

Seed & Fertilizer Handling

(C) Walillones

Gravity Box Conveyor 6" x 16'

Part No. 29858

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 KILLBROS products, all specifications and information contained herein are subject to change without notice.

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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 is 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.

A CAUTION

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

IMPORTANT

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





Following Safety Instructions

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



- To prevent machine damage, use only attachments and service parts approved by the manufacturer.
- Always shut towing vehicle engine and hydraulic power unit engine off & remove key before servicing the implement.
- 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 equipment. Make sure everyone is clear before operating machine or towing vehicle.
- 4

• Never attempt to operate implement unless you are in driver's seat.

Before Operating or Servicing

- Do not stand between towing vehicle and implement during hitching.
- Avoid working under an implement; however, if it becomes absolutely unavoidable, make sure the implement is safely blocked.
- Always make certain everyone and everything is clear of the machine before beginning operation.
- Verify that all safety shields are in place and properly secured.
- Ensure that all applicable safety decals are installed and legible.
- When working around the implement, be careful not to be cut by sharp edges.

During Operation

- Regulate speed to field conditions. Maintain complete control at all times.
- Never 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 unattended with engine running.
- Seed being transported may contain seed treatment. Read and follow all requirements for personal
 protective equipment and first aid as outlined on seed tags.

Before Transporting

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

During Transport

- · Comply with state and local laws governing highway safety when moving machinery.
- Use transport lights as required by local laws to adequately warn operators of other vehicles.
- Use good judgment when transporting equipment on highways. Regulate speed to road conditions and maintain complete control.
- Maximum speed of implement should never exceed 20 mph. Do not exceed 10 mph during offhighway travel.
- 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 pressure before disconnecting hydraulic lines from tractor, loosening any hydraulic fittings or servicing hydraulic system. See hydraulic power unit manual for procedure to relieve pressure.
- Use a piece of cardboard or wood to detect leaks of hydraulic fluid under pressure. Correct hydraulic leaks immediately.
- High-pressure fluids can penetrate the skin and cause serious injury or death. 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 or cut and wire reinforcing exposed.
 - o Outer covering ballooning locally.
 - o Evidence of kinking or crushing of the flexible part of a hose.
 - o Armoring embedded in the outer cover.

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.

Wear clothing and personal protective equipment appropriate for the job.	E	
Wear steel-toed shoes when operating.		J.S.
Wear hearing protection when exposed to loud noises.		

• This product may contain a chemical known to the state of California to cause cancer, or birth defects, or other reproductive harm.

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SECTION II Set Up

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Conveyor - Set Up

Small Door Hopper Assembly



Before attaching mounting brackets determine your door angle dimension as shown (Fig. 3-1). This will help determine what side of the door angles to mount the mounting brackets; see chart on page 15 and Fig. 3-1.

- Specific applications may require the hopper to be offset 2"-3" from gravity box door centerline.
- 1. Use two plates (21330), six 3/8-16 x 1" capscrews (9390-055), and 3/8-16 locknuts (9928) and place in the lower three holes on each door angle.
- 2. Attach hopper pivot mount (22090) to inside of hopper. Install carriage bolts (9388-053) on the under side of the hopper (22588). Install the backing plate (22089), lock washers (9404-021), and hex nuts (9394-006). Slide the pivot mounts inward or outward to assemble the clevis pin and tighten hardware.
- 3. Align hopper seal (22509) to the inside of the hopper (22588) and fasten the corners using back strap (22508), two 1/4-20 x 3/4" capscrews (9390-003), and 1/4-20 locknuts (9936) (Fig. 3-2). Attach the two springs (22507) to the outside of the hopper using four U-clips (22506) and 1/4-20 x 1" capscrews (9390-005) and 1/4-20 locknuts (9936).
- 4. Fasten hopper seal (22509) to the sides of conveyor hopper using two straps (21642), six 1/4-20 x 3/4" capscrews (9390-003), and 1/4-20 locknuts (9936) (Fig. 3-2).

Small Door Hopper Assembly (continued)

- Threads must face out.
- Attach conveyor hopper to mounting bracket (Fig. 3-1). Use two 1/2 dia. x 6" clevis pins (95568), flat washers (9405-088) and cotter pins (9391-035) to attach the hopper pivot tubes to the mounting brackets (Fig. 3-1).
- Install the hose holder (20103) to the door angle opposite of the transport/latch assembly using one 3/8-16UNC x 1 1/4 capscrew (9390-056), two 3/8" flat washers (9405-074) and one 3/8-16UNC locknut (9928) (Fig. 3-3).





Conveyor - Set Up

Large Door Hopper Assembly



1. Attach the mounting brackets to the inside of the "L" bracket on the door angle (Fig. 3-4). Use four 7/16-14 x 1 1/4" capscrews (9390-079) and 7/16-14 locknuts (94980).

- On some grain box models, the shim plate (22244) may have to be used between the mounting bracket and the "L" bracket to achieve proper spacing to mount the hopper.
- Align hopper seal (22509) to the inside of the hopper and fasten the last three holes using back strap (22508), six 1/4-20 x 3/4" capscrews (9390-003), and 1/4-20 locknuts (9936). Attach springs (22507) to the outside of the hopper using U-clips (22506), 1/4-20 x 1" capscrews (9390-005), and locknuts (9936) (Fig. 3-5).
- 3. Fasten the hopper seal to the inside of the conveyor hopper using two straps (21658), four 1/4-20 x 3/4" capscrews (9390-003), and 1/4" locknuts (9936) (Fig. 3-5).
- 4. Finish fastening hopper seal to the sides of hopper using four 1/4-20 x 3/4" capscrews, 1/4" flat washer, and 1/4" locknuts (Fig. 3-4).
- 5. Attach conveyor hopper to the mounting brackets. Use two 1/2 x 3 1/2" clevis pins (95890), flat washers (9405-088). and cotter pins (9391-035) to attach the hopper pivot tubes to the mounting brackets (Fig. 3-4).



