M85 PORTABLE MASS-TER MOVER
40’, 65’, 70’, 80’ & 90’ MODELS

OWNER’S & OPERATOR’S MANUAL

Effective August 20, 2011
Publication No. 1039422

Electric Drive Models
M850403EB
M850653EB
M850703EB
M850803EB
M850903EB

PTO Drive Models
M850403PB
M850653PB
M850703PB
M850803PB
M850903PB

IMPORTANT! The reducer gear box is shipped Without Oil.
Oil must be added before conveyor operation.
Refer to the Lubrication Section in this manual.
POLICIES AND PROCEDURES

Prices: Prices in effect at time of shipment will apply. Prices are subject to change without notice. All prices are F.O.B. Clay Center, Kansas. Orders shipped from locations other than Clay Center, Kansas will be subject to additional charges, such as back freight and/or additional freight.

Service Charge: A service charge will be assessed for all past due balances as permitted by state law not to exceed 1-1/2% per month.

Minimum Order: Processing and handling costs necessitate a minimum charge of $15.00 net on all orders.

Back Orders: Back orders will be shipped as they become available. Contact Hutchinson/Mayrath Customer Service for alternative shipping options or if cancellation is desired.

Damaged Goods: It is the consignee’s responsibility to check all shipments thoroughly upon receipt of goods. If any damage is discovered, it must be noted on the freight bill of lading before signing. The consignee must make necessary claims against the respective freight line. All damage claims must be submitted within 30 days of delivery receipt.

Shortages: All shortages must be noted at time of delivery. Shortages must be noted on the freight bill of lading before signing. Hutchinson/Mayrath must be advised of all concealed shortages upon discovery. Once notified of concealed shortages Hutchinson/Mayrath will advise corrective action to be taken.

Return of Goods: All returns must be approved by Hutchinson/Mayrath prior to shipment. All return requests will be issued a return authorization number. NO RETURNS WILL BE ACCEPTED WITHOUT A RETURN AUTHORIZATION NUMBER AND PRIOR AUTHORIZATION FROM THE FACTORY. All returns must be shipped prepaid. A 15% restocking charge will be applied to all returned merchandise. Custom Products may not be returned for credit. Only current products in new and salable condition may be returned. No safety devices may be returned for credit.

Modifications: It is the policy of Hutchinson/Mayrath to improve its product whenever possible and practical to do so. We reserve the right to make changes, improvements and modifications at any time without incurring the obligation to make such changes, improvements and modifications on any equipment sold previously.

Limited Warranty: (a) For a period of (1) year after receipt of goods by the original consumer buyer, Hutchinson/Mayrath will supply free of charge replacement parts for parts that prove defective in workmanship or material. Defective parts must be returned freight prepaid to a specified Hutchinson/Mayrath location. Only Hutchinson/Mayrath original repair parts may be used for warranty repairs.
(b) This limited warranty does not extend to parts designed to wear in normal operation and be replaced periodically; or to damage caused by negligence, accident, abuse or improper installation or operation.
(c) GOODS NOT MANUFACTURED BY HUTCHINSON/MAYRATH CARRY ONLY THE MANUFACTURER’S WARRANTY.
(d) THIS UNDERTAKING IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

FAILURE TO FOLLOW THE INSTRUCTIONS CONTAINED IN THE OWNER’S & OPERATOR’S MANUALS AND THE ITEMS LISTED BELOW WILL RESULT IN THE VOIDING OF THIS LIMITED WARRANTY.
(1) Improper assembly, including failure to properly install all safety equipment.
(2) Improper installation.
(3) Unauthorized alternations of goods.
(4) Goods operated when obviously in need of repair.
(5) Use of unauthorized repair parts.
(6) Irresponsible operation.
(7) Used to handle materials other than free flowing, nonabrasive and dry materials, as intended.
(8) Damaged through abusive use or accident.

Limitation of Liability: BUYER AGREES THAT IN NO EVENT SHALL HUTCHINSON/MAYRATH HAVE LIABILITY FOR DIRECT DAMAGES THE EXCESS OF THE CONTRACT PRICE OF THE GOODS IN RESPECT OF WHICH CLAIM IS MADE. BUYER FURTHER AGREES THAT IN NO EVENT SHALL HUTCHINSON/MAYRATH ON ANY CLAIM OF ANY KIND HAVE LIABILITY FOR LOSS OF USE, LOSS OF PROFITS, OR FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES.
SAFETY

GENERAL SAFETY STATEMENT

This manual was written with the safety of the operator and others who work with the equipment as our prime concern. The instructions presented will help the reader learn SAFE day to day work practices. We want you as our partner in safety.

It is your responsibility as an owner, operator or supervisor to know what specific safety requirements and precautions exist and to make these known to all other personnel working with the equipment or in the area, so that they too may safely perform their duties and avoid any potentially hazardous situations.

Please remember safety equipment provides important protection for persons around a grain handling system that is in operation. Be sure ALL safety shields and protection devices are installed and properly maintained. If any shields or guards are damaged or missing, contact your dealer to obtain the correct items.

Avoid any alterations of the equipment. Such alterations may create a dangerous situation where serious injury or death may occur.

SAFETY DECALS

Check to ensure all Safety Decals are present and in good condition. If a decal cannot easily be read for any reason, or has been painted over, replace the decal immediately. Safety decals are offered free of charge, and can be ordered through your Hutchinson/Mayrath dealer.

SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety.

Watch this symbol - it points out important safety precautions. It means - ATTENTION! Become alert! Your personal safety is involved! Read the message that follows the symbol when a warning is given, be alert to the possibility of personal injury or death.
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OPERATOR QUALIFICATIONS

WARNING

Anyone who will operate or work around this machine shall first read this manual! This manual must be delivered with the equipment to its owner. Failure to read this manual and its safety instructions is a misuse of the equipment.

Operation of this conveyor shall be limited to competent and experienced persons. In addition, anyone who will operate or work around a conveyor must use good common sense. In order to be qualified, the operator must also know and meet all other requirements, such as:

1. Some regulations specify that no one under the age of 16 may operate power machinery. This includes this conveyor. It is your responsibility to know what these regulations are in your area or situation.
2. Current OSHA regulations state in part: “At the time of initial assignment and at least annually thereafter, the employer shall instruct every employee in safe operation and servicing of all equipment which the employee is, or will be involved with.”*
3. Unqualified persons are to stay out of the work area. See page 4.
4. A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

*SFederal Occupational Safety & Health Standards for Agriculture Subpart D, Section 1928.57 (a) (6).

SIGN-OFF SHEET

As a requirement of OSHA, it is necessary for the employer to train the employee in the safe operation and safety procedures with this auger. We include this sign off sheet for your convenience and personal record keeping.

<table>
<thead>
<tr>
<th>DATE</th>
<th>EMPLOYER SIGNATURE</th>
<th>EMPLOYEE SIGNATURE</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

RIGHT and LEFT DESIGNATION

When referencing the left, right, front or rear of the conveyor, it is always determined by standing at the inlet end of the conveyor and looking towards the discharge end.
MACHINE INSPECTION

Our conveyors are well made and we are proud of our line of equipment. We would like you, as our customer, to do your part in using caution and good judgement in using our equipment, as well as any other machinery.

After delivery of your new conveyor and/or completion of assembly and before each use, inspection of the machine is mandatory. Use the assembly instructions in this manual as a reference to determine that the conveyor is assembled properly. This inspection should include, but not be limited to:

1. Check to see that all shields listed in the assembly instructions are in place, secured and functional.
2. Check all safety signs (decals) and replace any that are worn, missing or illegible. Safety signs may be obtained free of charge from your dealer or ordered from the factory.
3. Check all fasteners; nuts, bolts, set screws etc. for tightness.
4. Check winch and cable for security and operation. Winch should have at least three complete wraps of cable around the winch drum with conveyor in the full down position.
5. Check oil levels in gearboxes (See the Lubrication and Maintenance Section in this manual for proper procedures).
6. Make sure clean-out door in bottom of hopper and all inspection opening covers are shut and secured.
7. Are drive belts and conveyor chains properly adjusted (See Maintenance Section).

BREAK-IN INFORMATION

Any conveyor when it is new, or after sitting idle for a season should go through a “break-in” period. The conveyor should be run at partial capacity until several hundred bushels of grain have been conveyed to polish the housing. A conveyor that has not been polished in this manner requires greater horsepower to operate, and damage to conveyor can occur.

When the housing has been polished and smooth, the conveyor can be run at full capacity. Never run the conveyor empty for any length of time as excessive wear will result. If at all possible, do not stop or start the conveyor under load, especially before the housing becomes well polished, as this may cause the conveyor to “freeze-up.”

IMPORTANT! The conveyor should be frequently checked and serviced to operate freely. Keep all guards and shields in place, replace any that are damaged or missing.
**GENERAL INFORMATION**

**ELECTRIC DRIVE POWER REQUIREMENTS**

The conveyor can also be operated using an electric drive motor. Always use a motor with the required power recommended shown in the chart below. Use a motor that operates at 1750 RPM.

Electric motors and controls shall be installed by a qualified electrician and must meet the standards set by the National Electric Code and all local and state codes.

A magnetic starter should be used to protect your motor when starting or stopping. It should stop the motor in case of power interruption, conductor fault, low voltage, circuit interruption and/or motor overload. The motor should then be restarted manually.

A main power disconnect switch that can be locked only in the “Off” position shall be provided. This shall be locked whenever work is being done to the conveyor.

**WARNING!** Shut off power and lockout whenever cleaning or servicing the conveyor.

The reset and starting controls must be located so that the operator has full view of the entire operation.

Disconnect power before resetting motor overloads.

Make certain electric motor is grounded.

A main power disconnect switch that can be locked in only the “Off” position shall be provided. This shall be locked whenever work is being done to the conveyor.

Do Not enter the grain bin unless all power driven equipment has been shutdown and locked out.

**TRACTOR & PTO REQUIREMENTS**

The conveyor PTO was designed for use with a tractor that is capable of operating at 540 RPM’s (speeds greater than this will cause excessive wear and/or damage to the conveyor).

**NOTE:** The PTO driveline furnished with the conveyor is equipped with a “Spring-Lok” coupler at the tractor end. This type of coupler is spring loaded and will fit the standard 1 3/8” x 6 splined PTO shaft from a tractor.

The PTO driveline is also equipped with a shear bolt at the tractor connection. The shear bolt protects the conveyor from damage should the conveyor become plugged or subjected to high loads. If this scenario should occur, the shear bolt would “shear off” causing the connection to the conveyor to suddenly stop (the tractor PTO would still continue turning, but not the conveyor driveline). **Immediately shutdown the tractor and lockout before attempting to investigate the cause of the problem.**

Extra shear bolts are located in the operator’s manual container. Always use same size and strength shear bolts (3/8-16 x 1” Grade 8 PLT).

The tractor should also be equipped with an adjustable drawbar and have a hydraulic control circuit capable of producing 1400 to 1500 PSI for the hydraulic winch used for raising and lowering the main conveyor (the hydraulic winch is standard on the 65 ft. thru 90 ft. models).

**OPERATING CAPACITIES**

The M85 Portable Mass-Ter Mover conveyor has the ability to convey 8,000 to 10,000 BPH (216 to 270 MTH) of reasonably dry grain during normal operating conditions.

Maximum possible capacity will be less with high moisture grain (above 15%) than with dry grain. Twenty-five percent (25%) moisture could cut capacity back by as much as 40% under some conditions.

The results or capacities of conveyors can vary greatly under varying conditions. Different materials, moisture content, amounts of foreign matter, angle of operation, methods of feeding and conveyor speed all play a role in the performance of the conveyor. A conveyor operating at a 40° incline could be cut by 20% in capacity compared to a conveyor operating horizontally.

Overfeeding the conveyor would result in increased power requirements, extra strain on the driveline and possibly a complete stalling out. Under the “extra” grain pressure conditions, a control gate or other method of limiting the amount of grain being fed into the conveyor should be used.

<table>
<thead>
<tr>
<th>Conveyor Length</th>
<th>Recommended Horsepower</th>
<th>Recommended Motor Sheave*</th>
</tr>
</thead>
<tbody>
<tr>
<td>40’</td>
<td>20 hp (15 kW)</td>
<td>5.4” P.D. 3B</td>
</tr>
<tr>
<td>65’</td>
<td>30 hp (22 kW)</td>
<td>5.4” P.D. 6B</td>
</tr>
<tr>
<td>70’</td>
<td>40 hp (30 kW)</td>
<td>5.4” P.D. 6B</td>
</tr>
<tr>
<td>80’</td>
<td>40 hp (30 kW)</td>
<td>5.5” O.D. 4B</td>
</tr>
<tr>
<td>90’</td>
<td>50 hp (37 kW)</td>
<td>5.5” O.D. 4B</td>
</tr>
</tbody>
</table>

* Motor Sheave is provided.

P.D. = Pitch Diameter

O.D. = Outside Diameter
**CONVEYOR CLEARANCE**

**WARNING!** Be alert of all overhead obstructions and electrical wires, failure to do so can result in electrocution, serious injury to operator and bystanders, conveyor damage and/or extensive property damage.

Lower the conveyor well below the level of power lines before moving. Maintain at least 10 feet of clearance (electrocution can occur without direct contact of the power lines).

The clearance dimensions for the conveyors are shown below and on the following page.
The dimensions below are given for the conveyor when it is in its full raised position (See Page 8 for information on the transport height for the conveyor).

Never transport the conveyor while it is in the raised position, even when moving from one work site to another. Always transport the conveyor in its full down position.

<table>
<thead>
<tr>
<th>Conveyor Length</th>
<th>Dimension “A”</th>
<th>Dimension “B”</th>
<th>Dimension “C”</th>
</tr>
</thead>
<tbody>
<tr>
<td>40’</td>
<td>24’-4” (7.42 m)</td>
<td>14’-8” (4.47 m)</td>
<td>13’-7” (4.14 m)</td>
</tr>
<tr>
<td>65’</td>
<td>40’-5” (12.32 m)</td>
<td>23’-7” (7.19 m)</td>
<td>22’-1” (6.73 m)</td>
</tr>
<tr>
<td>70’</td>
<td>43’-8” (13.31 m)</td>
<td>25’-6” (7.77 m)</td>
<td>23’-9” (7.24 m)</td>
</tr>
<tr>
<td>80’</td>
<td>50’-3” (15.32 m)</td>
<td>30’-10” (9.40 m)</td>
<td>25’-2” (7.67 m)</td>
</tr>
<tr>
<td>90’</td>
<td>57’-3” (12.45 m)</td>
<td>34’-9” (10.59 m)</td>
<td>28’-5” (8.66 m)</td>
</tr>
</tbody>
</table>

Conveyor shown in its full raised position

Shown as Reference Only
CONVEYOR CLEARANCE (con’t.)

The clearance dimensions for the conveyor shown below are given for when the conveyor is set up for operation at the work site.

Though the dimensions are as close to accurate as possible, the dimensions may vary depending on bin size, type of storage structure, conveyor position, and other factors associated with your particular application.

NOTE: The 80’ and 90’ models have an extendable axle. The tread width (“H”) given in the chart refer to the axles being in the collapsed position for transport.

The 40’, 65’ and 70’ models do not use the extendable axle, therefore the given dimension for these models is the standard tread width.

<table>
<thead>
<tr>
<th>Conveyor Length</th>
<th>A1</th>
<th>A2</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'</td>
<td>24'4&quot;</td>
<td>21'6&quot;</td>
<td>14'2&quot;</td>
<td>13'0&quot;</td>
<td>14'1&quot;</td>
<td>10'1&quot;</td>
<td>12'4&quot;</td>
<td>10'3&quot;</td>
<td>9'0&quot;</td>
</tr>
<tr>
<td></td>
<td>(7.42 m)</td>
<td>(6.55 m)</td>
<td>(4.32 m)</td>
<td>(3.96 m)</td>
<td>(4.29 m)</td>
<td>(3.07 m)</td>
<td>(3.76 m)</td>
<td>(3.12 m)</td>
<td>(2.74 m)</td>
</tr>
<tr>
<td>65'</td>
<td>40'5&quot;</td>
<td>35'10&quot;</td>
<td>24'1&quot;</td>
<td>24'1&quot;</td>
<td>20'7&quot;</td>
<td>15'10&quot;</td>
<td>18'3&quot;</td>
<td>17'3&quot;</td>
<td>12'0&quot;</td>
</tr>
<tr>
<td></td>
<td>(12.32 m)</td>
<td>(10.92 m)</td>
<td>(7.34 m)</td>
<td>(7.34 m)</td>
<td>(6.27 m)</td>
<td>(4.83 m)</td>
<td>(5.56 m)</td>
<td>(5.26 m)</td>
<td>(3.66 m)</td>
</tr>
<tr>
<td>70'</td>
<td>43'8&quot;</td>
<td>38'9&quot;</td>
<td>25'9&quot;</td>
<td>25'9&quot;</td>
<td>22'4&quot;</td>
<td>17'8&quot;</td>
<td>20'2&quot;</td>
<td>18'6&quot;</td>
<td>12'0&quot;</td>
</tr>
<tr>
<td></td>
<td>(13.31 m)</td>
<td>(11.81 m)</td>
<td>(7.85 m)</td>
<td>(7.85 m)</td>
<td>(6.81 m)</td>
<td>(5.38 m)</td>
<td>(6.15 m)</td>
<td>(5.64 m)</td>
<td>(3.66 m)</td>
</tr>
<tr>
<td>80'</td>
<td>50'3&quot;</td>
<td>44'7&quot;</td>
<td>27'9&quot;</td>
<td>27'9&quot;</td>
<td>26'10&quot;</td>
<td>19'9&quot;</td>
<td>23'9&quot;</td>
<td>22'10&quot;</td>
<td>11'8&quot;</td>
</tr>
<tr>
<td></td>
<td>(15.32 m)</td>
<td>(13.59 m)</td>
<td>(8.46 m)</td>
<td>(8.46 m)</td>
<td>(6.18 m)</td>
<td>(6.02 m)</td>
<td>(7.24 m)</td>
<td>(6.96 m)</td>
<td>(3.56 m)</td>
</tr>
<tr>
<td>90'</td>
<td>57'3&quot;</td>
<td>50'4&quot;</td>
<td>31'5&quot;</td>
<td>31'5&quot;</td>
<td>30'0&quot;</td>
<td>23'0&quot;</td>
<td>27'0&quot;</td>
<td>25'3&quot;</td>
<td>11'8&quot;</td>
</tr>
<tr>
<td></td>
<td>(12.45 m)</td>
<td>(15.34 m)</td>
<td>(9.58 m)</td>
<td>(9.58 m)</td>
<td>(9.14 m)</td>
<td>(7.01 m)</td>
<td>(8.23 m)</td>
<td>(7.70 m)</td>
<td>(3.56 m)</td>
</tr>
</tbody>
</table>

A1 – Maximum discharge height (40’ max. angle)
A2 – Discharge height at 35°
B – Closest point to bin at 35° (ground level)
C – Closest point to bin at 35° (eave level)
D – Free clearance above wheels
E – Intake to lower arm attachment
F – Upper undercarriage arm length
G – Lower undercarriage arm length
H – Tread width center of tire (with axle collapsed)

with axle extended = approx. 15'0" (4.57 m)
**TRANSPORT INFORMATION**

Always observe safe driving and operating practices, and comply with your local and state regulations that govern marking, towing and maximum width while transporting.

