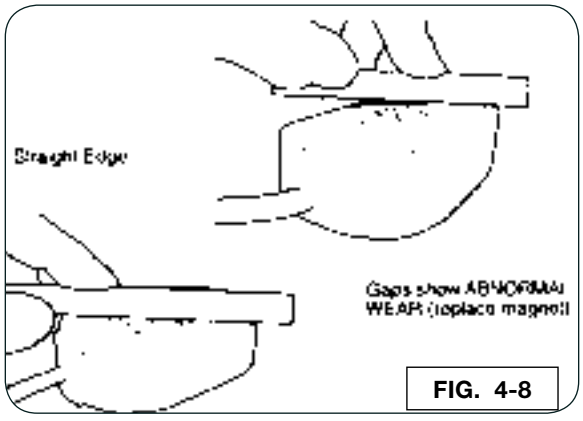


FIG. 4-8

Brake Cleaning and Inspection (continued)

Shoes and Linings

A simple visual inspection of your brake linings will tell if they are usable. Replacement is necessary if the lining is worn (to within 1/16" or less), contaminated with grease or oil, or abnormally scored or gouged. Hairline heat cracks are normal in bonded linings and should not be cause for concern. When replacement is necessary, it is important to replace both shoes on each brake and both brakes of the same axle. This will help retain the "balance" of your brakes.

After replacement of brake shoes and linings, the brakes must be re-burnished to seat in the new components. This should be done by applying the brakes 20 to 30 times from an initial speed of 40 m.p.h., slowing the vehicle to 20 m.p.h. Allow ample time for brakes to cool between applications. This procedure allows the brake shoes to seat in to the drum surface.

FIG. 4-9

How to Measure Voltage

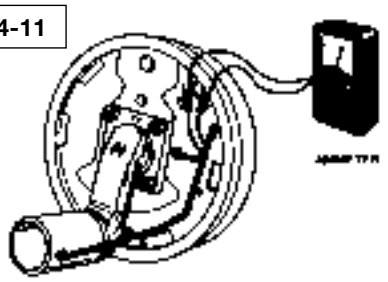
System voltage is measured at the magnets by connecting the voltmeter to the two magnet lead wires at any brake. This may be accomplished by using a pin probe inserted through the insulation of the wires. The engine of the towing vehicle should be running when checking the voltage so that a low battery will not affect the readings. Voltage in the system should begin at 0 volts and, as the controller bar is slowly actuated, should gradually increase to about 12 volts. If the controller does not produce this voltage control, consult your controller manual. The threshold voltage of a controller is the voltage applied to the brakes when the controller first turns on. Lower threshold voltage will provide for smoother braking. If the threshold voltage is too high, the brakes may feel touchy and harsh.

FIG. 4-10

How to Measure Amperage

System amperage is the current flowing in the system when all the magnets are energized. The amperage will vary in proportion to the voltage. The engine of the tow vehicle should be running with the undercarriage connected when checking the undercarriage braking system. One place to measure system amperage is at the BLUE wire of the controller which is the output to the brakes. The BLUE wire must be disconnected and the ammeter put in series into the line.
System amperage draw should be as noted in the following table.

FIG. 4-11



Brake Size	Amps/ Magnet	Two Brakes	Four Brakes	Six Brakes	Magnet Ohms
7 x 1¼	2.5	5.0	10.0	15.0	3.9
10 x 1½	3.0	6.0	12.0	18.0	3.2
10 x 2¼	3.0	6.0	12.0	18.0	3.2
12 x 2	3.0	6.0	12.0	18.0	3.2
12¼ x 2½	3.0	6.0	12.0	18.0	3.2

Make sure your ammeter has sufficient capacity and note polarity to prevent damaging your ammeter. If a resistor is used in the brake system, it must be set at zero or bypassed completely to obtain the maximum amperage reading. Individual amperage draw can be measured by inserting the ammeter in the line at the magnet you want to check. Disconnect one of the magnet lead wire connectors and attach the ammeter between the two wires. Make sure that the wires are properly reconnected and sealed after testing is completed. The most common electrical problem is low or no voltage and amperage at the brakes. Common causes of this condition are:

1. Poor electrical connections
2. Open circuits
3. Insufficient wire size
4. Broken wires
5. Blown fuses (fusing of brakes is not recommended)
6. Improperly functioning controllers or resistors

Another common electrical problem is shorted or partially shorted circuits (indicated by abnormally high system amperage). Possible causes are:

1. Shorted magnet coils
2. Defective controllers
3. Bare wires contacting a grounded object

Finding the cause of a short circuit in the system is done by isolating one section at a time. If the high amperage reading drops to zero by unplugging the undercarriage, then the short is in the undercarriage. If the amperage reading remains high with all the brake magnets disconnected, the short is in the undercarriage wiring. All electrical troubleshooting procedures should start at the controller. Most complaints regarding brake harshness or malfunction are traceable to improperly adjusted or nonfunctional controllers. See your controller manufacturer's data for proper adjustment and testing procedures. For best results, all the connection points in the brake wiring should be sealed to prevent corrosion. Loose or corroded connectors will cause an increase in resistance which reduces the voltage available for the brake magnets.

Brake Drum Inspection

There are two areas of the brake drum that are subject to wear and require periodic inspection. These two areas are the drum surface where the brake shoes make contact during stopping and the armature surface where the magnet contacts (only in electric brakes).

The drum surface should be inspected for excessive wear or heavy scoring. If worn more than .020" oversized, or the drum has worn out of round by more than .015", then the drum surface should be re-machined. If scoring or other wear is greater than .090" on the diameter, the drum must be replaced. When turning the drum surface, the maximum re-bore diameter is as follows:

The machined inner surface of the brake drum that contacts the brake magnet is called the armature surface. If the armature surface is scored or worn unevenly, it should be re-faced to a 120 micro inch finish by removing not more than .030" of material. To insure proper contact between the armature face and the magnet face, the magnets should be replaced whenever the armature surface is re-faced and the armature surface should be re-faced whenever the magnets are replaced.

IMPORTANT

- *It is important to protect the wheel bearing bores from metallic chips and contamination which result from drum turning or armature re-facing operations. Make certain that the wheel bearing cavities are clean and free of contamination before reinstalling bearing and seals. The presence of these contaminants will cause premature wheel bearing failure.*

Bearing Inspection

Wash all grease and oil from the bearing cone using a suitable solvent. Dry the bearing with a clean, lint-free cloth and inspect each roller completely.

Troubleshooting Brakes

Most electric brake malfunctions, that cannot be corrected by either brake adjustments or synchronization adjustments, can generally be traced to electrical system failure. Voltmeters and ammeters are essential tools for proper troubleshooting of electric brakes. Mechanical causes are ordinarily obvious, i.e. bent or broken parts, worn out linings or magnets, seized lever arms or shoes, scored drums, loose parts, etc. Please consult the following troubleshooting charts in this section of the manual to determine the causes and solutions for common problems found in undercarriage braking systems.

⚠ CAUTION

- **BEST BRAKING PERFORMANCE IS ACHIEVED WITH A CONTROLLER SETTING THAT IS JUST SHORT OF WHEEL LOCK UP OR SLIDE. OVERLY AGGRESSIVE BRAKING WHICH RESULTS IN WHEEL LOCK UP AND SLIDING, CAN CAUSE A DANGEROUS LOSS OF CONTROL AND RESULT IN PERSONAL INJURY OR DEATH.**

Power Pak

For general maintenance and servicing of power pak unit.

NOTE: For maintenance of engine and warranty information, refer to Operator's Manual provided with engine. Following are Websites to locate local Honda engine dealers and service centers.

US www.honda-engines.com

Canada www.honda.ca

Please provide Honda with the following engine information:
22.1 HP/41.97 CU IN; GX690 RHTXA2

The hydraulic filter and fluid should be replaced after every 100 hours of engine run or once the filter gauge indicates a restriction in the red area. Be sure to filter the fluid when filling tank, especially from a bulk container. Any foreign materials in fluid will dramatically reduce the life of the pump. Follow steps below to change hydraulic fluid:

⚠ WARNING

- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE "RELIEVING HYDRAULIC PRESSURE" IN THE MAINTENANCE SECTION OF THIS MANUAL.**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

Power Pak (continued)

Replace the initial filter after 3 hours of use with the additional oil filter provided. It is not necessary to replace the hydraulic fluid at this time. When the filter is replaced after the initial filter replacement, it is important that the hydraulic fluid be replaced too. It takes approximately 13.5 gallons to fill the system.

IMPORTANT

- *When replacing filter be sure that it is replaced with an Unverferth service part. This filter has an ultra-fine mesh which filters out microscopic particles. Failure to replace with an Unverferth filter could result in system malfunction and/or shortened life of components. The hydraulic filter and fluid should be replaced after every 100 hours of engine run time. Be sure to filter the fluid when filling the tank, especially from a bulk container. Any foreign fluid will dramatically reduce the life of the pump.*
- *Use a premium hydraulic fluid. This fluid not only will provide pressure to operate your equipment, but also lubricates all components. This unit was designed to use* **Chevron 1000 THF hydraulic fluid***. Use the same or equivalent-type hydraulic fluid to provide a long service life of your Power Pak.*

NOTE: The filter gauge may take several seasons for the gauge to approach the red (replace) portion of the gauge. Once the gauge is close to the red (replace) portion, the gauge will spike.

1. Turn off engine and remove spark plug to prevent engine from starting. Be sure all hydraulic fittings and hoses are relieved of pressure, FIG. 4-12.

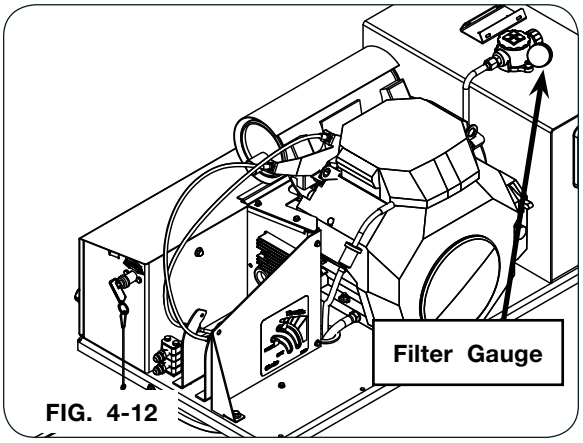


FIG. 4-12

2. Make sure a proper container is available to drain hydraulic oil. Remove hydraulic fluid o-ring drain plug (99692) and drain hydraulic oil into container, FIG. 4-13.

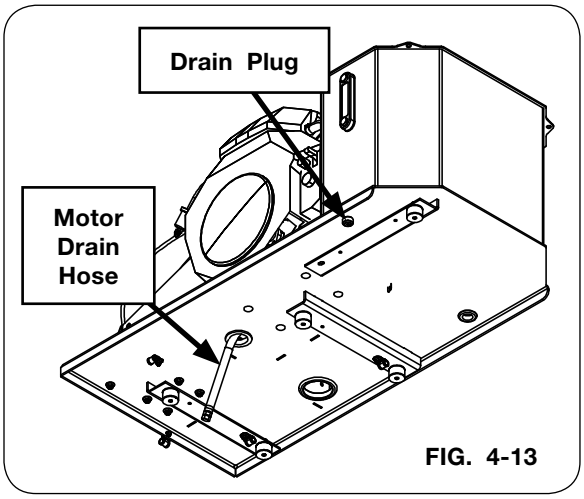
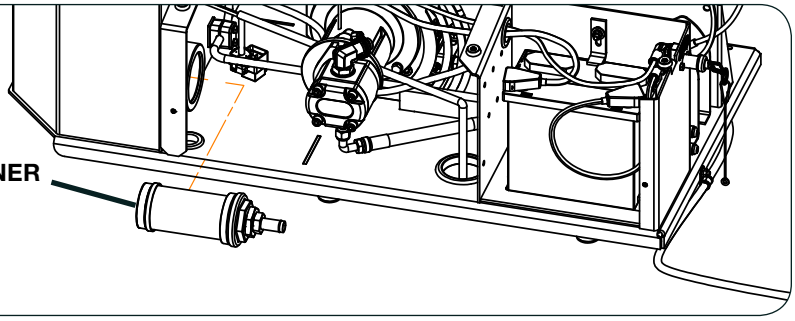


FIG. 4-13

Power Pak (continued)

3. Using a 1 7/8” wrench, remove intake strainer from tank. Clean strainer of all debris and check for any damage. Replace if necessary, FIG. 4-14.

FIG. 4-14



4. Before reinstalling intake strainer to tank, apply Teflon paste or tape on threads to help seal threads, FIG. 4-14.

5. On return line filter, remove filter cap and pull out filter using pull tabs on filter, FIG. 4-14. Properly dispose of filter and replace with a new filter of exact specifications. DO NOT substitute filter specifications.

6. Once all components have been reassembled and secured, new hydraulic fluid may be added to the hydraulic fluid tank. Fill fluid within 1” to 1 1/2” of the top of the level gauge on the front on the unit, FIG. 4-15. DO NOT over fill. Once the tank is full, secure cap to top of tank.

NOTE: When topping off hydraulic fluid tank, always use the same fluid as what is already in the tank. DO NOT mix different brands or types of hydraulic fluid.

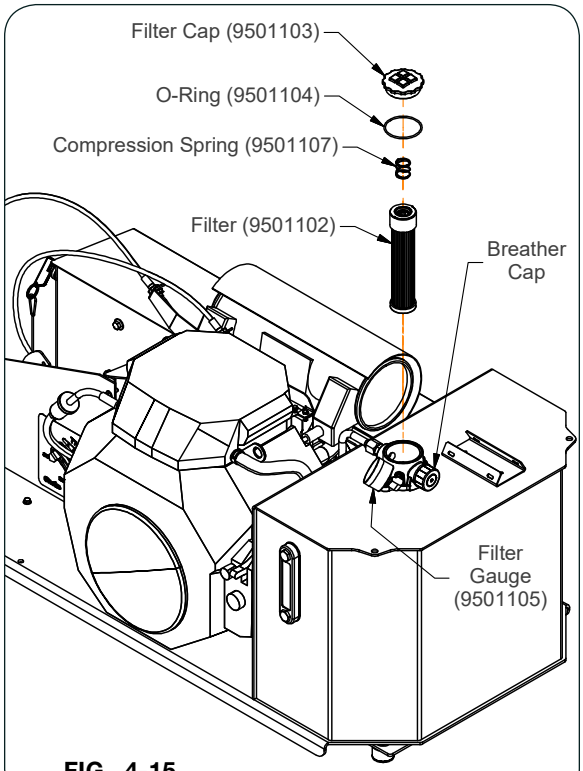


FIG. 4-15

Power Pak (continued)

7. With the spark plugs removed, the pump must be primed. To prime pump, rotate engine by cranking the starter. Do this approximately 10 times to fill the intake line.

8. Reinstall spark plugs and start engine.

Also to maintain POWER PAK, inspect the battery. Remove battery cover and inspect the battery itself, along with any components, wires and connections for any wear or damage, FIG. 4-16. Replace as required.

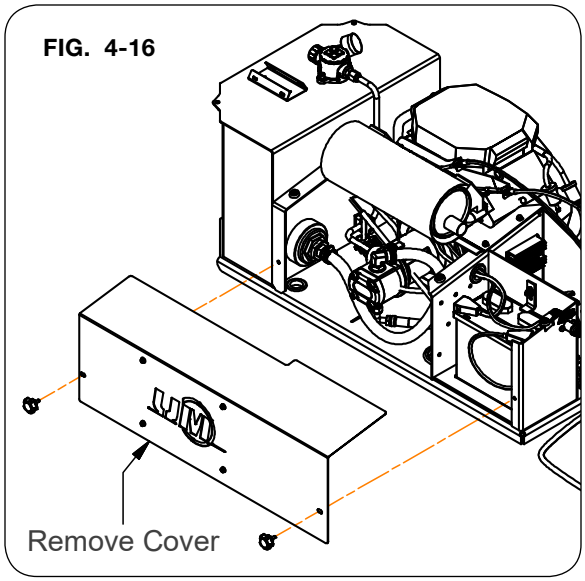


FIG. 4-16

Be sure battery strap is secure preventing battery from shifting inside compartment.

IMPORTANT

- *When storing for long periods of time be sure battery has a full charge and then turn the disconnect off before storing.*

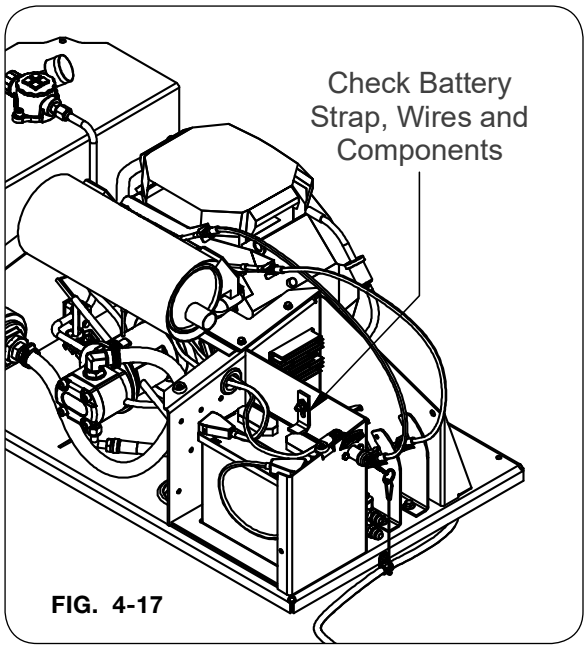


FIG. 4-17

Battery Warranty

Contact:
Interstate Battery:
www.interstatebatteries.com
800-CRANKIT

Wheels and Tires

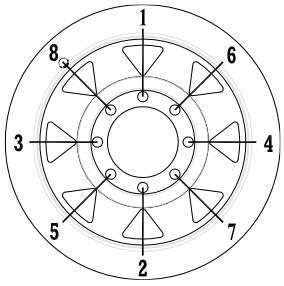
Wheel Nut Torque Requirements

⚠ CAUTION

- **IMPROPERLY TORQUED WHEEL NUTS/BOLTS CAN CAUSE A LOSS OF IMPLEMENT CONTROL AND MACHINE DAMAGE. TORQUE THE WHEEL NUTS/BOLTS TO THE VALUES IN THE TABLE. CHECK THE TORQUE BEFORE USE, AFTER ONE HOUR OF UNLOADED USE OR AFTER THE FIRST LOAD, AND EACH LOAD UNTIL THE WHEEL NUTS/BOLTS MAINTAIN THE TORQUE VALUE. CHECK THE TORQUE EVERY 10 HOURS OF USE THEREAFTER. AFTER EACH WHEEL REMOVAL, START THE TORQUE PROCESS FROM THE BEGINNING. WARRANTY DOES NOT COVER FAILURES CAUSED BY IMPROPERLY TORQUED WHEEL NUTS/BOLTS.**

Failure to check torque before first load may damage wheel nut/bolt seats. Once seats are damaged, it will become impossible to keep nuts/bolts tight. Tighten nuts/bolts to applicable torque value shown in table. Start all nuts/bolts by hand to prevent cross threading. Torque nuts/bolts in the recommended sequence as shown in Diagram 1.

WHEEL HARDWARE	
SIZE	FOOT-POUNDS
M22x1.5	450 ft.-lbs.



8 BOLT
DIAGRAM 1

Tire Pressure

The following is to be used as a general guide for tire inflation and figures can vary depending on specific brand of tire used. **It is important that tires are inspected after Seed Runner tender is loaded.** Start with minimum pressure indicated. The tire should stand up with no side-wall buckling or distress as tire rolls. Record the pressure needed to support the full load and maintain this pressure to achieve proper tire life. **Do not exceed maximum recommended tire pressure.**

TIRE SIZE	PSI
215/75R17.5 LRE	125

(All tire pressures in psi)

Wheels and Tires (continued)

Tire Warranty

For questions regarding new tire warranty, please contact the appropriate branded tire dealer. Used tires carry no warranty. Following are phone numbers and Websites for your convenience:

Carlisle/Ironman	www.carlisletire.com Phone 800-260-7959 Fax 800-352-0075
Continental/Mitas	www.mitas-tires.com Phone 704-542-3422
BKT Tires	Phone: 888-660-0662 330-836-1090

NOTE: Gladiator and Ironman Tires under the Gladiator brand are sold by Carlisle.

Complete Torque Chart – Capscrews - Grade 5

IMPORTANT

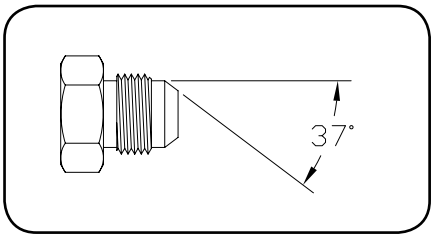
- *Grade 5 capscrews can be identified by three radial dashes on head.*
- *For wheel torque requirements, refer to Wheels and Tires.*
- *Tighten U-bolts to have the same number of threads exposed on each end.*

SIZE	FOOT POUNDS	NEWTON METERS	SIZE	FOOT POUNDS	NEWTON METERS
1/4-20 1/4-28	8-10 9-11	11-13 12-15	3/4-10 3/4-16	200-220 210-230	270-300 285-310
5/16-18 5/16-24	15-17 17-19	20-23 23-26	7/8-9 7/8-14	330-350 360-380	425-475 460-515
3/8-16 3/8-24	25-28 28-31	34-38 38-42	1-8 1-14	500-525 540-560	675-710 730-760
7/16-14 7/16-20	40-45 45-50	54-61 61-68	1 1/8-7 1 1/8-12	600-635 665-700	815-860 920-950
1/2-13 1/2-20	62-68 68-75	84-92 92-102	1 1/4-7 1 1/4-12	850-895 940-990	1150-1215 1275-1340
9/16-12 9/16-18	90-98 100-110	22-133 134-148	1 3/8-6 1 3/8-12	1125-1175 1280-1335	1525-1590 1735-1810
5/8-11 5/8-18	120-135 124-137	162-183 168-186	1 1/2-6 1 1/2-12	1500-1560 1685-1755	2035-2115 2285-2380

Hydraulic Fittings – Torque and Installation

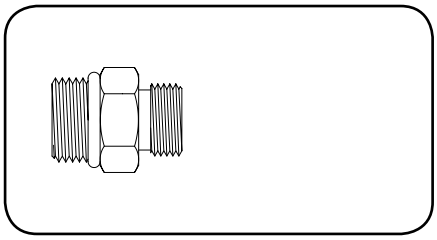
SAE FLARE CONNECTION (J. I. C.)

1. Tighten nut with finger until it bottoms the seat.
2. Using a wrench, rotate nut to tighten. Turn nut 1/3 turn to apply proper torque.



SAE STRAIGHT THREAD O-RING SEAL

1. Insure jam nut and washer are backed up to the back side of smooth portion of elbow adapter.
2. Lubricate o-ring -- VERY IMPORTANT!
3. Thread into port until washer bottoms onto spot face.
4. Position elbows by backing up adapter.
5. Tighten jam nut.



Storage

Your Seed Tender is an important investment. Spend a little time to protect it from destructive rust and corrosion. You will be repaid in longer service life and better performance.

After use, clean out box, conveyor, and hopper. Remove all seed, and pressure wash to remove road dirt, seed treatment, etc.

Prepare engine on hydraulic power unit for storage. Refer to engine operator's manual for details.

Inspect hydraulic oil level in reservoir. Level should be 1" to 1 1/2" from the top of the sight glass. Add appropriate hydraulic oil as needed. Most farm tractor type hydraulic oils are acceptable. DO NOT use Automatic Transmission Fluid! DO NOT mix different oils when topping off the tank.

Check bolts for tightness. Inspect for damaged or worn parts. Check valves, motor, hoses, and fittings for leaks. Check hoses for wear. Replace or repair items as needed.

Repaint any chipped or scraped areas, and store inside away from livestock.

Charge battery before storage if applicable. Lack of charge may result in the battery freezing over the winter.

Once engine is shut off turn the battery disconnect switch to the off position.

Replace all worn, torn or faded decals and reflectors.

It is recommended to check the conveyor belt tension after storage, before belt operation. Damage to the belt can occur.

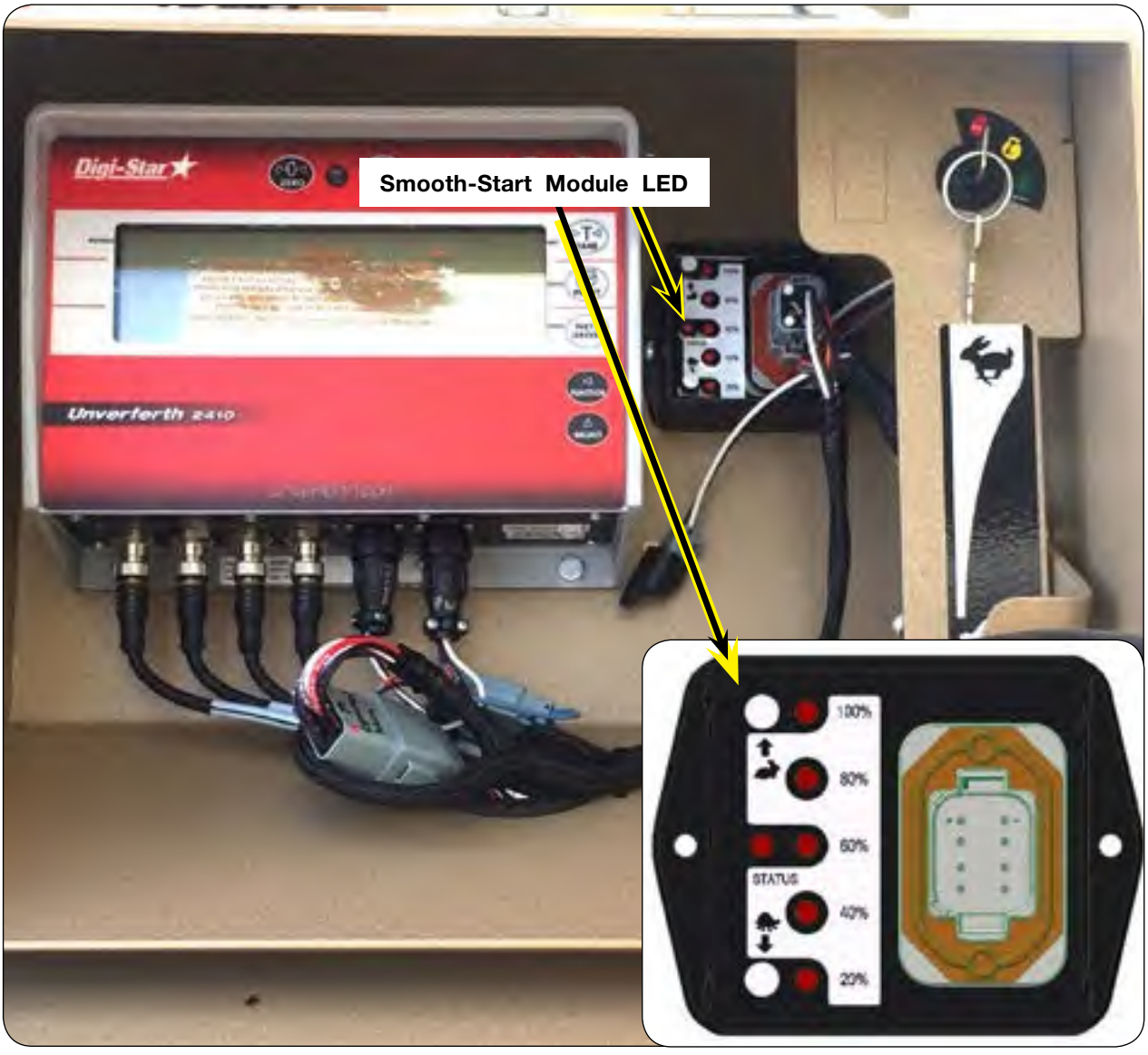
Smooth-Start Module Troubleshooting

This module, located inside the common enclosure at the front of the machine, is used to control the conveyor belt speed and reduce the wear on the conveyor components. by gradually bringing the belt up to operating speed.

If the system is not operating as expected, the LED can be used to determine what is occurring.

Refer to OPERATIONS section for adjustment procedure

LED State / Blink Rate	System Status
Steady Off	The module is not powered or has failed.
Slow On/Off Flash (1 Hz)	The input signal is inactive and the output is off. (CONVEYOR OFF)
Steady On	The input signal is detected as active and the output is on. (CONVEYOR ON)
Rapid On/Off Flash (5 Hz)	The input signal is active and the output is active. The module is detecting an error condition with the output. Check the output wiring for open or short circuits.



Troubleshooting

SYMPTOM CAUSE	CORRECTION
Tire Wear, Lights	
Tires show excessive wear	Check tire pressure
Wheel makes grinding or squeaking noise	Service wheel bearings
Tail lights are not functioning	Check wires and connections Replace lamps
Conveyor Will Not Turn Over or Develop Proper Speed/Torque	
Pump does not deliver sufficient pressure or volume	Check output and delivery, change if necessary
Conveyor jammed	Shut-off and lock-out power, open clean-out door and remove excess material (make sure swivel spout is clear)
Oil level too low	Fill to proper level
Belt tension	Refer to “Conveyor Belt Tension”, page 4-5
Conveyor Runs Too Slow	
Engine running too slow	Increase engine speed
Pump not producing minimum required flow and pressure	Check pump fluid capacity and correct
Pump is worn	Repair or replace pump
Internal leak in controls or motor	Replace seals; repair or replace valves or motor
Air in system	Purge system and tighten connections
Improper hydraulic oil viscosity	If conveyor starts slowly and speed increases after oil heats up, oil is too heavy weight. If conveyor slows down after oil heats up, oil is too light weight
Belt tension	Refer to “Conveyor Belt Tension”, page 4-5

Troubleshooting (continued)

SYMPTOM CAUSE	CORRECTION
Oil Heats Excessively	
Oil viscosity incorrect	Drain and refill with proper weight oil
Dirty oil	Drain, flush, and refill with a clean oil and filter
Oil level too low	Fill to proper level
Oil slipping through worn pump	Repair or replace pump
Restricted line or piping	Reroute lines to eliminate restrictions
Reservoir too small to provide adequate cooling	Replace with larger reservoir or install oil cooler
Belt Edges Showing Excessive Wear	
Belt tracking incorrectly	Adjust tracking as detailed in service section page 2-3.
Poly seals on intake and/or discharge end worn.	Replace poly seals
Pivoting Arm Will Not Raise or Lower	
Engine running too slow	Increase engine speed
Conveyor Will Not Pivot	
Pivot lock in place	Unlatch conveyor or check pivot lock operating mechanism.
Dirt or debris on pivot track	Clean dirt from track
Bearing worn out	Replace bearing
Power Pak	
Pump Squeals: A. Oil level too low in reservoir B. Oil is cold C. Intake strainer is plugged D. Return-line filter is plugged E. Hoses are kinked or leaking	A. Check sight gauge on reservoir B. Run engine at low idle until hydraulic fluid warms C. Drain reservoir and clean strainer D. Remove and replace filter E. Inspect, adjust or replace hose if necessary
Unit is lacking power: A. Oil level too low in reservoir B. Oil is cold C. Intake strainer is plugged D. Return-line filter is plugged E. Hoses are kinked or leaking F. Pressure relief valve is set too low or is plugged	A. Check sight guage on reservoir B. Run engine at low idle until hydraulic fluid warms C. Drain reservoir and clean strainer D. Remove and replace filter E. Inspect, adjust or replace hoses if necessary F. Remove cover and adjust with “L” wrench or remove valve and inspect for contamination

Troubleshooting (continued)

Conveyor Raise/Lower Cylinder Not Working Properly

⚠ WARNING

- **RELIEVE HYDRAULIC SYSTEM OF ALL PRESSURE BEFORE ADJUSTING OR SERVICING. SEE "RELIEVING HYDRAULIC PRESSURE" IN THE MAINTENANCE SECTION OF THIS MANUAL.**

- **HIGH-PRESSURE FLUIDS CAN PENETRATE THE SKIN AND CAUSE SERIOUS INJURY OR DEATH. LEAKS OF HIGH-PRESSURE FLUIDS MAY NOT BE VISIBLE. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS.**

- **HYDRAULIC SYSTEM MUST BE PURGED OF AIR BEFORE OPERATING TO PREVENT SERIOUS INJURY OR DEATH.**

- **NEVER LOOSEN OR REMOVE ANY HYDRAULIC FITTING WITHOUT FIRST VERIFYING THAT ALL FLUID PRESSURE HAS BEEN RELIEVED. FAILURE TO DO SO MAY RESULT IN UNINTENDED MOVEMENT OF ALL OR A PORTION OF THE EQUIPMENT, POSSIBLY CAUSING SEVERE INJURY OR DEATH DUE TO CRUSHING OR CUTTING. INJURY MAY ALSO OCCUR FROM CONTACT WITH OIL UNDER PRESSURE THAT MAY ESCAPE DURING FITTING REMOVAL.**

- **FALLING OBJECTS CAN CAUSE SERIOUS INJURY OR DEATH. DO NOT WORK UNDER THE MACHINE AT ANY TIME WHILE BEING HOISTED. BE SURE ALL LIFTING DEVICES AND SUPPORTS ARE RATED FOR THE LOADS BEING HOISTED. THESE ASSEMBLY INSTRUCTIONS WILL REQUIRE SAFE LIFTING DEVICES UP TO 1,000 LBS. SPECIFIC LOAD RATINGS FOR INDIVIDUAL LOADS WILL BE GIVEN AT THE APPROPRIATE TIME IN THE INSTRUCTIONS.**

1. Park the Seed Runner tender on a firm, level surface. Block the tires on the unit to keep it from moving. Set the towing vehicle's parking brake, shut off the engine and remove the ignition key.

2. If the conveyor is in the raised position, use an appropriate lifting device rated for at least 1,000 lbs. and support the conveyor. If the conveyor is in the transport position proceed as follows. Make sure that all the load is off the lift cylinder and that cylinder pin will freely rotate (FIG. 4-19).

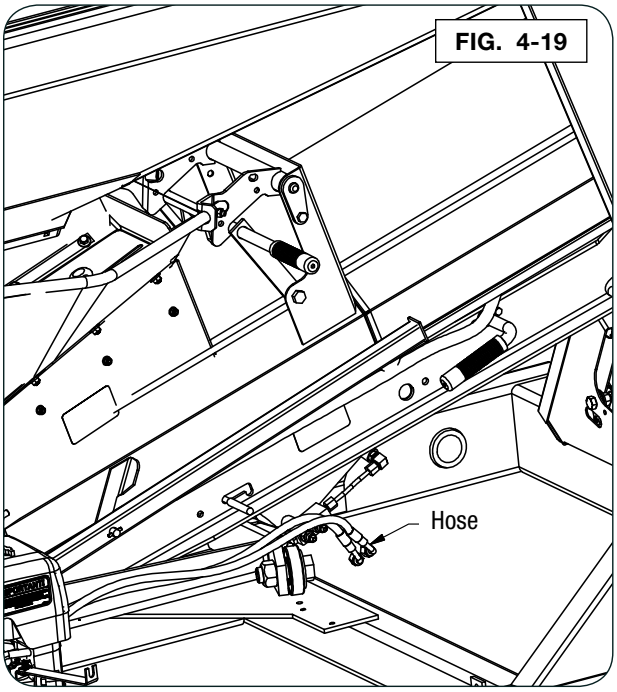


FIG. 4-19

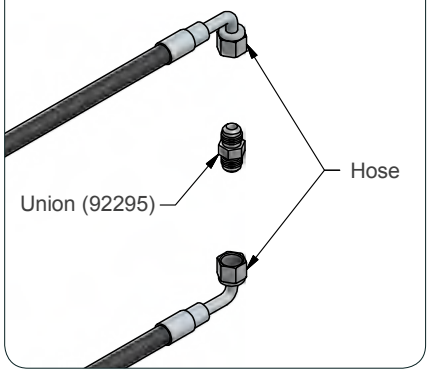
Troubleshooting (continued)

Conveyor Raise/Lower Cylinder Not Working Properly (continued)

3. Remove the two hoses from the cylinder and connect the two hoses together using union fitting (92295). Tighten the connections as directed by the "Hydraulic Fittings - Torque and Installation" in the MAINTENANCE section of this manual.

4. To flush the two hoses, operate the Seed Runner tender for a minimum of ten minutes while actuating the control to raise and lower the conveyor. Make sure to actuate the control in both directions (raise and lower).

FIG. 4-20

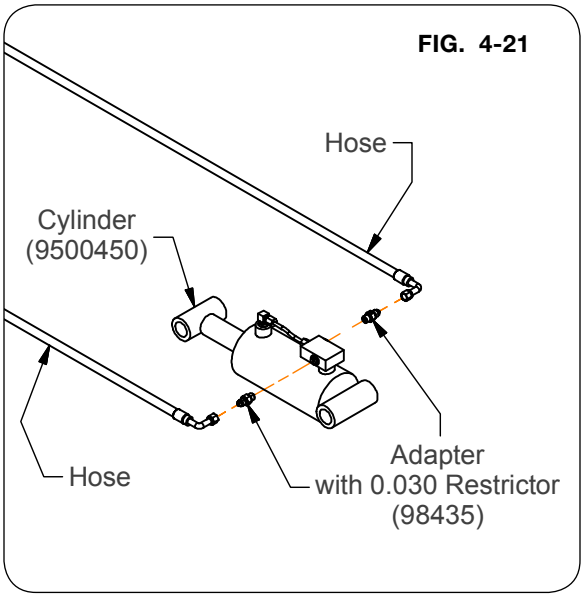


5. Once this is completed, shut the engine off. Remove the two orifice fittings from the lift cylinder. Flush the fittings and make sure that there is nothing obstructing the 0.030" orifice in each fitting. If the fitting is obstructed, replace adapter fittings with restrictor.

6. Reinstall the orifice fittings (98435) in the same orientation as they were removed. Tighten the connections as directed by the "Hydraulic Fittings - Torque and Installation" in the MAINTENANCE section of this manual

7. Make sure the hydraulic pressure is removed from the hoses (9501159) that attach to the cylinder. Remove the union fitting (92295) from the two hoses (9501159) and reinstall the hoses in their original location on the lift cylinder (9500450).

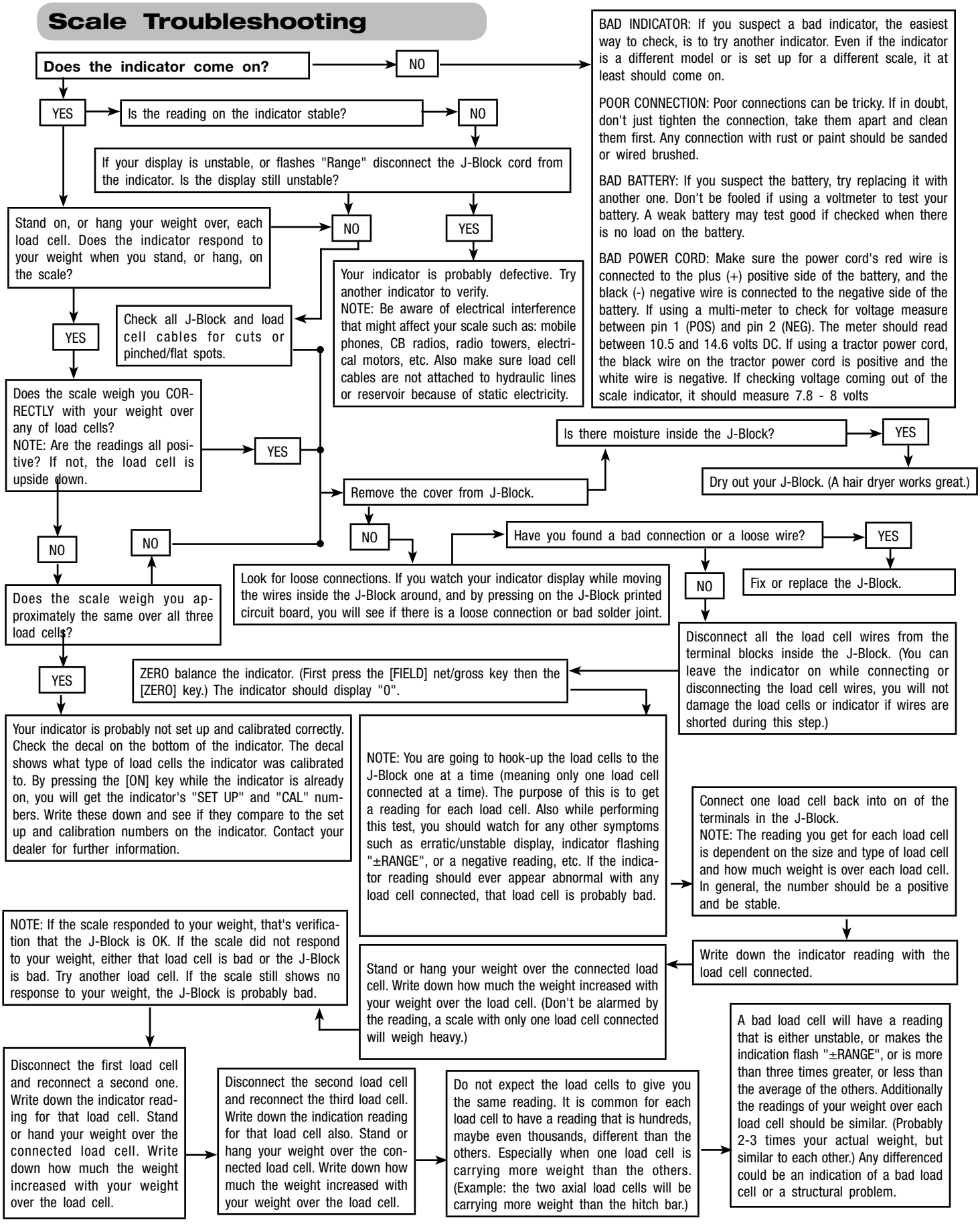
FIG. 4-21



8. If the conveyor is supported by a lifting device slowly lower it into the transport position and remove the lifting device.