Conveyor - Set Up

Conveyor Components Assembly-All Sizes

A WARNING

• DO NOT WORK UNDER MACHINE AT ANY TIME WHILE BEING HOISTED. INADVERTENT FALLING OF MACHINE WILL CAUSE SEVERE PERSONAL INJURY OR DEATH.

A CAUTION

• BE SURE HOIST IS SAFETY RATED FOR AT LEAST 500 LBS. FAILURE TO DO SO WILL CAUSE DAMAGE TO MACHINE AND MAY CAUSE PERSONAL INJURY.

IMPORTANT

• Be sure straps are located inside on/off control rod.

Lift conveyor using a minimum 500 lb. lift. Place conveyor near the hopper

- Attach the winch (TA0-904904-0) to the winch bracket (25405B). Secure with one 3/8-16UNC x 1 capscrew (9390-055), two 3/8" flat washers (9405-076) and 3/8-16UNC locknut (9928) as shown in Fig. 3-7 and Fig. 3-8. Secure the opposite end with 3/8-16UNC x 3/4 capscrew (9390-053) and 3/8-16UNC locknut (9928) as shown in Fig. 3-7 and Fig. 3-8.
- 2. Fasten the winch and winch bracket assembly to the conveyor with four 3/8-16UNC x 3/4 capscrews (9390-053) and 3/8-16UNC locknuts (9928) as shown in Fig. 3-7 and Fig. 3-8.
- Remove the bolt and nut from the pulley (TA0-923512-1) and insert the link/plate (26556). Secure into position with the previously removed hardware. Attach the opposite end of the link/plate (26556) to the cable bracket weldment (25579B) with 3/8-16UNC x 1 1/2 capscrew (91299-057) and 3/8-16UNC locknut (9928) as shown in Fig. 3-9 and Fig. 3-10.
- 4. Attach the cable bracket weldment (25579B) and plate (25762B) to the conveyor with four 3/8-16UNC x 1 capscrews (9390-055) and 3/8-16UNC locknuts (9928) as shown in Fig. 3-9 and Fig. 3-10 when mounting the conveyor to the box on the right-hand side. Place plate (25762B) on the opposite side of the conveyor when mounting the conveyor to the box on the left-hand side.





Conveyor Components Assembly-All Sizes (continued)

<u>NOTE</u>: The cable bracket weldment (25579B) can be mounted to the conveyor using the different mounting holes to accommodate the different style of gravity boxes. Adjust accordingly for your specific gravity box.

- 5. Secure the bushing (25421) to the latch bracket (25420B) with 1/2-13UNC x 6 1/2 capscrew (9390-116) and 1/2-13UNC locknut (9800) as shown in Fig. 3-11 and Fig. 3-12.
- Attach the bushing side of the latch bracket (25420B) to the conveyor with two 3/8-16UNC x 1 1/4 capscrews (9390-056) and 3/8-16UNC locknuts (9928) as shown in Fig. 3-11 and Fig. 3-12.

<u>NOTE</u>: Always locate latch bracket bushing side towards the gravity box side of conveyor.

7. Attach the opposite side of the latch bracket (25420B) with two 3/8-16UNC x 1 capscrews (9390-055) and 3/8-16UNC locknuts (9928) as shown in Fig. 3-11 and Fig. 3-12.

<u>NOTE</u>: The latch bracket (25420B) can be mounted to the conveyor using the different mounting holes to accommodate the different style of gravity boxes. Adjust accordingly for your specific gravity box.



Small Door Cable Assembly

- 1. Remove the bolt, bushing, and nut from pulley (TA0-923512-1) (Fig. 3-13A & Fig. 3-13B).
- 2. Thread cable 84" long (26683) through the pulley (TA0-923512-1) and attach the thimble end of the winch cable (22050) using the hardware previously removed (Fig. 3-13A & Fig. 3-13B).
- 3. Drill two 7/16" dia. holes 48" apart centered around the door angles and attach the swivel pulley (92459) and cable 84" long (26683) to the top of the gravity box using the following parts (Fig. 3-13A & Fig. 3-13B):
 - A. 3/8-16 x 1 1/4" capscrew (9390-056)
 - B. Bushing (22046)
 - C. 3/8" flat washer (9405-076)
 - D. 3/8-16 locknut (9928)
- 4. Attach the secondary support cable 101" long (22048) to the cable bracket weldment (25579B) with 3/8-16UNC x 1 1/2 capscrew (91299-057) and 3/8-16UNC locknut (9928) as shown in Fig. 3-14.
- 5. Thread the winch cable (22050) through the pulley (TA0-923512-1) and fasten to the winch (Fig. 3-14). (For attaching cable to winch, refer to "Winch Assembly" in ASSEMBLY section.)
- 6. Drill a 7/16" diameter hole as shown in Fig. 3-15. Attach the other end of the secondary support cable to the upper-middle rail of the gravity box by placing a 3/8" flat washer on top of the rail, insert a 3/8-16 x 1 3/4" lg. capscrew (9390-058) and tighten with a 3/8" flat washer (9405-076) and 3/8-16 locknut (9928) (Fig. 3-15).





