

OPERATOR'S AND PARTS MANUAL NO. PB-2WAY  
FOR  
3200 & 4200 SERIES

# MEYER

TSS VARIABLE SPEED MODEL  
Front & Rear Unload Forage Boxes  
with Independent Outfeed Clutch



## 3200 SERIES:

Model 3216  
Model 3218  
Model 3220

DO NOT OPERATE EQUIPMENT UNTIL THIS MANUAL HAS BEEN READ AND UNDERSTOOD.

## 4200 SERIES:

Model 4216  
Model 4218  
Model 4220  
Model 4222



MANUFACTURED BY  
**Meyer Mfg. Corp.**

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# INTRODUCTION

Congratulations on your purchase of a new Meyer farm equipment product. Undoubtedly you have given much consideration to your purchase and we're proud that you have selected Meyer. Pride in craftsmanship, engineering and customer service have made Meyer products the finest in the farm equipment industry today.

There is no substitute for quality. That is why thousands of people like you have purchased Meyer farm equipment. They felt it was the best equipment to serve their farming needs, now and in years to come. We ask that you follow our policy of "safety first," and we strongly suggest that you read through the owner's manual before operating your Meyer farm equipment.

Meyer Manufacturing Corporation wants to thank you for not compromising quality. We are determined to offer excellence in customer service as well as provide you with the very best value for your dollar.

## REMEMBER:

### FARM EQUIPMENT BUYERS TRUST THE NAME MEYER!

Sincerely,

All Employees of  
MEYER MANUFACTURING CORPORATION

Meyer Mfg. Corp. reserves the right to make improvements in design, or changes in specifications at any time, without incurring any obligation to owners of units previously sold.

This supersedes all previous published instructions.

**IMPORTANT:** The standard forage box header unit discharges to the LH side and the parts illustrations depict these units. If you have an optional RH unit, always specify the part number shown in this book followed by -RH. Nearly all header parts appear similar to the standard unit but are really mirror images. Box parts are all identical. If you specify -RH and there is no difference in the item you wish to order, this will be properly interpreted at the factory and will not cause any problem.

## IMPORTANT:

At the front of this manual is an Owner's Registration Form. Be sure your dealer has completed this form and promptly forwarded a copy to Meyer Manufacturing to validate the manufacturer's warranty. The product model and serial number are recorded on this form and below for proper identification of your Meyer Forage Box by your dealer and the manufacturer when ordering repair parts. The serial number plate is found near the control levers on your forage box and stamped in the front corner of the left hand end frame.

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

Date of Purchase \_\_\_\_\_

At the back of this manual is the repair parts section. All replacement parts are to be obtained from or ordered through your Meyer dealership. When ordering repair parts, refer to the parts section and give complete information including quantity, correct part number, detailed description and even Model No. and Serial No. of the forage box which needs repair parts.

## HOW TO READ YOUR SERIAL NUMBER

Your serial number is stamped above the discharge opening on the unit discharge end frame.

Example: 11T2242

Model Year / TSS / Model / Sequence of Build

↓ ↓ ↓ ↓

11 T 2 242

**NOTE:** All references to right hand (RH), left hand (LH), front and rear apply to the product as viewed from the rear of the box.

# PRE-DELIVERY & DELIVERY CHECK LIST

TSS Check List

## Meyer Manufacturing Corporation

Phone: 715-654-5132 • Toll-Free: 1-800-325-9103 • P.O. Box 405 • Dorchester, WI 54425

This Pre-Delivery & Delivery Check List must be gone through by the Selling Party and the Customer to validate the Owner's Registration Form.

### PRE-DELIVERY CHECK LIST

After the New Meyer Forage Box has been completely set-up, check to be certain it is in correct running order before delivering it to the customer.

The following is a list of points to inspect:

**Check off each item as you have made the proper adjustments and found the item operating satisfactorily. Any adjustments made, MUST be according to specifications defined in this manual.**

- All shields and guards are in place and securely fastened.
- All bolts and other fasteners are secure and tight.
- All mechanisms operate trouble free.
- All grease fittings have been lubricated, gear boxes filled to proper levels, and all roller chains are oiled. See "Lubrication" section of this manual.
- PTO shields turn freely.
- Cross Conveyor Chain and Main Apron Chains are at proper tension. See "Adjustments" section in this manual.
- All roller chain springs adjusted properly for automatic tensioning. See "Adjustments" section in this manual.
- Emergency Stop and Trip Cables operate properly.
- All decals are in place and legible.

### DELIVERY CHECK LIST

The following check list is an important reminder of valuable information that MUST be passed on to the customer at the time the unit is delivered.

**Check off each item as you explain it to the customer.**

- Explain to the customer that pre-delivery check list was fully completed.
- Give customer the Owner & Operator's Manual. Instruct to read and completely understand its contents BEFORE attempting to operate the Forage Box.
- Explain and review with customer the New Meyer Forage Box manufacturer's warranty.
- Show the customer where to find the serial number on the implement.
- Explain and review with the customer "Safety Precautions" section of this manual.
- Explain and review with customer the proper "Start-up and Operating Procedures" sections of this manual.
- Demonstrate the "Emergency Stop" operation, activation and reset. Also, demonstrate the PTO Shaft Locking Device, Main Clutch adjustments and the three Control Lever operations.
- Explain that regular lubrication and proper adjustments are required for continued proper operation and long life of the Forage Box. Review with the customer the "Lubrication" and "Adjustments" sections of this manual.
- Explain the importance of apron chain tension, and the need to watch and tighten during the break in period.
- Fully complete this "PRE-DELIVERY & DELIVERY CHECK LIST" with the customer.



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# MANUFACTURER'S WARRANTY

## MEYER (FRONT & REAR UNLOAD) FORAGE BOX

11/2014

- I. The "Owner's Registration Form" must be completed in full and promptly returned to Meyer Mfg. Corp. for this warranty to become both valid and effective. All warranties on new Meyer forage boxes shall apply only to the original retail customer from an authorized Meyer Mfg. Corp. dealership.
- II. This warranty shall not apply to any Meyer forage box which has been subjected to misuse, negligence, alteration, accident, incorrect operating procedures, has been used for an application not designed for or pre-authorized by Meyer in writing, has had the serial numbers altered, or which shall have been repaired with parts other than those obtained through Meyer Mfg. Corp. Meyer is not responsible for the following: Depreciation or damage caused by normal wear, lack of reasonable and proper maintenance, failure to follow the operator's manual recommendations or normal maintenance parts and service. Meyer is not responsible for rental of replacement equipment during warranty repairs, damage to a power unit (including but not limited to a truck or tractor), loss of earnings due to equipment down time, or damage to equipment while in transit to or from the factory or dealer.
- III. Meyer Mfg. Corp. warrants New Meyer Forage Boxes to be free from defects in material and workmanship under recommended use and maintenance service, as stated in the "Owner / Operator's Manual & Parts Book", as follows:
  - A. Meyer Mfg. Corp. will repair or replace F.O.B. Dorchester, WI, as Meyer Mfg. Corp. elects, any part of a new Meyer forage box which is defective in material or workmanship:
    - i. Without charge for either parts or labor during the first (1) year from purchase date to the original retail customer.
    - ii. Without charge for parts only during the second (2) year from purchase date to the original retail customer.
  - B. In addition to the above basic warranty, Meyer Mfg. Corp. will repair or replace F.O.B. Dorchester, WI as Meyer mfg. Corp. elects:
    - i. Any part of the following which is defective in material or workmanship (not neglect to recommended use and service) without charge for parts only (not labor) during the stated time periods from date of purchase to the original retail customer:  

Two (2) Years:	a. The 3200 and 4200 Series enclosed main apron drive Superior gearbox assembly, Meyer #19-0024 and #19-0025.
	b. The D667H and D667X pintle main apron chain assembly.

      - ii. Any part of the following which is defective in material or workmanship (not neglect to recommended use and service) with a "pro-rated" charge for parts only (not labor) during the stated time period from date of purchase to the original retail customer:  

Ten (10) Years:	a. The all bolted or all welded steel frame box structure.
	b. The aluminized steel or galvaneal steel painted panels which comprise the sides and rear of the box portion (not front unit) of the forage box, upon evidence satisfactory to Meyer Mfg. Corp., that any such panel either rusted or corroded through or cracked or split.
- IV. COMMERCIAL USE: Coverage as in paragraph III.A.i. ONLY, except warranty cover is for (90) days for parts and labor to the original commercial retail customer.
- V. Repairs eligible for labor warranty must be made by Meyer Mfg. Corp. or an authorized Meyer dealership. The original retail customer is responsible for the transportation of the forage box to the dealership for warranty service or for any service call expenses.
- VI. Except as stated above, Meyer mfg. Corp. shall not be liable for injuries or damages of any kind or nature, direct, consequential, or contingent, to persons or property. This warranty does not extend to loss of crop or for any other reasons.
- VII. No person is authorized to give any warranties or to assume any other obligation on Meyer Mfg. Corp.'s behalf unless made or assumed in writing by Meyer Mfg. Corp. This warranty is the sole and exclusive warranty which is applicable in connection with the manufacture and sale of this product and Meyer Mfg. Corp.'s responsibility is limited accordingly.
- VIII. Tires, optional scales and tarps fall under the original manufacturer's warranty.



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# **SAFETY FIRST**

 **This symbol is used to call attention to instructions concerning personal safety. Be sure to observe and follow these instructions. Take time to be careful!**

 **WARNING: BEFORE ATTEMPTING TO OPERATE THIS FORAGE BOX, READ AND STUDY THE FOLLOWING SAFETY INFORMATION. IN ADDITION, MAKE SURE THAT EVERY INDIVIDUAL WHO OPERATES OR WORKS WITH THE FORAGE BOX, WHETHER FAMILY MEMBER OR EMPLOYEE, IS FAMILIAR WITH THESE SAFETY PRECAUTIONS.**

The emergency stop mechanism stops only the front unloading unit from operating and not the rear unloading operation of the forage box! Trip the emergency stop regularly with the trip cables to ensure that it will shut the front unloading unit down in an emergency.

Require anyone who will operate this forage box to read and completely understand this owner's manual. Give necessary instructions.

DO NOT operate, service, inspect or otherwise handle this forage box until all operators have read this Owner's Manual and have been properly trained in its intended usage.

DO NOT allow minors (children) or inexperienced persons to operate this forage box.

If the forage box becomes clogged, shut off the tractor engine and allow all mechanisms to stop. Disconnect PTO shaft or hydraulic drive supply hoses (relieve hydraulic pressure). Then, clean or work on the forage box as required.

Always shut off power and disconnect PTO shaft or Hydraulic drive supply hoses (relieve hydraulic pressure) from tractor to prevent accidental startup or unexpected movement before working on forage box.

DO NOT clean, adjust or reset the emergency stop while the forage box is in motion.

Make sure all hydraulic fittings are tight and that all hoses are in good condition. Hydraulic fluid escaping under pressure can have sufficient force to penetrate skin and cause serious injury. Never investigate for hydraulic leaks by using a part of the body to feel for escaping fluid.

Inspect when first delivered and regularly thereafter; that all connections and bolts are tight and secure before operating.

Know how to stop the unloading unit of the forage box before starting it!

DO NOT operate until all shields and guards are in place and securely fastened.

Make certain everyone is clear of the forage box before applying power.

Keep hands, feet and clothing away from moving parts. Loose or floppy clothing should not be worn by the operator.

Stay well clear of the cross conveyor and discharge opening while operating.

DO NOT step up on any part of the forage box at any time. DO NOT use the PTO guard as a step.

DO NOT step over the power take-off shaft. Stay clear of the PTO at all times.

Keep PTO shaft telescoping tube shields turning freely. Keep PTO master shield on tractor. Replace damaged or missing shields.

Match the right tractor PTO spline and speed with the PTO driveline provided with the implement. Never operate PTO above normal 540 RPM rating. Never connect forage box PTO shaft to a 1000 RPM tractor PTO. Never use a spline adapter.

Keep the forage box away from power lines. Contact with electric lines may result in serious injury or death by electrocution!

Use only properly rated running gear and tires.

DO NOT tow at speeds in excess of 20 MPH when transporting this forage box. Never exceed a safe travel speed.

Observe all applicable traffic laws when transporting on public roadways (where legal to do so). Check local laws for all highway lighting and marking requirements.

Always install a SMV emblem on forage box for transporting on roadways and keep this emblem clean and bright.

MEYER MFG. CORP. PROVIDES GUARDS FOR EXPOSED MOVING PARTS FOR THE OPERATOR'S PROTECTION; HOWEVER, SOME AREAS CANNOT BE GUARDED OR SHIELDED IN ORDER TO ASSURE PROPER OPERATION. THE OPERATOR'S MANUAL AND DECALS ON THE FORAGE BOX ITSELF WARN YOU OF DANGERS AND MUST BE READ AND OBSERVED CLOSELY!

## **Study the Above Safety Rules**

**FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

# SAFETY FIRST

A brief definition of signal words that are used in this manual is as follows:

- ! DANGER** indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.
- ! WARNING** indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury and includes hazards that are exposed when guards are removed.
- ! CAUTION** indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It is also used to alert against unsafe practices.

**Warning Push For Emergency Stop**

46-0001-14 **DANGER** Rotating Augers Disconnect and Lock Out Power Before Entering Box to Service.

46-0001-15 **WARNING** ENTANGLEMENT HAZARD Keep All Shields In Place While Machine Is Running

46-0001-4 **DANGER** Moving Parts Keep Away

46-0001-5 **DANGER** Rotating Augers Disconnect and Lock Out Power Before Entering Box to Service.

46-0001-26 **DANGER** ENTANGLEMENT HAZARD Keep All Shields In Place While Machine Is Running

46-8500-7 **WARNING** OIL INJECTION HAZARD RELIEVE PRESSURE BEFORE SERVICING. DO NOT CHECK WITH HANDS. IF INJURED SEEK EMERGENCY MEDICAL ATTENTION.

46-0004-2 **WARNING** NOT A STEP! This is a PTO Guard. Very serious injury or amputation could result from contact with rotating PTO shaft.

46-0001-71 **WARNING** THE EMERGENCY STOP TRIP CABLE STOPS ONLY THE FRONT UNLOADING OPERATION AND NOT THE REAR UNLOADING OPERATION OF THE FORAGE BOX!

46-0001-72 **WARNING** Front & Rear Unloading Forage Boxes DURING REAR UNLOADING, UNLOADING IS BEST OBSERVED FROM THE TRACTOR SEAT. KEEP ALL PERSONS WELL CLEAR OF THE FORAGE BOX AND THE REAR DOOR UNLOADING AREA. THE EMERGENCY STOP DOES NOT STOP THE REAR-UNLOADING OPERATION OF THE FORAGE BOX!

46-0001-13 **DANGER** ROTATING DRIVE SHAFT CONTACT CAN CAUSE DEATH KEEP AWAY! DO NOT OPERATE WITHOUT- ALL DRIVE SHAFT GUARDS, TRACTOR AND EQUIPMENT SHIELDS IN PLACE DRIVE SHAFT SECURELY ATTACHED AT BOTH ENDS DRIVE SHAFT GUARDS THAT TURN FREELY ON DRIVE SHAFT READ OPERATOR'S MANUAL DO NOT USE PTO ADAPTORS

46-0001-22 **CAUTION** SAFETY FIRST (Do Not Operate This Machine Without Reading These Instructions)

46-0001-35 **CAUTION** TO PREVENT SERIOUS INJURY OR DEATH

**! CAUTION: READ ALL DECALS ON THE FORAGE BOX AND IN THIS MANUAL. KEEP THESE DECALS CLEAN AND REPLACE ANY LOST OR DESTROYED DECALS. BECOME FAMILIAR WITH ALL TRACTOR AND FORAGE BOX CONTROLS.**

# ! SAFETY FIRST

The Meyer Forage Box is manufactured with operator safety in mind. Located on the forage box are various decals to aid in operation and warn of danger or caution areas. Pay close attention to all decals on the forage box.

**! DO NOT REMOVE ANY DECALS. IF DECALS ARE LOST, DAMAGED OR IF FORAGE BOX IS REPAINTED, REPLACE DECALS. REMEMBER: DECALS ARE FOR YOUR PROTECTION AND INFORMATION.**



**! CAUTION: READ ALL DECALS ON THE FORAGE BOX AND IN THIS MANUAL. KEEP THESE DECALS CLEAN AND REPLACE ANY LOST OR DESTROYED DECALS. BECOME FAMILIAR WITH ALL TRACTOR AND FORAGE BOX CONTROLS.**

# **WARNING**

 **WARNING: IF FOR ANY REASON THE EMERGENCY STOP MECHANISM DOES NOT FUNCTION PROPERLY, DO NOT USE THE MACHINE UNTIL IT IS REPAIRED. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

## **OPERATION OF THE EMERGENCY STOP**

Across the upper edge of the front unloading unit is a “Warning Push For Emergency Stop” pushbar. By pushing on this bar during front unloading operation only, the forage box will shut down in an emergency.

Emergency stop trip cables connected to the “Emergency Stop” pushbar extend along both sides and down the front of the forage box. Pulling on these trip cables will also shut down the front unloading unit of the forage box in an emergency.

**NOTE: The emergency stop mechanism DOES NOT STOP the PTO drive shaft, nor the rear unloading operation of the forage box.**

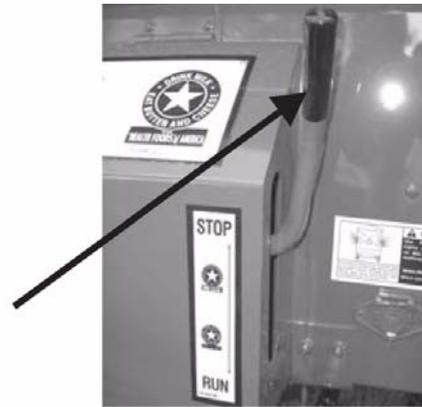
 **WARNING: THE EMERGENCY STOP MECHANISM STOPS ONLY THE FRONT UNLOADING UNIT FROM OPERATING AND NOT THE REAR UNLOADING OPERATION OF THE FORAGE BOX!**

## **EMERGENCY STOP TRIP LOCATIONS**



## **RESETTING THE EMERGENCY STOP**

 **WARNING: DO NOT RESET THE EMERGENCY STOP MECHANISM UNTIL ALL PEOPLE, TOOLS AND OTHER OBJECTS ARE WELL CLEAR OF THE FORAGE BOX. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



### **INDEPENDENT OUTFEED CLUTCH CONTROL LEVER**

To reset the emergency stop mechanism, fully engage the INDEPENDENT OUTFEED CLUTCH control lever into the “RUN” position.

Check frequently to be assured that the emergency stop mechanism is in proper operating condition. Slowly engage the tractor PTO and operate the forage box at an idle speed to ensure it is operating properly. Push the emergency stop bar across the upper edge of the front unloading unit, to ensure that the forage box can be shut down in an emergency.

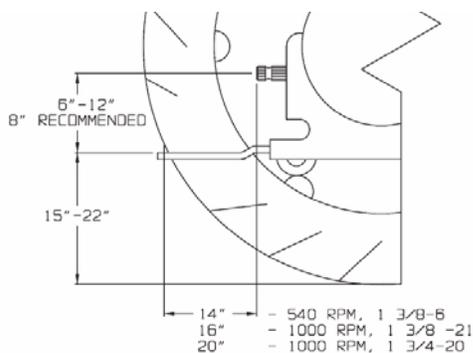
Reset the emergency stop and recheck using the emergency stop trip cables at various locations to ensure that the forage box can be shut down in an emergency. Periodically repeat emergency stop inspections during the operating season and at all times keep excessive slack out of the emergency stop trip cables.

# PRE-OPERATION

Be certain your forage box is properly mounted to the running gear. Consult your dealer if you have any questions about the tie down kit from the manufacturer and illustrated in the parts listing of this manual.

DO NOT fill the cross conveyor unloading area with forage to get extra capacity. Overloading puts unnecessary pressures and strains on the cross conveyor and auger drive.

This forage box is to be operated with 540 RPM PTO ONLY. No PTO adapter may be used to alter speed or geometry. Set your tractor drawbar to conform to the standard dimensions as shown on the following illustration. This will ensure that the PTO drive shaft will not be over extended.



**DRAWBAR & PTO RELATIONSHIP**

**! DANGER: DO NOT OPERATE WITHOUT PTO GUARD ON MACHINE AND ON TRACTOR. MAINTAIN PTO DRIVE SHAFT GUARDS IN OPERATING CONDITION. REPLACE THEM IF DAMAGED AND NOT TURNING FREELY. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

**! WARNING: INSPECT REGULARLY THAT ALL CONNECTIONS AND BOLTS ARE TIGHT AND SECURE BEFORE OPERATING. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Inspect the forage box for proper adjustments as this will ensure maximum machine performance. See "Adjustments" section. Grease and oil the forage box as required. See "Lubrication" section.

**! WARNING: DO NOT OPERATE UNTIL ALL SHIELDS AND GUARDS ARE IN PLACE AND SECURELY FASTENED. FAILURE TO HEED MAY**

## RESULT IN SERIOUS PERSONAL INJURY OR DEATH. TRANSPORTING

Always disconnect the PTO drive shaft from the tractor and return it to the PTO storage bracket on the unloading unit before transporting. Failure to do this may result in equipment damage.

If you have a fold down cross conveyor extension, always transport with this extension folded up to reduce your width. Check and observe that the rear discharge door is completely latched closed before traveling on roadways.



**FOLD DOWN CROSS CONVEYOR EXTENSION**

**! WARNING**

To prevent serious injury or death:

- Read and understand owner's manual before using. Review safety precautions annually.
- No riders allowed when transporting.
- Securely attach to towing unit. Use a high strength appropriately sized hitch pin with a mechanical retainer and attach safety chain.
- Do not exceed 20 mph (33 kph). Slow down for corners and rough terrain.
- Do not drink and drive.
- Before moving running gear, be sure required lights and reflectors are installed and working.
- Before maintenance or repair, stop vehicle, set parking brake, and remove ignition key.
- Place safety stands under frame and chock wheels before working on tires or running gear.
- Maintain wheel bolts at torque as recommended in the manual.
- If equipped with brakes, maintain proper adjustment.

46-0800-4

**! WARNING**

**CRUSHING HAZARD**

To prevent serious injury or death:

- Keep hands and body out of hitch area when attaching towing vehicle.
- Keep body clear of crush point between towing vehicle and load.

46-0800-4

**! WARNING**

**RUN-AWAY HAZARD**

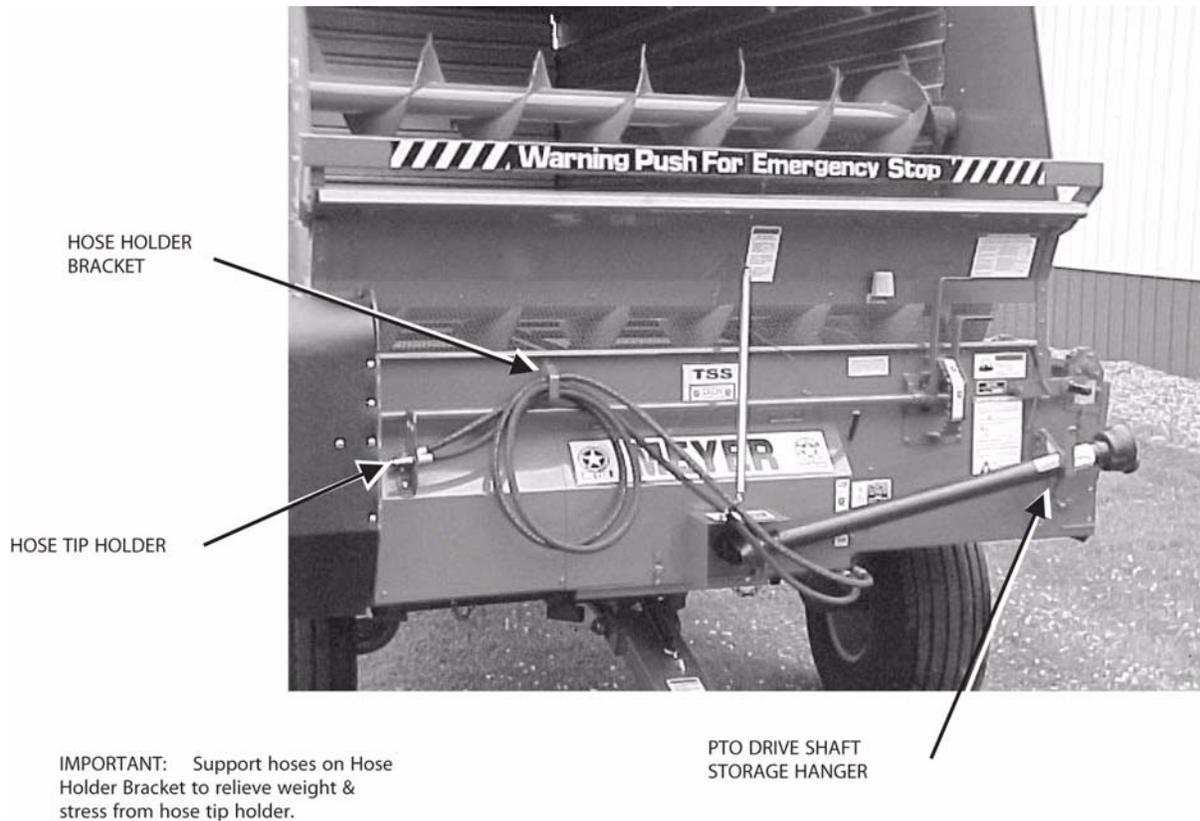
To prevent serious injury or death:

- Shift to lower gear before going down steep grades.
- Keep towing vehicle in gear at all times.
- Never exceed a safe travel speed.

46-0800-4

**! WARNING: INSTALL A SMV EMBLEM ON REAR OF FORAGE BOX FOR TRANSPORTING ON**

**ROADWAYS. KEEP THIS EMBLEM CLEAN AND BRIGHT. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



**IMPORTANT:** Support hoses on Hose Holder Bracket to relieve weight & stress from hose tip holder.

PTO DRIVE SHAFT STORAGE HANGER

**PROPER PTO DRIVE SHAFT AND HYDRAULIC HOSE STORAGE**

Your running gear probably has a telescoping tongue for convenience to hitch up. Always back up and lock this tongue in the operating position after hitching.

If you will travel on public roads and it is legal to do so, you must know all rules governing such operation. This will include lighting and brake requirements in addition to traffic rules. You will also be required to install a safety chain device on the running gear.

**! WARNING: YOU MUST OBSERVE ALL APPLICABLE TRAFFIC LAWS WHEN TRANSPORTING ON PUBLIC ROADWAYS. CHECK LOCAL LAWS FOR ALL HIGHWAY LIGHTING AND MARKING REQUIREMENTS. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

**! CAUTION: USE FLASHING WARNING LIGHTS WHEN TRANSPORTING ON ALL PUBLIC ROADWAYS, EXCEPT WHEN PROHIBITED BY LAW.**

**! WARNING: DO NOT TOW AT SPEEDS IN EXCESS OF 20 MPH. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Operating speed is dictated by the terrain over which you are traveling. Always use caution. Avoid traveling on slopes or hills that are unsafe.

	<p><b>! CAUTION</b> Use Flashing Warning Lights when transporting on <u>ALL</u> highways (public roadways) at <u>ALL</u> times.</p>
<p>EXCEPT WHEN PROHIBITED BY LAW! (Check w/local law enforcement)</p>	
<p><small>By all State and Federal laws, implement lights do not replace the SMV (Slow-Moving Vehicle) Identification Emblem. All towed agricultural vehicles must display SMV Emblems when traveling LESS than 20 mph (32 kph).</small></p>	
<p><small>46-0001-62 1</small></p>	

Check for traffic constantly. Be sure you can see that no one is attempting to pass you and that all traffic is sufficiently clear from you before making any turns.

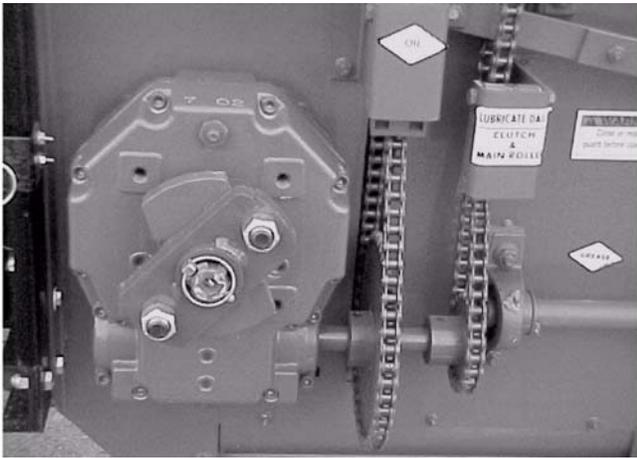
## TRUCK MOUNT FORAGE BOXES

Depending on the make and model of truck it may be necessary to install a light converter (MEYER PART #56-0028.) Converter will allow signal lights and brake lights to operate according to DOT lighting standard. Call factory for more information.

# **FRONT UNLOAD DRIVE COUPLER “SET-UP”** **(PTO OR HYDRAULIC DRIVE)**



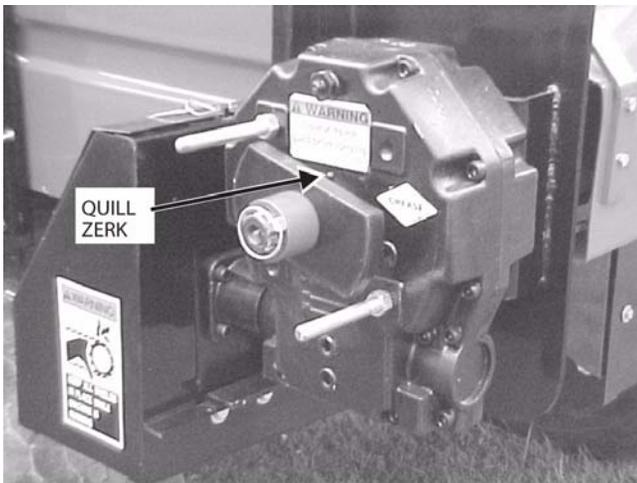
**WARNING: DISCONNECT PTO DRIVE SHAFT AND HYDRAULIC HOSES (RELIEVE HYDRAULIC PRESSURE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS FORAGE BOX. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



### STEP 1

Install Coupling Plate and lynch pin onto the large gearbox assembly, splined shaft at the **FRONT** of the forage box.

(Shield Removed For Illustration Purposes Only)  
**COUPLING PLATE**



### STEP 2 IMPORTANT! (MUST PERFORM)

Install sleeve spacer and lynch pin onto the hydraulic drive gearbox at the **REAR** of the forage box. The internal splined shaft will be idling in reverse and the gearbox quill zerk must be greased daily.