9. Verify the raise and lower function using the operator control.

Scale Troubleshooting



Scale "Short Form" Set Up & Calibration For UM2520 Indicator

IMPORTANT

- *This indicator was calibrated at the factory to weigh accurately with your system. Additional calibration is not necessary under NORMAL conditions.*

The Short Form Set Up & Calibration procedure allows you to change the "SET UP" and "CAL" numbers of the indicator. You may want to perform this procedure if;

1) The indicator is being connected to different load cells.
or
2) You want to adjust the calibration to match another scale system.

PLEASE NOTE: Do not attempt to calibrate the scale if the indicator is not reading stable weights. The calibration procedure will not fix instability, inconsistencies, or flashing "RANGE" messages.

Before continuing, first write down the current "SET UP" and "CAL" numbers of your UM indicator. These numbers are displayed during the "Self Test". To run the Self Test:

With the indicator already ON, press the [FIELD] key and then [ON/OFF] key to start the Self Test. Press the [ON/OFF] key to "pause" the Self Test while numbers are displayed. Press [ON/OFF] key again to resume.

Verify the SET UP & CAL numbers with the Example table below and record the numbers on your indicator.

ORIGINAL	SEED RUNNER
SET UP#	**127060**
CAL#	**24080**

Example Table:

SET UP# _____ CAL# _____

Keep this information for future reference. See next page for more SET UP#'s & CAL#'s.

1. Adjust UM Indicator to Match Another Scale:

Sometimes two different scales are used to weigh the same load. When this is done, the weight measured by each scale may not be the same. This can be caused by one or both of the two scales being slightly out of calibration. This indicator has the ability to match any other scale, even if that scale is uncalibrated.

To match your Unverferth scale (Scale A) to another scale (Scale B) you must determine the Calibration Multiplier. To do this, place a load on Scale A (feed wagon, etc...) and write down the weight displayed. Repeat several times to determine the average weight. Next, place the same load on Scale B and again write down the weight displayed. Again, repeat several times to determine the average weight. Then, use this formula to determine the Calibration Multiplier for the Unverferth "CAL" number:

Scale "Short Form" Set Up & Calibration For UM2520 Indicator (continued)

It is important to use an average of several weights before calibrating the scale.

Scale Matching Example:
Original
SET UP# 127060
CAL# 24080

	1 Trail	2 Trail	3 Trail
Scale B	30,000	30,580	28,000
Scale A	29,440	29,800	27,500
Scale B ÷ A	1.020	1.026	1.018

You should not modify your **"SET UP"** number. Only your **"CAL"** number.

Scale Matching Example:
Original
SET UP# _____
CAL# _____

	1 Trail	2 Trail	3 Trail
Scale B			
Scale A			
Scale B ÷ A			

(Trail 1) + (Trail 2) + (Trail 3) = "X"

"X" ÷ 3 Trails = _____ **CAL Multiplier**

Orig. UM CAL# X CAL Multiplier = NEW UM CAL#

_____ **X** _____ **=** _____

Follow the instructions **"To change the Set Up / Calibration Numbers"** shown in the indicator operator's manual.

Auto Conveyor Shut-off Troubleshooting

1. Check system voltage:
   - With the engine running the voltage at the battery should be 14.5 Volts.

2. Scale will not turn on:
   - Check fuse, if bad replace with 15 amp fuse.
   - Check polarity of connection; with the key [ON], and using a voltmeter check between terminals one and two of the scale connector. This should be +12 volts. Also on the 4 pin scale connector check between terminal one (white wire) and terminal two (black wire), this should also read +12 volts. If the reading is -12 volts the power wire polarity needs reversed. Both the scale and the Smooth-Start Module are polarity protected and will not turn on if the polarity is incorrect.

Tank Lights and Magnetic Reed Switch

The indicator lights located on the side of the tank are controlled by a magnetic reed switch inside the tank to detect the grain. If grain is covering the switch, the light should be on. If no grain is in contact with the switch, the light should be off. If a light stays on continuously or does not come on when grain comes in contact with the switch, check all wiring connections between the sensor and the upper tank harness to ensure everything is connected properly.

Adjusting Proximity Switch

NOTE: The door indicator lights are controlled by a proximity switch on the opposite side of the tank that detects the movement of the door. With the door fully closed, the end of the switch should be around 1/4" from the door sensing plate and the light should be on. When the door opens, the light should turn off. Adjust the switch as necessary, using the steps below, to ensure that the light turns on and off properly.

1. On the back of the switch is a clear plastic screw. Remove this screw.

2. Under this plastic screw is an adjustment set screw.

3. With the door shut, adjust the switch until the light turns on. To increase sensitivity, turn the set screw clockwise. To decrease sensitivity, turn the set screw counterclockwise.

4. Once the adjustment is set, reinstall the screw on the back of the switch.

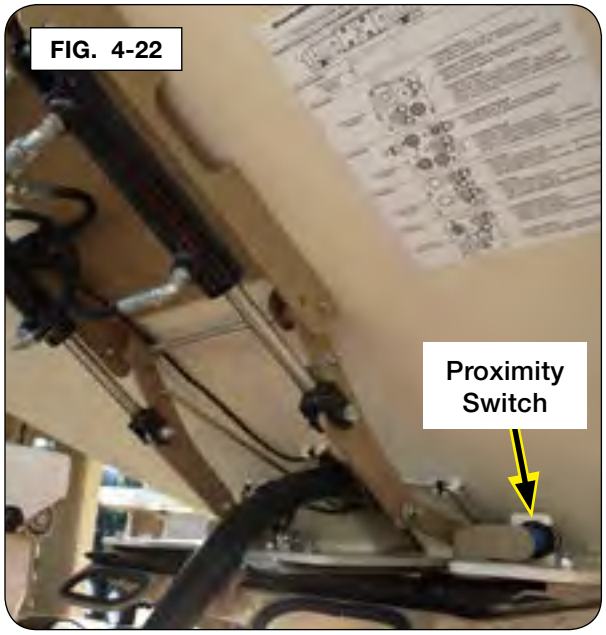
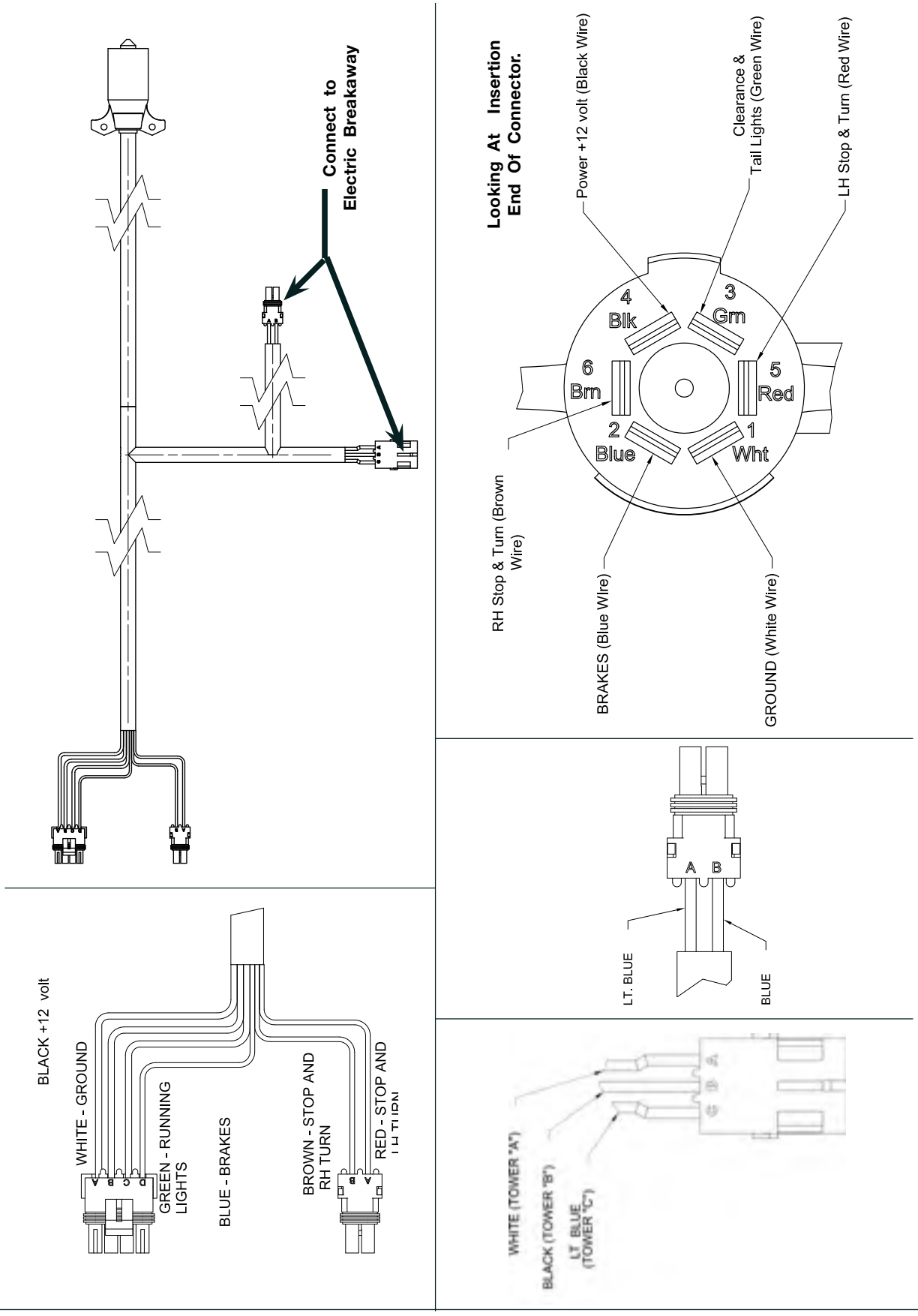


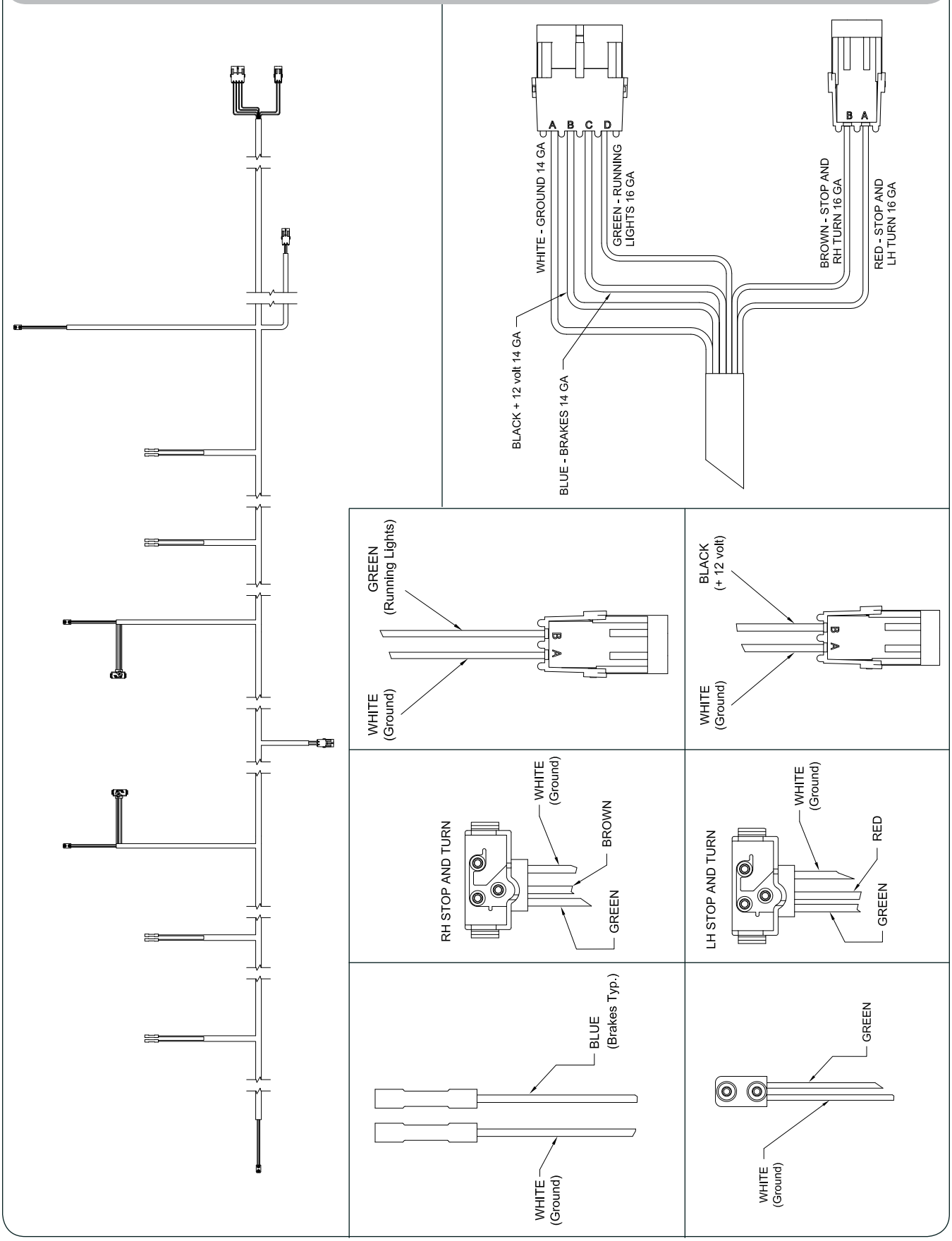
FIG. 4-22

FIG. 4-23

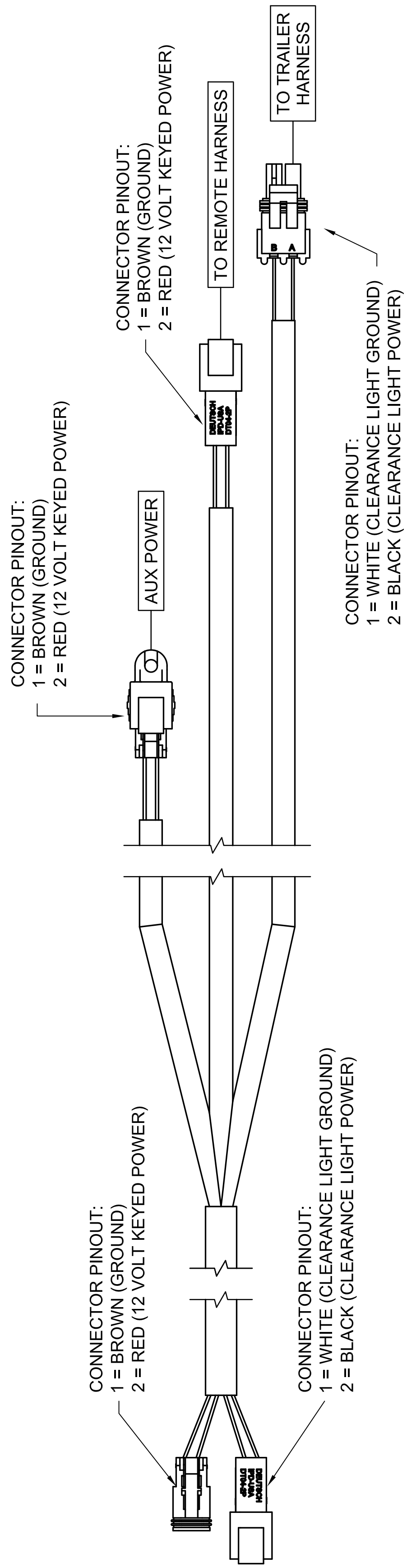
Gooseneck Electrical Schematic (Harness #27829)



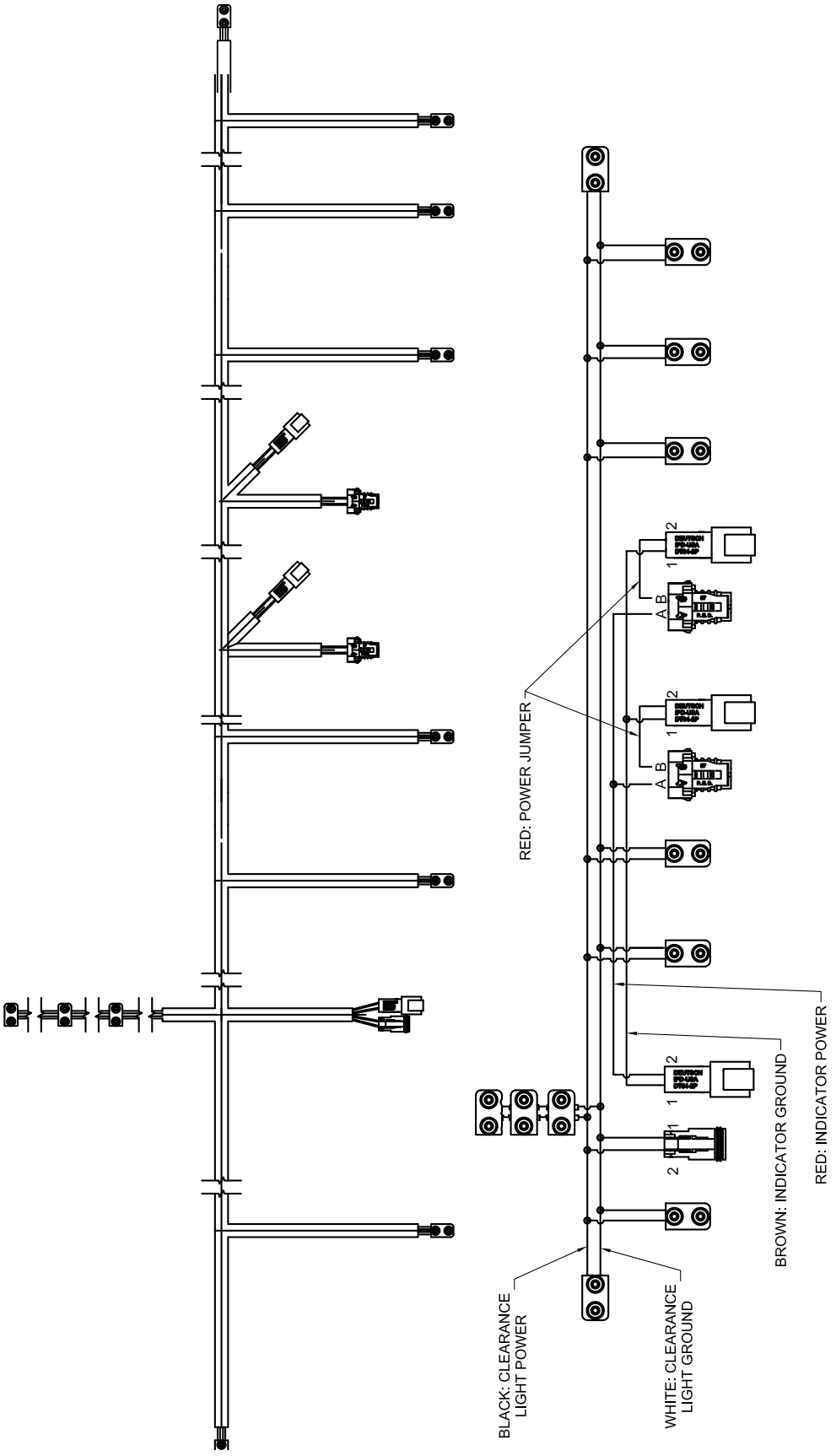
Undercarriage Electrical Schematic (Harness #2002133)



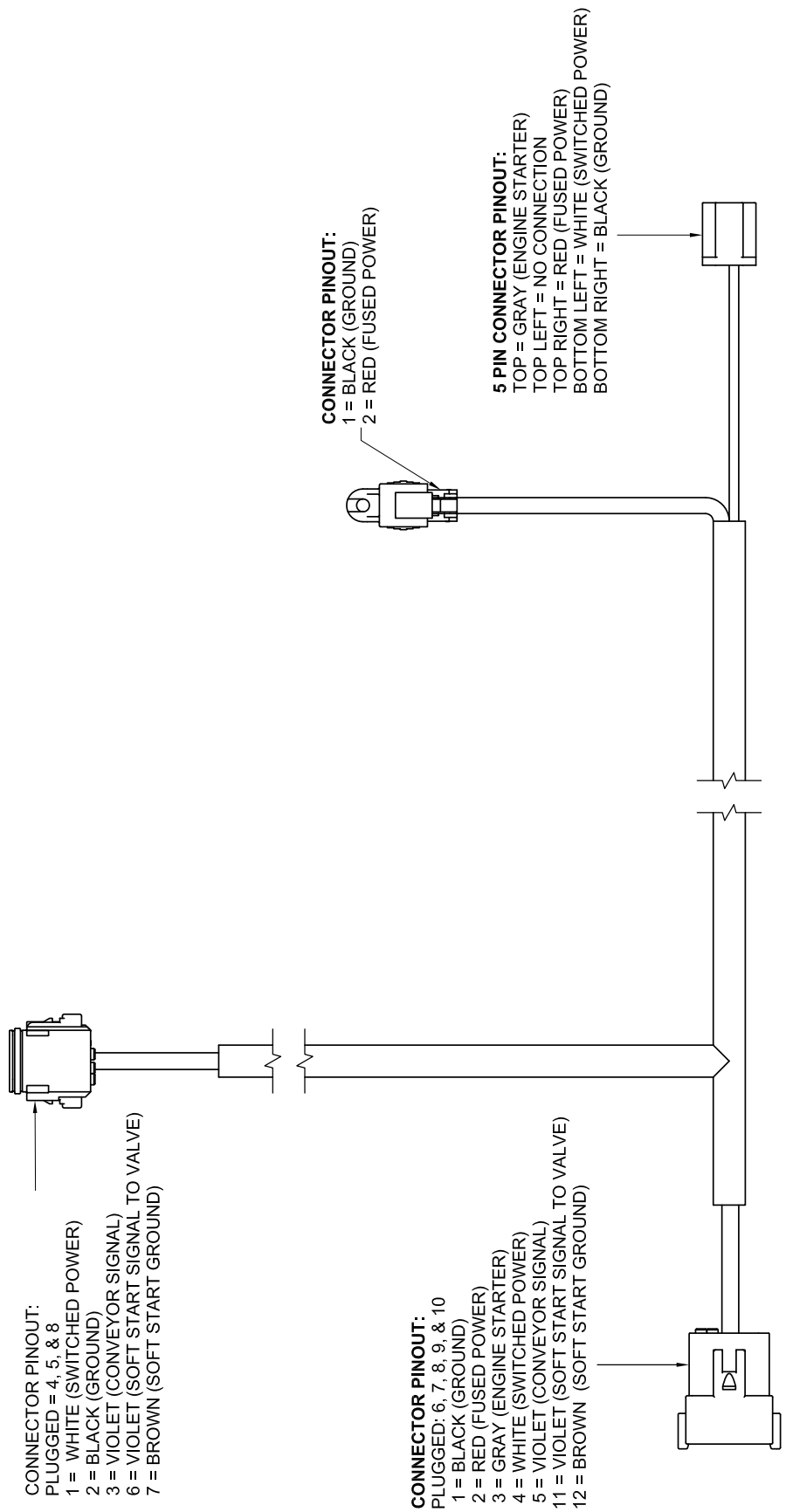
Seed Tank Lighting Electrical Schematic (Harness #2002090)



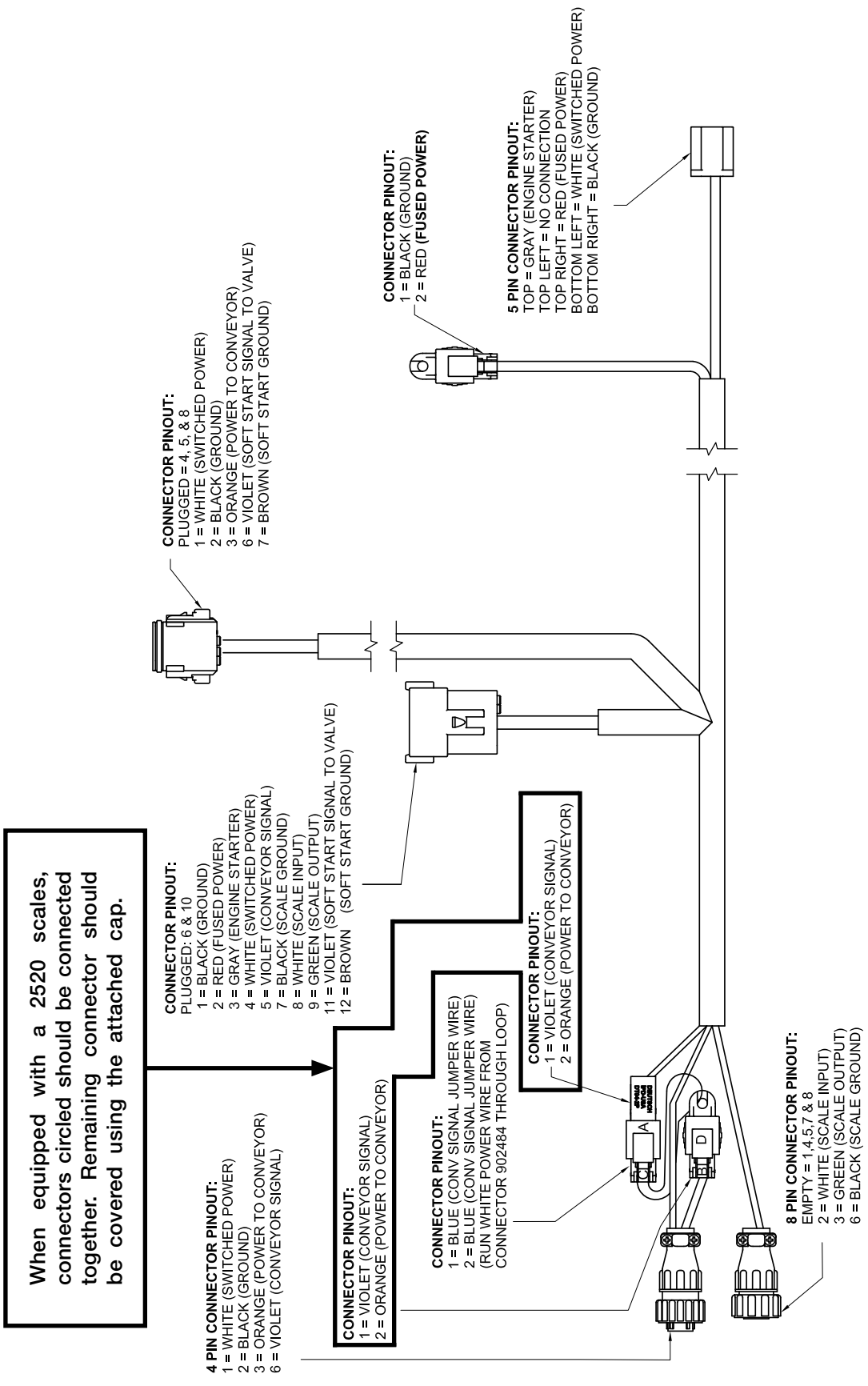
Seed Tank Lighting Electrical Schematic (Harness #2007536)



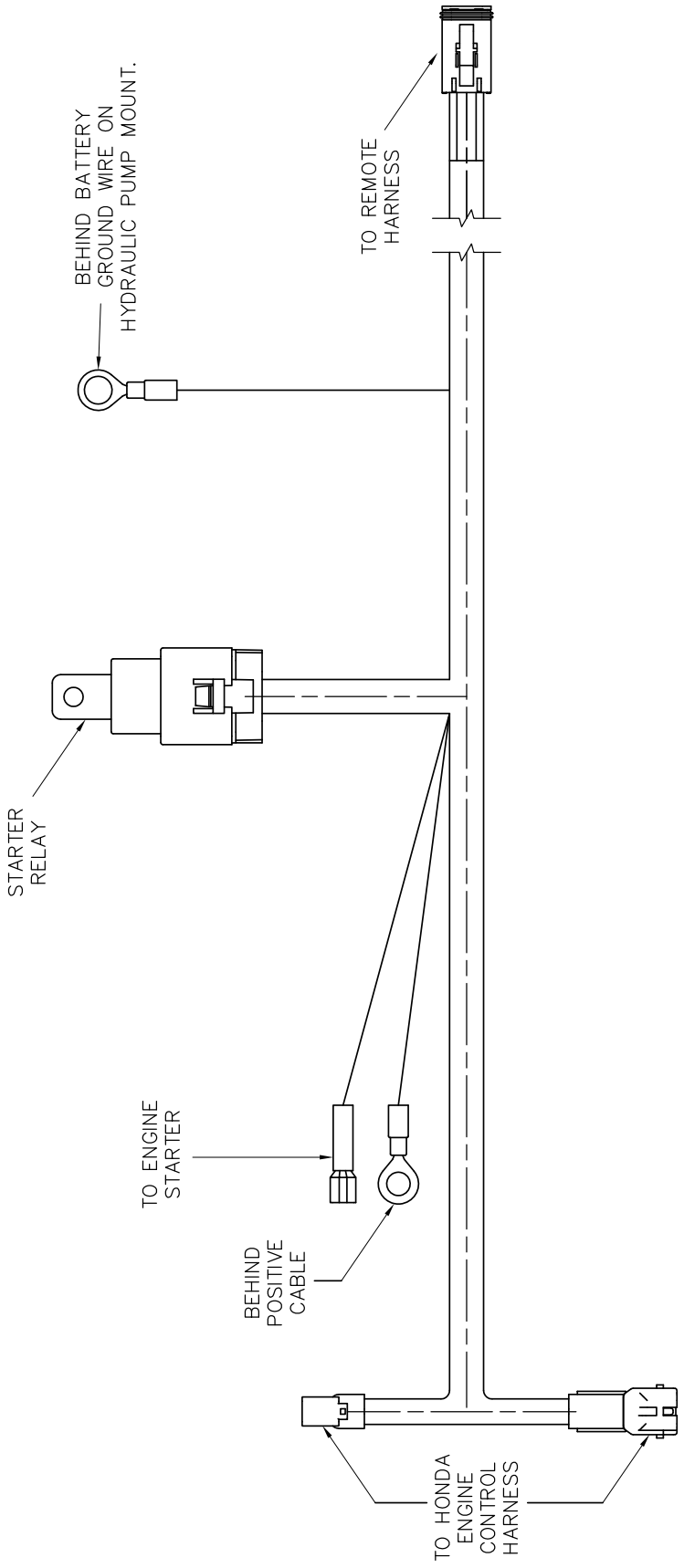
Non-Scale Electrical Schematic (Harness #2002130)



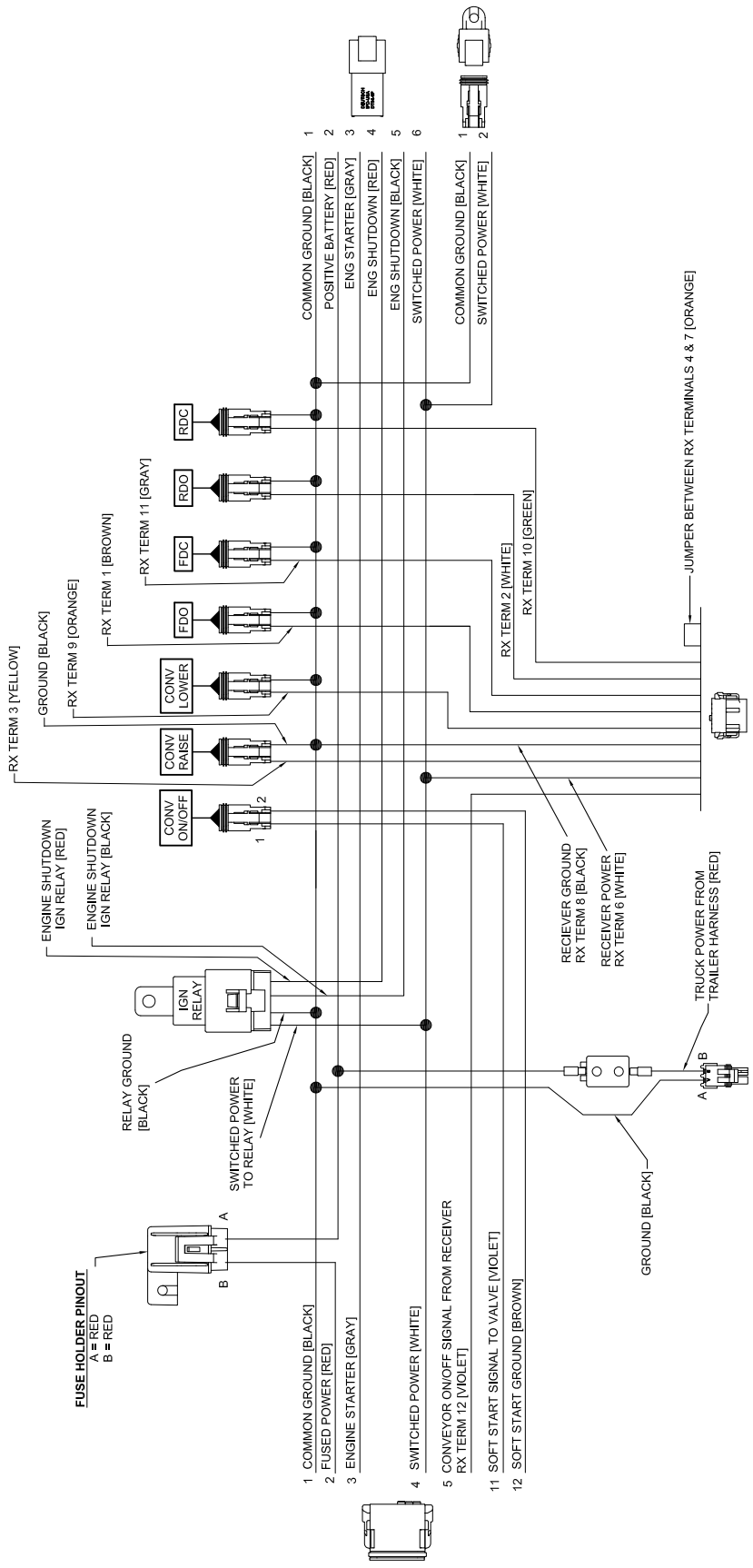
Optional Scale Electrical Schematic (Harness #2002132)



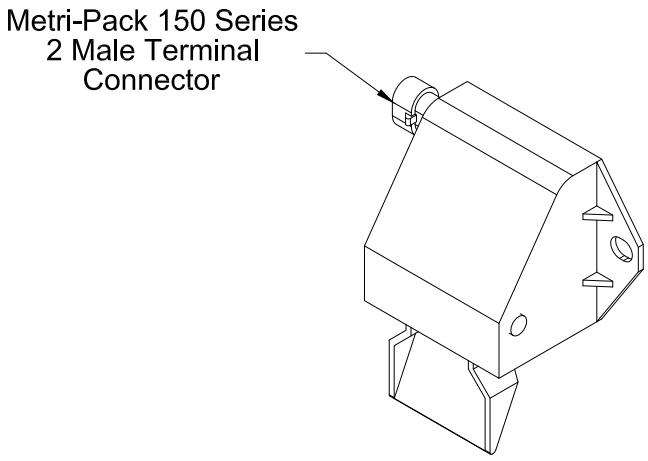
Power Pak Electrical Schematic (Harness #2002128)



Radio Remote Electrical Schematic (Harness #2002520)



Magnetic Reed Switch #9501978 - Electrical Schematic



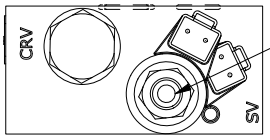
Stackable Valve Manual Override Operation & Wire Schematic

*Push the inner button down, and either push in or pull up on the outer collar to activate the function.

ALL Functions

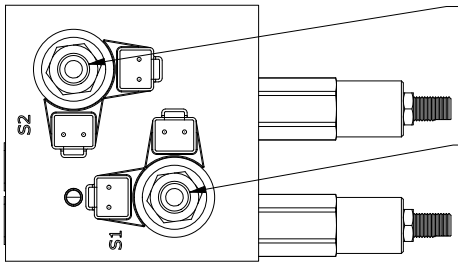
End Cover Body

Gooseneck Hydraulic Jack Valve



Pull Out/Push In
to manually operate the jack.