9928

FIG. 3-15

26683

OM-01966

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Large Door Cable Assembly

- 1. Remove the bolt, bushing, and nut from pulley (TA0-923512-1) (Fig. 3-16A & Fig. 3-16B).
- 2. Thread cable 96" long (26685) through the pulley (TA0-923512-1) and attach the thimble end of the winch cable (22050) using the hardware previously removed (Fig. 3-16A & Fig. 3-16B).
- Drill two 7/16" diameter holes 60" on center through the lower or formed lip where side extensions attach. Attach the swivel pulley (92459) and cable 96" long (26685) to the top of the gravity box using the following parts (Fig. 3-16A & Fig. 3-16B):
 - A. 3/8-16 x 1 1/4" capscrew (9390-056)
 - B. Bushing (22046)
 - C. 3/8" flat washer (9405-076)
 - D. 3/8-16 locknut (9928)
- 4. Attach the chain to the center strap on side of gravity box (Fig. 3-16A & Fig. 3-16B):
 - A. 3/8-16 x 4 1/2" capscrew (9390-068)
 - B. 3/8-16 locknuts (9928)
 - C. Two 3/8" flat washers (9405-076)
- Connect the secondary support cable 101" long (22048) to the chain with quick link (91514) (Fig. 3-16A & Fig. 3-16B).
- Attach the secondary support cable 101" long (22048) to the cable bracket weldment (25579B) with 3/8-16UNC x 1 1/2 capscrew (91299-057) and 3/8-16UNC locknut (9928) as shown in Fig. 3-17.
- Thread the winch cable (22050) through the pulley and fasten to the winch (Fig. 3-17). (For attaching cable to winch, refer to "Winch Assembly" in ASSEMBLY section.)



Spout Assembly-All Sizes

1. Slip the clamp (98060) onto the telescopic spout (96855) as shown in Fig. 3-18. Place the telescopic spout and clamp on the conveyor spout weldment (26220B) and tighten clamp.



Attach Conveyor To Hopper-All Sizes

A WARNING

• DO NOT WORK UNDER MACHINE AT ANY TIME WHILE BEING HOISTED. INADVERTENT FALLING OF MACHINE WILL CAUSE SEVERE PERSONAL INJURY OR DEATH.

A CAUTION

• BE SURE HOIST IS SAFETY RATED FOR AT LEAST 500 LBS. FAILURE TO DO SO WILL CAUSE DAMAGE TO MACHINE AND MAY CAUSE PERSONAL INJURY.

- Be sure straps are located inside on/off control rod.
- Lift conveyor using a minimum 500 lb. lift. Connect the swivel base to the conveyor hopper outlet using two swivel clamps (2966) which includes 3/8-16 x 2 1/2" carriage bolts (9388-057), and 3/8-16 hex nuts (9394-006) (Fig. 3-19A & Fig. 3-19B). Then grease.





Conveyor - Set Up

Transport Latch Assembly-All Sizes

A WARNING

- WHEN WORKING AROUND THE MACHINE, BE SURE IT IS SECURELY BLOCKED; FAILURE TO DO SO COULD RESULT IN MOVEMENT OF MACHINE, CAUSING SERIOUS INJURY OR DEATH.
- MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS. KEEP ALL GUARDS IN PLACE.
- NEVER ENTER BOX WITH CONVEYOR OR TOWING VEHICLE RUNNING. SERIOUS OR FATAL INJURY CAN OCCUR DUE TO ENTANGLEMENT WITH ROTATING COMPONENTS. ALWAYS STOP ENGINE, REMOVE KEY BEFORE ENTERING BOX.
- TO PREVENT PERSONAL INJURY OR DEATH ALWAYS ENSURE THAT THERE ARE PEOPLE WHO REMAIN OUTSIDE THE BOX TO ASSIST THE PERSON WORKING INSIDE THE BOX, AND THAT ALL SAFE WORK PLACE PRACTICES ARE FOLLOWED. THERE IS LIMITED MOBILITY AND EXIT PATH(S) WHEN WORKING INSIDE THE BOX.

<u>NOTE</u>: An optional extension panel is available for larger capacity wagons to allow the latch assembly to be installed and operated at a more acceptable height.

- Determine which end of the gravity box will be used as the transport location for the conveyor. Use the latch assembly backing plate (25585B) as a template by placing the backing plate parallel to the seam in the box and aligned with the side of the box as shown in Fig. 3-20A & Fig. 3-20B. Mark hole locations and drill 5/8" dia. holes.
- Two people are required to attach the latch assembly backing plate (25585B) to the inside of the box and latch assembly (25582B) to the outside of the box with four 1/2-13UNC x 1 3/4" capscrews (9390-102) and 1/2-13UNC locknuts (9800) (Fig. 3-20A & Fig. 3-20B).
- 3. Remove the nut and flat washer from the latch assembly (Fig. 3-20A & Fig. 3-20B).



Conveyor — Set Up



- 4. Attach the pulley (92459) to the latch assembly (25582B) with the previously removed hardware (Fig. 3-20A & 3-20B).
- 5. Attach the snap hook (901620) to the end of the winch cable 86" long (20158). Thread the cable through the pulley and note the angle of the cable to approximately where you want to mount the winch on the panel of your box (see Fig. 3-21 for reference).
- 6. Using the winch mounting bracket (25964B) as a template, place the bracket on the box panel and align it perpendicular to the angle of your winch cable. Mark the hole locations and drill 13/32" dia. holes (Fig. 3-21).
- 7. Fasten the winch mounting bracket (25964B) and backing plate (25966B) to the box panel with four 3/8-16UNC x 1 1/4 capscrews and 3/8-16UNC locknuts as shown in Fig. 3-21.
- 8. Using two 3/8-16UNC x 3/4 capscrews/large flange and 3/8-16UNC nuts/large flange, secure the winch (9119) to the winch mounting bracket (25964B) as shown in Fig. 3-21.
- 9. Attach cable to winch, refer to "Winch Assembly" in ASSEMBLY section.