**WARNING!** Be alert of all overhead obstructions and electrical wires, failure to do so can result in electrocution.

Lower the conveyor well below the level of power lines before moving. Maintain at least 10 feet of clearance (electrocution can occur without direct contact of the power lines).

Electrocution Can Occur Without Direct Contact of Power Lines!

- Plan your route to avoid overhead obstructions and power lines.
- Move the conveyor with a tractor to and from the work area. A pickup truck or other suitable vehicle may be used for transporting the conveyor over great distances.
- Always transport your conveyor in the full down position.
- The undercarriage slide should be seated against the down position stop with slight tension on the winch cable (there must be 3 complete wraps of cable around the winch drum when the conveyor is in the full down position).
- Hitch should be secured to tractor and jack stored in its transport position (make sure to attach hitch safety chain).
- **Avoid Sharp Turns!** It is possible to hit the tractor tires or fenders.
- To prevent conveyor from upending, make sure all grain has been emptied from the conveyor before transporting.
- Before moving the conveyor, the operator should make sure all personnel are clear of the "Moving Conveyor Hazard Area" shown on Page 14. Never allow persons to stand underneath or ride on the conveyor when it is being transported.
- Know the transport height of the conveyor before moving it (see chart below).

<table>
<thead>
<tr>
<th>Conveyor Length</th>
<th>Transport Height*</th>
<th>Lowered Height**</th>
</tr>
</thead>
<tbody>
<tr>
<td>40'</td>
<td>10'-10&quot; (3.30 m)</td>
<td>12'-1&quot; (3.68 m)</td>
</tr>
<tr>
<td>65'</td>
<td>13'-0&quot; (3.96 m)</td>
<td>14'-1&quot; (4.29 m)</td>
</tr>
<tr>
<td>70'</td>
<td>14'-3&quot; (4.34 m)</td>
<td>15'-4&quot; (4.67 m)</td>
</tr>
<tr>
<td>80'</td>
<td>15'-2&quot; (4.62 m)</td>
<td>16'-5&quot; (5.00 m)</td>
</tr>
<tr>
<td>90'</td>
<td>16'-4&quot; (4.98 m)</td>
<td>17'-6&quot; (5.33 m)</td>
</tr>
</tbody>
</table>

* Transport height is with conveyor fully lowered, hitch pinned in lowest position, and attached to a vehicle with a drawbar height of 1’–6” (4.6 cm).

** Lowered height is with the conveyor fully lowered and the boot (inlet end) resting on the ground.
ATTACH CONVEYOR to TOWING VEHICLE

1. The hitch jack is intended to lift the intake end of the conveyor for hitching and unhitching purposes. Depending on the position of the conveyor (raised or lowered) the jack needs to be as vertical to the ground as possible when being used.

   Remove the bent pin and rotate the jack accordingly, reinstall and secure the pin once the jack is positioned (See Fig. 2).

2. Secure the conveyor hitch clevis to tractor drawbar with hitch pin and keeper, or you can use a bolt, flat washers and two nuts. Make certain the hitch clevis is securely attached.

   An auxiliary attachment system (safety chain) is required when transporting on public roads. Its function is to retain the connection between the towing and towed machines in the event of separation of the primary attachment system.

3. Fasten one end of a safety chain (not furnished) to the drawbar on the towing vehicle, and the other end to the loop-anchor welded to the side of the conveyor hitch tube (See Fig. 3). A clevis or similar type of intermediate support for the chain should be fastened to the hitch tube no farther than 6” (152 mm) from the hitch pin.
ATTACH CONVEYOR to TOWING VEHICLE (con’t.)

4. Once the conveyor has been hitched to the towing vehicle, raise the jack stand to the appropriate transport position.

Remove the 1/2” x 3 1/8” long pin from its storage position below the jack stand pulley. Insert the pin into the hole just above the support tube weldment (See Fig. 4). This pin will keep the jack in place during transport. Remove any slack from the cable to eliminate jack vibration during transport.

- Conveyor should be placed on as level a surface as possible (the wheels must be allowed to roll freely as the conveyor is being raised).
- When positioning the conveyor into its working position, make sure to leave adequate room for the loaded vehicles to reach the inlet hopper.

STEP 1: Locate Conveyor Next to Bin

1. Move the conveyor into its working position with a towing vehicle (See Fig. 5). Locate the conveyor as close as possible to the bin, or other storage structure (move conveyor slowly towards the bin with the towing vehicle - not by hand).

2. For 80’ and 90’ Models: These two models are equipped with an extendable/collapsible axle. The axles must be collapsed for transporting. After the conveyor is positioned at the bin site, and before raising the conveyor, the axles must be extended.

IMPORTANT! Conveyor must be in the full down position and attached to the towing vehicle before extending the axles. A hydraulic jack with a minimum 5 ton (4536 kg) rating is recommended. See Step 3 below for extending axle procedures.

PLACEMENT of CONVEYOR for FILLING GRAIN BIN

3. Raise one side of the undercarriage at a time to extend or collapse the axles. There is a collar welded to the bottom side on each end of the axle tube to prevent the jack from slipping off, position the jack below this collar.

Raise the axle just high enough for the tire to clear the ground. Place jack stands or equivalent beneath the axle for support.

Remove the lock pin securing the inner axle tube and extend the axle out aligning the next hole in the inner axle with the hole from which the lock pin was previously removed (the axle will extend approximately 19” [48.3 cm] to the next hole location). Reinsert lock pin.

Repeat this procedure on the opposite side of the conveyor.

CAUTION! Make sure entire area above conveyor and the path of travel is clear of overhead obstructions and electrical wires. Failure to do so can result in electrocution (maintain at least 10 feet of clearance from power lines, electrocution can occur without direct contact of the power lines).

To prevent tip-over when backing, avoid rolling over any obstructions and avoid steep slopes. If the conveyor is to be set on a slope, approach the bin uphill. Avoid moving the conveyor at right angles to a slope.

Make sure everyone is clear of the work area when moving the conveyor.

Keep hands clear of the winch drum when winch is in operation.
PLACEMENT of CONVEYOR for FILLING GRAIN BIN (con’t)

Step 1
Locate Conveyor Next to Bin
Extend Axles (80’ & 90’ Models)

Remove Lock Pin, Extend Axle, Reinsert Pin

Jacking Location

Axle Extension on 80’ & 90’ Models
Approx. 19” (48.3 cm) of Extension

Fig. 5

STEP 2: Raise Conveyor

1. Raise the inlet end of the conveyor with the hitch jack to relieve pressure on the hitch locating pin (See Fig. 6). Remove the locating pin and using the jack, lower the inlet end to the ground.

WARNING! Hydraulic systems are highly pressurized. Do Not connect or disconnect hydraulic components when there is pressure in the system. Escaping hydraulic oil, even an invisible pinhole leak, can penetrate body tissues and cause severe injury. If injured by hydraulic oil escaping under pressure, see a doctor at once. Serious infection or reaction may occur if medical attention is not received immediately.

2. Leave the locating pin out. Connect the hydraulic hoses from the conveyor winch to the tractor and raise the discharge end of the conveyor high enough to clear the top of the bin (40’ models use a hand crank winch). Keep hands clear of the winch drum when winch is in operation.

3. Reposition the hitch jack so it is vertical to the ground. Raise the inlet end just high enough to allow the locating pin to be reinserted into the first available hole (this will allow the inlet end to be slightly above the ground).

4. Raise the jack stand so the conveyor can be moved without dragging the jack on the ground.

Check to make sure the conveyor discharge spout remains high enough to clear the top of the bin.

IMPORTANT! Observe the cable as it is winding onto the winch drum. The cable should roll up on the drum evenly, avoid cable build-up on one side of the drum. Do Not block or restrict the movement of the tires. The wheels must be allowed to roll freely as the conveyor is being raised.
STEP 3: Back into Position

1. After raising the inlet end off the ground, back the conveyor slowly into working position with the towing vehicle (See Fig. 7). Never move the conveyor by hand, always use a vehicle. Do Not attempt to increase conveyor height by positioning its wheels on lumber, blocks or any other means to raise its height.

2. Continue backing the conveyor until the discharge spout is directly over the bin opening (when positioning the discharge over the bin opening, keep in mind that the discharge end will lower a few inches as the conveyor fills with grain). When discharging into a grain spreader, maintain at least 12" (30.5 cm) of space between the discharge and the spreader.

   **CAUTION!** Never stand between the tractor and conveyor when hitching or unhitching, unless all controls are in neutral and the brakes locked. Never raise the intake end higher than necessary to attach to a towing vehicle. Weight is transferred rapidly to the discharge end when the intake is raised, especially when conveyor is in the raised position.

   With conveyor raised, reposition jack vertical to the ground. Use jack to raise inlet just enough to reinsert the hitch locating pin.

   Hole location may be different than what is shown

   Raise jack above ground before moving conveyor

   Step 3
   Back Into Position

   Step 4
   Lower Intake End to Ground and Unhitch

   CAUTION! Never stand between the tractor and conveyor when hitching or unhitching, unless all controls are in neutral and the brakes locked. Never raise the intake end higher than necessary to attach to a towing vehicle. Weight is transferred rapidly to the discharge end when the intake is raised, especially when conveyor is in the raised position.

   4. Position the hitch jack vertical to the ground. Raise the inlet end just high enough to remove the hitch weight from the tractor drawbar. Remove safety chain and tractor hitch pin. If hydraulic hoses were attached for winch operation, make sure they are disconnected before moving the tractor from the area.

   **NOTE:** It is good practice to secure the discharge end of the conveyor to the bin or storage structure to prevent possible wind damage (remember to disconnect any tie-downs and/or anchors before moving the conveyor away from the bin).

   5. Make sure all clean-out doors, access panels and safety guards are in place before beginning grain transfer operations.
RELOCATION OF CONVEYOR

When grain conveying is completed, the conveyor should be moved away from the bin and lowered. It can then be moved to a different bin for more conveying operations, or it can be cleaned-up for storage.

STEP 1: Raise Conveyor
1. Empty all grain from the conveyor and clean up the work area. Loosen the wingnut on the small hopper door located on the lower right side of the inlet hopper and clean excess grain from hopper.
2. Untie any anchors and/or supports that were used to help secure the conveyor.
3. Disconnect the power source. Electric units, unplug all electrical cords and store them so they cannot become damaged during transport. PTO drive units, place PTO driveline into the storage/transport bracket and secure for transport.
4. If the hitch tube was removed, reinstall it to the conveyor. Using the hitch jack, raise the inlet end just high enough to attach the hitch to the tractor drawbar and install the safety chain (See Page 9 for safety chain information). Connect the hydraulic winch hoses to the tractor’s hydraulic system (65’ thru 90’ units only).
5. Remove the wheel chocks and raise conveyor until the discharge spout clears the top of the bin.
6. Once conveyor is ready, move the conveyor slowly away from the grain bin with the towing vehicle. Never attempt to move conveyor by hand, always use a vehicle.

STEP 2: Lower Conveyor
1. Immediately after conveyor has cleared the bin or storage structure, lower the conveyor to its full down position. IMPORTANT! Lower the conveyor to its full down position even if only relocating to another bin (80’ & 90’ units, collapse axles before moving).
2. Use the hitch jack to raise inlet just far enough to relieve pressure on the locating pin. Raise inlet until locating pin can be reinserted into the front hole used for transport (See Fig. 1 on Page 9).

STEP 3: Move to Next Bin or Storage
1. Disconnect and secure the hydraulic winch hoses so they will not become damaged during transport. On 80’ and 90’ Models, the axles will need to be collapsed before transporting conveyor. Refer to the following page (Page 14) on procedures for collapsing the axles.
2. Move conveyor to next bin or storage site, or prepare the conveyor for storage (conveyor should be stored in the full down position).
   If the conveyor will be stored outside, make sure the small inlet hopper door on the lower right side of the hopper remains open (this will allow rain water, melted snow, etc. to drain from the hopper).
3. Follow the machine inspection recommendations on Page 4 before operating conveyor again.

CAUTION! Never stand between the tractor and conveyor when hitching or unhitching, unless all controls are in neutral and the brakes locked. Never raise the intake end higher than necessary to attach to a towing vehicle. Weight is transferred rapidly to the discharge end when the intake is raised, especially when conveyor is in the raised position.
Collapse Axles for Transporting Conveyor (80’ & 90’ Models Only)

1. **The 80’ & 90’ Models** are equipped with an extendable/collapsible axle. **The axles must be collapsed for transporting.**
   
   **IMPORTANT!** Conveyor must be in the full down position and attached to the towing vehicle before collapsing the axles. A hydraulic jack with a minimum 5 ton (4536 kg) rating is recommended for lifting.

2. Raise one side of the undercarriage at a time to collapse the axles. There is a collar welded to the bottom side on each end of the axle tube to prevent the jack from slipping off, position the jack below this collar (See Fig. 9).
   
   Raise the axle just high enough for the tire to clear the ground. **Place jack stands or equivalent beneath the axle for support.**

3. Remove the lock pin securing the inner axle tube and collapse the axle inward aligning the next hole in the inner axle with the hole from which the lock pin was previously removed. Reinsert lock pin. Repeat this procedure on the opposite side of the conveyor.

**CONVEYOR MOVING HAZARD AREA**

**WARNING!** Before moving the conveyor, the operator should make sure all personnel are clear of the “Moving Hazard Area” as shown in the diagram below. Never allow persons to ride on the conveyor while it is being transported.

The shaded area represents the hazard area to stay clear of.
WARNING! Under no circumstances should persons not involved in the operation be allowed to trespass into the work area.

It shall be the duty of all operator’s to see that children and/or other persons stay out of the work areas. Trespassing into the work area by anyone not involved in the actual operation, or trespassing into a hazard area by anyone shall result in immediate shutdown by the operator.

It shall be the responsibility of the operator’s to see that the work area has secure footing, is clean and free of all debris and tools which might cause accidental tripping and/or falling. It shall also be their responsibility to keep the work area clean and orderly during the operation.

Before starting the conveyor, a designated work area should be established and properly marked. The following diagram shows the manufacturers designated work area for conveyor operation.

These areas shall be marked off with colored nylon or plastic rope or banners hung as portable barriers to define the designated work area.

All operator’s shall know how to shutdown and lockout the equipment in the event of an emergency.

Be cautious of slippery surfaces. Make sure area is clear of tools, debris, or other items that may trip you or create a hazardous situation.
WARNING! The operator shall be aware of any unusual vibrations, noises and the loosening of any fasteners.

Keep all safety shields and devices in place.

Keep hands, feet and clothing away from moving parts.

The operator shall have a full view the conveyor work area and check that all personnel are clear of hazard areas before adding power.

A main power disconnect switch that can be locked in only the “Off” position shall be provided. This shall be locked whenever work is being done to the conveyor.

The reset and starting controls must be located so that the operator has full view of the entire operation.

Disconnect power before resetting motor overloads. Make certain electric motor is grounded.

Shut off power and lockout whenever cleaning or servicing the conveyor.

Check the following before adding power:

- All safety devices are in place and properly fastened, and the clean-out door on bottom of hopper is in place.
- Drive belts are properly tightened and in good condition. Replace belts if they are cracked, frayed, or damaged in any way.
- Check electrical cords to ensure they are in good condition. Replace if necessary.
- Check electric power box and controls. Verify the power source can be locked out.
- Ensure conveyor is properly positioned and work area is appropriately marked and free of tools, debris and other hazards.
- Verify all drive component hardware and fasteners are tight, i.e. motor mount, pulleys, setscrews etc.

Begin Grain Conveying Operations

1. Start the electric motor and check to make sure conveyor is running properly.
2. Slowly begin filling the inlet hopper with grain until desired flow rate is achieved.

Emergency Shutdown

Should the conveyor be immediately shutdown under load, disconnect and lockout the power source. Clear as much grain from the hopper and conveyor as you can. Use the clean-out door in the bottom of the hopper to help clean grain from this area.

When as much grain as possible has been cleared, reconnect the power source and clear the conveyor gradually.

Never attempt to restart conveyor when full of grain. Starting the unit under load may result in damage to the conveyor, such damage is considered abuse and is not covered by warranty.

Normal Shutdown

Make certain that the hopper and conveyor are empty before stopping the unit. Before the operator leaves the work area, the power source shall be locked out (See "Lockout" below).

Intermittent Shutdown

When a conveyor is stopped and restarted under full load, it may result in damage to the conveyor. Therefore if intermittent operation is to be carried out, it is advisable to reduce the load level.

When kept from absolute filling, conveyor start-up is easier and operation more efficient.

Lockout

The power source for electric units shall have a main disconnect box that can be locked only in the “Off” position. That is what “shutdown and lockout” refers to - Shut off the main power source and lock the handle or breaker switch in the “Off” position.
WARNING! The operator shall be aware of any unusual vibrations, noises and the loosening of any fasteners. Keep all safety shields and devices in place. Keep hands, feet and clothing away from moving parts. The operator shall have a full view of the conveyor work area and check that all personnel are clear of hazard areas before adding power. Shut off power and lockout whenever cleaning or servicing the conveyor. Before starting tractor, be certain power to the PTO is off. Be certain the PTO driveline is securely attached to the conveyor and tractor. Use a PTO with a rotating shield in good working condition that can be turned freely on the shaft. Stay out of designated hazard area of an operating PTO.

Check the following before adding power:
- All safety devices are in place and properly fastened, and the clean-out door on bottom of hopper is in place.
- Make sure tractor is parallel to conveyor with PTO driveline as horizontal as possible.
- Ensure conveyor is properly positioned and work area is appropriately marked and free of tools, debris and other hazards.
- Verify all drive component hardware and fasteners are tight. Check drive belts for proper tension and that they are in good condition.

Begin Grain Conveying Operations
1. Engage PTO at a slow RPM to minimize shock loads, then work up to recommended RPM. Make sure conveyor is running properly. The conveyor can be operated at speeds from 450 to 540 RPM's. Do Not attempt full load operation at speeds below 450 RPM as high torque requirements may damage the conveyor.
2. Slowly begin filling inlet hopper with grain until desired flow rate is achieved.

Emergency Shutdown
Should the conveyor be immediately shutdown under load, disconnect and lockout the power source. Clear as much grain from the hopper and conveyor as you can. Use the clean-out door in the bottom of the hopper to help clean grain from this area. When as much grain as possible has been cleared, reconnect the power source and clear the conveyor gradually. Never attempt to restart conveyor when full of grain. Starting the unit under load may result in damage to the conveyor, such damage is considered abuse and is not covered by warranty.

Normal Shutdown
Make certain that the hopper and conveyor are empty before stopping the unit. Before the operator leaves the work area, the power source shall be locked out (See "Lockout" below).

Intermittent Shutdown
When a conveyor is stopped and restarted under full load, it may result in damage to the conveyor. Therefore if intermittent operation is to be carried out, it is advisable to reduce the load level. When kept from absolute filling, conveyor start-up is easier and operation more efficient.