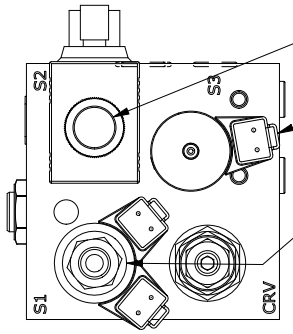
3 Function



Front Door
* Pull out to close door.
GRAY Wire Labeled: Door Close - Top Solenoid
* Push in to open door.
BROWN Wire Labeled: Door Open - Bottom Solenoid

Rear Door
* Pull out to close door.
GREEN Wire Labeled: Door Close - Top Solenoid
* Push in to open door.
WHITE Wire Labeled: Door Open - Bottom Solenoid

7 Function

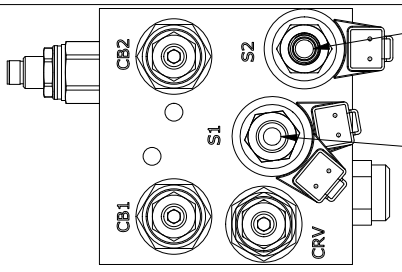


Conveyor Tilt-Up
Push center button to tilt conveyor up.
RED Wire Labeled: Tilt-Up - Square Solenoid

Conveyor Tilt-Down
Pull up and and turn either direction to tilt conveyor down.
GREEN Wire Labeled: Tilt-Down - Round Solenoid

Conveyor Rotate
* Pull out to pivot conveyor clockwise.
ORANGE Wire Labeled: Pivot CW - Top Solenoid
* Push in to pivot conveyor counter-clockwise.
BLUE Wire Labeled: Pivot CCW - Bottom Solenoid

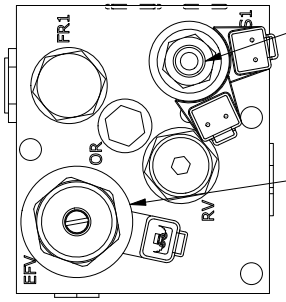
6 Function



Swing Brake Release
* Turn clockwise all the way to release brake.
PURPLE Wire Labeled: Brake Release

Conveyor Swing
* Pull out swing conveyor forward.
RED Wire Labeled: Swing Forward - Top Solenoid
* Push in to swing conveyor in reverse.
BLUE Wire Labeled: Swing Reverse - Bottom Solenoid

2 Function

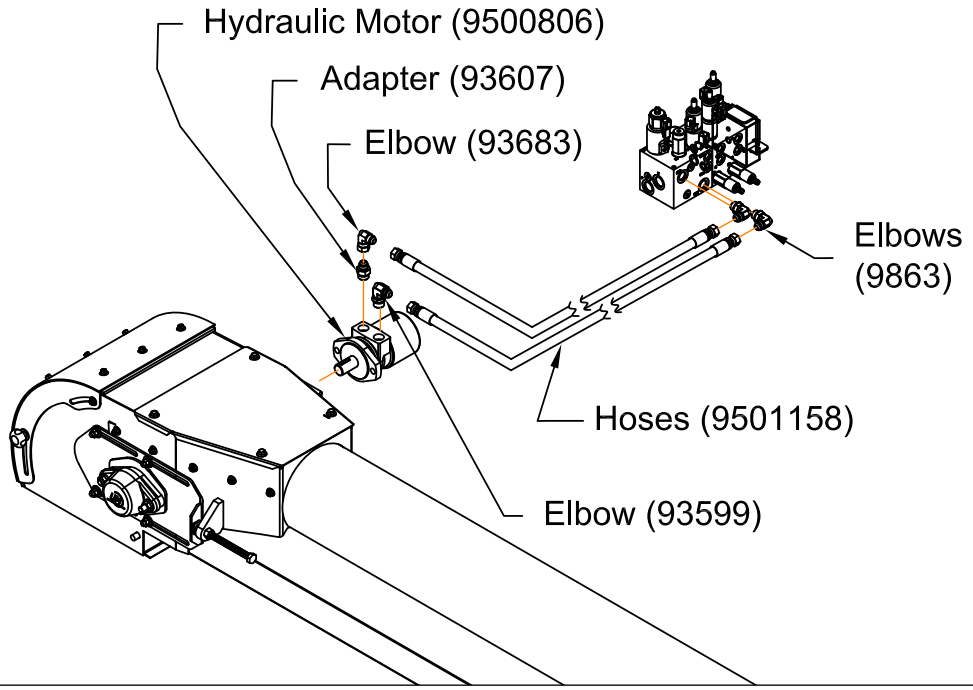


Conveyor Raise/Lower
* Pull out to lower conveyor.
ORANGE Wire Labeled: Conveyor Lower - Top Solenoid
* Push in to raise conveyor.
YELLOW Wire Labeled: Conveyor Raise - Bottom Solenoid

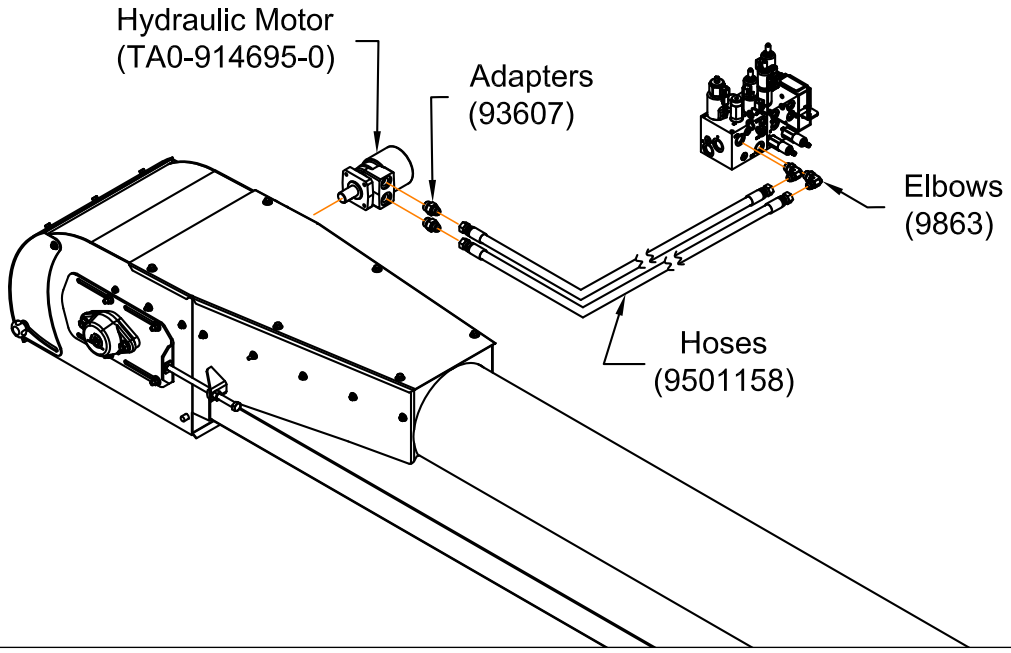
Conveyor On/Off
Screw In to override and operate the conveyor.
PURPLE Wire Labeled: Conveyor On/Off

2004792 Rev. 4

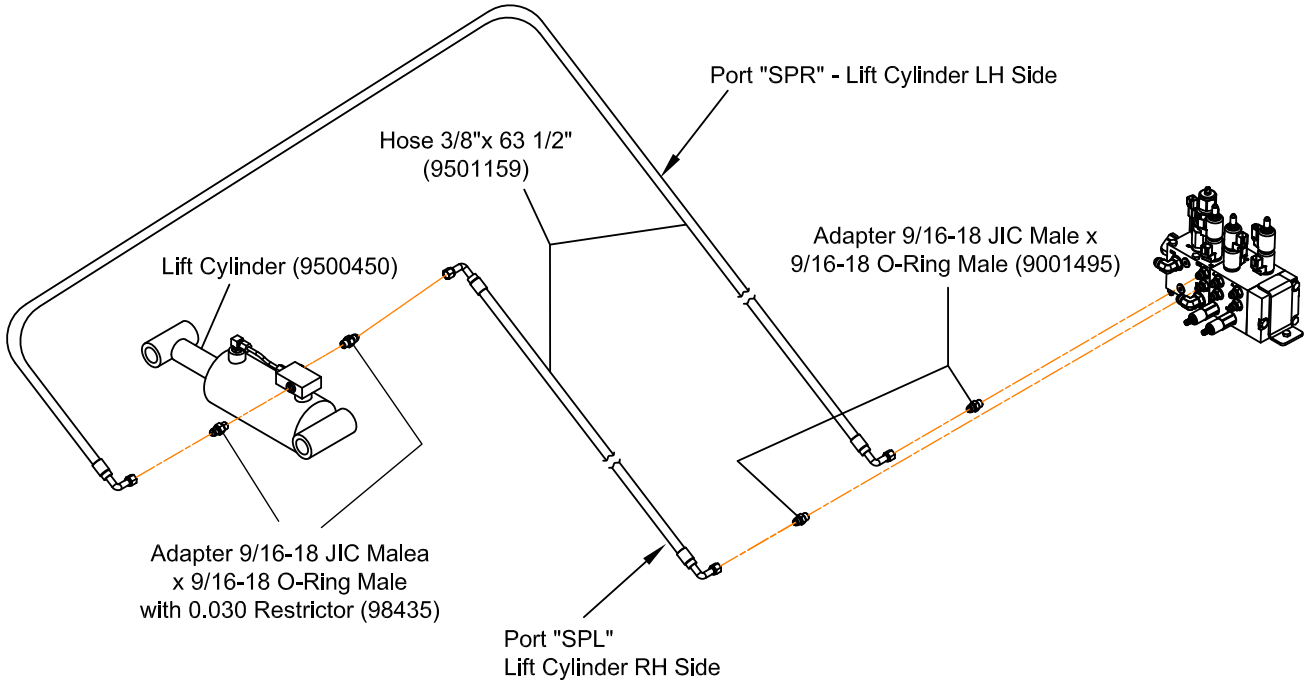
Hydraulic Diagram For 8” x 24’ Conveyor



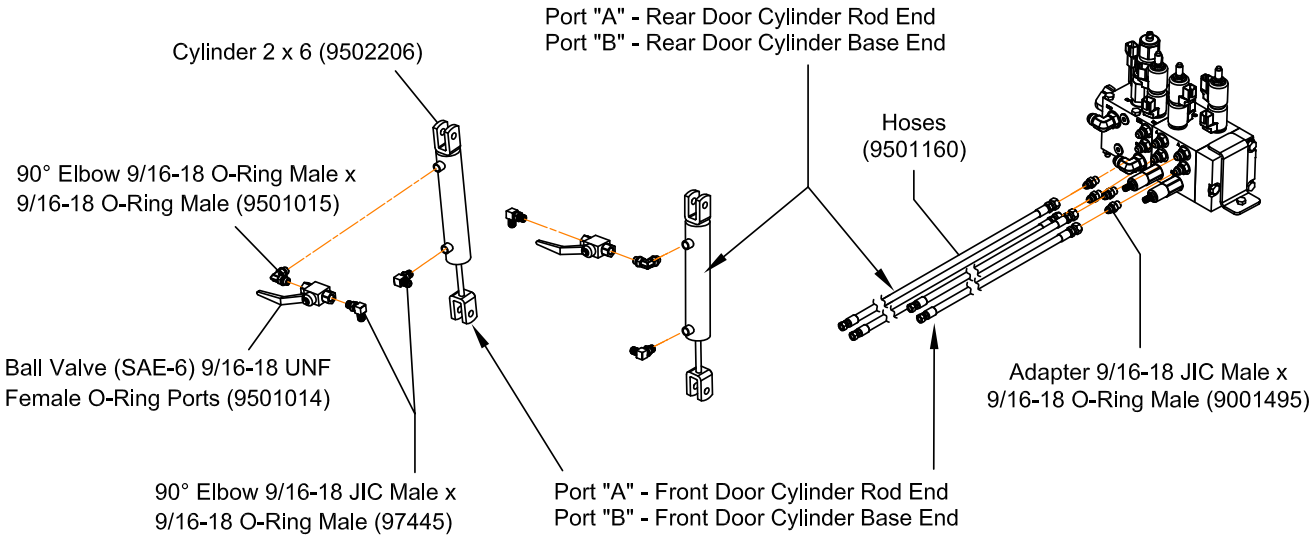
Hydraulic Diagram For 10” x 24’ Conveyor



Hydraulic Diagram For Conveyor Raise/Lower



Hydraulic Diagram For Doors



Notes

SECTION V
Parts

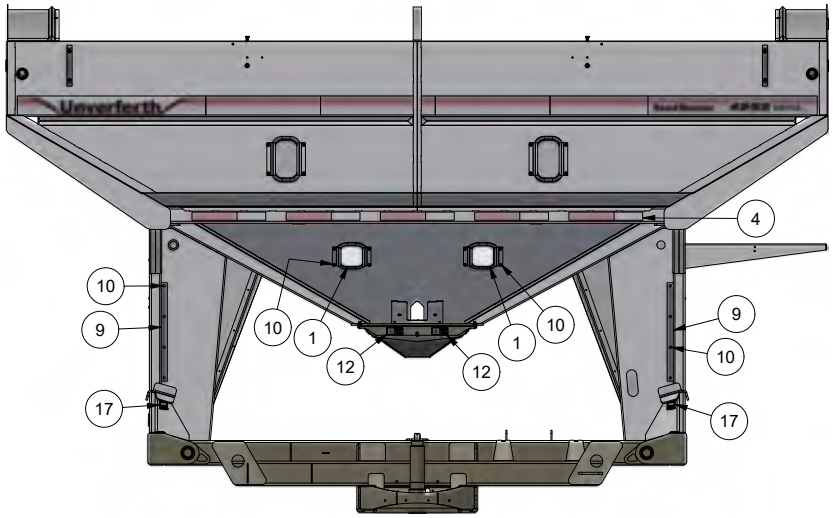
Please visit www.unverferth.com/parts/ for the most current parts listing.

Box Decals & Window Components....5-2
Touch-Up Paint....5-3
Ladder Components....5-4
Deluxe Ladder Components....5-6
Door Components....5-8
Sliding Hopper Components....5-10
Pivot Arm Components....5-12
Pivot Arm Mount to Platform....5-16
Pivot Arm Mount to Conveyor....5-19
Hopper Components - 8” Tube Conveyor....5-22
Hopper Components - 10” Tube Conveyor....5-26
Idler End Components - 8” Tube Conveyor....5-30
Idler End Components - 10” Tube Conveyor....5-32
Discharge Spout Components - 8” Tube Conveyor....5-34
Discharge Spout Components - 10” Tube Conveyor....5-36
Self-Loading Spout....5-40
Hydraulic Components - 3 Function....5-42
Directional Control Valve - Main....5-44
Directional Control Valve - Dual Doors....5-46
Shroud Panel, Valve Cover, Fuel Tank & Tool Box Components....5-48
Pump/Motor Mount, Filter, Access Cover, Battery Components....5-50
Muffler, Cables, Spark Arrester, & Optional EPA CARB Compliant Kit....5-52
Pump, Cold Start Valve, & Shroud Components....5-54
Power Pak Harnesses, Site Gauge & Actuator Components....5-56
Box Electrical Components....5-58
Cable Return Tarp System Components....5-60
Axle Components....5-64
Dual Axle Undercarriage Components....5-66
Undercarriage Electrical Components....5-68
Electrical Breakaway Components....5-69
Non-Scale Components....5-70
Scale Platform for Units Less Undercarriage....5-71
Scale Components (Optional)....5-72
Enclosure, Remote, & Receiver Components - 3 Function....5-74
Gooseneck Hitch Components....5-76
Hydraulic Jack Kit #2002947B for Gooseneck Hitch (Optional)....5-78
Spare Tire (Optional)....5-78
Electric Tarp Kit (#27706) (Optional)....5-79
T&G Applicator (Optional)....5-79
License Plate/Lamp Holder Assembly Kit #25481 (Optional)....5-80
AG Decal Package #2010513 (Option) - SMV, SIS Decals, & Reflectors....5-81
Seed Tender Remote - Override Box....5-82
6-Function Wireless Remote Control Package #2007513TS (Option)....5-83
7-Function Wireless Remote Control Package #2007514TS (Option)....5-83

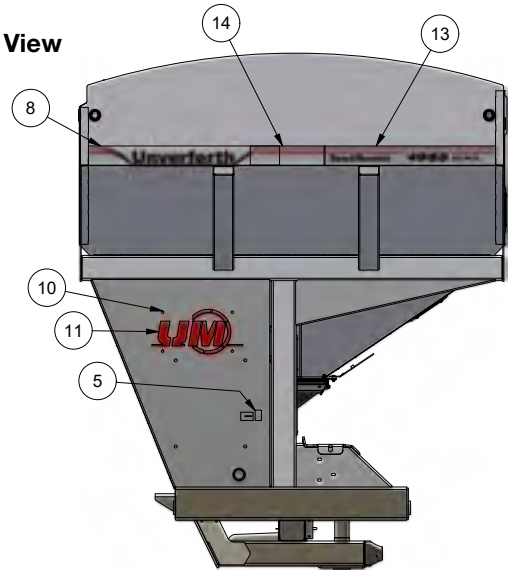
Box Decals & Window Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

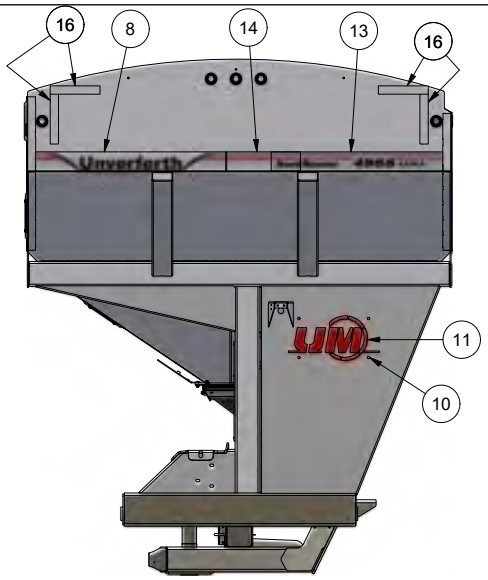
Hopper Door Side



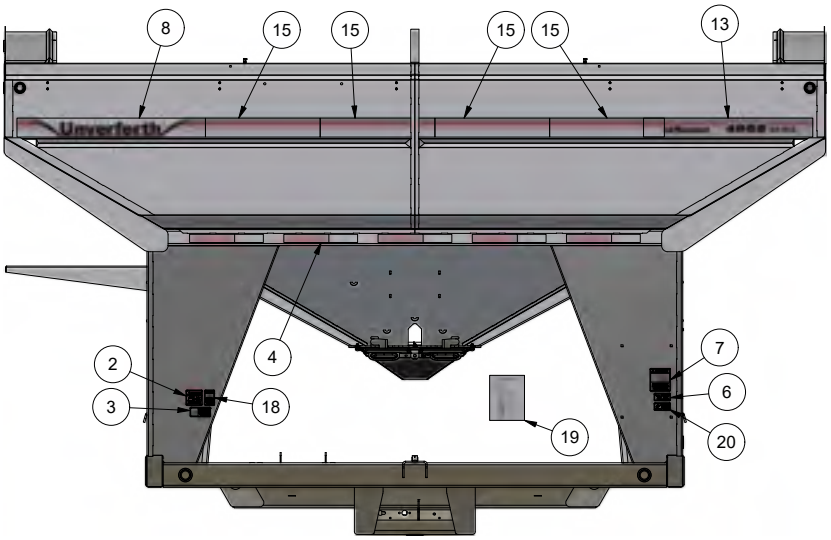
Front View



Rear View



Power Pak Side



Box Decals & Window Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

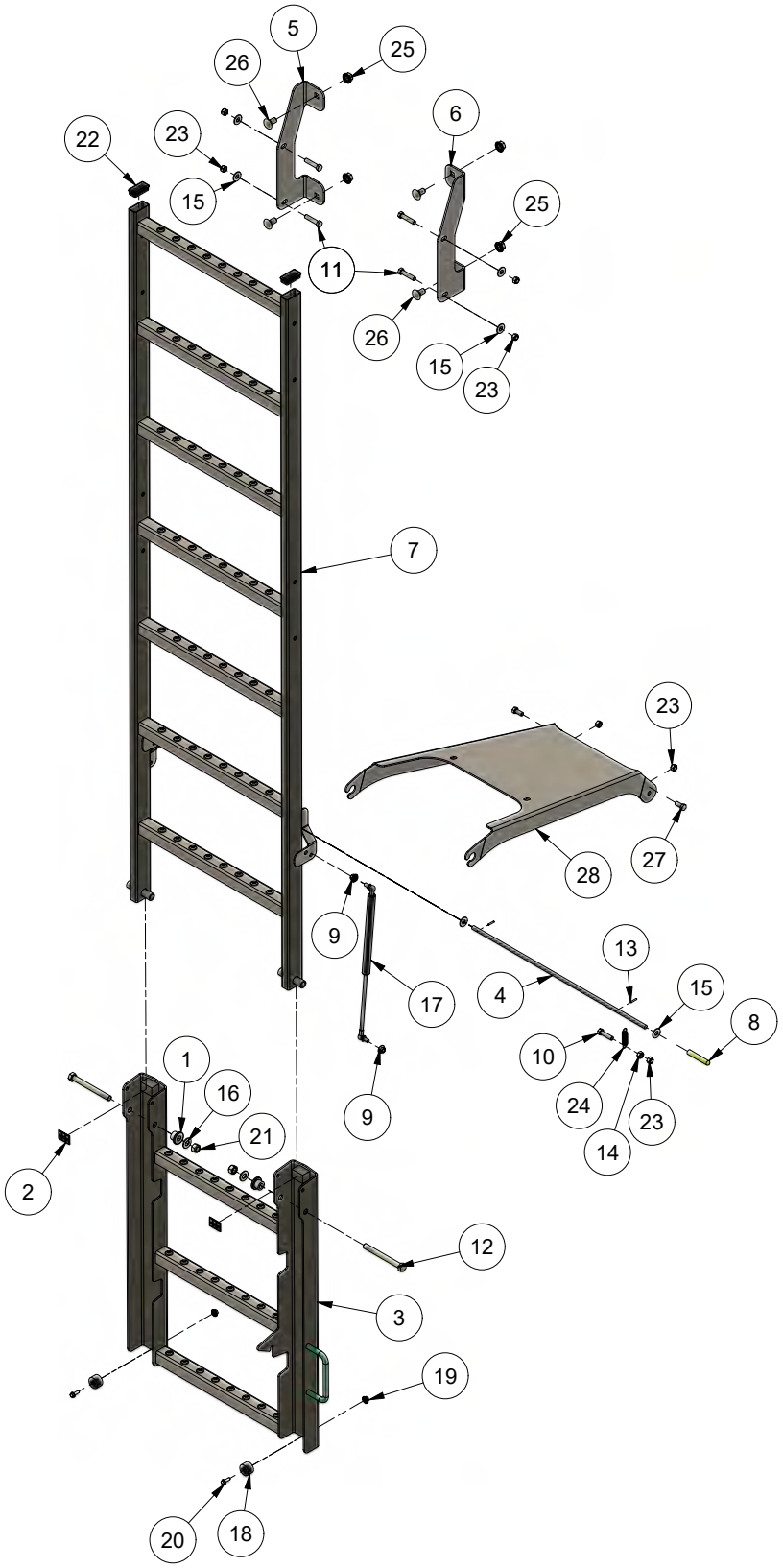
ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	2002566B	Window Bracket	8	
	102608	Window	4	
	102693	Black Rubber Weatherstrip	4	
	9390-003	Capscrew, 1/4"-20UNC x 3/4"	16	
	97189	Hex Nut/Large Flange, 1/4"-20UNC	16	
2	235161	Decal, "Danger" (Flammable)	1	
3	95445	Decal, "Warning" (High-Pressure Leaks)	1	
4	25003	Conspicuity Marking (11" Red/7" Red)	10	
5	91605	Decal, FEMA	1	
6	98350	Decal, "Warning" (No Riders)	1	
7	901580	Decal, "Danger" (Never Play in/on the Grain...)	1	
8	901832	Decal, "Unverferth"	4	
9	2001611	Wear Strip	2	
10	9388-002	Carriage Bolt, 1/4"-20UNC x 3/4"	16	
	97189	Hex Nut/Large Flange, 1/4"-20UNC	16	
11	2002809R	Accent Panel	2	
12	95839	Decal, "Warning" (Pinch Point)	2	
13	9501882	Decal, Seed Runner 4955DXL	4	
14	901834	Decal, Stripe (4.626 x 18)	2	
15	901855	Decal, Stripe (4.626 x 28)	8	
16	902362	White Conspicuity Markings	4	
17	97048	Decal, "Warning" (Pinch Point)	2	
18	902026	Decal, WARNING "Spark Arrestor"	1	
19	2004792	Valve Decal	1	
20	95008	Decal, CAUTION (Slippery Surface...)	1	

Touch-Up Paint

PAINT	PART NO.
Ivory White - Spray Paint (12oz)	901210
Tan Base Coat - Spray Paint (12oz)	9500474
Radiant Brass - Spray Paint (12oz)	901297

Ladder Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



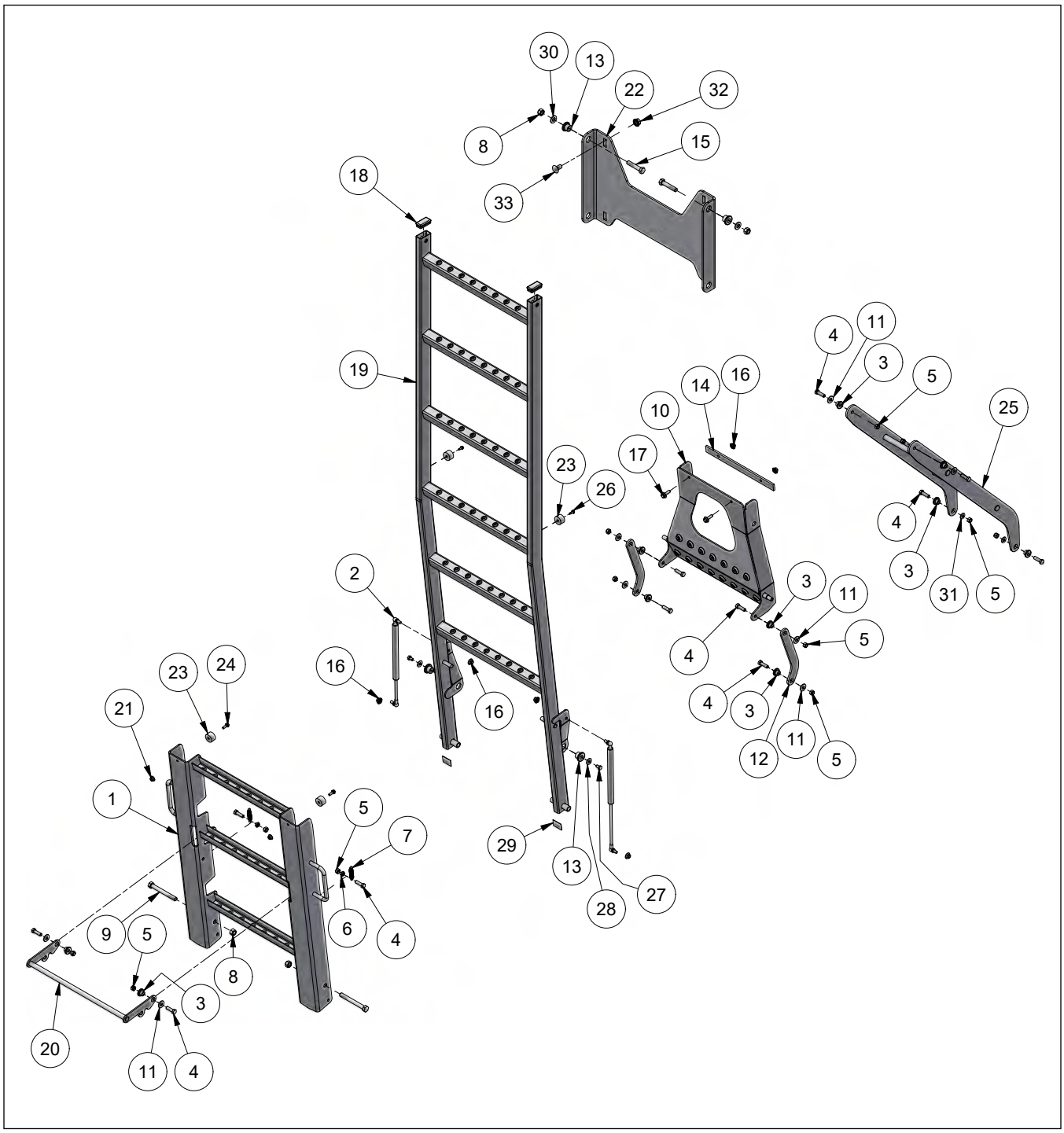
Ladder Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY
1	2003030	Nylon Bushing	2
2	2004072	Rubber Pad 1" x 1 1/2"	2
3	2005553TS	Ladder Extension Weldment	1
4	2005569	Pin 3/8" Dia. x 23 7/8"	1
5	2005570TS	Upper Ladder Mount	1
6	2005571TS	Upper Ladder Mount	1
7	2006463TS	Upper Ladder Weldment	1
8	9003869	Hand Grip	1
9	91257	Large Flange Hex Nut 5/16"-18UNC	2
10	9390-057	Capscrew 3/8"-16UNC x 1 1/2"	1
11	9390-058	Capscrew 3/8"-16UNC x 1 3/4"	4
12	9390-113	Capscrew 1/2-13UNC x 5	2
13	9392-056	Roll Pin 1/8" Dia. x 3/4"	2
14	9394-006	Hex Nut 3/8"-16UNC	1
15	9405-076	Flat Washer 3/8" USS	6
16	9405-086	Flat Washer 1/2" SAE	2
17	9501085	Gas Spring	1
18	9501194	Bumper	2
19	97189	Large Flange Hex Nut 1/4"-20UNC	2
20	97420	Flange Screw Hex Head 1/4"-20UNC x 3/4"	2
21	9800	Locknut 1/2"-13UNC	2
22	98337	Plug	2
23	9928	Locknut 3/8-16UNC	5
24	99860	Extension Spring	1
25	91267	Flange Nut 1/2"-13UNC	4
26	9388-102	Carriage Bolt 1/2"-13UNC x 1"	4
27	9390-054	Capscrew 3/8"-16UNC x 7/8"	2
28	2006461TS	Ladder Holder	1

Deluxe Ladder Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



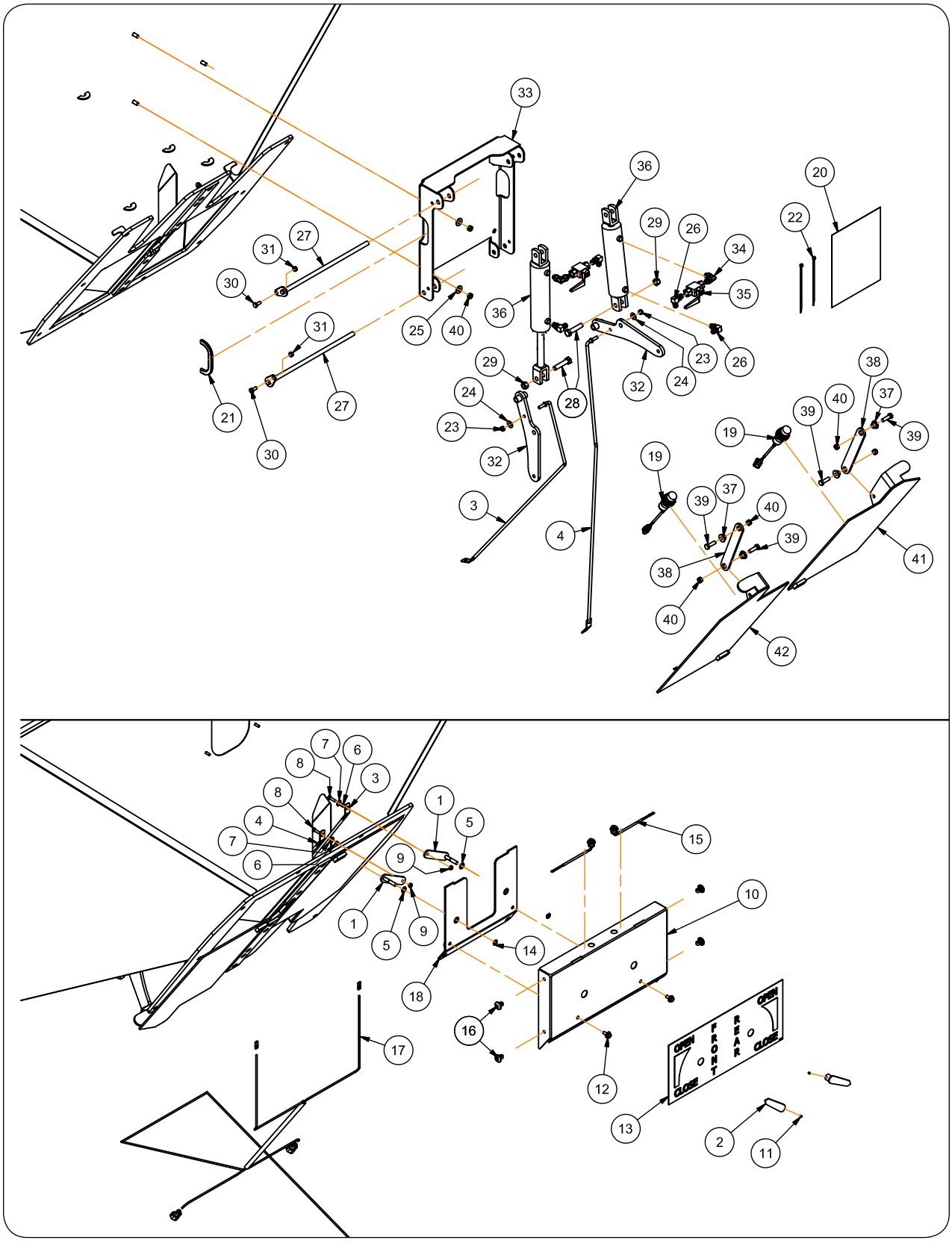
Deluxe Ladder Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY
1	2002896TS	Ladder Extension Weldment	1
2	9501085	Gas Spring	2
3	2003029	Nylon Bushing	8
4	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	10
5	9928	Locknut, 3/8"-16UNC	10
6	9395-006	Hex Jam Nut, 3/8"-16UNC	2
7	99860	Extension Spring	2
8	9800	Locknut, 1/2"-13UNC	4
9	9390-112	Capscrew, 1/2"-13UNC x 4 1/2" G5	2
10	2003065TS	Step Weldment	1
11	9405-076	Flat Washer, 3/8" USS	4
12	2002917TS	Link	2
13	2003030	Nylon Bushing	4
14	2003102	UHMW Strip	1
15	9390-105	Capscrew, 1/2"-13UNC x 2 1/2" G5	2
16	91257	Hex Nut/Large Flange, 5/16"-18UNC	6
17	97604	Flange Screw, 5/16"-18UNC x 1" G5	2
18	98337	Plug	2
19	2003235TS	Ladder Weldment	1
20	2003232TS	Latch Weldment	1
21	97189	Hex Nut/Large Flange, 1/4"-20UNC	2
22	2003104TS	Ladder Bracket	1
23	9501194	Bumper	4
24	97420	Flange Screw Hex Head, 1/4"-20UNC x 3/4"	2
25	2003057TS	Link Weldment	1
26	93661	Self Drilling Screw, #10-16 x 5/8"	2
27	9390-026	Capscrew, 5/16"-18UNC x 1/2" G5	2
28	9405-070	Flat Washer, 5/16" USS	2
29	2004072	Rubber Pad, 1" x 1 1/2"	
30	9405-086	Flat Washer, 1/2" SAE	
31	9405-074	flat Washer, 3/8" SAE	
32	91267	Flange Nut, 1/2"-13UNC	4
33	9388-102	Carriage Bolt, 1/2"-13UNC x 1" G5	4

Door Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



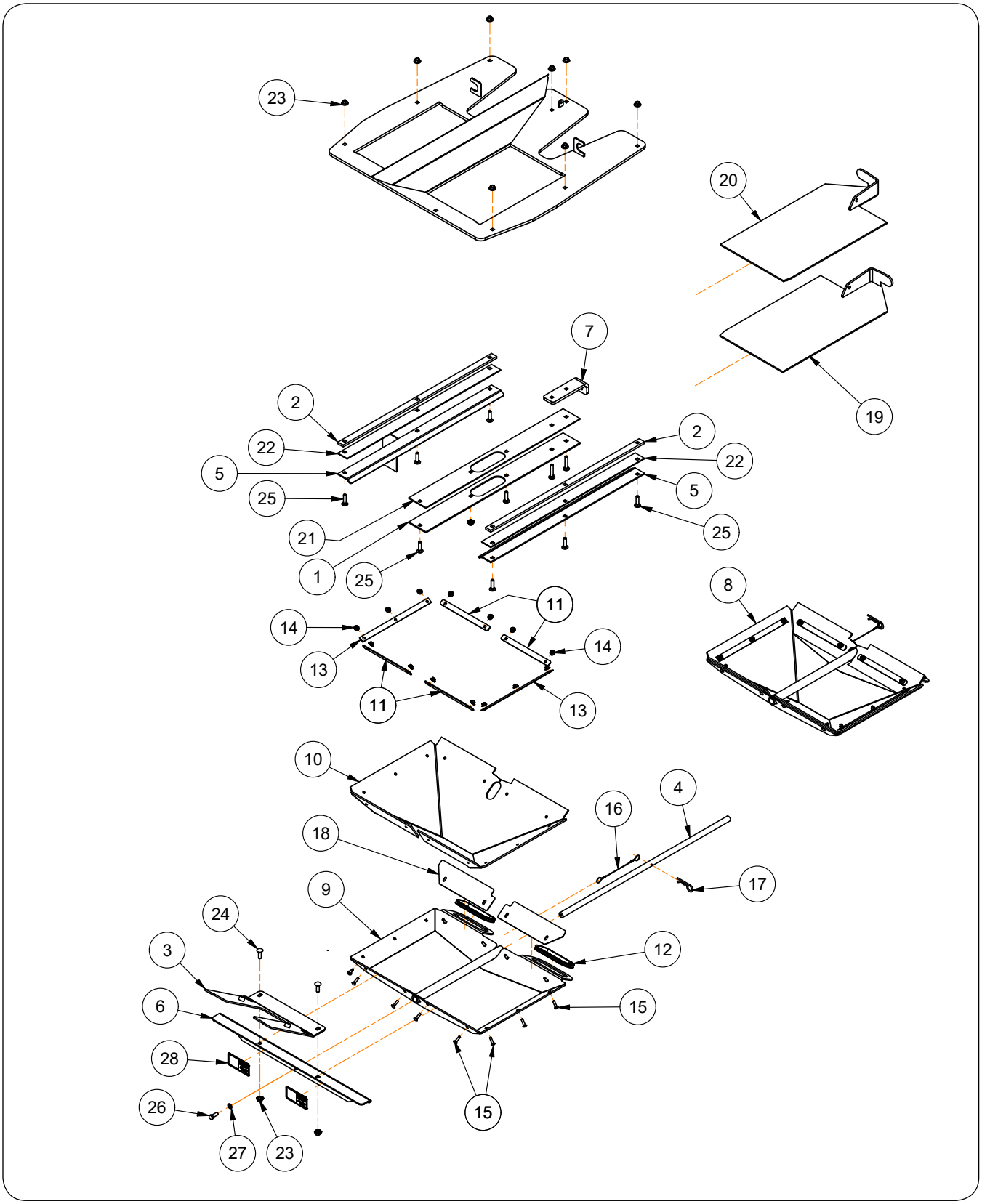
Door Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2002846	Lever Weldment	2	
2	2002844R	Indicator Weldment	2	
3	2002825	Control Rod LH	1	
4	2002826	Control Rod RH	1	
5	9501011	Nylon Washer	2	
6	22018	Bushing	2	
7	9405-064	Flat Washer 1/4" USS	2	
8	9390-005	Capscrew 1/4-20UNC x 1	2	Grade 5
9	9936	Locknut 1/4"-20UNC	4	
10	2002848IV	Cover Plate	1	
11	9399-047	Set Screw 10-24UNC x 1/4	2	
12	91256	Flange Screw 5/16-18UNC x 3/4	2	Grade 5
13	2003013	Decal, Door Open/Close Front & Rear	1	
14	9501063	E-Ring External	2	
15	902776	Red Indicator Light w/Connectors	2	
16	903027	Button Head Cable Tie	4	
17	2004346	Wire Harness for Door Indicator	1	
18	2002829IV	Indicator Weldment	1	
19	28804	Proximity Switch Assembly	2	
20	2004792	Decal, Valve Operating Instructions	1	
21	2004064	Trim-Loc	A/R	
22	9000106	Cable Tie 7 1/2"	A/R	
23	9398-010	Elastic Stop Nut 5/16-18UNC	2	
24	9405-070	Flat Washer 5/16 USS	2	
25	9405-076	Flat Washer 3/8 USS	4	
26	97445	90° Elbow 9/16-18 JIC Male x 9/16-18 O-Ring Male	4	
27	2000437	Pin Weldment	2	
28	9390-104	Capscrew 1/2-13UNC x 2 1/4	2	Grade 5
29	9800	Locknut 1/2-13UNC	6	
30	9390-028	Capscrew 5/16-18UNC x 3/4	3	Grade 5
31	9807	Locknut 5/16-18UNC	6	
32	2001498TS	Link Plate Weldment	2	
33	2001495TS	Door Operator Weldment	1	
36	9502206	Cylinder 2 x 6 (3000PSI)	2	
34	9501015	90° Elbow 9/16-18 O-Ring Male Both Ends	2	
35	9501014	Ball Valve (SAE-6) 9/16-18 UNF Female O-Ring Ports	2	
37	2000430	Bushing	4	
38	2001499TS	Link Plate	2	
39	9390-056	Capscrew 3/8-16UNC x 1 1/4	4	Grade 5
40	9928	Locknut 3/8-16UNC	8	
41	2006998TS	Door Weldment LH	1	
42	2006997TS	Door Weldment RH	1	

Sliding Hopper Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



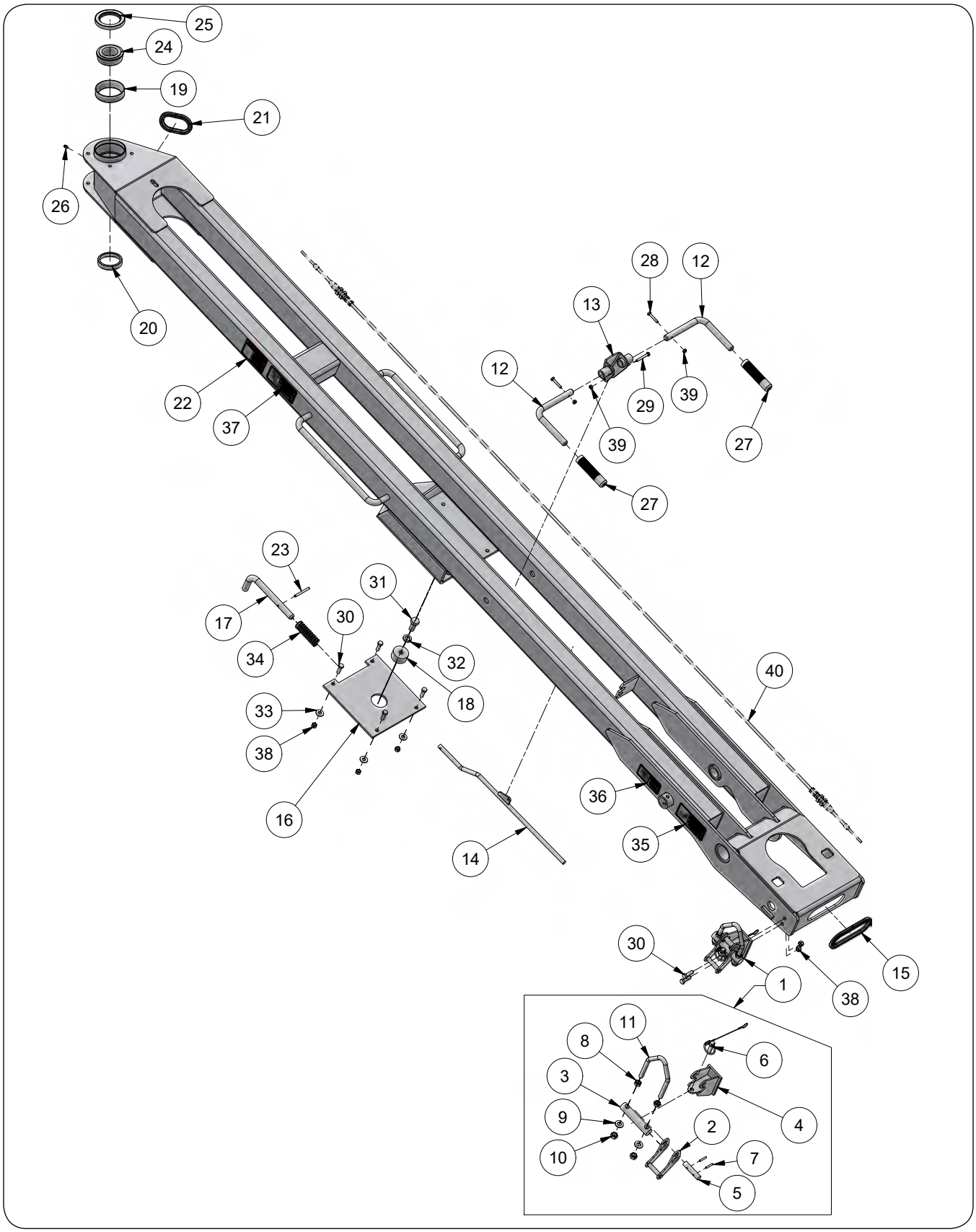
Sliding Hopper Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001470TS	Strip/Plate 3 1/4" x 29 1/4"	1	
2	2001513TS	Plate 1" x 29 1/8"	2	
3	2002829IV	Indicator Weldment	1	
4	2006833	Bar 3/4" Dia. x 31 3/4"	1	
5	2006836TS	Bar 2 1/2" x 29 1/8"	2	
6	2006838TS	Plate 4" x 28 1/8"	1	
7	2006880TS	Plate 2" x 8 1/32"	1	
8	2006977TS	Chute Assembly	1	Includes Items 9 through 18
9	2006850TS	Chute Weldment	1	
10	2006862	Rubber Chute	1	
11	2006878TS	Strap/Plate 3/4" x 9"	4	
12	2006937	Trim Lock 14 1/4"	2	
13	2002815TS	Strap/Plate 3/4" x 13"	2	
14	97189	Large Flange Hex Nut 1/4"-20UNC	14	
15	9388-003	Carriage Bolt 1/4"-20UNC x 1" G5	14	
16	9501482	Lanyard	1	
17	95959	Hairpin Cotter 5/32" Dia. x 3"	1	
18	2009682TS	Plate	2	
19	2006997TS	Door Weldment Right-Hand	1	
20	2006998TS	Door Weldment Left-Hand	1	
21	2007487	Poly Strip 3 1/4" x 29 1/4"	1	
22	2007488	Poly Strip 1 3/4" x 29 1/4'	2	
23	91263	Large Flange Nut 3/8"-16UNC	13	
24	9388-052	Carriage Bolt 3/8"-16UNC x 1 1/4" G5	2	
25	9388-053	Carriage Bolt 3/8"-16UNC x 1 1/2" G5	9	
26	9390-055	Capscrew 3/8"-16UNC x 1" G5	2	
27	9404-021	Lock Washer 3/8"	2	
28	95839	Decal, WARNING "Pinch Point"	2	

Pivot Arm Components - Serial Number D69630100 & Up

Please visit www.unverferth.com/parts/ for the most current parts listing.