(Shield Removed For Illustration Purposes Only)  
**SLEEVE SPACER**



**WARNING: DO NOT OPERATE WITHOUT ALL SHIELDS, GUARDS AND COVERS INSTALLED. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



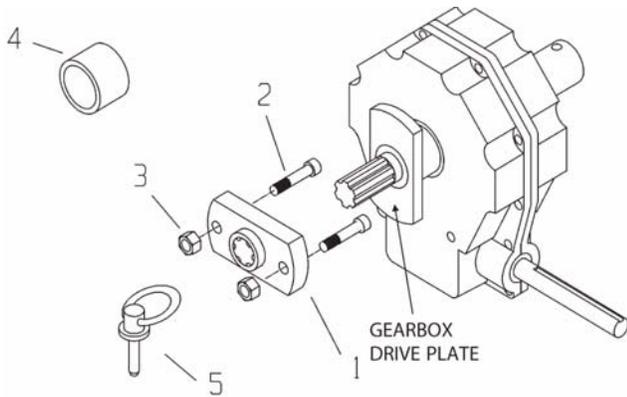
**STEP 3**

Move the lever for PTO drive rear unloading to the “Disengage” position (UP).

(Shield Removed For Illustration Purposes Only)  
**PTO DRIVE REAR UNLOAD DISENGAGE LEVER**

Operating Procedures: See Front Unload “VARIABLE SPEED OPERATION with IOC” Page 13.

**#37-0010 COUPLING PLATE ASSEMBLY COMPLETE**



KEY	PART NO.	DESCRIPTION
1	37-0010-4	Coupler Plate
2	831-7516-2	Drive Bolt, 3/4-16 x 2 Allen Head GR8
3	884-7516-Z	3/4-16 Flange Top Lock Nut
4	43-0020	Idler Sleeve Spacer
5	823-0002	Lynch Pin

# REAR UNLOAD DRIVE COUPLER “SET-UP” (PTO OR HYDRAULIC DRIVE)

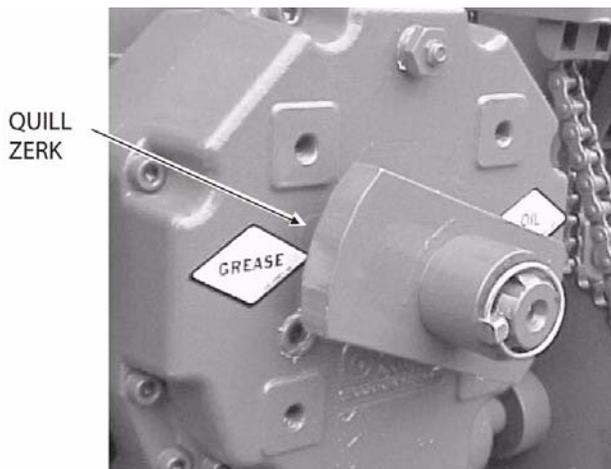
**!** WARNING: DISCONNECT PTO DRIVE SHAFT AND HYDRAULIC HOSES (RELIEVE HYDRAULIC PRESSURE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS FORAGE BOX. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.



(Shield Removed For Illustration Purposes Only)  
**COUPLING PLATE**

## STEP 1

Install Coupling Plate and lynch pin onto the large gearbox assembly on the splined shaft at the REAR of the forage box.



(Shield Removed For Illustration Purposes Only)  
**SLEEVE SPACER**

## STEP 2 IMPORTANT! (MUST PERFORM)

Install sleeve spacer and lynch pin onto the large gearbox assembly, splined shaft at the FRONT of the forage box. The internal splined shaft will be idling in reverse and the gearbox quill zerk must be greased daily.

**!** WARNING: DO NOT OPERATE WITHOUT ALL SHIELDS, GUARDS AND COVERS INSTALLED. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.

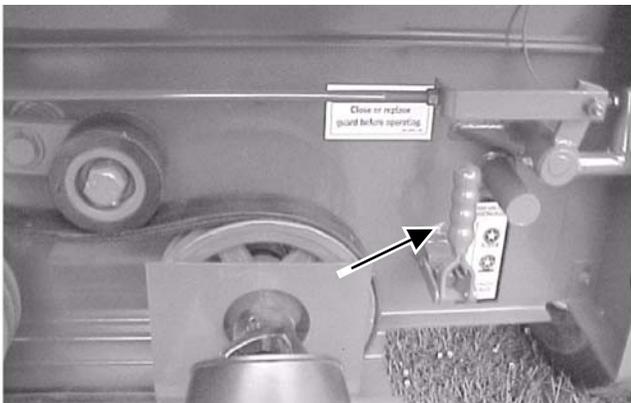


**INDEPENDENT OUTFEED CLUTCH LEVER**

**STEP 3**

Move the Independent Outfeed Clutch lever to “STOP” (UP).

**NOTE:** The PTO driven independent Outfeed clutch can be used to clean out accumulation of forage from the front unit cross conveyor without changing the drive coupler for forage box rear unloading.



(Shield Removed For Illustration Purposes Only)  
**PTO DRIVE REAR UNLOAD ENGAGE LEVER**

**STEP 4a (PTO DRIVE) or**

Move the lever for PTO drive rear unloading to the “ENGAGE” position (DOWN).



**HYDRAULIC CHECK VALVE AT REAR OF BOX**

**STEP 4b (HYDRAULIC DRIVE)**

Couple both supply and return line hydraulic hoses of the forage box to the hydraulic outlets of the towing tractor.

**NOTE:** The rear unloading gearbox and hydraulically driven motor, hydraulic return line features a check valve to protect and prevent any accidental damage by mistakenly, or incorrectly coupling hydraulic hoses to the tractor. The check valve is equipped with a reverse flow feature which will allow the box to run in a reverse direction for drive plate removal. Reverse hydraulic flow approximately 10-15 seconds to rotate gearbox drive plate away from the removable drive plate. **DO NOT RUN IN REVERSE FOR UNLOADING!**

**Operating Procedures: See “REAR UNLOAD OPERATION” (HYD or PTO) Page 18**

# FRONT UNLOAD VARIABLE SPEED OPERATION WITH INDEPENDENT OUTFEED CLUTCH

## FORAGE BOX CONTROL LEVERS

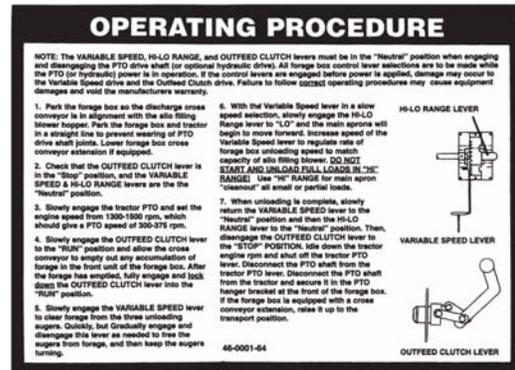
DECAL #46-0001-64

**! WARNING: NEITHER THE VARIABLE SPEED NOR THE HI-LO RANGE CONTROL LEVER WILL DISENGAGE THE CROSS CONVEYOR. ONLY THE TRACTOR PTO, INDEPENDENT OUTFEED CLUTCH, OR EMERGENCY STOP MECHANISM WILL STOP THE CROSS CONVEYOR. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Facing the front of the forage box, the lower most RH control lever is the INDEPENDENT OUTFEED CLUTCH control. Moving this control lever down into the “Run” position engages the cross conveyor and main drive mechanism. Engage this control lever into the “Run” position for normal operation. Once this control lever is engaged, it acts as the emergency stop when pushing on the “Warning Push for Emergency Stop” push bar or when pulling on the emergency stop trip cables.

The LH control lever is the VARIABLE SPEED control. Moving this control lever regulates rotational speed of the unloading augers and the forward speed of the main apron chains, in conjunction with the HI-LO RANGE control. At the uppermost notch on the control quadrant, the VARIABLE SPEED control is in “Neutral” position. In this position, neither the main apron chains advance, nor do the unloading augers rotate under load, regardless of the position of the HI-LO RANGE control. Moving the VARIABLE SPEED control lever down on the control quadrant increases speed of both auger rotation and main apron chain forward travel.

The RH control lever is the HI-LO RANGE control. Center detent is the “Neutral” position. Shifting the lever up on the control quadrant is “LO” RANGE and shifting the lever fully down is “HI” RANGE. Range selection affects the forward speed of the main apron chains only. In the “Neutral” position, the main apron chain does not travel forward.



Three levers control operating the front unloading unit of the forage box.

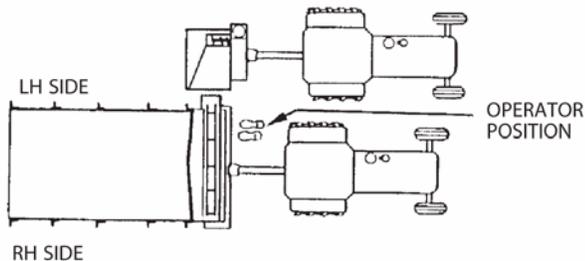
1. INDEPENDENT OUTFEED CLUTCH - IOC
2. VARIABLE SPEED
3. “HI-LO RANGE”

## UNLOADING THE FORAGE BOX

Pull the forage box into position and park so that the cross conveyor discharge opening is in alignment with the silo filling blower hopper. If the forage box is equipped with a fold down cross conveyor extension, it can be lowered before pulling in front of the blower. After a couple of parking trails, you may become familiar with the correct parking place and be able to lower the cross conveyor extension after parking. Always park the forage box and unloading tractor in a straight line. Minimize the unloading angle on the PTO drive shaft to prevent wearing of universal joints when connected to the unloading tractor PTO. Shift the unloading tractor to "Neutral" or "Park" and set the brakes.

**NOTE:** Normal operation is using a farm tractor. If using some other vehicle, exercise equivalent caution when parking and exiting this vehicle.

Properly dismount from the tractor and approach the forage box by walking along the left side of the tractor as shown in the following diagram. Do not approach the forage box from the right side of the machine (left hand unload). Approach the left front area of the forage box, as this is where the control levers are located. Standing in the operator position will not require crossing the PTO drive shaft at any time during the unloading operation.



### OPERATOR TRAFFIC PATTERN



**WARNING: DO NOT STEP OVER THE PTO DRIVE SHAFT. STAY WELL CLEAR OF THE PTO AT ALL TIMES. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



**WARNING: DO NOT STEP UP ON ANY PART OF THE FORAGE BOX AT ANY TIME. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

## START UP PROCEDURES

Remove PTO drive shaft from the forage box PTO storage bracket and connect to the tractor PTO. Be sure the PTO yoke is securely locked to the tractor PTO. If using an optional hydraulic drive, couple the hydraulic hoses to the power supply.

Check that the INDEPENDENT OUTFEED CLUTCH control lever is in the "Stop" position and the VARIABLE SPEED & HI-LO RANGE control levers are in the "Neutral" positions.

**NOTE:** The INDEPENDENT OUTFEED CLUTCH, VARIABLE SPEED, and HI-LO RANGE control levers must be in their "Stop" or "Neutral" positions when engaging and disengaging the PTO drive shaft (or optional hydraulic drive). All forage box control lever selections are to be made while the PTO (or hydraulic) power is in operation. If the control levers are engaged before power is applied, damage may occur to the Variable Speed drive or Independent Outfeed Clutch drive or both. Failure to follow correct operating procedures may cause equipment damage and may void the manufacturer's warranty.

At this time, start the silo filling blower. Return to the forage box unloading tractor, slowly engage the PTO, and set the engine speed from 1300-1500 RPM. to give a PTO speed of 300-375 RPM.

Return to the operator's position adjacent to the forage box controls. Intermittently engage the INDEPENDENT OUTFEED CLUTCH control lever to the "Run" position and allow the cross conveyor to empty out any accumulation of forage in the front unloading unit. After the forage has emptied, fully engage the INDEPENDENT OUTFEED CLUTCH control lever into the "Run" position.

Next, engage the VARIABLE SPEED control lever to clear forage from the three unloading augers. Intermittently move the lever between "Neutral" and the 1st and/or 2nd notch settings on the control quadrant. This will engage and disengage the augers at a slow speed to clear them without the main apron moving forward; because the HI-LO RANGE control lever is still in "Neutral."

With the augers cleared and running and the VARIABLE SPEED control lever in a slow speed setting, move the RANGE control lever to "LO" and the main apron chain will begin to move forward. Moving the VARIABLE SPEED control lever down on the control quadrant will increase speed of both auger rotation and main apron forward travel. Keep increasing speed of the VARIABLE SPEED control to regulate rate of forage box unloading speed to match the capacity of the silo filling blower.

Slow up, but do not stop the VARIABLE SPEED control when shifting to “HI” RANGE.

**! CAUTION: YOU CAN MOVE THE RANGE CONTROL LEVER TO “HI” FOR CLEAN-OUT AT THE END OF UNLOADING AND YOU MAY ALSO FIND IT TO BE AN APPROPRIATE SPEED SELECTION FOR SMALL OR PARTIAL LOADS. DO NOT START AND UNLOAD FULL LOADS IN “HI” RANGE.**

**NOTE:** Control lever settings must be made while the forage box front unloading unit is in operation. Moving the control levers with the unloading unit stopped will be difficult or impossible. This may cause equipment damages and may void the manufacturer’s warranty.

When finished unloading the forage box, perform the “Shut Down Procedures.”



**REAR OPENING DISCHARGE DOOR**

**! CAUTION (QUICK RELEASE!)**

## SHUTDOWN PROCEDURES

For proper operation, it is IMPORTANT that when unloading is completed to slowly return the VARIABLE SPEED control lever to the “Neutral” position and then the HI-LO RANGE control lever to the “Neutral” position. Then, disengage the INDEPENDENT OUTFEED CLUTCH control lever to the “Stop” position. This will prepare the forage box front unloading unit for proper “start-up” on the next load of forage.

**NOTE:** Control lever settings must be made while the forage box front unloading unit is in operation. Moving the control levers with the unloading unit stopped will be difficult or impossible. This may cause equipment damages and may void the manufacturer’s warranty.

Idle down the tractor engine RPMs. Disengage the PTO drive shaft and turn the tractor “OFF.” When all movement has stopped, disconnect the PTO drive shaft from the forage box unloading tractor and return it to the PTO storage bracket. Secure the PTO drive shaft into the PTO storage bracket with the rubber tie down strap. Shut down the silo filling blower tractor and wait for all motion to stop. If the forage box is equipped with a cross conveyor extension, raise it up to the transport position and securely latch it before traveling on roadways.

The unloading process described is to be performed by the operator alone. This will eliminate unexpected “start-ups” and minimize other hazards that could result by more than one person in control. If the forage box or silo filling blower should become clogged, shut off all power to the forage box and blower. Wait for all motion to stop. Disconnect PTO drive shaft or hydraulic supply and return hoses. Then, clean out the machine.

Never use “live” power to aid in the clean-out of a clogged machine. If any mechanism fails, move the forage box to a safe work area and then repair the mechanism before proceeding with unloading of the forage. If repairs require the removal of forage from inside of the forage box, then remove the rear discharge door (bolted hinges on top of each side) and then empty the forage manually by hand through the rear opening.

**! DANGER: NEVER ENTER THE FORAGE BOX OR FRONT UNLOADING UNIT FOR ANY REASON WITHOUT FIRST DISCONNECTING PTO DRIVE SHAFT OR HYDRAULIC HOSES FROM POWER SUPPLY. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Never enter the forage box for any reason if there is any possibility of power being applied to the unit.

## **REAR UNLOAD OPERATION PTO OR HYDRAULIC DRIVE**

**! WARNING: MAKE CERTAIN EVERYONE IS WELL CLEAR OF EQUIPMENT BEFORE APPLYING POWER. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Always park the forage box and unloading tractor in a straight line. Minimize the unloading angle on the PTO drive shaft to prevent wearing of universal joints when connected to the unloading tractor PTO. Shift the unloading tractor to "Neutral" or "Park" and set the brakes.

**NOTE:** Normal operation is using a farm tractor. If using some other vehicle, exercise caution when parking and exiting this vehicle.

Remove the PTO drive shaft from the forage box PTO storage bracket and connect it to the tractor PTO. Be sure the PTO yoke is securely locked to the tractor PTO. Move the Independent Outfeed Clutch control lever to the "Stop" position. If using a hydraulic drive, couple the hydraulic hoses to the power supply. Be sure the hydraulic hoses are securely locked to the tractor hydraulic couplers.

HINGE BOLTS



**REAR OPENING DISCHARGE DOOR**

**! CAUTION (QUICK RELEASE!)**

Make sure all persons are well clear of the forage box and the unloading area.

The rear discharge door opens automatically by releasing its latches as the main aprons begin to move. The rear discharge door can spring open with extreme force when its latches release. Pressure of forage against the rear door causes it to spring open very quickly.

**! WARNING: THE REAR DISCHARGE DOOR CAN SPRING OPEN QUICKLY AND WITH EXTREME FORCE. KEEP ALL PERSONS WELL CLEAR OF THE FORAGE BOX AND UNLOADING AREA. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Return to the tractor, restart, and **SLOWLY** engage the tractor PTO or hydraulics to start the apron chains and to open the rear door. Once the door opens, regulate the discharge flow with the tractor engine speed. Do not operate above rated tractor engine RPM speed.

Unloading is best observed from the tractor seat. Keep moving the forage box forward to prevent silage from being carried underneath into the main apron chain return area.



**REAR DISCHARGE DOOR LATCH**  
(Typical both sides)

**! WARNING: DO NOT STEP UP ON ANY PART OF THE FORAGE BOX AT ANY TIME. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

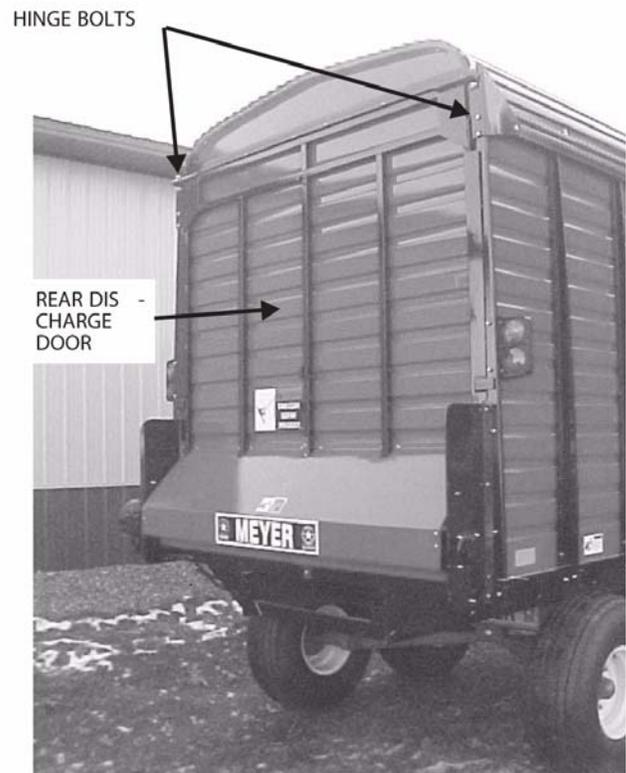
When finished unloading, reduce engine speed to idle and disengage the tractor PTO or hydraulics. Pull the forage box straight ahead to pull the rear door away from the unloaded pile of forage. Gravity will allow the rear door to swing shut. The rear door latches will engage to secure it closed. Visibly observe that rear discharge door properly latches closed.

The unloading process described is to be performed by the operator alone. This will eliminate unexpected “start-ups” and minimize other hazards that could result by more than one person in control. If the forage box should become clogged, shut off all power to the forage box and wait for all motion to stop. Disconnect PTO drive shaft or hydraulic supply and return hoses and then clean out the machine.

Never use “live” power to aid in the clean-out of a clogged machine. If any mechanism fails, move the forage box to a safe work area and then repair the mechanism before proceeding with unloading of the forage. If repairs require removal of forage from inside of the forage box, then remove the rear discharge door (bolted hinges on top of each side) and then empty the forage manually by hand through the rear opening.

**! DANGER: NEVER ENTER THE FORAGE BOX OR FRONT UNLOADING UNIT FOR ANY REASON WITHOUT FIRST DISCONNECTING THE PTO DRIVE SHAFT OR HYDRAULIC HOSES FROM POWER SUPPLY. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

Never enter the forage box for any reason if there is any possibility of power being applied to the unit.



**REAR OPENING DISCHARGE DOOR**

**! CAUTION (QUICK RELEASE!)**

# LUBRICATION



**WARNING: DISCONNECT PTO DRIVE SHAFT (OR HYDRAULIC POWER SOURCE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

## DAILY LUBRICATION

(every 8-10 loads)

**L1** Grease (2) PTO drive shaft universal joints (not illustrated). Grease (1) PTO drive shaft telescoping shaft and tube. Zerk accessible through the plastic guards (not illustrated).

**L2** Grease front idler sprocket - wipe off excess grease from exterior.

**L3** Grease (2) moveable clutch sheaves - wipe excess from interior and exterior. Prevent oil and grease from getting on clutch sheave belt drive surface.

**L4** Apply grease to lower cluster shaft end and lower variable speed engagement arm.

**L5** Oil (2) roller chains and "HI-LO" range sliding jaw clutch.

**L6** Grease "HI-LO" range brass shifting collar.

**L7** Oil (2) roller chains on auger drive and (1) roller chain on cross conveyor drive. Oil the middle and upper auger drive roller chains through slots provided in the chain shields.

**L8** Grease (2) gearbox hollow output shaft zerks (1 Front, 1 Rear - zerk located behind coupling plate).

## BEGINNING OF CROP MAINTENANCE

(approximately 100-150 loads)

**L9** Grease (4) main apron shaft bearings (2 Front, 2 Rear) (Front center bearing grease from zerk in left end frame).

**L10** Grease (3) shifter control lever guide sleeves. Grease (1) Independent Outfeed Clutch handle pivot under front shield.

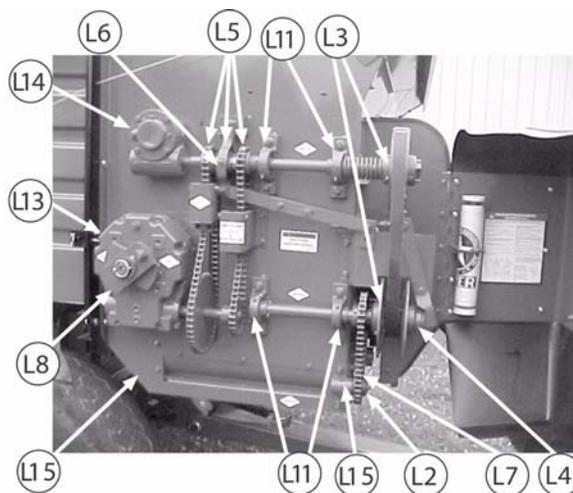
**L11** Grease (4) gear cluster shaft bearings.

**L12** Grease (2) rear gate hinges. Oil (2) rear gate latch pivot bolts.

**L13** Maintain oil in the front and rear main apron drive (2) gearboxes at the check plug level. Change oil in the gearboxes after the first season of use and yearly thereafter. Use #85W140 wt. Gear Lube Oil. Lighter oil may be used in temperatures below 20° F.

**L14** Maintain oil in the auger drive upper gearbox at the check plug level. Change oil in the gearbox after the first season of use and yearly thereafter. Use ONLY Synthetic ISO 460 Gear Oil AGMA 7 (Non EP) or equivalent.

**L15** Grease (4) Cross Conveyor Apron Shaft Bearings.



### LUBRICATION DIAGRAMS

(Shields Removed for Illustration Purposes Only)



UNDER SHIELD



(A1) Adjust main apron chain per “Adjustments” section. Adjust cross conveyor chain per “Adjustments” section.

(A2) Adjust shifter controls per “Adjustments” section.

(A3) Remove panel and clean out accumulation of foreign material build-up.

### END OF CROP CLEANUP AND MAINTENANCE

Allow box to completely clean out last load of forage. Clean out all forage material from inside the box, roof and on the outside of the box. Clean the front cross conveyor on the top pan and in the lower pan (chain return) area. Clean out the clean-out panel. Clean out the deflector shield at the rear of the box, both inside and outside.

It is recommended to lube the forage box before storage to exclude moisture from bearings. Apply oil to roller chain drives and to the main apron chains and cross conveyor chains. Also, new or used oil is recommended to be applied to the floor and inside of the box walls.

It is also a good time to inspect all adjustments and check for parts that need repair or replacement. Performing these tasks now will guarantee that the forage box is ready for use at the beginning of the next season.

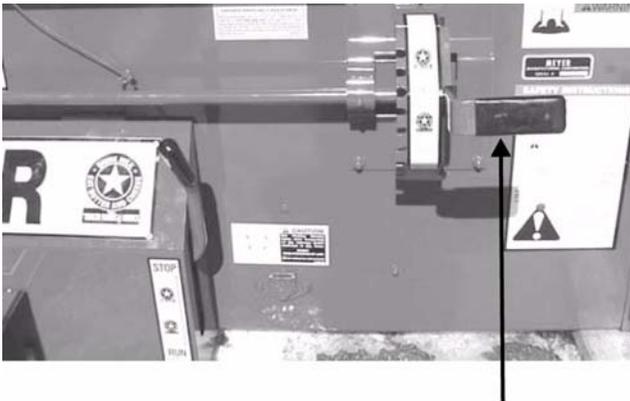
#### Equivalent Viscosity of ISO-VG Grades at 104°F and SAE Gear Lube Grades

ISO-VG Grade	SAE Gear Lube Grade
46	75W
100	80W-90
220	90
460	85W-140
1500	250

# TWO-SPEED OPERATION

## CONTROL LEVER

**! WARNING: THE RANGE CONTROL LEVER DOES NOT STOP THE CROSS APRON. ONLY THE TRACTOR PTO OR THE EMERGENCY STOP MECHANISM WILL STOP THE CROSS CONVEYOR. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**



**RANGE CONTROL LEVER**

The unloading of the forage box is controlled by the range control lever and the tractor PTO speed.

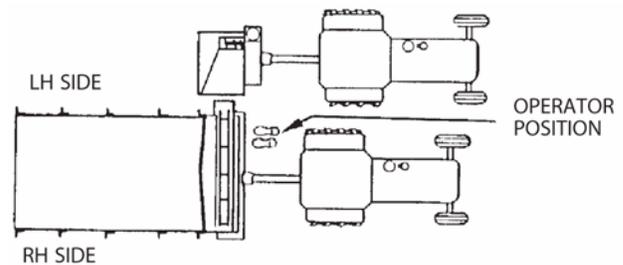
Center detent on the range control is “NEUTRAL”, up is “LOW” and down is “HIGH” range. Range selection affects the forward speed of the main apron chain only. In neutral, the apron does not advance.

## UNLOADING THE FORAGE BOX

Pull the forage box into position and park so that the cross conveyor discharge opening is in alignment with the silo filling blower hopper. If the forage box is equipped with a fold down conveyor extension, it can be lowered before pulling in front of the blower. After a couple of parking trials, you may become familiar with the correct parking place and be able to lower the cross conveyor extension after parking. Always park the forage box and unloading tractor in a straight line. Minimize the unloading angle on the PTO drive shaft to prevent wearing of universal joints when connected to the unloading tractor PTO. Shift the unloading tractor to “Neutral” or “Park” and set the brakes.

**NOTE:** Normal operation is using a tractor. If using some other vehicle exercise equivalent caution when parking and exiting this vehicle.

Properly dismount from the tractor and approach the forage box by walking along the left side of the tractor as shown in the following diagram. Do not approach the forage box from the right side of the machine (left hand unload). Approach the left front area of the forage box, as this is where the control levers are located. Standing in the operator position will not require crossing the PTO drive shaft at any time during the unloading operation.



**OPERATOR TRAFFIC PATTERN**

**WARNING: DO NOT STEP OVER THE PTO DRIVESHAFT. STAY WELL CLEAR OF THE PTO AT ALL TIMES. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

**WARNING: DO NOT STEP UP ON ANY PART OF THE FORAGE BOX AT ANY TIME. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OF DEATH.**

## **START UP PROCEDURES:**

Remove the PTO drive shaft from the forage box PTO storage bracket and connect it to the tractor PTO. Be sure the PTO yoke is securely locked to the tractor PTO. If using an optional hydraulic drive, couple the hydraulic hoses to the power supply.

Check that the INDEPENDENT OUTFEED CLUTCH control lever is in the "Stop" position and the HI-LO RANGE control lever is in the "Neutral" position.

**NOTE:** The INDEPENDENT OUTFEED CLUTCH and HI-LO RANGE control levers must be in their "Stop" or "Neutral" positions when engaging and disengaging the PTO drive shaft (or optional hydraulic drive). All forage box control lever selections are to be made while the PTO (or hydraulic) power is in operation. If the control levers are engaged before power is applied, damage may occur to the Independent Outfeed Clutch drive. Failure to follow correct operating procedures may cause equipment damage and may void the manufacturer's warranty.

At this time, start the silo filling blower. Return to the forage box unloading tractor, slowly engage the PTO, and set the engine speed from 1300-1500 RPM. to give a PTO speed of 300-375 RPM.

Return to the operator's position adjacent to the forage box controls. Intermittently engage the INDEPENDENT OUTFEED CLUTCH control lever into the "Run" position and allow the cross conveyor to empty out any accumulation of forage in the front unloading unit. After the forage has emptied, fully engage the INDEPENDENT OUTFEED CLUTCH control lever into the "Run" position.

Next, move the RANGE control lever to "LO" and the main apron chain will begin to move forward.

**IMPORTANT:** YOU CAN MOVE THE RANGE CONTROL LEVER TO "HI" FOR CLEAN-OUT AT THE END OF UNLOADING AND YOU MAY ALSO FIND IT TO BE AN APPROPRIATE SPEED SELECTION FOR SMALL OR PARTIAL LOADS. DO NOT START AND UNLOAD FULL LOADS IN "HI" RANGE.

**NOTE:** Control lever settings must be made while the forage box front unloading unit is in operation. Moving the control levers with the unloading unit stopped will be difficult or impossible. This may cause equipment damages and may void the manufacturer's warranty.

When finished unloading the forage box, perform the "Shut Down Procedures." Refer to page 17.

# TWO SPEED LUBRICATION AND MAINTENANCE



**WARNING: DISCONNECT PTO DRIVE SHAFT (OR OPTIONAL HYDRAULIC POWER SOURCE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

## ROLLER CHAIN DRIVES

The roller chain drives are tensioned by automatic spring loaded tension blocks.

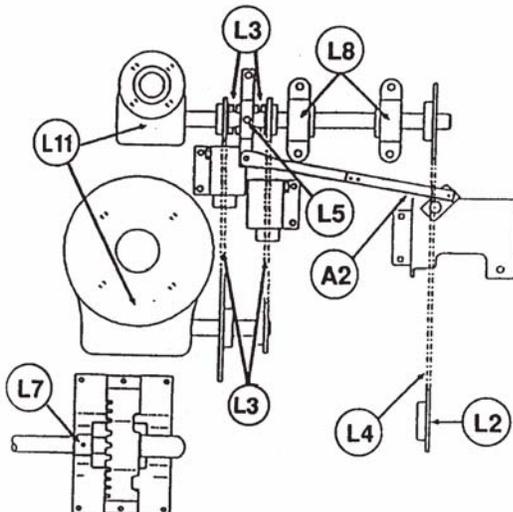
## RANGE CONTROL CLUTCH ENGAGEMENT

With the range control lever set to neutral, the engaging jaw clutch should be about midway between the “LO and “HI” sprocket clutch jaws on the splined shaft. Neither should be engaged. When the lever is moved to “LO” the engaging jaw clutch should mate with “LO” speed sprocket clutch and have about 1/16” of clearance. Likewise for the “HI” speed when the lever is moved to “HI”. This engagement is adjusted by changing the length of over-lap on the two, slotted hole linkage bars.