Lockout
Stop PTO and turn off power source. Remove ignition key from power source (if this is not possible, remove the PTO driveline from the work area).
WARNING! Shut off power and lockout before attempting to adjust, service, clean or repair the conveyor or any of its components.
Keep hands, feet and clothing away from moving parts.
Make sure all safety devices, shields and guards are in place and functional. Immediately replace any that are damaged or missing.
Never rely solely on mechanical or hydraulic jacks for support. Use jack stands or equivalent for support.
Never operate the conveyor with access doors or panels open.

WARNING! Hydraulic systems are highly pressurized. Do Not connect or disconnect hydraulic components when there is pressure within the system.
Escaping hydraulic oil, even an invisible pin hole leak can penetrate body tissues and cause serious injury.
Use a piece of wood or cardboard when searching for leaks, Never use your hands or other parts of your body.
If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction can occur if medical attention is not received at once.

GENERAL MAINTENANCE INFORMATION

For economical and efficient operation of your conveyor, maintain regular and correct lubrication, maintenance and service schedules. Neglect leads to reduced efficiency, excessive wear and needless down time.
Any parts needing replacement should be replaced with parts of the same type and size. Do Not modify or alter any of the conveyor components.

GUARDS
Check the guards to see if they are properly adjusted and securely fastened.
Guards should not be rubbing against pulleys, belts, chains or sprockets. Immediately replace any worn or damaged guards.

HEAD & INLET HOPPER BEARINGS
The head bearings are located on the head section at the discharge end of the conveyor (one bearing on each side of the head section).
The inlet hopper bearing is located on the right hand side of the inlet hopper.
These bearings are fitted with grease zerks (lubrication fittings) and should be lubricated approximately once annually.
Before greasing the bearings, make sure the zerks are free of dirt, otherwise the dirt will be passed into the bearing race which can cause contamination resulting in bearing failure.
Use an SAE multi-purpose type grease. Normally only one to two pumps of the grease gun is sufficient when servicing the bearings. NOTE: Over greasing can be just as harmful as under greasing if it forces grease out of the bearing seals.
The bearings themselves do not require adjustment, but check to make sure the hardware securing the bearings is tight. Also check the setscrews in the lock collars to ensure they are tight against the shaft.
BEARING LUBRICATION (con’t.)

UNDERCARRIAGE AXLE BEARINGS

WARNING! Do Not rely solely on hydraulic or mechanical jacks for support. Use jack stands or equivalent to support undercarriage axle.

Tapered roller bearings are standard on all conveyor axles and should be repacked with grease annually, or as needed determined by usage.

To Repack Wheel Bearings:
1. Raise the undercarriage axle high enough to allow the tire to clear the ground (only raise one side of the axle at a time).
   Place jack stands or equivalent beneath the axle for support and remove the tire.

2. Remove the dust cover by prying around the edges, (See Fig. 11) then remove the cotter pin, slotted nut and flat washer from the end of the axle shaft.

3. Carefully remove the hub from the shaft being careful so the outer bearing doesn’t fall to the ground. Clean the bearing with solvent and inspect the bearing for wear and damage, replace if necessary.
   To inspect the inner bearing you will need to remove the seal from the rear of the hub (the seal may become damaged during this procedure, replace as necessary, see parts identification above).
   With the seal removed, you can now remove the inner bearing from the hub. Clean the bearing with solvent and inspect it for wear and damage. Replace if necessary.

4. Clean the hub cavity with solvent before reassembly. Using a good automotive type axle grease, repack the inner bearing. Insert the inner bearing into the hub and press on the grease seal.

5. Reinstall the hub onto the axle shaft being careful not to damage the lip of the seal during installation.

6. Repack the outer bearing. Fill the hub cavity with grease until about 1/3 full, then install the outer bearing.

7. Reinstall the flat washer and the slotted nut. Tighten the nut to seat the bearings. Keep tightening the slotted nut until the hub begins to bind as it is being rotated. Back off the slotted nut to the next slot and install a new 5/32” x 1 3/4” cotter pin. Reinstall the dust cap and remount the tire.
   Repeat this procedure on the opposite wheel hub.
**DRIVE BELTS (ELECTRIC & PTO DRIVE)**

All belts need to be checked and adjusted periodically to assure all belt driven components are performing properly. Belt tension must be sufficient to avoid any slipping or abnormal wear during conveyor operation.

**Do Not overtighten the belts.** Overtightening creates high stress on the belts and conveyor components and can result in excessive vibration. This vibration can result in damage to the conveyor components.

Check to see that correct alignment of the sheaves and belts is maintained. Check that all sheaves are secured on their shaft, drive key is in place and the setscrews are tight.

**Adjust Belt Tension:**

1. **Electric Models:** Loosen the four (4) carriage bolts securing the feet of the motor mount plate to the brackets on the conveyor housing (See Fig. 12).

   **PTO Models:** Loosen the four carriage bolts securing the PTO housing to the mount brackets on the side of the conveyor housing, and loosen the two 5/16” bolts securing the belt guard to the PTO housing (See Fig. 13).

2. **All Models:** Locate the 3/4” threaded adjustment rod attached to the front of the motor mount plate (See Fig’s. 12 and 13).

3. Note the two (2) 3/4” nuts securing the threaded rod to the adjustment bracket. Loosen the nut on the back side of the bracket and thread the nut back a couple of inches.

   Turn the nut on the front side of the bracket until proper belt tension has been achieved. **Proper tension is 9/16” of deflection per belt when using 7.5 lbs. of force at the center of the span between the two sheaves.**

   After 24 hours of operation, and for the remainder of belt life, deflection should be 9/16” using 4 to 5.5 lbs. of force. If you do not have a weight set to apply the recommended amount of force, a fish scale is a good alternative. Tension can also be checked by pressing firmly on the belts at the center of the span between the two sheaves.
WINCH MAINTENANCE

CAUTION! Keep hands away from winch drum and cable during winch operation.
Never fully extend the cable, always leave a minimum of three wraps of cable around the winch drum.
If brake disc mechanism operates intermittently or erratically, brake disc inspection should be performed.

Hand Operated Winch (40’ Models)
CAUTION: The cable keeper alone will not hold the weight of the conveyor. There should be enough cable so that when the conveyor is in its full down position, there is a minimum of three (3) cable wraps around the winch drum.

Lubrication
All gears must be clean and lubricated (auto-type grease) to insure proper and safe operation.
All shafts, bushings and ratchet parts must be clean and wet with oil (use a 10W-30 automotive oil).

Brake Disc
Inspect brake disc for wear and/or damage. Brake disc should be replaced if they are cracked or broken, or if the thickness is less than 1/16” (2 mm). Do Not use oil or grease on fiber brake faces.

Brake Ratchet Mechanism
Check ratchet operation by listening for “clicking sound” when cable is reeled in (handle turned clockwise). When the cable is reeled out, there is no clicking sound. Replace any worn or damaged parts before further operation.

Hydraulic Operated Winch (65’, 70’, 80’ & 90’ Models)
The winch is shipped with oil. Use the plug shown in Fig. 14 to determine oil level.
To check oil level, remove the fill/check plug from the front side of the winch.
Add oil until it begins to flow out of the plug opening, reinsert plug. Do Not overfill. Additional oil may damage the seals or be forced out through the vented plug.

Inspect brake disc for wear and/or damage. Brake disc should be replaced if they are cracked or broken, or if the thickness is less than 1/16” (2 mm). Do Not use oil or grease on fiber brake faces.

Hydraulic Operated Winch
(65’, 70’, 80’ & 90’ Models)
The winch is shipped with oil. Use the plug shown in Fig. 14 to determine oil level.
To check oil level, remove the fill/check plug from the front side of the winch.
Add oil until it begins to flow out of the plug opening, reinsert plug. Do Not overfill. Additional oil may damage the seals or be forced out through the vented plug.

When additional oil is required, we recommend the use of an SAE 90W non-foaming multipurpose gear oil for normal operating temperatures between 40°F to 120°F (4.4°C to 48.9°C). For temperatures below 40° (4.4°C) use an SAE 80W oil.
Use a grade/brand that is commercially available for automotive differentials. Extra pressure additives may be of some value in severe applications.
**LUBRICATION & MAINTENANCE**

**GEARBOX LUBRICATION**

**WARNING!** Keep all safety shields and devices in place. Never clean, adjust or lubricate a machine that is in operation.

**IMPORTANT!** The gearbox is shipped **without** oil. Oil needs to be added before operation of the conveyor. Even under normal working conditions, oil will still dissipate. Check oil level in gearboxes periodically and maintain proper level.

**Lubrication is extremely important.** For satisfactory operation, follow the information shown on the reducer gearbox nameplate, its warning tag and in the manual provided with the gearbox. Failure to observe these precautions could result in damage to the equipment.

Oil should be changed more frequently when conveyor is being operated at high temperatures, under extreme dirty conditions, or when operated continuously.

Under these extreme conditions the oil should be changed every **1 to 3 months**, depending on severity of the conditions.

**CAUTION:** Too much oil will cause overheating and too little oil will result in gear wear and failure. Check oil level regularly.

Very often, small metal particles will show up in the oil due to the wearing process. A magnetic drain plug is provided to help contain the particles.

1. With conveyor in the full down position, remove the vent/fill plug from the top of the gearbox as shown in Fig. 15.

Add **6 qts. (5.7 l)** of oil to the gearbox. Insert a dipstick, or similar type device, through the vent hole and check oil level. Record the level on the dipstick. Use this method for future readings when determining oil level (a wire coat hanger can be used as a substitute for the dipstick).

If the oil level is to be checked with the conveyor at an angle different than the full down position, place the conveyor at the angle it will most likely be at when the next oil level check is performed.

Use the dipstick to record the oil level at that particular angle. Use the dipstick reading for future level checks (conveyor must be at the same angle as when the initial reading was taken).

**Recommended Oil:**

- **SAE 90 weight**, high grade petroleum base, rust and oxidation inhibited (R&O) gear oil.

**Capacity:** Approximately 6 qts. (5.7 l)

**Oil Change Intervals:**

- Initial change after **2 weeks** (if desired, this oil may be filtered and reused).
- Thereafter, every **2500 hours**, or **6 months** (whichever comes first). Oil should be drained, magnetic plug cleaned, and gearbox flushed and refilled with new oil.
- Under extreme conditions, **1 to 3 months**.

For temperatures below 40° F (4.4° C), use an 80 weight oil of the same quality as the 90 weight. Extra pressure additives may be of value in severe applications.

**Fig. 15**
CONVEYOR DRIVE CHAIN TENSION and ADJUSTMENT

WARNING! Whenever you must service or adjust your equipment, make sure to stop the machine and lockout your power source.

Regular inspections should be established in order to ensure the conveyor chain is in good operating condition at all times.

The life of the conveyor chain will be shortened when the chain is allowed to sit in water or is operated in acidic conditions, try to avoid these situations.

To extend chain life, spray a light coat of soybean oil on the chain after each seasons use. Use extreme caution, keep away from moving chain and paddles.

Check Chain Tension
1. Inspect conveyor chain for loose bolts, missing chain parts, missing or damaged chain paddles and overall chain condition.
2. Check chain tension. Grasp one of the paddles at the inlet end, and attempt to rotate it up towards the chain (See Fig. 16). Proper chain tension should allow only minimal movement of the paddle.

There may be some flexing of the paddle itself, but overall there should be very minimal movement of the paddle and chain.

Adjust Chain Tension
1. Loosen the four (4) carriage bolts on each of the take-up slides on the head section located at the discharge end of unit, See Fig. 16 (there will be a total of eight carriage bolts).
2. Move the jam nuts on the conveyor chain adjustment bolts in direction desired to either loosen or tighten the chain. Move the jam nuts in equal increments so that the head shaft remains straight. Check each side for equal distance by measuring from the shaft of each bearing to the head end.

Once proper tension has been set, tighten the eight carriage bolts and secure the jam nuts.

If the chain is still too loose after these adjustments, it may be necessary to remove one or more chain links from the chain.

Fig. 16
The PTO driveline has three (3) fittings that require lubrication (See illustration below).

Lubricate all fittings with a good quality lithium based E.P. grease which meets the NLGI #2 Specifications and contains no more than 1% molybdenum disulfide (example: Shell Super Duty or equivalent).

An E.P. grease meeting the NLGI #2 Specifications and containing 3% molybdenum disulfide may be substituted in the telescoping members only (example: Mobil Oil Co. - “Mobil Grease CMP,” Shell Oil Co. - “Retinax AM,” and Texaco - “Molyex EP #0 & #2).

Telescoping members should be lubricated while in the collapsed position.

- The first lube interval should be 16 to 24 hours after initial start-up and operation, then follow the recommendations shown below.
- Check the u-joint setscrews at the conveyor end to make sure they are tight against the conveyor drive shaft.

### Replacement Parts are Not Lubricated

Replacement parts must be lubricated at the time of assembly. Depending on the replacement part, use the chart below to determine the proper amount of grease to use for that particular location.

After repaired parts have been lubricated and installed, follow the recommendations in the chart for correct lubrication intervals.

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### PTO DRIVELINE SHEAR BOLT

The PTO driveline is equipped with a shear bolt at the tractor connection. Extra shear bolts are provided and stored in the operator’s manual container.

The shear bolt protects the conveyor from damage should the conveyor become plugged or subjected to high loads. If this scenario should occur, the shear bolt would “shear off” causing the connection to the conveyor to suddenly stop (the tractor’s PTO would still continue turning, but not the conveyor driveline).

Immediately shut down the tractor and lockout before attempting to investigate the cause of the problem.

It is important that the correct replacement bolt be of the same size and strength as the original (see chart below). This is to insure the shear device will function properly to help protect the operator and the conveyor.

---

### PTO Driveline Lubrication Recommendations

After the first lube interval (first 16 to 24 hours of operation) the following schedule should be maintained.

<table>
<thead>
<tr>
<th>Interval</th>
<th>Location</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 hrs.</td>
<td>U-Joint Cross &amp; Bearing</td>
<td>1 Pump</td>
</tr>
<tr>
<td>8 hrs.</td>
<td>Telescoping Members</td>
<td>4–8 Pumps</td>
</tr>
</tbody>
</table>

### Shear Bolt Specifications

<table>
<thead>
<tr>
<th>Conveyor Size</th>
<th>Shear Bolt Size</th>
<th>Shear Bolt Grade</th>
<th>Replacement Shear Bolt Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>M85</td>
<td>3/8–16 x 1&quot;</td>
<td>Grade 8</td>
<td>Part No. 1018892</td>
</tr>
</tbody>
</table>

---

![Fig. 17](image-url)
TROUBLE SHOOTING

LOW CAPACITY
- The conveyor may not be getting enough grain. Check to see that the hopper intake has not bridged over restricting the flow.
- Chain speed is too slow.
- Grain is high in moisture. A low capacity will likely be achieved with high moisture grain. Excessive feeding of high moisture grain can cause plugging.

PADDLE BREAKING OR BENDING
- Paddles may be coming loose from the chain. Keep the paddles securely connected to the chain.
- Housing misalignment.
- Frequent starts under load. Allow conveyor to clean out before shutting down.
- Sprockets at intake or discharge ends may be off center. Align in center of housing.
- Overfeeding; adjust the feeding of the conveyor to allow less grain to enter while maintaining full speed.

EXCESSIVE CONVEYOR NOISE
- Conveyor chain is too loose. Check chain tension and adjust if necessary (See Maintenance Section).
- Improper assembly or misalignment of housing. Loosen housing connection(s) that are the source of noise and disassemble. Check for end smoothness and grind if necessary.
- Sprockets at intake or discharge end may be off center. Check setscrew in sprocket and ensure that it is tight.

BELT SLIPPAGE
- Incorrect belt tension. Turn the adjustment bolts on the motor mount end until proper tension is reached.
- Unit is plugged. Clean the grain and any obstructions from the conveyor.
Choose an open level ground accessible to a chain hoist or other lifting devices where the conveyor may be laid out in full length.

It will be convenient for assembly if the sections are placed on stands or saw horses, this will also make assembly of the undercarriage easier as well.

Be sure the stands or saw horses can support the weight of the tube sections. A stand height of 36” tall is recommended.

Before beginning assembly it is suggested to read through the assembly instructions in this manual and layout all items from the kits to ensure all parts are accounted for.

This not only helps you become familiar with the parts and assembly procedures, but also makes you aware of what tools, equipment or materials you may need to complete the assembly process.

1. Position the trunk sections in their respective positions as shown in the following illustrations.

The support stands may have to be repositioned when installing the tracks on the bottom side of the housing. The trunk sections, once connected together, can also be turned upside down to install the tracks and other components that attach to the underside of the conveyor.

Whenever reference is made to the left, right, front or rear of the conveyor, it is always determined by standing at the hitch (inlet) end looking towards the discharge end.
**ASSEMBLY PROCEDURES**

**TRUNK HOUSING LAYOUT (con't.)**

70' Models

- Boot Assembly (Intake Hopper) 1032602
- 1st Trunk Section 1033081
- 2nd Trunk Section 1033082
- 3rd Trunk Section 1033084
- 4th Trunk Section 1033083
- 5th Trunk Section 1033082
- 6th Trunk Section 1033084
- 7th Trunk Section 1033083
- Head Section 1032623

80' Models

- Boot Assembly (Intake Hopper) 1033769
- 1st Trunk Section 1033712
- 2nd Trunk Section 1033713
- 3rd Trunk Section 1033714
- 4th Trunk Section 1033714
- 5th Trunk Section 1033714
- 6th Trunk Section 1033714
- 7th Trunk Section 1033714
- 8th Trunk Section 1033714
- Head Section 1033808

90' Models

- Boot Assembly (Intake Hopper) 1033769
- 1st Trunk Section 1033712
- 2nd Trunk Section 1033713
- 3rd Trunk Section 1033714
- 4th Trunk Section 1033714
- 5th Trunk Section 1033714
- 6th Trunk Section 1033714
- 7th Trunk Section 1033714
- 8th Trunk Section 1033714
- Head Section 1033808

Truss Supports (Ref. No. 1) can be installed during trunk assembly (See Page 28 and Pages 38 & 39).
TRUNK SECTION ASSEMBLY

1. Note the center partition in each of the trunk housings. During assembly the center partition in the next trunk to be installed will overlap on the top of the previous trunk section (See illustration below). Secure the trunk sections using 7/16” x 1 1/4” bolts and nylon locknuts in all mounting holes.

NOTE: On 80’ and 90’ Models the truss supports can be installed as the trunk sections are being assembled, otherwise the 7/16” x 1 1/4” bolts used at the top of the trunks, if installed now, will need to be removed in order to mount the truss supports during truss assembly. If you choose to install the bolts at this time, you may want to leave them loose for easy removal when the truss supports are to be installed during assembly of the truss sections (See Pages 38 & 39).
INSTALL TRACK

1. Install track sections as shown in each of the following illustrations (40’ Models shown below; 65’ Models, Page 30; 70’ Models, Page 31; 80’ Models Page 32 and 90’ Models Page 33).

All track sections will use 1/2” x 1 1/4” bolts, flat washers and nylon locknuts for mounting to the conveyor. Lay out the track sections in their respective order before beginning to install them onto the conveyor.

The tracks have two different size holes. The 9/16” dia. holes are used to mount the tracks to the conveyor housing. Use the dimensions shown in the illustrations to help identify the correct track sections as well as the correct orientation of the track.