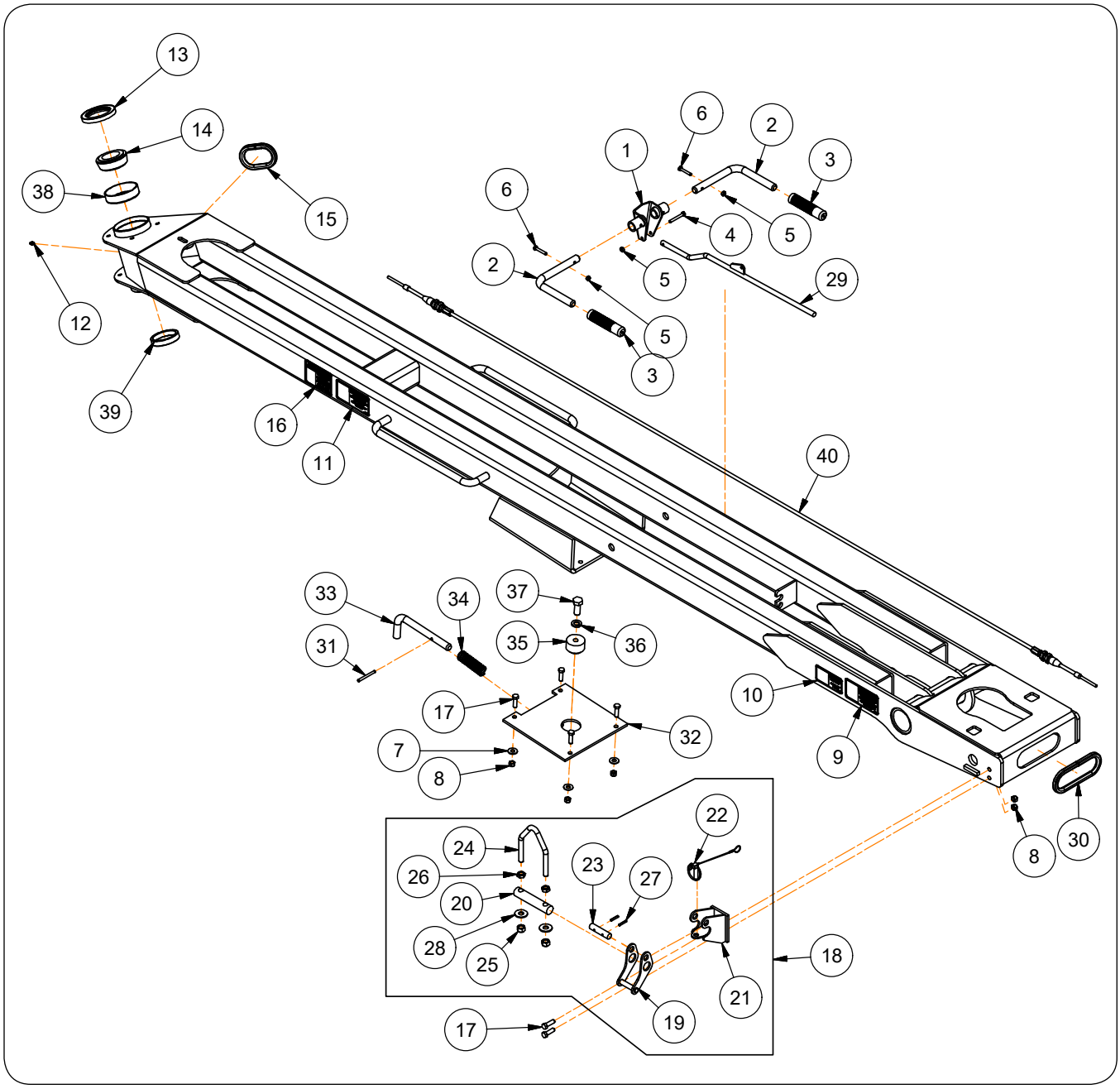
Pivot Arm Components - Serial Number D69630100 & Up

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	2011350TS	Pivot Arm Assembly	1	Includes Items 1 through 38
1	2005590TS	Latch Assembly	1	Includes Items 2-11
2	2005585TS	Handle Weldment	1	
3	2005589	Pin 1" Dia. x 5"	1	
4	2005610TS	Latch Base	1	
5	2005613	Pin 5/8" Dia. x 2 3/4"	1	
6	901170	Lynch Pin W/Lanyard	1	
7	91144-121	Spiral Pin, 3/16" Dia. x 1 1/8"	2	
8	9395-010	Hex Jam Nut 1/2"-13UNC	2	
9	9405-086	Flat Washer 1/2" SAE	2	
10	94981	Locknut/Center, 1/2"-13UNC	2	
11	9501761	U-Bolt, 1/2"-13UNC x 5 1/2", 3 3/4" C/C	1	
12	2001364TS	Handle 3/4" Dia.	2	
13	2001365TS	Cam Weldment	1	
14	2006432TS	Push Rod Weldment	1	
15	2006829	U-Channel	1	
16	2007539	Poly Sheet 9 1/2" x 9 1/2"	1	
17	2007540	Pin 3/4" Dia. x 10 7/16"	1	
18	2007541	Pin 2" Dia. x 1"	1	
19	91151	Bearing Cup #3720, 3.6718" OD	1	
20	9354	Bearing Cup #LM603011, 3.0625" OD	1	
21	82044	U-Channel	1	
22	901478	Decal, DANGER	2	
23	902614-168	Spiral Pin 1/4" Dia. x 2 1/2"	1	
24	91154	Bearing Cone #3780; 2" Bore	1	
25	91157	Seal #9064811	1	
26	91160	Grease Zerk	1	
27	92928	Grip/Handle 3/4" Dia.	2	
28	9390-007	Capscrew 1/4"-20UNC x 1 1/2"	2	
29	9390-009	Capscrew 1/4"-20UNC x 2"	1	
30	9390-056	Capscrew 3/8"-16UNC x 1 1/4" G5	6	
31	9390-122	Capscrew 5/8"-11UNC x 1 1/2"	1	
32	9404-029	Lock Washer 5/8"	1	
33	9405-076	Flat Washer 3/8" USS	4	
34	9502271	Spring/Compression 3 1/2"	1	
35	95445	Decal, WARNING "High-Pressure"	2	
36	95839	Decal, WARNING "Pinch Point"	2	
37	98229	Decal, WARNING "Lower Equipment"	2	
38	9928	Locknut 3/8"-16UNC	6	
39	9936	Locknut 1/4"-20UNC	3	
39	9500824	Control Cable	1	

Pivot Arm Components - Serial Number D69630099 & Lower

Please visit www.unverferth.com/parts/ for the most current parts listing.



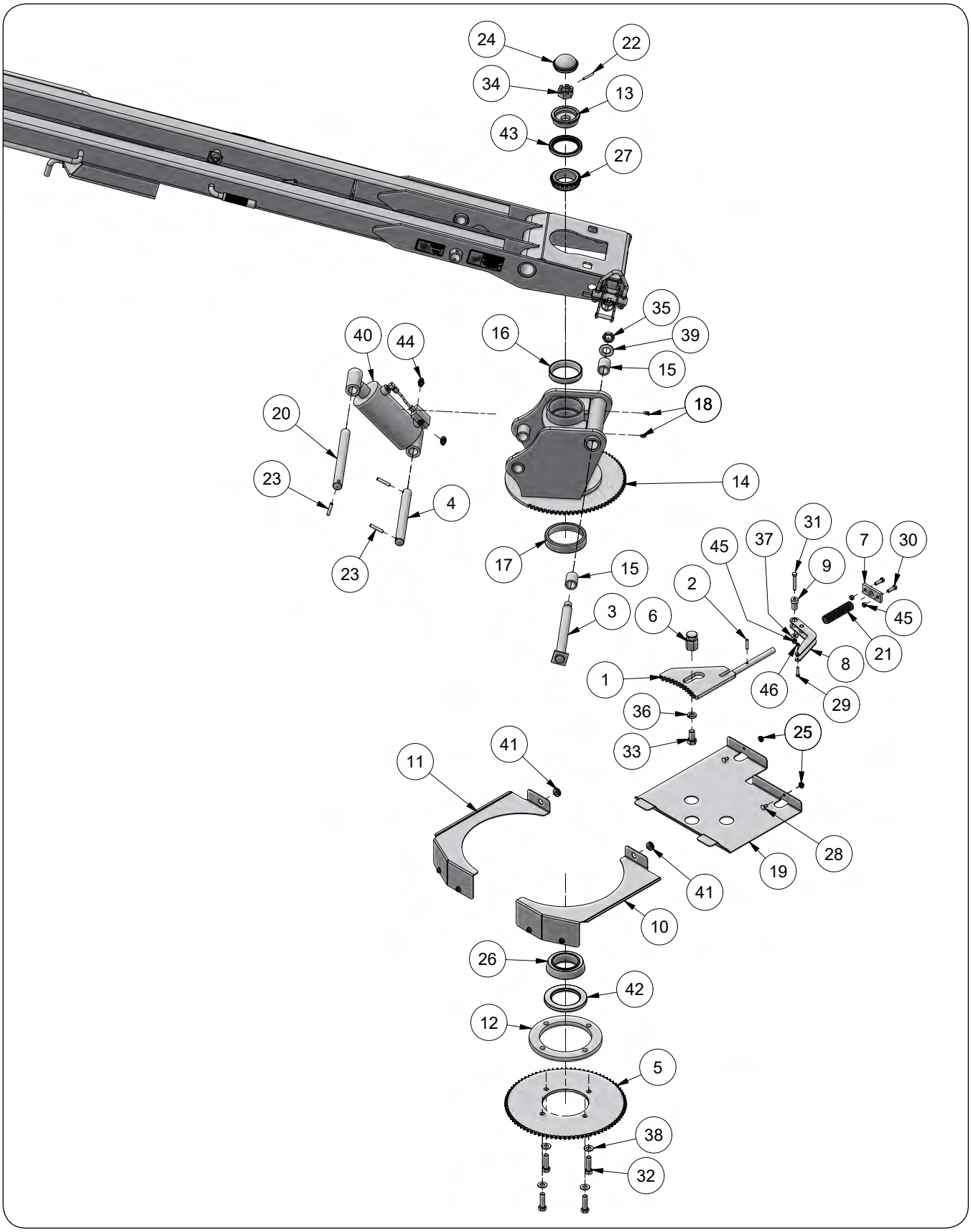
Pivot Arm Components - Serial Number D69630099 & Lower

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	2006430TS	Pivot Arm Assembly	1	Includes Items 1 through 30
1	2001365TS	Cam Weldment	1	
2	2001364TS	Handle 3/4" Dia.	2	
3	92928	Grip/Handle 3/4" Dia.	2	
4	9390-009	Capscrew 1/4"-20UNC x 2"	1	
5	9936	Locknut 1/4"-20UNC	3	
6	9390-007	Capscrew 1/4"-20UNC x 1 1/2"	2	
7	9405-076	Flat Washer 3/8" USS	4	
8	9928	Locknut 3/8"-16UNC	13	
9	95445	Decal, WARNING "High-Pressure"	2	
10	95839	Decal, WARNING "Pinch Point"	2	
11	98229	Decal, WARNING "Lower Equipment"	2	
12	91160	Grease Zerk	4	
13	91157	Seal #9064811	1	
14	91154	Bearing Cone #3780; 2" Bore	1	
15	82044	U-Channel	1	
16	901478	Decal, DANGER	2	
17	9390-056	Capscrew 3/8"-16UNC x 1 1/4" G5	6	
18	2005590TS	Latch Assembly	1	
19	2005585TS	Handle Weldment	1	
20	2005589	Pin 1" Dia. x 5"	1	
21	2005610TS	Latch Base	1	
22	901170	Lynch Pin W/Lanyard	1	
23	2005613	Pin 5/8" Dia. x 2 3/4"	1	
24	9501761	U-Bolt 1/2"-13UNC	1	
25	9800	Lock Nut/Top 1/2"-13UNC	2	
26	9395-010	Hex Jam Nut 1/2"-13UNC	2	
27	9392-097	Roll Pin 3/16" Dia. x 1"	2	
28	9405-088	Flat Washer 1/2" USS	1	
29	2006432TS	Push Rod Weldment	1	
30	2006829	U-Channel	1	
31	902614-168	Spiral Pin 1/4" Dia. x 2 1/2"	1	
32	2007539	Poly Sheet 9 1/2" x 9 1/2"	1	
33	2007540	Pin 3/4" Dia. x 10 7/16"	1	
34	9502271	Spring/Compression 3 1/2"	1	
35	2007541	Pin 2" Dia. x 1"	1	
36	9404-029	Lock Washer 5/8"	1	
37	9390-122	Capscrew 5/8"-11UNC x 1 1/2"	1	
38	91151	Bearing Cup #3720, 3.6718" OD	1	
39	9354	Bearing Cup #LM603011, 3.0625" OD	1	
40	9500824	Control Cable	1	

Pivot Arm Mount to Platform - Serial Number D69630100 & Up

Please visit www.unverferth.com/parts/ for the most current parts listing.



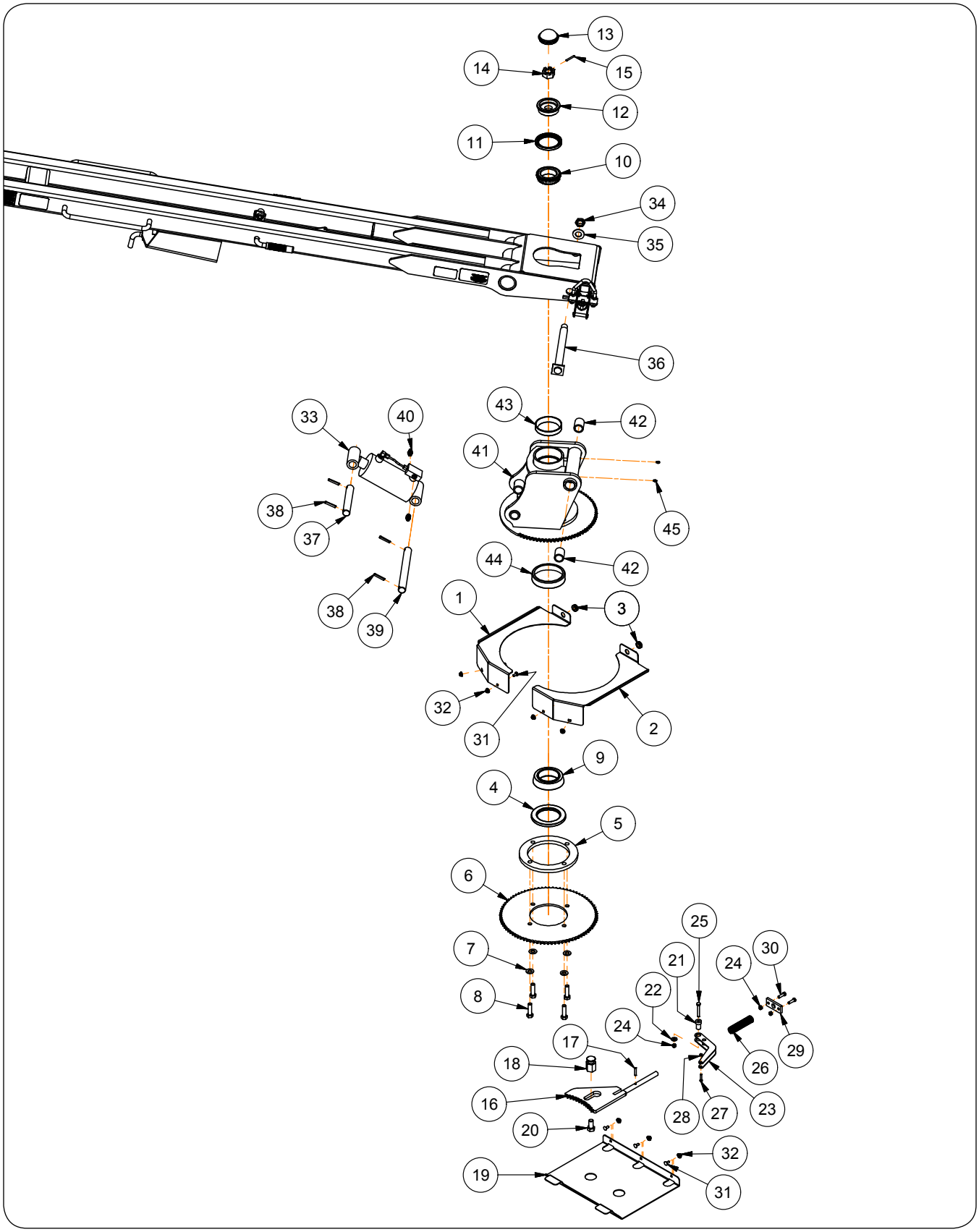
Pivot Arm Mount to Platform - Serial Number D69630100 & Up

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001327TS	Latch Weldment	1	
2	9392-155	Roll Pin, 5/16" Dia. x 1 1/2"	1	
3	2001350	Pin, 1 1/4" Dia. x 11 15/16"	1	
4	2001352	Pin, 1 1/4" Dia. x 12 1/4	1	
5	2001358	Sprocket 50A84	1	
6	2001954	Hex Pin 2.3" Long	1	
7	2001958TS	Plate for Latch Weldment	1	
8	2001963TS	Lever Arm Weldment	1	
9	2001964	Bushing w/Flange	1	
10	2001968TS	Upper Shield Right-Hand	1	
11	2001969TS	Upper Shield Left-Hand	1	
12	2001975	Pivot Plate 10 1/4" Dia.	1	
13	2002005	Bushing	1	
14	2011340TS	Pivot Weldment	1	
15	91238	Bronze Bearing	2	
16	92475	Bearing Cup #33462	1	
17	92476	Bearing Cup #HM218210	1	
18	92917	45° Grease Zerk	4	
19	2011371TS	Lower Shield	1	
20	2011491	Pin, 1 1/4" Dia. x 13 1/4"	1	
21	902616	Compression Spring	1	
22	91144-165	Spiral Pin, 1/4" Dia. x 1 7/8"	1	
23	91144-207	Spiral Pin, 3/8" Dia. x 2"	4	
24	91156	Hub Cap	1	
25	91257	Hex Nut/Large Flange, 5/16"-18UNC	12	
26	92545	Bearing Cone, #HM218248	1	
27	92546	Bearing Cone, #33275	1	
28	9388-024	Carriage Bolt, 5/16"-18UNC x 3/4"	7	
29	9390-006	Capscrew, 1/4"-20UNC x 1 1/4" G5	1	
30	9390-056	Capscrew, 3/8"-16UNC x 1 1/4" G5	2	
31	9390-061	Capscrew, 3/8"-16UNC x 2 1/2" G5	1	
32	9390-125	Capscrew, 5/8"-11UNC x 2 1/4" G5	4	
33	9390-143	Capscrew, 3/4"-10UNC x 1 1/2" G5	1	
34	9393-024	Slotted Nut, 1 1/4"-12UNF	1	
35	9397-018	Elastic Jam Nut, 1"-14UNS	1	
36	9404-033	Lock Washer, 3/4"	1	
37	9405-076	Flat Washer, 3/8" USS	1	
38	9405-098	Flat Washer, 5/8" SAE	4	
39	9405-116	Flat Washer, 1" SAE	1	
40	9500450	Cylinder 4" x 4" (3000PSI) w/Check Valve	1	
41	9500823	Grommet 5/8" ID	2	
42	9500828	Seal for 4" Dia. Shaft	1	
43	9500829	Seal for 3 1/2" Dia. Shaft	1	
44	98435	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male	2	With 0.03 Restrictor
45	9928	Locknut, 3/8"-16UNC	9	
46	9936	Locknut, 1/4"-20UNC	1	
47	2011588	Roller Chain #50 (Single) 125 Links	1	NOT SHOWN

Pivot Arm Mount to Platform - Serial Number D69630099 & Lower

Please visit www.unverferth.com/parts/ for the most current parts listing.



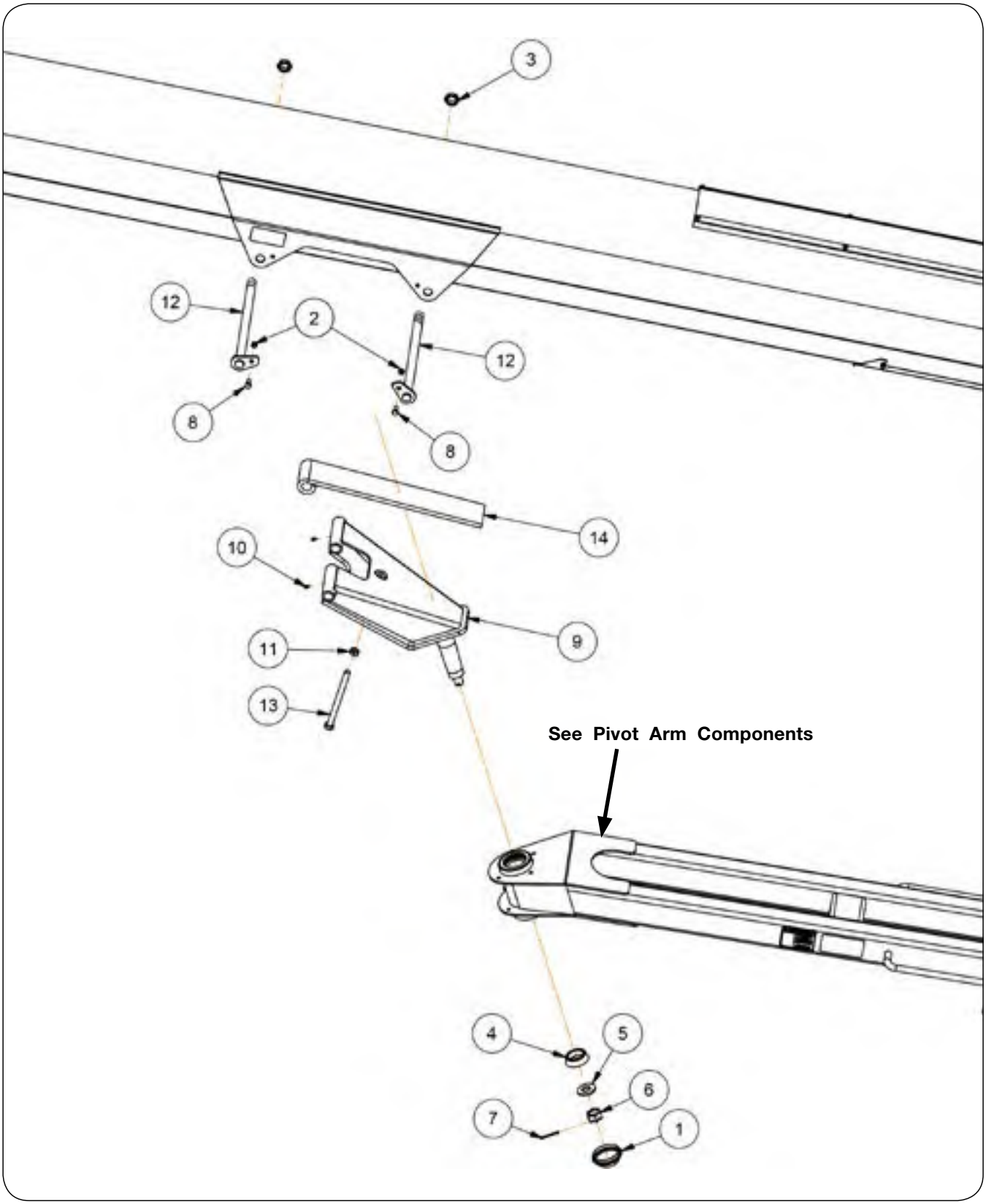
Pivot Arm Mount to Platform - Serial Number D69630099 & Lower

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001969TS	Upper Shield Left-Hand	1	
2	2001968TS	Upper Shield Right-Hand	1	
3	9500823	Grommet 5/8" ID	2	
4	9500828	Seal for 4" Dia. Shaft	1	
5	2001975	Pivot Plate 10 1/4" Dia.	1	
6	2001358	Sprocket 50A84	1	
7	9405-098	Flat Washer 5/8" SAE	4	
8	9390-125	Capscrew 5/8-11UNC x 2 1/4	4	
9	92545	Bearing Cone #HM218248	1	
10	92546	Bearing Cone #33275	1	
11	9500829	Seal for 3 1/2" Dia. Shaft	1	
12	2002005	Bushing	1	
13	91156	Hub Cap	1	
14	9393-024	Slotted Nut 1 1/4-12UNF	1	
15	91144-165	Spiral Pin 1/4" Dia. x 1 7/8	1	
16	2001327TS	Latch Weldment	1	
18	2001954	Hex Pin 2.3" Long	1	
19	2001965TS	Lower Shield	1	
20	9390-143	Capscrew 3/4-10UNC x 1 1/2	1	
21	2001964	Bushing w/Flange	1	
22	9405-076	Flat Washer 3/8" USS	1	
23	2001963TS	Lever Arm Weldment	1	
24	9928	Locknut 3/8-16UNC	9	
25	9390-061	Capscrew 3/8-16UNC x 2 1/2	1	
26	902616	Compression Spring	1	
27	9390-006	Capscrew 1/4-20UNC x 1 1/4	1	
28	9936	Locknut 1/4-20UNC	1	
29	2001958TS	Plate for Latch Weldment	1	
30	9390-056	Capscrew 3/8-16UNC x 1 1/4	2	
31	9388-024	Carriage Bolt 5/16-18UNC x 3/4	7	
32	91257	Large Flange Hex Nut 5/16-18UNC	12	
33	9500450	Cylinder 4 x 4 (3000PSI) w/Check Valve	1	
34	9397-018	Elastic Jam Nut 1-14UNS	1	
35	9405-116	Flat Washer 1" SAE	1	
36	2001350	Pin 1 1/4" Dia. x 11 15/16	1	
37	2001351	Pin 1 1/4" Dia. x 7 3/4	1	
38	9392-180	Roll Pin 3/8" Dia. x 2	4	
39	2001352	Pin 1 1/4" Dia. x 12 1/4	1	
40	98435	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male	2	With 0.03 Restrictor
41	2006054TS	Pivot Weldment	1	
42	91238	Bronze Bearing	2	
43	92475	Bearing Cup #33462	1	
44	92476	Bearing Cup #HM218210	1	
45	91160	Grease Zerk	4	

Pivot Arm Mount to Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.



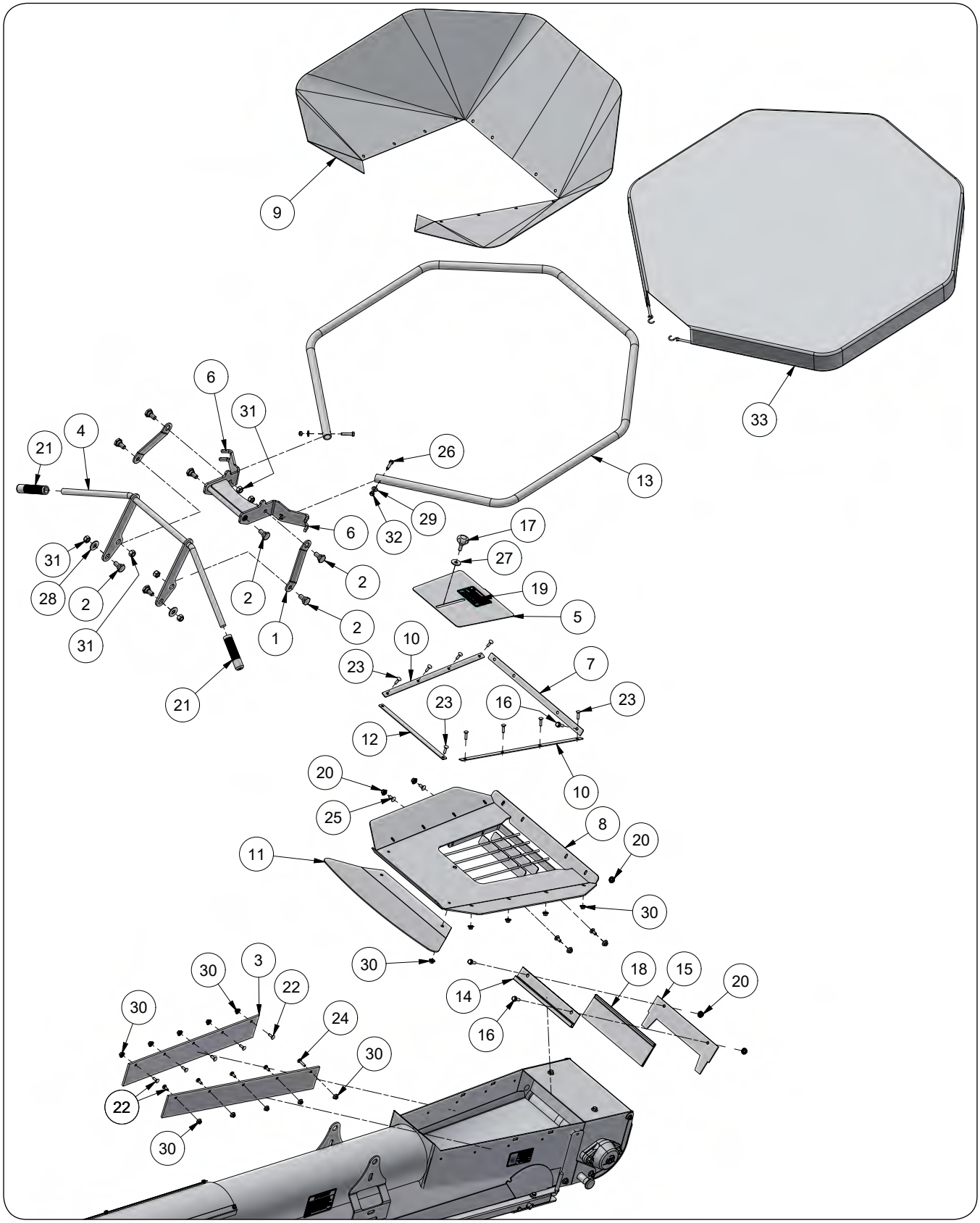
Pivot Arm Mount to Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	91156	Hub Cap	2	
2	9928	Lock Nut/Top 3/8"-16UNC	5	
3	9397-018	Elastic Jam Nut 1"-14UNS	3	
4	9353	Bearing Cone (LM603049)	1	
5	9448	Flat Washer 1"	1	
6	9393-020	Slotted Nut 1"-14UNS	1	
7	9391-045	Cotter Pin 3/16" Dia. x 1 3/4"	1	
8	9390-055	Capscrew 3/8"-16UNC x 1" G5	2	
9	2002141TS	Conveyor Pivot Weldment - 10" Conveyor	1	
	2007265TS	Conveyor Pivot Weldment - 8" Conveyor		
10	91160	Grease Zerk	2	
11	9395-014	Hex Jam Nut 5/8"-11UNC	1	
12	2006478	Pin Weldment 1" Dia. x 16 3/8"	2	
13	9502021	Capscrew 5/8"-11UNC x 8" Full Threaded	1	
14	2002146TS	Spring	1	

Hopper Components — 8” Tube Conveyor (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.



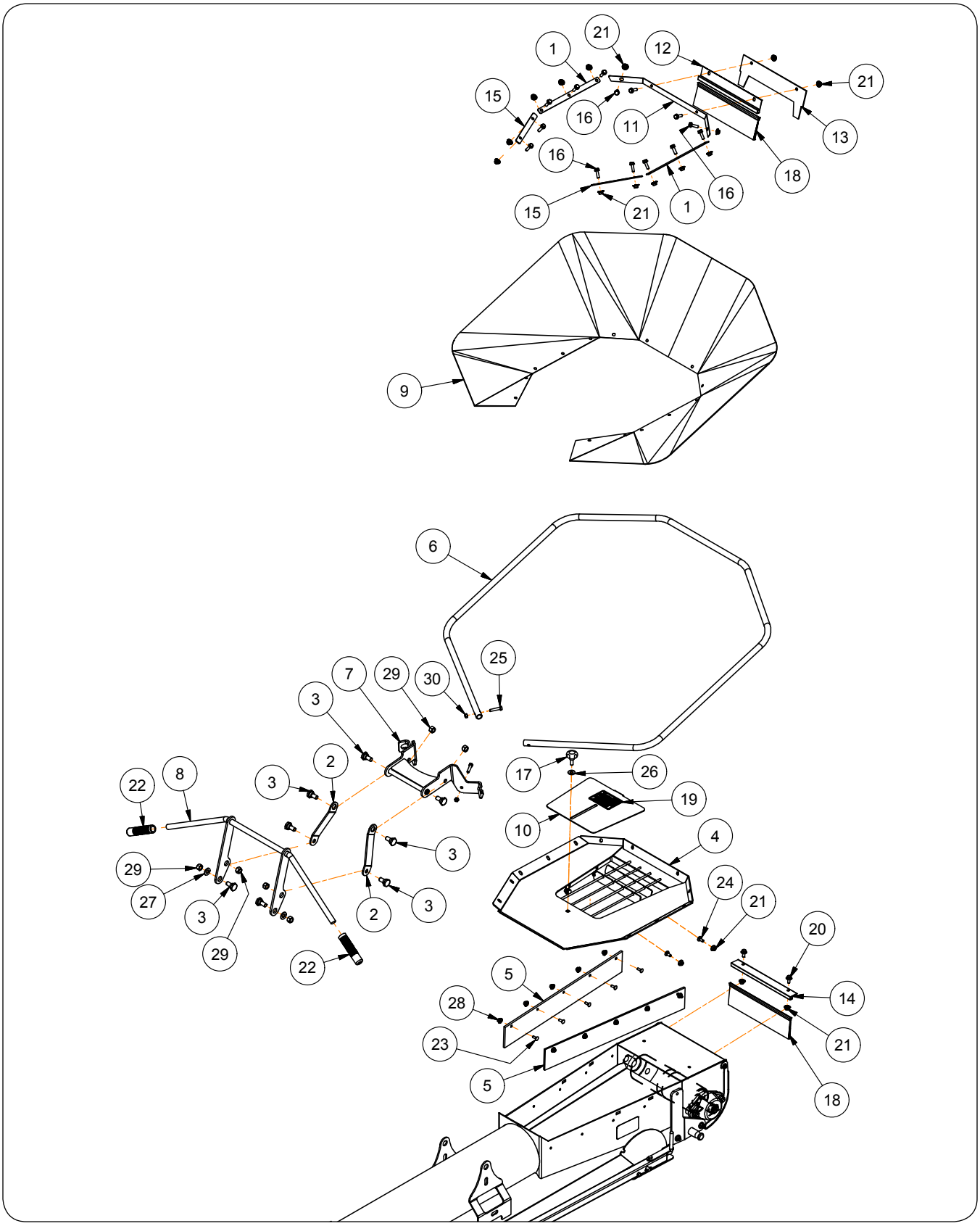
Hopper Components — 8” Tube Conveyor (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2003176TS	Link Plate, 1 3/8” x 7 1/4”	2	
2	2003191	Shoulder Bolt, 3/4” Dia. x .310” w/ 1/2”-13UNC	8	
3	2007223	Seal, 3 1/2” x 25 3/4”	2	
4	2007247TS	Handle Weldment	1	
5	2007257TS	Cover Plate	1	
6	2011261TS	Pivot Weldment	1	
7	2011264TS	Plate, 7/8” x 19”	1	
8	2011265TS	Grate Weldment	1	
9	2011297	Canvas Hopper	1	
10	2011331TS	Plate, 3/4” x 20 1/4”	2	
11	2011334	Seal, 9” x 22 3/4”	1	
12	2011335TS	Plate, 3/4” x 13 1/4”	1	
13	2011899TS	Bent Tube	1	
14	25262	Brush Holder	1	
15	26243	Seal, 4 1/2” x 12 1/2”	1	
16	901044	Flange Screw, 5/16”-18UNC x 1” G5	4	
17	901046	Knob	3	
18	901814	Nylon Brush, 3 1/2” x 12 1/4”	2	
19	902635	Decal, IMPORTANT	1	
20	91257	Hex Nut/Large Flange, 5/16”-18UNC	10	
21	92928	Grip/Handle Bar	2	
22	9388-002	Carriage Bolt, 1/4”-20UNC x 3/4” G5	9	
23	9388-003	Carriage Bolt, 1/4”-20UNC x 1” G5	10	
24	9388-004	Carriage Bolt, 1/4”-20UNC x 1 1/4”	1	
25	9388-024	Carriage Bolt, 5/16”-18UNC x 3/4” G5	4	
26	9390-032	Capscrew, 5/16”-18UNC x 1 1/2”	2	
27	9405-078	Flat Washer, 3/8"	3	
28	9405-088	Flat Washer, 1/2” USS	2	
29	9501011	Nylon Washer	2	
30	97189	Hex Nut/Large Flange, 1/4”-20UNC	38	
31	9800	Locknut, 1/2”-13UNC	8	
32	9807	Locknut, 5/16”-18UNC	4	
33	9504719	Vinyl Hopper Cover	1	

Hopper Components — 8” Tube Conveyor (SND69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.



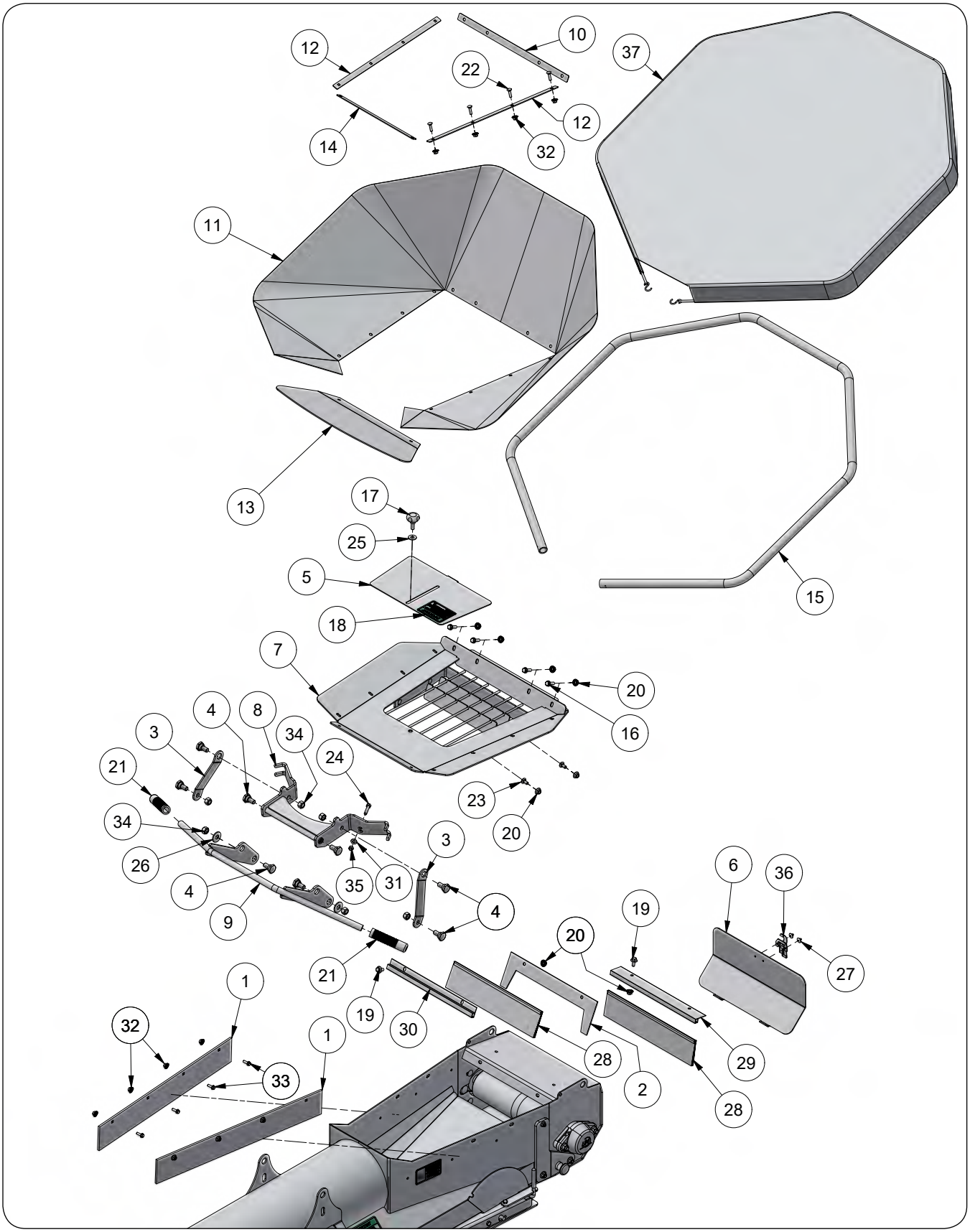
Hopper Components — 8” Tube Conveyor (SND69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001058TS	Strap 3/4” x 12”	2	
2	2003176TS	Link Plate 1 3/8” x 7 1/4”	2	
3	2003191	Shoulder Bolt 3/4” Dia. x .310” w/ 1/2”-13UNC	8	
4	2007135TS	Grate Weldment	1	
5	2007223	Seal 3 1/2” x 25 3/4”	2	
6	2007225TS	Bent Tube	1	
7	2007230TS	Pivot Weldment	1	
8	2007247TS	Handle Weldment	1	
9	2007256	Canvas Hopper 42” Wide	1	
10	2007257TS	Cover Plate	1	
11	2007259TS	Strap 1 11/16” x 22 3/32”	1	
12	25262	Brush Holder	1	
13	26243	Seal 4 1/2” x 12 1/2”	1	
14	26308	Brush Holder	1	
15	28486TS	Strap 3/4” x 7 1/2”	2	
16	901044	Flange Screw 5/16”-18UNC x 1” G5	14	
17	901046	Knob	3	
18	901814	Nylon Brush 3 1/2” x 12 1/4”	2	
19	902635	Decal, IMPORTANT	1	
20	91256	Flange Screw 5/16”-18UNC x 3/4”	6	
21	91257	Flange Nut 5/16”-18UNC	20	
22	92928	Grip/Handle Bar	2	
23	9388-002	Carriage Bolt 1/4”-20UNC x 3/4” G5	9	
24	9388-024	Carriage Bolt 5/16”-18UNC x 3/4” G5	4	
25	9390-032	Capscrew 5/16”-18UNC x 1 1/2”	2	
26	9405-076	Flat Washer 3/8" USS	11	
27	9405-086	Flat Washer 1/2” SAE	4	
28	97189	Large Flange Hex Nut 1/4-20UNC	28	
29	9800	Locknut 1/2-13UNC	8	
30	9807	Locknut 5/16-18UNC	4	

Hopper Components — 10” Tube Conveyor (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.