## DAILY LUBRICATION MAINTENANCE

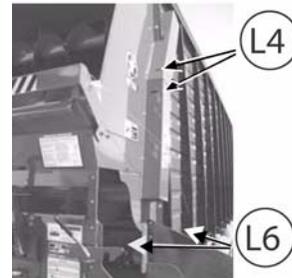
(every 8-10 loads)

- (L1) Grease PTO drive shaft joints (not illustrated).
- (L2) Grease front idler sprocket - wipe off excess grease from exterior.
- (L3) Oil roller chains and HI-LO range jaw clutch.



- (L4) Oil roller chains on auger drive and cross conveyor drive. Oil through slots provided in the chain shields.

- (L5) Oil or grease HI-LO range brass shifting collar.



## BEGINNING OF CROP MAINTENANCE

(approximately 100-150 loads)

- (L6) Grease main shaft bearings.
- (L7) Grease range control sleeve.
- (L8) Grease gear cluster shaft bearings.
- (L11) Maintain oil level in gear boxes. See L13 & L14, page 20.
- (L15) Grease (4) Cross Conveyor Apron Shaft Bearings, see page 20.
- (A2) Adjust range control per “Clutch Engagement”.

## END OF CROP CLEANUP AND MAINTENANCE

Clean out all forage material from inside the box, roof, and on the outside of the box. Clean the front cross apron on the top and in the lower pan (chain return) area. Clean out the deflector shield at the rear of the box, both inside and outside.

New or used oil is recommended to be applied to the floor and inside of the box walls. Also coat all apron chains and slats with oil.

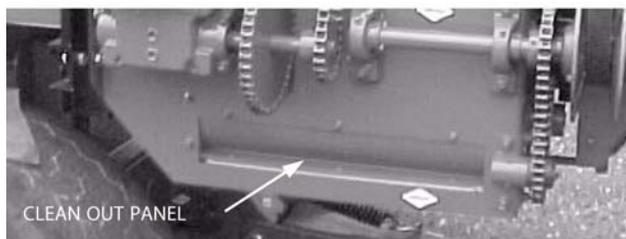
# ADJUSTMENTS



**WARNING: DISCONNECT PTO DRIVE SHAFT (OR HYDRAULIC POWER SOURCE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

**NOTE:** Some shields removed on adjustment diagrams for illustration purposes only.

## CLEAN-OUT PANEL



Remove clean-out panel on a regular basis to clean out accumulation of foreign material build-up. Keep this area clean for proper cross conveyor chain operation.

## CROSS CONVEYOR CHAIN WITH CROSS APRON HOLD DOWNS



Correct adjustment of the cross apron chain occurs when 12" of chain, APRON SLAT does not touch the BOTTOM PAN of the cross apron return area at the discharge opening. To tighten the chain, loosen the two bolts securing the slotted bearing bracket at each side of the discharge opening. Tighten the chain by tightening the nut on the adjuster bolt. Adjust both sides equally. Retighten the bearing bracket bolts.

## MAIN APRON CHAINS

After unloading the first ten loads from the front and also after unloading the first ten loads from the rear, check the main apron chain tension. After initial adjustment check chain tension daily for the next five days of operation. Initial wear in of chain will require adjustment to maintain proper chain tension. **FAILURE TO MAINTAIN PROPER CHAIN TENSION MAY VOID WARRANTY.**

Removable master links are included in each of the four strands for tightening after tightener travel is at its maximum. Remove a link from each of the four strands at the same time to assure proper timing.

The main aprons are each independently tensioned by an anchoring, adjustable bolt and pivoting arm tightener system.

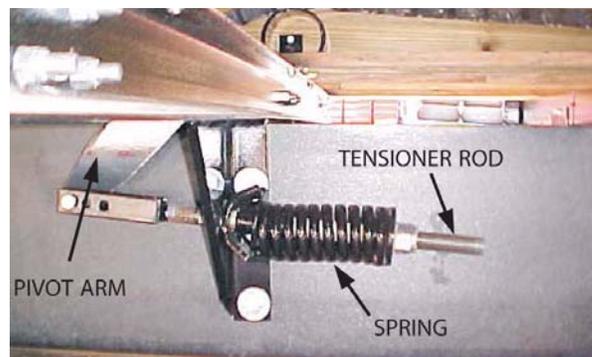


**PRIOR TO 08 SERIAL NUMBERS** - To tighten the main aprons, tighten down the anchoring eye bolts centrally located at each side of the forage box on the steel 10" stringers.

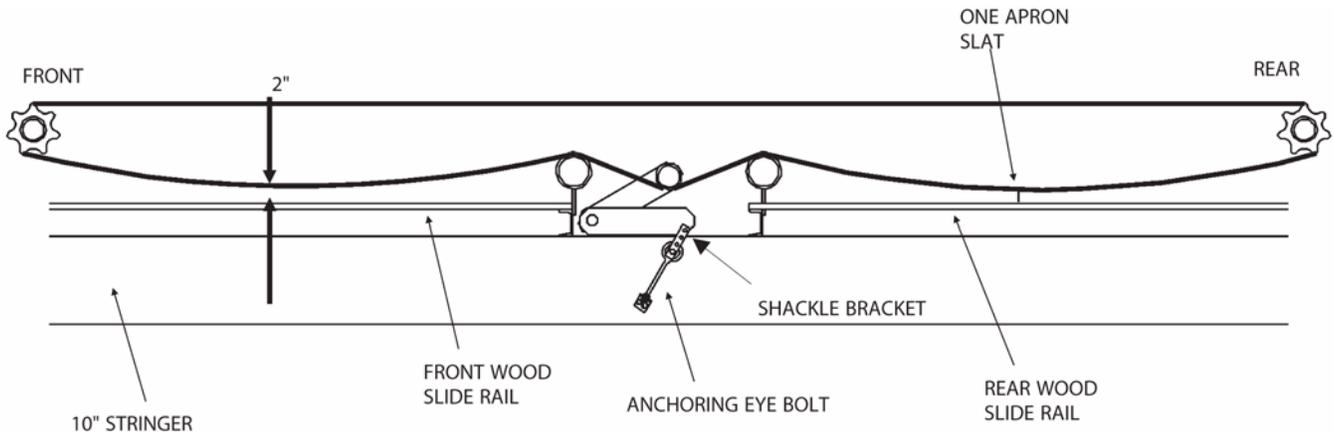
**08 SERIAL NUMBERS AND LATER** - To tighten the main aprons, tighten the tensioner rod on the spring loaded tensioner centrally located at each side of the forage box on the steel 10" stringers. Tighten the spring to a 5" compressed length.

In addition to tightening the anchoring eye bolts, there is located on the inner chain strands of each apron assembly a fine adjustment bolt on the pivoting arm tightener. Adjust as needed to equalize stretch in chain strand pairs of each independent apron assembly. See page 26.

### 08 SERIAL NUMBERS AND LATER



## MAIN APRON CHAINS (PRIOR TO 08 SERIAL #'S)



(LEFT HAND SIDE - SIDE VIEW) - TYPICAL BOTH SIDES

### A. For Regular Tightening:

#### **IMPORTANT AT ALL TIMES OF OPERATION!**

Correct apron tension occurs when the return main apron slats ride 2" at mid span off of the front pair of wooden slide rails and only one apron slat touches at mid span on the rear pair of wooden slide rails.

#### **For Additional Regular Tightening Adjustment:**

Move the main apron tightening pivot arm, pivot bolt down the length of the shackle bracket closer to the anchoring bolt.

**NOTE:** After repeated regular tightening of the main apron chain assemblies and when the return main apron slats begin to "bottom-out" onto the top of the 10" channel iron of the steel frame stringers, remove equal number of links from each apron chain assembly. Reset anchoring eye bolts for correct main apron tension.

### B. For Fine Tightening & to Equalize Stretch in Individual Chain Strand Pairs.

1. Allows to Fine Adjust/Tighten Individual Chain Strand Pairs of each Main Apron.
2. Allows to Equalize Stretch in Individual Chain Strand Pairs of each Main Apron.

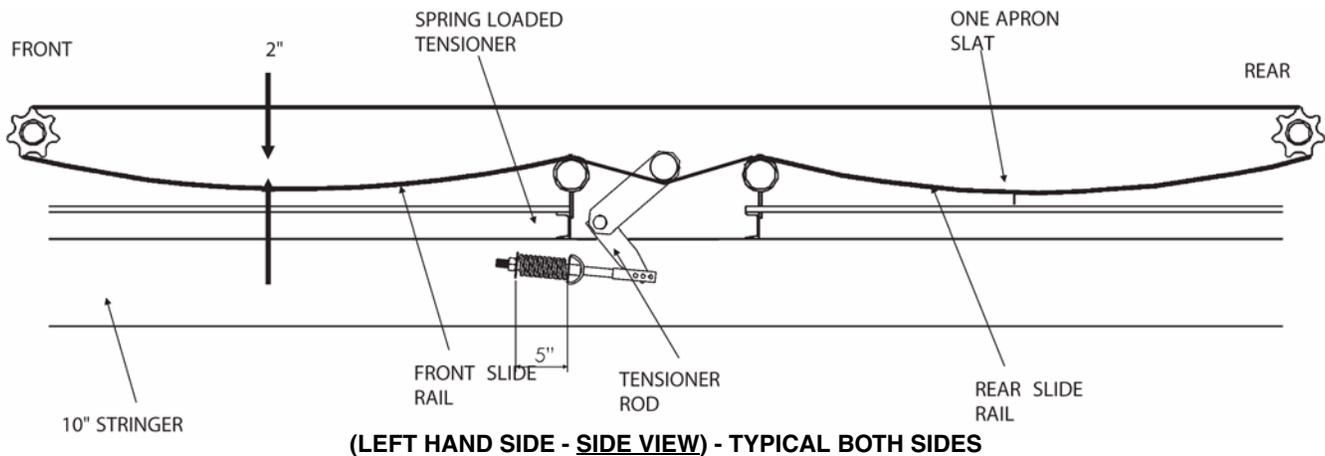
Loosen the anchoring eye bolt on the main apron chain prior to making the adjustments on the individual chain strands. This will allow easier adjustment of the adjuster bolt. Located on the inner chain strand of each main apron assembly, there is an adjustable, tightening pivot arm with a 1/2" x 1-1/4" adjuster bolt. Turn this 1/2" X 1-1/4" bolt by first loosening two set screws located on the adjustable pivot arm. Tighten or loosen the 1/2" adjuster bolt to make fine adjustment/tightening in the individual chain strands or to equalize stretch in the individual chain strand pairs of each independent main apron assembly. **Retighten the two set screws and retighten the anchoring eye bolt for correct apron tension.**

### **IMPORTANT! WARRANTY MAY BE VOIDED**

New Meyer Forage Box "Manufacturer's Warranty" shall not apply to any Meyer Forage Box, main apron chain, which has been subjected to misuse, negligence, alteration, accident or incorrect operation (adjustment) procedures.

Please! Follow **Correct Main Apron Tightening and Adjustment Procedures!**

## MAIN APRON CHAINS (08 SERIAL #'S & LATER)



### A. For Regular Tightening:

#### **IMPORTANT AT ALL TIMES OF OPERATION!**

Correct apron tension occurs when the return main apron slats ride 2" at mid span off of the front pair of slide rails and only one apron slat touches at mid span on the rear pair of slide rails.

#### **For Additional Regular Tightening Adjustment:**

There are 3 anchor holes on the clevis end of the tensioner rod. Relieve tension and anchor the clevis to a different hole when there is no more adjustment.

**NOTE:** After repeated regular tightening of the main apron chain assemblies and when the return main apron slats begin to "bottom-out" onto the top of the channel iron of the steel frame stringers, remove equal number of links from each apron chain assembly. Readjust the spring loaded tensioner for correct main apron tension.

### B. For Fine Tightening & to Equalize Stretch in Individual Chain Strand Pairs.

1. Allows to Fine Adjust/Tighten Individual Chain Strand Pairs of each Main Apron.
2. Allows to Equalize Stretch in Individual Chain Strand Pairs of each Main Apron.

Loosen the spring loaded tensioner on the main apron chain prior to making the adjustments on the individual chain strands. This will allow easier adjustment of the adjuster bolt. Located on the inner chain strand of each main apron assembly, there is an adjustable, tightening pivot arm with a 1/2" x 1-1/4" adjuster bolt. Turn this 1/2" x 1-1/4" bolt by first loosening two set screws located on the adjustable tightening pivot arm. Tighten or loosen the 1/2" adjuster bolt to make fine adjustment/tightening in the individual chain strands or to equalize stretch in the individual chain strand pairs of each independent main apron assembly. **Retighten the two set screws and readjust the spring loaded tensioner for correct apron tension.**

### **IMPORTANT! WARRANTY MAY BE VOIDED**

New Meyer Forage Box "Manufacturer's Warranty" shall not apply to any Meyer Forage Box, main apron chain, which has been subjected to misuse, negligence, alteration, accident or incorrect operation (adjustment) procedures.

Please! Follow **Correct Main Apron Tightening and Adjustment Procedures!**

## ROLLER CHAIN DRIVES

All roller chain drives are tensioned by automatic spring loaded tension blocks.

### RANGE CONTROL CLUTCH ADJUSTMENT

With the Range control lever set to "NEUTRAL," the sliding splined jaw clutch should be at midspan between the "LO" and "HI" sprocket clutch jaws on the splined gear cluster shaft. Neither "LO" nor "HI" should be engaged. When the lever is moved to "LO", the engaging jaw clutch should mate with the "LO" range sprocket clutch and have about 1/16" of clearance. Likewise for the "HI" range when the lever is moved to "HI." This engagement is adjusted by changing the length of over-lap on the two, slotted hole linkage bars. See Lubrication Diagram, page 24 for location - A2.

**NOTE:** Pending sprocket tooth wear, the two clutch sprockets and the sliding splined jaw clutch can be switched from left to right and right to left on the splined gear cluster shaft to access new wear on opposite sides of jaw shoulders.

### VARIABLE SPEED BELT REPLACEMENT

1. Shift the Variable Speed control lever to "NEUTRAL" (up).
2. Shift the Range control lever to "NEUTRAL" (center).
3. Move the Independent Outfeed Clutch control lever to "STOP" (up).
4. Lower the Fold Down Cross Conveyor Extension. If machine is equipped.
5. Open cluster shield plastic door.
6. Roll the old belt counter-clockwise off of the top sheaves starting at the 2:00 position.
7. Install the new belt around the lower sheaves and then roll clock-wise onto the top sheaves starting at the 10:00 position.
8. Close and securely fasten the cluster shield plastic door.
9. Raise and latch the Fold Down Cross Conveyor Extension. If machine is equipped.

## VARIABLE SPEED CONTROL ADJUSTMENT

When the Variable Speed control lever is in "NEUTRAL," neither the main aprons nor the unloading augers are to operate when under load - (when wagon is full of forage). Variable speed operation should begin when the lever is moved down one or two notches from "NEUTRAL." To adjust the drive belt, follow these steps:

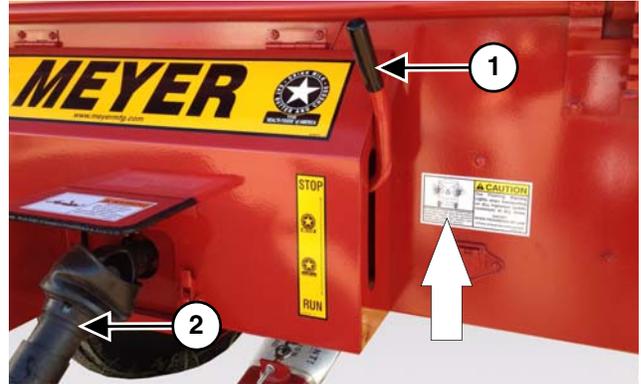
1. With the Variable Speed control lever in "NEUTRAL," remove the drive belt as described under Variable Speed Belt Replacement.
2. Move the Variable Speed control lever down to the 2nd from last notch on the control quadrant.
3. Check lower sheaves engagement:
  - A. If bases of sheaves do not set tight together: See step #4 (A)
  - B. If bases of sheaves bottom-out TOO tight together: See step #4 (B)
4. Loosen jam nut and remove bolt from the control rod special bolt and swivel eyelet assembly:
  - A. Lengthen or unthread the eyelet to set base of sheaves tight together.
  - B. Shorten or thread the eyelet to set base of sheaves tight together.
5. Reinstall bolt into control rod special bolt and swivel eyelet assembly, and tighten jam nut.
6. Check adjustment made by creating moderate tension on the Variable Speed control lever when moving lever between 2nd to last notch and last notch on the control quadrant.
7. Place Variable Speed control lever into "NEUTRAL," and reinstall the drive belt as described under Variable Speed Belt Replacement.

**NOTE:** The Variable Speed belt should be **REPLACED** when sheaves are correctly adjusted and the Variable Speed control lever does not engage the unloading augers until the 5th or 6th notch down on the control quadrant.

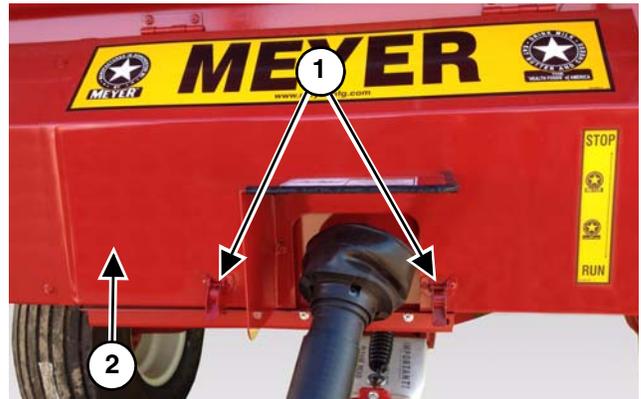
## INDEPENDENT OUTFEED CLUTCH BELT REPLACEMENT

**⚠ WARNING: DISCONNECT PTO DRIVE SHAFT (OR OPTIONAL HYDRAULIC POWER SOURCE) BEFORE CLEANING, ADJUSTING, LUBRICATING OR SERVICING THIS MACHINE. FAILURE TO HEED MAY RESULT IN SERIOUS PERSONAL INJURY OR DEATH.**

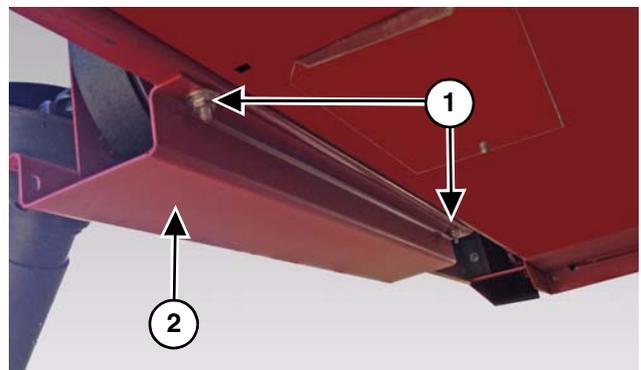
1. Move the Independent Outfeed Clutch control lever (Item 1) to “STOP” (up).
2. Extend the PTO drive shaft (Item 2) out straight and lower the tractor end down to ground.



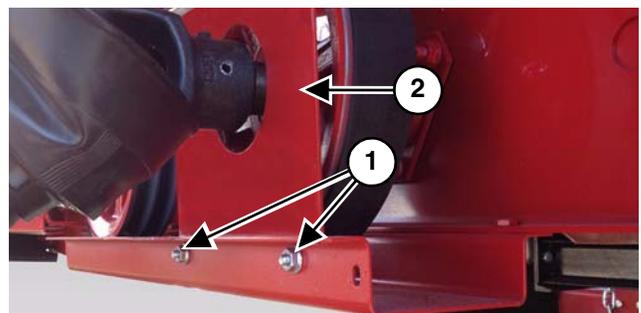
3. Release the two latches (Item 1) and raise the front chain shield assembly (Item 2).



4. Loosen the two bolts (Item 1) on the belt pan (Item 2).



5. Remove the two bolts (Item 1) for the PTO shaft cover (Item 2).



6. Roll off the old Double V-Belt from the two pulleys.
7. Slide the old Double V-Belt under the PTO shaft cover and down over the end of the PTO drive shaft.
8. Install new Double V-Belt over the end of the PTO drive shaft and up, under the PTO shaft cover and onto the two pulleys.

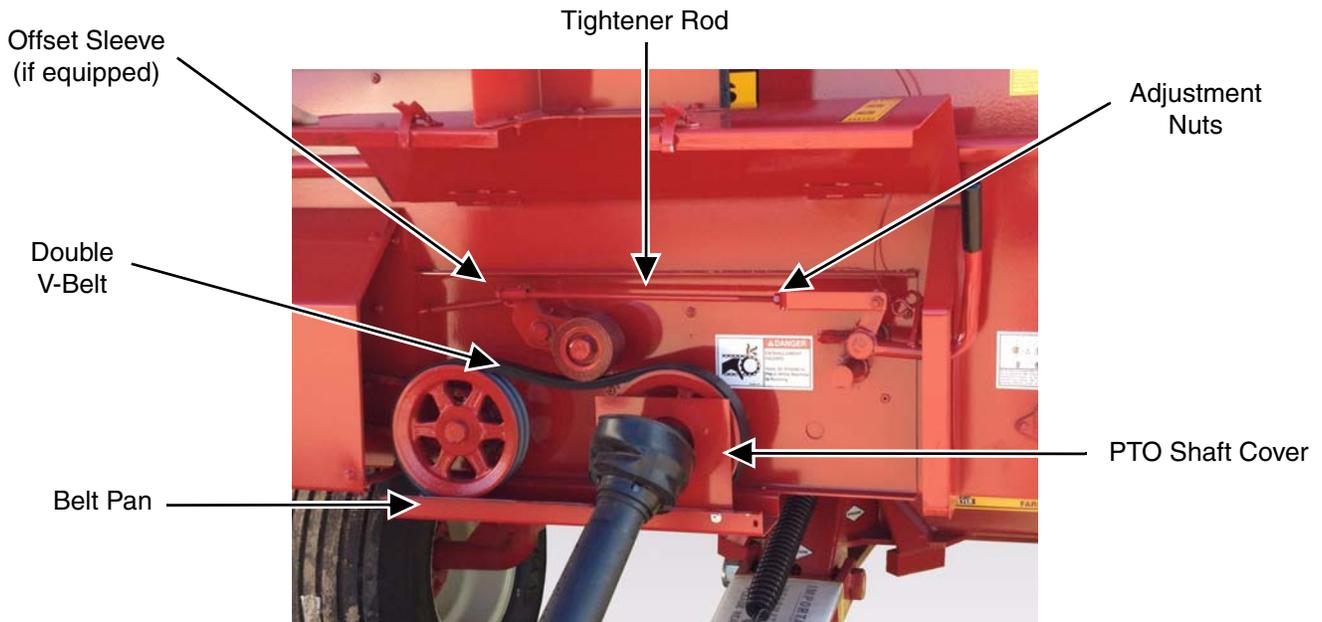


9. Move the Independent Outfeed Clutch control lever (Item 1) to "RUN" (down). Check for proper tension. Adjust as needed. (See Independent Outfeed Clutch Adjustment).
10. Refasten the PTO input shaft cover and belt pan.
11. Lower the front chain shield assembly and secure the two latches.
12. Raise the PTO drive shaft and place into the PTO storage bracket.



## INDEPENDENT OUTFEED CLUTCH ADJUSTMENT

Lengthen or shorten tightener rod with jam nuts to create moderate tension on the Double V-Belt when engaging the Independent Outfeed Clutch control lever into the "Run" position. See the following illustration for component locations.

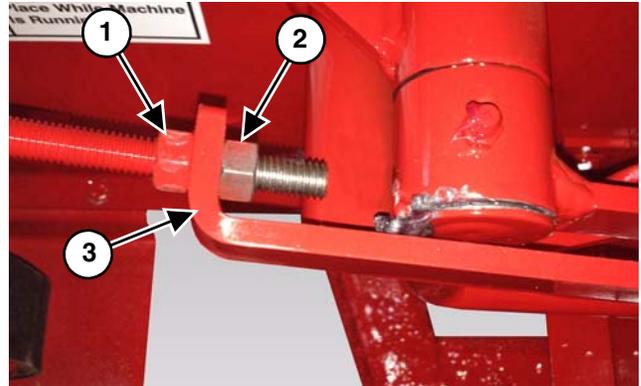


**NOTE: Proper tension is when the belt is loose enough so that it does not engage when the handle is up (disengaged), and that it does not slip under load when the handle is down (engaged).**

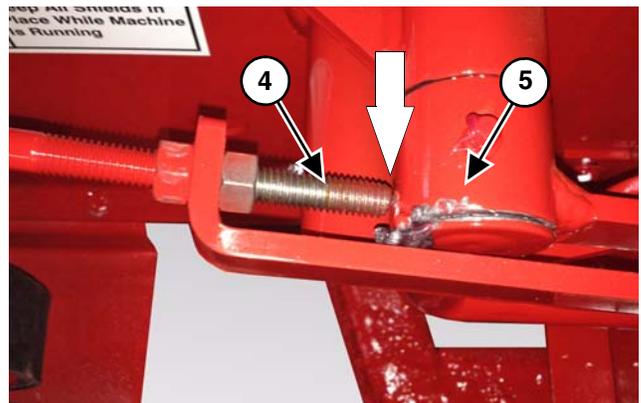
1. Loosen the nut(s) on the back / front side of the handle linkage, and then adjust the nuts on either side of the handle linkage.

**Increase Tension** - Loosen the front nut (Item 1), tighten the back nut (Item 2) to increase belt tension. When the desired tension is achieved, tighten the front nut against the handle linkage (Item 3).

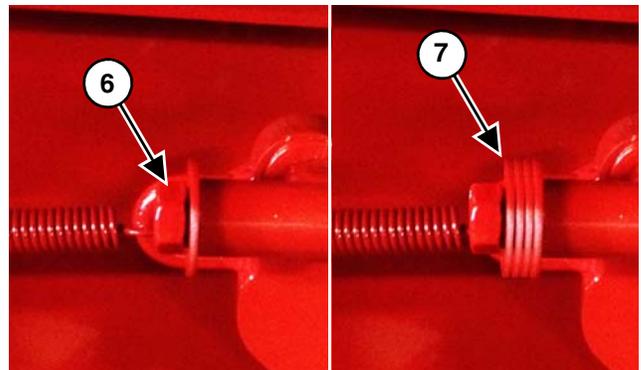
**Decrease Tension** - Loosen the back nut (Item 2), tighten the front nut (Item 1) against the handle linkage (Item 3) to relieve tension on the belt. When the desired tension has been removed, tighten the back nut against the handle linkage.



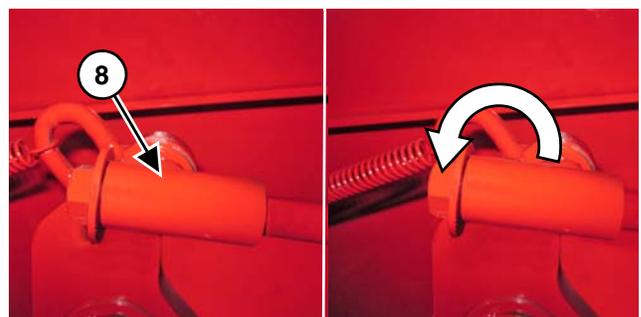
**NOTE: The adjustment is maxed out when the rod (Item 4) hits the pivot (Item 5) when engaging the handle.**



2. (Only if Step 1 does not provide enough adjustment.) Remove the nut(s) on the back and front side of the handle linkage. Remove the tightener rod (Item 6), then add washers (Item 7) (as needed) to the rod behind the tightener sleeve weldment. Re-install the tightener rod. Repeat Step 1.