NOTE: The 65’ and 90’ Models use a section of tracks that are the same part number for both the left and right sides. Simply rotate one of the tracks end-for-end for use on the opposite side of the conveyor.

Whenever reference is made to the left, right, front and rear of the conveyor, it always determined by standing at the inlet end, looking towards the discharge end.

40’ Models

Lower Right Track (45” long)
Lower Left Track (45” long)
Intake End

All Mounting Holes for Tracks to Housing are 9/16” dia.

Right Track (240” long)
Left Track (240” long)

Discharge End

The first section of tracks (45” long) have three 11/16” dia. holes on the bottom side for the installation of the undercarriage mount. These holes need to be facing towards the inlet end.

The second section of tracks has four 11/16” dia. holes at one end, with the farthest hole 11” from the end of the track. These four holes need to be facing the discharge end.
65' Models

The first section of tracks has four 11/16” dia. holes on the bottom side for the installation of the undercarriage mount. The four holes are equally spaced between both ends and allow for the same track to be used on both the left and right sides. To identify the track, use the 53” measurement shown in the illustration.

The first section of tracks have a set of four holes for the installation of the winch mount, and a set of two holes for mounting the lower UC stop. First hole in the four-hole set is 55 1/2” from end of track, this set of holes needs to be facing towards the intake end.

This section of tracks have a set of four holes for the installation of the upper trolley stop. First hole is 22” from end of track, this set of holes needs to be facing towards the discharge end.

Use 1/2” x 1 1/4” Bolts, Flat Washers and Nylon Locknuts for all Track Mounting

Intake End

Discharge End

Lower Left & Right Tracks (120” long) 9/16” dia. Holes

Lower Left Track, 1032670  Lower Right Track, 1032670

Middle Left & Right Tracks (240” long)

Middle Left Track, 1035321  Middle Right Track, 1032893

Upper Left & Right Tracks (120” long)

Upper Left Track, 1035322  Upper Right Track, 1032894

Intake End

Discharge End
Install Tracks (con’t.)

70’ Models

The first section of tracks has four 11/16” dia. holes on the bottom side for the installation of the undercarriage mount. To identify the track, use the 30 1/2” measurement shown in the illustration. These holes need to be facing the discharge end.

Discharge End

This section of tracks has a set of four holes for the installation of the winch mount, and a set of two holes for mounting the lower UC stop. First hole in the two-hole set is 88 1/2” from end of track, this set of holes needs to be facing towards the discharge end.

Discharge End

This section of tracks has a set of four holes for the installation of the upper trolley stop. First hole is 54 3/4” from end of track, this set of holes needs to be facing towards the discharge end.

Use 1/2” x 1 1/4” Bolts, Flat Washers and Nylon Locknuts for all Track Mounting.
Install Tracks (con’t.)

80’ Models

The first section of tracks has four 11/16” dia. holes on the bottom side for the installation of the undercarriage mount and two holes at one end that will be used with the next track section for winch mounting. The two holes need to be towards the discharge end. Use measurements shown for track identification.

This section of tracks has two sets of 2 holes each. The first set (4 1/2” from end) will combine with the two holes in the end of the previous track for winch mounting. The other two holes (95 3/4” from end) are for the lower stop mount.

This section of tracks has a set of four holes for the installation of the upper trolley stop. First hole is 55 1/2” from end of track, this set of holes needs to be facing towards the discharge end.

Use 1/2” x 1 1/4” Bolts, Flat Washers and Nylon Locknuts for all Track Mounting.

Lower Left & Right Tracks (240” long)
Intake End

Lower Left Track, 1035230
Middle Left Track, 1035232
Upper Left Track, 1035234

Lower Right Track, 1035229
Middle Right Track, 1035231
Upper Right Track, 1035233
Install Tracks (con’t.)

90’ Models

The 1st section of tracks mount at the inlet end of the housing.

Lower Left & Right Tracks
(240” long)

Intake End

11/16” dia. Holes
f/UC Mount

Lower Middle
Left & Right Tracks
(240” long)

Intake End

9/16” dia. Holes

Use the 89” dimension shown for track identification. This end towards discharge end of conveyor.

Upper Middle
Left & Right Tracks
(240” long)

Intake End

151 1/4”

Use the 55 1/2” dimension shown for track identification. The 55 1/2” end goes towards the inlet end of conveyor.

Upper Left & Right Tracks
(90” long)

Intake End

10 1/2”

The four holes face towards the inlet end of the conveyor.

Lower
Left Track, 1033837
Right Track, 1034083

Middle Lower
Left Track, 1033838
Right Track, 1034081

Middle Upper
Left Track, 1033839
Right Track, 1033839

Upper
Left Track, 1033994
Right Track, 1033995

Use 1/2” x 1 1/4” Bolts, Flat Washers and Nylon Locknuts for all Track Mounting

Discharge End
3. The chain and paddles will be inserted into the bottom partition of the housing from the discharge end of the conveyor (make sure the paddles are facing the discharge end).

4. Remove the access panel from the front of the head section (See Fig. 21 on Page 35). Route the chain and paddles down the bottom partition in the housing to the inlet hopper, around the hopper sprocket, and back up through the upper partition to the discharge end.

5. Route the chain around the head sprocket and check chain length. Cut to appropriate length and attach the chain together using connecting link and cotter pins.

6. Adjust the chain tension. Loosen the four carriage bolts on each side of the head section (for a total of eight bolts). Loosen the 3/4” jam nuts on the threaded adjustment bolts. Use the adjustment bolts to achieve chain tension (move the adjustment bolts in equal increments so the head shaft remains square. Check each side for equal distance by measuring from the shaft to the end of the head).

1. Assemble the sections of chain together using the connecting links and cotter pins provided.

Note: The chain supplied with the unit is more than sufficient in length for proper installation. It will be necessary to cut the chain to the appropriate length during installation, if not, there will be too much slack in the chain even when all adjustment procedures have been done.

2. Fasten the paddles to the attachment brackets welded to the chain (See Fig 19). Secure paddles using four (4) 5/16” x 1 1/2” bolts, (4) flat washers and (4) nylon locknuts (bolts & flat washers on paddle side).

IMPORTANT! Do Not overtighten the bolts when attaching the paddles to the chain. Excessive tightening can deform the paddles.

The recommended torque for the paddle bolts and hardware is 15 to 20 ft. lbs. (20.1 to 26.8 N-m).

Install the chain so the paddle mounting bracket will be behind the paddles as the grain is moved up the conveyor housing (See Fig’s. 19 & 20).

IMPORTANT! Be careful not to twist the chain when feeding it through the conveyor housing.

To check for twisted chain, place a light source at the inlet section and look into the conveyor housing from the discharge end.

The chain and paddles can now be assembled and installed into the conveyor housing. If desired, the paddles can be attached to the chain before installing the chain into the housing.

IMPORTANT! Be careful not to twist the chain when feeding it through the conveyor housing.

To check for twisted chain, place a light source at the inlet section and look into the conveyor housing from the discharge end.

1. Assemble the sections of chain together using the connecting links and cotter pins provided.

Note: The chain supplied with the unit is more than sufficient in length for proper installation. It will be necessary to cut the chain to the appropriate length during installation, if not, there will be too much slack in the chain even when all adjustment procedures have been done.
7. Once proper tension has been set, tighten the eight carriage bolts previously loosened and secure the jam nuts locking the adjustment bolts into place.

To check chain tension, grasp one of the paddles and attempt to rotate it up towards the chain. There should be very minimal movement of the paddle. If the chain is still too loose after adjustments have been made, it may be necessary to remove one or more of the chain links from the chain.
INSTALL SPOUT

1. Once the head section and chain and paddles have been installed, the spout can be mounted to the discharge opening. Secure the spout using ten (10) 5/16” x 1” bolts, flat washers and nylon locknuts (See Fig. 22).

TRUSS ASSEMBLY, 65’ & 70 MODELS

1. Loosely attach the truss sides to the mounting brackets welded to the conveyor housing. Secure each truss side using two (2) 1/2” x 1 1/2” bolts and nylon locknuts (See Details “B” & “C” on the following page). The shorter truss sides (32” long) will be installed at the intake and the discharge ends of the conveyor. The longer truss sides (43 11/16” long) will be installed at the center of the conveyor.

2. Install the truss crossbraces between the truss sides using two (2) 3/8” x 1 1/4” bolts and nylon locknuts. Keep the crossbraces square with the truss sides and secure into place. The shorter truss sides use the 31” long crossbrace (Detail “B”) and the center (longer) truss sides use the 28” crossbrace at the bottom and the 40” long crossbrace at the top (Detail “C”).

3. Tighten the hardware securing the truss sides to the mount brackets on the conveyor housing (keep the truss sides square with the mount brackets).

4. Install the 5/8” eyebolts through the bottom truss anchors located on each side of the lower conveyor housing and through the upper cable anchor at the discharge end (See Detail “A” on the following page). Slide a 5/8” flat washer onto the eyebolts and thread two 5/8” non-lock nuts onto the ends of the eyebolts.

5. Locate the two 3/8” diameter cables from the kit, these will be used for the truss cables. Insert one end of the cable through the eyebolt (at either end of the conveyor) so the cable extends approximately 12” through the eyebolt. Using two of the provided cable clamps, secure the cable with the u-bolt portion of the clamp against the loose end of the cable (See Detail “A”).

6. Temporarily route the cable over the truss sides and to the eyebolt at the opposite end of the conveyor.

7. Attach the cables to the tops of the truss sides using the cable clamps (See Details “B” & “C”). Do Not tighten at this time.

8. Insert each end of the cable through the respective eyebolt and pull excess slack from the cables. Secure the cable ends using two cable clamps, See Detail “A” (the u-bolt portion of the clamp needs to be against the loose end of the cable).

9. Using the two 5/8” non-lock nuts on each of the eyebolts, tighten the cable until the truss is holding the conveyor straight. Tighten both eyebolts on each side equally, making sure the conveyor is not being pulled to one side or the other. Once the cable has been tightened, secure the two nuts on the eyebolts by tightening them against each other.

Now go back and tighten all the cable clamps securing the cable to the tops of the truss sides. Check all hardware used to assemble the truss sections to ensure they have been properly tightened.

Check down the length of the conveyor again to make sure everything stayed aligned as the hardware and cable clamps were tightened. Make any necessary adjustments.
TRUSS ASSEMBLY, 65' & 70' MODELS (con't.)

Truss Assembly
65' & 70' Models

Attach Cross Braces
with 3/8" x 1 1/4" Bolts
and Nylon Locknuts

Attach Truss Sides with
1/2" x 1 1/2" Bolts and
Nylon Locknuts

Attach Truss Sides with
1/2" x 1 1/2" Bolts and
Nylon Locknuts

Attach Cross Braces &
Truss Sides the Same
as at the Intake End

Detail A

Bottom Truss Anchor

Position U-Bolts
Against the Loose End
of the Cable

5/8" Eyebolt

5/8" Non-Lock Nuts
and Flat Washer

Eybolt & Cable Attach the
Same on the Discharge End

70' Model Shown
as Reference Only

Cable Lengths (Truss Assembly)

65' Models – 3/8" dia. x 60' long
70' Models – 3/8" dia. x 65' long

1 Truss Side (short) – 32” long
2 Truss Crossbrace (short) – 31” long
3 Truss Side (tall) – 43 11/16” long
4 Truss Crossbrace (lower) – 28” long
5 Truss Crossbrace (upper) – 40” long
6 3/8” Cable Clamp
**ASSEMBLY PROCEDURES**

**TRUSS ASSEMBLY, 80' & 90' MODELS**

The following assembly instructions will show a reference number in parenthesis ( ), this number refers to the item shown in the assembly illustration on Page 39.

When assembling the truss sections, leave all the bolts loose until all components of the truss sections have been installed. **NOTE:** It is recommended to start assembly of truss sections at one end of the conveyor and work towards the other.

1. If the truss stands (Ref. 1) were not installed during the trunk section assembly install them now, otherwise continue with Step 2 below. If installing them now, remove the 7/16” x 1 1/4” bolts from the top flange on the trunk sections and install the truss stands (See illustration below).

   If the truss stands were not installed during trunk assembly, install them to the top of the trunk sections using the 7/16” x 1 1/4” bolts and nylon locknuts

2. Locate the two truss anchor tubes (Ref. 2) from the box of parts. Thread a 1” non-lock nut (Ref. 3) onto the threaded end of each anchor tube. Start at the inlet end and insert the threaded portion of the tube into the anchor mount welded to the top of the inlet hopper (See Detail “A” on Page 39). Thread another 1” non-lock nut onto the end of the anchor tube to help keep it in place during the assembly process (Do Not tighten the nut at this time).

3. Using one 1/2” x 2 1/2” bolt and nylon locknut, attach the other end of the anchor tube, along with one end of a top horizontal truss tube (Ref. 4) and one end of an x-brace tube (Ref. 5) to the top part of the first truss stand. **NOTE:** The top truss tube and anchor tube are sandwiched between the truss stand with the x-brace on the outside (See Detail “B” on Page 39).
   Attach another x-brace tube (Ref. 5) to the mounting tab located at the bottom-center of the truss stand and secure x-brace using one 1/2” x 2” bolt and nylon locknut (See Detail “C”).

4. Go to the next truss stand (Ref. 1) and position the first top horizontal truss tube (Ref. 4) and a second top truss tube (Ref. 4) between the upper part of the truss stand. Place the end of the x-brace tube from the bottom of the first truss stand on the outside and position another x-brace tube on the opposite side. Secure the entire assembly using one 1/2” x 3” bolt and nylon locknut (See Detail “D”).
   Continue with these assembly procedures up to the last truss stand closest to the discharge end. This end will be assembled with the anchor tube (Ref. 2) and x-brace (Ref. 5) in the same manner as the inlet end.

5. Note the hole in the center of the x-brace tubes, secure the x-braces together using one 1/2” x 3 1/2” bolt and nylon locknut.

6. Slightly tighten the 1” nuts (Ref. 3) on the ends of the anchor tubes to take out some of the slack (the anchor tubes should be applying slight pressure to the truss stands they are attached to). Now tighten all the hardware that was used to assemble the truss sections (start at one end of the trussing and work towards the other).
   Once all hardware has been tightened, verify the anchor tubes (Ref. 2) at each end of the conveyor are tight. Tighten the 1” nuts against the anchor mount to lock the anchor tubes into place.
The two top (horizontal) truss tubes (Ref. 4) are sandwiched between the truss stands (Ref. 1), with the x-braces (Ref. 5) on the outside.

Bolt X-Brace tubes together using one 1/2” x 3 1/2” bolt and nylon locknut.

The anchor tube, horizontal top tube and x-brace tube are installed in the same manner at the discharge end.

1/2” x 2 1/2” Bolt and Nylon Locknut.

Mount Tab for X-Brace Tubes.

1/2” x 2” Bolt and Nylon Locknut.

The anchor tube and x-brace tube are installed in the same manner at the discharge end.

Detail “A”

Detail “B”

Detail “C”

Detail “D”

The two top (horizontal) truss tubes (Ref. 4) are sandwiched between the truss stands (Ref. 1), with the x-braces (Ref. 5) on the outside.

1/2” x 3” Bolt and Nylon Locknut.
1. Attach the undercarriage mount to the lower mounting holes on the inlet end of the tracks, make sure the cable anchor loop welded to the mount is facing towards the discharge end of the conveyor (See illustration on following page, Page 41). Secure using six (6) 5/8" x 1 1/2" bolts, flat washers and nylon locknuts. **Note:** The four outside bolts will be inserted from the top of the mount, the two middle bolts will be inserted from the bottom side of the mount, See illustration on Page 41.

2. Use the dimensions shown below to locate the lower pulley mount (approximately 68" from the inlet end of the tracks). Attach the lower pulley mount to the tracks using four (4) 5/8" x 1 1/2" bolts, flat washers and nylon locknuts.

3. From the inlet end of the tracks, measure 132 3/4" towards the discharge end. Position the face of the lower trolley stop at this location. Secure the stop to the tracks using four (4) 5/8" x 1 1/2" bolts, flat washers and nylon locknuts.

4. Slide the trolley onto the tracks from the discharge end of the conveyor (trolley pulley assembly facing towards the inlet end).

5. Release the trolley straps and move the trolley up against the upper trolley stop. Temporarily secure the trolley to the upper stop in the same manner as before (this will keep the trolley from rolling during the remainder of the assembly process).

---

**CAUTION!** The trolley rolls freely on the tracks, keep hands and fingers away from the trolley rollers and track during installation, and when raising and lowering the conveyor.

Position the trolley away from the end of the tracks and install the upper trolley stop (it is recommended to temporarily secure the trolley with straps or a similar method to prevent it from rolling during upper trolley stop installation). Measure 12 3/4" from the discharge end of the tracks and position the trolley stop as shown in the illustration below and on Page 41. Secure using eight (8) 5/8" x 1 1/2" bolts, flat washers and nylon locknuts.

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**40' Models**

![Diagram of Undercarriage Mount, Trolley StOPS & Lower Pulley Mount 40' Models](image-url)
Undercarriage Mount, Upper and Lower Trolley Stops and Lower Pulley Mount

40' Models

All Mounting Hardware
5/8” x 1 1/2” Bolts, Flat Washers & Nylon Locknuts

Make sure to slide trolley onto tracks before installing upper trolley stop.

Undercarriage Mount, Lower Pulley Mount & Upper and Lower Trolley Stops, 40' Models (con’t.)
**ASSEMBLY PROCEDURES**

**UNDERCARRIAGE MOUNT, TROLLEY STOPS & WINCH MOUNT**

**65’ & 70’ MODELS**

**Undercarriage Mount**

1. Attach the undercarriage mount to the inlet end of the tracks using the measurements shown below. 
   **Note:** Measure from the inlet end of the tracks to where the center of the mount tube will be located (See illustration below).

   **65’ Models** measure 60” from inlet end of tracks to center of undercarriage mount.
   **70’ Models** measure 82 1/2” from inlet end of tracks to center of undercarriage mount.

   Secure the undercarriage mount to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts (See illustration on Page 43).

**Winch Mount**

2. Use the dimensions shown below to locate the winch mount.

   **65’ Models** measure 174” from the inlet end of the tracks to the back side of the winch mount.
   **70’ Models** measure 204” from the inlet end of the tracks to the back side of the winch mount.

   Secure the winch mount to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts (See illustration on Page 43).

**Trolley Stops**

3. For **65’ Models** measure 236 3/4” from the inlet end of the tracks (**70’ Models** measure 273 1/4”). Position the face of the lower trolley stop at this location. Secure the stop to the tracks using four (4) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts.

4. Slide the trolley onto the tracks from the discharge end of the conveyor (trolley pulley assembly facing towards the inlet end).

   **65’ Models** measure 32 11/16” from the discharge end of the tracks and position the upper trolley stop as shown in the illustration below and on Page 43 (70’ Models measure 65 1/2”).

   Secure the upper trolley stop to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts.

5. Temporarily secure the trolley to the upper stop with straps, or a similar method, to prevent it from rolling during the remainder of the assembly process.

---

**CAUTION!** The trolley rolls freely on the tracks, keep hands and fingers away from the trolley rollers and track during installation, and when raising and lowering the conveyor.

---

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Make sure to slide trolley onto tracks before installing upper trolley stop.