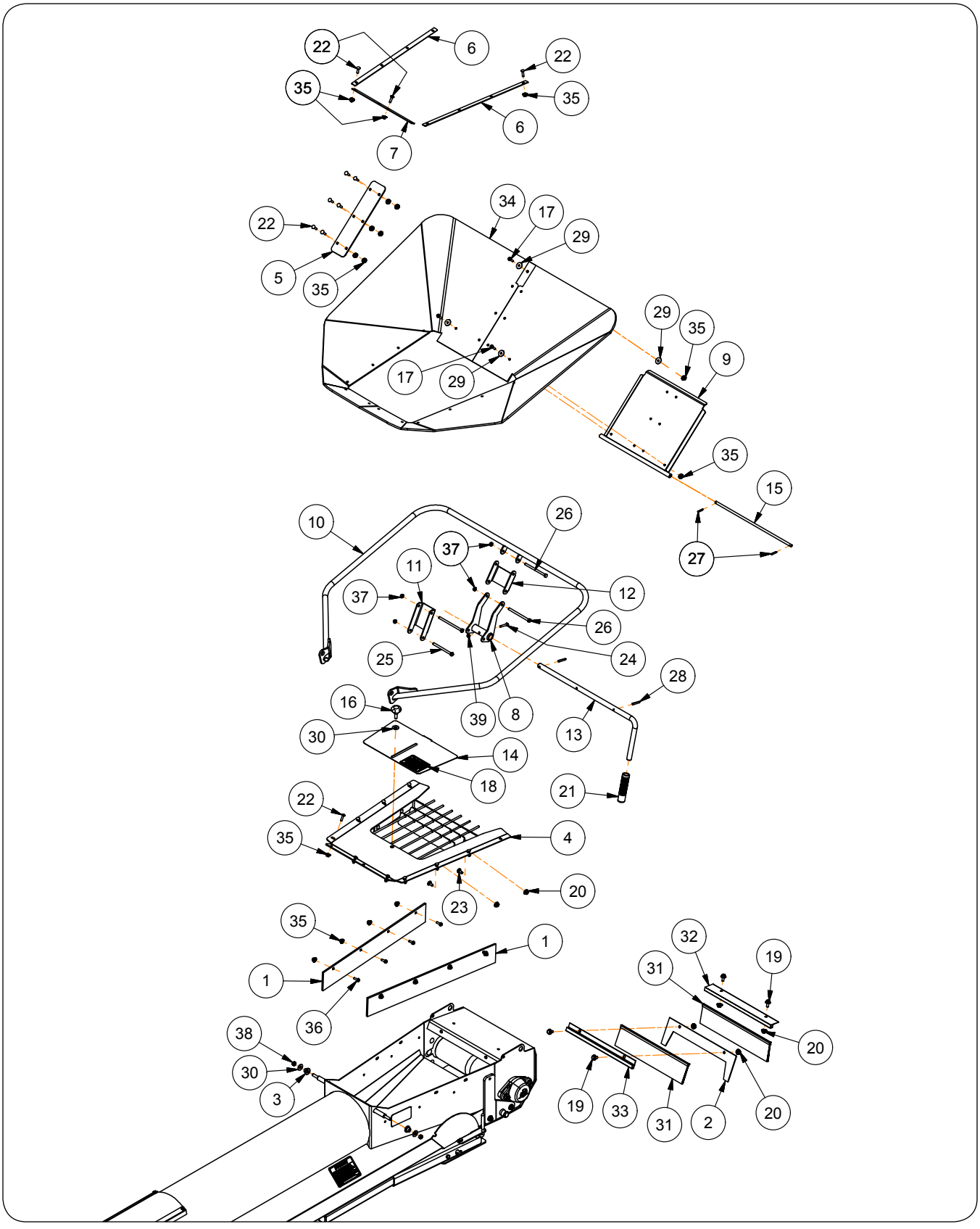
Hopper Components — 10” Tube Conveyor (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2000544	Seal 3 1/2 x 26	2	
2	2000553	Seal 4 1/2 x 15 1/2	1	
3	2003176TS	Link Plate, 1 3/8” x 7 1/4”	2	
4	2003191	Shoulder Bolt, 1/2”-13UNC	8	
5	2006321TS	Cover Plate	1	
6	2006472TS	Cleanout Door	1	
7	2011242TS	Grate Weldment	1	
8	2011255TS	Pivot Weldment	1	
9	2011258TS	Handle Weldment	1	
10	2011264TS	Plate, 7/8” x 19”	1	
11	2011297	Canvas Hopper	1	
12	2011331TS	Plate, 3/4” x 20 1/4”	2	
13	2011334	Seal, 9” x 22 3/4”	1	
14	2011335TS	Plate/Strap, 3/4” x 13 1/4”	1	
15	2011899TS	Bent Tube	1	
16	901044	Flange Screw, 5/16”-18UNC x 1” G5	4	
17	901046	Knob	3	
18	902635	Decal, IMPORTANT	1	
19	91256	Flange Screw, 5/16”-18UNC x 3/4”	10	
20	91257	Flange Nut, 5/16”-18UNC	12	
21	92928	Grip/Handle Bar	2	
22	9388-003	Carriage Bolt, 1/4”-20UNC x 1” G5	12	
23	9388-024	Carriage Bolt, 5/16”-18UNC x 3/4” G5	4	
24	9390-032	Capscrew, 5/16”-18UNC x 1 1/2” G5	2	
25	9405-076	Flat Washer, 3/8" USS	3	
26	9405-088	Flat Washer, 1/2” USS	2	
27	9500175	Pop Rivet	4	
28	9500404	Nylon Brush 3 1/2H x 15 1/4	2	
29	9500406	Brush Holder 14 3/4" Long (Angled)	1	
30	9500437	Brush Holder 14 3/4" Long (Straight)	1	
31	9501011	Nylon Washer	2	
32	97189	Hex Nut/Large Flange, 1/4-20UNC	41	
33	97420	Flange Screw, 1/4-20UNC x 3/4	15	
34	9800	Locknut, 1/2”-13UNC	6	
35	9807	Locknut, 5/16-18UNC	4	
36	TA0-902596-0	Latch/Draw Blade	2	
37	9504719	Vinyl Hopper Cover	1	

Hopper Components — 10" Tube Conveyor (SN D69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.



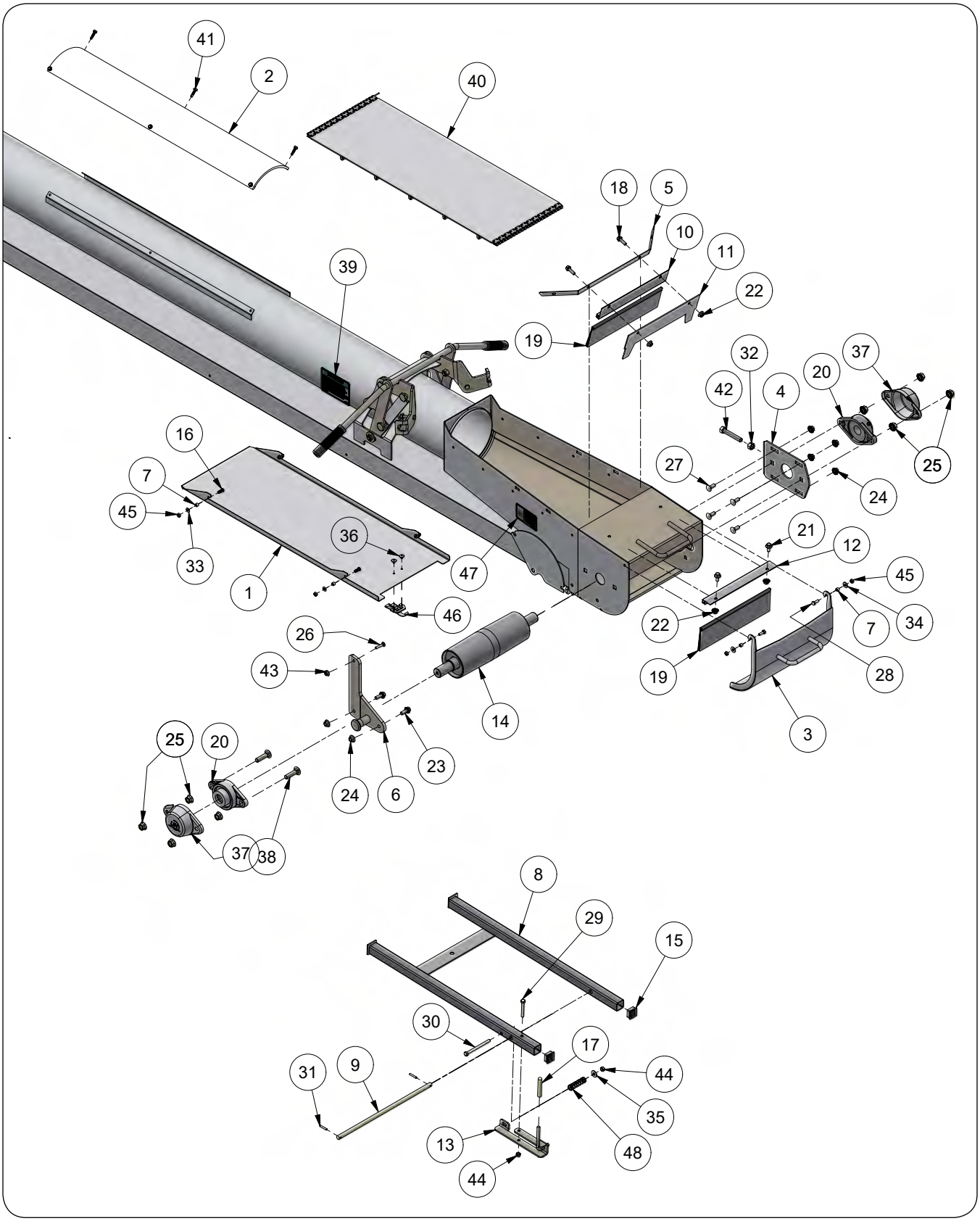
Hopper Components — 10” Tube Conveyor (SN D69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2000544	Seal 3 1/2 x 26	2	
2	2000553	Seal 4 1/2 x 15 1/2	1	
3	2003029	Nylon Bushing	2	
4	2006180TS	Grate Weldment	1	
5	2006192TS	Plate 3 x 13	1	
6	2006193TS	Plate 3/4 x 21	2	
7	2006199TS	Plate 3/4 x 13 1/2	1	
8	2006252TS	Pivot Weldment	1	
9	2006263TS	Pivot Weldment	1	
10	2006268TS	Hopper Tube Weldment	1	
11	2006290TS	Pivot Plate 5 1/8 x 5 1/4	1	
12	2006291TS	Pivot Plate 4 x 6 1/8	1	
13	2006306TS	Handle	1	
14	2006321TS	Cover Plate	1	
15	2006403	Pin	1	
16	901046	Knob	3	
17	901101	Flange Screw 1/4”-20UNC x 1”	7	
18	902635	Decal, IMPORTANT	1	
19	91256	Flange Screw 5/16”-18UNC x 3/4”	10	
20	91257	Flange Nut 5/16”-18UNC	8	
21	92928	Grip/Handle Bar	1	
22	9388-003	Carriage Bolt 1/4”-20UNC x 1” G5	20	
23	9388-024	Carriage Bolt 5/16”-18UNC x 3/4” G5	4	
24	9390-007	Capscrew 1/4”-20UNC x 1 1/2”	1	
25	9390-042	Capscrew 5/16”-18UNC x 4”	2	
26	9390-043	Capscrew 5/16”-18UNC x 4 1/2”	2	
27	91144-121	Spiral Pin, 3/16" Dia. x 1 1/8”	4	
28	9392-136	Roll Pin 1/4” Dia. x 1 1/2”	2	
29	9405-066	Flat Washer 1/4”	4	
30	9405-076	Flat Washer 3/8" USS	5	
31	9500404	Nylon Brush 3 1/2H x 15 1/4	2	
32	9500406	Brush Holder 14 3/4" Long (Angled)	1	
33	9500437	Brush Holder 14 3/4" Long (Straight)	1	
34	9501815	Rubber Hopper	2	
35	97189	Large Flange Hex Nut 1/4-20UNC	52	
36	97420	Flange Screw 1/4-20UNC x 3/4	15	
37	9807	Locknut 5/16-18UNC	6	
38	9928	Locknut 3/8”-16UNC	2	
39	9936	Locknut 1/4-20UNC	7	

Idler End Components — 8” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.



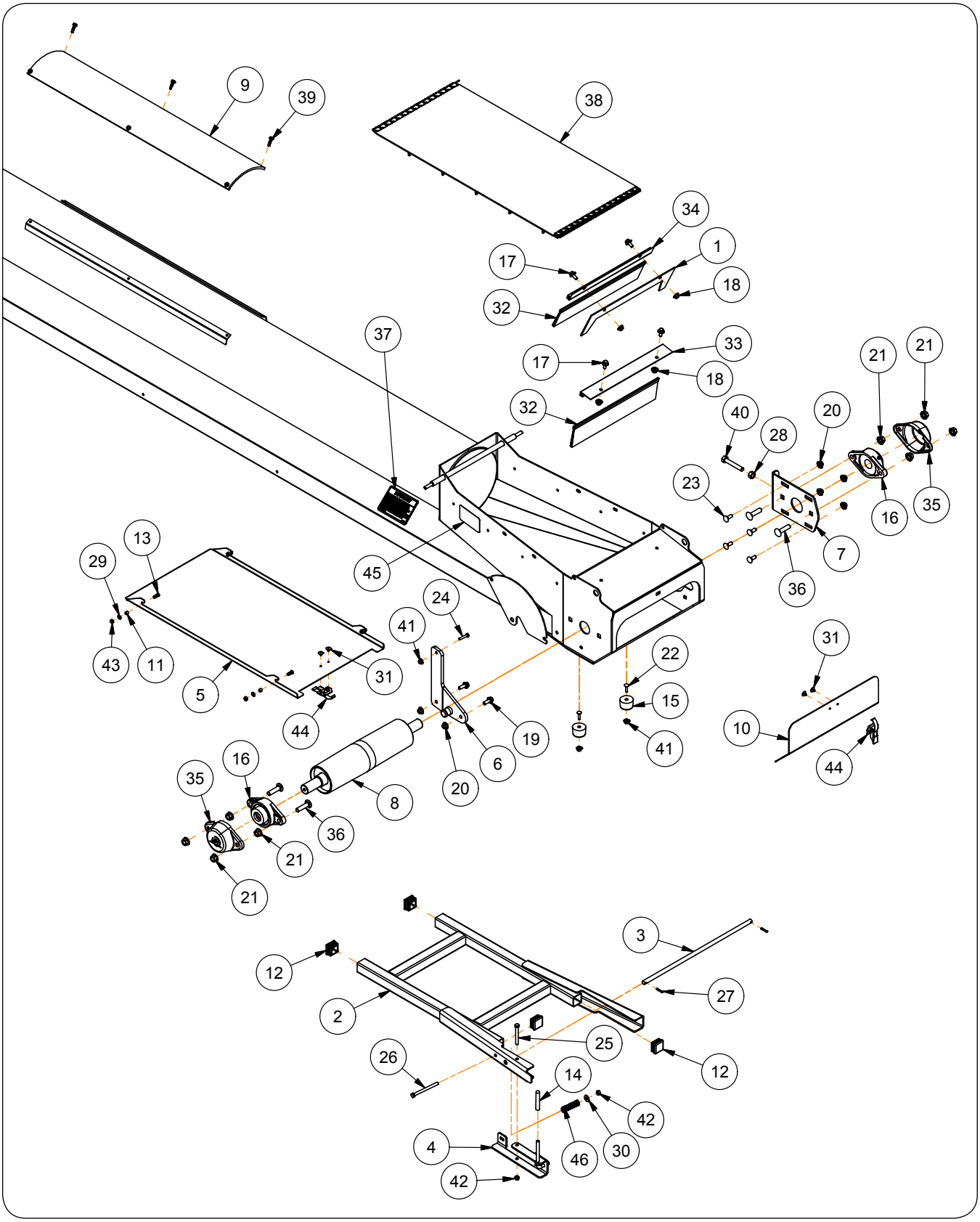
Idler End Components — 8” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2003196TS	Shield	1	
2	2003863	Wear Guard	1	
3	2004106TS	Cleanout Door	1	
4	2004158TS	Adjustment Plate	1	
5	2007259TS	Strap	1	
6	2007260TS	Latch Weldment	1	
7	22018	Bushing 9/32" Long	8	
8	25260TS	Stand Weldment	1	
9	25261	Pin, 1/2" Dia. x 16 1/4”	1	
10	25262	Brush Holder	1	
11	26243	Seal, 4 1/2” x 12 1/2”	1	
12	26308	Brush Holder	1	
13	27110TS	Latch Weldment	1	
14	28408	Idler Shaft, 1 1/4”	1	
15	9000117	Square Plug, 1 1/4"	2	
16	9003829	Button Head Socket, 1/4”-20UNC x 3/4”	4	
17	9003869	Hand Grip	1	
18	901044	Flange Screw, 5/16”-18UNC x 1” G5	14	
19	901814	Nylon Brush, 3 1/2” x 12 1/4”	2	
20	902697	Flange Bearing 2-Bolt, 1 1/4" Bore	4	
21	91256	Flange Screw, 5/16”-18UNC x 3/4”	6	
22	91257	Hex Nut/Large Flange, 5/16”-18UNC	20	
23	91262	Flange Screw, 3/8”-16UNC x 1”	2	
24	91263	Hex Nut/Large Flange, 3/8”-16UNC	6	
25	91267	Flange Nut, 1/2”-13UNC	14	
26	9388-004	Carriage Bolt, 1/4”-20UNC x 1 1/4” G5	1	
27	9388-051	Carriage Bolt, 3/8”-16UNC x 1” G5	12	
28	9390-003	Capscrew, 1/4”-20UNC x 3/4” G5	4	
29	9390-035	Capscrew, 5/16”-18UNC x 2 1/4” G5	1	
30	9390-042	Capscrew, 5/16”-18UNC x 4” G5	1	
31	91144-121	Spiral Pin, 3/16" Dia. x 1 1/8”	2	
32	9394-010	Hex Nut, 1/2”-13UNC	3	
33	9405-052	Flat Washer, 3/16" USS	4	
34	9405-064	Flat Washer, 1/4” USS	4	
35	9405-070	Flat Washer, 5/16" USS	1	
36	9500175	Pop Rivet, 3/16" Dia.	2	
37	9501223	Cover	3	
38	9388-106	Carriage Bolt, 1/2”-13UNC x 2” G5	6	
39	9501790	Decal, IMPORTANT “Belt Tension”	1	
40	9501994	Conveyor Belt	1	
	2007527	Splice Pin Assembly	-	
41	9512	Screw/Self Drilling, 1/4-14 x 1”	6	
42	95452	Capscrew, 1/2-13UNC x 3 (Full Threaded)	1	
43	97189	Hex Nut/Large Flange, 1/4”-20UNC	28	
44	9807	Locknut, 5/16”-18UNC	4	
45	9936	Locknut, 1/4”-20UNC	8	
46	TA0-902596-0	Latch/Draw Blade	1	
47	TA1-906109-0	Decal, WARNING "Moving Parts Can Crush/Cut…"	2	
48	TA510035	Compression Spring for Stop Pin	1	

Idler End Components — 10” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.



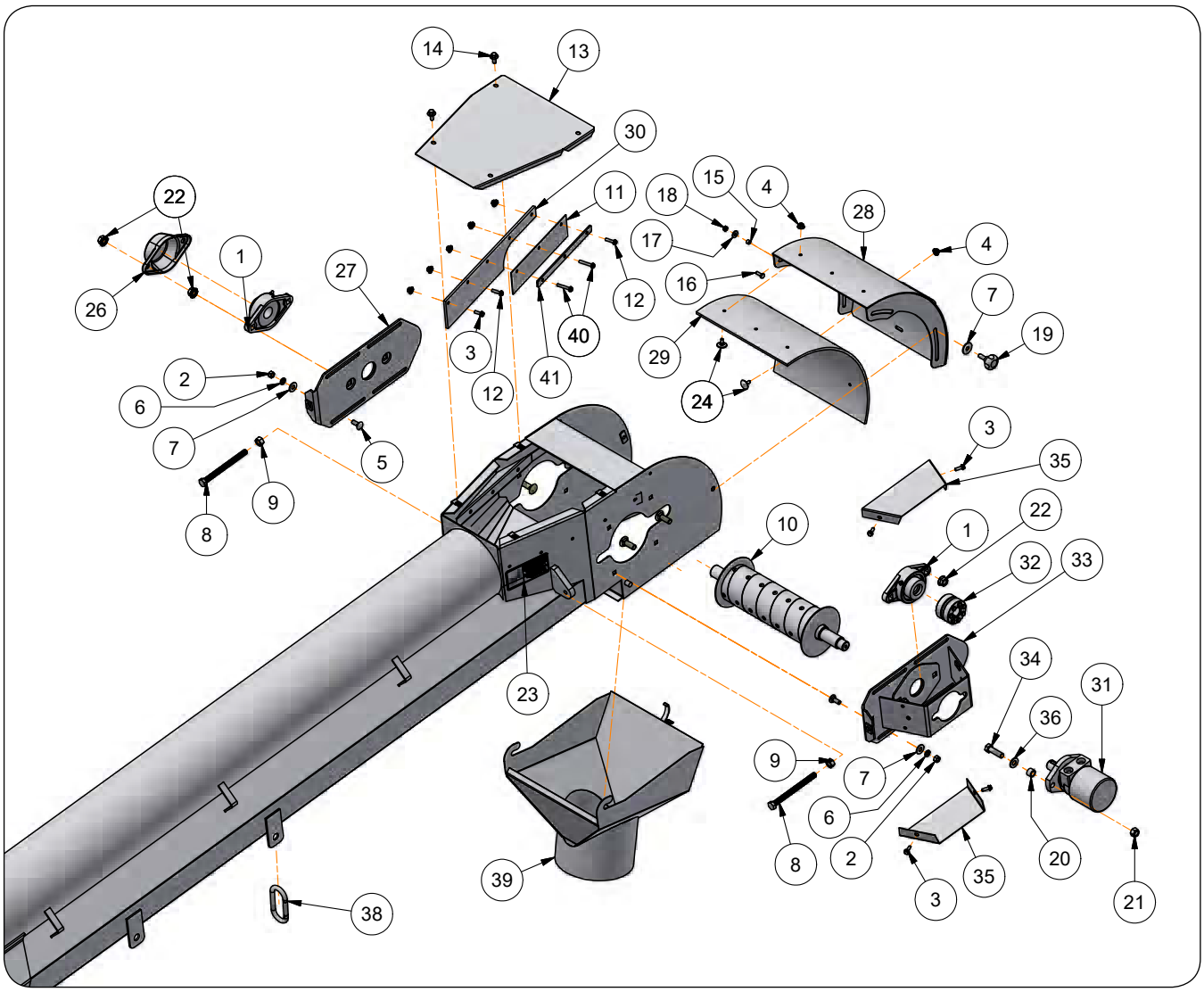
Idler End Components — 10” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2000553	Seal 4 1/2” x 15 1/2”	1	
2	2001118TS	Stand Weldment	1	
3	2001122	Pin 1/2" Dia. x 19 1/4”	1	
4	2001125TS	Latch Weldment	1	
5	2002860TS	Shield	1	
6	2005628TS	Latch Weldment	1	
7	2005680TS	Adjustment Plate	1	
8	2006068	Idler Pulley 4”	1	
9	2006325	Wear Guard	1	
10	2006472TS	Cleanout Door	1	
11	22018	Bushing 9/32" Long	6	
12	9001645	Square Plug 1 1/2"	4	
13	9003829	Button Head Socket 1/4”-20UNC x 3/4”	4	
14	9003869	Hand Grip	1	
15	901169	Rubber Bumper	2	
16	902697	Flange Bearing 2-Bolt 1 1/4" Bore	4	
17	91256	Flange Screw 5/16”-18UNC x 3/4”	10	
18	91257	Large Flange Hex Nut 5/16”-18UNC	8	
19	91262	Flange Screw 3/8”-16UNC x 1”	2	
20	91263	Large Flange Hex Nut 3/8”-16UNC	14	
21	91267	Flange Nut 1/2”-13UNC	12	
22	9388-003	Carriage Bolt 1/4”-20UNC x 1” G5	20	
23	9388-051	Carriage Bolt 3/8”-16UNC x 1” G5	12	
24	9390-006	Capscrew 1/4”-20UNC x 1 1/4” G5	1	
25	9390-037	Capscrew 5/16”-18UNC x 2 3/4” G5	1	
26	9390-042	Capscrew 5/16”-18UNC x 4” G5	2	
27	9392-097	Roll Pin 3/16" Dia. x 1”	4	
28	9394-010	Hex Nut 1/2”-13UNC	5	
29	9405-052	Flat Washer 3/16" USS	4	
30	9405-070	Flat Washer 5/16" USS	1	
31	9500175	Pop Rivet 3/16" Dia.	4	
32	9500404	Nylon Brush 3 1/2 x 15 1/4	2	
33	9500406	Brush Holder 14 3/4" Long (Angled)	2	
34	9500437	Brush Holder 14 3/4" Long	1	
35	9501223	Cover	3	
36	9388-106	Carriage Bolt, 1/2”-13UNC x 2” G5	6	
37	9501790	Decal, IMPORTANT “Belt Tension”	1	
38	9501888	Conveyor Belt	1	
39	9512	Screw/Self Drilling 1/4-14 x 1”	6	
40	95452	Capscrew 1/2-13UNC x 3 (Full Threaded)	1	
41	97189	Large Flange Hex Nut 1/4”-20UNC	52	
42	9807	Locknut 5/16”-18UNC	6	
43	9936	Locknut 1/4”-20UNC	7	
44	TA0-902596-0	Latch/Draw Blade	2	
45	TA1-906109-0	Decal, WARNING "Moving Parts Can Crush/Cut…"	2	
46	TA510035	Compression Spring for Stop Pin	1	

Discharge Spout Components — 8” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.



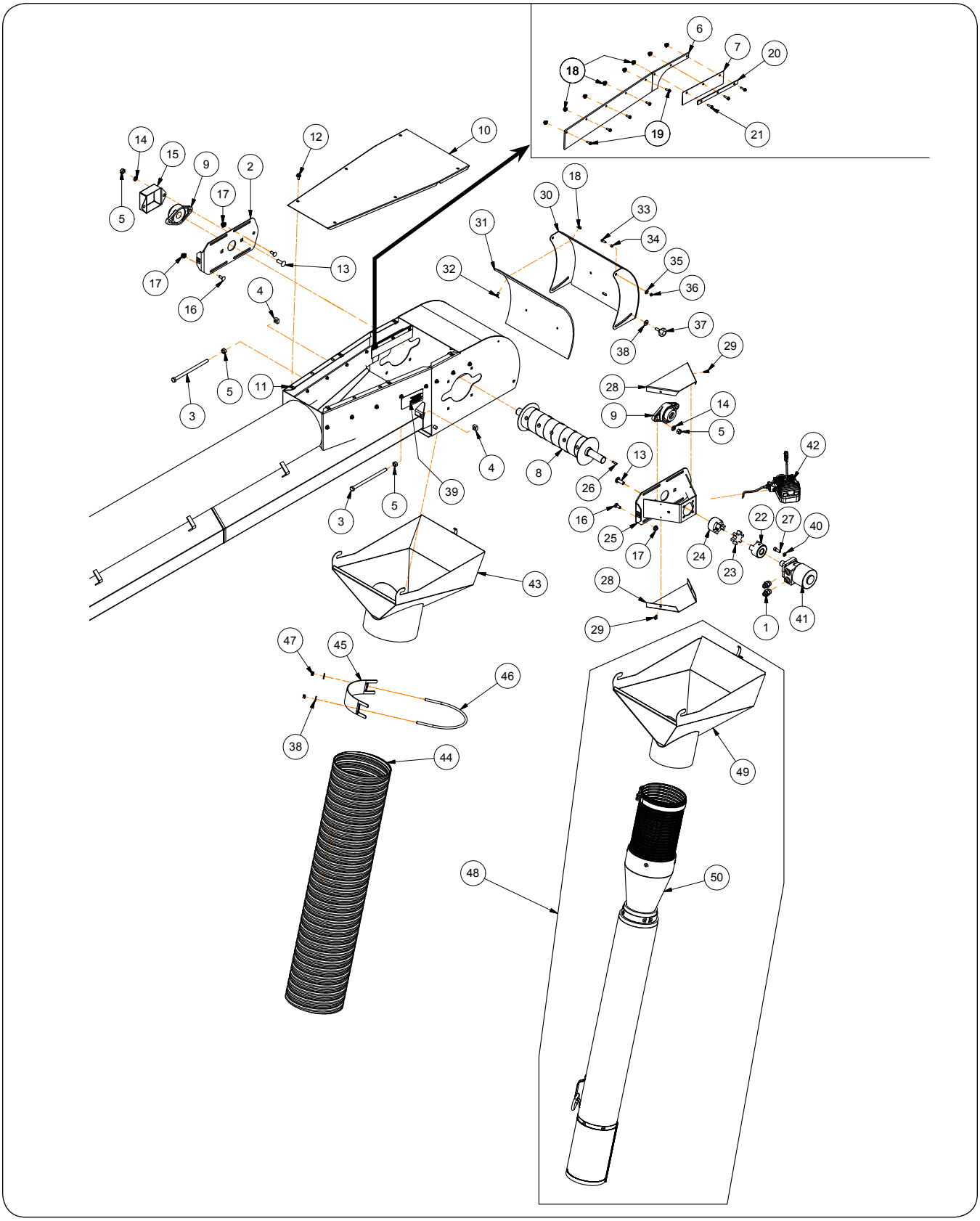
Discharge Spout Components — 8” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	902697	2-Bolt Flange Bearing	4	
2	9394-006	Hex Nut 3/8”-16UNC	8	Grade 5
3	97420	Flange Screw 1/4”-20UNC x 3/4”	14	
4	97189	Hex Nut/Lrg Flg 1/4”-20UNC	26	
5	9388-051	Carriage 3/8”-16UNC x 1”	12	Grade 5
6	9404-021	Lock Washer 3/8”	8	
7	9405-076	Flat Washer 3/8” USS	11	
8	97171	Hex Bolt	2	Grade 5
9	9394-010	Hex Nut 1/2”-13UNC G5	3	
10	9501222	Drive Pulley	1	
11	25256	Seal 2 3/4 x 10 1/2	2	
12	901101	Flange Screw 1/4”-20UNC x 1”	4	
13	2003363TS	Top Shield	1	=Tan Speckle=
14	91256	Screw/Large Flg 5/16”-18UNC x 3/4”	6	
15	22018	Bushing	8	
16	9390-003	Capscrew 1/4”-20UNC x 3/4” Gr5	8	Grade 5
17	9405-064	Flat Washer 1/4” USS	4	Grade 5
18	9936	Locknut 1/4”-20UNC	8	Grade 5
19	901046	Knob	3	Grade 5
20	24550	Bushing	2	
21	9800	Locknut 1/2”-13UNC	8	
22	91267	Flange Nut 1/2”-13UNC	14	
23	95445	Decal, WARNING “High-Pressure Fluid...”	1	
24	902006	Elevator Bolt 1/4”-20UNC x 3/4”	8	Grade 5
25	9388-106	Carriage Bolt, 1/2”-13UNC x 2” G5	6	
26	9501223	Cover	3	
27	2003483TS	Adjustment Plate Weldt	1	=Tan Speckle=
28	2003440TS	Deflector Weldment	1	=Tan Speckle=
29	9501210	Neoprene Sheet	1	
30	25257	Poly Strip	2	
31	9500806	Hydraulic Motor	1	=Tan Speckle=
32	9501220	Fenner Coupler	1	
33	2003486TS	Adjustment Plate Weldment	1	=Tan Speckle=
34	9390-102	Capscrew 1/2”-13UNC x 1 3/4”	2	Grade 5
35	2003487TS	Shield	2	=Tan Speckle=
36	9405-086	Flat Washer 1/2” SAE	4	
37	9388-104	Carriage Bolt, 1/2”-13UNC x 1 1/2” G5	2	
38	9500155	Spring Snap	1	
39	26284TS	Spout Weldment (Pntd)	1	=Tan Speckle=
40	901831	Flange Screw 1/4”-20UNC x 1 1/2”	4	
41	26432TS	Strip 3/4 X 10 1/4	2	=Tan Speckle=

Discharge Spout Components — 10” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.



Discharge Spout Components — 10” Tube Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	93607	Adapter 3/4-16 JIC Male x 7/8-14 O-Ring Male	2	
2	26783TS	Adjustment Plate Weldment	1	
3	902069	Capscrew 1/2-13UNC x 8 1/2 Full Threaded	2	
4	902884	Square Nut 1/2-13UNC	2	
5	9394-010	Hex Nut 1/2-13UNC	11	
6	29051	Poly Strip 4 x 34 15/16	2	
7	25256	Seal 2 3/4 x 10 1/2	2	
8	2000516	Drive Roller 4" Dia.	1	
9	902697	Flange Bearing 2-Bolt 1 1/4" Bore	4	
10	2000508TS	Top Shield	1	
11	902626	U-Nut 5/16-18UNC	6	
12	91256	Flange Screw 5/16-18UNC x 3/4	10	
13	9388-104	Carriage Bolt, 1/2”-13UNC x 1 1/2” G5	8	
14	9404-025	Lock Washer 1/2"	8	
15	28314TS	Cover	2	
16	9388-051	Carriage Bolt 3/8-16UNC x 1	12	
17	91263	Large Flange Hex Nut 3/8-16UNC	12	
18	97189	Large Flange Hex Nut 1/4-20UNC	29	
19	97420	Flange Screw 1/4-20UNC x 3/4	18	
20	26432B	Strip 3/4 x 10 1/4	2	
21	901101	Flange Screw 1/4-20UNC x 1	6	
22	902726	Coupler 1" Dia. w/Keyway & Set Screw	1	
23	902727	Coupler Insert/Spider	1	
24	902725	Coupler 1 1/4" Dia. w/Keyway & Set Screw	1	
25	2000509TS	Adjustment Plate Weldment	1	
26	9001501	Key 1/4 x 1/4 x 1	1	
27	99888-063	Socket Head Capscrew 3/8-16UNC x 1 Full Threaded	4	
28	2000540TS	Shield	2	
29	9473	Self Drilling Screw 1/4-14 x 3/4	4	
30	2000543TS	Deflector Weldment w/Handle	1	
31	9500401	Neoprene Sheet	1	
32	902006	Elevator Bolt 1/4-20UNC x 3/4	5	
33	9390-003	Capscrew 1/4-20UNC x 3/4	6	
34	22018	Bushing 3/8" OD x 9/32" Long	6	
35	9405-064	Flat Washer 1/4" USS	2	
36	9936	Locknut 1/4-20UNC	6	
37	901046	Knob	4	

(Continued on next page)

Discharge Spout Components — 10” Tube Conveyor

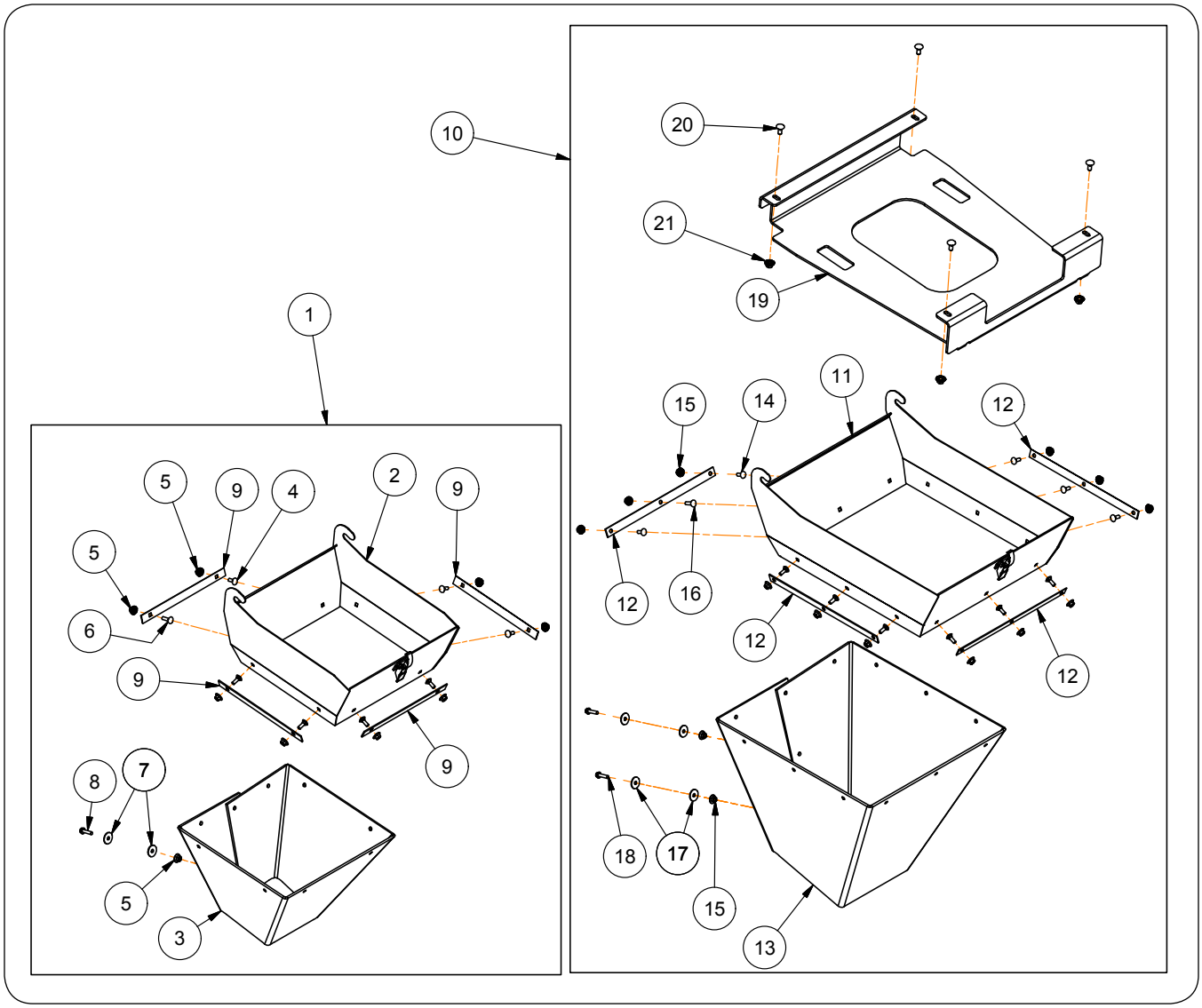
Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
38	9405-076	Flat Washer 3/8" USS	2	
39	95445	Decal, WARNING "High-Pressure Fluid..."	1	
40	9404-021	Lock Washer 3/8"	6	
41	TA0-914695-0	Hydraulic Motor 6 Cu. In. 12GPM	1	
42	301213	Work Light Replacement Kit	1	
43	2001389TS	Spout Weldment 10"	1	
44	9500910	Flexible Spout 10" Dia. x 48" Long	1	
	2002944TS	Flexible Spout Bundle 10” x 48”	-	Includes Spout & Items 38, 45, 46, & 47
45	2002382TS	Clamp Half	1	
46	9500906	U-Bolt 3/8-16UNC x 10 3/4	1	
47	9394-006	Hex Nut 3/8-16UNC	2	
48	2002945TS	Optional Spout Bundle 10" to 8" - 3 Stage	-	
49	2001665TS	Spout Weldment 10" to 8"	1	
50	9500163	Telescopic Spout 8" Dia. x 11' Max. Length (3-Stage)	1	

Notes

Self-Loading Spout

Please visit www.unverferth.com/parts/ for the most current parts listing.