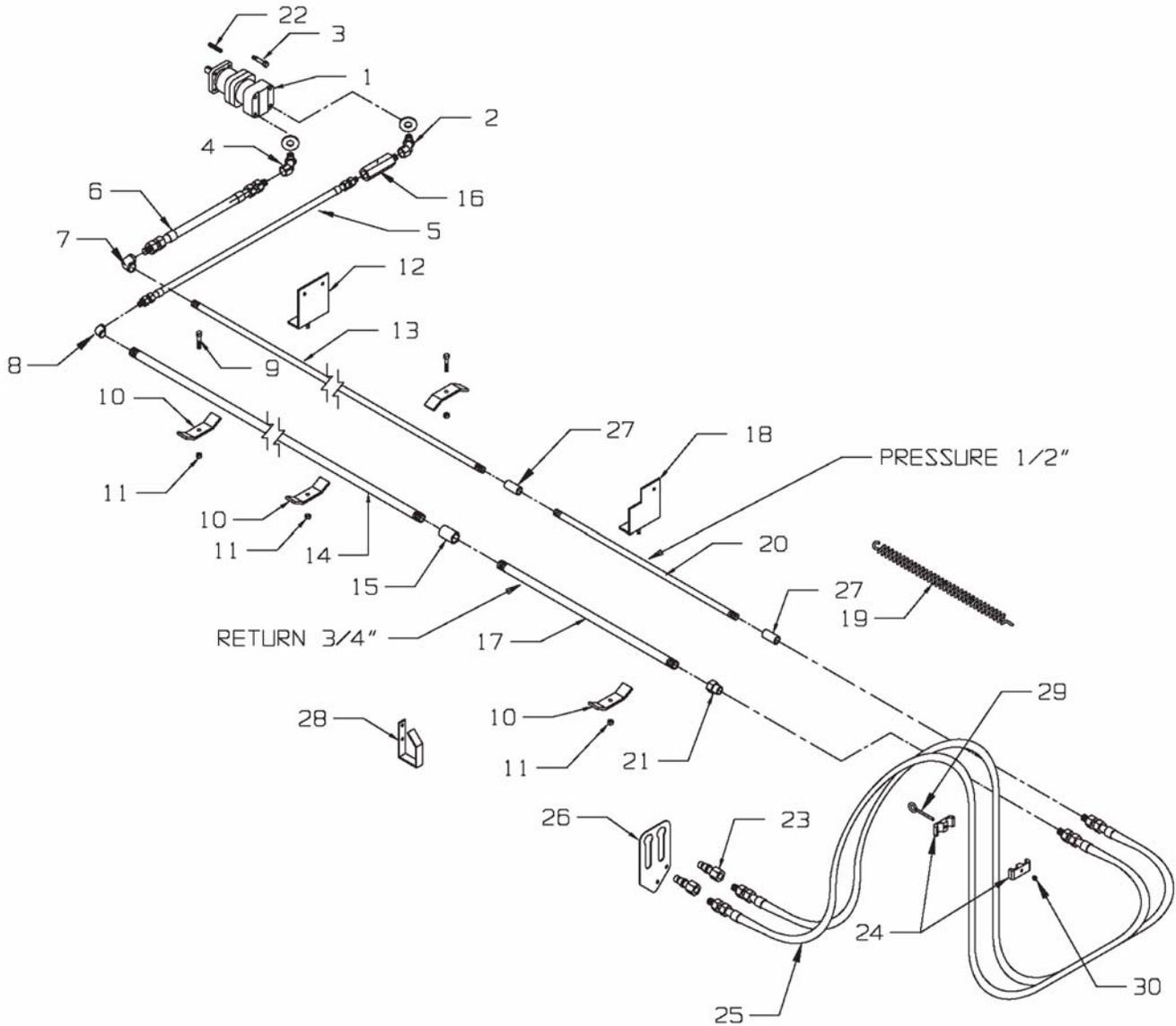


**NOTE: If the forage box is equipped with an offset sleeve (Item 8), flip so the long end of the sleeve is toward the head of the bolt.**



# REPAIR PARTS

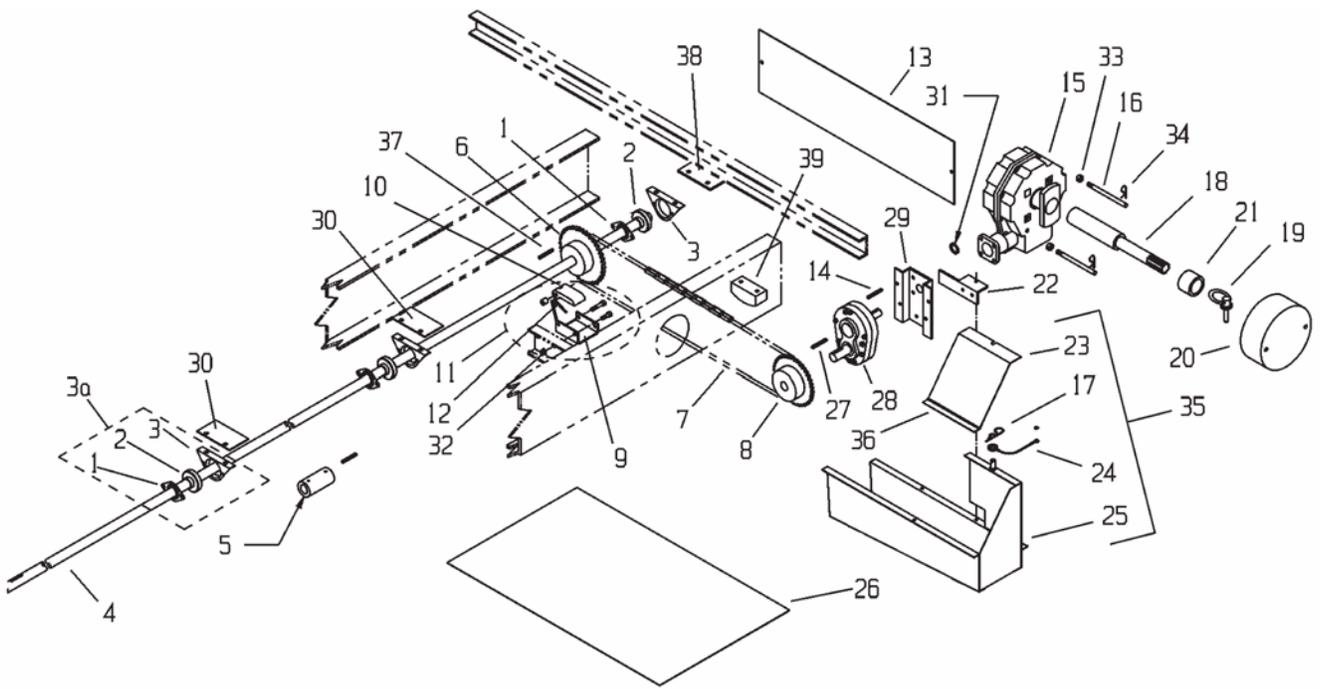
## 3200-4200 SERIES HYDRAULIC REAR UNLOAD COMPONENTS



## 3200-4200 SERIES HYDRAULIC REAR UNLOAD COMPONENTS

KEY	PART NUMBER	QTY	DESCRIPTION
1	55-0099	1	Hydraulic Motor
2	55-0083	1	3/4" 45° NPSM Swivel ORB
3	831-3816-1.25	4	3/8"-16 x 1-1/4" AHCS GR5
4	55-0059	1	1/2" x 45° NPSM Swivel ORB
5	55-0029	1	3/4" Hose Assembly x 36" Long
6	55-0028	1	1/2" Hose Assembly x 36" Long
7	55-0010	1	1/2" 90° BM Elbow
8	55-0027	1	3/4" 90° BM Elbow
9	851-3816-2.25Z	3	3/8"-16 x 2.25" GR 5 MB
10	25-0210-4	AR	Hyd Pipe Holder Clamp
11	815-3816-Z	3	3/8"-16 Nylon Insert Lock Nut
12	25-0210-5	1	Box Hyd Pipe Holder
13	55-0025	1	16' Floor 1/2" x 183" Hyd. Pipe
	55-0023	1	18' Floor 1/2" x 207" Hyd. Pipe
	55-0021	1	20' Floor 1/2" x 231" Hyd. Pipe
	55-0074	1	22' Floor 1/2" x 24" Ext. Pipe
14	55-0024	1	16' Floor 3/4" x 185" Hyd. Pipe
	55-0022	1	18' Floor 3/4" x 209" Hyd. Pipe
	55-0020	1	20' Floor 3/4" x 233" Hyd. Pipe
	55-0073	1	22' Floor 3/4" x 24" Ext. Pipe
15	55-0030	1	3/4" BM Coupler
16	55-0007-B-RF	1	3/4" Check Valve (Reverse Flow)
17	55-0037	1	3/4" x 30" Ext. Hyd. Pipe
18	25-0210-2	1	Unit Hyd Pipe Holder
19	29-0012	1	Spring
20	55-0038	1	1/2" x 30" Ext. Hyd. Pipe
21	55-0039	1	1/2" F x 3/4" F Reducer
22	35-0019-H	1	1/4" x 1/4" x 1-1/4" key with Rounded Ends (Hard)
23	55-0013	2	Pioneer Coupler
24	55-0033	1	Clamp Assembly
25	55-0034	2	1/2" x 132" Hose Assembly
26	25-0249-1	1	Holder for Hyd. Hose Ends
27	55-0006	2	1/2" BM Coupling
28	25-0209	1	Hyd. Hose Holder Bracket
29	811-3118-2Z	1	5/16" Eyebolt
30	810-3118-Z	1	5/16" Spin lock nut

# PTO REAR UNLOAD DRIVE TRAIN



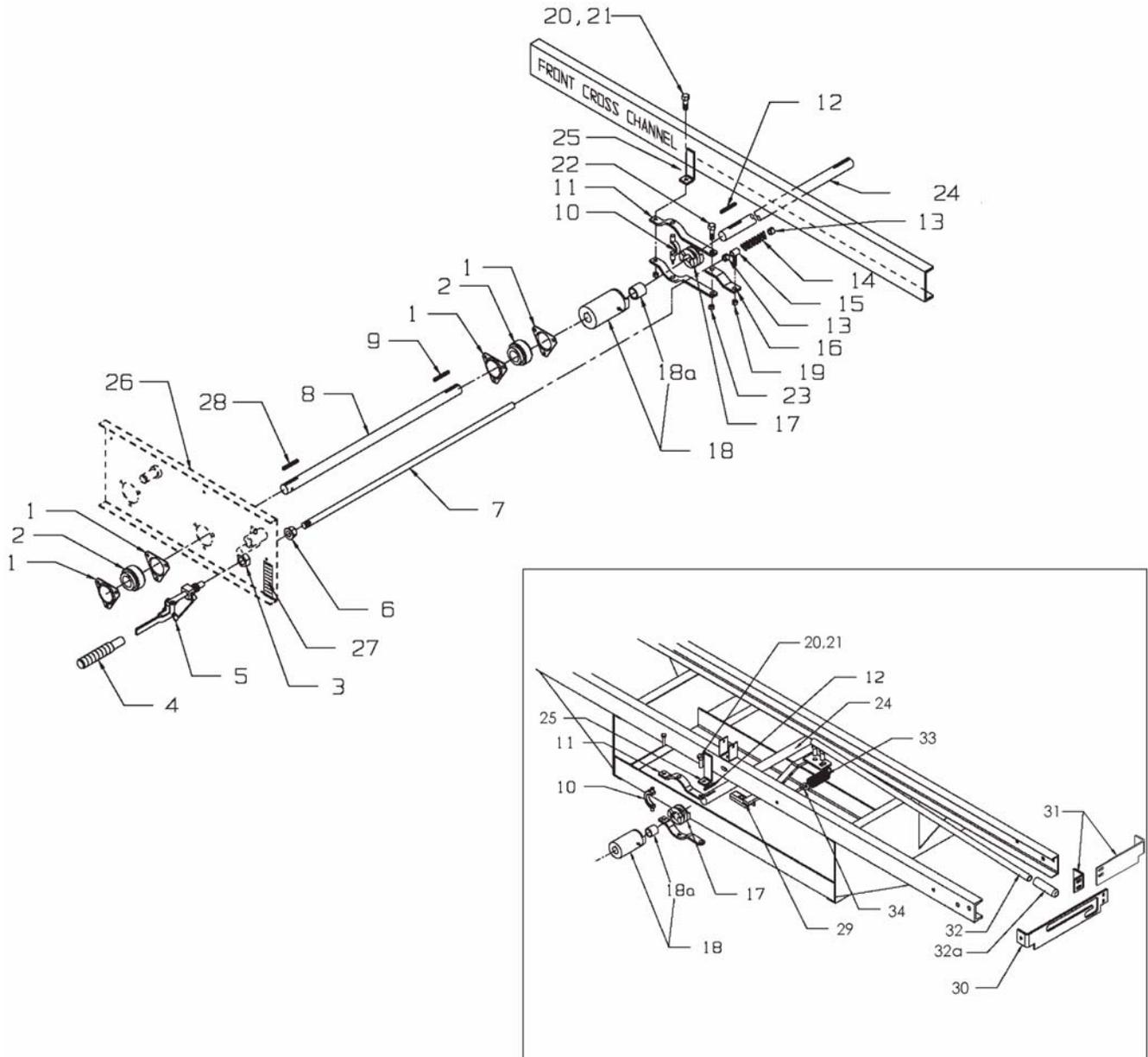
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## PTO REAR UNLOAD DRIVE TRAIN

KEY	PART NO.	QTY	DESCRIPTION
1	14-0003-2	AR	Flange, 2 Hole, 1-1/4"
2	14-0002-3	AR	Bearing, 1-1/4" w/collar
3	14-0003-1	AR	Pillow Block Flanges, 2 Hole, 1-1/4"
3A	14-0032	AR	1-1/4" Cast Pillow Block Bearing
4	23-0083	1	16' Box, 194 1/2" Drive Shaft
	23-0084	1	18' / 22' Box, 218 1/2" Drive Shaft
	23-0086	1	20' Box, 240" Drive Shaft
	23-0039	1	22' Box 48" Drive Shaft Ext.
5	37-0007	1	Shaft Coupler (22' Box Only)
6	10-0002	1	50B28 1-1/4" B, 1/4" KWY
	10-0083	AR	60B24 1-1/4" B, KWY (22' Box Only)
7	11-0086	1	#50-180 Roller Chain
	11-0118-HD	AR	#60-148 Hvy. Duty Roller Chain (22' Box Only)
8	10-0035	1	50B19 1-1/4" B, 1/4" KWY
	10-0082	AR	60B16 1-1/4" B, 1/4 KWY (22' Box Only)
9	25-0011-1	1	Chain Tightener Bracket
10	41-0001	1	Tightener, 5" Nylon Paddle
11	41-0029	1	Tightener Assembly w/Bracket
12	29-0002	2	Torsion Spring
13	52-0018-12	1	3200 Series Rear Stringer Cover Shield
	52-0018-3	1	4200 Series Rear Stringer Cover Shield
14	35-0021-H	1	1/4" x 1/4" x 1 3/4" Key (Hard)
15	19-0025	1	Rear Gear Box (25:1 Ratio)
16	24-0115-3	2	Shield Mounting Stud Bolt
17	32-0021	1	2" Hair Spring Cotter Pin
18	23-0059-2	1	Rear Splined Drive Shaft
19	823-0002	1	Lynch Pin
20	24-0115-4	1	Rear Gear Box Round Shield
21	43-0020	1	Idler Sleeve Spacer
22	52-0018-11	1	Gear Box Bracket, Mounting Gusset
23	52-0018-2-8	1	Top Cover Shield Door w/ Hinge Assembly
24	32-0022	1	6" Lanyard

KEY	PART NO.	QTY	DESCRIPTION
25	52-0018-2-9	1	Cover Shield Weldment w/o Door Assembly
26	52-0018-13	1	Model 3214/3216 Roller Chain Return Pan
	52-0018-9	1	Model 3218/3220 Roller Chain Return Pan
	52-0018-7	1	4200 Series Roller Chain Return Pan
27	35-0001	1	1/4" x 1/4" x 1 1/8" Key
28	19-0032	1	1:1 Ratio Gear Box Assembly
29	52-0028-1	1	1:1 Gear Box Mounting Bracket
30	25-0171	AR	Carrier Bearing Plate
31	808-1-1.5-18	1	18 GA x 1" ID x 1-1/2" OD M.B.
32	52-0018-8	1	Chain Tightener Mount Channel
33	813-5013-Z	1	1/2" -13 Regular Nut
34	32-0019	2	#10 Hair Spring Cotter Pin
35	52-0018-2	1	Rear Shielding Assembly w/Door
36	52-0018-2-6	1	9" Long Hinge Only
37	35-0021	1	1/4" x 1/4" x 1 3/4" Key
38	25-0287-1	1	Carrier Bearing Plate (20' - 22')
	25-0171	1	Carrier Plate (16' - 18')
39	901-3618-6	1	Wood Tightening Block

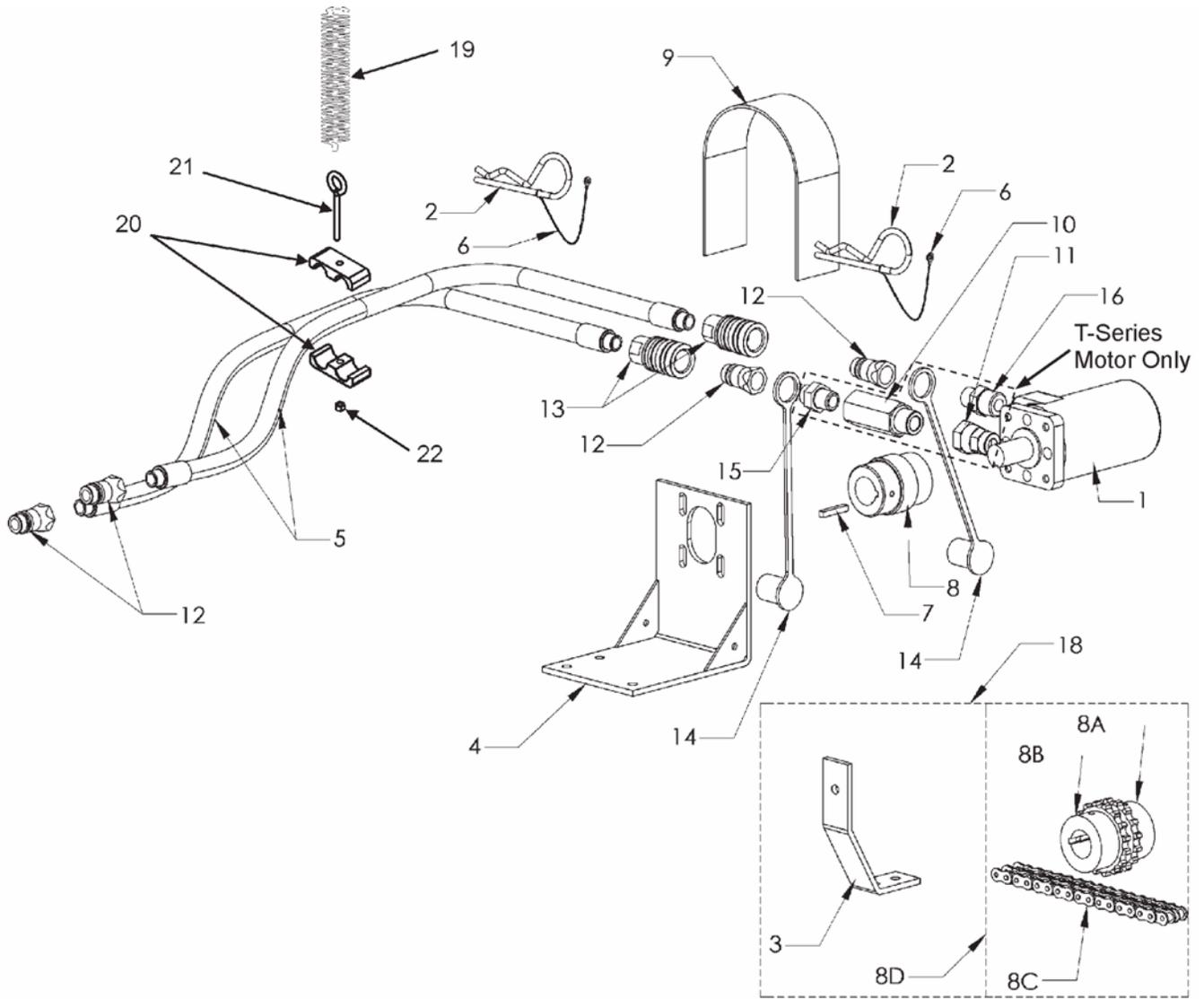
# PTO REAR UNLOAD DRIVE CLUTCH



## PTO REAR UNLOAD DRIVE CLUTCH

KEY	PART NUMBER	DESCRIPTION
1	14-0002-2	Flange, 3-hole, 1-1/4"
2	14-0002-3	Bearing, 1-1/4" w/collar
3	826-1014	1-14 Jam Nut (Only)
4	16-0040-3	Red Handle Grip
5	16-0040-1	Shifter Control, Hand Toggle Lever
6	810-3816-Z	3/8"-16 Flange Spin Lock Nut
7	16-0043-1	Rear Clutch Linkage Rod
8	23-0082	Unit Center Shaft
9	35-0016	1/4" x 1/4" x 2-1/4" Key
10	21-0001	Brass Shifter Collar w/zerk
11	17-0001	Clutch Shifter Yoke
12	35-0023	1/4" x 2" Key w/rounded Ends
13	14-0036	3/8" Shaft Lock Collar
14	29-0014	Spring
15	16-0041	Linkage Pivot Sleeve
16	25-0278-1	Shifting Bracket Extension
17	15-0003	Jaw Clutch 1-1/4" Bore w/1/4" Keyway
18	15-0005	PTO Rear Clutch Coupler
18A	13-0014	Bronze Bushing 1-1/4" ID x 1-1/2" OD x 1-1/2" Long
19	814-3816-Z	3/8-16 Indented Lock Nut
20	851-3816-1.5Z	3/8"-16 x 1-1/2" GR 5 Machine Bolt
21	815-3816-Z	3/8"-16 Nylon Insert Locknut
22	851-5013-1.5Z	1/2"-13 x 1 1/2" GR 5 MB ZN
23	815-5013-Z	1/2"-13 Nylon Insert Lock Nut
24	23-0083	16' Box, 194 1/2" Drive Shaft
	23-0084	18' Box, 218 1/2" Drive Shaft
	23-0086	20' Box, 240" Drive Shaft
	23-0039	22' Box Ext Shaft (Uses #23-0084 Plus Ext)
25	100-7000-40	Yoke Pivot Bracket
26	25-0267	Clutch Plate Wldmnt w/ Jam Nut
27	46-0001-68	Rear Unload Engage/Disengage Decal
28	35-0021	1/4" x 1/4" x 1 3/4" Key
29	25-0134	Linkage Arm Welded Assy.
30	25-0135-1	Side Shift Plate
31	25-0135-3	Side Shift Plate
	25-0135-2	Side Shift Plate
32	25-0136	Pipe Handle w/grip
32A	51-0004	Rubber Grip Only
33	929-0003	Spring
34	933-3804	5/16"-18 x 4" Eyebolt

# OPTIONAL FRONT HYDRAULIC DRIVE

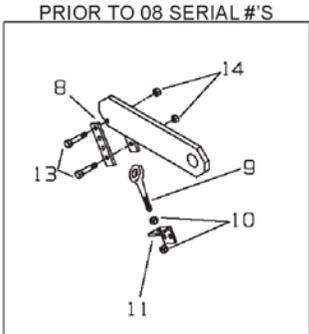
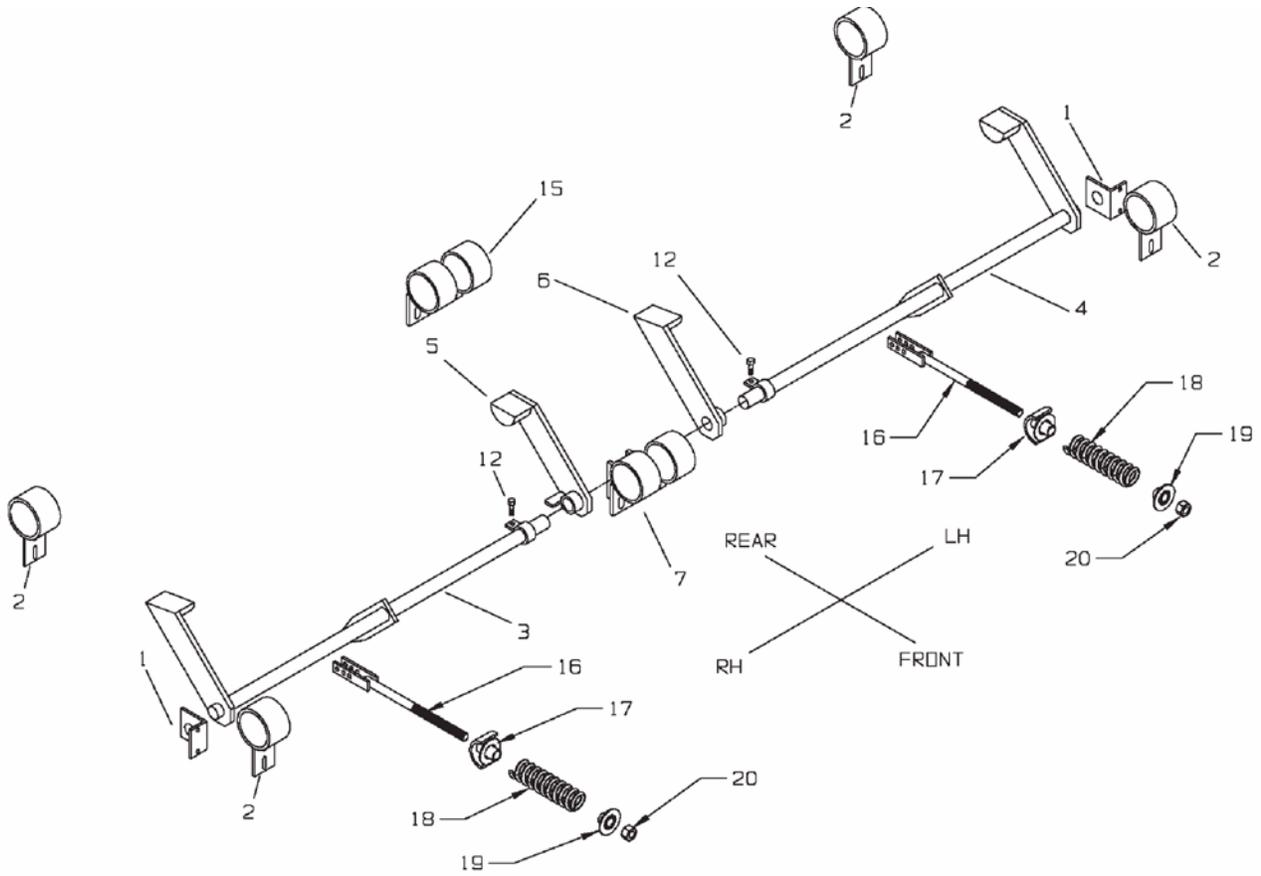


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## OPTIONAL FRONT HYDRAULIC DRIVE

KEY	PART NUMBER	QTY	DESCRIPTION
1	55-0099	1	Hydraulic Motor T-Series
2	823-.25-5Z	2	Hitch Pin Clip, 1/4" x 5"
3	25-0280-1	1	Hydraulic Clutch Bottom Bracket Brace
4	25-0283	1	Stationary Hydraulic Motor Bracket Assy.
5	55-0034	2	1/2" x 132" Hose Assembly (Pull Type Only)
6	32-0022	2	Lanyard
7	35-0012	1	1/4" x 1-1/2" Square Key
8	37-0012	1	Stationary Hydraulic Motor Coupler-Welded (Prior to 07 Serial #)
8A	37-0013-1	1	Shaft Coupler Sprocket - 1" Bore (Serial # 07 & Later)
8B	37-0017-1	1	Shaft Coupler Sprocket 1-1/4" Bore (Serial # 07 & Later)
8C	37-0013-2	1	#50 Double Coupler Chain
8D	37-0019	AR	Chain Coupler Assembly Complete (Serial # 07 & Later)
9	49-0027-1	1	Stationary Hydraulic Motor Belting
10	55-0007-B	1	3/4" Check Valve
11	55-0048	1	7/8" Straight to 3/4" NPSM Swivel Coupler
12	55-0013	4	Male Hydraulic Coupler (Pull Type Only)
13	55-0035	2	Female Hydraulic Coupler (Pull Type Only)
14	55-0036	2	Hydraulic Coupler Dust Cap (Pull Type Only)
15	55-0156	1	3/4" to 1/2" Chamfered Hydraulic Adapter
16	55-0159	1	5/8" to 1/2" Straight to Pipe Male Adapter
17	35-0042	1	1/4" Woodruff Key
18	TSS-STAT-CCU	1	Chain Coupler Update Kit From Solid Coupler
19	29-0012	1	Hydraulic Hose Support Spring
20	55-0033	1	1/2" Hose Support Clamp
21	811-3118-2Z	1	5/16" Eye Bolt
22	810-3118-Z	1	5/16" Spin Lock Nut

# FRONT & REAR UNLOAD FORAGE BOX MAIN APRON CHAIN TIGHTENER

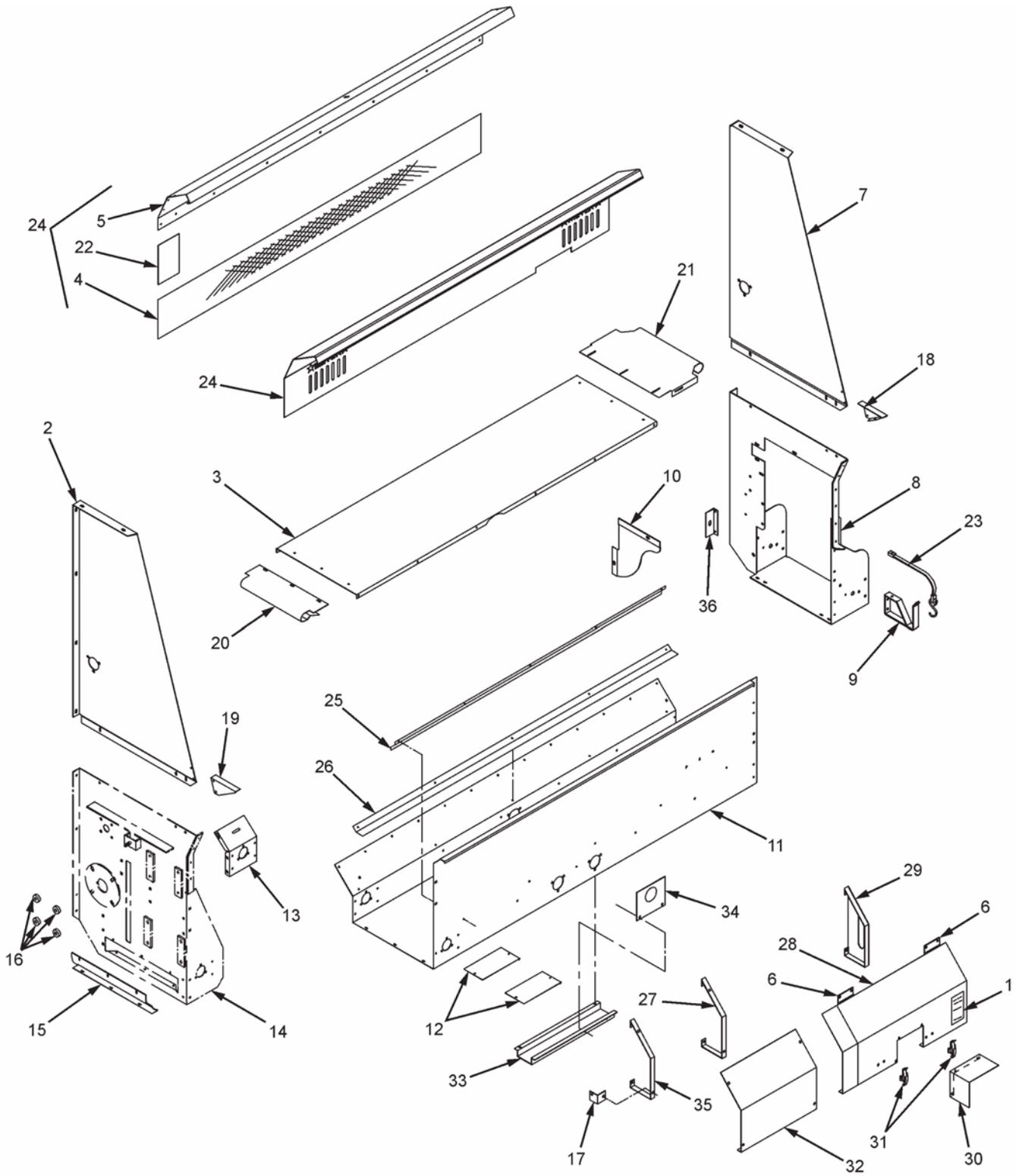


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## FRONT & REAR UNLOAD FORAGE BOX MAIN APRON CHAIN TIGHTENER

KEY	PART NUMBER	QTY	DESCRIPTION
1	25-0215	2	Tightener Assy Mount Angle
2	25-0211	4	Outside Chain Lift Pipe Welded Assembly
3	25-0222	1	RH Tightener Assembly (Prior to 08 Serial #'s)
	25-0247	1	RH Tightener Assembly (08 Serial #'s & Later)
	25-0222-TRUCK	1	Truck Mt RH Tightener Assembly (Prior to 08 Serial #'s)
	25-0247-TRUCK	1	Truck Mt RH Tightener Assembly (08 Serial #'s & Later)
4	25-0223	1	LH Tightener Assembly (Prior to 08 Serial #'s)
	25-0248	1	LH Tightener Assembly (08 Serial #'s & Later)
	25-0223-TRUCK	1	Truck Mt LH Tightener Assembly (Prior to 08 Serial #'s)
	25-0248-TRUCK	1	Truck Mt LH Tightener Assembly (08 Serial #'s & Later)
5	25-0224	1	Adjustable Tightener Arm, RH
6	25-0225	1	Adjustable Tightener Arm, LH
7	25-0216	1	Center Bracket, Apron Tightener Mount
8	25-0220	4	Apron Tightener Shackle (Prior to 08 Serial #'s)
9	811-5013-4Z	2	1/2"-13 x 4" Eyebolt (Prior to 08 Serial #'s)
10	813-5013-Z	4	1/2"-13 Regular Nut (Prior to 08 Serial #'s)
11	25-0221	2	Apron Tightener Angle Clip (Prior to 08 Serial #'s)
12	851-5013-1.25Z	2	1/2"-13 x 1-1/4" GR5 Bolt (Fine Adjustment Bolt)
13	851-3816-1.5Z	4	3/8"-16 x 1-1/2" Bolt GR
14	815-3816-Z	4	3/8"-16 Nylon Insert Lock Nut
15	25-0219	1	Apron, Center Pipe Bracket
16	25-6007	2	Tightener Rod Assy. Main Apron (08 Serial #'s & Later)
17	25-6011	2	Rocking Sleeve Assy. Tightener Bolt (08 Serial #'s & Later)
18	929-0002	2	Main Apron Tightener Spring (08 Serial #'s & Later)
19	925-3841	2	Outer Spring Guide, Tightener Assy. (08 Serial #'s & Later)
20	815-7510-Z	2	3/4"-10 Nut (08 Serial #'s & Later)