Undercarriage Mount, Trolley Stops & Winch Mount
65' & 70' Models
**ASSEMBLY PROCEDURES**

**UNDERCARRIAGE MOUNT, TROLLEY STOPS & WINCH MOUNT**

80' & 90' MODELS

**Undercarriage Mount**

1. Attach the undercarriage mount to the inlet end of the tracks using the measurements shown below.
   
   **Note:** Measure from the inlet end of the tracks to where the center of the mount tube will be located (See illustration below).

   **80' Models** measure 105” from inlet end of tracks to center of undercarriage mount.

   **90' Models** measure 144” from inlet end of tracks to center of undercarriage mount.

   Secure the undercarriage mount to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts (See illustration on Page 45).

**Winch Mount**

2. Use the dimensions shown below to locate the winch mount.

   **80' Models** measure 234” from the inlet end of the tracks to the back side of the winch mount.

   **90' Models** measure 294” from the inlet end of the tracks to the back side of the winch mount.

   Secure the winch mount to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts (See illustration on Page 45).

**Trolley Stops**

3. For **80' Models** measure 340 1/2” from the inlet end of the tracks (90' Models measure 396”). Position the face of the lower trolley stop at this location (See illustration below). Secure the stop to the tracks using four (4) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts.

4. Slide the trolley onto the tracks from the discharge end of the conveyor (trolley pulley assembly facing towards the inlet end).

   For **80' Models** measure 69” from the discharge end of the tracks and position the upper trolley stop as shown in the illustration below and on Page 45 (90' Models measure 78”).

   Secure the upper trolley stop to the tracks using eight (8) 5/8” x 1 1/2” bolts, flat washers and nylon locknuts.

5. Temporarily secure the trolley to the upper stop with straps, or a similar method, to prevent it from rolling during the remainder of the assembly process.

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**CAUTION!** The trolley rolls freely on the tracks, keep hands and fingers away from the trolley rollers and track during installation, and when raising and lowering the conveyor.
Make sure to slide trolley onto tracks before installing upper trolley stop.

5/8" x 1 1/2" Bolt

5/8" Flat Washer and Nylon Locknut

Undercarriage Mount

5/8" Flat Washer and Nylon Locknut

Upper Trolley Stop

5/8" Flat Washer and Nylon Locknut

Lower Trolley Stop

Winch Mount

5/8" Flat Washer and Nylon Locknut

Undercarriage Mount, Trolley Stops & Winch Mount
80' & 90' Models

90' Model Shown as a Reference Only. The 80' Models use the same components, the only difference is the spacing of the components on the tracks. Refer to the dimensions shown on the previous page for component spacing.
ASSEMBLY PROCEDURES

UNDERCARRIAGE & HUB ASSEMBLY

40’ MODELS

WARNING! Do not rely solely on hydraulic or mechanical jacks and/or overhead hoist to support the conveyor. Use jack stands, saw horses, or equivalent to support the conveyor.

Try to assemble the undercarriage next to the main conveyor assembly as this will allow for minimal movement of the main conveyor when attaching it to the undercarriage.

The hubs, bearings and spindles are assembled at the factory and packed with grease at that time. Refer to the “Lubrication and Maintenance” Section in this manual for disassembly and maintenance procedures.

TIRE and HUB to AXLE TUBE

1. Lay the undercarriage out so the longer arm sections are at the discharge end of the conveyor (Refer to Fig. 23 below).

2. Raise and support the undercarriage axle tube just high enough to allow installation of the tire (only raise one side of the undercarriage at a time). Use jackstands or equivalent to support the undercarriage, never rely solely on mechanical or hydraulic jacks, or on the overhead hoist for support.

3. Slide the hub and spindle assembly into the end of the axle tube and secure using one 1/2” x 4 1/2” bolt and nylon locknut. Install the rim and tire and secure using the lug bolts provided (See illustration on Page 47). Repeat this procedure on the opposite side of the undercarriage.

UNDERCARRIAGE ASSEMBLY

WARNING! Some of the undercarriage components are heavy, use assistance when lifting or moving these parts. Be aware of pinch points during the assembly process. Use caution around these areas.

1. Using a chain hoist or other safe suitable means, lift the conveyor assembly at a point near the center of the conveyor (use a sling completely around the conveyor housing, Do Not lift the entire weight of the conveyor from the extreme end, Do Not lift conveyor by any of the truss sections).

Position the trolley at the discharge end of the conveyor. Insert the 1 1/2” dia. x 18 9/16” long pivot bushing through the trolley and align the upper undercarriage arms with the bushing. Secure the arms to the trolley using the 1” x 23” long threaded bolt and 1” nylon locknut (See Page 47).

Temporarily wrap a chain or strap around the trolley and upper stop plate to prevent the trolley from sliding when attaching the lower arms to the lower undercarriage mount.

2. At the inlet end of the conveyor, attach the lower undercarriage arms to the undercarriage mount as shown on Page 47. Secure using two 1” x 3” bolts, flat washers, 1 1/2” dia. x 15/16” long bushings and nylon locknuts (the bolts, flat washers and bushings are inserted from the outside of the undercarriage mount).

Make sure all hardware is tight and remove the strap or chain that was previously installed around the trolley and upper stop plate.
UNDERCARRIAGE ASSEMBLY
40’ MODELS
UNDERCARRIAGE & HUB ASSEMBLY
65’ & 70’ MODELS

When assembling the undercarriage, leave all bolts loose until all components have been installed. The instructions below show a reference number in parenthesis ( ), this number refers to the item shown on the assembly illustration on the following page.

1. Assemble wheel hubs and install onto end of axle (see illustration at lower right on Page 49). Pack both inner and outer bearings with a good quality axle grease and fill hub cavity about 1/3 full with the grease. Install both bearings into the hub (larger bearing on back side of hub). Press the grease seal over the larger bearing and into the hub.

2. Slide the hub and bearing assembly onto the axle spindle (be careful not to damage the lips of the seal). Install the flat washer and slotted nut. Tighten the nut until the hub begins to bind when you rotate it. Back off the nut to the next slot and install the cotter pin. Install the dust cover.

3. Attach the lower radius arms (Ref. 1 & 2) to the undercarriage mount on the bottom side of the conveyor housing (See Detail “A” at the lower left corner of Page 49). Secure the arms using two 3/4” x 2” bolts, lock washers and 3 1/2” O.D. flat washer. Apply about four pumps of a good quality lithium based grease into the grease zerks on each arm.

4. Bolt the axle (Ref. 3) to the end of the lower arms using eight 5/8” x 2 1/2” bolts and nylon locknuts. **NOTE:** the lower arms will bolt to the inside of the axle plate (See Detail “B”). Make sure the axle is oriented with the reflective decals facing up.

5. Install the longer x-brace tubes (Ref. 4) to the lower arms and secure using four 1/2” x 1 1/2” bolts, flat washers and nylon locknuts (the x-brace tubes are 105 3/4” long f/ 70’ Models & 102 3/4” long f/ 65’ Models). **Note:** All x-brace tubing has a hole near the center of the tube but offset to one end, this hole should be positioned towards the narrow end of the radius arms. Bolt the x-brace tubes together using one 1/2” x 3 1/4” bolt, flat washer and nylon locknut.

6. Attach the upper lift arms (Ref. 5 & 6) to the lower arms. Secure each arm using one 1” x 3” bolt, one 5” O.D. washer (Ref. 7), flat washer, spacer bushing (Ref. 8) and nylon locknut. The 5” O.D. washer will be positioned between the lower arm and the lift arm (See Detail “B”). The spacer bushing size is 1 1/2” O.D. x 15/16” long.

7. Bolt the shorter x-brace tubes (Ref. 9) to the upper lift arms using four 1/2” x 1 1/2” bolts, flat washers and nylon locknuts. Make sure to position the offset hole towards the narrow end of the arms. The short x-braces measure 99 1/8” in length f/ 70’ Models & 96 1/4” f/ 65’ Models.

8. Attach the crossbrace tube (Ref. 10) to the bottom side of the each lower arm as shown in Detail “B” on the following page. Secure using two 1/2” x 1 1/2” bolts and nylon locknuts. **IMPORTANT!** **The crossbrace tube MUST be installed on the BOTTOM side of the lower arms.**

9. Raise the conveyor housing just enough to allow the upper lift arms to be connected to the trolley. Install the 18 7/16” long bushing (Ref. 11) into the trolley and position the trolley between the upper arms. Secure the trolley using one 1” x 23” threaded rod. Remove the temporary strap used to hold the trolley into place.

10. Tighten all bolts in the upper arm assembly, including the bolts that connect the upper and lower arms together.

11. Install the cross stiffener (Ref. 12) between the lower undercarriage arms as shown in the illustration on the following page. Use the end plates and eight 1/2” x 3 1/2” bolts to secure the stiffener into place. Make sure the stiffener is contacting each of the arms when bolted into place.

12. Install the reflector brackets (Ref. 13) to the lower arms (below the upper lift arm and lower arm connection). Secure each reflector bracket using two 5 16” x 1” bolts and nylon locknuts.

13. Tighten all lower arm assembly bolts.

14. Mount the wheel & tires and secure using the lug bolts provided.

**WARNING!** Some of the undercarriage components are heavy, use assistance when lifting or moving these parts. Be aware of pinch points during the assembly process. Use caution around these areas. Do not rely solely on hydraulic or mechanical jacks and/or overhead hoist to support the conveyor. Use jack stands, saw horses, or equivalent to support the conveyor.
UNDERCARRIAGE ASSEMBLY
65’ & 70’ MODELS

**Detail “A”**
- 3/4” x 2” Bolt, Lock Washer & 3 1/2” O.D. Flat Washer

**Detail “B”**
- 5/8” x 2 1/2” Bolt and Nylon Locknut
- 1” x 3” Bolt, Flat Washer, Spacer and Nylon Locknut
- 1/2” x 1 1/2” Bolt and Nylon Locknut

IMPORTANT!
Crossbrace Tube Attaches to the Bottom Side of the Lower Radius Arm

This mount is already attached to the conveyor.

**Lower Arm Positioned on the Inside of the Axle Plate**

Trolley is already installed onto the tracks, shown here for reference only

When installing axle, make sure reflective decals are facing up.

**Grease Zerks on End of Radius Arms**

**Trolley Bushing 1 1/2” O.D. x 18 7/16”**

**1” x 3” Bolt, 5” Spacer, Flat Washer, 15/16” Spacer and Nylon Locknut**

**1/2” x 1 1/2” Bolt and Nylon Locknut**

**1/2” x 3 1/2” Bolt & Nylon Locknut**

**5/16” x 1” Bolt and Nylon Locknut**

**3/4” X 2” Bolt, Lock Washer & 3 1/2” O.D. Flat Washer**

**3/4” X 2” Bolt, Lock Washer & 3 1/2” O.D. Flat Washer**

**HUB ASSEMBLY**
- Seal
- Cotter Pin
- Hub
- Inner Cone Bearing
- Outer Cone Bearing
- Dust Cap
- Slotted Nut

**IMPORTANT!**
Grease Zerks on End of Radius Arms
UNDERCARRIAGE ASSEMBLY
80’ & 90’ MODELS

When assembling the undercarriage, leave all bolts loose until all components have been installed.
The instructions below show a reference number in parenthesis ( ), this number refers to the item shown on the
assembly illustration on the following page.

1. Attach the lower radius arms (Ref. No’s. 1 & 2) to the undercarriage mount on the bottom side of the conveyor
housing (See Detail “A” in the bottom left corner of Page 51). Secure each arm using one 3/4” x 2” bolt, lock
washer and 3 1/2” O.D. flat washer. Apply about 4 pumps of a good quality lithium based grease into the
grease zerks on the end of each arm.

2. Bolt the axle (Ref. 3) to the end of the lower radius arms using eight 5/8” x 2 1/2” bolts and nylon locknuts.
NOTE: the lower arms will bolt to the inside of the axle plate (See Detail “B”). Make sure the axle is
oriented with the reflective decals facing towards the discharge end (the hub w/ extendable axles will be
facing down).

3. Install the longer x-brace tubes (Ref. 4) to the lower radius arms and secure using four 1/2” x 1 1/2” bolts, flat
washers and nylon locknuts (x-brace tubes are 117 3/4” long f/ 80’ Models & 125 7/16” long f/ 90’ Models).
Note: The x-brace tubing has a hole near the center of the tube but is offset to one end, this hole should be
positioned towards the narrow end of the radius arms, See Page 51. Secure x-brace tubes together using
one 1/2” x 3 1/4” bolt and nylon locknut.

On 90’ Models, an extra set of x-braces (Ref. 5) will be installed at the widest end of the lower radius
arms. Install these in the same manner as the previous x-braces (the inlet end of these x-braces will
share the same mount tab as the previous set of x-braces).

4. Attach the upper lift arms (Ref. 6 & 7) to the lower radius arms. Secure each arm using one 1 1/4” x 3 1/2” bolt,
one 5” O.D. washer (Ref. 8), one flat washer, one spacer bushing (Ref. 9) and one nylon locknut. The 5” O.D.
washer will be positioned between the lower radius arm and the upper lift arm (See Detail “B”). The size of
the spacer bushing is 1 1/2” O.D. x 15/16” long.

5. Bolt the lower x-brace tubes (Ref. 10) to the widest section of the upper lift arms using four 1/2” x 1 1/2” bolts,
flat washers and nylon locknuts (the next set of x-braces will share the same upper mounting tab, only insert
the bolts in these mounting tabs so they can be easily removed when installing the next set of braces). Make
sure to position the offset hole towards the narrow end of the arms (the lower x-braces measure 108 1/8” in
length f/ 80’ Models & 128 3/16” f/ 90’ Models). Secure x-brace tubes together using one 1/2” x 3 1/4” bolt and
nylon locknut.

Bolt the upper x-brace tubes (Ref. 11) to the narrow portion of the lift arms in the same manner as the previous
x-braces (this set of x-braces will share the same upper mounting tabs). Secure the tubes together using one
1/2” x 3 1/4” bolt and nylon locknut (these braces measure 116 3/4” f/ 80’ Models and 118 7/8” f/ 90’ Models).

6. Attach the lift arm crossbar (Ref. 12) to the top side of the mounting tab on the lower portion of the lift arms as
shown in Detail “B” on the following page. Secure using two 1/2” x 1 1/2” bolts and nylon locknuts (for 90’
Models use two 5/8” x 2” bolts and nylon locknuts). On 90’ Models only, also install a crossbar (Ref. No. 16)
on the lower radius arms (See Detail “B”). Secure using two 5/8” x 2” bolts and nylon locknuts.

7. Raise the conveyor housing just enough to allow the upper lift arms to be connected to the trolley. Install the
18 7/16” long bushing (Ref. 13) into the trolley and position the trolley between the upper arms. Secure using
one 1” x 23” threaded rod. Remove the temporary strap used to hold the trolley into place.

8. Tighten all bolts in the upper arm assembly, including the bolts that connect the upper and lower arms together.

9. Install the cross stiffener (Ref. 14) between the lower undercarriage arms as shown in the illustration on the
following page. Use the end plates and eight 1/2” x 4 1/2” bolts to secure the stiffener into place. Make sure
the stiffener is contacting each of the arms when bolted into place.
10. Install the reflector brackets (Ref. 15) to the lower arms (below the upper lift arm and lower arm connection). Secure each reflector bracket using two 5/16" x 1" bolts and nylon locknuts.

11. Tighten all lower arm assembly bolts.

12. Mount the wheels & tires and secure using the lug nuts provided.

90' Model Shown

The assembly procedures for the 80' & 90' Models are the same except, Items 5 (radius arm x-braces) & 16 (radius arm crossbar), these are only used on the 90' Models.
WINCH and CABLE PULLEY ASSEMBLY
40' MODELS

WARNING!  Keep hands away from winch drum during winch operation.
Never fully extend the cable, always keep three complete wraps of cable around the winch drum.
Never operate the winch with wet or oily hands, always use a firm grip on the handle.

For additional winch information, follow the instructions and precautions listed in the material supplied by the winch manufacturer.

When referencing the front, rear, left and right sides, it is always determined by standing at the inlet end looking towards the discharge end.

1. Install the winch onto the mount plate located on the left side lower radius arm of the undercarriage. Secure using three 3/8" x 1 1/4" bolts, six 3/8" flat washers and two 3/8" nylon locknuts (the winch drum should face the inlet end of the conveyor).

Attach the winch handle to the winch and secure using the hex nut supplied with the winch. Do Not remove the two hex nuts securing the shaft to the winch body.

2. Locate the swivel connector from the box of parts. Remove the hair pin and clevis pin from the swivel connector and attach the connector to the pulley anchor loop located on the undercarriage mount. Secure using the pins previously removed.

3. Note: There are two 3 3/4" diameter pulley's in the box of parts. Assemble the pulley clevis using the pulley with the smaller diameter center hole. Insert the 1" diameter x 9/16" long bushing into the center hole of the pulley. Place a clevis plate on each side of the pulley and bushing and secure using one 1/2" x 2" bolt and nylon locknut. Do Not tighten completely at this time.

Attach the hooked ends of the clevis assembly to the swivel connector. Tighten the 1/2" x 2" bolt and nut and torque to 80 ft. lbs. Insert the 1/4" x 1 3/4" bolt through the clevis assembly and secure with the provided side depress locknut.

Fig. 24
WINCH and CABLE PULLEY ASSEMBLY,
40' MODELS

Tighten Locknut so Bushing does Not Turn Against the Clevis Plate. Torque to 80 ft. lbs. (108 N·m)
**CABLE ANCHOR & CABLE ROUTING, 40’ MODELS**

1. Slide the pulley mount clevis over the anchor pipe welded to the mount plate as shown in Detail “A” on Page 55 (position the clevis so the bolt stop is at the top).

2. Locate the remaining 3 1/2” diameter pulley from the box of parts (this pulley will have the 1.65” dia. center hole). Insert the 1 5/8” O.D. x 1 23/32” long bushing into the cable pulley and place a 3 1/2” dia. x 3/8” thick washer on each side of the pulley (See Illustration on Page 55). Place the thinner 3 1/2” dia. washer over each of the 3/8” thick washers.

Install this assembly into the end of the clevis and secure using one 1” x 3 1/2” bolt and nylon locknut. Insert the 1/4” x 3″ cotter pin into the smaller hole in the clevis and secure cotter pin.

3. Attach the 5/16” dia. x 65’ long cable to the winch drum. Pass the free end of the cable over the winch drum and make three wraps around the drum.

Insert the end of the cable, from inside the drum, through one of the round holes in the drum side until the end of the cable extends approximately 1” past the two square holes (See Fig. 25).

Keep a little tension on the cable so it does not come unraveled from the drum.

4. Secure the end of the cable to the outside of the winch drum with the provided cable keeper and two 3/16” x 3/4” carriage bolts, lock washers and non-lock nuts (insert the carriage bolts from the inside of the drum, See Fig. 25).

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CAUTION! The cable keeper alone will not hold the weight of the conveyor. There should be a minimum of three (3) complete wraps of cable around the winch drum.

If there are not three wraps of cable around the drum when the conveyor is fully lowered, then the cable must be replaced with a longer one.
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Conveyor should be in the full down position when routing the winch cable. This will ensure that the winch drum will have the required three wrap minimum when the conveyor is in its full down position.