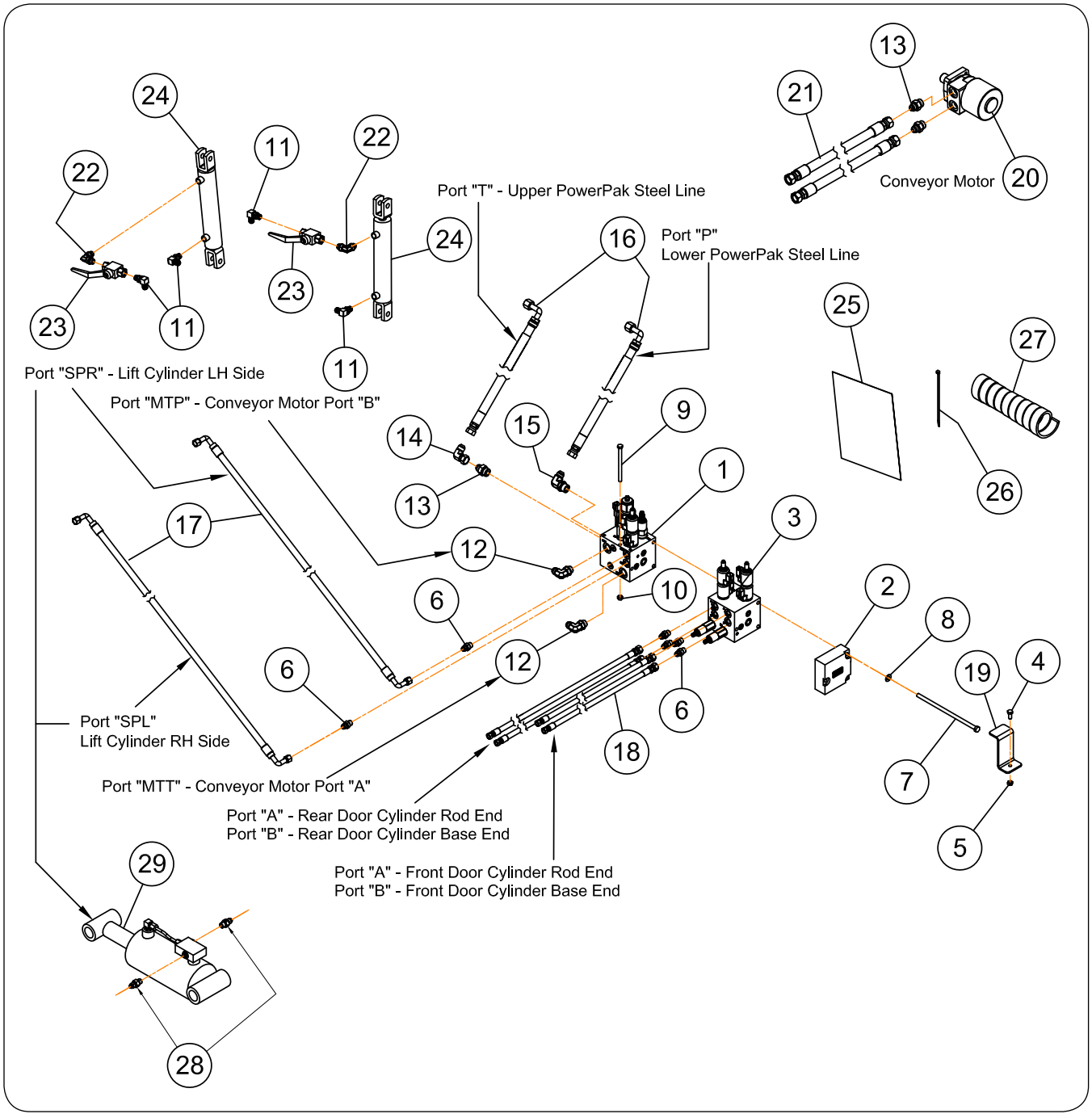
Self-Loading Spout

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2004942TS	Spout Assembly 8”	1	
2	2004940TS	Spout Weldment 8”	1	
3	2004941	Rubber Spout	1	
4	9388-002	Carriage 1/4-20UNC x 3/4 Gr5	7	
5	97189	Hex Nut/Large Flange 1/4-20UNC	9	
6	9388-003	Carriage 1/4-20UNC x 1 Gr5	1	
7	9405-066	Flat Washer 1/4 Type B (Wide)	2	
8	901101	Flange Screw 1/4-20UNC x 1	1	
9	2004943TS	Strap	4	
10	2004103TS	Spout Assembly 10”	1	
11	2003110TS	Spout Weldment 10"	1	
12	2002815TS	Strap	4	
13	2003117	Rubber Spout	1	
14	9388-002	Carriage 1/4-20UNC x 3/4 Gr5	11	
15	97189	Hex Nut/Large Flange 1/4-20UNC	14	
16	9388-003	Carriage 1/4-20UNC x 1 Gr5	1	
17	9405-066	Flat Washer 1/4 Type B (Wide)	4	
18	901101	Flange Screw 1/4-20UNC x 1	2	
19	2003515TS	Spout Holder	1	
20	9388-024	Carriage Bolt 5/16-18UNC x 3/4	4	
21	91257	Flange Nut 5/16-18UNC	4	

Hydraulic Components - 3 Function

Please visit www.unverferth.com/parts/ for the most current parts listing.



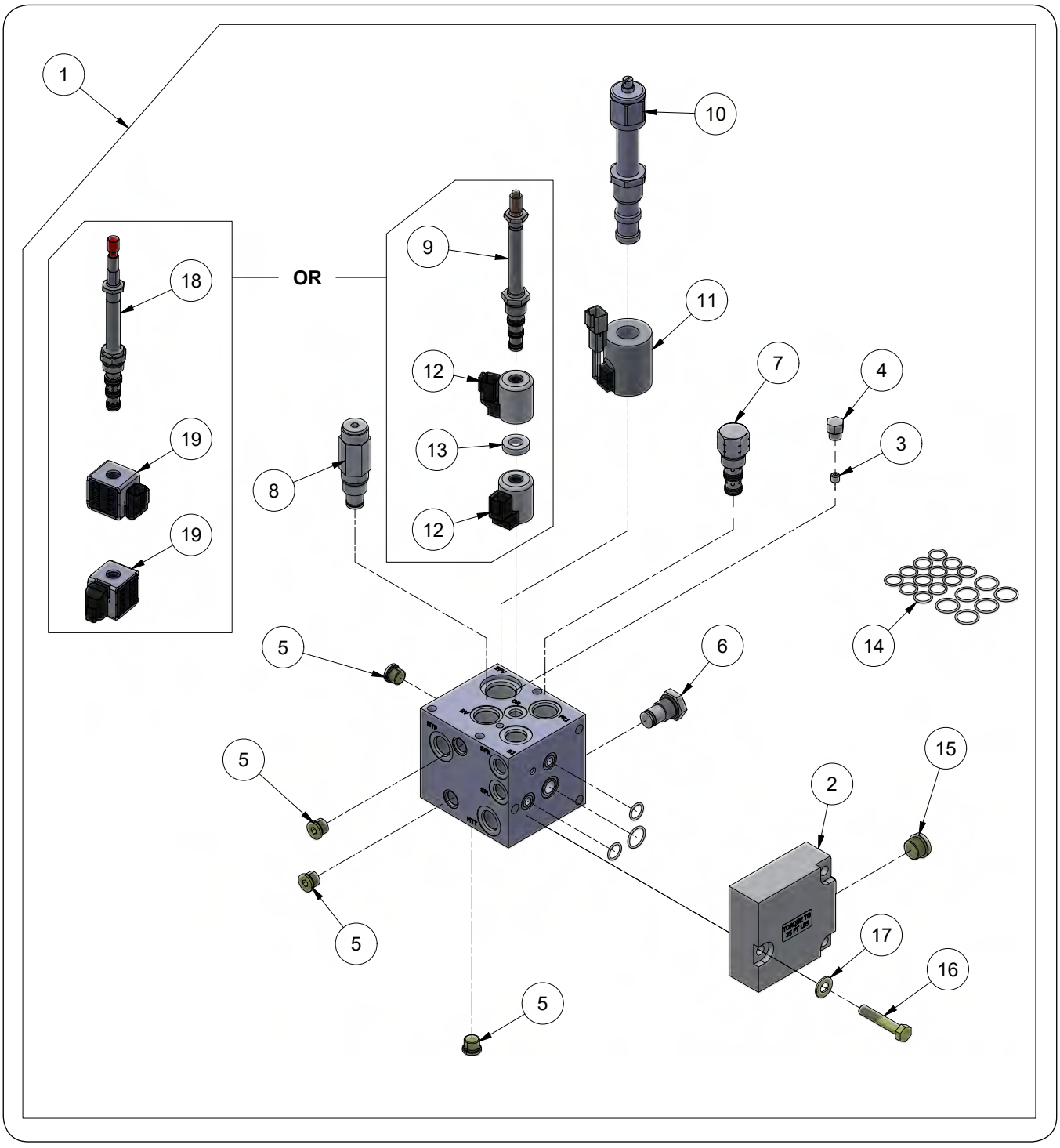
Hydraulic Components - 3 Function

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9501071	Valve Assembly - Main	1	Includes Item 2
2	9500306	Valve End Cover Assembly	1	
3	9502286	Valve Assembly Stackable Valve Body For Dual Doors	1	
4	9390-028	Capscrew 5/16"-18UNC x 3/4" G5	1	
5	9807	Lock Nut 5/16"-18UNC	1	
6	9001495	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male	6	
7	9390-071	Capscrew 3/8-16UNC x 6	3	Grade 5
8	9405-074	Flat Washer 3/8" SAE	3	
9	9390-043	Capscrew 5/16-18UNC x 4 1/2	3	Grade 5
10	9807	Locknut 5/16-18UNC	3	
11	97445	90° Elbow 9/16-18 JIC Male x 9/16-18 O-Ring Male	4	
12	9863	90° Elbow 3/4-16 JIC Male x 3/4-16 O-Ring Male	2	
13	93607	Adapter 3/4-16 JIC Male x 7/8-14 O-Ring Male	3	
14	93683	90° Elbow 3/4-16 JIC Male x 3/4-16 JIC Female	1	
15	93599	90° Elbow 3/4-16 JIC Male x 7/8-14 O-Ring Male	1	
16	902836	Hose 1/2 x 24 - 90° Elbow 3/4-16 JIC Female x 3/4-16 JIC Female (3000PSI)	2	
17	9501159	Hose 3/8 x 63 1/2 - 90° Elbow 9/16-18 JIC Female Both Ends (3000PSI)	2	
18	9501160	Hose 1/4 x 99 - 9/16-18 JIC Female Both Ends (3000PSI)	4	
19	2004906TS	Strap	1	
20	TA0-914695-0	Hydraulic Motor 6 Cu. In. 12GPM	1	
21	9501158	Hose 1/2 x 400 - 3/4-16 JIC Female Both Ends (3000PSI)	2	
22	9501015	90° Elbow 9/16-18 O-Ring Male Both Ends	2	
23	9501014	Ball Valve (SAE-6) 9/16-18 UNF Female O-Ring Ports	2	
24	9502206	Cylinder 2 x 6 (3000PSI)	2	
25	2004792	Decal	1	
26	9000106	Cable Tie 7 1/2"	6	
27	9004075	Spiral Hose Wrap	A/R	Specify in Feet
28	98435	Adapter 9/16-18 JIC Male x 9/16-18 O-Ring Male w/ 0.03 Restrictor	2	
29	9500450	Lift Cylinder 4 x 4 (3000PSI) w/Check Valve	1	

Directional Control Valve - Main

Please visit www.unverferth.com/parts/ for the most current parts listing.



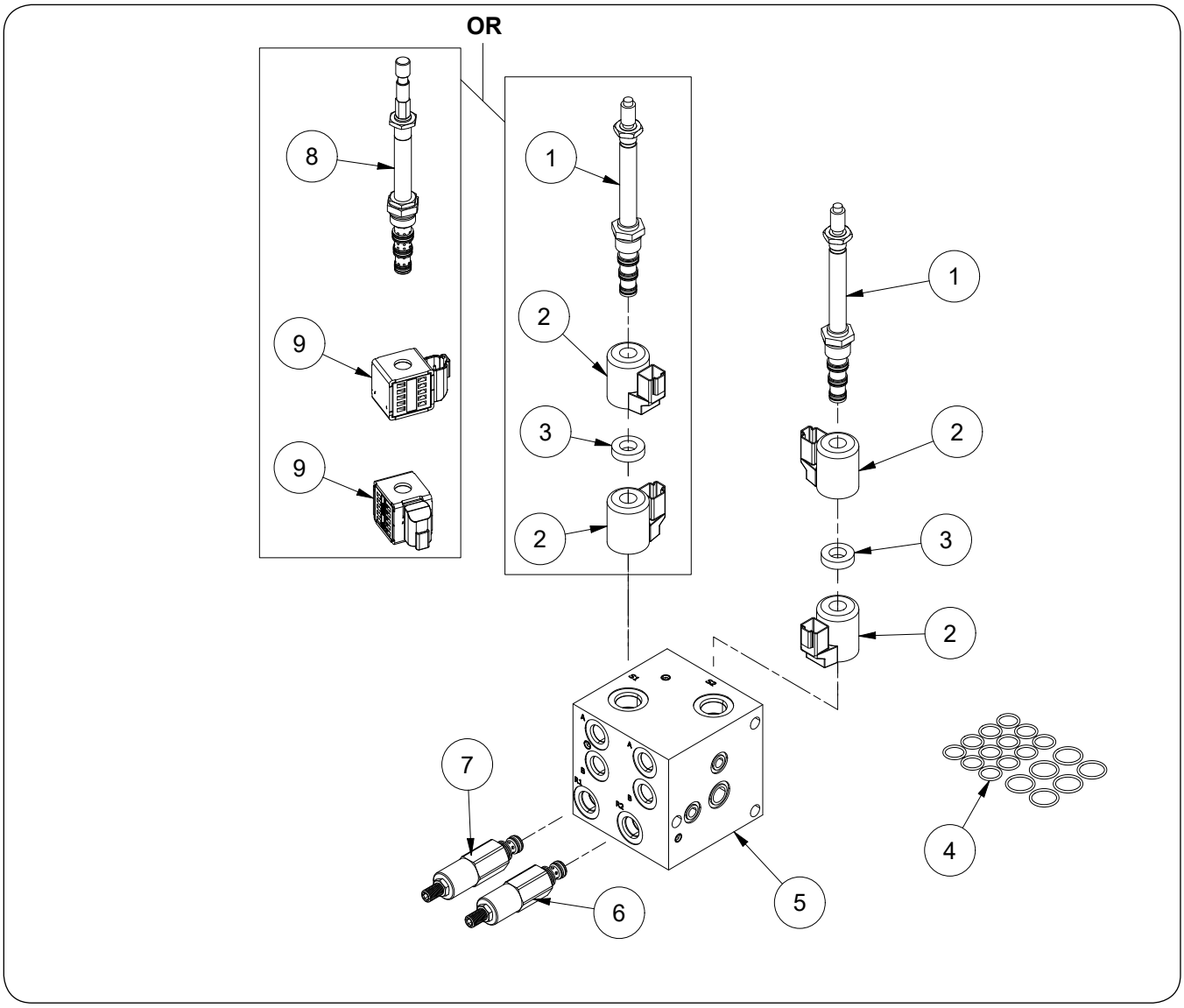
Directional Control Valve - Main

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
1	9501071	Valve Assembly	1	Includes items 2 through 18
2	9500306	Valve End Cover Assembly without Power Beyond	1	
3	902347	Orifice Plug 0.025, 5/16-24UNF Thread, 0.125 Allen Hex Socket	1	
4	902825	Port Plug 7/16-20UNF Hex Head	1	
5	9003423	Plug 9/16-18 O-Ring Male w/Hollow Hex Socket	4	
6	902821	Check Valve	1	
	902853	Seal Kit	-	
7	9501428	Flow Regulator	1	
	9500116	Seal Kit	-	
8	9501082	Relief Cartridge	1	
	903032	Seal Kit	-	
9	902842	Cartridge Valve 3/4-16UNF (3 Position, 4 Way)	3	For Round Coils
	902849	Seal Kit for 3 Position, 4 Way Cartridge Valve	-	
10	9500131	Cartridge - Proportional 1 1/16-8UNC Thread	1	
	9500132	Seal Kit	-	
11	9500136	Proportional Coil	1	
12	902811	Coil - Electromagnetic	6	For Round Coils
13	902812	Coil Spacer	3	For Round Coils
14	9500600	Seal Kit - Valve Assembly O-Rings	-	
15	98048	Hex Plug 3/4-16 O-Ring Male	1	
16	9390-059	Capscrew 3/8-16UNC x 2	3	
17	9405-074	Flat Washer 3/8" SAE	3	
18	9504053	Cartridge Valve 3/4"-16UNF (3 Position, 4 Way)	1	For Square Coils
19	9504052	Square Coil - Electromagnetic	1	For Square Coils

Directional Control Valve - Dual Doors

Please visit www.unverferth.com/parts/ for the most current parts listing.



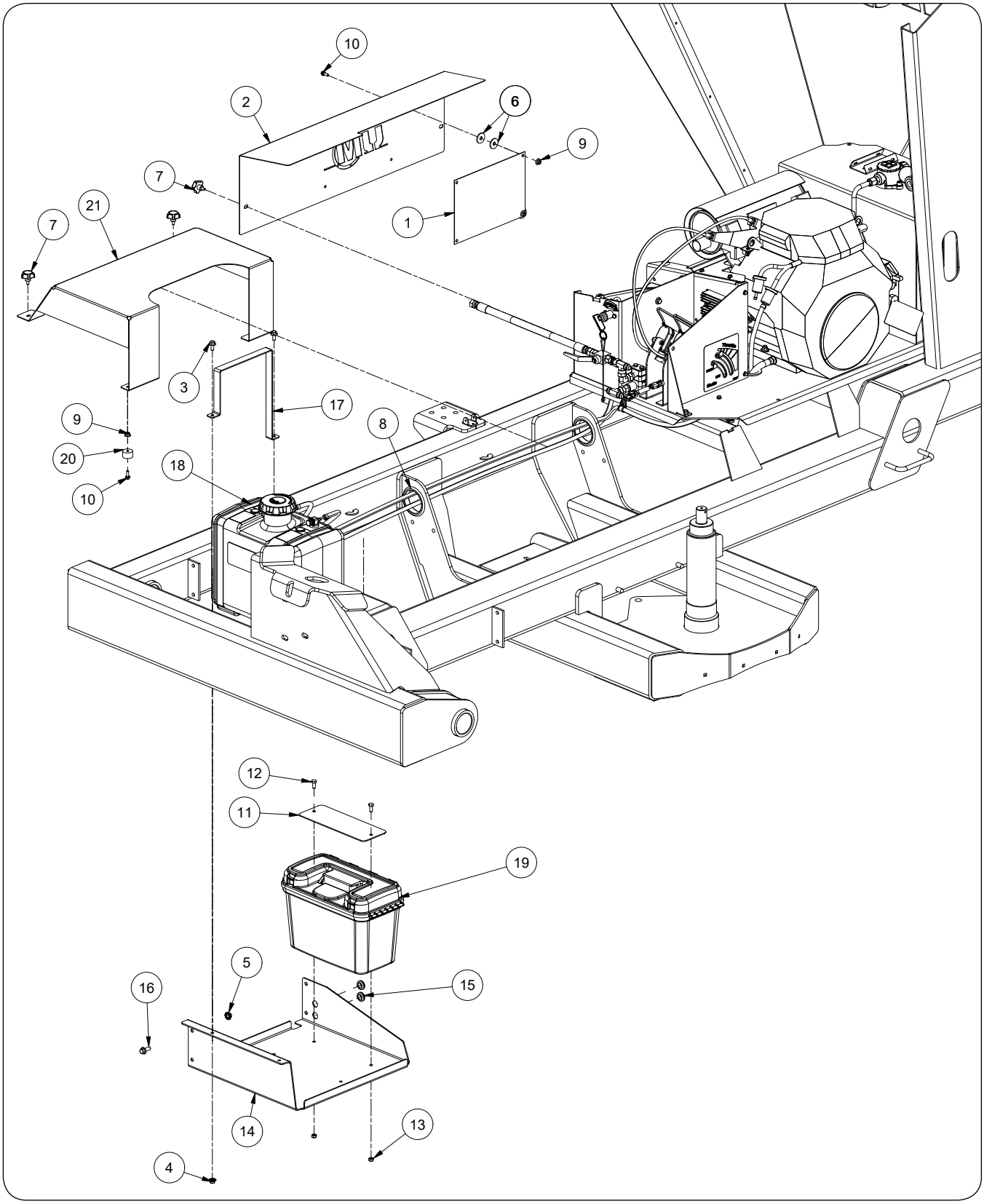
Directional Control Valve - Dual Doors

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	9502286	Valve Assembly Stackable Valve Body For Conveyor Dual Doors with Relief Valves	1	Includes Items 1 through 7
1	902842	Cartridge Valve 3/4-16UNF (3 Position, 4 Way)	2	For Round Coils
	902849	Seal Kit for 3 Position, 4 Way Cartridge Valve	-	
	902813	Coil Nut	-	
2	902811	Coil - Electromagnetic	4	For Round Coils
3	902812	Coil Spacer	2	For Round Coils
4	9500600	Seal Kit - Valve Assembly O-Rings	-	
5	N/A	Valve Body Only - Dual Doors	1	
6	9502287	Relief Valve Direct Acting 600 PSI	1	
	9501800	Seal Kit for Relief Valve	-	
7	9502288	Relief Valve Direct Acting 700 PSI	1	
	9501800	Seal Kit for Relief Valve	-	
8	9504053	Cartridge Valve 3/4"-16UNF (3 Position, 4 Way)	2	For Square Coils
9	9504052	Square Coil - Electromagnetic	2	For Square Coils

Shroud Panel, Valve Cover, Fuel Tank & Tool Box Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



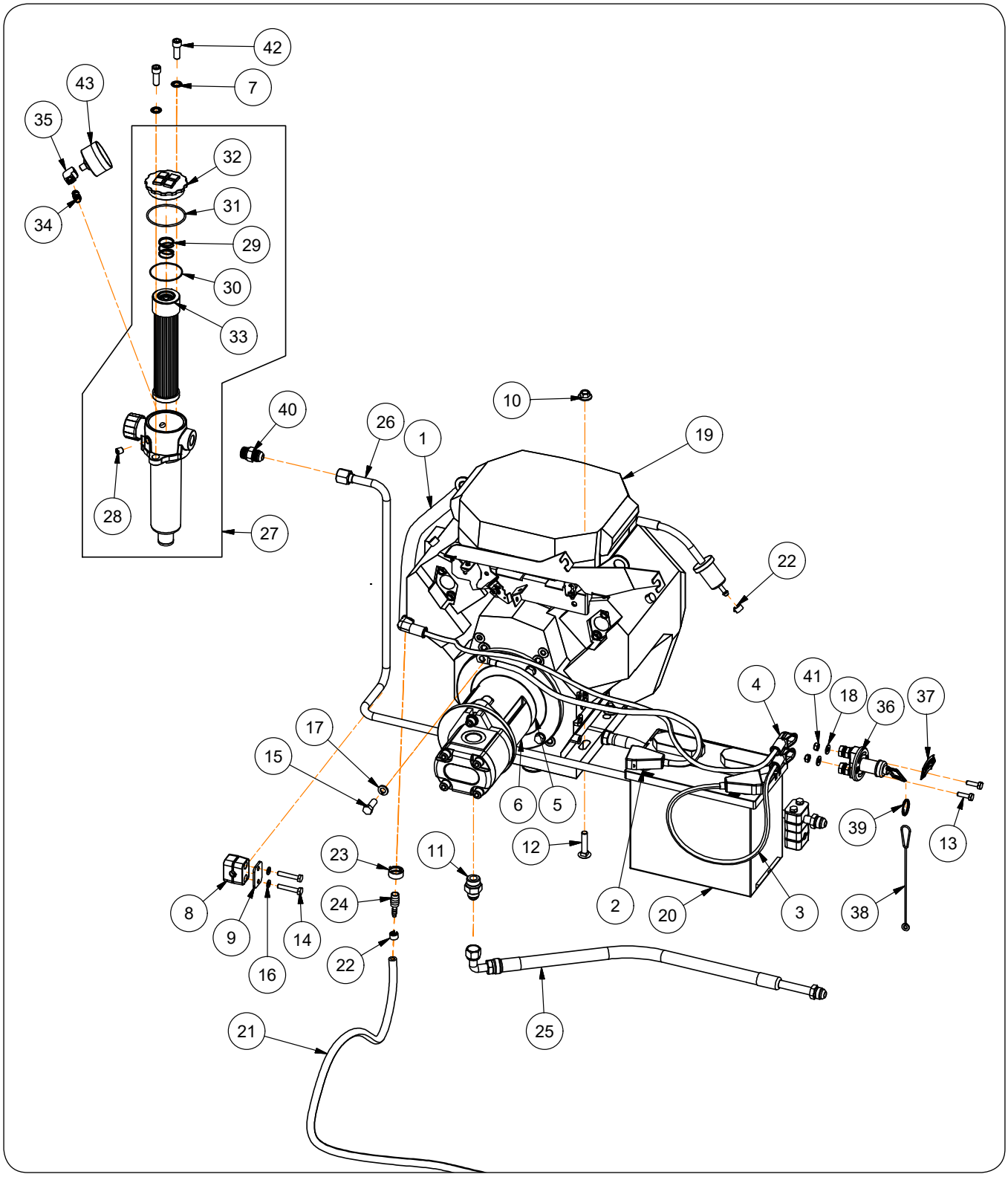
Shroud Panel, Valve Cover, Fuel Tank & Tool Box Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001032R	Backing Plate	1	
2	2002954IV	Shroud Panel	1	
3	91256	Flange Screw 5/16-18UNC x 3/4	5	
4	91257	Large Flange Hex Nut 5/16-18UNC	5	
5	91263	Large Flange Hex Nut 3/8-16UNC	4	
6	9405-078	Flat Washer 3/8" Wide	8	
7	9500468	Knob	4	
8	9007173	Rubber Grommet 2 5/8" ID	4	
9	97189	Large Flange Hex Nut 1/4-20UNC	16	
10	97420	Flange Screw 1/4-20UNC x 3/4	16	
11	27741B	Tool Box Strap 4 x 11	1	
12	9390-028	Capscrew 5/16-18UNC x 3/4	2	
13	9807	Locknut 5/16-18UNC	2	
14	2002075TS	Fuel Tank/Tool Box Mounting Bracket	1	
15	99890	Rubber Grommet 9/16" ID	2	
16	91262	Flange Screw 3/8-16UNC x 1	2	
17	2002077TS	Fuel Tank Strap 1 x 28 5/32	2	
18	9500689	Fuel Tank 6 Gallon Assembly	1	
19	902456	Manual Holder/Tool Box	1	
20	9501194	Bumper	2	
21	2004720TS	Valve Cover	1	

Pump/Motor Mount, Filter, Access Cover, Battery Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



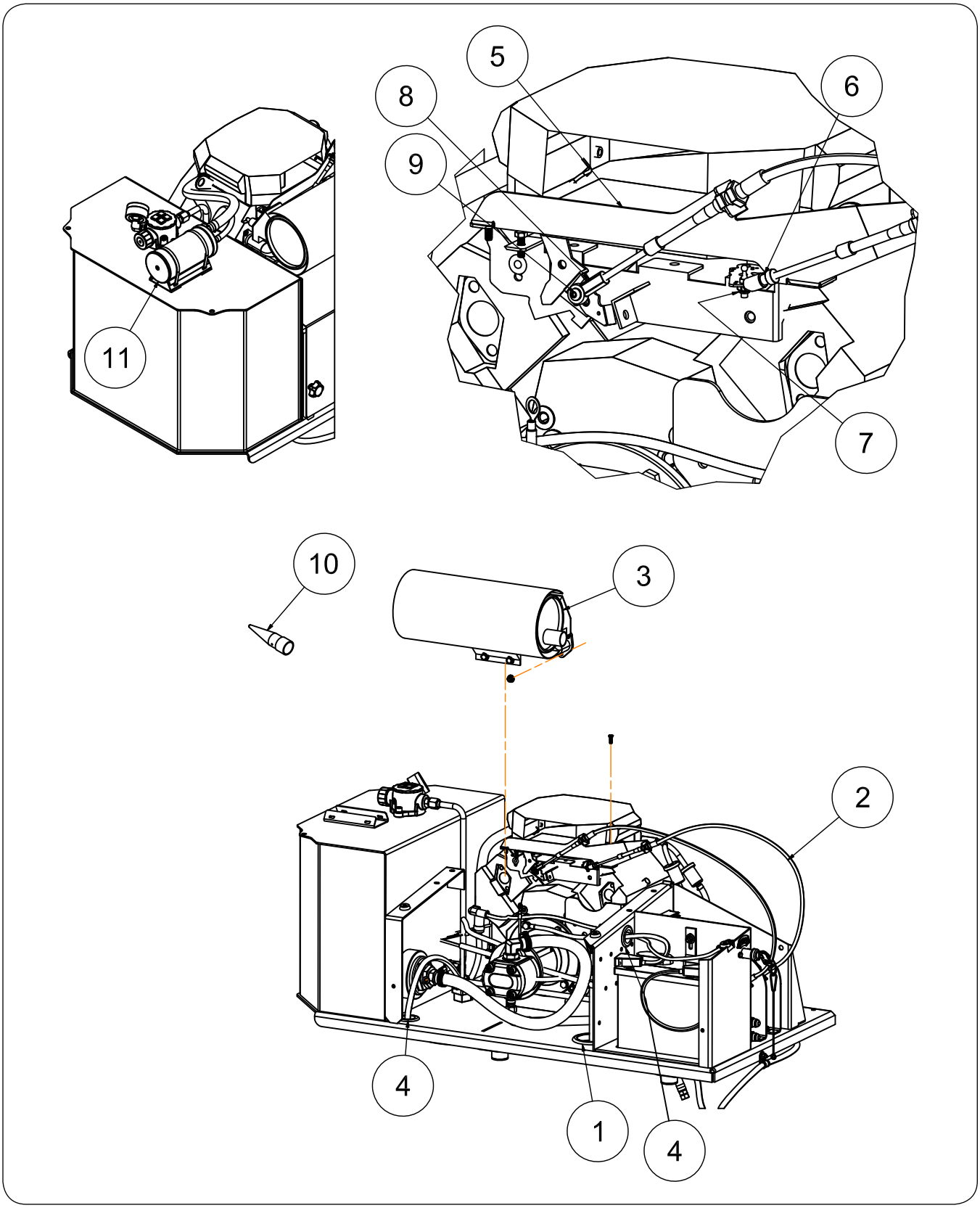
Pump/Motor Mount, Filter, Access Cover, Battery Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2001295	Fuel Hose 7/16" ID x 17 1/2	1	
2	2002968	Battery Cable (4GA) BLACK	1	
3	2008912	Battery Cable 24" (4GA) RED	1	For Disconnect Switch Units
	2002969	Battery Cable 30 7/8" (4GA) RED		For Non-Disconnect Switch Units
4	2008913	Battery Cable 37 11/16" (4GA) RED	1	For Disconnect Switch Units
5	25515	Pump/Motor Mount Weldment	1	Includes Item 5
6	901340	Plastic Access Cover	1	
7	901567	Internal Lock Washer 3/8" ID	2	
8	902892	Clamp Body (2 Halves) (1/2" Dia.)	2	
	9502910	Clamp Body (2 Halves) (11/16" Dia.)	1	
9	902893	Clamp Cover Plate	2	
10	91263	Large Flange Hex Nut 3/8"-16UNC	4	
11	93607	Adapter 3/4-16 JIC Male	1	
12	9388-054	Carriage Bolt 3/8"-16UNC x 1 3/4"	4	
13	9390-004	Capscrew 1/4"-20UNC x 7/8" G5	2	
14	9390-007	Capscrew 1/4"-20UNC x 1 1/2" G5	2	
15	9390-055	Capscrew 3/8"-16UNC x 1" G5	4	
16	9404-017	Lock Washer 1/4"	4	
17	9404-021	Lock Washer 3/8"	11	
18	9405-062	Flat Washer 1/4" SAE	2	
19	9500462	Honda Gas Engine 22HP	1	
20	NA	Batter 12V Top Post	1	Obtain Battery Locally
21	9500687	Fuel Hose 1/4" Dia. x 126 3/4" Long	1	
22	9500699	Constant Tension Clamp (1/2" OD)	4	
23	9500700	Constant Tension Clamp (7/8" OD)	2	
24	9500708	Hose Barb 1/2 x 1/4	1	
25	9502961	Hydraulic Tube 1/2" Dia. x 25 9/16" Long	1	
26	9501061	Hydraulic Tube 1/2" Dia. x 36 1/2" Long	1	
27	9501108	Filter Assembly 25GPM	1	Includes Items 28 through 33
28	9501109	Plug 1/8-27 NPTF Male	1	
29	9501107	Spring 1 1/16" Long	1	
30	9501100	O-Ring for Filter Bowl	1	
31	9501104	O-Ring for Filter Cap	1	
32	9501103	Filter Cap	1	
33	9501102	Filter "A10" 9.2GPM	1	
34	9501112	Nipple Brass Hex 1/8-27 NPT Male x 1/8-27 Male	1	
35	9501113	90° Elbow Female Brass 1/8-27 NPT	1	
36	9502619	Battery Disconnect Switch	1	
37	9502623	Decal, "On/Off" Switch	1	
38	9502661	Nylon Lanyard 8"	1	
39	97489	Split Ring 1"	1	
40	9864	Adapter 3/4-16JIC Male x 3/4-16 O-Ring Male	1	
41	9936	Lock Nut 1/4"-20UNC	6	
42	99888-063	Socket Head Capscrew 3/8"-16UNC x 1" G8	2	
43	9501105	Filter Gauge 1/8-27 NPT	1	

Muffler, Cables, Spark Arrester, & Optional EPA CARB Compliant Kit

Please visit www.unverferth.com/parts/ for the most current parts listing.



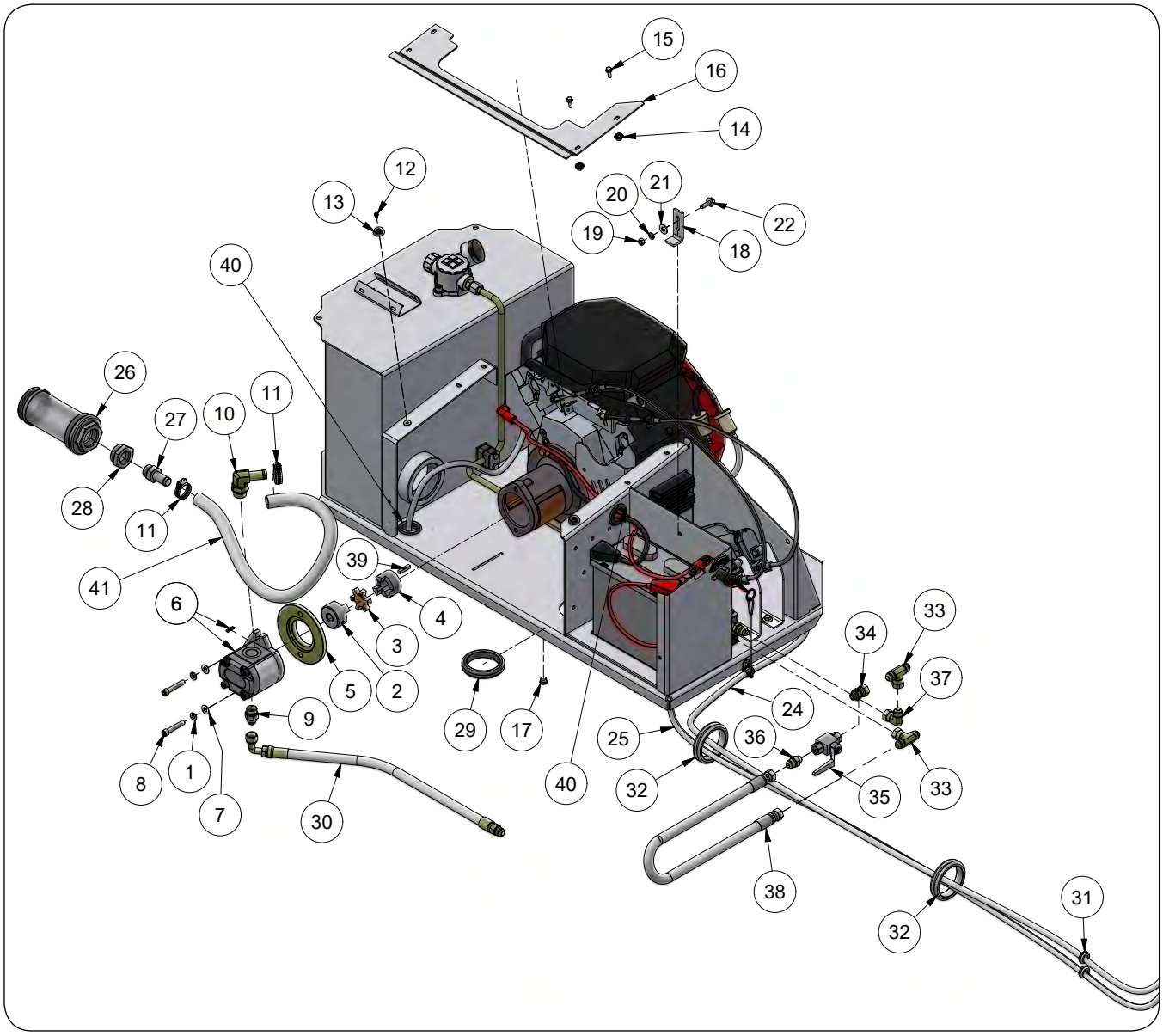
Muffler, Cables, Spark Arrester, & Optional EPA CARB Compliant Kit

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9004485	Rubber Grommet 2 5/8" ID	1	
2	901413	Control Cable 42" Long	2	
3	9500481	Muffler Assembly	1	
4	97840	Rubber Grommet 1 1/4" ID	2	
5	2000983B	Throttle Bracket	1	
6	902368	Ball Joint Quick Disconnect 10-32UNF Threaded	2	
7	9398-003	Elastic Stop Nut #10-32UNC	4	
8	9501312	Rod End/Spherical, Female 10-32UNF	1	
9	9501318	Button Head Socket #10-32UNF x 5/8”	1	
10	9500704	Spark Arrester	-	
11	2001309	Optional EPA CARB Compliant Kit	-	

Pump, Cold Start Valve, & Shroud Components (continued)

Please visit www.unverferth.com/parts/ for the most current parts listing.



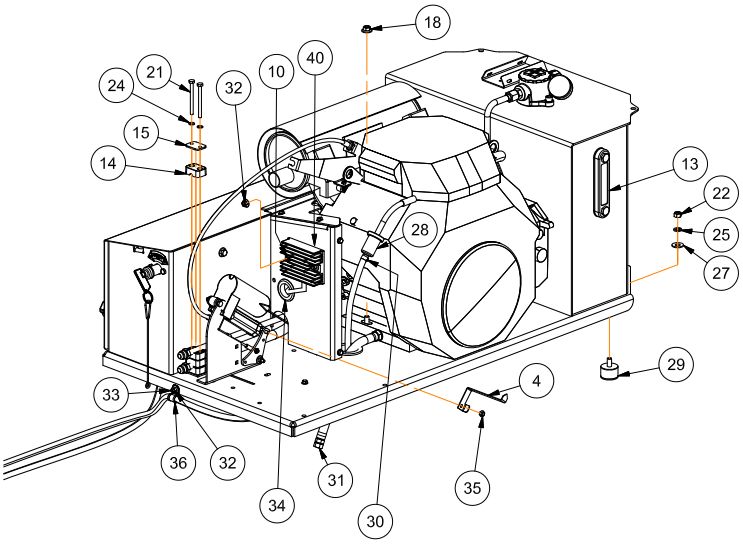
Pump, Cold Start Valve, & Shroud Components (continued)

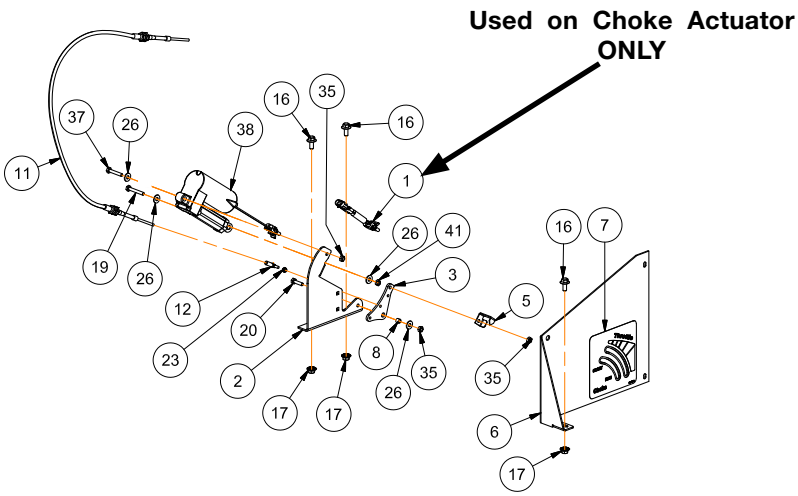
Please visit www.unverferth.com/parts/ for the most current parts listing.