# TSS UNIT FRAME W/ IOC



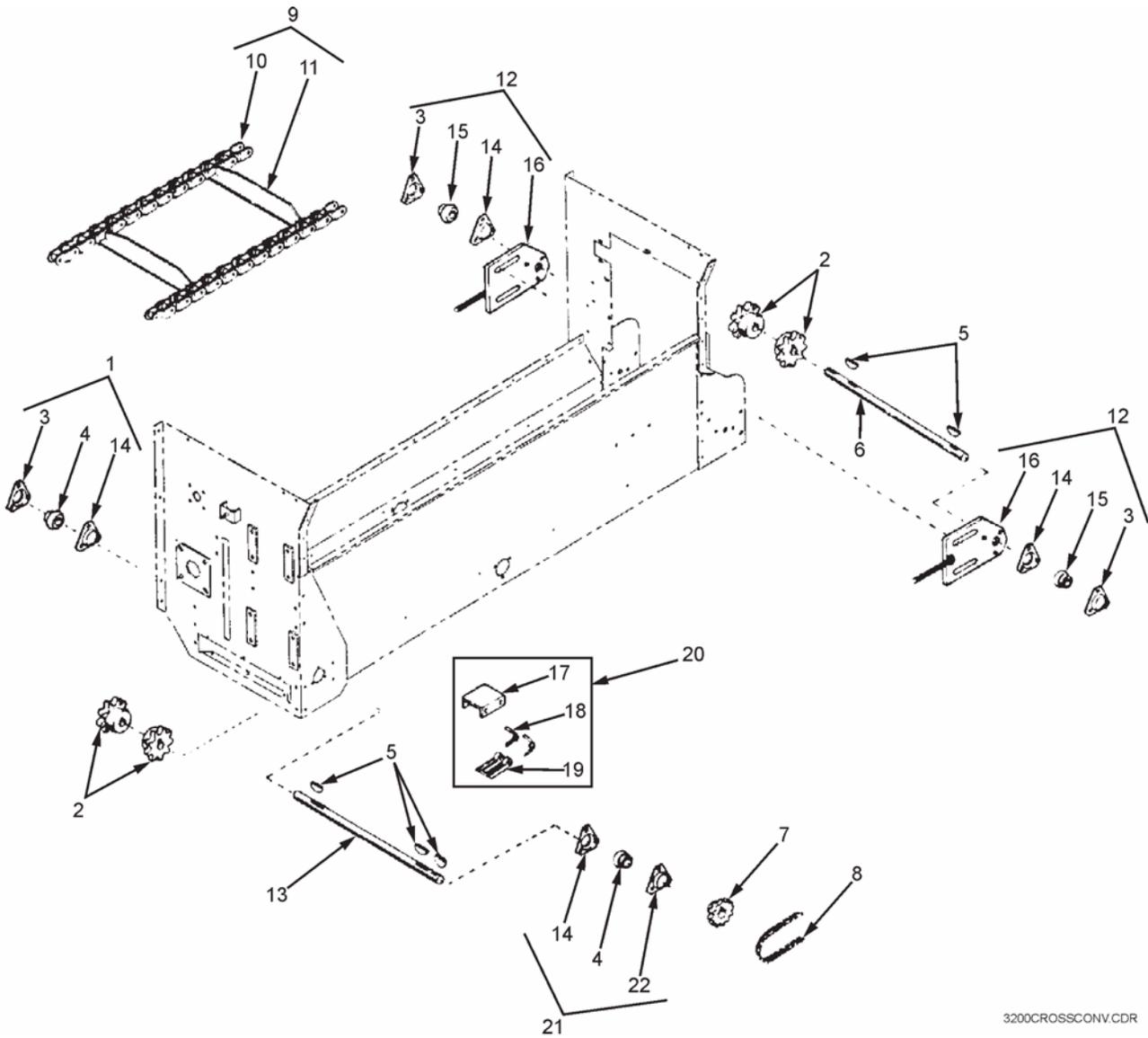
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## TSS UNIT FRAME W/ IOC

KEY	PART NO.	QTY	DESCRIPTION
1	46-0001-66	1	Stop - Run Decal
2	25-0148-2	1	RH Top Auger Extension
3	27-0027	1	Top Apron Pan
4	31-0006-2	1	Expanded Metal Screen
5	31-0006-1	1	Upper Spillage Guard
6	24-0123-2	2	Hinge Only, 4" Long-Heavy Duty
7	25-0148-1	1	LH Top Auger Extension
8	39-0017	1	Discharge Frame
9	25-0006	1	PTO Hanger Bracket
10	24-0099	1	Auger Guard
11	27-0028	1	Apron Pan (Prior to serial #06T2230)
	27-0031	1	Apron Pan (Serial #06T2230 & Later)
	27-0028-RH	1	R.H. Apron Pan (Prior to serial #06T2230)
	27-0031-RH	1	R.H. Apron Pan (Serial #06T2230 & Later)
12	24-0103	2	Access Cover
13	39-0019	1	Pan Support Bracket (Prior to serial #06T2230)
	39-0024	1	Pan Support Bracket (Serial #06T2230 & Later)
	39-0019-RH	1	R.H. Pan Support Bracket (Prior to serial #06T2230)
	39-0024-RH	1	R.H. Pan Support Bracket (Serial #06T2230 & Later)
14	39-0021	1	RH Side Plate Weldment
	39-0028	1	RT300 / 700 Right End Frame, Welded Assembly (See Page 58)
15	27-0026	1	TSS Clean-Out Panel
16	43-0014	4	Gearbox Spacer (weld to end Frame)
17	24-0010-2	1	Front Shield Angle Clip
18	34-0007	1	LH Spillage Guard Gusset
19	34-0008		RH Spillage Guard Gusset
20	24-0079	1	Right Conveyor Shaft Shield
21	24-0059	1	Left Conveyor Shaft Shield
22	31-0006-3	1	Spillage Screen Block

KEY	PART NO.	QTY	DESCRIPTION
23	33-0032	1	Hold Down Strap
24	31-0013	1	Solid Spillage Guard (Replaces Old Style w/Screen)
	31-0013-RH	1	Right Hand Unload Spillage Guard
25	25-0200	1	TSS X-Apron Front Holddown
26	25-0201	1	TSS X-Apron Rear Holddown (Prior to serial #06T2230)
	25-0203	1	TSS X-Apron Rear Holddown (Serial #06T2230 & Later)
27	25-0265-1	1	Center, Front Shield Bracket
28	24-0123	1	Hinged Front Chain Shield Asm
29	24-0122	1	Clutch Front Shield End Cap
30	31-0005	1	PTO Guard (LH)
31	32-0001-1	1	Door Catch, Latch
32	24-0124	1	RF Stationary Chain Shield
33	25-0261	1	Clutch Bottom Bracket, Belt Pan
34	24-0125-1	1	Clutch, PTO Shaft Cover
35	25-0266-1	1	RH, Front Shield Bracket
36	39-0015-1	1	Left End Frame Tab (Serial #06T2230 & Later)
NS	TSS-POLY-CC	1	Poly Cross Conveyor Option for Units without Extension (Optional)
NS	TSS-POLY-CC-EXT	1	Poly Cross Conveyor Option for Units with 2' Extension (Optional)

# TSS CROSS CONVEYOR W/IOC

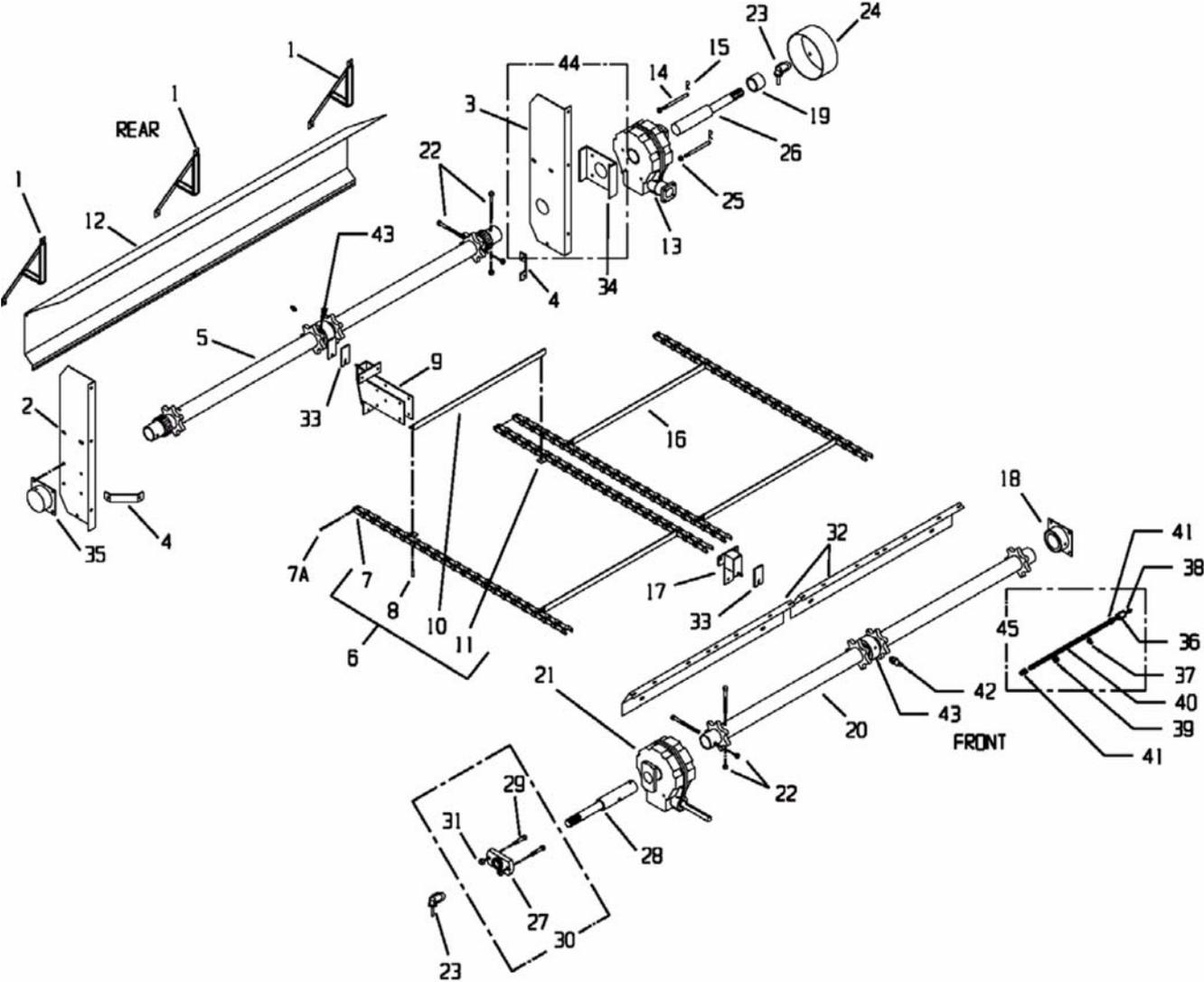


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## TSS CROSS CONVEYOR W/IOC

KEY	PART NUMBER	QTY	DESCRIPTION
1	14-0004	1	Bearing Assembly, 1" w/90 Degree Grease Fitting
2	10-0008	4	Sprocket, No.55-8 Tooth
3	14-0057-1	3	3 Hole Flange w/Straight Grease Fitting for 1" Bearing
4	14-0004-3-BTS	2	Bearing, 1" w/collar B-Type Seal
5	35-0002	5	Key, Woodruff, 1/4" x 1-1/4"
6	23-0023	1	Shaft, Cross Conveyor (Left)
7	10-0007	1	Sprocket, 50B28, 1" Bore
8	11-0111	1	Roller Chain - #50 (144 links) (Prior to serial #09T2201)
	11-0140	1	Roller Chain - #50 (142 links) (Serial #09T2201 & Later)
9	11-0059-D	1	Extension Length Cross Apron Pintle Chain Assembly Complete
	11-0060-D	1	Regular Length Cross Apron Pintle Chain Assembly Complete
10	11-0006-1	206	Link, Pintle Chain (w/2 pins & cotter pins)
11	11-0006-2	16	Chain Slat w/attachments
12	14-0022	2	Tightener Bearing Asm.
13	23-0008	11	Cross Conveyor Shaft (Right)
14	14-0058-1	4	3 Hole Flange w/No Grease Fitting for 1" Bearing
15	14-0004-3-BTS	2	Bearing, 1" w/collar B-Type Seal
16	25-0074	2	Bracket, Tightener Bearing
17	25-0011	1	Bracket, Chain Tightener
18	29-0002	2	Spring, Chain Tightener
19	41-0001	1	Tightener 5", Nylon Slide
20	41-0024	1	Tightener Asm.
21	14-0004	1	Bearing Assembly 1" w/90 Degree Grease Fitting
22	14-0059-1	1	3 Hole Flange w/90 Degree Grease Fitting for 1" Bearing

# FRONT & REAR UNLOAD MAIN APRON

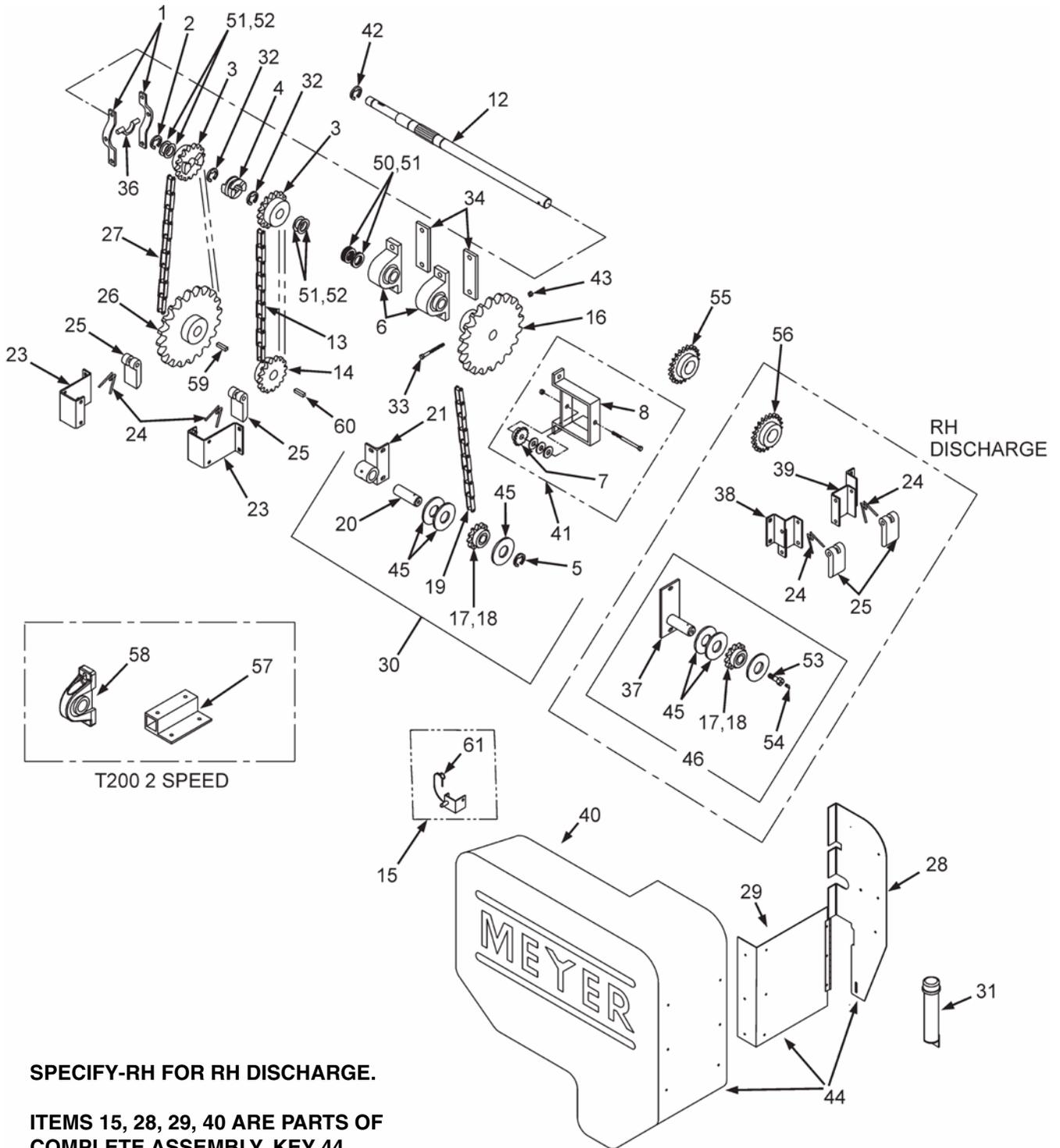


## FRONT & REAR UNLOAD MAIN APRON

KEY	PART NO.	QTY	DESCRIPTION
1	25-0237	3	Rear Apron Shield Brace
2	25-0218-1	1	Right Main Roller Bracket
3	25-0190-1	1	Left Main Roller Bracket
4	25-0179	2	Bearing Bracket Brace
5	23-0059	1	Rear Drive Main Roller
6	11-0101	2	Chain Assy 3216 Floor, 667H
	11-0102	2	Chain Assy 3218 Floor, 667H
	11-0103	2	Chain Assy 3220 Floor, 667H
	11-0104	2	Chain Assy 4216 Floor, 667X
	11-0105	2	Chain Assy 4218 Floor, 667X
	11-0106	2	Chain Assy 4220 Floor, 667X
	11-0119	2	Chain Assy 4222 Floor, 667X
7	11-0068-3		Pintle Chain Link-D667H
	11-0008-1		Pintle Chain Link-D667X
7A	11-0068-4		Pintle Chain Pin 667H
	11-0008-8		Pintle Chain Pin 667X
8	11-0008-2		Rivet, 3/8x1
9	25-0205	1	Rear Center Bearing Support Bracket
10	11-0080		Main Apron Slat Only
11	11-0068-2		Attachment Link-D667H
	11-0008-3		Attachment Link-D667X
12	24-0129	1	Rear Shield Complete
13	19-0025	1	Rear Gear Reducer (25:1)
14	24-0115-3	2	Shield Mounting Stud
15	32-0019	2	Hair Spring Cotter Pin
16	11-0081-2		Chain Slat w/attachments-667H
	11-0084-2		Chain Slat w/attachments-667X
17	25-0018	1	Front Ctr. Brg. Support Bracket
	25-0204	1	20' / 22' Front Ctr. Brg. Support Bracket
18	14-0009-T	1	Main Roller Shaft Bearing Assy
19	43-0020	1	Idler Sleeve Spacer
20	23-0069	1	Front Drive Main Roller

KEY	PART NO.	QTY	DESCRIPTION
21	19-0024	1	Front Gear Reducer (50:1)
22	33-0017	2	Bolt, 5/8" x 3-1/2" GR 5 W/Locknut
23	823-0002	2	Lynch Pin
24	24-0115-4	1	Rear Gearbox Shield
25	813-5013-Z	2	1/2"-13 Regular Nut
26	23-0059-2	1	Rear Splined Drive Shaft Hardened
27	37-0010-4	1	Coupler Plate Only
28	23-0060-1	1	Front Splined Drive Shaft Hardened
29	831-7516-2	2	Drive Bolt, 3/4"-16 x 2" Allen Head GR 8
30	37-0010	1	Coupler Plate Assembly Complete
31	884-7516-Z	2	3/4"-16 Flange Top Locknut
32	27-0030	2	Reverse Chain Guide Panel (Prior to serial #06T2230)
	27-0032	2	Reverse Chain Guide Panel (Serial #06T2230 & Later)
33	Shim	AR	Center Bearing Bracket Shim
34	25-0206	1	Gearbox Mounting Bracket
35	14-0034	1	Rear Main Roller Shaft Brg. Assy
36	30-0009	1	1 1/8" NPT Coupler
37	32-0024	1	9/32" Loom Clamp
38	30-0002	1	1/8" NPT Straight Zerk
39	33-1003	1	Rubber Grommet
40	735-.25CT		Copper Tube Grease Line (order by foot)
41	930-3602	2	Male Brass Compression Fitting
42	30-0018	1	1/8" x 1/8" 45° St. Elbow
43	14-0035	2	2 Split Ctr Brg (Replacement)
44	25-0190	1	L. Brg Plate Assy
45	933-3637	1	51" Grease Line Assy

# TWO SPEED DRIVE CLUSTER



**SPECIFY-RH FOR RH DISCHARGE.**

**ITEMS 15, 28, 29, 40 ARE PARTS OF COMPLETE ASSEMBLY, KEY 44.**

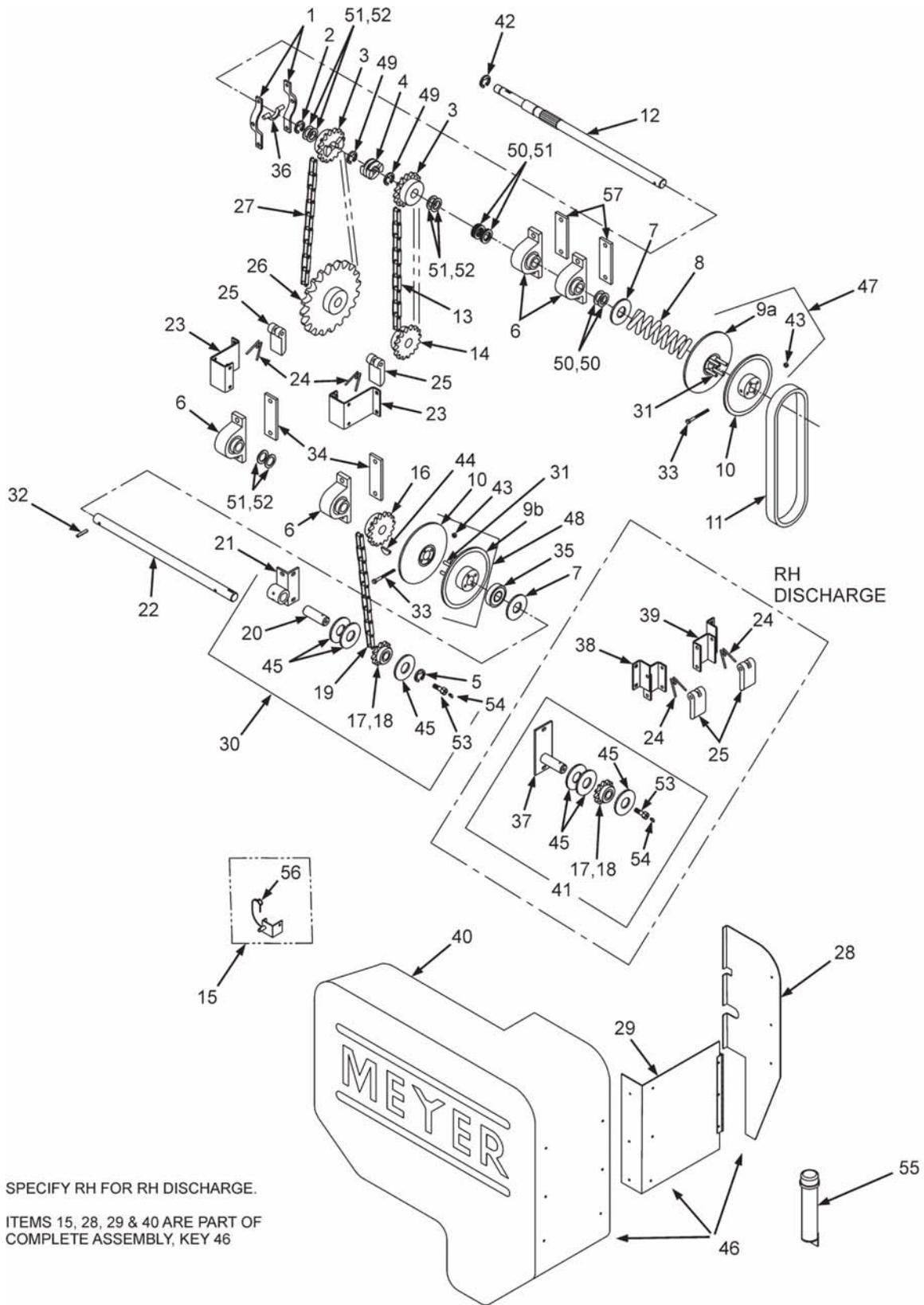
## TWO SPEED DRIVE CLUSTER

KEY	PART NO.	QTY	DESCRIPTION
1	17-0001	2	Clutch Shifter Yoke
2	33-0012	1	1-1/4" Dia Retaining Ring
3	10-0006	1	Clutch Sprkt 50C16 1-1/4" Bore
4	15-0001	1	Jaw Clutch 1-1/4" Splined Bore
5	33-1000	1	1-1/8" Retaining Ring
6	14-0032	4	1-1/4" Pillow Block Brg
	14-0002-3G	4	1-1/4" Bearing Only (greaseable)
7	10-0068	1	Idler Sprkt 50C17 w/Bearing
	10-0068-1	1	1/2" Idler Bearing Only
8	25-0165	1	Idler Sprkt Mounting Brkt
12	19-0015-1-2SP	1	Upper Gearbox Input Shft, Drilled
13	11-0088	1	#50-69 Roller Chain (Prior to serial #09T2201)
	11-0009	1	#50-72 Roller Chain (Serial #09T2201 & Later)
14	10-0064	1	Sprkt 50B19 1" B (Prior to serial #09T2201)
	10-0042	1	Sprkt 50B24 1"B (Serial #09T2201 & Later)
15	25-0197	1	Door Catch Assembly
16	10-0070	1	Sprkt 50C32 1-1/4" Bore, Drilled (Prior to serial #09T2201)
	10-0072	1	Sprkt 50C28 1-1/4" Bore, Drilled (Serial #09T2201 & Later)
17	14-0026	1	1-1/8" B Needle Bearing Only
18	10-0061	1	Idler Sprkt 50C17 w/Needle Brg
19	11-0100	1	#50-193 Roller Chain
	111-0050-186	1	#50-186 Roller Chain (RH Unloading Units Only)
20	23-0044	1	Idler Shaft
21	25-0164	1	Idler Bracket Weldment
23	25-0161-1	2	Chain Tensioner Bracket
24	29-0002	4	Tensioner Spring
25	41-0001	2	Tightener, 5" Nylon Slide
26	10-0060	1	Sprkt 50B42 1" Bore
27	11-0089	1	#50-82 Roller Chain
28	25-0198-ASM	1	Shield Mount Plate

KEY	PART NO.	QTY	DESCRIPTION
29	24-0112-4	1	Shield Support with Hinge
30	44-0048	1	2-Spd Frt Idler Shaft Asm.
31	33-0044	1	Manual Holder w/Cap
32	33-0018	2	1-1/4" Snap Ring
33	851-3118-3.5Z	2	5/16" x 3-1/2" MB GR5
34	43-0013-.5	2	Spacer Plate
36	21-0001	1	Collar, Clutch Shifter- Brass
37*	25-0189	1	2-Spd Idler Brkt Plate & Shaft Wldmt
38*	25-0183-RHH	1	Tightener Bracket Wldmt (High)
39*	25-0183-RHL	1	Tightener Bracket Wldmt (Low)
40	24-0112-1	1	Plastic Door Only
41	44-0049	1	2 Spd Idler Brkt Asm w/Sprkt
42	19-0055-4-19	1	1" ID Snap Ring
43	815-3118-Z	2	5/16" Nylon Insert Lock Nut
44	24-0112-K	1	Shield Asm - LH Unload
	24-0110-RH	1	T200 RH Cluster Shield
	24-0098	1	RH Cluster Door
45	808-1.13-1.75-18	AR	18 Ga. 1-1/8" ID Machine Bushing
46*	44-0050	1	RH 2 Spd Idler Plate Asm w/Sprkt
50	808-1.25-1.875-10	AR	10 Ga. 1-1/4" ID. Machine Bushing
51	808-1.25-1.875-14	AR	14 Ga. 1-1/4" ID Machine Bushing
52	808-1.25-1.875-18	AR	18 Ga. 1-1/4" ID Machine Bushing
53	33-0030-RH	1	Idler Shaft Grease Bolt, 1/2" x 3/4"
54	30-0004	1	1/4"-28 90° Grease Fitting
55	10-0019	1	Sprkt 50B22 1" Bore
56*	10-0004	1	Lower Shaft Sprocket, 50B17, 1-1/4" B, 1/4 Keyway
57	25-0166	1	2 Speed Bearing Support
58	14-0039	1	1" Pillow Block Bearing
59	35-0001	1	1/4" x 1/4" x 1-1/8" Key
60	35-0021	1	1/4" x 1/4" x 1-3/4" Key
61	823-0003	1	Lynch Pin