5. Route the free end of the cable over to the pulley clevis attached to the swivel connector (position the cable between the cotter pin and the pulley).

Next, route the cable up and around the pulley on the trolley (keep the cable positioned between the pulley and the cotter pin, See Page 55).

6. Bring the cable down and around the pulley attached to the clevis and anchor pipe welded to the mount plate shown in Detail “A” on Page 55.

7. Route the cable back up and around the anchor bushing and attach to the front of the trolley. Pull any excess slack from the cable and secure the cable using the two 5/16” cable clamps provided (install the cable clamp with the u-bolt portion of the clamp against the loose end of the cable).

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**Fig. 25**
CABLE ANCHOR & CABLE ROUTING
40' MODELS

Make sure cable is positioned between pulley and cotter pin

Pulley Assembly Shown in Detail “A”

1” x 3 1/2” Bolt
1/4” x 3” Cotter Pin
Bolt Stop
Pulley Mount Clevis

1” Nylon Locknut

Thin Flat Washer
3/8” Thick Washer
Pulley

U-Bolt Portion of Clamp Against Loose End of Cable

Trolley and Anchor Clevis Not Shown for Clarity

Cable Anchor Bushing

Pulley

3/8” Thick Washer
Thin Flat Washer

Detail “A”

Pulley Assembly

Make sure cable is positioned between pulley and cotter pin

Cable Attached to Anchor Bushing

Pulley Fastened to Trolley

Cable Routing from Winch

Cable Routing
INSTALL WINCH ASSEMBLY & ROUTE
WINCH CABLE, 65' & 70' MODELS

WARNING! Keep hands away from winch drum during winch operation. Never fully extend the cable, always keep three complete wraps of cable around the winch drum.

For additional winch information, follow the instructions and precautions listed in the material supplied by the winch manufacturer.

1. First, remove the shipping bolts from the lift winch assembly. Mount the winch to the winch mount plate located on the bottom side of the conveyor. Secure the winch to the winch mount using six (6) 1/2” x 2 1/2” bolts and nylon locknuts. Position the winch so the drum of the winch is facing towards the discharge end of the conveyor.

2. Attach the pulley assembly to the winch mount. Slide the clevis over the anchor pipe welded to the mount plate (position the clevis so the bolt stop is on the bottom, See illustration on following page). Insert the spacer bushing into the cable pulley and place a 3 1/2” O.D. flat washer onto each side of the pulley. Install this assembly into the end of the clevis and secure using one 1” x 4” bolt and nylon locknut.

3. Attach the 1/2” diameter lift cable to the winch drum. Pass the free end of the cable over the top of the winch drum and make three (3) wraps around the drum (See Fig. 26).

4. Insert the end of the cable from inside of the drum, through the small opening in the drum and secure cable to drum using the existing anchor setscrew (keep a little tension on the cable so it doesn’t come unraveled).

CAUTION! The cable anchor setscrew alone will not hold the weight of the conveyor. There should be enough cable so that when the conveyor is in its full down position, there is a minimum of three (3) cable wraps around the winch drum.

If there are not three wraps of cable around the winch drum when the conveyor is fully lowered, then the cable must be replaced with a longer one.

5. Route the free end of the winch cable from the winch up and around the trolley pulley (the cable will be positioned between the pulley and the cotter pin, See illustration on Page 57).

Bring the cable back down and wrap around the pulley at the end of the winch mount plate, then back up again to the anchor bushing in front of the trolley pulley.

Loop cable around the bushing and pull remaining slack from the cable. Secure cable to the bushing using three 1/2” cable clamps (make sure to place the u-bolt portion of the clamps against the loose end of the cable).
INSTALL WINCH ASSEMBLY & ROUTE
WINCH CABLE, 65' & 70' MODELS

1" x 4" Bolt and Nylon Locknut

Clevis

Bolt Stop

Cotter Pin

Winch Mount

1/2" x 2 1/2" Bolt and Nylon Locknut

Pulley Assembly Fastened to Winch Mount as Shown in Detail “A”

Make sure cable is positioned between pulley and cotter pin

65' & 70' Models

Pulley Assembly Fastened to Trolley

Cable Attached to Anchor Bushing

Make sure cable is positioned between pulley and cotter pin
INSTALL WINCH ASSEMBLY & ROUTE WINCH CABLE, 80' & 90' MODELS

CAUTION! Keep hands away from winch drum during winch operation. The cable keeper alone will not hold the weight of the conveyor. There should be a minimum of three (3) complete wraps of cable around the winch drum.

For additional winch information, follow the instructions and precautions listed in the material supplied by the winch manufacturer.

1. First, remove the shipping bolts from the lift winch assembly. Mount the winch to the winch mount plate located on the bottom side of the conveyor. Secure the winch to the winch mount using six (6) 1/2" x 2 1/2" bolts and nylon locknuts. Position the winch so the drum of the winch is facing towards the discharge end of the conveyor.

2. Attach the pulley assembly to the winch mount. Slide the clevis over the anchor pipe welded to the mount plate (position the clevis so the bolt stop is on the top, See illustration on following page). Stack the pulley’s, washers and bushing as shown on the following page (thin washer, pulley, 3/8" thick washer, pulley and thin washer placed over the bushing). Install this assembly into the end of the clevis and secure using one 1" x 5" bolt and nylon locknut. Install the 3/8” x 4” bolt through the small hole in the clevis and secure using the 3/8” nylon locknut.

3. Attach the 1/2” diameter lift cable to the winch drum. Pass the free end of the cable over the top of the winch drum and make three (3) wraps around the drum (See Fig. 27).

4. Insert the end of the cable from inside of the drum, through the small opening in the drum and secure cable to drum using the existing anchor setscrew (keep a little tension on the cable so it doesn’t come unraveled).

CAUTION! The cable anchor setscrew alone will not hold the weight of the conveyor. There should be enough cable so that when the conveyor is in its full down position, there is a minimum of three (3) cable wraps around the winch drum.

If there are not three wraps of cable around the winch drum when the conveyor is fully lowered, then the cable must be replaced with a longer one.

5. Route the free end of the winch cable from the winch up and around the bottom trolley pulley (the cable will be positioned between the pulley and the 3/8” bolt in the clevis, See illustration on Page 59). Bring the cable back down and wrap around the bottom pulley at the end of the winch mount plate, then back up again and around the top pulley of the trolley.

Route cable back down to the top pulley on the winch mount plate and back up again to the anchor bushing in front of the trolley pulley’s.

Loop cable around the bushing and pull remaining slack from the cable. Secure cable to the bushing using three 1/2” cable clamps (make sure to place the u-bolt portion of the clamps against the loose end of the cable).
INSTALL WINCH ASSEMBLY & ROUTE
WINCH CABLE, 80' & 90' MODELS

- Anchor Bushing
- Pulley

- Anchor Bushing
- Pulley

- U-Bolt Portion of Clamp Against Loose End of Cable

- Trolley and Parts Not Shown for Clarity

- Make sure cable is positioned between pulley's and bolt

- 3/8" x 4" Bolt & Nylon Locknut
- 1" x 5" Bolt & Nylon Locknut

- Bushing
- 3.5" dia. x .1382" Thick Washer
- Pulley
- 3.5" dia. x 3/8" Thick Washer
- Pulley
- 3.5" dia. x .1382" Thick Washer

- Reference Winch Mount
- Pulley Assembly When Attached to Winch Pulley Anchor

- 1/2" x 2 1/2" Bolt
- 1/2" Nylon Locknut

- Reference Winch Mount

- Winch Assembly

- Winch Pulley Clevis

- Cable Routing from Winch

- Pulley Assembly Fastened to Trolley

- Cable Attached to Bushing
HYDRAULIC HOSE INSTALLATION, 65’, 70’, 80’ & 90’ MODELS

WARNING! Do Not connect or disconnect hydraulic components when there is pressure within the system. Hydraulic systems are highly pressurized. Escaping hydraulic oil, even an invisible pin hole leak, can penetrate body tissue and cause serious injury. Use a piece of wood or cardboard when looking for leaks. Never use the hands or other body parts. If injured by hydraulic oil escaping under pressure, see a doctor immediately. Serious infection or reaction can occur if medical attention is not received at once.

1. Apply a thin coat of clean hydraulic oil to the o-rings on the end of the hoses and attach the hoses to the winch relief valve.

2. Route the hoses towards the inlet end of the conveyor. The hose clamps will attach to the conveyor housing using the bolts already in the housing (See illustration below). Starting at the winch, remove every fourth bolt in the housing (approx. every 40”). Slide the clamps onto the hoses and attach the clamps and hoses to the housing, with the clamps positioned as shown below.

3. At the inlet end of the conveyor, remove the lower left nut from the flanged bearing (See illustration below). Using the “L-shaped” hose clamp from the parts kit, position the hoses behind the clamp and attach the clamp to the bolt from which the nut was removed, reinstall the nut.

Note: The fittings used to connect the hoses to the tractor are not supplied, obtain these fittings locally. The connectors need to fit a 1/2” NPT male hose end.
**HITCH ASSEMBLY - ALL MODELS**

1. Attach the hitch to the inlet end of the conveyor as shown in Fig. 28 below. Use the 13/16” x 11” long pin and hair pins to secure the pivot section of the hitch.

2. The hitch can be adjusted to different angles to help accommodate your particular application. Pin the hitch in the desired position and secure using the bent pin and hair pin provided.

**PTO DRIVE ASSEMBLY - ALL MODELS**

1. Thread one 3/4” non-lock nut onto the PTO threaded tightener rod, followed by a 3/4” flat washer.

2. Guide the tightener rod into the bracket on the inlet housing and set the top of the PTO housing on the upper mounting brackets (See illustration below). Loosely bolt the PTO housing to the brackets using four 1/2” x 1 1/2” carriage bolts, flat washers and nylon locknuts (position the carriage bolts with the heads through the slots on the mount brackets).

3. Remove the two bolts and lock washers at the rear of the reducer gearbox as shown below. Install the belt guard bracket/PTO driveline storage support using the same bolts and lock washers previously removed.
4. Bolt the PTO shield hanger to the PTO housing using two 3/8" x 1" bolts and nylon locknuts (the shield bolts directly above the flange bearing).

5. Slide the PTO belt guard into the PTO housing and loosely bolt together using two 5/16" x 1" bolts, four flat washers and two nylon locknuts. Bolt the rear end of the belt guard to the belt guard bracket previously installed on the gearbox. Secure using three 5/16" x 1" bolts, six flat washers and three nylon locknuts.

6. Install the sheave and bushing to the reducer gearbox shaft. Make sure the 3/8" x 3" key is installed and make sure the sheave is aligned with the sheave in the PTO housing.

7. Pull the belts from inside the PTO housing to the reducer and install over the sheave. Install the other 3/4" flat washer onto the threaded tightener rod and thread on another 3/4" non-lock nut. Tighten the belts until there is approximately 1/2" of deflection when belts are firmly pressed in the center of the span between the sheaves.

8. Slide the u-joint shield over the end of the PTO driveline. Attach the 1 1/2" bore diameter end of the driveline to the input shaft extending from the PTO housing assembly. Make sure the 3/8" x 2" key is properly inserted and tighten the setscrews to secure PTO driveline to input shaft (See illustration for proper connection). Secure the u-joint shield to the shield hanger using two 3/8" x 1" bolts and nylon locknuts.

9. Set PTO driveline into the driveline storage support and pin into place. The driveline should always be stored in the storage support when not in use and during transport.

Snap the operator’s manual container into the holder located on the right side of the inlet hopper (the container also contains extra shear bolts for the PTO/tractor connection).

Operator's Manual Container
5/16" x 1" Bolt, Flat Washers & Nylon Locknut
3/8" x 1" Bolt & Nylon Locknut
Belt Guard
U-Joint Shield
3/8" x 2" Key
Sheave & Bushing
PTO Drive Sheave Shaft
3/8" x 1" Bolt, Flat Washer & Nylon Locknut
PTO Driveline

IMPORTANT! For the setscrew in the PTO driveline yoke to be properly engaged on the sheave shaft, slide the yoke onto the shaft until the setscrew will sit on the flat portion of the shaft. Do Not extend the shaft beyond the inside edge of the yoke.
**ELECTRIC DRIVE ASSEMBLY**

*(ALL MODELS)*

1. Attach the upper belt guard bracket to the left rear motor mount bracket as shown below. Secure the belt guard bracket using three 3/8” x 1” bolts and nylon locknuts.

2. Bolt the 3/4” threaded adjustment rod to the motor mount plate as shown in the illustration below. Secure using two 1/2” x 1 1/2” bolts, flat washers and nylon locknuts.

3. Thread one 3/4” non-lock nut onto the adjustment rod and slide on a 3/4” flat washer. Position the motor mount plate onto the mount brackets welded to the conveyor housing while inserting the threaded rod into the adjustment bracket as shown below. Slide another 3/4” flat washer onto the rod and loosely install the other 3/4” non-lock nut.

4. Loosely bolt the motor mount legs to the mount brackets using four 1/2” x 1 1/4” carriage bolts, flat washers and nylon locknuts.

5. Install the appropriate sized electric motor onto the motor mount plate *(the motor and its mounting hardware are not furnished. Refer to Page 5 for proper motor size information.)*

Use the proper size and speed motor to ensure satisfactory conveyor operation.

6. Temporarily secure the motor to the mount plate by loosely installing a bolt and nut to help hold the motor in place while finishing the assembly procedures for installing the driven sheave, belt guard and belts.

The motor will be repositioned when aligning the motor sheave with the driven (conveyor) sheave.
7. Remove and discard the two existing bolts and lock washers closest to the reducer gearbox input shaft (See illustration below).

8. Position the belt guard over the input shaft and secure to the gearbox using four 1/2” flat washers, two 1/2” spacers, two 1/2” x 6 1/2” bolts and the original lock washers (a flat washer will go on the bolt and lock washer side and a flat washer with the spacers between the guard and the gearbox, See illustration below).

9. Secure the belt guard to the upper belt guard bracket using two 3/8” x 1” bolts, four flat washers and two nylon locknuts.

10. Install the 1 3/4” bore bushing, 3/8” x 3” key and the larger diameter sheave onto the gearbox input shaft. Position the sheave as close to the gearbox as possible without actually contacting the gearbox. Secure sheave to input shaft with the setscrews provided with the bushing.

11. Attach the smaller diameter sheave and the remaining bushing and key to the electric motor shaft (40’ Models use a 3/8” x 2” key, 65’, 70, 80’ and 90’ Models use a 1/2” x 2” key).

12. Align the sheaves with each other using a straight edge placed against the front face of each sheave. Once aligned, remove the temporary bolt holding the motor in place. Note the mounting hole alignment for the motor to the mount plate. Using the appropriate hardware, secure the motor to the motor mount plate.

Verify sheave alignment, make any necessary adjustments and secure sheave to motor shaft using the setscrews provided with the bushing.

13. Install the belts over the sheaves, and using the threaded adjustment rod attached to the front of the motor mount plate, tighten the belts until proper tension has been achieved.

There should be approximately 9/16” (14 mm) of deflection per belt when using 7 1/2 lbs. (3 kg) of force at the center of the belt span between the two sheaves.

After 24 hours of operation, and for the remainder of the belt life, there should be 9/16” (14 mm) of deflection when using 4 to 5 1/2 lbs. (2 kg) of force.

14. Tighten all hardware and fasteners used during the electric drive assembly process.
**JACK ASSEMBLY - ALL MODELS**

1. Slide the spacer plate onto the tube of the support weldment (See Fig. 30 below). Insert the tube weldment into the mount tube on the side of the inlet hopper. Position the outer angle plate between the square tube and flange ring on the tube weldment (See Fig. 30).

2. Locate the jack stand from the parts kit. With the slotted end up, install the jack stand through the square tube on the support tube weldment as shown in Fig. 31. Attach the base plate to the bottom of the jack stand using one 1/2" x 4" bolt and nylon locknut.

3. Insert the pulley thru the slot at the top of the jack stand and align the hole in the pulley with the hole in the jack stand. Insert the 1" diameter spacer through the center of the pulley and secure pulley using one 1/2" x 3 1/2" bolt and nylon locknut.

4. Insert the 1/2" x 3 1/8" pin through the hole directly below the pulley and secure using the hair pin provided. This pin will be moved to the hole at the lower end of the jack stand when the conveyor is being transported (the pin will keep the jack stand from sliding through the support tube). Store the pin in the hole below the pulley when not in use.
JACK ASSEMBLY (con’t.)

5. Connect the winch to the threaded studs located on the support tube weldment (See Fig. 32). Secure the winch using two 3/8” flat washers and nylon locknuts.

6. Install the cable starting at the winch end. Wrap the cable once around the winch drum. Pass the end of the cable through one of the holes in the side of the drum and extend cable 1” past the set of square holes.

7. Secure the cable to the outside of the drum using two 3/16” x 3/4” carriage bolts, lock washers and non-lock nuts (bolts insert from the inside of the drum).

8. Route the cable up through the slot, over the pulley and down to the cable anchor located on the support tube weldment (See Fig. 32). Install the cable thimble onto the anchor and wrap the cable around the thimble. Secure the cable using one 3/16” cable clamp (make sure the u-bolt portion of the clamp is against the loose end of the cable). Wind up the excess cable onto the winch drum (the cable is properly attached when there is a clicking sound as the cable is being wound onto the drum). There should be at least three wraps of cable around the drum when the jack is raised to the transport position.

9. Position the jack to the desired position and insert the 5/8” x 5” bent pin in the appropriate hole to secure jack in place (See Fig. 30 on Page 65).
INLET HOPPER PANEL ASSEMBLY

1. Remove and retain the two bolts and attaching hardware that secure the rear side of the hopper screen to the boot (See Fig. 33). Insert the bottom of the rear hopper panel between the hopper screen and boot and align the mounting holes. Secure the panel using the hardware previously removed (Do Not tighten completely at this time).

2. Attach the hopper side plates to the boot and to the rear panel. The side plates will attach to the inside lip of the rear panel. Secure each side panels using six (6) 1/4” x 3/4” bolts, eight (8) flat washers and six (6) nylon locknuts (See Fig. 33). Insert the bolts head from the inside of the hopper panels. Once properly positioned, tighten all hardware securing the panels.

3. The hopper cover can be installed prior to conveyor storage and after each day of operation. Position the cover over the hopper panels and secure using eight (8) 5/16” x 3/4” bolts, sixteen (16) flat washers and eight (8) nylon locknuts (See Fig. 34).

HOPPER EXTENSION PANELS (OPTIONAL)

An optional hopper extension kit is available for this conveyor. The extension panels can be installed onto the hopper panels to increase hopper capacity.

1. Position the extension panels as shown in Fig. 34 below. Loosely attach the rear extension panel to the rear hopper panel using 1/4” x 3/4” bolts, flat washers and nylon locknuts (a flat washer will be used on the bolt and on the nut side). Attach the extension panels to the hopper panels and to each other using 1/4” x 3/4” bolts, flat washers and nylon locknuts (use a flat washer on the bolt and on the nut side).