Conveyor - Set Up



Hose Mounting Bracket-All Sizes

- Position hose mounting bracket on the skid cross member at the tractor end of the box. Drill 13/32" dia. hole and fasten the bracket with a 3/8-16UNC x 1" capscrew (9390-055), and 3/8-16UNC locknut (9928) (Fig. 3-22).
- 2. Assemble two unions (93839) to the mounting bracket (Fig. 3-22).



Winch Assembly

A WARNING

• BEFORE OPERATING WINCH, BE SURE THAT WINCH IS SECURELY INSTALLED TO THE CONVEYOR AND THAT THE CABLES ARE TIED TO THE WINCH AND GRAVITY BOX. BE SURE TO READ THE FOLLOWING INSTRUCTIONS AND OPERATING PROCEDURES PROVIDED WITH THE WINCH. FAILURE TO DO SO COULD RESULT IN DAMAGE TO THE CONVEYOR OR SERIOUS BODILY HARM.

IMPORTANT

- Refer to proper assembly instructions for your gravity box before installing winch.
- On 16' Box Conveyors, see instruction sheet accompanied with the winch for winch and cable assembly.
- 1. Check that all cables and winch are securely installed and not damaged in any way.
- 2. Tie cable to winch by the following instructions (Fig. 5-1).

NOTE: Start cable between spool plate.

- 1. Thread cable from inside winch, out through hole "A".
- 2. Continue through hole "B" and hole "C" as shown in Fig. 5-1.
- Finally, thread back under cable between hole "A" and "B". Tighten.
- 4. When operating the winch, take note of the following guidelines:
 - -- never walk under conveyor while it is suspended
 - -- never leave conveyor unattended while it is suspended
 - -- test winch each time by lifting conveyor a few inches out of transport bracket before completely raising
 - -- never winch conveyor up or down while it is loaded
 - -- be sure that cable is not kinked or unaligned on winch drum
 - -- always take safety precautions



Conveyor - Set Up

Optional Electric Control Kit #26352

A WARNING

- EYE PROTECTION AND OTHER APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN WHILE SERVICING IMPLEMENT.
- 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. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.
- RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING HYDRAULIC SYSTEM. SEE HYDRAULIC POWER UNIT MANUALS FOR PROPER PROCEDURE.
- 1. Lower the conveyor to access the hydraulic motor end of the conveyor.
- 2. Relieve all hydraulic pressure from system by making sure that the hydraulic supplies are turned off and the key is removed. Next, manually slide the valve control rod on the conveyor from ON to OFF position several times.
- 3. Remove control rod linkage from conveyor. See Fig. 1.
- 4. Remove hoses and fittings from manual control valve on upper end of conveyor. See Fig. 2.
- Remove capscrews and lock washers securing manual valve to hydraulic motor, see Fig.
 Once manual valve is removed, remove original O-Rings from hydraulic motor ports and replace with O-Rings (91306) provided. Position new electronic valve (901878) on top of ports making sure that the "A" port of the valve is to the top end as shown in Fig. 3.
- 6. Secure electronic valve (901878) to hydraulic motor by using the original lock washers previously removed and capscrews (9390-037) provided in kit. See Fig. 3.





shown

Optional Electric Control Kit #26352 (continued)

- 11. Connect the pigtail to the electronic valve. You should feel a slight snap securing the connector to the valve. See Fig. 7.
- 12. Connect the harness to the exiting wiring harness.
- 13. Next, connect the control switch to the end of the retractable cord.



 HIGH-PRESSURE FLUIDS CAN PEN-ETRATE THE SKIN AND CAUSE SERI-OUS INJURY OR DEATH. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARD-BOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.

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

<u>NOTE</u>: When starting Seed Runner, if the conveyor switch is in the "ON" position it will cause the engine to start hard and/or the conveyor will start to move.



- 14. At this point the conveyor is ready for operation. Start the Power Source according to operation procedures in the Operator's Manual. Operate the conveyor for approximately one minute to purge all air from system. Verify that the conveyor belt is running in the proper direction. Use the control switch to turn the conveyor ON by depressing the switch on the handle till it clicks. To turn the conveyor OFF, depress the button again.
- 15. Next, determine the place to store the control switch (26330) during transport. Secure plate (26505) using existing hardware or the two self-drilling screws (9473) provided in this kit, see Fig. 8. Be sure to position the fingers of the bracket close enough to prevent the switch from vibrating out of the bracket during transport.

<u>NOTE</u>: When placing control switch transport bracket, avoid interference with box when conveyor is in the transport position.

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General Operations

A WARNING

• KNOW AND UNDERSTAND SAFETY RULES BEFORE OPERATING OR SERVICING THIS MACHINE. REVIEW "SAFETY" SECTION IN THIS MANUAL IF NECESSARY.

Read this operation section thoroughly. Acquaint yourself with the adjustments required to obtain efficient and trouble-free operations.

Preparing Hydraulic Supply

- 1. Before operating the unit, be sure that you refer to tractor's or the hydraulic supply's operating manual on proper operating procedures of the hydraulics.
- 2. Be sure to check the hydraulic reservoir for proper levels of fluid.
- 3. Be sure that the hydraulic system supplies at least 6 GPM at 1000 PSI.

Connecting Gravity Box To Transport Vehicle

- Be sure to hitch tractor or truck to gravity box securely. Use safety chains and SMV signs during on-road use.
- Connect hydraulic supply lines to auger hydraulic lines and tighten securely. Be sure that the auger control is in the off position (Fig. 1-1).