\* These items for RH discharge units only

# TSS VARIABLE SPEED CLUSTER DRIVE W/IOC



SPECIFY RH FOR RH DISCHARGE.  
 ITEMS 15, 28, 29 & 40 ARE PART OF  
 COMPLETE ASSEMBLY, KEY 46

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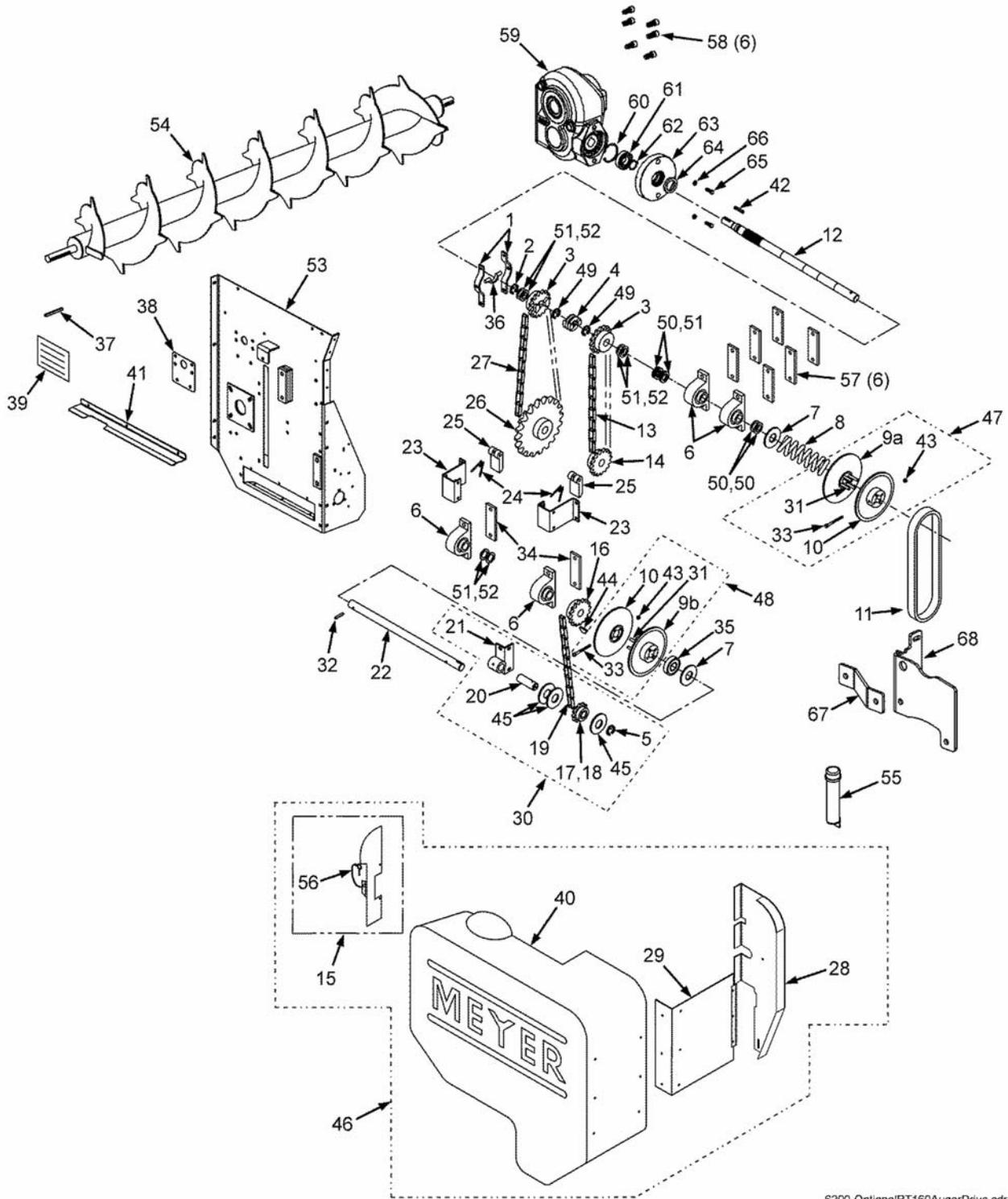
## TSS VARIABLE SPEED CLUSTER DRIVE W/IOC

KEY	PART NO.	QTY	DESCRIPTION
1	17-0001	2	Clutch Shifter Yoke
2	33-0012	1	1-1/4" Dia Retaining Ring
3	10-0006	2	Clutch Sprkt 50C16 1-1/4" Bore
4	15-0001	1	Jaw Clutch 1-1/4" Splined Bore
5	33-1000	1	1-1/8" Retaining Ring
6	14-0032	1	1-1/4 Pillow Block Brg
	14-0002-3G		1-1/4" Bearing Only (greaseable)
7	828-0125Z	1	SAE Washer 1-1/4" ID
8	29-0009	1	Spring, Clutch
9	12-0015-HD	1	Variable Sheave Half, Tapped (Upper Sheave Shaft)
9B	12-0009-HD	1	Variable Sheave Half, Tapped (Lower Sheave Shaft)
	12-0009-1	1	Rubber O-Ring Only (not illustrated)
10	12-0010-HD	2	Fixed Sheave Half
11	49-0013	1	Belt
12	19-0015-1	1	Upper Gearbox Input Shaft
13	11-0088	1	#50-70 Roller Chain (Prior to serial #09T2201)
	11-0009	1	#50-72 Roller Chain (Serial #09T2201 & Later)
14	10-0064	1	Sprkt 50B19 1"B (Prior to serial #09T2201)
	10-0042	1	Sprkt 50B24 1"B (Serial #09T2201 & Later)
15	25-0197	1	Door Catch Assembly
16	10-0010	1	Sprkt 50B24 1-1/4" Bore (Prior to serial #09T2201)
	10-0035	1	Sprkt 50B19 1-1/4" Bore (Serial #09T2201 & Later)
17	10-0061	1	Idler Sprocket 50C17 w/Needle Brg
18	14-0026	1	1-1/8" B Needle Bearing Only
19	11-0111	1	Roller Chain - #50 (144 links) (Prior to serial #09T2201)
	11-0140	1	Roller Chain-#50 (142 links) (Serial #09T2201 & Later)
20	23-0044	1	Idler Shaft
21	25-0160	1	Idler Bracket Weldment
22	23-0045	1	Lower Shaft
23	25-0161-1	2	Chain Tensioner Bracket
24	29-0002	2	Tensioner Spring
25	41-0001	2	Tightener, 5" Nylon Slide
26	10-0060	1	Sprkt 50B42 1" B, 3200 / 4200

KEY	PART NO.	QTY	DESCRIPTION
27	11-0089	1	#50-82 Roller Chain for 3200/4200
28	25-0198	1	Shield Mount Plate
29	24-0112-4	1	Shield Support with Hinge
30	44-0047	1	TSS Frt Idler Shaft Asm.
31	12-0011-HD	8	Guide Pins, 1/2" Dia.
32	38-0013	1	Roll Pin, 5/16" x 1-3/4"
33	851-3118-3.75Z	2	5/16" x 3-3/4" MB GR5
34	43-0013	2	Spacer Plate
35	14-0029	1	1-1/4" Thrust Bearing
36	21-0001	1	Collar, Clutch Shifter-Brass
37*	25-0184	1	Idler Brkt Plate & Shaft Wldmt
38*	25-0183-RHH	1	Tightener Bracket Wldmt (High)
39*	25-0183-RHL	1	Tightener Bracket Wldmt (Low)
40	24-0112-1	1	Plastic Door Only
41*	44-0047-RH	1	RH TSS Frt Idler Shaft Assy
42	19-0055-4-19	1	1" ID Snap Ring
43	814-3118-Z	2	5/16" Lock Nut
44	35-0002	1	1/4" x 1-1/4" Woodruff Key
45	808-1.13-1.75-18	AR	18 Ga. 1-1/8" ID Machine Bushing
46	24-0112-K	1	Shield Assembly- LH Unload
	24-0110-RH	1	RH Cluster Shield (not shown)
	24-0098	1	RH Cluster Door (not shown)
47	12-0015K	1	Upper Sheave Kit Complete
48	12-0009K	1	Lower Sheave Kit Complete
49	33-0018	2	1-1/4" Snap Ring
50	808-1.25-1.875-10	AR	10 Ga. 1-1/4" ID Machine Bushing
51	808-1.25-1.875-14	AR	14 Ga. 1-1/4" ID Machine Bushing
52	808-1.25-1.88-18	AR	18 Ga. 1-1/4" ID Machine Bushing
53	33-0030-RH	1	Idler Shaft Grease Bolt, 1/2" x 3/4"
54	30-0004	1	1/4"-28 90° Grease Fitting
55	33-0044	1	Manual Holder w/Cap
56	823-0003	1	Lynch Pin
57	43-0013-.5	2	Spacer Plate

\* These items for RH discharge units only

# RT160 VARIABLE SPEED CLUSTER DRIVE W/IOC (1 OF 2)

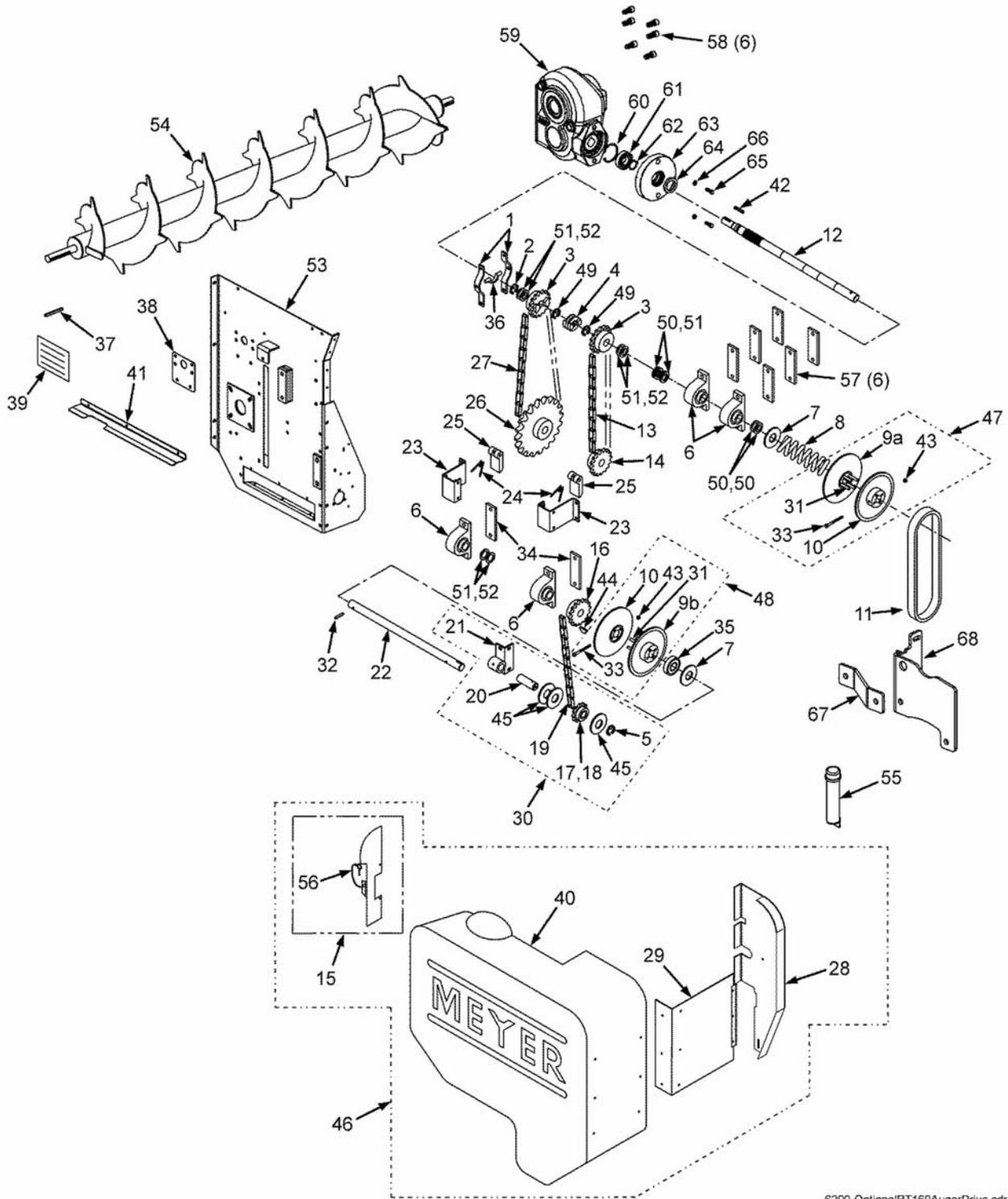


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## RT160 VARIABLE SPEED CLUSTER DRIVE W/IOC (1 OF 2)

KEY	PART NUMBER	QTY	DESCRIPTION
1	17-0001	2	Clutch Shifter Yoke
2	33-0012	1	1-1/4" Diameter Retaining Ring
3	10-0006	2	Clutch Sprocket 50C16 1-1/4" Bore
4	15-0001	1	Jaw Clutch 1-1/4" Splined Bore
5	33-1000	1	1-1/8" Retaining Ring
6	14-0032	4	1-1/4" Pillow Block Bearing
	14-0032-3G		1-1/4" Bearing Only (Greaseable)
7	828-0125Z	2	SAE Washer 1-1/4" ID
8	29-0009	1	Spring, Clutch
9a	12-0015-HD	1	Variable Sheave Half, Tapped (Upper Sheave Shaft)
9b	12-0009-HD	1	Variable Sheave Half, Tapped (Lower Sheave Shaft)
	12-0009-1	1	Rubber O-Ring Only (Not Illustrated)
10	12-0010-HD	2	Fixed Sheave Half
11	49-0013	1	Belt
12	23-0167	1	RT160 Upper Gearbox Input Shaft
13	11-0057	1	#50-71 Roller Chain
14	10-0093	1	Sprocket 50B24 1-1/4" Bore, 5/16" Keyway
15	25-6015	1	Door Catch Assembly
16	10-0035	1	Sprocket 50B19 1-1/4" Bore
17	10-0061	1	Idler Sprocket 50C17 W/Needle Bearing
18	14-0026	1	1-1/8" Bore Needle Bearing Only
19	11-0140	1	#50-142 Roller Chain
20	23-0044	1	Idler Shaft
21	25-0160	1	Idler Bracket Weldment
22	23-0045	1	Lower Shaft
23	25-0423	2	RT160 Chain Tensioner Bracket
24	29-0002	4	Tensioner Spring
25	41-0001	2	Tightener, 5" Nylon Slide
26	10-0058	1	Sprocket 50B42 1-1/4" Bore
27	111-0050-81	1	#50-81 Roller Chain
28	25-6014	1	Shield Mount Plate
29	24-0112-4	1	Shield Support With Hinge
30	44-0047	1	TSS Front Idler Shaft Assembly
31	12-0011-HD	8	Guide Pins, 1/2" Diameter
32	38-0013	1	Roll Pin, 5/16 x 1-3/4"
33	851-3118-3.75Z	2	5/16 x 3-3/4" Bolt

# RT160 VARIABLE SPEED CLUSTER DRIVE W/IOC (2 OF 2)



6200-OptionalRT160AugerDrive.cdr

## RT160 VARIABLE SPEED CLUSTER DRIVE W/IOC (2 OF 2)

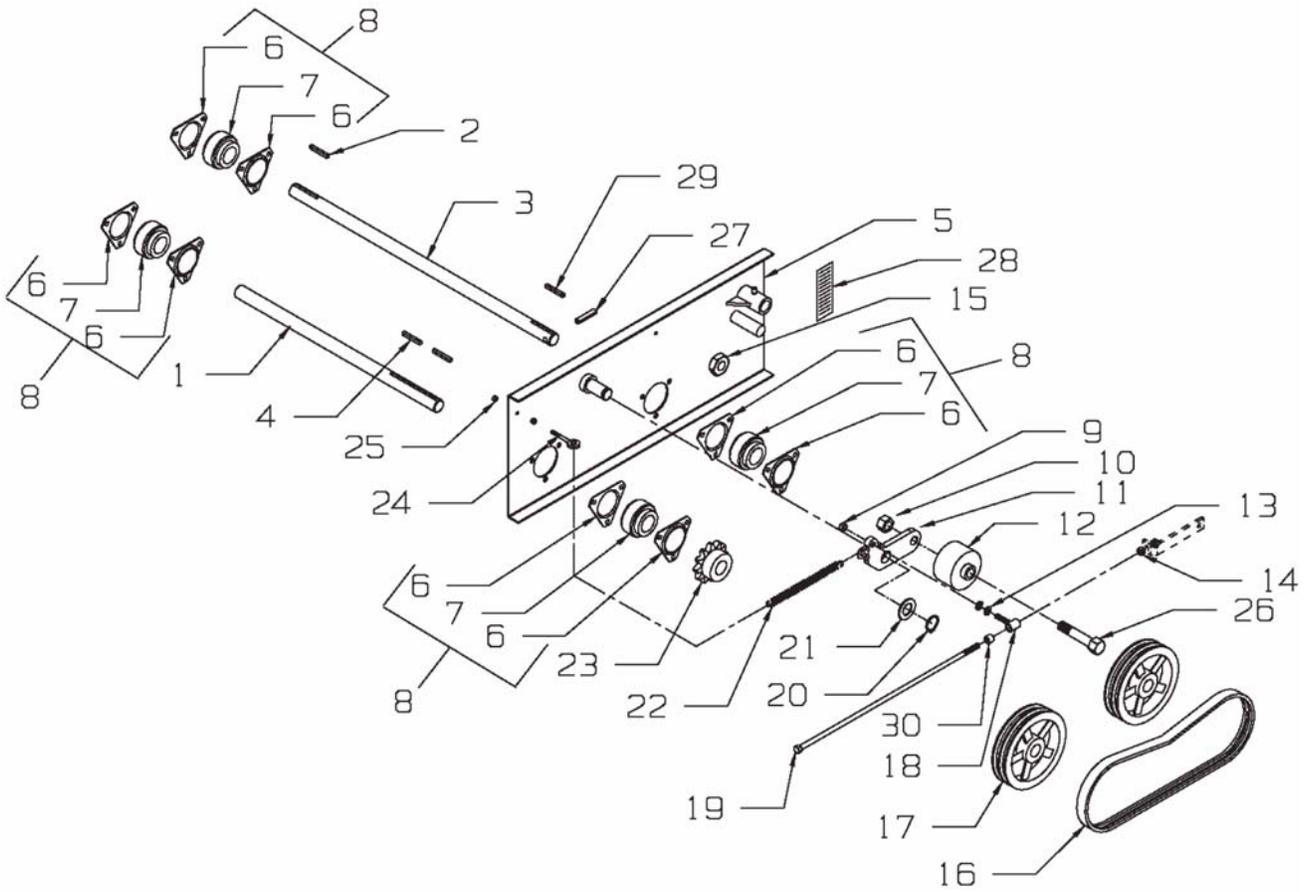
KEY	PART NUMBER	QTY	DESCRIPTION
34	43-0013	2	Spacer Plate
35	14-0029	1	1-1/4" Thrust Bearing
36	21-0001	1	Collar, Clutch Shifter-Brass
37	135-3131-4-1	1	5/16 x 5/16 x 4" Square Key 1045 W/Square Ends
38	25-0428	1	RT160 Spacer Plate
39	46-0001-124	1	Important Upper & Lower Gearbox Lube Decal
40	24-0112-1	1	RT160 Cluster Shield
41	25-0430	1	Cluster Shield Top Cap - Bolt-On
42	135-2525-1.25-1	1	1/4 x 1/4 x 1.25" Square key 1045 W/Rounded Ends
43	814-3118-Z	2	5/16" Center Lock Nut
44	35-0002	1	1/4 x 1-1/4" Woodruff Key
45	808-1.13-1.75-18	A/R	18 Ga. 1-1/8 ID Machine Bushing
46	24-0116-K	1	T300 Unit Shield Assembly
47	12-0015K	1	Upper Sheave Kit Complete
48	12-0009K	1	Lower Sheave kit Complete
49	33-0018	2	1-1/4" Snap Ring
50	808-1.25-1.875-10	A/R	10Ga. 1-1/4" ID Machine Bushing
51	808-1.25-1.875-14	A/R	14Ga. 1-1/4" ID Machine Bushing
52	808-1.25-1.88-18	A/R	18Ga. 1-1/4" ID Machine Bushing
53	39-0028	1	RT300/700 Right End Frame Welded Assembly
54	26-0037	1	RT160 Bottom Auger Assembly 5/16" Keyway
	26-0037-FB	1	RT160 Feeder Box Bottom Auger Assembly 5/16" Keyway
55	33-0044	1	Manual Holder W/Cap
56	823-0003	1	Lynch Pin
57	43-0013-.5	6	Spacer Plate
58	831-M12-1.75-25	6	Socket Head Cap Screw M12-1.75 x 25
59	19-0206	1	RT160 Gearbox 8.4:1 W/Gasket
60	33-0053	1	Snap Ring 2.21" Internal
61	14-0308	1	1" Bearing
62	19-0002-8	1	Snap Ring 1" Shaft External
63	19-0206-1-1	1	RT160 Input Housing
64	19-0206-1-2	1	Seal
65	851-M12-1.75-40-Z	1	Hex Head Bolt M12-1.75 x 40MM
66	822-0050-Z	2	1/2" Split Lock Washer
67	25-0476	1	Variable Speed Control Arm Mount Brace
68	25-0475	1	RT160 Speed Control Brace



## TSS AUGERS & AUGER DRIVE

KEY	PART NUMBER	QTY	DESCRIPTION
1	35-0006	4	Key 3/8" x 1-1/4"
2	41-0009	1	Lower Auger Drive Chain Tightener Assembly
2A	25-0047	1	Mounting Bracket
2B	29-0002	2	Spring
2C	41-0002	1	Tightener, 3" Nylon Slide
3	14-0003-2	6	1-1/4" Bearing Flange, 2 Hole
4	14-0002-3	5	Bearing w/Collar 1-1/4"
5	14-0002-2	4	1-1/4" Bearing Flange, 3 Hole
6	10-0012	2	Sprocket 50B17, 1-1/4" Bore, 3/8" Keyway
7	25-0186	1	Left Top Auger Mounting Bracket w/Tightener Bracket
	25-6025	1	Left Top Auger Mounting Bracket w/Tightener Bracket (Optional High Sided Model)
8	25-0142	1	Right Top Auger Mounting Bracket
	100-9990-200-1-1	1	Right Top Auger Mounting Bracket (Optional High Sided Model)
9	11-0087	1	Lower Auger #50-95 Roller Chain (Prior to SN 11T2229)
	111-0050-99	1	Lower Auger #50-99 Roller Chain (11T2229 & Later)
	11-0079	1	Lower Auger #60-80 Roller Chain 4th Auger Option (Prior to SN 11T2229)
	111-0060-83	1	Lower Auger #60-83 Roller Chain 4th Auger Option (11T2229 & Later)
10	26-0034	2	Auger 2nd & 3rd
	26-0034-FB	1	Feeder Box Models - 2nd Auger
11	26-0033	1	Lower Auger 1/4" Key (Prior to serial #09T2201)
	26-0033-FB	1	Feeder Box Lower Auger 1/4" Key (Feeder Box Models: Prior To Serial # 09T2201)
	26-0036	1	Lower Auger 5/16" Key (Serial #09T2201 & Later)
	26-0036-FB	1	Feeder Box Lower Auger 5/16" Key (Feeder Box Models: Serial #09T2201 & Later)
	26-0037-FB	1	RT160 Feeder Box Bottom Auger Assembly 5/16" Keyway (See page 58)
12	35-0012	1	Key 1/4" x 1-1/2" (Prior to serial #04T2201)
	35-0028	1	Key 1/4" x 1-1/4" (Serial #04T2201 through #09T2200)
	35-0030-H	1	Key 5/16" x 1-1/4" Hardened (SN 09T2201 through 11T2221)
	135-31W-1.25-1	1	Woodruff Key 5/16" x 1-1/4" Hardened (SN 11T2222 & Later)
13	24-0092	1	Upper Auger Chain Guard
	24-0092-RH	1	RH Upper Auger Chain Guard
14	24-0101	1	Lower Auger Chain Guard
	24-0101-RH	1	RH Lower Auger Chain Guard
15	11-0074	1	Upper Auger #50-94 Roller Chain
16	10-0012	1	Sprocket 50B17, 1-1/4" Bore, 3/8" Keyway
	10-0095	1	Sprocket 60B15, 1-1/4" Bore, 3/8" Keyway (4th Auger Option)
17	14-0003-2	4	1-1/4" Bearing Flange, 3 Hole
18	14-0002-3	2	Bearing w/Collar 1-1/4"
19	29-0002	1	Spring
20	41-0002	1	Tightener, 3" Nylon Slide
21	10-0009	1	Sprocket 50B36, 1-1/4" Bore, 3/8" Keyway (4th Auger Option)
22	11-0139	1	3rd-4th Auger Chain #50-89
23	10-0012	1	Sprocket, 50B17, 1-1/4" Bore, 3/8" Keyway
24	26-0035	1	4th Auger Assembly
25	24-6004	1	Auger Shield Welded Assy (4th Auger Option)
	24-6004-RH	1	RH Auger Shield Welded Assy (4th Auger Option)
	24-0123-2	3	Hinges Only
	32-0027	2	Rubber T-Latch Kit
26	TSS-AUGER-4-KIT	1	4th Auger Pkg (2011 Models and Later)
27	10-0012	1	Sprocket 50B17, 1-1/4" Bore, 3/8" Keyway (Prior to SN 11T2229)
	110-50B24-1.25-1	1	Sprocket 50B24, 1-1/4" Bore, 3/8" Keyway (SN 11T2229 & Later)
	10-0095	1	Sprocket 60B15, 1-1/4" Bore, 3/8" Keyway, 4th Auger Option, (Prior to SN 11T2229)
	110-60B20-1.25-1	1	Sprocket 60B20 1-1/4" Bore, 3/8" Keyway, 4th Auger Option (11T2229 and Later)

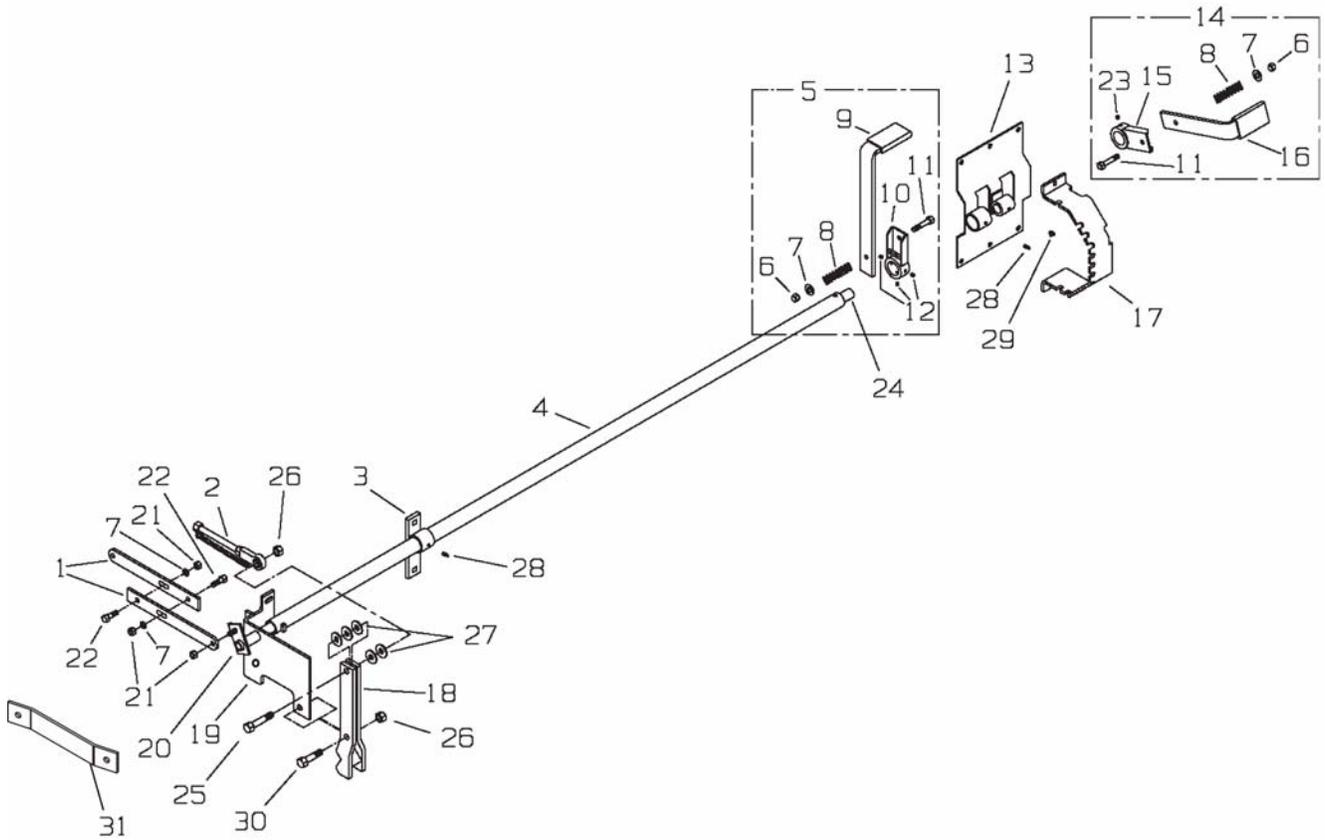
**3200-4200 SERIES INDEPENDENT OUTFEED CLUTCH DRIVE  
“STOP” & “RUN” CONTROL RELATED PARTS**



**3200-4200 SERIES INDEPENDENT OUTFEED CLUTCH DRIVE  
“STOP” & “RUN” CONTROL RELATED PARTS**

KEY	PART NUMBER	QTY	DESCRIPTION
1	23-0081	1	Clutch Drive Idler Shaft
2	35-0016	1	1/4" x 1/4" x 2-1/4" Key
3	23-0082	1	2-Way Unit Center Shaft
4	35-0001	2	1/4" x 1/4" x 1-1/8" Key
5	25-0267	1	Clutch Plate Weldment w/Jam Nut
6	14-0002-2	8	Flange, 3 Hole, 1-1/4"
7	14-0002-3	4	Bearing, 1-1/4" w/Collar
8	14-0002	4	Bearing Assembly, 1-1/4"
9	814-3816-Z	1	3/8" -16 Indented Lock Nut
10	933-3621	1	3/4" -10 Jam Nut
11	25-0260-4	1	Clutch Tightener Arm Weldment
12	912-0002-1	1	Tightener Roller 2" (Rubber)
13	805-0038-Z	2	3/8" Flat Washer
14	813-3816-Z	1	3/8" -16 Regular Nut
15	826-1014	1	1" -14 Jam Nut (Only)
16	49-0023	1	Clutch, Double V-Belt
17	12-0020	2	8" Double Pulley, 1-1/4" B, 1/4" Kwy
18	16-0041	1	Linkage Pivot Sleeve Weldment
19	801-3816-17.5	1	3/8" -16 x 17-1/2" HHCS
20	33-0020	1	Retaining Ring
21	808-1-1.15-18	A/R	18 Ga. 1" ID Machine Bushing
22	29-0005	1	Extension Spring
23	10-0004	1	50B17 Sprocket, 1-1/4" B, 1/4" Kwy
24	811-2520-2.5Z	1	1/4" -20 x 2-1/2" Eye Bolt - Zinc
25	810-2520-Z	2	1/4" -20 Flange Spin Lock Nut
26	851-7510-3Z	1	3/4" -10 x 3" GR5 MB ZN
27	38-0015	1	5/16" x 2" Roll Pin
28	46-0001-68	1	Rear Unload Engage/Disengage Decal
29	35-0021	1	1/4" x 1/4" x 1-3/4" Key
30	43-0022		Spacer