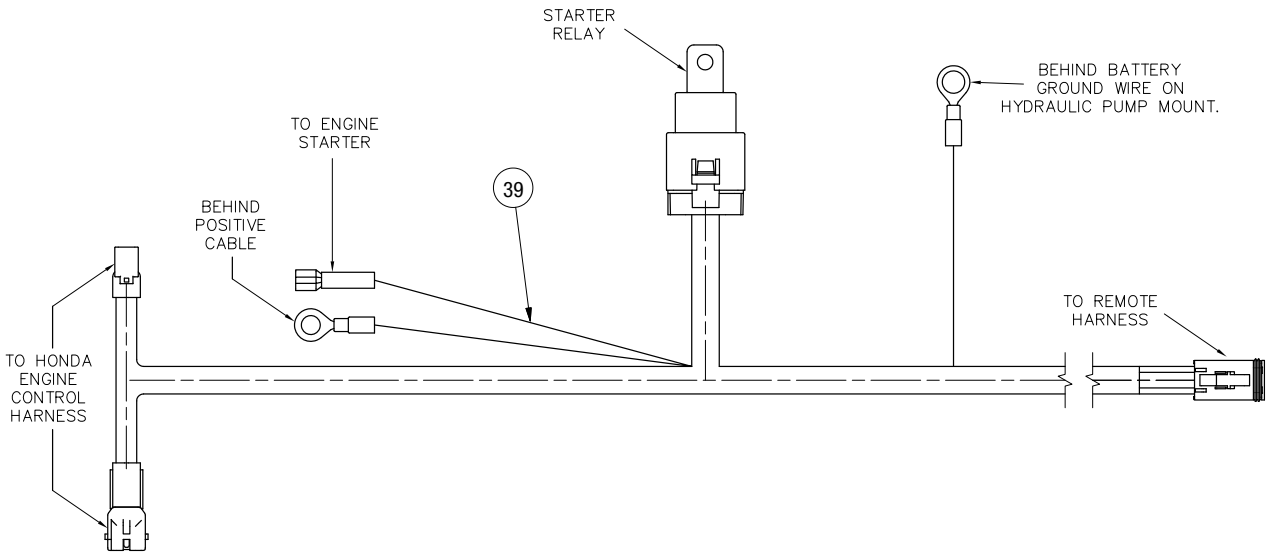
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9404-021	Lock Washer, 3/8"	11	
2	901370	Jaw Coupling 5/8" Bore w/Keyway	1	
3	901372	Coupler Insert/Spider	1	
4	9500510	Jaw Coupling 1 1/8" Bore w/Keyway & Set Screw	1	
5	2001013	Pump Mount Spacer	1	
6	901694	Pump 0.61 CU-IN (2000RPM) w/Keyway	1	
	903056	Key, 5/32" x 5/32" x 3/4"	1	
7	9405-074	Flat Washer, 3/8" SAE	2	
8	99888-067	Socket Head, 3/8"-16UNC x 2"	2	
9	93607	Adapter, 3/4-16 JIC Male x 7/8-14 O-Ring Male	1	
10	901380	90° Elbow 3/4" ID Beaded Hose	1	
11	TA800912	Hose Clamp SAE #16 Stainless Steel	2	
12	9500118	Self-Piercing Screw, #10-32UNC x 1/2"	3	
13	9003850	Bumper, 31/32" Dia.	3	
14	97189	Hex Nut/Large Flange, 1/4"-20UNC	14	
15	97420	Flange Screw, 1/4"-20UNC x 3/4"	14	
16	2000984IV	Shroud Panel	1	
17	99692	O-Ring Hex Plug	1	
18	28671B	Battery Hold-Down Strap	1	
19	9394-004	Hex Nut, 5/16"-18UNC	1	
20	9404-019	Lock Washer, 5/16"	1	
21	9405-070	Flat Washer, 15/16" USS	1	
22	97604	Large Flange Screw, 5/16"-18UNC x 1"	1	
23	902368	Ball Joint Quick Disconnect	1	
24	9500698	Fuel Line, 121" Long	1	
25	9500687	Fuel Hose, 1/4" Dia. x 127" Long	1	
26	9501126	Suction Strainer w/Magnet 14GPM	1	
27	9501128	Beaded Hose Barb 3/4" Hose ID Insert x 1 1/16-12UN	1	
28	9501129	Reducer, 1 5/8-12 O-Ring Male x 1 1/16-12 O-Ring Female Nut	1	
29	9004485	Rubber Grommet, 2 5/8" ID (5/8" Thick)	1	
30	9502961	Hydraulic Hose, 1/2" Dia. x 25 9/16"	1	
31	99890	Rubber Grommet, 9/16" ID	2	
32	9007173	Rubber Grommet, 2 5/8" ID (3/4" Thick)	2	
33	94997	Tee, 3/4-16 JIC Male x 3/4-16 JIC Male x 3/4-16 JIC Female	2	
34	97664	Adapter, 9/16-18 O-Ring male x 3/4-16 JIC Female	1	
35	9501014	Cold Start Ball Valve (SAE-6)	1	
36	95475	Adapter, 3/4-16 UNF JIC Male x 9/16-18 UNF O-Ring Male	1	
37	93683	90° Elbow, 3/4-16 JIC Male x 3/4-16 JIC Female	1	
38	9502790	Hydraulic Hose, 1/2" Dia. x 20"	1	
39	93778	Key, 1/4" x 1/4" x 1 1/4"	1	
40	97840	Rubber Grommet, 1 1/4" ID	2	
41	2001027	Hose 3/4" ID x 29 5/16"	1	

Power Pak Harnesses, Site Gauge & Actuator Components

Please visit www.unverferth.com/parts/ for the most current parts listing.







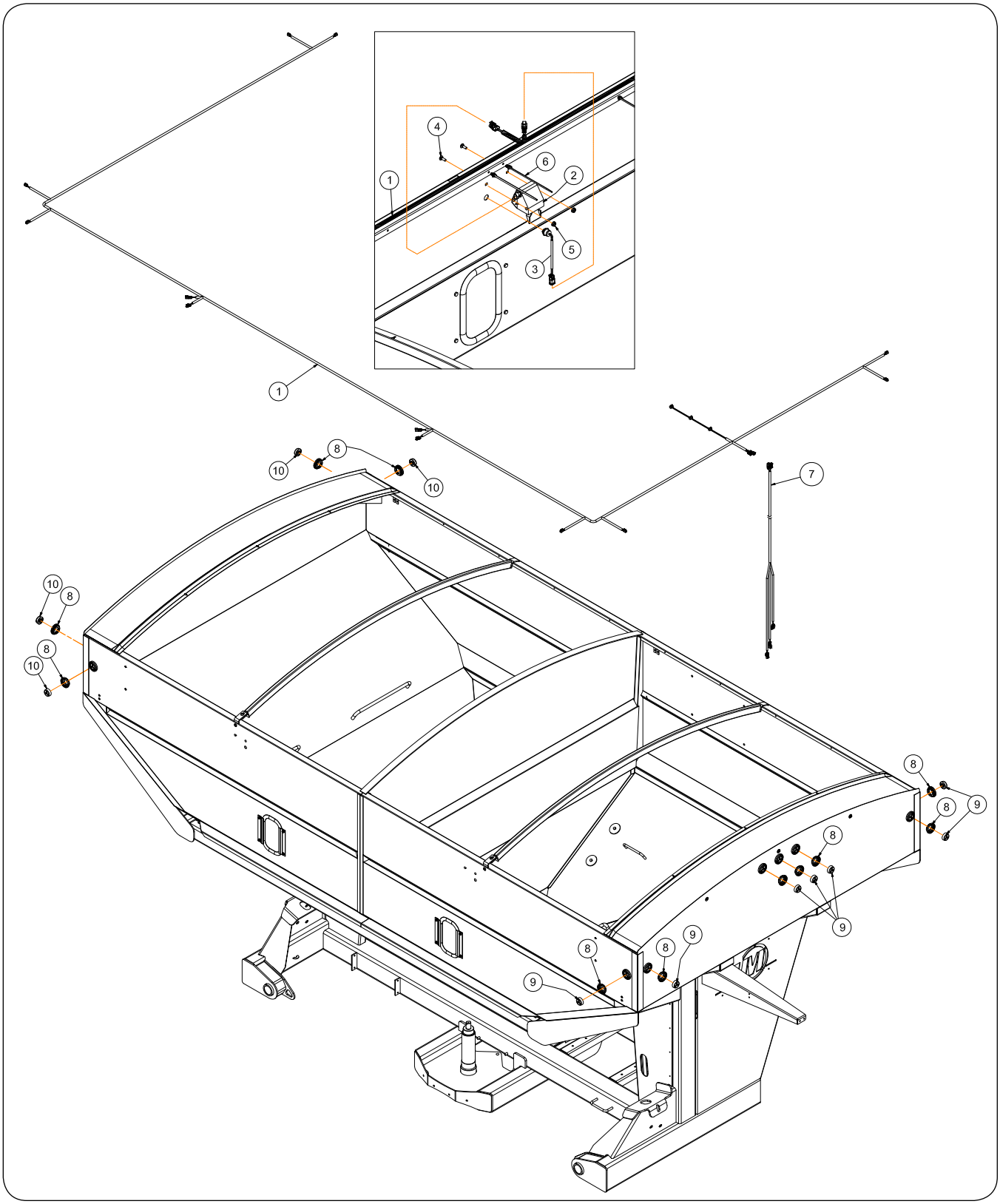
Power Pak Harnesses, Site Gauge & Actuator Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2002810	Wire Harness Adapter 6"	1	
2	2008945IV	Actuator Bracket	2	
3	2008953IV	Actuator Lever (Throttle)	2	
4	2008954R	Throttle Indicator	1	
5	2008955Y	Choke Indicator	1	
6	2002957IV	Indicator Panel	1	
7	2002958	Decal, Throttle/Choke	1	
8	22018	Bushing 3/8" Dia. x 9/32" Long	2	
10	901101	Flange Screw 1/4-20UNC x 1	2	
11	901413	Control Cable 42" Long	2	
12	901414	Rod End Bearing For Control Cable	2	
13	901771	Site Gauge Assembly	1	
14	902892	Clamp Body (2 Halves)	2	
15	902893	Clamp Cover Plate	2	
16	91256	Flange Screw 5/16-18UNC x 3/4	5	
17	91257	Large Flange Hex Nut 5/16-18UNC	5	
18	91263	Large Flange Hex Nut 3/8-16UNC	4	
19	9390-008	Capscrew 1/4-20UNC x 1 3/4	2	
20	9390-005	Capscrew 1/4-20UNC x 1	2	
21	9390-013	Capscrew 1/4-20UNC x 3	2	
22	9394-006	Hex Nut 3/8-16UNC	5	
23	9398-003	Elastic Stop Nut #10-32UNC	4	
24	9404-017	Lock Washer 1/4"	4	
25	9404-021	Lock Washer 3/8"	11	
26	9405-064	Flat Washer 1/4" USS	6	
27	9405-076	Flat Washer 3/8" USS	5	
28	9500462	Honda Gas Engine 22HP	1	
29	9500471	Vibration Mount	5	
30	9500699	Constant Tension Clamp (1/2" OD)	4	
31	9500703	Oil Drain Hose 12" Long	1	
32	97189	Large Flange Hex Nut 1/4-20UNC	14	
33	97420	Flange Screw 1/4-20UNC x 3/4	14	
34	97840	Rubber Grommet 1 1/4" ID	2	
35	9936	Locknut 1/4-20UNC	6	
36	TA0-903850-0	Cable Clamp 1/2" Size	4	
37	9390-007	Capscrew 1/4-20UNC x 1 1/2	2	
38	2008982	Actuator Replacement Kit	2	
39	2002128	Engine Wire Harness 58”	1	
40	9500487	Rectifier Honda GX690	1	
41	9394-002	Hex Nut 1/4”-20UNC	2	

Box Electrical Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



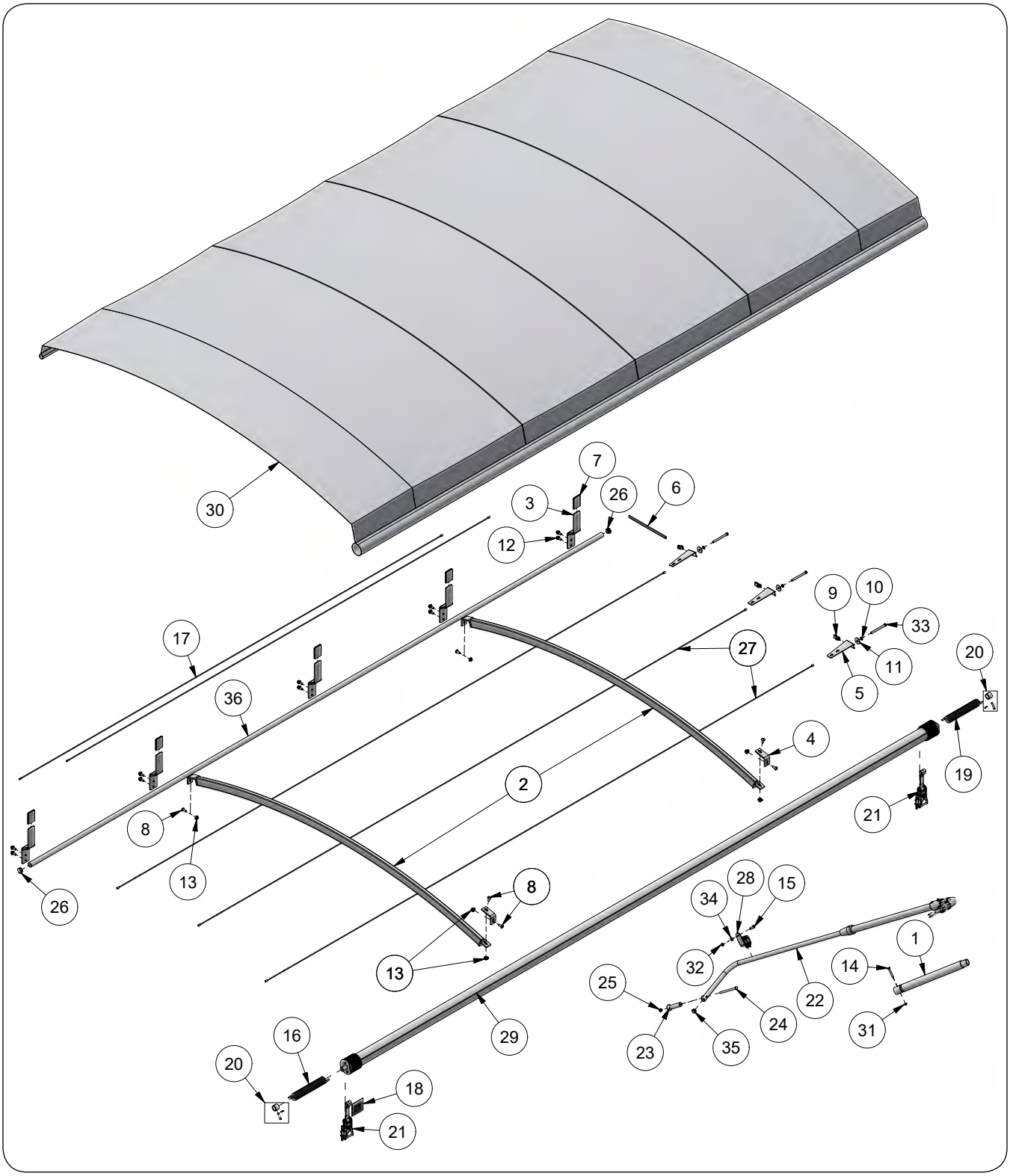
Box Electrical Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2007536	Wire Harness Tank Lighting and Indicators for Magnetic Reed Switch	1	
2	9501978	Magnetic Reed Switch	2	
3	9502267	Red Indicator Light	2	
4	902947	Carriage Bolt 1/4”-20UNC x 3/4 (Stainless Steel)	4	
5	9004720	Hex Nut 1/4”-20UNC (Stainless Steel)	4	
6	99599	Cable Tie (Fir Tree)	25	
7	2002090	Rear Tank Harness	1	
8	900956	Grommet Open Back	11	
9	902218	Light/Red LED (2 prong)	7	
10	902219	Light/Amber LED (2 Prong)	4	

Cable Return Tarp System Components (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.



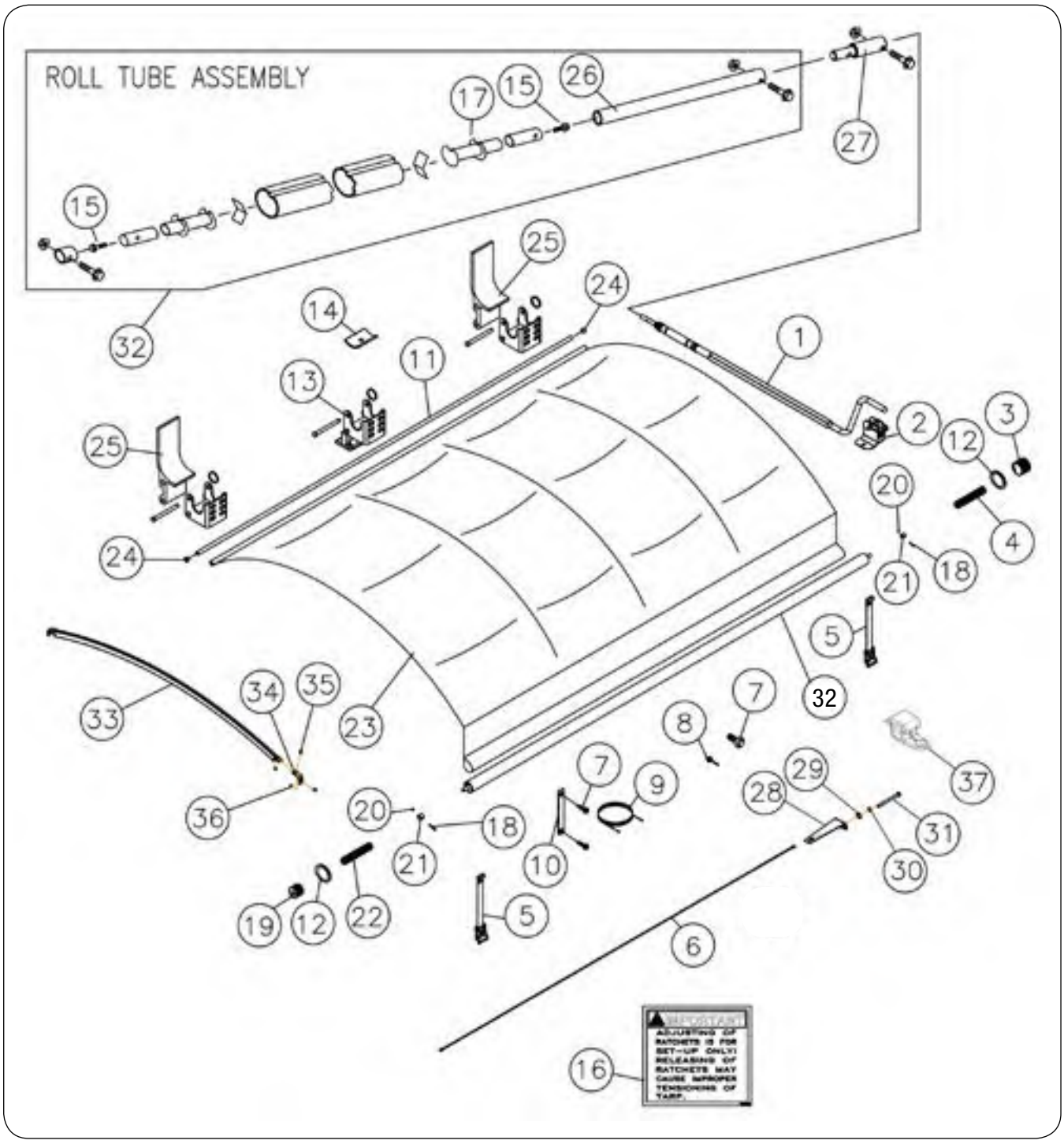
Cable Return Tarp System Components (SN D69630100 & Up)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2007580B	Handle Extension	-	
2	2011153TS	Tarp Bow Weldment	2	
3	2011539B	Tarp Stop Weldment	5	
4	251122B	Sideboard Tarp Bow Bracket	2	
5	281711B	Tarp Bracket	3	
6	9000787	Trim-Edge Vinyl Coat	A/R	
7	9003078	Cap/Plastic	5	
8	9005312	Truss Head, 3/8”-16UNC x 1”	6	
9	9005376	U-Nut, 3/8”-16UNC	3	
10	9005688	Lock Washer/External Tooth, 3/8”	3	
11	9005696	Fender Washer, 3/8”	3	
12	91262	Flange Screw, 3/8”-16UNC x 1” G5	10	
13	91263	Nut/Large Flange, 3/8”-16UNC	6	
14	9390-035	Capscrew, 5/16”-18UNC x 2 1/4” G5	1	
15	9390-055	Capscrew, 3/8”-16UNC x 1” G5	1	
16	105826	Spring - Red	1	
17	105828	Cable/Roll Tarp	2	
18	105876	Decal, IMPORTANT “Adjusting Racket”	1	
19	105894	Tarp Spring/Left - Yellow	1	
20	105998	Nylon Coupler (Includes Bolt & Nut)	2	
21	106042	Ratchet w/Strap	2	
22	9003249	Crank Handle w/Flexible Shaft	1	Includes Flex Drive Shaft & Items 23-25
	9004078	Flex Drive Shaft Assembly	-	
23	9503015	Handle Grip, 1 3/8” Dia. x 4 7/16”	1	
24	9390-071	Capscrew, 3/8”-16UNC x 6” G5	1	
25	9398-012	Elastic Locknut, 3/8”-16UNC	1	
26	901557	Plug Kit	1	
27	9500813	Cable Assembly, 180”	3	
28	9503008	Clamp	1	
29	9503601	Roll Tube, 3” Dia. x 200”	1	
30	9504194	Tarp Fabric, 100” x 198”	1	For 100” x 200” Box
	9005581	Tarp Repair Kit	-	
31	9807	Locknut/Top, 5/16-18UNC	1	
32	9928	Locknut/Top, 3/8”-16UNC	1	
33	TA0-907131-0	Capscrew, 3/8”-16UNC x 4 1/2” G5	3	
34	9405-070	Flat Washer, 5/16” USS	1	
35	N/A	Plug/Nylon, 1”	1	
36	221581	Fixed Tube, 1 1/8” Dia. x 190”	1	

Cable Return Tarp System Components (SN D69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.



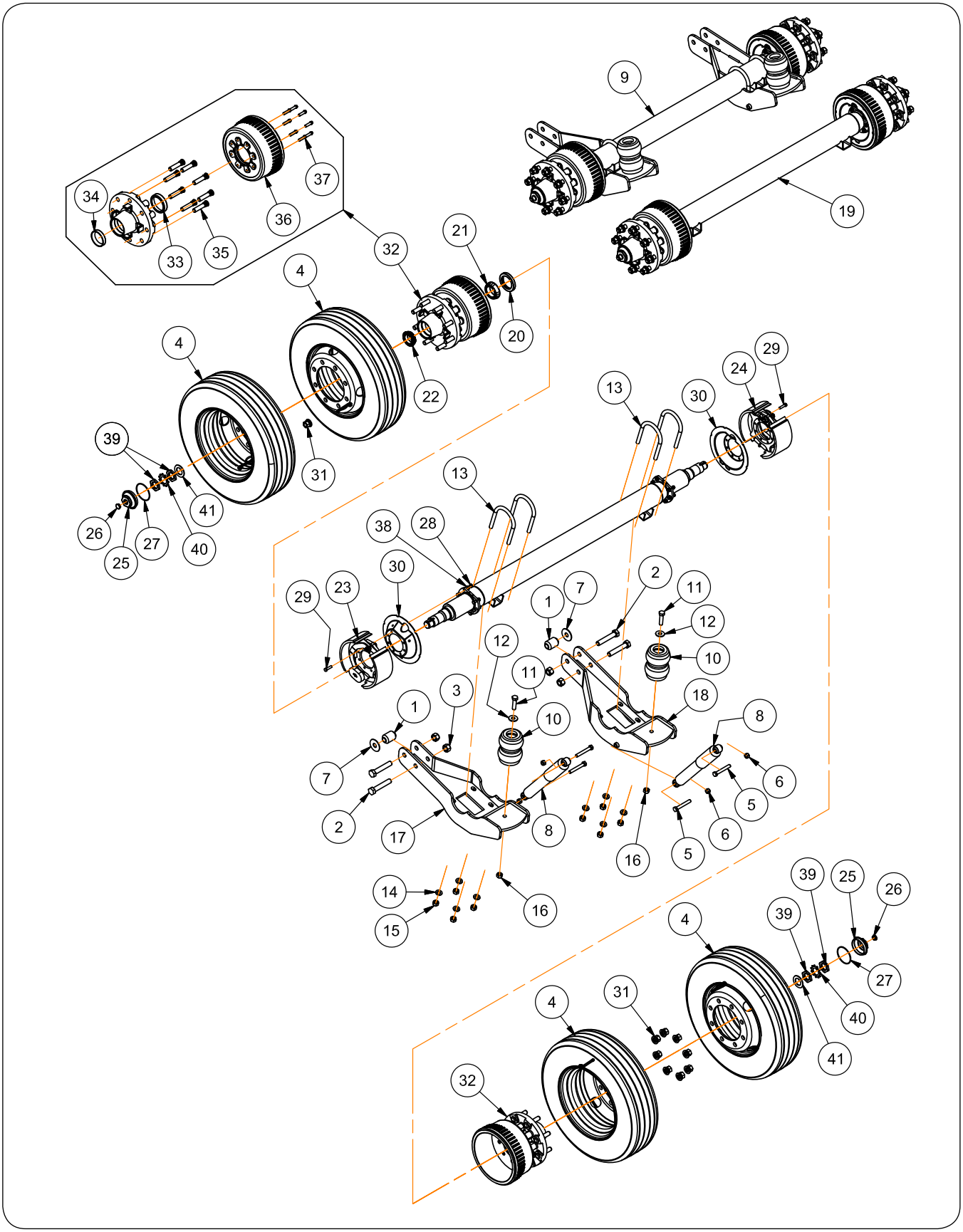
Cable Return Tarp System Components (SN D69630099 & Lower)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9003249	Crank Handle w/Flexible Shaft	1	
	2007580B	Handle Extension	-	
	9390-035	Capscrew, 5/16-18UNC x 2 1/4 G5	-	
	9807	Lock Nut, 5/16-18UNC	-	
2	901526	Tube Holder Sub Asy	1	
3	9503121	Nylon Spool/RIGHT & LEFT	1	
4	105826	Spring - Red	1	
5	106042	Ratchet w/Strap	2	
6	9500813	Cable Assembly 180”	2	
7	96972	Screw/Self-Drilling 3/8-16UNC x 1	4	
8	97172	Rivet/Pop 3/16	A/R	
9	105828	Cable/Roll Tarp	1	
10	901185	Poly Strip 1 1/4 x 10	2	
11	N/A	Stationary Tube	1	
12	N/A	Rubber Ring	2	
13	105820	Tarp Bracket/Quick Release w/Hardware	3	
14	105829	Tarp Tube Stops	A/R	
15	9003086	Hardware Bag (Includes Bolts)	-	
16	105876	Decal, IMPORTANT “Adjusting Racket”	1	
17	902065	Cartridge Tube (35.13 Long)	1	
18	9390-008	Capscrew 1/4-20UNC x 1 3/4	2	Grade 5
19	9503121	Nylon Spool/RIGHT & LEFT	-	
20	9936	Locknut 1/4-20UNC	2	
21	105998	Nylon Coupler (Includes Bolt & Nut)	2	
22	105894	Tarp Spring/Left - Yellow	1	
23	9501092	Tarp Fabric For 102 x 200 Box	1	
	9005581	Tarp Repair Kit	-	
24	901557	Plug Kit	2	
25	901525	Quick Release Stop (Tall Leg) w/Mounting Bracket & Hardware	3	
26	902066	PVC Spacer (21 1/4 LONG)	1	
27	26857	Shaft Extension	1	
28	281712B	Bracket & U-Nut Assembly	2	
29	9005688	External Tooth Lock Washer 3/8	2	
30	9405-076	Flat Washer 3/8 USS	3	
31	TA0-907131-0	Capscrew 3/8-16UNC x 4 1/2	1	Grade 5
32	N/A	Roll Tube w/20” Cartridge Extension	1	
33	2001490TS	Tarp Bow Weldment	2	
34	251122B	Sideboard Tarp Bow Bracket	2	
35	9005312	Truss Head 3/8-16UNC x 1	4	
36	91263	Large Flange Hex Nut 3/8-16UNC	4	
37	9503008	Clamp	1	

Axle Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



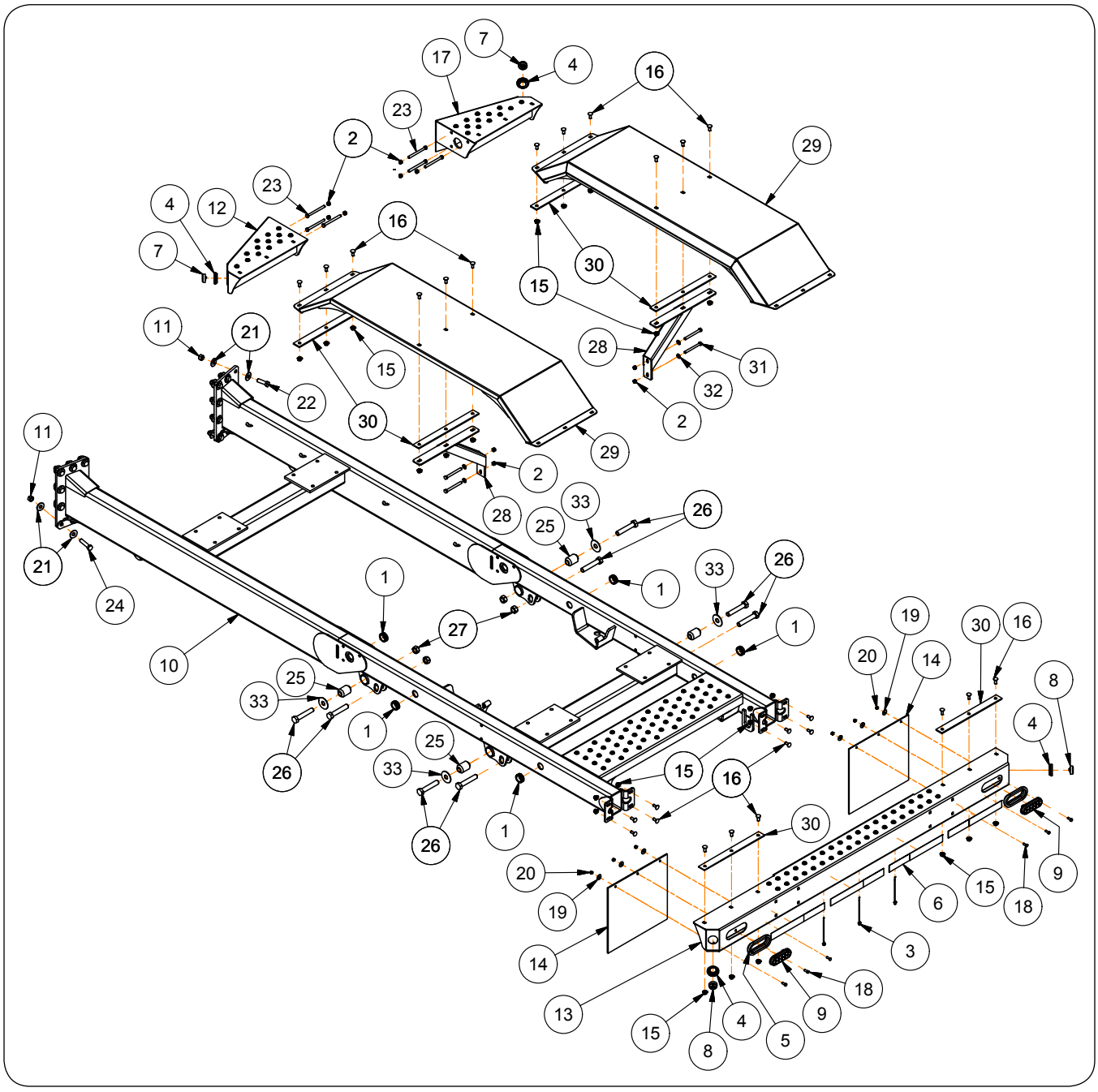
Axle Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	9501134	Rubber Covered Spring Eye Bushing	4	
2	9390-194	Capscrew 1"-8UNC x 5 1/2" G5	8	
3	9663	Locknut 1-8UNC	8	
4	9501895	Wheel & Tire Assembly	8	
	9002500	Valve Stem		
	9501896	Wheel 6.75 x 17.5 (8 Holes)		
	9501901	Tire 215/75R17.5 LRH		
5	9390-133	Capscrew 5/8"-11UNC x 4 1/2" G5	7	
6	9801	Lock Nut/Top 5/8"-11UNC	7	
7	2007463	Hard Washer	4	
8	9502057B	Shock Absorber	4	
9	2006015B	Axle Assembly	2	Includes Items 10 through 41
10	9501496	Rubber Bumper	2	
11	9390-149	Capscrew 3/4"-10UNC x 3" G5	2	
12	9405-106	Flat Washer 3/4" USS	2	
13	9501609	U-Bolt 3/4"-16UNF	4	
14	RR107006	Flat Washer 3/4"	8	
15	9394-015	Hex Nut 3/4"-16UNF	8	
16	9802	Lock Nut/Top 3/4"-10UNC	2	
17	2006020B	Trailing Arm LH Bracket Weldment	1	
18	2006021B	Trailing Arm RH Bracket Weldment	1	
19	9501792	Axle Assembly with Electric Brakes	1	Includes Items 20 through 41
20	9501476	Oil Seal 4.500" OD x 3.125" ID	2	
21	101551	Bearing Cone 2.625" ID	2	
22	9007498	Bearing cone 2 1/4" ID	2	
23	9504621	Brake Cluster LH/Electric	1	
24	9504622	Brake Cluster RH/Electric	1	
25	9501519	Oil Cap	2	
26	9501520	Oil Cap Plug	2	
27	9501521	Oil Cap O-Ring	2	
28	9394-007	Hex Nut, 7/16"-20UNF	14	
29	9390-307	Capscrew, 7/16"-20UNF x 1 3/4" G5	14	
30	9501860	Dust Shield	2	
31	97319	Flanged Cap Nut M22 x 1.5	16	
32	9501892	Hub 8-Bolt & Drum Assembly	2	Includes Items 33 through 37
	9501893	Hub 8-Bolt, w/Cups and Studs	2	
33	93819	Bearing Cup 4 7/16" OD	1	
34	9501473	Bearing Cup 3.844" OD	1	
35	9007001	Stud Bolt M22 x 1.5 x 4	8	
36	9504620	Brake Drum 8-Bolt	1	
37	9504619	Screw Hex Flange, 1/2"-13UNC x 1 3/4" G8	8	
38	9404-023	Lock Washer, 7/16"	4	
39	9504632	Hex Jam Nut, 1 3/4"-12UN	2	
40	9504633	Washer Tang, 1 3/4" ID	2	
41	9504634	Spindle Washer, 1 3/4" ID	2	

Dual Axle Undercarriage Components

Please visit www.unverferth.com/parts/ for the most current parts listing.