A WARNING



• DO NOT DISCONNECT HYDRAULIC COUPLERS WHEN HYDRAULIC SYSTEM IS PRES-SURIZED. BE SURE TO RELIEVE ALL HYDRAULIC PRESSURE BEFORE DISCONNECTING ANY LINES OR PIPES BETWEEN THE AUGER AND THE HYDRAULIC SUPPLY. FAILURE TO DUE SO COULD RESULT IN SERIOUS BODILY INJURY.

Preparing Conveyor

Hydraulic Control

Conveyor belt speed is controlled by moving the lever on the flow control valve or moving the control rod running lengthwise along the side of the conveyor.

<u>NOTE</u>: With electrical control option installed, you can not control the speed, on/off function only.

The flow control valve limits the amount of hydraulic fluid flowing to the hydraulic motor.

A WARNING

- 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. SEEK MEDICAL TREATMENT IMMEDIATELY IF INJURED BY HIGH-PRESSURE FLUIDS. USE CARDBOARD OR WOOD TO DETECT LEAKS IN THE HYDRAULIC SYSTEM.
- RELIEVE HYDRAULIC PRESSURE BEFORE SERVICING HYDRAULIC SYSTEM. SEE TRAC-TOR OPERATOR'S MANUAL FOR PROPER PROCEDURE.

Check routing of all hydraulic hoses. Hoses should not be kinked, twisted, or rubbing against sharp edges. Hose should be secured with tie straps. Check hose fittings for hydraulic leaks. Tighten and/or repair or replace as required.

Operating Procedures



 SEED MAY BE TREATED WITH HAZARDOUS MATERIAL. AVOID CONTACTING SEED WITH SKIN, EYES, AND AVOID BREATHING DUST. FOLLOW MANUFACTURER'S REC-OMMENDATIONS.

CAUTION

- KEEP ALL UNAUTHORIZED PEOPLE CLEAR OF WORK AREA.
- BE SURE TO MAINTAIN A FIRM GRIP OF THE WINCH HANDLE AT ALL TIMES WHEN LOWERING CONVEYOR. BE SURE TO ENGAGE RATCHET PAW (ON WINCH) INTO POSI-TION WHEN WINCHING IS COMPLETE, OR CONVEYOR WILL DROP SUDDENLY WHEN HANDLE IS RELEASED.

Operating Procedures (continued)

IMPORTANT

• Always check that the secondary support cable and winch cables are connected securely and are not damaged.

<u>NOTE</u>: Refer to ASSEMBLY section for proper winch and cable installation.

 To release conveyor from the transport latch assembly, remove the transport pin from the transport position and place it in the storage position as shown in Fig. 1-2 & 1-3. Release the latch handle and slowly unwind the winch cable to allow the conveyor to swing-out (Fig. 1-2 & Fig. 1-3). When all the tension is off the cable, disconnect the snap hook from the conveyor.

<u>NOTE</u>: See winch manufacturer's instructions on winch safety and operation.

The winch mounted on top of the main section, is used to raise and lower the conveyor for operation or transport (Fig. 1-4).

There is a friction brake in the winch to hold the conveyor in position when the winch handle is released (Fig. 1-4).





Operating Procedures (continued)

2. Position conveyor over area to be filled and engage the hydraulic power supply system to allow the hydraulic oil to flow to the conveyor. Make sure the conveyor belt is moving in a forward direction. A check valve prevents the belt from going backwards, either reverse the hoses going into the tractor or move the tractor control hydraulic lever in the opposite direction to reverse the flow. Refer to ASSEMBLY section for hydraulic instructions.



- BE SURE THAT ALL CONVEYOR DOORS ARE CLOSED AND SHIELDS ARE IN PLACE WHEN OPERATING. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT MAY BECOME ENTANGLED IN MOVING PARTS; FAILURE TO DO SO COULD RESULT IN SERIOUS BODILY HARM.
- 3. Once the conveyor has begun to move, open the gravity box hopper door. Be sure to regulate flow from gravity box into conveyor hopper for optimum performance.

<u>NOTE</u>: To achieve optimum performance, test by placing conveyor at different angles. The best position of the conveyor will depend on the type of material being handled.

<u>NOTE</u>: Use pressurized water to wash-out conveyor and hopper after using fertilizer. See SERVICE section.

Before Transporting

Be sure to empty conveyor completely by closing gravity box door and allowing conveyor to run empty. Turn the conveyor off and latch the conveyor into transport position as follows.

- To latch the conveyor, raise the conveyor up enough so the latch bracket (Fig. 1-5) will hit the middle of the latch assembly. Attach the snap hook end of the cable to the conveyor (Fig. 1-6) and draw the conveyor inward until the latch bracket is locked in the latch assembly.
- 2. Insert the transport pin as shown in Fig. 1-6 to lock the conveyor in place.

IMPORTANT

• Conveyor must be empty before transporting, failure to do so voids warranty.



During Transport

A WARNING

ALWAYS TRAVEL AT A SPEED WHICH PERMITS COMPLETE CONTROL OF EQUIPMENT.

A CAUTION

USE APPROVED LIGHTS, REFLECTORS, AND DEVICES WHEN TRANSPORTING AT NIGHT AND DURING PERIODS OF POOR VISIBILITY.

IMPORTANT

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- Before transporting, be sure that conveyor is securely mounted in transport position.
- Use caution when traveling, do not attempt to transport unit under low hanging tree branches, overhead telephone wires or electrical wires. Be aware of transport height of unit or damage could occur.
- Comply with all state and local laws governing highway safety and regulations when moving equipment on public roads.