Once panels have been properly assembled, tighten all hardware. The cover can be installed prior to conveyor storage and after each day of operation. The cover attaches using eight (8) 5/16” x 3/4” bolts, sixteen (16) flat washers and eight (8) nylon locknuts.
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<tr>
<td>Boot, Spout, Tracks and Trunk Sections (80’ &amp; 90’ Models)</td>
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<tr>
<td>Trolley, Winch Mount, Undercarriage Mount &amp; Trolley Stops (80’ &amp; 90’ Models)</td>
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PARTS LIST

DECALS & SAFETY SYMBOLS

![Decal Image 1](image1)

1. **DANGER**

2. **DANGER**

3. **CAUTION**

4. **IMPORTANT**

5. **Hutchinson-Mayrath**

6. **DANGER**

7. **DANGER**

8. **DANGER**

9. **WARNING**

10. **DANGER**

11. **DANGER**

12. **WARNING**

---

Serial No. Plate is Located on Left Side of Housing

70' Model Shown as Reference Only

---

<table>
<thead>
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<th>Part No.</th>
<th>Description</th>
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<tbody>
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<td>Danger Decal, Do Not Operate...</td>
</tr>
<tr>
<td>2</td>
<td>1002311</td>
<td>Danger Decal, Moving Chain...</td>
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<tr>
<td>3</td>
<td>1001973</td>
<td>Caution Decal, General Information</td>
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<tr>
<td>4</td>
<td>34221</td>
<td>Decal, Trunk Alignment</td>
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<td>5</td>
<td>1021180</td>
<td>Decal, Yellow Reflective</td>
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<td>6</td>
<td>34687</td>
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<td>1001981</td>
<td>Danger Decal, Upending...</td>
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<td>8</td>
<td>1001980</td>
<td>Danger Decal, Electrocution...</td>
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<td>9</td>
<td>1001975</td>
<td>Warning Decal, Transport</td>
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<td>10</td>
<td>1001984</td>
<td>Danger Decal, Disassembly</td>
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<td>Danger Decal, Missing Guards</td>
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<td>Warning Decal, Hydraulic</td>
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### HITCH COMPONENTS
*(ALL MODELS)*

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<td>3</td>
<td>D1166</td>
<td>Hair Pin</td>
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<td>4</td>
<td>1031068</td>
<td>Bent Pin, 3/4&quot; x 5&quot; long</td>
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### BOOT, TRACKS & TRUNK SECTIONS
*(40’ MODELS)*

#### 40’ Models

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<th>Part No.</th>
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<td>Boot Assembly</td>
</tr>
<tr>
<td>2</td>
<td>1034293</td>
<td>Lower Trunk Section, f/ 40’</td>
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<tr>
<td>3</td>
<td>1034294</td>
<td>Middle trunk Section, f/ 40’</td>
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<tr>
<td>4</td>
<td>1034295</td>
<td>Upper trunk Section, f/ 40’</td>
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<td>1032623</td>
<td>Head Section</td>
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<td>Lower Track, right (45” long)</td>
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<td>7</td>
<td>1034297</td>
<td>Upper Track, right (240” long)</td>
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<tr>
<td>8</td>
<td>1033698</td>
<td>Spout, Discharge (20”)</td>
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Refer to Page P-5 for Boot Parts Breakdown.
### PARTS LIST

**BOOT, TRACKS & TRUNK SECTIONS**  
(65’ & 70’ MODELS)

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<th>Ref. No.</th>
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<th>Part No.</th>
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Refer to Page P-5 for Boot Parts Breakdown.
### PARTS LIST

#### BOOT, TRACKS & TRUNK SECTIONS

*(80' & 90' MODELS)*

**80' Models**

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**90' Models**

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<td>2</td>
<td>1034083</td>
<td>Track, Lower Right f/ 90' (240&quot; lg)</td>
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<td>3</td>
<td>1035232</td>
<td>Track, Middle Left, f/ 80' (240&quot; lg)</td>
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Refer to Page P-6 for Boot Parts Breakdown.
## PARTS LIST

### BOOT COMPONENTS

**40', 65' & 70' MODELS**

For Complete Boot Assembly
Order Part No. 1032602

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<th>Part No.</th>
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<td>18</td>
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<td>Decal, Trunk Alignment</td>
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<td>3</td>
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<td>Reducer Mount Weldment</td>
<td>19</td>
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<td>Caution Decal, General Statement</td>
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<td>1012624</td>
<td>Sprocket, 81C-16T 3' bore</td>
<td>20</td>
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<td>1032628</td>
<td>Shield Screen Weldment</td>
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<td>1031921</td>
<td>Key, 5/8” square x 5 1/4” long</td>
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<td>33046</td>
<td>Bolt, 5/16-18 x 1” Gr 5 PLT</td>
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<td>553512</td>
<td>Key, 3/4” square x 3 1/2” long</td>
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<td>Flat Washer, 5/16” PLT</td>
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<td>D1150</td>
<td>Lock Washer, 3/8”</td>
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<td>Nut, 5/16-18 Nylon Lock, PLT</td>
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<td>Door, Inlet Hopper</td>
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<td>11</td>
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<td>Washer, 3 1/2” O.D. x 13/16” I.D.</td>
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<td>33157</td>
<td>Wingnut, 5/16-18 PLT</td>
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<td>Lock Washer, 3/4”</td>
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<td>15</td>
<td>D1143</td>
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<td>31</td>
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<td>Lock Washer, 5/16” PLT</td>
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<td>16</td>
<td>33244</td>
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<td>32</td>
<td>33151</td>
<td>Nut, 5/16-18 Non-Lock PLT</td>
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</table>
**PARTS LIST**

**BOOT COMPONENTS**

**80' & 90' MODELS**

For Complete Boot Assembly
Order Part No. 1033769

---

### Reference Numbers

1. **Wide Inlet Boot Weldment**
   - Ref. No.: 1033770
   - Description: 1033804 Inlet Boot Shaft

2. **Reducer Mount Weldment**
   - Ref. No.: 1032607
   - Description: 1033555 Sprocket, 81C-18T 3 7/16" bore

3. **Sprocket, 81C-18T 3 7/16" bore**
   - Ref. No.: 1033555
   - Description: 1031082 Reducer, Weasler 8100 4:1 ratio

4. **Reducer, Weasler 8100 4:1 ratio**
   - Ref. No.: 1031082
   - Description: 3090L1 Bearing, 2 7/16" bore, 4 hole flange

5. **Bearing, 2 7/16" bore, 4 hole flange**
   - Ref. No.: 3090L1
   - Description: 1031921 Key, 5/8" square x 5 1/4" long

6. **Key, 5/8" square x 5 1/4" long**
   - Ref. No.: 1031921
   - Description: 1033816 Key, 7/8" square x 3 1/2" long

7. **Key, 7/8" square x 3 1/2" long**
   - Ref. No.: 1033816
   - Description: 11 1033770

8. **Wide Inlet Boot Weldment**
   - Ref. No.: 1033770

9. **Shield Screen Weldment**
   - Ref. No.: 26 21 22

10. **Door, Inlet Hopper**
    - Ref. No.: 16 1004738

11. **Wingnut, 5/16-18 PLT**
    - Ref. No.: 33157

12. **Nut, 5/16-18 Nylon Lock PLT**
    - Ref. No.: 33144

13. **Nut, 5/8-11 Non-Lock PLT**
    - Ref. No.: 33151

---

**Ref. No.**  | **Part No.**  | **Description**  | **Ref. No.**  | **Part No.**  | **Description**
---|---|---|---|---|---
1 | 1033770 | Wide Inlet Boot Weldment | 17 | 1002311 | Danger Decal, Moving Chain...
2 | 1033804 | Inlet Boot Shaft | 18 | 34221 | Decal, Trunk Alignment
3 | 1032607 | Reducer Mount Weldment | 19 | 1001973 | Caution Decal, General Statement
4 | 1033555 | Sprocket, 81C-18T 3 7/16" bore | 20 | 1012872 | Danger Decal, Do Not Operate...
5 | 1031082 | Reducer, Weasler 8100 4:1 ratio | 21 | 33060 | Bolt, 3/8-16 x 1" Gr 5 PLT
6 | 3090L1 | Bearing, 2 7/16" bore, 4 hole flange | 22 | 1032628 | Shield Screen Weldment
7 | 1031921 | Key, 5/8" square x 5 1/4" long | 23 | 33046 | Bolt, 5/16-18 x 1" Gr 5 PLT
8 | 1033816 | Key, 7/8" square x 3 1/2" long | 24 | 33023 | Flat Washer, 5/16" PLT
9 | 11 1033770 | Wide Inlet Boot Weldment | 25 | 33135 | Nut, 5/16-18 Nylon Lock, PLT
10 | D1150 | Lock Washer, 3/8" | 26 | 1004738 | Door, Inlet Hopper
11 | D1149 | Nut, 3/8-16 non-lock | 27 | 33157 | Wingnut, 5/16-18 PLT
12 | 33110 | Bolt, 3/4-10 x 2" Gr 5 PLT | 28 | 4701-1 | Bolt, 5/16-18 x 3/4" Gr 5 PLT
13 | D1153 | Lock Washer, 3/4" | 29 | 1005798 | Clean Out Door, Inlet Hopper
14 | 1031908 | Bolt, 1/2-13 x 6" Gr 5 PLT | 30 | 33139 | Nut, 5/8-11 Nylon Lock PLT
15 | D1143 | Lock Washer, 1/2" | 31 | 33144 | Lock Washer, 5/16" PLT
16 | 33244 | Bolt, 5/8-11 x 2" Gr 5 PLT | 32 | 33151 | Nut, 5/16-18 Non-Lock PLT
## TRUSS COMPONENTS
### 65' & 70' MODELS

<table>
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<tr>
<td>1</td>
<td>106399</td>
<td>Truss Side (short) 32” long</td>
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<td>2</td>
<td>1033086</td>
<td>Truss Crossbrace (31” long)</td>
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<tr>
<td>3</td>
<td>1011200</td>
<td>Truss Side (tall) 43 11/16” long</td>
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<tr>
<td>4</td>
<td>1033087</td>
<td>Truss Crossbrace (lower) 28” lg.</td>
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<tr>
<td>5</td>
<td>1033088</td>
<td>Truss Crossbrace (upper) 40” lg.</td>
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<td>6</td>
<td>3010L11</td>
<td>Cable Clamp, f/ 3/8” cable</td>
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<table>
<thead>
<tr>
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<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>7</td>
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<td>Eye Bolt, 5/8-11</td>
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<td>8</td>
<td>33026</td>
<td>Flat Washer, 5/8”</td>
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<td>9</td>
<td>D1170</td>
<td>Nut, 5/8-11 Non-lock</td>
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<tr>
<td>10</td>
<td>1033242</td>
<td>Cable, 3/8” dia. x 60’ long (f/ 65’)</td>
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<td></td>
<td>1035177</td>
<td>Cable, 3/8” dia. x 65’ long (f/ 70’)</td>
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### TRUSS COMPONENTS
#### 80' & 90' MODELS

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<td>Truss Top Brace</td>
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<td>2</td>
<td>1032667</td>
<td>Anchor Tube</td>
<td>5</td>
<td>1019723</td>
<td>Truss X-Brace Tube</td>
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<td>Nut, 1-8 Non-Lock</td>
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### Parts List

#### Trolley, Winch Mount, Undercarriage Mount & Trolley Stops

**40' Models**

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<td>2</td>
<td>1034321</td>
<td>Lower Pulley Mount</td>
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<tr>
<td>3</td>
<td>1032685</td>
<td>Trolley Stop, Lower</td>
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<tr>
<td>4</td>
<td>1032679</td>
<td>Trolley Stop, Upper</td>
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<tr>
<td>5</td>
<td>1032704</td>
<td>Trolley Body Weldment</td>
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<tr>
<td>6</td>
<td>1032713</td>
<td>Roller Tube Assembly</td>
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<tr>
<td>7</td>
<td>1032721</td>
<td>Roller Pin Weldment</td>
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<tr>
<td>8</td>
<td>1021146</td>
<td>Bushing, Cable Anchor</td>
</tr>
<tr>
<td>9</td>
<td>1034318</td>
<td>Clevis, Cable Pulley</td>
</tr>
<tr>
<td>10</td>
<td>1034319</td>
<td>Bushing, Cable Anchor (f/ 1/2&quot; Bolt)</td>
</tr>
<tr>
<td>11</td>
<td>1032519</td>
<td>Pulley, f/ 5/16&quot; Cable</td>
</tr>
<tr>
<td>12</td>
<td>1028506</td>
<td>Washer, f/ Lift Trolley</td>
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<tr>
<td>13</td>
<td>1031583</td>
<td>Spacer, 3/8&quot; f/ Lift Trolley</td>
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<tr>
<td>14</td>
<td>1009494</td>
<td>Bolt, 1/2-13 x 3&quot; G5 PLT</td>
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<td>Nut, 1/2-13 Nylon Lock PLT</td>
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<td>1007943</td>
<td>Nut, 1-8 Lock</td>
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<tr>
<td>18</td>
<td>3337A1</td>
<td>Cotter Pin, 3/16&quot;</td>
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<tr>
<td>19</td>
<td>D1165</td>
<td>Cotter Pin, 1/4&quot; x 3&quot;</td>
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Complete Trolley Assembly
Order Part no. 1034316
(Includes Items 5 thru 19)
PARTS LIST

TROLLEY, WINCH MOUNT,
UNDERCARRIAGE MOUNT & TROLLEY STOPS
65’ & 70’ MODELS

The parts listed below are used for both the 65’ and 70’ Models.

Complete Trolley Assembly
Order Part No. 1032675
(Includes Items 5 thru 15)

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<td>Pulley, 5” O.D.</td>
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<td>Winch Mount</td>
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<td>1031583</td>
<td>3/8” Spacer f/ Lift Trolley</td>
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<td>3</td>
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<td>11</td>
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<td>Bolt, 1-8 x 3 1/2” Gr8 PLT</td>
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<td>4</td>
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<td>Upper Trolley Stop</td>
<td>12</td>
<td>1021146</td>
<td>Bushing, Cable Anchor</td>
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<td>Cotter Pin, .25” x 3” long</td>
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<td>8</td>
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**PARTS LIST**

**TROLLEY, WINCH MOUNT.**

**UNDERCARRIAGE MOUNT & TROLLEY STOPS**

**80' & 90' MODELS**

The parts listed below are used for both the 80' and 90' Models.

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<th>Ref. No.</th>
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<td>3/8&quot; Spacer f/ Lift Trolley</td>
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<td>Washer f/ Lift Trolley</td>
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<td>Lower Trolley Stop</td>
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Complete Trolley Assembly
Order Part No. 1034003
(Includes Items 5 thru 17)
### PARTS LIST

**WINCH, WINCH PULLEYS, LIFT CABLE, 40' MODELS**

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<td>Clevis, Lower Pulley Mount</td>
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<tr>
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<td>Bolt, 1-8 x 3 1/2&quot; G8 PLT</td>
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<td>6</td>
<td>1007943</td>
<td>Nut, 1-8 Nylon Lock</td>
</tr>
<tr>
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<td>Washer, 3.5&quot; dia. x 3/8&quot; thick</td>
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<td>Washer, 3.5&quot; dia. x .1382&quot; thick</td>
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<td>Bushing, 1&quot; x 9/16&quot; f/ Pulley Clevis</td>
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<td>Nut, 1/2-13 Nylon Locknut</td>
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<td>Bolt, 1/4-20 x 1 3/4&quot; Gr5 PLT</td>
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<td>Nut, 1/4-20 Side Depress Lock</td>
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<td>Clamp, f/ 5/16&quot; Cable</td>
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<td>20</td>
<td>- - -</td>
<td>Hair Pin (provided with Item #11)</td>
</tr>
<tr>
<td>21</td>
<td>- - -</td>
<td>Cotter Pin (provided with Item #11)</td>
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</table>

See Page P-13 for Winch Parts Breakdown
## Parts List

### Winch, Lift Cable, Winch Mount

**65' & 70' Models**

<table>
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<td>• Valve, Hydr. Bypass Relief</td>
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<td>1021237</td>
<td>• Lower Guard Half (winch)</td>
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<tr>
<td>4</td>
<td>1021164</td>
<td>• Cable, Lift (1/2&quot; dia. x 82' long)</td>
</tr>
<tr>
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<td>1021155</td>
<td>• Clevis, Cable Pulley</td>
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<td>6</td>
<td>D1165</td>
<td>• Cotter Pin, .25&quot; x 3.5&quot; long</td>
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<td>7</td>
<td>1007943</td>
<td>• Nut, 1&quot; Non-lock PLT</td>
</tr>
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*Indented Parts Names Indicate these Parts are Included in the Previous Assembly.*

<table>
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<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>8</td>
<td>1021064</td>
<td>Bolt, 1&quot; x 3 1/2&quot; G8 PLT</td>
</tr>
<tr>
<td>9</td>
<td>1031583</td>
<td>Washer, 1 5/8&quot; I.D. x 3/8&quot; thick</td>
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<td>Pulley, Cable (5&quot; O.D.)</td>
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<tr>
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<td>1021146</td>
<td>Bushing, Cable Pulley</td>
</tr>
<tr>
<td>12</td>
<td>1032743</td>
<td>Winch Mount</td>
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<tr>
<td>13</td>
<td>1021242</td>
<td>Upper Guard Half (winch)</td>
</tr>
<tr>
<td>14</td>
<td>1021158</td>
<td>Clamp, f/ 1/2&quot; Cable</td>
</tr>
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---

![Diagram of Winch, Lift Cable, Winch Mount](attachment:image.png)

- U-Bolt Portion of Clamp Against Loose End of Cable

- Bolt Portion of Clamp Against Loose End of Cable
## PARTS LIST

### WINCH, LIFT CABLE, WINCH MOUNT

#### 80’ & 90’ MODELS

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
<th>Ref. No.</th>
<th>Part No.</th>
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<td>Winch Mount</td>
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<td>Nut, 1-8 Nylon Lock G5 PLT</td>
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<td>Clevis, Lower Cable Pulley</td>
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<td>Bolt, 3/8-16 x 4” G5 PLT</td>
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<td>3</td>
<td>1021069</td>
<td>Hydraulic Winch, Complete</td>
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<td>Nut, 3/8-16 Nylon Lock PLT</td>
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<td>4</td>
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<td>Valve, Hydr. Bypass Relief</td>
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<td>Bushing, Cable Anchor</td>
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<td>5</td>
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<td>Lower Guard Half (winch)</td>
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<td>Washer, Flat 3.5” dia. x .1382 thick</td>
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<tr>
<td>6</td>
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<td>Upper Guard Half (winch)</td>
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<td>Pulley, f/ Lower Cable Anchor</td>
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<tr>
<td>7</td>
<td>1035315</td>
<td>Cable, 1/2” dia. x 155’ long</td>
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<td>Washer, Flat 3.5” dia. x 3/8” thick</td>
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<td>Bolt, 1-8 x 5” G8 PLT</td>
<td>16</td>
<td>1021158</td>
<td>Clamp, f/ 1/2” Cable</td>
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*Indented Parts Names Indicate these Parts are Included in the Previous Assembly.*
### UNDERCARRIAGE COMPONENTS

#### 40' MODELS

<table>
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<tr>
<th>Ref. No.</th>
<th>Part No. 1</th>
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<th>Part No. 2</th>
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<td>Undercarriage Weldment</td>
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<td>103241</td>
<td>Lug Bolt, 1/2-20 x 1”</td>
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<tr>
<td>2</td>
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<td>Pivot Bolt f trolley</td>
<td>13</td>
<td>1003103</td>
<td>Hub, 5 Bolt (includes Items 14 &amp; 15)</td>
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<tr>
<td>3</td>
<td>1033195</td>
<td>Pivot Bushing f trolley</td>
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<td>3147R1</td>
<td>Inner Cup (Timken No. LM48510)</td>
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<td>4</td>
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<td>Nut, 1-8 Nylon Lock</td>
<td>15</td>
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<td>Outer Cup (Timken No. LM67010)</td>
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<td>Bolt, 1-8 x 3” G5 PLT</td>
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<td>Spindle, 2.38” x 14” long</td>
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<td>Washer, Flat 1” PLT</td>
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<td>Outer Cone (Timken No. LM67048)</td>
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<td>1021198</td>
<td>Bushing, 1 1/2” O.D. x 15/16” lg</td>
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<td>8</td>
<td>1003104</td>
<td>Hub &amp; Spindle Ay. Complete</td>
<td>19</td>
<td>107233</td>
<td>Grease Seal</td>
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<tr>
<td>9</td>
<td>33384</td>
<td>Bolt, 1/2-13 x 4 1/2” G5 PLT</td>
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<td>Washer, Flat 2” x 13/16” x 7 GA.</td>
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<td>Nut, 1/2-13 Nylon Lock</td>
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<td>Cotter Pin, 5/32” x 1 3/4”</td>
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<td>11</td>
<td>1007971</td>
<td>Tire &amp; Rim</td>
<td>22</td>
<td>6360C</td>
<td>Slotted Hex Nut (castle nut) 3/4-16 UNF</td>
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<td>- -</td>
<td>107225</td>
<td>• Rim, 15 x 6 x 5 Bolt</td>
<td>23</td>
<td>107234</td>
<td>Dust Cover, Hub</td>
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<tr>
<td>- -</td>
<td>420156</td>
<td>• Tire, 15” 205/7515 Implement</td>
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</table>

*Indented Parts Names Indicate these Parts are Included in the Previous Assembly.*
NOTE: Connecting Tube Bolts to the *Bottom Side* of the Lower Arm

When installing axle, make sure reflective decals are facing up.