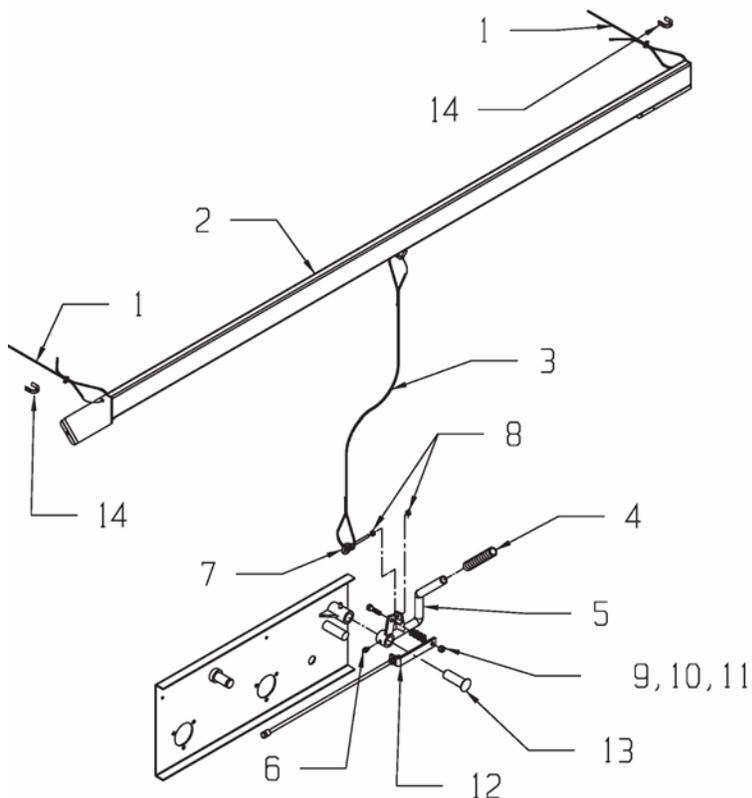
# VARIABLE SPEED SHIFTER CONTROLS AND EMERGENCY STOP CLUTCH RELATED PARTS



## VARIABLE SPEED SHIFTER CONTROLS AND EMERGENCY STOP CLUTCH RELATED PARTS

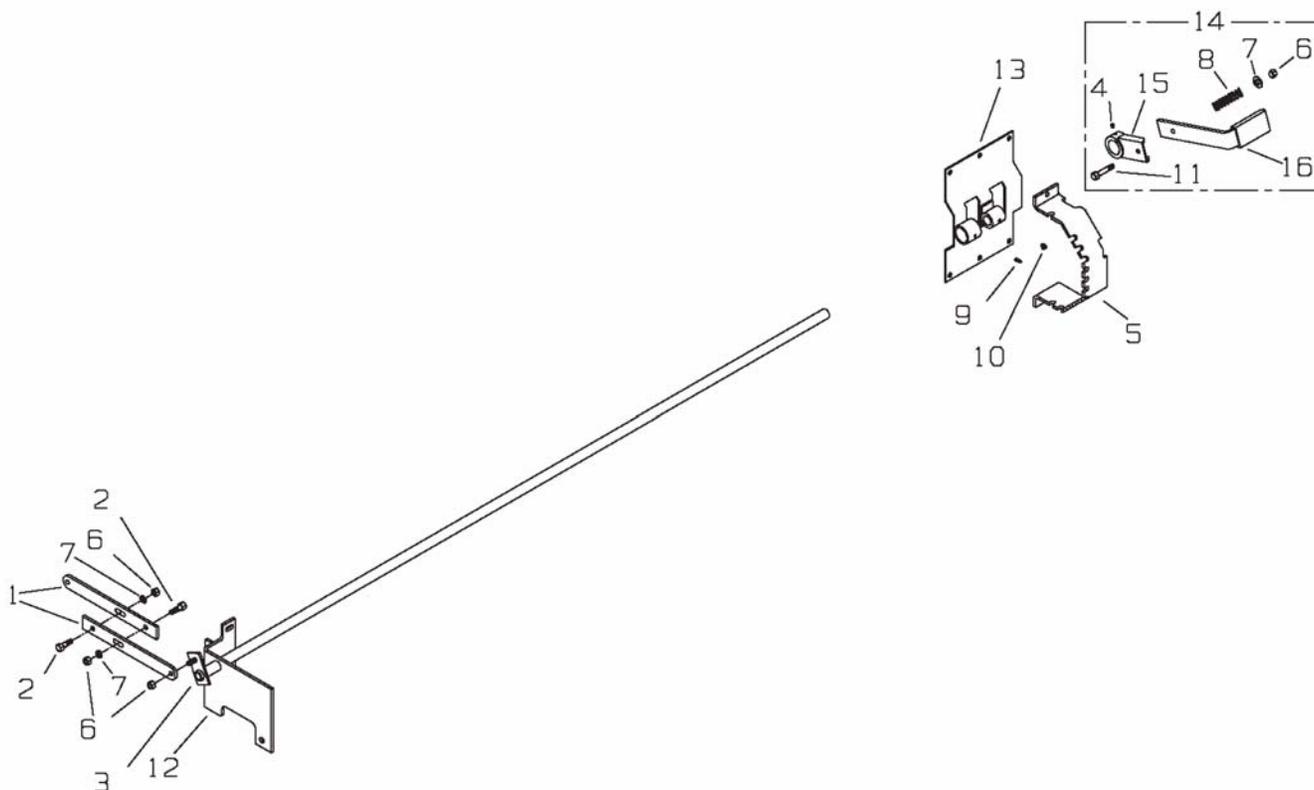
KEY	PART NUMBER	QTY	DESCRIPTION
1	42-0022-1	2	Linkage Bar
2	42-0021	1	Bolt w/chain & Eyelet
3	42-0013	1	Pipe Guide Bracket Asm.
4	16-0031	1	Speed Control Pipe
5	16-0029	1	Speed Control Handle Asm.
6	814-3816-Z	2	3/8" Locknut (Zinc)
7	805-0038- Z	4	3/8" Flat Washer (Zinc)
8	29-0008	2	Spring
9	42- 0020	1	Speed Control Handle
10	42-0019	1	Speed Control Hub Wldmt
11	851-3816-2Z	1	3/8" x 2" Machine Bolt
12	827-3118-.38	3	5/16" x 3/8" Set Screw
13	25-0158	1	Quadrant Bracket Wldmt
14	16-0030	1	Range Control Handle Asm.
15	42-0018	1	Range Control Hub Wldmt
16	16-0028	1	Range Control Handle
17	25-0154	1	Control Quadrant
18	25-0151	1	Control Asm.
19	25-0157	1	Speed Control Bracket
20	16-0032-2	1	Range Control Pipe Ear
21	814-3816-Z	3	3/8" Locknut (Zinc)
22	851-3816-1.25Z	2	Bolt 3/8"-16 x 1.25"
23	38-0003	1	Roll Pin
24	16-0032	1	Range Control Pipe Asm.
25	851-5013-2.5Z	1	1/2"-13 x 2-1/2" Bolt
26	814-5013-Z	2	1/2"-13 Lock Nut
27	828-0050-Z	5	1/2" Washer
28	30-0001	2	1/4" Grease Zerk
29	30-0003	1	1/4" 45° Grease Zerk
30	851-5013-2Z	1	Bolt 1/2" x 2"

## INDEPENDENT OUTFEED CLUTCH



KEY	PART NUMBER	QTY	DESCRIPTION
1	36-0001	2	Cables, Emergency Stop
	36-0007	4	Cable Crimp Only
2	16-0010	1	Push Bar, Emergency Stop, Control
3	36-0002	1	Cable, Emergency Stop Front, w/Crimp Fittings
	36-0007	2	Cable Crimp Only
4	51-0003	1	7/8" ID Rubber Grip Only
5	16-0044	1	I.O.C. Clutch Handle - Weldment
6	30-0001	1	1/4"-28 Straight Grease Fitting
7	811-2520-1Z	1	1/4"-20 x 1" Eye Bolt - Zinc
8	814-2520-Z	1	1/4"-20 Indented Lock Nut
9	851-3816-1.5Z	1	3/8"-16 x 1-1/2" Machine Bolt - Zinc GR5
10	805-0038-Z	4	3/8" Flat Washer
11	814-3816-Z	1	3/8"-16 Indented Lock Nut
12	25-0268-1	1	Linkage Extension Plate
13	25-0279	1	Pivot Shaft Weldment
14	33-0048	2	Cable Thimble

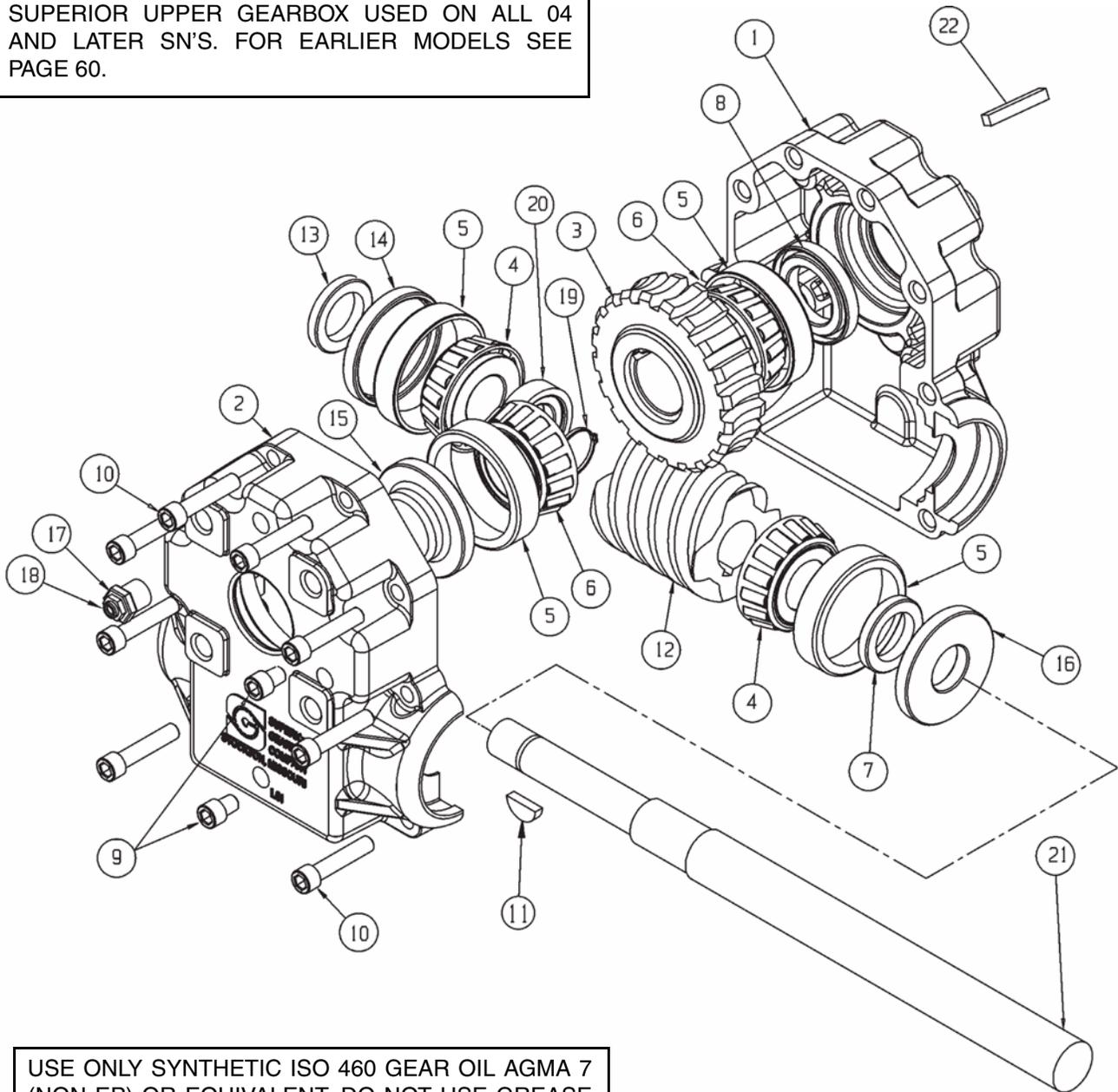
## TWO SPEED HI-LO SHIFTER CONTROL



KEY	PART NUMBER	QTY	DESCRIPTION
1	42-0022-1	2	Linkage Bar
2	851-3816-1.25Z	2	Bolt 3/8"-16 x 1.25"
3	16-0032-2	1	Range Control Pipe Ear
4	38-0003	1	Roll Pin 1/4" x 1-1/4"
5	25-0154	1	Control Quadrant
6	814-3816-Z	4	3/8" Locknut (Zinc)
7	805-0038-Z	3	3/8" Flat Washer (Zinc)
8	29-0008	1	Spring
9	30-0001	2	1/4" Grease Zerk
10	30-0003	1	1/4" 45° Grease Zerk
11	851-3816-2Z	1	3/8" x2" Machine Bolt
12	25-0157	1	Speed Control Bracket
13	25-0158	1	Quadrant Bracket Wldmt
14	16-0030	1	Range Control Handle Asm.
15	42-0018	1	Range Control Wldmt
16	16-0028	1	Range Control Handle

# UPPER GEAR BOX WITH INPUT SHAFT ASSEMBLY

SUPERIOR UPPER GEARBOX USED ON ALL 04 AND LATER SN'S. FOR EARLIER MODELS SEE PAGE 60.



USE ONLY SYNTHETIC ISO 460 GEAR OIL AGMA 7 (NON EP) OR EQUIVALENT. DO NOT USE GREASE FOR LUBRICANT.

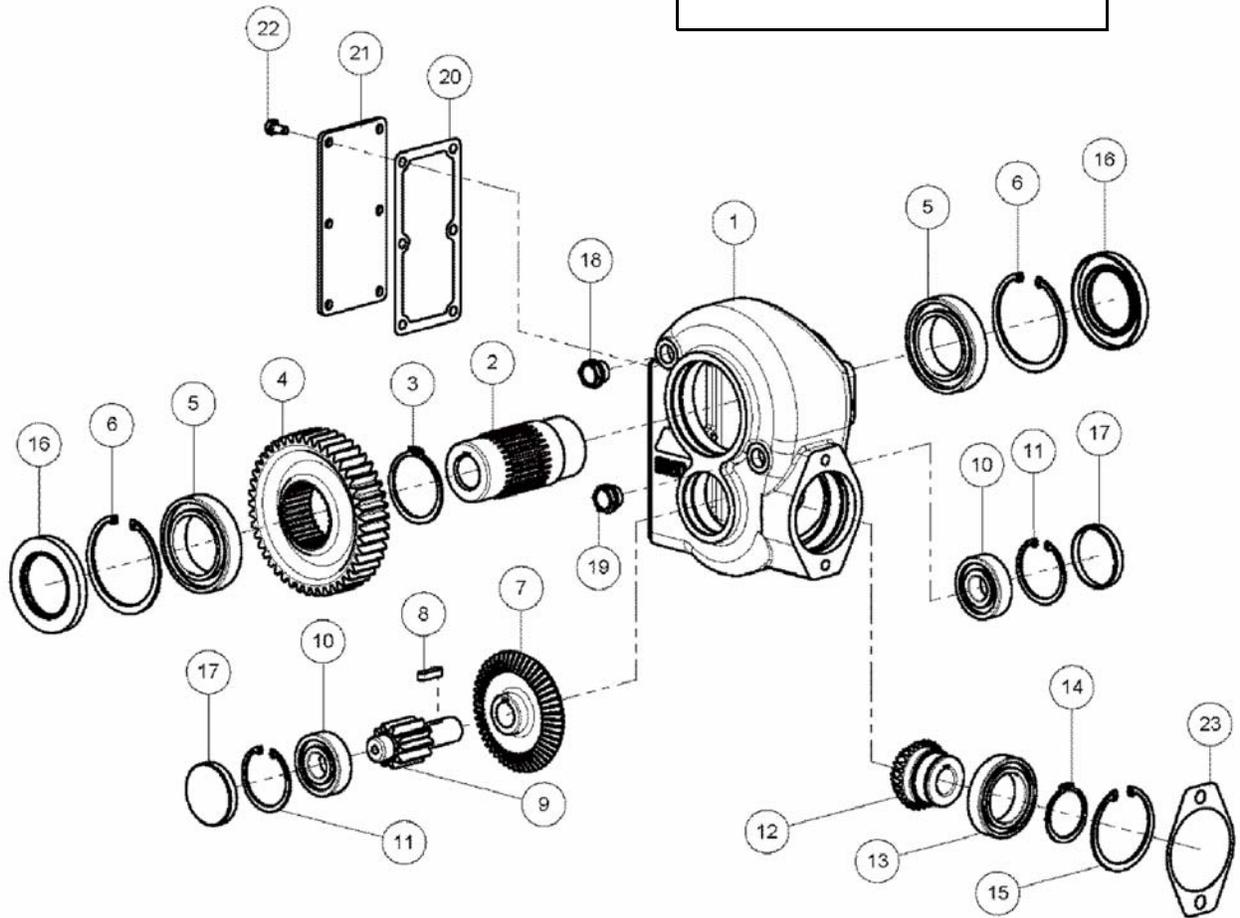
32-4200-UpperGearBoxWithInputShaftAssembly.cdr

## UPPER GEAR BOX WITH INPUT SHAFT ASSEMBLY

KEY	PART NUMBER	QTY	DESCRIPTION
	19-0155	1	Upper Gearbox w/Input Shaft, 5:1 5/16" Key (Prior to Serial #09T2201)
	19-0158	1	Upper Gearbox w/Input Shaft, 10:1 5/16" Key (Serial # 09T2201 & Later)
	19-0155-4	1	Upper Gearbox w/o Input Shaft, 5:1 5/16" Key (Prior to Serial # 09T2201)
	19-0158-4	1	Upper Gearbox w/o Input Shaft, 10:1 5/16" Key (Serial #09T2201 - 15T2234)
	19-0206	1	RT160 Upper Gearbox Without Input Shaft, 8.4:1 5/16" Key (Serial # 15T2235 & Later)
1	19-0055-4-1	1	Tapped Gearbox Casting
2	19-0055-4-2	1	Thru Hole Casting
3	19-0055-GS	1	5:1 Gear Set, 4140 Gear, Bronze Worm, 5/16" Key (Prior to Serial # 09T2201)
	19-0058-GS	1	10:1 Gear Set, 4140 Gear, Bronze Worm, 5/16" Key (Serial #09T2201 Thru SN 12T2228)
	19-0058-4-2-4140	1	10:1 4140 Gear, 5/16" Key (Serial # 12T2229 & Later)
4	19-0055-4-4	2	Bearing Cone
5	19-0055-4-5	4	Bearing Cup
6	19-0055-4-6	2	Bearing Cone
7	19-0024-12	1	Seal 1" ID x 1 1/2" OD
8	19-0016-10	1	Seal 1-1/4" ID x 2" OD
9	19-0055-4-9	2	Plug, 1/4"-18 NPT Plug
10	19-0055-4-10	AR	Bolt 5/16"-18 x 1 1/2" SHCS
	19-0055-4-11	AR	Bolt 5/16"-18 x 1 3/4" SHCS
	19-0055-4-21	AR	Bolt 5/16"-18 x 1-1/4" SHCS
11	19-0003-6	1	Woodruff Key
12	19-0055-GS	1	5:1 Gear Set, 4140 Gear, Bronze Worm, 5/16" Key (Prior to Serial # 09T2201)
	19-0058-GS	1	10:1 Gear Set, 4140 Gear, Bronze Worm, 5/16" Key (Serial #09T2201 Thru SN 12T2228)
	19-0058-4-3-BR	1	Bronze Roller Worm Gear 10:1 (Serial #12T2229 & Later)
13	19-0024-28	1	End Cap 1-1/2"
14	19-0024-19	1	End Cap 2-5/16"
15	19-0055-4-15	1	End Cap 2"
16	19-0024-27	1	Seal 1" ID x 2 5/16" OD
17	19-0055-4-17	1	Bushing 1/4" NPT x 1/8" NPT
18	19-0055-4-18	1	Vent Plug 5 PSI
19	19-0055-4-19	1	External Retaining Ring 1.0 Shaft
20	19-0055-4-20	1	1" ID Spacer
21	19-0015-1	1	TSS Input Shaft
22	35-0028	1	Key, 1/4" x 1-1/4" (Superior Split Housing) (Prior to SN 09T2201)
	35-0030-H-SK	1	Step Key, 1/4" x 5/16" x 1-1/4" Hardened (Prior to Serial # 09T2201 w/Updated Gear Set or Gearbox)
	35-0030-H	1	Key, 5/16" x 5/16" x 1-1/4" Hardened (Serial # 09T2201 thru 11T2221)
	135-31W-1.25-1	1	Key, Woodruff 5/16" x 1-1/4" Hardened (Serial #11T2222 & Later)

# 19-0206 RT160 GEARBOX ASSEMBLY

USE ONLY 80W90 OIL

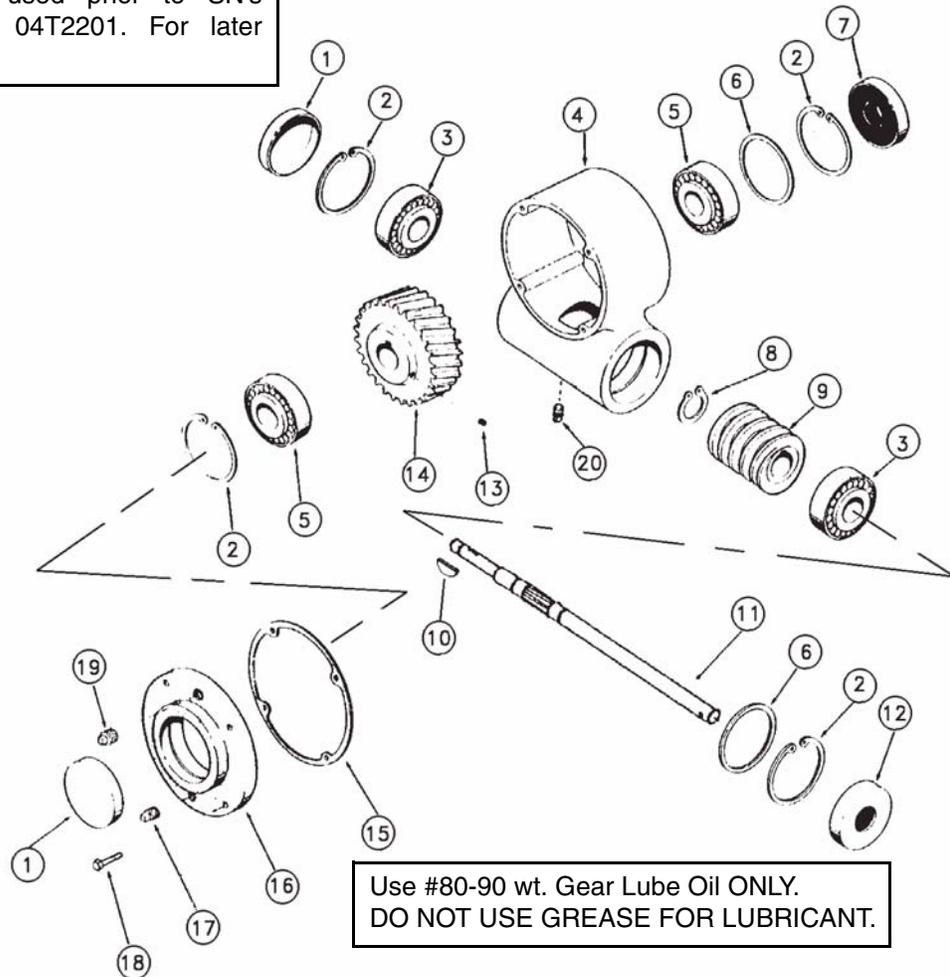


**19-0206**  
**RT160 UPPER GEARBOX ASSEMBLY**

KEY	PART NUMBER	QTY	DESCRIPTION
1	19-0206-1	1	Housing
2	19-0206-2	1	1-1/4" Hub
3	19-0206-3	1	Retaining Ring
4	19-0206-4	1	Gear
5	19-0206-5	2	Bearing
6	19-0206-6	2	Retaining Ring
7	19-0206-7	1	Gear
8	19-0206-8	1	Key
9	19-0206-9	1	Pinion
10	19-0206-10	2	Bearing
11	19-0206-11	2	Retaining Ring
12	19-0206-12	1	Pinion
13	619-0001-18	1	Bearing
14	619-0001-19	1	Retaining Ring
15	619-0001-16	1	Retaining Ring
16	19-0206-13	2	Oil Seal
17	19-0206-14	2	Plug
18	19-0203-16	1	Oil Breather Plug
19	19-0203-14	1	Oil Level Indicator
20	19-0206-15	1	Gasket
21	19-0206-16	1	Cover
22	619-0001-27	1	M8 x 16 Hex Head Bolt
23	19-0203-17	1	Gasket

## #19-0015 UPPER GEAR BOX WITH INPUT SHAFT ASSEMBLY

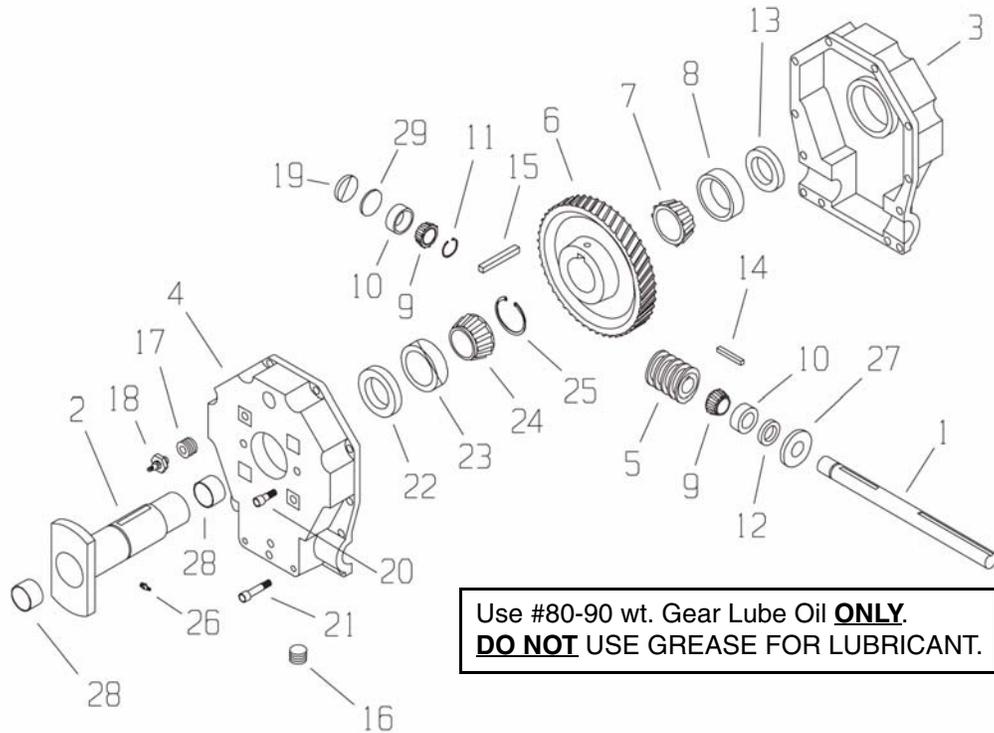
Durst upper gearbox used prior to SN's 04T5201, 04T6201 & 04T2201. For later models see page 58.