Conveyor – Maintenance

SECTION IV Maintenance

Lubrication	
Storage/Maintenance	
Conveyor Belt	4-3
Belt Tension	
Belt Tracking	
Torque Chart	
Trouble Shooting	

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 100 hours of operation and at the end of each season before storage. Use only one stroke of grease per bearing.

CAUTION

 DO NOT USE A HIGH-PRESSURE GREASE GUN TO LUBRICATE CONVEYOR BEARINGS, AS DAMAGE TO BEARING SEAL COULD OCCUR.

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

Miscellaneous Lube Points

Oil or grease periodically (or as needed) the following:

- -- Hinge for doors.
- -- On/Off control rod

Storage

Your conveyor 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.

DO THE FOLLOWING AFTER USE:

- 1. Clean out the conveyor / hopper. Use pressurized water to wash out the conveyor and hopper after use.
- 2. Wipe off the following:
 - -- Hydraulic valve, motor, hoses, and fittings.
 - -- Swivel base, cradle.
 - -- Reflectors and warning/caution decals.
- 3. Check the following:
 - -- Winch and secondary support cable for wear and looseness
 - -- Spout clamp rings
 - -- Mounting bolts for tightness.
 - -- Cable ties for tightness.
 - -- Valve, motor, hoses, and fittings for leaks, etc.
 - -- Hydraulic hoses for wear-abuse.
- DO THE FOLLOWING BEFORE PLACING THE AUGER IN STORAGE:
 - -- Repaint any chipped or scraped areas
 - -- Inspect for damaged or worn parts and replace before next season
 - -- Store unit inside, away from livestock

IMPORTANT

• Be sure the winch is not damaged or worn. Take extra precaution when inspecting, not doing so could result in failure of the winch. If removing conveyor from gravity box, remove six capscrews and locknuts and both side mounting plates (21330 or 21674) before loosening secondary support cable and lowering conveyor to ground or damage to hopper seal may occur.

Conveyor Belt

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 at the beginning of each season, and every 50 hours of use.



• MOVING PARTS CAN CRUSH AND CUT. KEEP AWAY FROM MOVING PARTS.

Belt Tension

Belt tension is inspected by removing lower cover panel from conveyor, and gently pulling on the conveyor belt. The belt should have approximately 1 1/2-2" of slack at the center.

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. It is important to move both sides the same distance.

Excessive tension on the belt will stretch the splice link and greatly reduce belt life. Insufficient 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.





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.



Conveyor Belt (continued)

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.



• ENTANGLEMENT IN MOVING COMPONENTS CAN CAUSE SERIOUS INJURY OR DEATH. AVOID PERSONAL ATTIRE SUCH AS LOOSE FITTING CLOTHING, SHOESTRINGS, DRAWSTRINGS, PANTS CUFFS, LONG HAIR, ETC. THAT MAY BECOME ENTANGLED IN MOVING PARTS WHILE ADJUSTING.

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.

Adjust by loosening (Do Not Remove) the four bolts (two on each side) on the adjusting plate.

Operate conveyor at slow speed, and tighten or loosen adjustment bolt until belt is running in the center of the pulley.

Tighten the two bolts on the adjustment plate, and lock the adjustment bolt into place.

Torque Chart

CAPSCREWS - GRADE 5

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<u>NOTE</u>: Grade 5 capscrews can be identified by three radial dashes on head.

<u>NOTE</u>: Tighten U-bolts evenly and equally to have the same number of threads exposed on each end.

SIZE	FOOT POUNDS	NEWTON METERS
1/4-20	8-10	11-13
1/4-28	9-11	12-15
5/16-18	15-17	20-23
5/16-24	17-19	23-26
3/8-16	25-28	34-38
3/8-24	28-31	38-42
7/16-14	40-45	54-61
7/16-20	45-50	61-68
1/2-13	62-68	84-92
1/2-20	68-75	92-102
9/16-12	90-98	122-133
9/16-18	100-110	134-148
5/8-11	120-135	162-183
5/8-18	124-137	168-186
3/4-10	200-220	270-300
3/4-16	210-230	285-310
7/8-9	330-350	425-475
7/8-14	360-380	460-515
1-8	500-525	675-710
1-14	540-560	730-760
1 1/8-7	600-635	815-860
1 1/8-12	665-700	920-950
1 1/4-7	850-895	1150-1215
1 1/4-12	940-990	1275-1340
1 3/8-6	1125-1175	1525-1590
1 3/8-12	1280-1335	1735-1810
1 1/2-6	1500-1560	2035-2115
1 1/2-12	1685-1755	2285-2380

HYDRAULIC FITTING-TORQUE AND INSTALLATION PROCEDURES

SAE FLARE CONNECTION (J.I.C.)



- 1. Tighten nut by hand 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.

PROBABLE CAUSE	CORRECTION	
CONVEYOR WILL NOT TURN OVER OR	DEVELOP PROPER SPEED OR TORQUE	
Pump does not deliver sufficient pressure or volume	Check output and delivery, change if necessary (see power unit manual).	
Conveyor jammed	Shut-off and lock-out power, open clean-out door and remove excess material (make sure swivel spout is clear)	
CONVEYOR RU	NS TOO SLOW	
Engine running too slow	Increase engine speed	
Pump not producing minimum required flow and pressure	Check pump flow and pressure 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	Bleed 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 EDGES SHOWI	NG EXCESSIVE WEAR	
Belt tracking incorrect	Adjust tracking as detailed in SERVICE section	
Poly seals on intake and/or discharge end worn.	Replace poly seals	

SECTION V Parts

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Discharge & Drive Pulley	
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Operating Components	5-8
Transport Components	5-9
Hose Holder, Cables & Hardware	5-10
Optional Electric Control Kit #26352	5-11