Items 20 & 21 are included with the hub (Item 19)

Grease Zerks on End of Radius Arms

This mount is already attached to the conveyor.

Trolley Shown for Reference Only
### UNDERCARRIAGE COMPONENTS

**65' & 70' MODELS**

All parts listed are used for both the 65' and 70' Models unless otherwise noted.

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>1035137</td>
<td>Radius Arm, Left f/ 70' (227 1/16&quot; long)</td>
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<td>1032698</td>
<td>Radius Arm, Left f/ 65' (212 3/32&quot; long)</td>
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<tr>
<td>2</td>
<td>1035136</td>
<td>Radius Arm, Right f/ 70' (227 1/16&quot; long)</td>
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<td>1032696</td>
<td>Radius Arm, Right f/ 65' (212 3/32&quot; long)</td>
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<td>3</td>
<td>1032703</td>
<td>Axle, 104 3/4&quot; long</td>
</tr>
<tr>
<td>4</td>
<td>1035153</td>
<td>Crossbrace Tube, Radius Arm f/ 70' (105 3/4&quot; long)</td>
</tr>
<tr>
<td></td>
<td>1033127</td>
<td>Crossbrace Tube, Radius Arm f/ 65' (102 3/4&quot; long)</td>
</tr>
<tr>
<td>5</td>
<td>1035141</td>
<td>Lift Arm f/ 70' (243&quot; long)</td>
</tr>
<tr>
<td></td>
<td>1032706</td>
<td>Lift Arm f/ 65' (221 1/32&quot; long)</td>
</tr>
<tr>
<td>6</td>
<td>1035141</td>
<td>Lift Arm f/ 70' (243&quot; long)</td>
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<tr>
<td></td>
<td>1032706</td>
<td>Lift Arm f/ 65' (221 1/32&quot; long)</td>
</tr>
<tr>
<td>7</td>
<td>1029648</td>
<td>Washer, 5&quot; O.D.</td>
</tr>
<tr>
<td>8</td>
<td>1021198</td>
<td>Bushing, 1 1/2&quot; O.D. x 15/16&quot; long</td>
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<tr>
<td>9</td>
<td>1035154</td>
<td>Crossbrace Tube, Lift Arm f/ 70' (99 1/8&quot; long)</td>
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<td>1033142</td>
<td>Crossbrace Tube, Lift Arm f/ 65' (96 1/4&quot; long)</td>
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<td>1033126</td>
<td>Connecting Tube (107&quot; long)</td>
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<td>Bushing, Trolley (1 1/2&quot; O.D. x 18 7/16&quot; long)</td>
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<td>12</td>
<td>1035159</td>
<td>Cross Stiffener f/ 70' (28 11/16&quot; long)</td>
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<td>1033129</td>
<td>Cross Stiffener f/ 65' (29 7/32&quot; long)</td>
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<td>1021204</td>
<td>Reflector Bracket</td>
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<td>End Plate f/ Cross Stiffener</td>
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<td>1033196</td>
<td>Pivot Bolt, f/ Trolley</td>
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<td>Nut, 1&quot; Nylon Lock PLT</td>
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<td>1025912</td>
<td>Wheel Rim, 16 x 6</td>
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<td>1025911</td>
<td>Hub, Wheel (furnished with items 20 &amp; 21)</td>
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<td>Outer Bearing Cup (Timken No. LM67010)</td>
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<td>Cotter Pin, 5/32&quot; x 1.75&quot;</td>
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<td>107234</td>
<td>Dust Cap</td>
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<td>D1147</td>
<td>Slotted Nut (castle nut)</td>
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<td>D1148</td>
<td>Washer</td>
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<td>Decal, Yellow Reflective</td>
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<td>Decal, Red Reflective</td>
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<td>1031922</td>
<td>Retainer Washer, 3 1/2&quot; O.D. x 13/16&quot;</td>
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To purchase the tire and rim assembly (tire mounted on rim) Order Part No. 1026197
UNDERCARRIAGE COMPONENTS
80' & 90' MODELS

Grease Zerks on End of Radius Arms

Collapsible Axle and Hub Parts Breakdown Shown on Page P-27

90' Model Shown as Reference Only
UNDERCARRIAGE COMPONENTS
80’ & 90’ MODELS

All parts listed are used for both the 80’ and 90’ Models unless otherwise noted.

<table>
<thead>
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<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1 2</td>
<td>1033864</td>
<td>Radius Arm, Left f/ 90’ (308 3/8” long)</td>
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<td>1035250</td>
<td>Radius Arm, Left f/ 80’ (278 7/8” long)</td>
</tr>
<tr>
<td>2 3</td>
<td>1033863</td>
<td>Radius Arm, Right f/ 90’ (308 3/8” long)</td>
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<td>1035249</td>
<td>Radius Arm, Right f/ 80’ (278 7/8” long)</td>
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<td>3 4</td>
<td>1034702</td>
<td>Lift Arm, Right f/ 90’ (324 1/8” long)</td>
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<td>Lift Arm, Right f/ 80’ (285 1/2” long)</td>
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<td>Lift Arm, Left f/ 90’ (324 1/8” long)</td>
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<td>Axle, Collapsible 147 5/8” long</td>
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<td>1033834</td>
<td>Lift Arm Crossbar (90 11/16” long)</td>
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<td>Crossbar, Radius Arm f/ 90’ (102 7/16” long)</td>
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<td>Crossbar, Radius Arm f/ 80’ (105” long)</td>
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<td>X-Brace, Lower Radius Arm, f/ 90’ Models Only (109 3/4” long)</td>
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<td>X-Brace, Upper Radius Arm, f/ 90’ (125 7/16” long)</td>
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<td>X-Brace, Lower Lift Arm f/ 90’ (128 3/16” long)</td>
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<td>X-Brace, Upper Lift Arm f/ 90’ (118 7/8” long)</td>
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<td>X-Brace, Lower Lift Arm f/ 80’ (108 1/8” long)</td>
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<td>X-Brace, Upper Lift Arm f/ 80’ (116 3/4” long)</td>
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<td>Trolley, Complete</td>
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<td>Bushing, Trolley (2” O.D. x 18 7/16” long)</td>
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<td>Pivot Bolt, f/ Trolley</td>
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<td>Mount, Undercarriage</td>
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<td>Retainer Plate (3 17/32” O.D. x 1/4” thick)</td>
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<td>End Plate f/ Cross-stiffener, 80’ Model (7” tall)</td>
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<td>Cross-stiffener, 90’ Model (29 1/16” long)</td>
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<td>Cross-stiffener, 80’ Model (28 19/32” long)</td>
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<td>Washer, 5” O.D. f/ radius arm/lift arm connection</td>
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<td>27</td>
<td>1021204</td>
<td>Bracket, Reflector</td>
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<td>28</td>
<td>1021198</td>
<td>Bushing, 1 1/2” O.D. x 15/16” long</td>
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<td>Tire, 16.5” x 16.1” /10 ply 5200# WR</td>
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<td>Wheel Rim, 16.1” x 14 x 8 Bolt</td>
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<td>Lug Nut</td>
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To purchase the tire and rim assembly (tire mounted on rim) Order Part No. 1034484
PARTS LIST

HEAD SECTION COMPONENTS
40’, 65’ & 70’ MODELS

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<th>Part No.</th>
<th>Description</th>
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<td>Head Weldment</td>
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<td>3090L1</td>
<td>Bearing, 4 Hole Flange, 2 7/16” bore</td>
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<td>3</td>
<td>1012624</td>
<td>Sprocket, 81C-16T 3” bore</td>
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<td>4</td>
<td>1021180</td>
<td>Decal, Yellow Reflective</td>
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<td>5</td>
<td>34221</td>
<td>Decal, Trunk Alignment</td>
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<td>31121</td>
<td>Roll Pin, 3/16” x 1”</td>
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<td>7</td>
<td>1033228</td>
<td>Take-Up Bolt Weldment</td>
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<td>8</td>
<td>D1152</td>
<td>Nut, 3/4-10 Non-lock</td>
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<td>1032626</td>
<td>Sprocket Shaft</td>
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<td>10</td>
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<td>Key, 3/4” sq. x 3 1/2” long</td>
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<table>
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<th>Description</th>
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<td>Bolt, Carriage 1/2-13 x 1 1/2”</td>
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<td>13</td>
<td>33025</td>
<td>Washer, 1/2” Flat PLT</td>
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<tr>
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<td>D1143</td>
<td>Lock Washer, 1/2” PLT</td>
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<td>D1169</td>
<td>Nut, 1/2-13 Non-lock PLT</td>
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<td>33044</td>
<td>Bolt, 5/16-18 x 3/4” Gr5 PLT</td>
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<td>33151</td>
<td>Nut, 5/16-18 Non-lock PLT</td>
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<td>Take-Up Plate Weldment</td>
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Complete Head Assembly, Order Part No. 1032623
# HEAD SECTION COMPONENTS

## 80' & 90' MODELS

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<td>Sprocket, 81C-16T 3&quot; bore</td>
</tr>
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<td>4</td>
<td>1021180</td>
<td>Decal, Yellow Reflective</td>
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<td>Decal, Trunk Alignment</td>
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<td>Nut, 3/4-10 Non-lock</td>
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<td>Sprocket Shaft</td>
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<td>Bolt, Carriage 1/2-13 x 1 1/2&quot;</td>
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<td>Washer, 1/2&quot; Flat PLT</td>
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<td>Nut, 5/8-11 Nylon Lock</td>
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<td>Take-Up Plate Weldment</td>
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PTO COMPONENTS
40', 65', 70', 80' & 90' MODELS

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<td>(40', 65' &amp; 70' Models)</td>
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<td>(See Page P-23 for parts breakdown)</td>
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## PARTS LIST

**PTO HOUSING BREAKDOWN**

*40', 65' 70', 80' & 90' MODELS*

All parts shown are used on all models unless otherwise noted.

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<td>Bearing, 4-hole Flange 1 1/2&quot; bore</td>
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ELECTRIC COMPONENTS
40', 65', 70', 80' & 90' MODELS

Belt Guard Shown
Without Door Attached

Electric Motor
Not Furnished
## ELECTRIC COMPONENTS

### 40’, 65’, 70’, 80’ & 90’ MODELS

All parts listed are used on all models unless otherwise noted.

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<td>Bracket, Belt Guard</td>
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<td>Spacer, 1” O.D. x 1/2” thick</td>
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<td>SD Bushing f/ Motor, 1 5/8” (40’ Models)</td>
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<td>SK Bushing f/ Motor, 2 1/8” (65’ &amp; 70’ Models)</td>
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## HYDRAULIC HOSES, CROSSOVER

### RELIEF VALVE

### 65, 70', 80' & 90' MODELS

All parts listed are used on all models unless otherwise noted.

### Ref. No. | Part No. | Description
--- | --- | ---
1 | 1032438 | Hydraulic Hose, .375" x 38' long (65’, 70’ & 80’ Models)
1 | 1032439 | Hydraulic Hose, .375" x 42’ long (90’ Models)
2 | 1006324 | Clamp, Hose 5/8"
3 | 1031448 | Hose Retainer
4 | 1032392 | Crossover Relief Valve
## EXTENDABLE AXLE COMPONENTS

### 80' & 90' MODELS

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<td>Axle Tube f/ Extendable Axle</td>
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<td>Decal, Red Retroreflective</td>
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<td>Decal, Orange Transport</td>
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<td>4</td>
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<td>Extendable Axle Assembly</td>
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<td>Extendable Axle Weldment</td>
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<td>Hub Assembly, 8-Bolt</td>
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<td>Pin Weldment f/ Extendable Axle</td>
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*Indented Parts Names Indicate these Parts are Included in the Previous Assembly.*
## JACK COMPONENTS

**40’, 65, 70’, 80’ & 90’ MODELS**

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<td>Keeper Kit, for Winch</td>
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</table>
### PARTS LIST

#### PTO DRIVELINE COMPONENTS

*40', 65, 70', 80' & 90' MODELS*

**Specifications:**
- U-Joint Type – 35R
- Conveyor End – 1 1/2" Bore with 3/8" Key Seat
- Tractor End – 1 3/8" – 6B Spline with Shear Bolt

**Replacement Parts are Not Lubricated.**
Replacement parts must be lubricated at the time of assembly. Refer to the “Lubrication” Section in this manual for proper procedures.

**NOTE:** Repair parts for PTO drivelines can also be purchased directly from:
- Weasler Engineering Inc.
  West Bend, WI  53095
  Ph: 414–338–2161

---

<table>
<thead>
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<td>242–22829</td>
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<td>Joint &amp; Tube Half Assembly w/Guard (Conveyor End)</td>
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<td>Roll Pin, 1/4&quot; x 1&quot; long</td>
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<td>Safety Sign, Inner Guard</td>
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* Shear Bolt Kit includes: Six (6) 3/8-16 x 1" Grade 8 Bolts and Locknuts.
Items 30 thru 33 are standard hardware items that can be purchased locally. Items 34 thru 37 are not available as separate parts because of the precision assembly required. If these parts require replacement, a new winch unit is recommended.

### Reference Table

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<td>Cable Keeper Kit</td>
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<td>Input Shaft Kit</td>
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<td>Intermediate Shaft Kit</td>
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<td>Ratchet Kit</td>
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## PARTS LIST

**INLET HOPPER PANELS**

*F/ ALL MODELS*

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<th>Part No.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1032731</td>
<td>Rear Hopper Panel</td>
</tr>
<tr>
<td>2</td>
<td>1032728</td>
<td>Hopper Panel, Right</td>
</tr>
<tr>
<td>3</td>
<td>1032729</td>
<td>Hopper Panel Left</td>
</tr>
<tr>
<td>4</td>
<td>4605-1</td>
<td>Bolt, 1/4-20 x 3/4” G5 PLT</td>
</tr>
<tr>
<td>5</td>
<td>33022</td>
<td>Flat Washer, 1/4” PLT</td>
</tr>
<tr>
<td>6</td>
<td>4003</td>
<td>Nut, 1/4-20 Nylon Lock</td>
</tr>
</tbody>
</table>

**HOPPER EXTENSION PANELS**

*F/ ALL MODELS*

<table>
<thead>
<tr>
<th>Ref. No.</th>
<th>Part No.</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>1034538</td>
<td>Extension Panel, Front</td>
</tr>
<tr>
<td>2</td>
<td>1034534</td>
<td>Extension Panel, Rear</td>
</tr>
<tr>
<td>3</td>
<td>1034532</td>
<td>Extension Panel, Side</td>
</tr>
<tr>
<td>4</td>
<td>1032730</td>
<td>Hopper Cover</td>
</tr>
<tr>
<td>5</td>
<td>4701-1</td>
<td>Bolt, 5/16-18 x 3/4” G5 PLT</td>
</tr>
<tr>
<td>6</td>
<td>33023</td>
<td>Flat Washer, 5/16” PLT</td>
</tr>
<tr>
<td>7</td>
<td>33135</td>
<td>Nut, 5/16-18 Nylon Lock PLT</td>
</tr>
<tr>
<td>8</td>
<td>4605-1</td>
<td>Bolt, 1/4-20 x 3/4” G5 PLT</td>
</tr>
<tr>
<td>9</td>
<td>33022</td>
<td>Flat Washer, 1/4” PLT</td>
</tr>
<tr>
<td>10</td>
<td>4003</td>
<td>Nut, 1/4-20 Nylon Lock</td>
</tr>
</tbody>
</table>
### CHAIN & PADDLE ASSEMBLY

**81XHH CHAIN, 48 PITCH LENGTH**

Chain & Paddle shown as they would be assembled in the bottom partition in the housing.

Intake End of Lower Trunk Housing

Discharge End of Lower Trunk Housing

Direction of Grain Movement

<table>
<thead>
<tr>
<th>REF. NO.</th>
<th>PART NO.</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1005588</td>
<td>Paddle, 1/2&quot; thick UHMW plastic</td>
</tr>
<tr>
<td>(1)</td>
<td>1005594</td>
<td>Paddle, 1/2&quot; thick UHMW plastic, for AR units</td>
</tr>
<tr>
<td>2</td>
<td>1038009</td>
<td>Chain w/ Brackets, 81XHH (10'-2 7/32&quot; long, 48 pitches)</td>
</tr>
<tr>
<td>3</td>
<td>1017077</td>
<td>Connecting Link, f/ 81XHH Chain</td>
</tr>
<tr>
<td>*</td>
<td>1034495</td>
<td>Offset Connecting Link f/ 81XHH Chain</td>
</tr>
<tr>
<td>4</td>
<td>4736</td>
<td>Bolt, 5/16-18 x 1 1/2&quot; G5 PLT</td>
</tr>
<tr>
<td>5</td>
<td>33135</td>
<td>Nut, 5/16–18 Nylon Lock PLT</td>
</tr>
<tr>
<td>6</td>
<td>33023</td>
<td>Flat Washer, 5/16&quot; PLT</td>
</tr>
</tbody>
</table>

* Not Shown