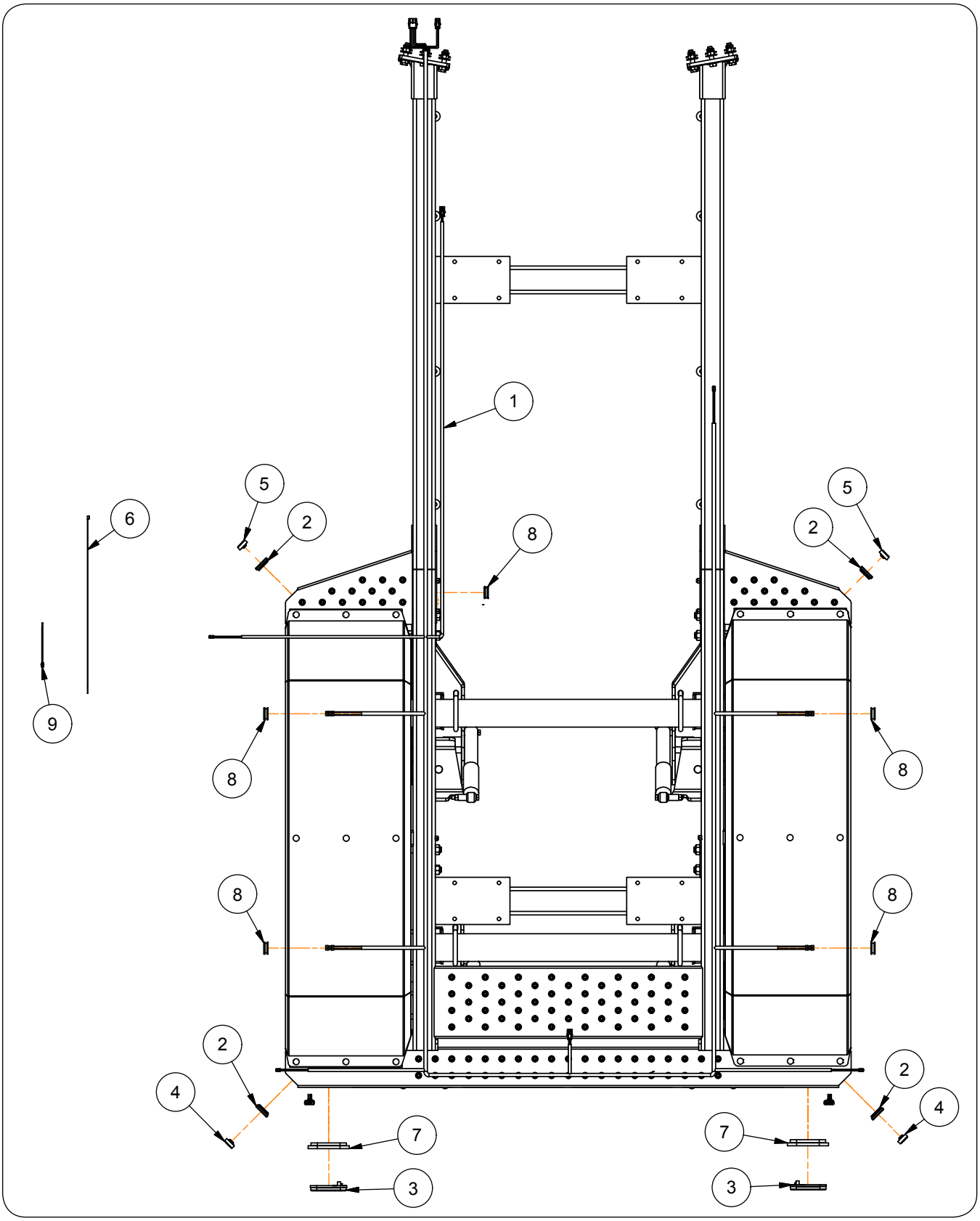
Dual Axle Undercarriage Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	98487	Rubber Grommet 1 1/2" ID	5	
2	9800	Locknut 1/2-13UNC	10	
3	99599	Cable Tie - Fir Tree Mount	3	
4	900956	Grommet, Open Back for 2" Dia. Panel Light	4	
5	97182	Grommet, Open Back for 2 1/4 x 6 1/2 Panel Light	2	
6	25003	Conspicuity Marking 18" (11" Red/7" White)	4	
7	902219	Amber LED Light 2" Dia.	2	
8	902218	Red LED Light 2" Dia.	2	
9	902217	Red LED Light 2 1/4 x 6 1/2	2	
10	2006014TS	Dual Axle Undercarriage Weldment	1	
11	9802	Locknut 3/4-10UNC	20	
12	2002068TS	Left-Hand Fender Mount Weldment	1	
13	2002050TS	Light Bar Weldment	1	
14	2002074	Mud Flap	2	
15	91267	Flange Nut 1/2-13UNC	26	
16	9388-103	Carriage Bolt 1/2-13UNC x 1 1/4	26	
17	2002069TS	Right-Hand Fender Mount Weldment	1	
18	9390-055	Capscrew 3/8-16UNC x 1	6	
19	9405-078	Flat Washer 3/8 (Wide)	6	
20	9928	Locknut 3/8-16UNC	6	
21	900902-053	Flat Washer 3/4" USS	40	
22	9390-147	Capscrew 3/4-10UNC x 2 1/2	14	
23	9390-114	Capscrew 1/2-13UNC x 5 1/2	6	
24	9390-151	Capscrew 3/4-10UNC x 3 1/2	6	
25	9501134	Rubber Covered Spring Eye Bushing	4	
26	9390-194	Capscrew 1"-8UNC x 5 1/2" G5	8	
27	9663	Lock Nut/Top 1"-8UNC	8	
28	2006578TS	Fender Support	2	
29	2006582TS	Fender Weldment	2	
30	2006585	Rubber Seal	6	
31	9390-113	Capscrew 1/2"-13UNC x 5" G5	4	
32	9405-086	Flat Washer 1/2" SAE	4	
33	2007463	Hard Washer	4	

Undercarriage Electrical Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

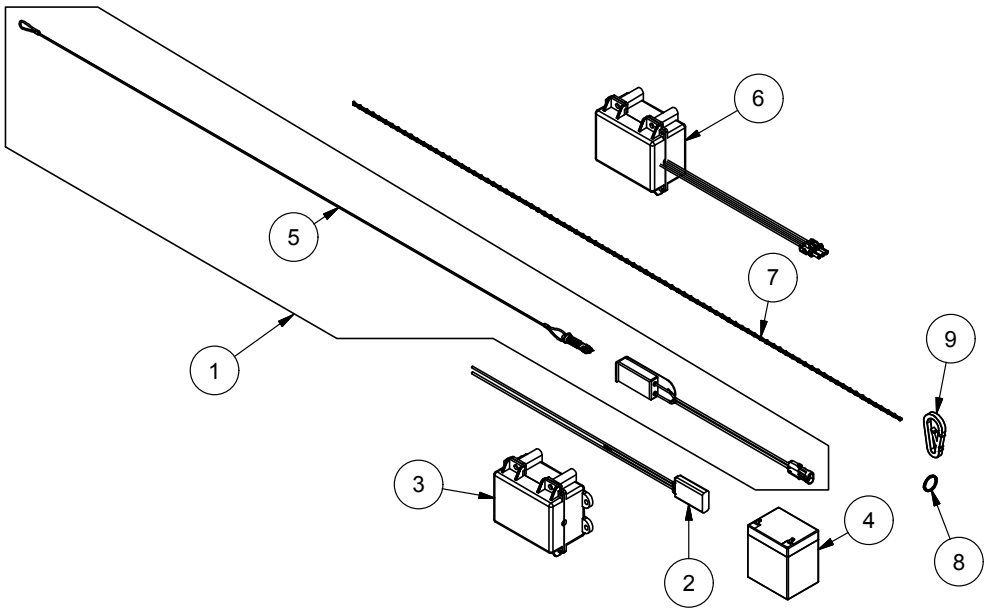


Undercarriage Electrical Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2002133	Wiring Harness - 365" Undercarriage Harness	1	
2	900956	Grommet Open Back	4	
3	902217	Light/Red LED (3 Prong)	2	
4	902218	Light/Red LED (2 Prong)	2	
5	902219	Light/Amber LED (2 Prong)	2	
6	94038	Cable Tie 32" Long	4	
7	97182	Grommet for Panel Light	2	
8	98487	Grommet 1 3/8" Dia.	5	
9	99599	Cable Tie - Fir Tree	3	

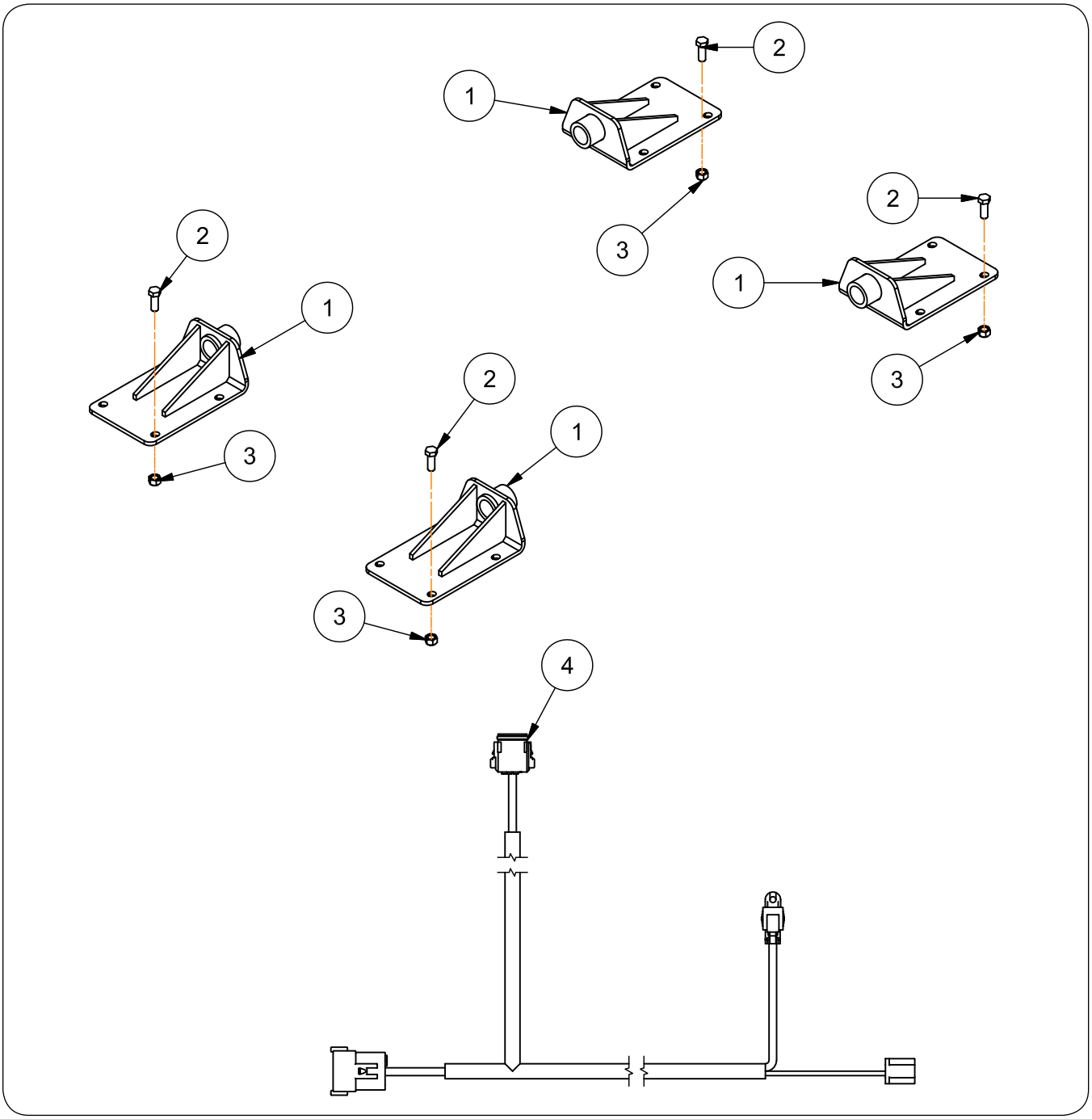
Electric Breakaway Components



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	900786	Breakaway Electric Switch w/Pull Pin	1	
2	900787	Battery 12V Charger	1	
3	902179	Battery Box w/Decals	1	
4	900789	Battery 12V Rechargeable	1	5.0 AMP-HR
5	901950	Pull Cord Breakaway Switch	1	
6	902764	Battery with Charger & Box	-	Includes Items 2, 3, & 4
7	30675	Sash Chain #35 x 48	1	
8	97489	Split Ring	2	
9	105251	Spring Clip Snap Link	1	

Non-Scale Components

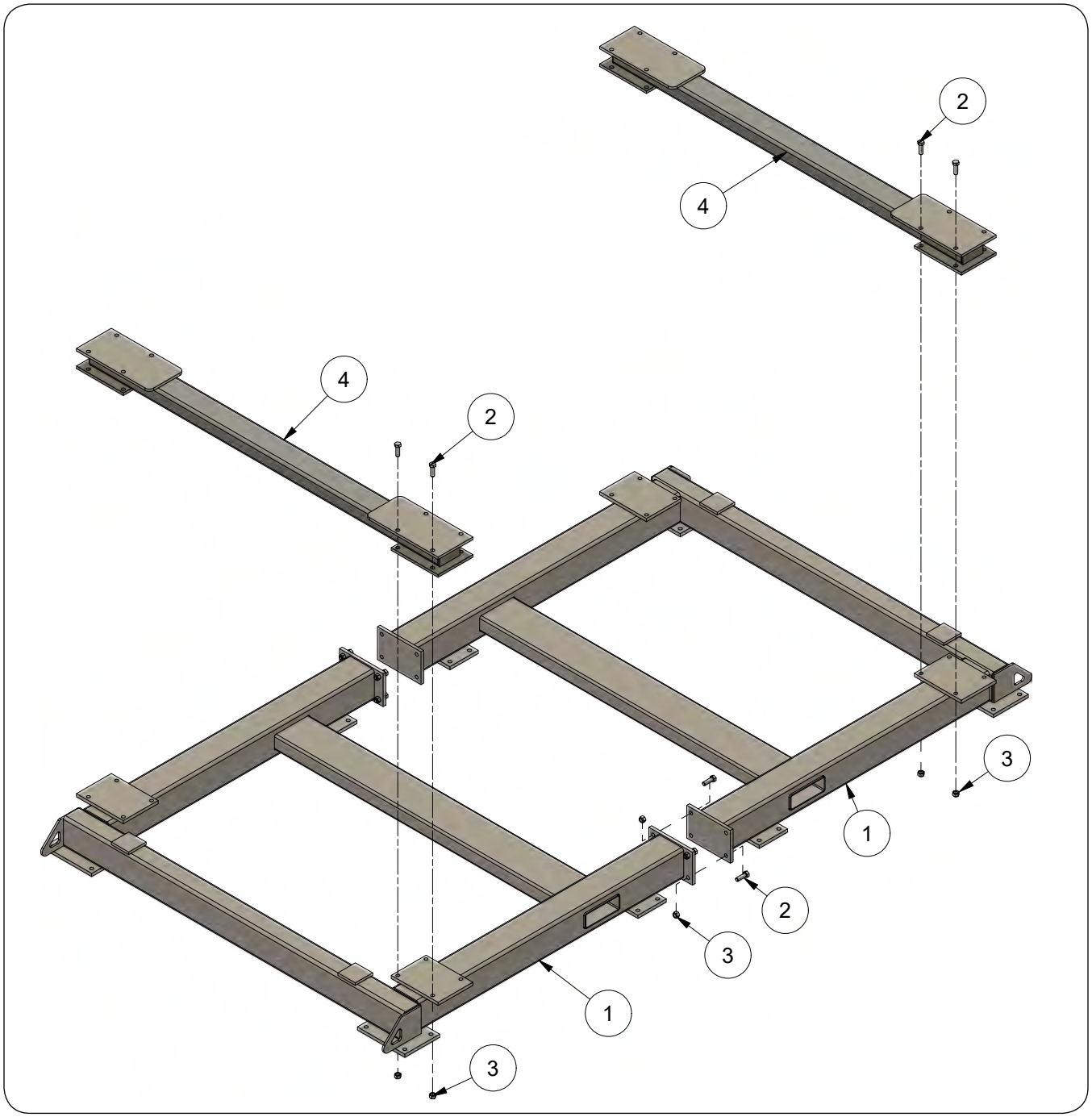
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	2002119TS	Non-Scale Components	-	Includes Items 1 through 4
1	2002116TS	Bracket Weldment	4	
2	9390-123	Capscrew 5/8-11UNC x 1 3/4	16	
3	9801	Locknut 5/8-11UNC	16	
4	2002130	Non-Scale Front Harness	1	

Scale Platform for Units Less Undercarriage

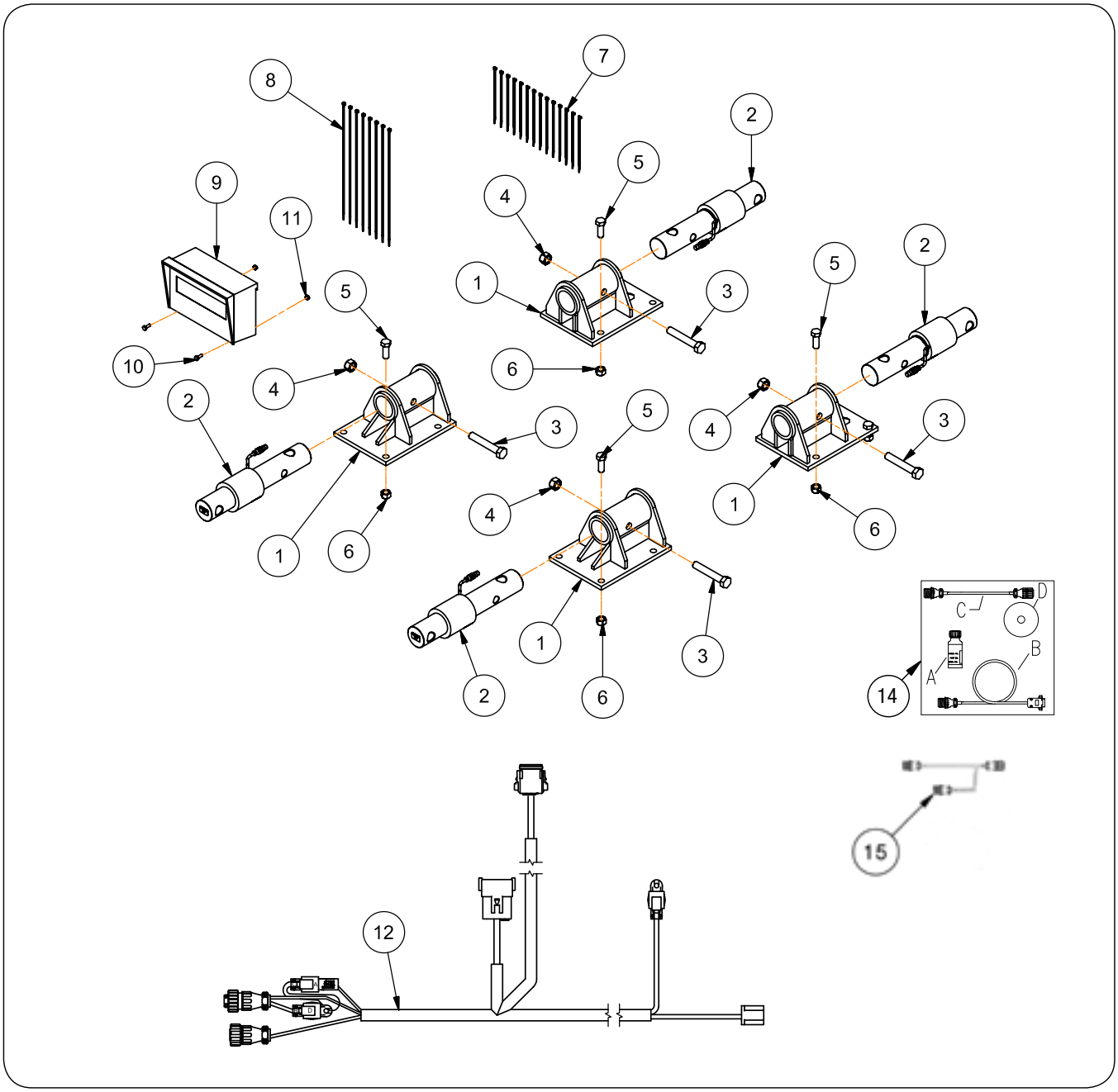
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	2002943TS	Scale Platform for Units Less Undercarriage	-	Includes Items 1-3
1	2002967TS	Scale Base	2	
2	9390-124	Capscrew 5/8-11UNC x 2	24	
3	9801	Locknut 5/8-11UNC	24	
4	2011480TS	Riser Pad Weldment	2	Serial Number D69630100 & Up

Scale Components (Optional)

Please visit www.unverferth.com/parts/ for the most current parts listing.



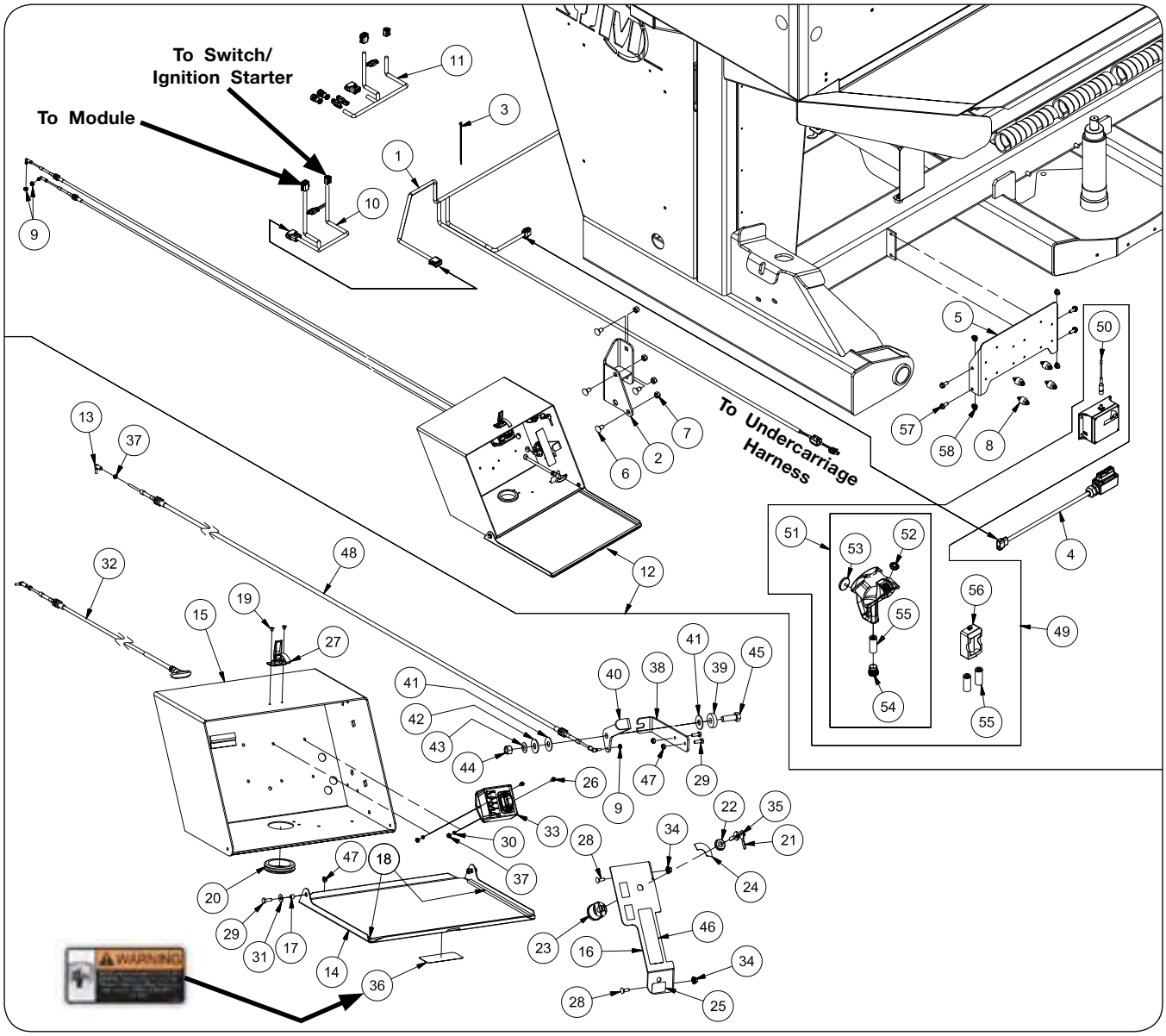
Scale Components (Optional)

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
	2002115TS	2410 Scale Package Complete with Indicator	-	Includes Items 1 through 12
	2002941TS	2520 Scale Package Complete with Indicator		
1	2002010TS	Scale Bracket Weldment	4	=Tan Speckle=
2	9004902	Weigh Bar/Scale Hitch Bar 2.5" Dia. Load Cell w/ 16 Ft. Cable	4	
3	9390-154	Capscrew 3/4-10UNC x 4 1/2	4	Grade 5
4	9802	Locknut 3/4-10UNC	4	
5	9390-123	Capscrew 5/8-11UNC x 1 3/4	8	Grade 5
6	9801	Locknut 5/8-11UNC	8	
7	9000106	Cable Tie 6" Long	14	
8	94037	Cable Tie 15 1/2" Long	8	
9	902034	Scale Indicator Unverferth 2410	1	
	9500374	Scale Indicator Unverferth 2520		
10	9390-003	Capscrew 1/4-20UNC x 3/4	4	Grade 5
11	9936	Locknut 1/4-20UNC	4	
12	2002132	Common Scale Wire Harness 28" Long	1	
13	9007102	Roll Printer Kit	1	NOT SHOWN
14	9003630	Memory Module Downloader Kit	1	(OPTIONAL)
A	9004150	Downloader Module	1	
B	9004149	Cable 5'	1	
C	9004152	Interface Cable 1'	1	
D	9004151	Software	1	
15	9004376	Y-Cable To Be Used With Printer & Downloader	1	

Enclosure, Remote, & Receiver Components — 3 Function

Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2002520	Wiring Harness for 3 Function Remote	1	
2	2004988TS	Enclosure Mounting Bracket	1	
3	9000106	Cable Tie 7 1/2"	9	
4	2010483	Adapter Harness for Receiver	1	
5	2002674TS	Receiver Mount =Tan Speckle=	1	
6	9388-102	Carriage Bolt 1/2"-13UNC x 1" G5	4	
7	9800	Lock Nut/Top 1/2"-13UNC	6	
8	9500067	Isolator 1" Dia. x 2 1/4" Long	4	
	97189	Large Flange Hex Nut 1/4-20UNC	8	
9	9398-003	Elastic Lock Nut #10UNF	2	
10	2002130	Common Enclosure Harness	1	
11	2002132	Scale Enclosure Harness	-	

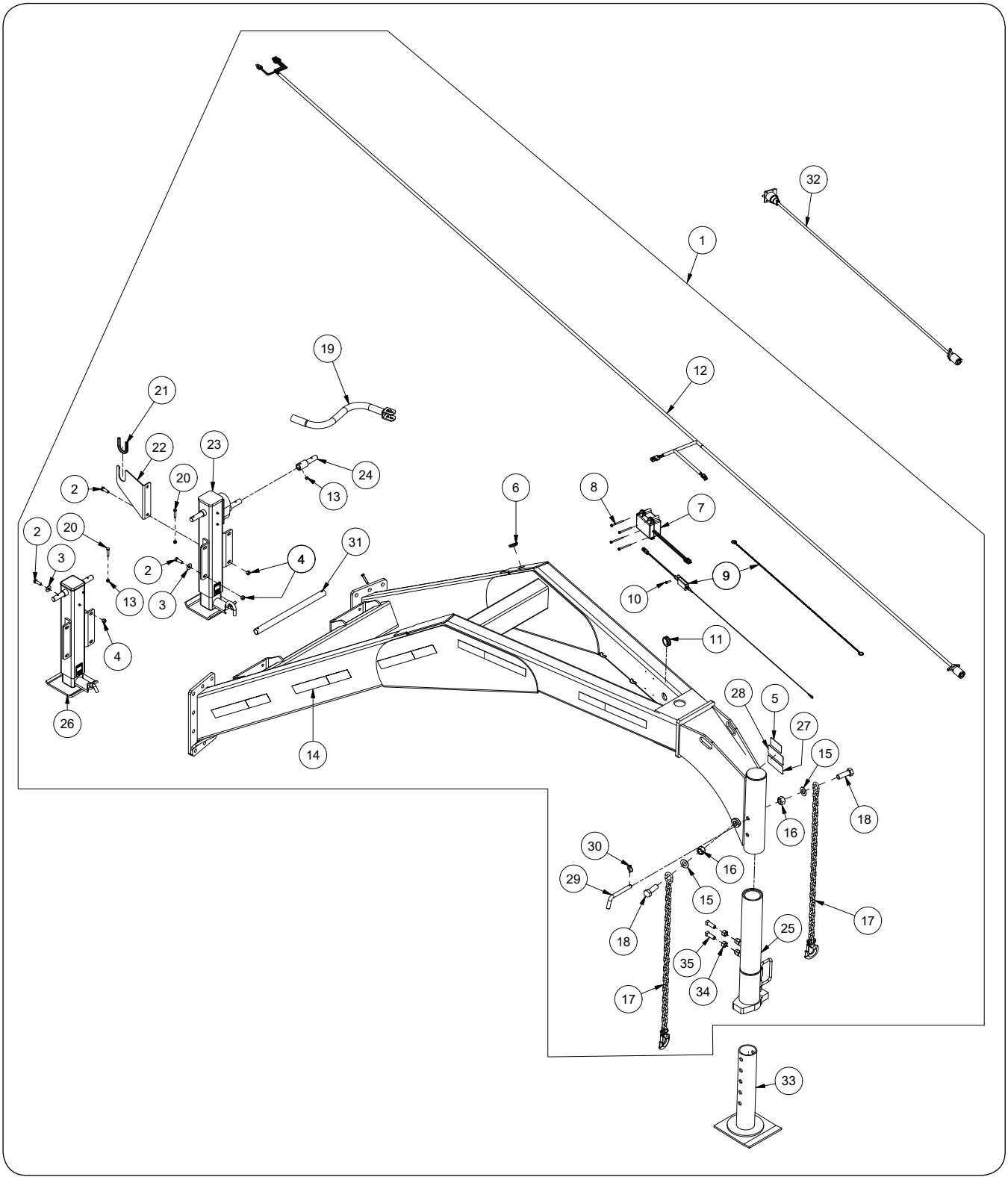
Enclosure, Remote, & Receiver Components — 3 Function

Please visit www.unverferth.com/parts/ for the most current parts listing.

ITEM	PART NO.	DESCRIPTION	QTY	NOTES
12	2006458TS	Remote Enclosure Assembly (3-Function)	1	Includes Items 13 - 48
13	901414	Rod End Bearing	1	
14	2002539TS	Cover	1	
15	2002540TS	Remote Enclosure Weldment	1	
16	2002538TS	Keyswitch Mounting Bracket	1	
17	22018	Bushing 3/8" Dia. x 9/32" Long	2	
18	900152	Foam Rubber Adhesive Tape	3	
19	9003503	Rivet 3/16" Dia.	2	
20	901334	Rubber Grommet 2 1/4" ID	1	
21	901718	Key	2	
22	901719	Nut/Keyswitch	1	
23	901720	Switch/Ignition Starter	1	
24	901811	Decal, Keyswitch	1	
25	902322	Decal, Choke	1	
26	903172-343	Pan Head #10-32UNF x 1/2" Phillips Machine Screw	2	
27	9220	Draw Latch	1	
28	9388-002	Carriage Bolt 1/4"-20UNC x 3/4"	2	Grade 5
29	9390-003	Capscrew 1/4"-20UNC x 3/4"	4	Grade 5
30	9404-013	Lock Washer #10	2	
31	9405-064	Flat Washer 1/4" USS	2	
32	9501026	Choke Cable	1	
33	9501811	Module - Soft Start	1	
34	97189	Large Flange Hex Nut 1/4"-20UNC	2	
35	97489	Split Ring for Keys	1	
36	97961	Decal, WARNING "Read and Understand..."	1	
37	9830-016	Hex Nut #10-32UNF	5	Grade 2
38	2002630TS	Cable Mount Bracket	1	
39	29612	Spacer	1	
40	27134TS	Throttle Lever	1	
41	95236	Nylon Flat Washer	2	
42	9405-088	Flat Washer 1/2" USS	1	
43	99913	Belleville Washer 1/2"	1	
44	9800	Lock Nut/Top 1/2"-13UNC	1	
45	9390-101	Capscrew 1/2"-13UNC x 1 1/2" G5	1	
46	902321	Decal, Throttle	1	
47	9936	Lock Nut 1/4"-20UNC	4	
48	9501025	Control Cable	1	
49	9503473	Radio Remote System 3-Function	1	Includes Items 50 - 56
50	9500065	Antenna for Receiver	1	
51	9500071	3-Function Transmitter	1	
52	9503674	E STOP Button (RED)	-	
53	901598	Magnet Mount for Remote Control	-	
54	9503675	Transmitter Battery Cap	-	
55	9503673	Hetronic 3.2V Battery	-	
56	9503677	AC Battery Charger with UL Plug	1	
57	91262	Flange Screw 3/8"-16UNC x 1"	4	
58	91263	Large Flange Nut, 3/8"-16UNC	4	

Gooseneck Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

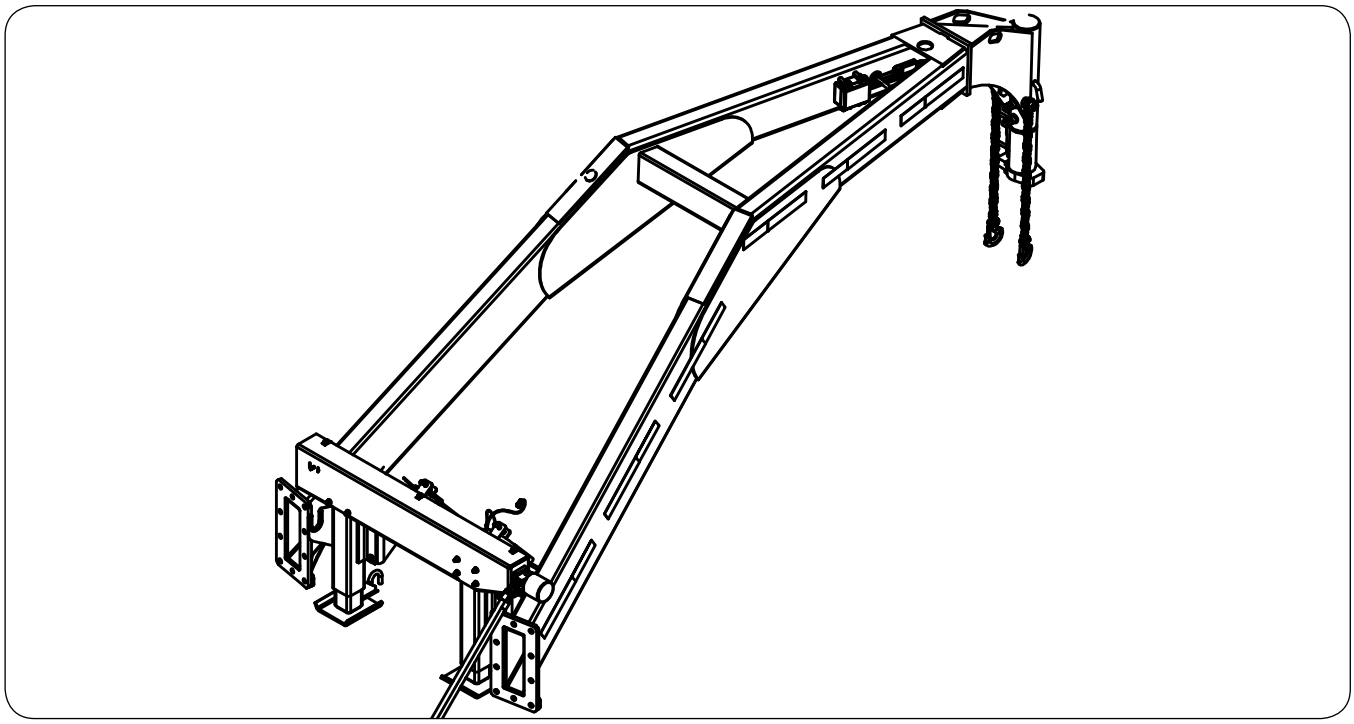


Gooseneck Hitch Components

Please visit www.unverferth.com/parts/ for the most current parts listing.

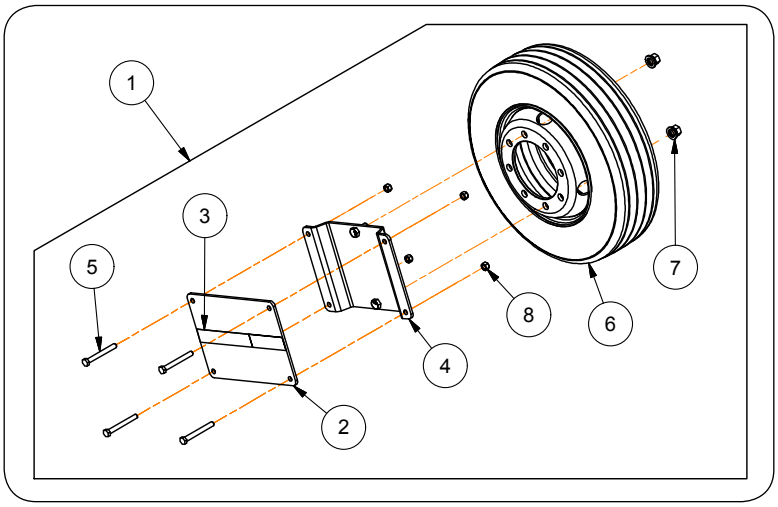
ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2002016TS	Gooseneck Hitch Assembly	-	Includes Items 1-28
2	9390-101	Capscrew 1/2-13UNC x 1 1/2	4	Grade 5
3	9405-088	Flat Washer 1/2"	4	
4	9800	Locknut 1/2-13UNC	4	
5	97961	Decal, WARNING (Read and Understand...)	1	
6	97422	Plug/Rubber	1	
7	-	Battery w/Charger & Box	1	Refer to "Electric Breakaway Components" in PARTS Section
8	902238	Flange Bolt 1/4-20 x 3	4	
9	-	Breakaway Switch, Sash Chain, Split Ring & Clip	1	Refer to "Electric Breakaway Components" in PARTS Section
10	9512	Screw/Self-Drilling 1/4-14 x 1	1	
11	98487	Grommet/Rubber	1	
12	27829	Wiring Harness Front	1	
13	9928	Locknut 3/8-16UNC	3	
14	25003	Conspicuity Marking / Reflectors	12	
15	9405-116	Flat Washer 1"	4	
16	9663	Locknut 1-8UNC	2	
17	9504779	Chain w/Hook & C-Link Assembly	2	
18	91299-187	Capscrew 1-8UNC x 3	2	Grade 8
19	9500583	Jack Handle	1	
20	9390-058	Capscrew 3/8-16UNC x 1 3/4	3	Grade 5
21	2002182	U-Channel/Black Trim	1	
22	2002102B	Handle Bracket	1	
23	2002936B	Jack 10,000# Weldment (2-Speed) w/Decals	1	
	9501197	Decal, WARNING "Gooseneck Jack - Weight"	1	
	97048	Decal, WARNING "Pinch Point"	1	
24	2002940	Coupler/Bar	1	
25	2003304B	Gooseneck Hitch - Drilled	1	
26	2003309B	Jack 10,000# Weldment w/Decals	1	
	9501197	Decal, WARNING "Gooseneck Jack - Weight"	1	
	97048	Decal, WARNING "Pinch Point"	1	
27	9500953	Decal, CAUTION (Always Use Transport Chain.....)	1	
28	9500952	Decal, CAUTION (Unhitching of Undercarriage can cause...)	1	
29	9501179	Bent Pin 3/4" Dia.	1	
30	9093	Klik Pin 3/16" Dia.	1	
31	2004071B	Extension Tube	1	
32	2004396	Optional 72" Light Harness Extension	-	
33	33381B	Optional Round Fifth Wheel Hitch Adaptor	-	
34	9394-016	Hex Nut, 3/4"-10UNC	2	
35	97875	Set Screw, 3/4"-10UNC x 2" G5	2	

Hydraulic Jack Kit #2002947B for Gooseneck Hitch Optional



Spare Tire (Optional)

Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	2007524TS	Optional Spare Tire Kit	-	
2	2002978TS	Mounting Plate w/Conspicuity Marking	1	
3	25003	Conspicuity Marking	1	
4	2007532TS	Spare Tire Bracket Weldment	1	
5	9390-135	Capscrew 5/8-11UNC x 5 1/2	4	Grade 5
6	9501895	Wheel & Tire Assembly	1	
7	97319	Flanged Cap Nut M22 x 1.5 G10	2	
8	9801	Locknut 5/8-11UNC	4	

Electric Tarp Kit (#27706) (Optional)

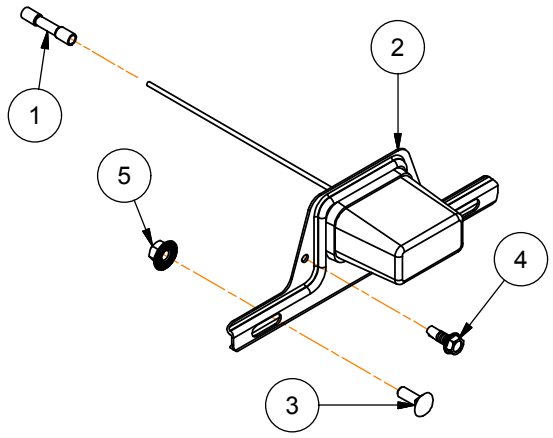
Please visit www.unverferth.com/parts/ for the most current parts listing.

See manual #27951 for complete parts listing.

T&G Applicator #2002000IV (Optional)

License Plate/Lamp Holder Assembly Kit #25481 (Optional)

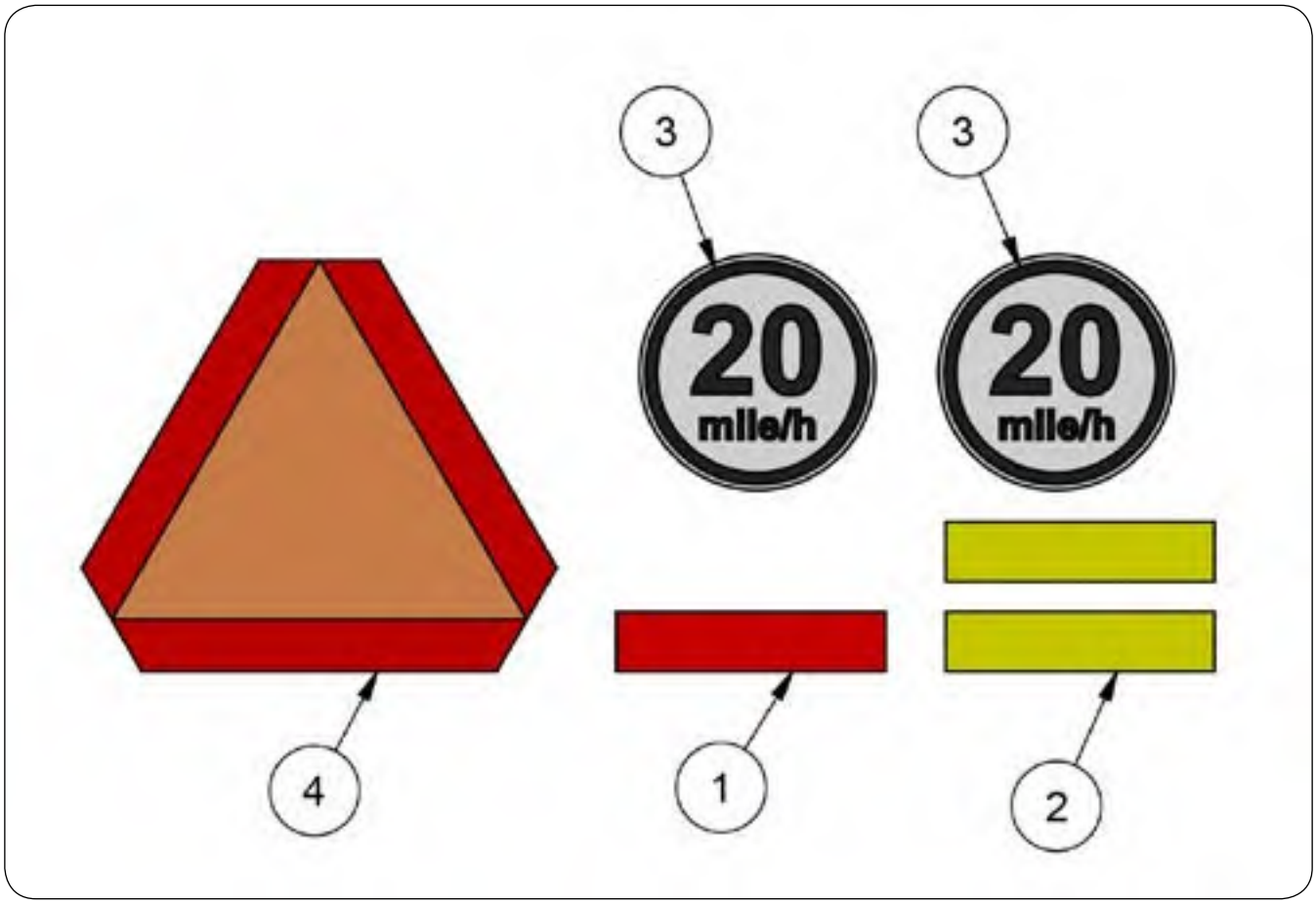
Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY	NOTES
1	900368	Sealed Splice Connector	1	
2	93769	License Plate/Lamp Holder	1	
3	9388-002	Carriage Bolt 1/4-20UNC x 3/4	2	
4	9473	Screw/Self 1/4-14 X 3/4	2	
5	97189	Hex Nut/Large Flange 1/4-20UNC	2	

AG Decal Package (Option) - SMV, SIS Decals, & Reflectors

Please visit www.unverferth.com/parts/ for the most current parts listing.



ITEM	PART NO.	DESCRIPTION	QTY.	NOTES
	2010513	AG Decal Package		Includes Items 1-4
1	9003126	Reflector, RED	1	
2	9003127	Reflector, AMBER	2	
3	9008714	Decal, Rear SIS 20MPH	2	
4	97530	Decal, SMV Emblem	1	

Seed Tender Remote - Override Box

Please visit www.unverferth.com/parts/ for the most current parts listing.

See manual #2009490 for complete setup instructions and parts listing.

Override Box
2 & 3 Function
(2009341)

Override Box
6 Function
(2009333)

Override Box
7 Function
(2010504)

6-Function Wireless Remote Control Pkg #2007513TS (Option)

Please visit www.unverferth.com/parts/ for the most current parts listing.

See manual #2010522 for complete setup instructions and parts listing.

7-Function Wireless Remote Control Package (Option) #2007514TS - 10” Conveyor; #2009804TS - 8” Conveyor

Please visit www.unverferth.com/parts/ for the most current parts listing.

See manual #2010523 for complete setup instructions and parts listing.


MEMBER
FEMA
FARM EQUIPMENT
MANUFACTURERS
ASSOCIATION