Idler End Components



Idler End Components

ITEM	PART NO.	DESCRIPTION	NOTES
1	23735B	Cover	
2	23912B	Adjustment Plate	
3	23923B	Cleanout Door	
4	25386	Brush Holder	
5	25388	Nylon Brush	
6	25389	Poly Strip	
7	26596	Seal	
8	26617	Brush Holder (Punched)	
9	26651B	Cover Plate	
10	26653	Seal	
11	900608	Idler Pulley	
12	901912	Decal, IMPORTANT (2000 PSI)	
13	902004	Nylon Brush	
14	902006	Elevator Bolt 1/4-20 x 3/4	
15	91256	Screw/Large Flange 5/16-18 x 3/4	Grade 5
16	91257	Flange Nut 5/16-18UNC	
17	9388-024	Carriage Bolt 5/16-18UNC x 3/4	Grade 5
18	9388-026	Carriage Bolt 5/16-18UNC x 1 1/4	Grade 5
19	9394-004	Hex Nut 5/16-18UNC	
20	9394-006	Hex Nut 3/8-16UNC	
21	9404-019	Lock Washer 5/16	
22	9473	Screw/Self Drilling 1/4-14 x 3/4	
23	95445	Decal, WARNING (High-Pressure)	
24	95839	Decal, WARNING (Pinch Point)	
25	96911	Decal, IMPORTANT (Support Conveyor)	
26	97189	Hex Nut/Large Flange 1/4-20UNC	
27	97961	Decal, WARNING (Read & Understand)	
28	TA0-903088-0	Bearing w/Flange 1" ID	
29	TA0-907104-0	Capscrew 3/8-16UNC x 1 3/4 (Full Threaded)	
30	TA0-908335-0	Rivet 3/16	
31	TA1-906109-0	Decal, WARNING (Moving Parts)	
32	9936	Locknut 1/4-20UNC	
33	25203B	Bottom Shield	
34	9390-001	Capscrew 1/4-20UNC x 1/2	Grade 5
35	9388-004	Carriage Bolt 1/4-20UNC x 1 1/4	Grade 5
36	24266	Friction Block	
37	901056	Wing Nut 1/4-20UNC	
38	23698	Lower Control Rod Weldment	
39	TA0-914793-0	Knob 1" Dia.	
40	9405-064	Flat Washer 1/4"	

Discharge & Drive Pulley Components



Discharge & Drive Pulley Components

ITEM		DESCRIPTION	NOTES
1	22018	Bushing	
2	22010	Coupler	
2	23070 22725D		
	237300	Cover	
4 E	239100	Adjustment Diste	
2	23994D		
	24200	Stell	
8	24399B	Shield	
9	24/55	Seal	
10	20214B	Deflector Assembly	
10	26432B	Strip	
12	9001501	Keystock	
13	901046	KIIUD Drive Dulley	
14	901077	Drive Pulley	
15	901101	Flange Screw 1/4-200NC X 1	
16	901245	Conveyor Belt	
1/	901478	Decal, DANGER	
18	902984		
20	91256	Screw/Large Flange 5/16-18UNC x 3/4	
21	91604B	Hydraulic Motor	
22	91605	Decal, FEMA	
23	93400	Capscrew 1/2-13UNC x 4 1/2	
24	9388-026	Carriage Bolt 5/16-18UNC x 1 1/4	Grade 5
25	9388-051	Carriage Bolt 3/8-16UNC x 1	Grade 5
26	9390-003	Capscrew 1/4-20UNC x 3/4	Grade 5
27	9390-055	Capscrew 3/8-16UNC x 1	Grade 5
28	9390-059	Capscrew 3/8-16UNC x 2	Grade 5
29	9394-004	Hex Nut 5/16-18UNC	
30	9394-006	Hex Nut 3/8-16UNC	
31	9394-010	Hex Nut 1/2-13UNC	
32	9404-019	Lock Washer 5/16	
33	9404-021	Lock Washer 3/8	
34	9405-062	Flat Washer 1/4	
35	9405-076	Flat Washer 3/8	
36	9473	Screw /Self Drilling 1/4-14x3/4	
37	97189	Hex Nut/Large Flange 1/4-20UNC	
38	97420	Flange Screw 1/4-20UNCx3/4	
39	98229	Decal, WARNING	
40	9928	Locknut 3/8-16UNC	
41	9936	Locknut 1/4-20UNC	
42	TA0-903088-0	Bearing w/Flange 1"ID	
43	93415	Grease Zerk	
44	24414B	Spout Bracket	
45	22578	Telescopic Spout Assembly	Includes Items 46, 47 & 60
46	98060	Spout Clamp	
47	22577	Spout Extension Sock	
48	25205	Upper Control Rod Weldment	
49	900209	Cap/Vinyl Handle	
50	23701	Coupler w/Set Screws	
51	23698	Lower Control Rod Weldment	
52	26220B	Spout Weldment w/Metal Latch	
53	24091B	Motor Mounting Bracket Weldment	
54	9392-056	Roll Pin 1/8" Dia. x 3/4	
55	23693	Handle 3/8" Dia.	
56	9390-034	Capscrew 5/16-18UNC x 2	Grade 5
57	95488	Valve/Hydraulic Control w/O-Rings	Includes Item 58
58	91306	0-Ring	
59	901723	Deflector Neoprene Sheet	
60	21759	Flexible Hose 6" OD x 18"	

Hopper Components



ITEM	PART NO.	DESCRIPTION
1	22588	Hopper
2	21330	Mount Plate
3	95568	Clevis Pin 1/2" Dia. x 6"
4	9391-035	Cotter Pin
5	22509	Rubber Seal
6	22508	Back Strap
7	9390-055	Capscrew 3/8-16 x 1"
8	9928	Locknut 3/8-16
9	21642	Side Strap
10	9390-003	Capscrew 1/4-20 x 3/4"
11	9936	Locknut 1/4-20
12	22090	Hopper Pivot
13	22089	Backing Plate
14	9388-053	Carriage Bolt 3/8-16 x 1 1/2"
15	9394-006	Hex Nut 3/8-16
16	9404-021	Lock Washer 3/8"
17	22507	Spring
18	9390-005	Capscrew 1/4-20 x 1"
19	22506	U-Clip
20	9405-088	Flat Washer, 1/2

Hopper Components



ITEM	PART NO.	DESCRIPTION
1	95890	Clevis Pin 1/2" Dia. x 3 1/2"
2	9391-035	Cotter Pin
3	9390-003	Capscrew 1/4-20 x 3/4"
4	9936	Locknut 1/4-20
5	21429	Hopper (64")
6	21671	Mounting Bracket RH
7	9390-079	Capscrew 7/16-14 x 1 1/4"
8	94980	Locknut 7/16-14
9	21674	Mounting Bracket LH
10	22511	Rubber Seal
11	22510	Back Strap
12	9405-064	Flat Washer 1"
13	21658	Side Strap
14	22244	Shim Plate
15	22507	Spring
16	9390-005	Capscrew 1/4-20 x 1"
17	22506	U-Clip
18	91514	Quick Link
19	9928	Locknut 3/8-16
20	9405-076	Flat Washer 3/8"
21	9390-068	Capscrew 3/8-16 x 4 1/2"
22	2829	Chain
23	9405-088	Flat Washer, 1/2"

Operating Components



ITEM	PART NO.	DESCRIPTION	NOTES
1	TA0-904904-0	Winch	
2	25405B	Winch Bracket	
3	9390-053	Capscrew 3/8-16UNC x 3/4	Grade 5
4	9390-055	Capscrew 3/8-16UNC x 1	Grade 5
5	9405-076	Flat Washer 3/8"	
6	9928	Locknut 3/8-16UNC	
7	25762B	Plate	
8	25579B	Cable Bracket Weldment	
9	91299-057	Capscrew 3/8-16UNC x 1 1/2 Grade 8	
10	26556	Link	
11	TA0-923512-1	Pulley 2" OD	
12	25420B	Latch Bracket	
13	9390-116	Capscrew 1/2-13UNC x 6 1/2	Grade 5
14	9800	Locknut 1/2-13UNC	
15	25421	Bushing 3/4" OD x 5 3/16	

Transport Components



ITEM	PART NO.	DESCRIPTION	NOTES
1	9928	Locknut 3/8-16UNC	
2	9800	Locknut 1/2-13UNC	
3	9390-056	Capscrew 3/8-16UNC x 1 1/4	Grade 5
4	25964B	Rear Winch Bracket	
5	25966B	Backing Plate	
6	95585	Capscrew/Large Flange 3/8-16UNC x 3/4 Grade 5	
7	91263	Nut/Large Flange 3/8-16UNC	
8	9119	Winch 900 Lb. Max.	
9	25582B	Latch Assembly	
10	25585B	Box Backing Plate	
11	9390-102	Capscrew 1/2-13UNC x 1 3/4 Grade 5	
12	92459	Swivel Eye Block	

Hose Holder, Cables, & Hardware



ITEM	PART NO.	DESCRIPTION
1	21350	Hose Bracket
2	9390-055	Capscrew 3/8-16 x 1" Lg.
3	9928	Locknut 3/8-16
4	22751	Swivel Clamps w/Hardware
5	9388-057	Carriage Bolt 3/8-16 x 2 1/2" Lg.
6	9394-006	Hex Nut 3/8-16
7	20103	Hose Holder
8	9390-056	Capscrew 3/8-16 x 1 1/4" Lg.
9	9405-076	Flat Washer 3/8"
10	93838	Hydraulic Hose 276" Lg.
11	93839	Bulkhead Union
12	9863	Elbow
13	9390-059	Capscrew 3/8-16 x 2" Lg.
14	2829	Chain

ITEM	PART NO.	DESCRIPTION
15	91514	Quick Link
16	22050	Winch Cable 183"
17	92459	Swivel Pulley
18	22048	Secondary Support Cable 101"
19	26683	Cable 84" for Small Door
	26685	Cable 96" for Large Door
	TAO-923512-1	Swivel Pulley
20	9235	Tarp Strap
21	9000106	Cable Tie 6"
21	94038	Cable Tie 32"
22	22046	Bushing
23	9390-068	Capscrew 3/8-16 x 4 1/2" Lg.
24	9390-058	Capscrew 3/8-16 x 1 3/4" Lg.

Optional Electric Control Kit #26352

ITEM	PART NO.	DESCRIPTION
1	96931	Hose Clamp 6 1/2"
2	9936	Locknut 1/4-20UNC
3	21907	Tube/Heat Shrink
4	26330	Switch Assembly
5	26341	Wire Harness Assembly
6	26351	Instruction Sheet
7	26505	Plate-Switch Retainer
8	26506	Plate
9	26507	Wire Harness
10	9000106	Cable Tie 6"
11	9002638	Eyelet 1/4" Electrical
12	900636	Reducer 9/16-18 O-Ring
13	901878	Valve/Electric 2-Way
14	91306	O-Ring
15	9390-037	Capscrew 5/16-18UNC x 2 3/4
16	9402-084	Truss Head 1/4-28UNF x 1/2
17	94038	Cable Tie 32"
18	9473	Self Drilling Screw 1/4-14 x 3/4
19	95908	90° Elbow 3/4-16JIC







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