KEY	PART NO.	QTY	DESCRIPTION
	19-0015	1	Upper gearbox w/ Input Shaft
	19-0015-4	1	Upper Gearbox w/o Input Shaft
1	19-0003-1	2	Cap
2	19-0002-2	4	Snap Ring
3	19-0055-4-4	2	Bearing Cone
	19-0002-4	2	Bearing Cup
4	19-0003-2	1	Housing
5	19-0055-4-6	2	Bearing Cone
	19-0055-4-5	2	Bearing Cup
6	19-0002-12	AR	Shim
7	19-0003-4	1	Output Seal
8	19-0002-8	1	Snap Ring
9	19-0015-3	1	Hardened Worm
10	19-0003-6	1	Woodruff Key

KEY	PART NO.	QTY	DESCRIPTION
11	19-0015-1	1	Input Shaft
12	19-0002-13	1	Input Seal
13	19-0003-7	1	Set Screw
14	19-0015-2	1	Bronze Gear
15	19-0002-19	1	Gasket
16	19-0003-9	1	Cover
17	19-0002-17	1	Vent Plug
18	19-0002-14	4	Cap Screw
19	19-0003-10	1	Level Plug
20	19-0003-12	1	Drain Plug

**#19-0024 50:1 RATIO, FRONT, LOWER GEARBOX (LEFT HAND UNLOAD)**  
**#19-0024-RH 50:1 RATIO, FRONT, LOWER GEARBOX**  
**(RIGHT HAND UNLOAD)**  
**3200 & 4200 SERIES**

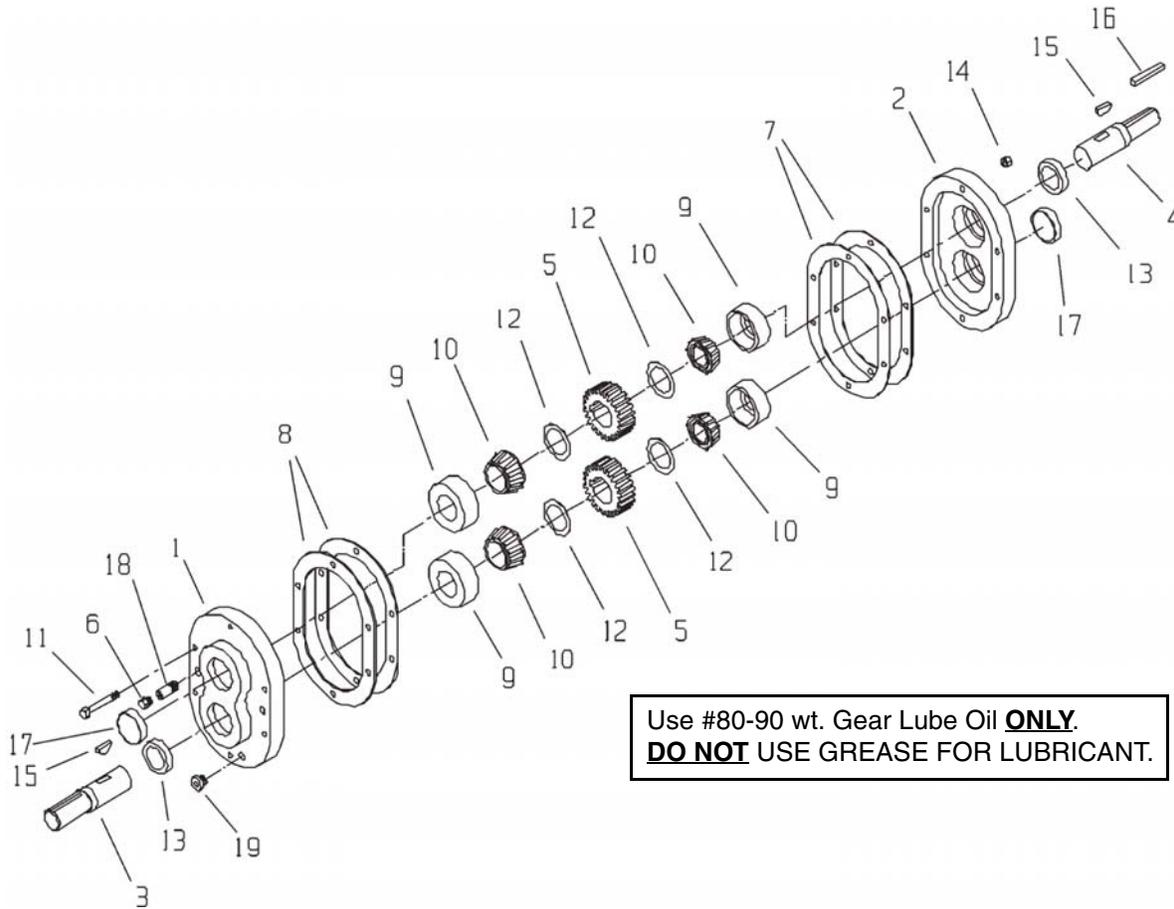


**Use #80-90 wt. Gear Lube Oil ONLY.**  
**DO NOT USE GREASE FOR LUBRICANT.**

KEY	PART NO.	QTY	DESCRIPTION
1	19-0024-1	1	Input Shaft 1" Dia.
2	19-0024-2	1	Output Shaft 2.25" Dia. (Hollow)
3	19-0024-3	1	Casting, Tapped Holes
4	19-0024-4	1	Casting, Through Holes
5	19-0024-5	1	Worm, 2 Lead RH
6	19-0024-6	1	Worm Gear, RH
7	19-0004-7	1	Bearing Cone, 2" ID
8	19-0024-8	1	Bearing Cup
9	19-0002-3	2	Bearing Cone, 1" ID
10	19-0002-4	2	Bearing Cup
11	19-0024-11	1	Retaining Ring, 1" Shaft
12	19-0024-12	1	Seal, 1" Shaft
13	19-0024-13	1	Seal, 2" Shaft
14	19-0024-14	1	Key, 1/4" SQ
15	19-0024-15	1	Key, 3/8"
16	19-0016-5	4	Plain Plug, 1/2" NPT
17	19-0023-2	1	Bushing, 1/2" to 1/8" NPT

KEY	PART NO.	QTY	DESCRIPTION
18	19-0002-17	1	Pressure Relief, 5psi
19	19-0024-19	1	End Plug, Input Shaft, - 2- 5/16" OD
20	19-0024-20	10	SHCS 3/8x1-1/2"
21	19-0016-11	4	SHCS 3/8x2-1/4"
22	19-0024-22	1	Seal 2.25" ID
23	19-0024-23	1	Bearing Cup
24	19-0024-24	1	Bearing Cone, 2.25" ID
25	19-0024-25	1	Retaining Ring 2.25"
26	19-0024-26	1	Grease Zerk
27	19-0024-27	1	Dust Seal, Input
28	13-0010	2	Quill Bushing
29	19-0024-28	1	End Cap, Rubber Cover 1-1/2" OD

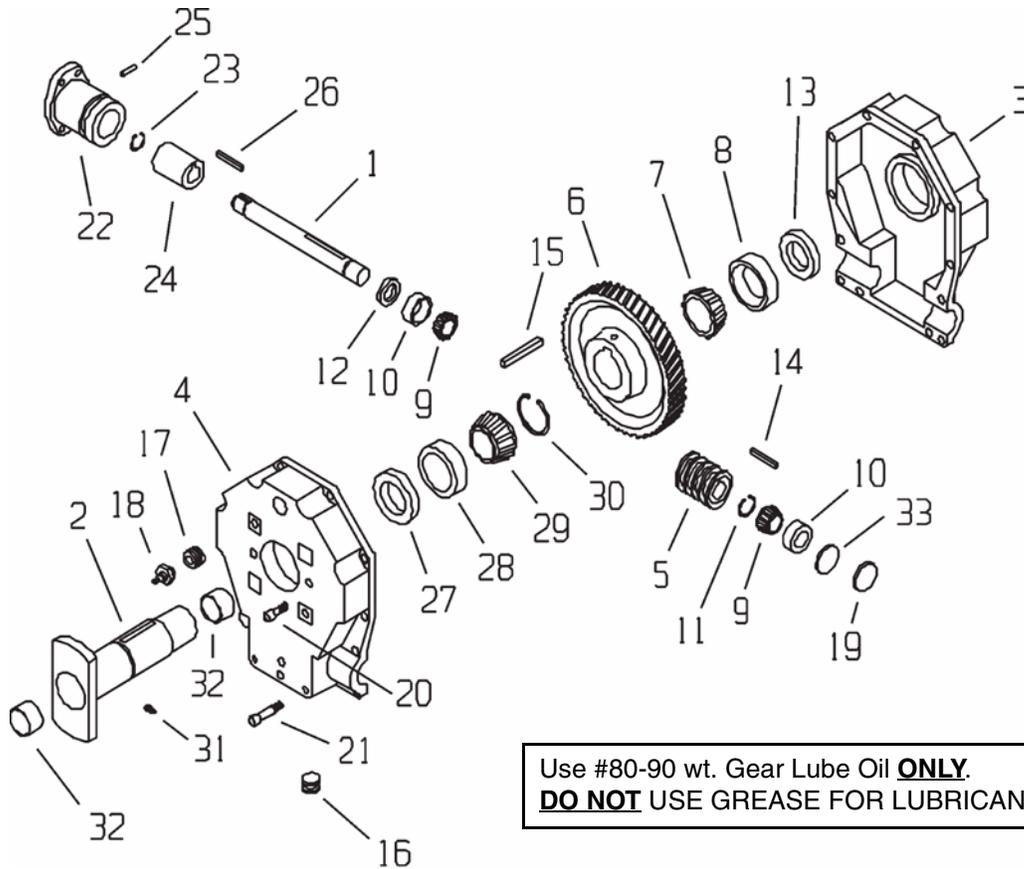
**#19-0032**  
**1:1 RATIO, REAR GEARBOX (PARALLEL SHAFT)**  
**3200 & 4200 SERIES**



Use #80-90 wt. Gear Lube Oil **ONLY**.  
**DO NOT USE GREASE FOR LUBRICANT.**

KEY	PART NUMBER	QTY	DESCRIPTION
1	19-0032-1	1	Housing 1/2
2	19-0032-2	1	Housing 1/2
3	19-0032-3	1	Shaft, Input (1-1/4" Diameter Stub Shaft)
4	19-0032-4	1	Shaft, Output (1" Diameter Stub Shaft)
5	19-0032-5	2	Gear, Spur 30 Teeth
6	19-0032-20	1	Plug, Vented
7	19-0032-7	2	Shim, .002 Red
8	19-0032-8	2	Shim, .005 Blue
9	19-0032-9	4	Cup, Race
10	19-0032-10	4	Cone, Bearing
11	19-0032-11	6	5/16" -18 x 2-1/2" GR5 Machine Bolt
12	19-0032-12	4	Shim
13	19-0032-21	2	Seal
14	19-0032-14	6	Nut, Hex 5/16" -18
15	19-0032-15	2	Woodruff Key, 5/16" x 1"
16	35-0021-H	1	1/4" x 1/4" x 1-3/4" Hardened Key
17	19-0032-17	2	Plug, Expansion
18	19-0032-18	1	Bushing, Pipe 3/8" x 1/8" NPT
19	19-0032-19	3	Plug, Pipe Socket 3/8" NPT

**#19-0025**  
**25:1 RATIO, REAR GEARBOX**  
**3200 & 4200 SERIES**

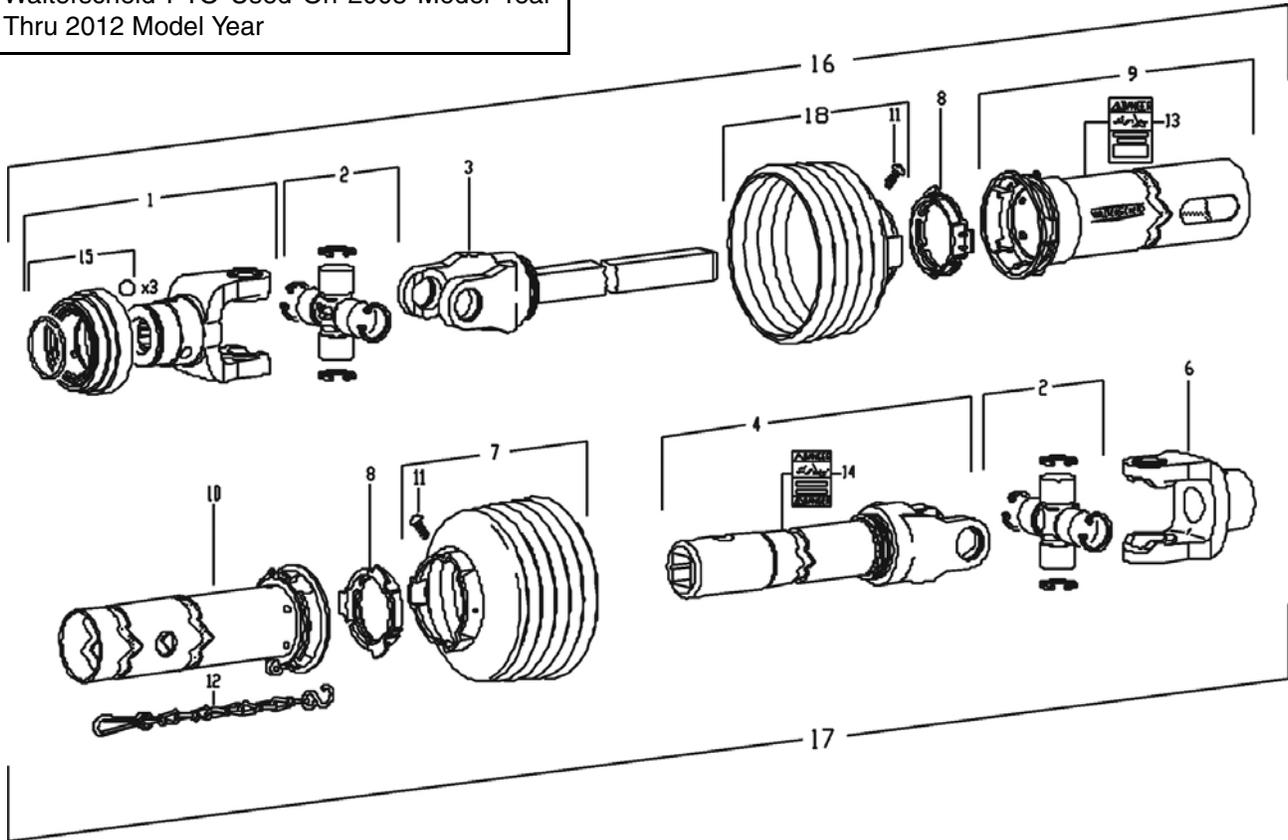


KEY	PART NO.	QTY	DESCRIPTION
1	19-0025-1	1	Input Shaft 1" Dia.
2	19-0024-2	1	Output Shaft 2.25" Dia. (Hollow)
3	19-0024-3	1	Casting, Tapped Holes
4	19-0024-4	1	Casting, Through Holes
5	19-0025-7	1	Worm, 2 Lead RH
6	19-0025-8	1	Worm Gear, RH
7	19-0004-7	1	Bearing Cone, 2" ID
8	19-0024-8	1	Bearing Cup
9	19-0002-3	2	Bearing Cone, 1" ID
10	19-0002-4	2	Bearing Cup
11	19-0024-11	1	Retaining Ring, 1" Shaft
12	19-0024-12	1	Seal, 1" Shaft
13	19-0024-13	1	Seal, 2" Shaft
14	19-0024-14	1	Key, 1/4" SQ
15	19-0024-15	1	Key, 3/8"
16	19-0016-5	4	Plain Plug, 1/2" NPT
17	19-0023-2	1	Bushing, 1/2" to 1/8" NPT
18	19-0002-17	1	Pressure Relief, 5 psi
19	19-0024-19	1	End Plug, Input Shaft, 2-5/16" OD

KEY	PART NO.	QTY	DESCRIPTION
20	19-0024-20	10	SHCS 3/8" x 1-1/2"
21	19-0016-11	4	SHCS 3/8" x 2-1/4"
22	19-0025-2	1	Hydraulic Adapter, 4 Bolt
23	19-0025-4	1	Retaining Ring (#5000-100)
24	19-0025-3	1	Hydraulic Sleeve
25	19-0025-5	1	Pin (Hydraulic Adapter)
26	19-0025-6	1	Key, 1/4" x 1.46"
27	19-0024-22	1	Seal 2.25" ID
28	19-0024-23	1	Bearing Cup
29	19-0024-24	1	Bearing Cone, 2.25" ID
30	19-0024-25	1	Retaining Ring 2.25"
31	19-0024-26	1	Grease Zerk
32	13-0010	2	Quill Bushing
33	19-0024-28	1	End Cap, Rubber Cover, 1-1/2" OD

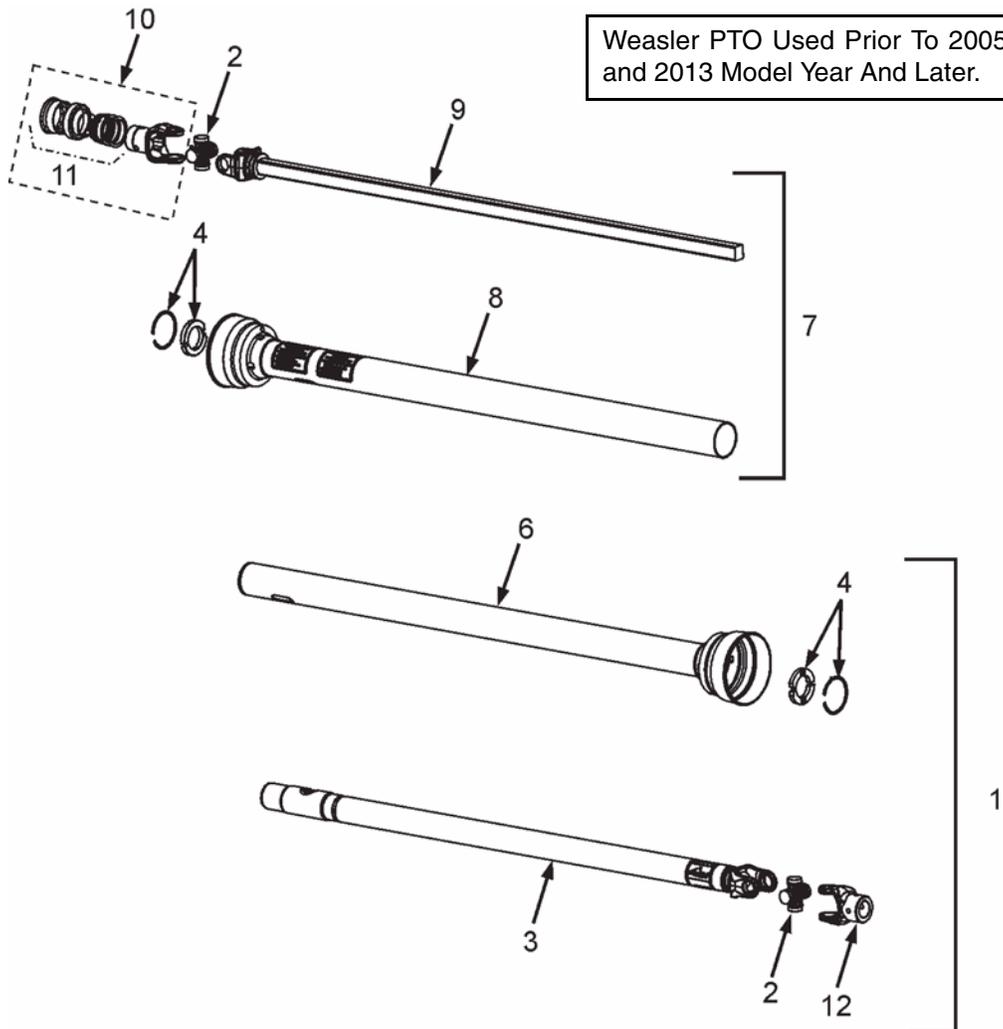
## #18-0117 UNIVERSAL JOINT TELESCOPING ASSEMBLY

Walterscheid PTO Used On 2005 Model Year  
Thru 2012 Model Year



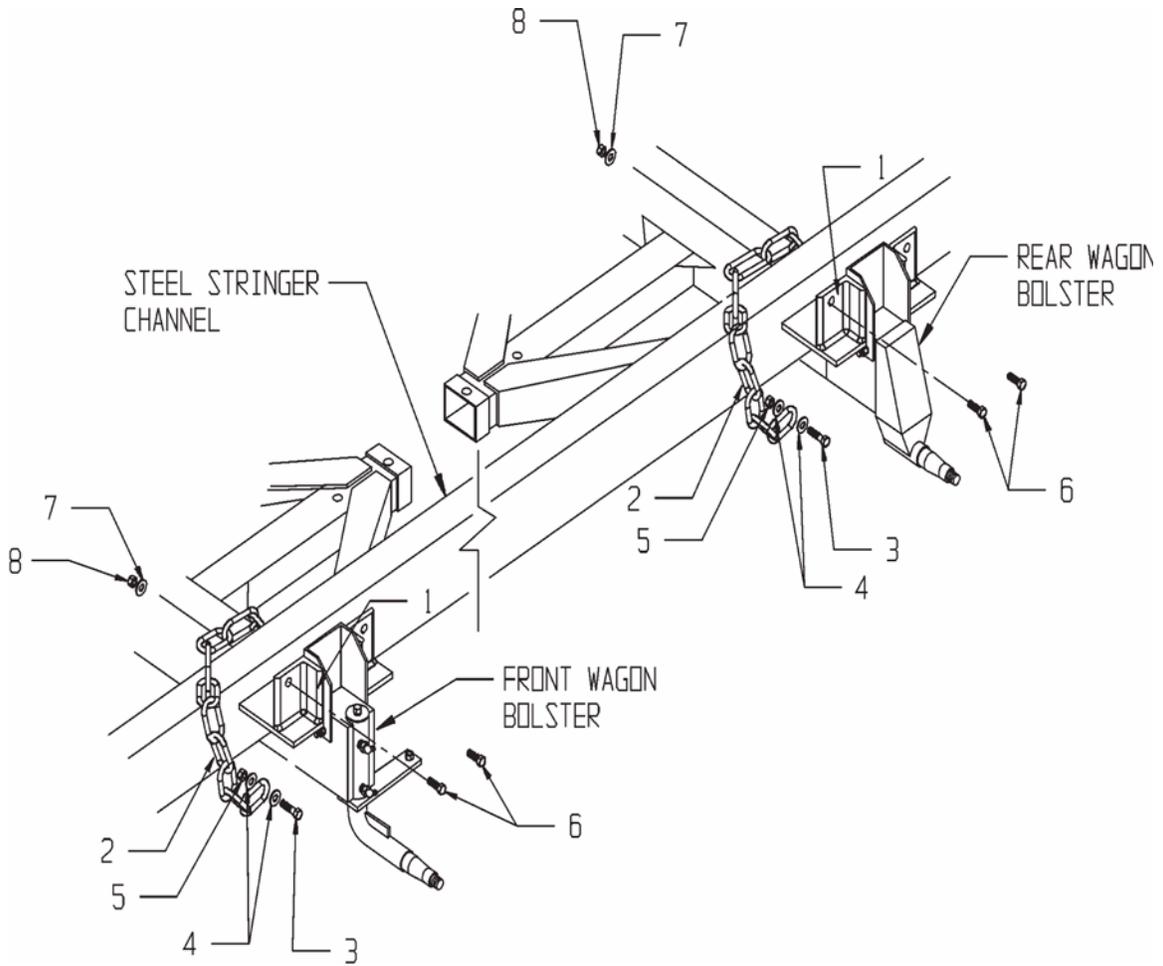
KEY	PART NUMBER	QTY	DESCRIPTION
	18-0117	1	Joint Assembly
1	18-0117-1-1	1	3/8"-6 Spline Yoke ASGE
2	18-0117-1-2	2	Cross and Bearing Kit
3	18-0117-1-3	1	Inboard Yoke and Bar Welded Assy.
4	18-0117-2-1	1	Inboard Yoke, Tube and Sleeve Welded Assy.
6	18-0117-2-2	1	1-1/4" Bore, 1/4" Key Yoke
7	18-0117-1-4	1	Shield Cone 5-Rib
8	918-0208-2-4	2	Bearing Ring SC25
9	18-0117-1-6	1	Outer Shield Tube Oval
10	18-0117-2-3	1	Inner Shield Tube Round
11	918-0208-2-9	2	Screw-Included in Item #7
12	918-0208-2-7	1	Safety Chain
13	918-0208-2-8	1	Decal Outer-Included in Item #9
14	918-0208-1-10	1	Decal Inner-Included in Item #4
15	18-0117-1-1-1	1	ASGE Collar Kit-Included in Item #1
16	18-0117-1	1	Tractor Male Half Complete
17	18-0117-2	1	Implement Female Half Shaft Complete
18	18-0117-1-7	1	Shield Cone 4-Rib

## #18-0017 12R UNIVERSAL JOINT TELESCOPING ASSEMBLY W/GUARD



KEY	PART NUMBER	QTY	DESCRIPTION
	18-0017	1	Joint Assy, 12R Universal #222-17134
1	18-0017-4	1	Joint & Tube Half w/guard (implement half)
2	18-0017-9	2	12R Cross & Bearing Kit
3	18-0017-6	1	Yoke, Tube & Slip Sleeve
4	18-0017-10	2	Nylon Repair Kit
6	18-0017-12	1	Inner Guard w/Bearing & Retainer
7	18-0017-1	1	Joint & Shaft Half w/guard (tractor half)
8	18-0017-11	1	Outer Guard w/Bearing & Retainer
9	18-0017-3	1	Yoke & Shaft
10	18-0017-7	1	Spring - Lock Yoke Assembly
11	18-0005-16	1	Spring - Lock Repair Kit
12	18-0017-13	1	Yoke, 1-1/4" Bore, 1/4" Kwy, w/RP Hole

# #52-0003S STEEL STRINGER TIE DOWN KIT



**#52-0003S**  
**STEEL STRINGER TIE DOWN KIT**

KEY	PART NUMBER	QTY	DESCRIPTION
	52-0003S	1	Tie Down Kit (Steel Stringers)
1	25-0084	4	Standard Tie Down Bracket
2	52-0003-1	4	51" Standard Tie Down Chain
	75-0341-4-HD	4	61" Heavy Duty Tie Down Chain for Riser Option
3	851-3816-1.5Z	4	Bolt, Hex Machine - 3/8" x 1-1/2"
4	805-0038-Z	8	3/8" Flat Washer
5	815-3816-Z	4	3/8" Lock Nut
6	851-5013-1.5-Z	8	1/2" x 1-1/2" Hex Machine Bolt
7	805-0050-Z	8	1/2" Flat Washers
8	815-5013-Z	8	1/2" Lock Nuts

**#52-0001TK TSS 12" OPTIONAL EXTENSION KIT**

(Regular LH Unloading)

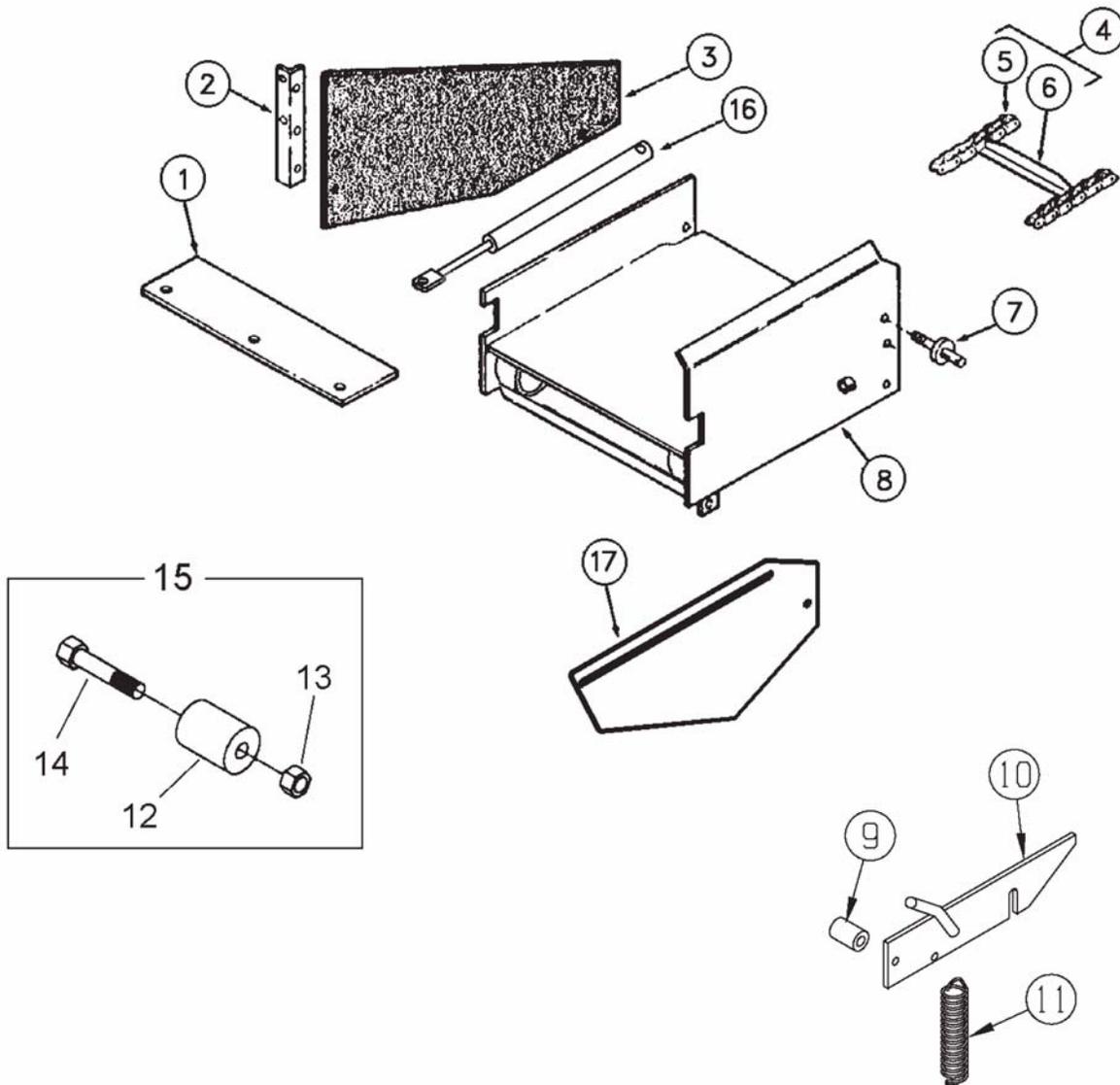
**#52-0001TK-RH TSS OPTIONAL EXTENSION KIT**

(Optional RH Unloading)

**#52-0021 OPTIONAL HYDRAULIC LIFT PKG**

(Not Shown)

**#52-0009K-FB CROSS CONVEYOR EXTENSION KIT**



**OPTIONAL EXTENSION KIT  
OPTIONAL HYDRAULIC LIFT PKG  
(Not Shown)**

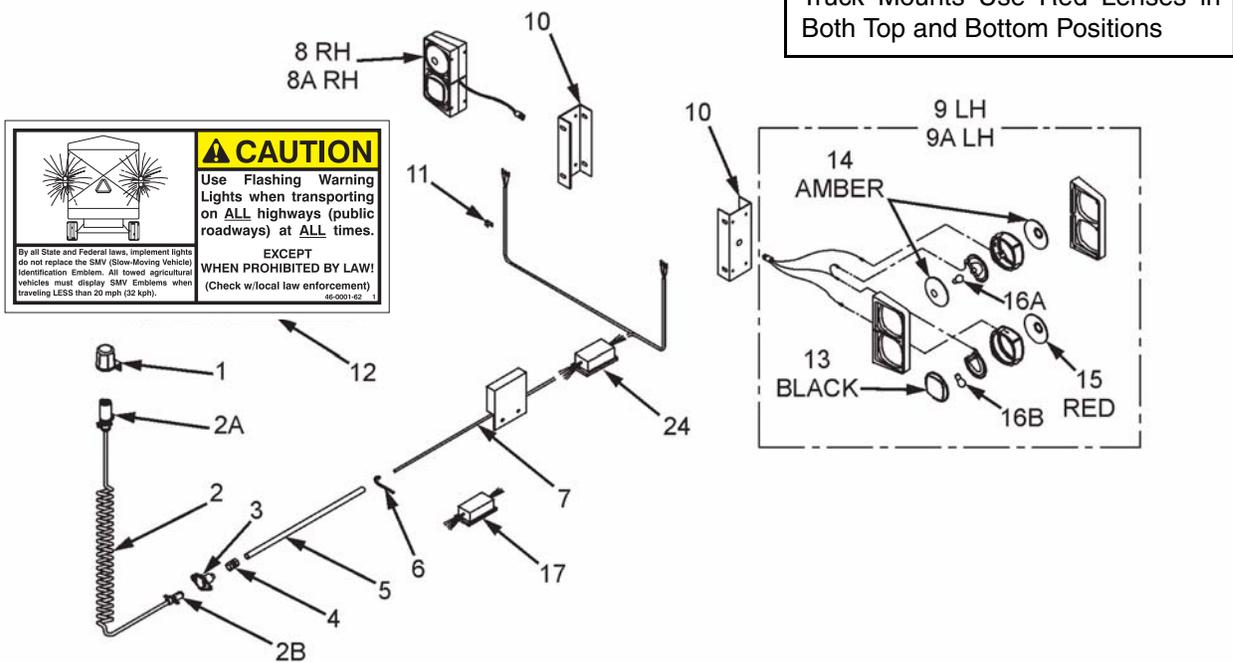
KEY	PART NUMBER	QTY	DESCRIPTION
0	52-0001TK	1	TSS Optional Extension Kit 12"
	52-0001TK-RH	1	TSS Optional Extension Kit 12" Right Hand Unload
	52-0001TK-FB	1	TSS Optional Extension Kit 12" W/ Hydraulic Lift Shaft
	52-0008K	1	TSS Optional Extension Kit 24"
	52-0008K-RH	1	TSS Optional Extension Kit 24" Right Hand Unload
	52-0008K-FB	1	TSS Optional Extension Kit 24" W/Hydraulic Lift Shaft
	52-0009K-FB	1	TSS Optional Extension Kit 36" W/Hydraulic Lift Shaft
1	24-0068	1	Cross Apron Top Panel Shield
2	25-0075	1	Belting Shield Mount Angle
3	49-0004	1	Belting, Shield
4	11-0061-D	1/2	12" / 24" Extension Section Cross Apron Pintle Chain Assembly
	11-0122	1	36" Extension Section Cross Apron Pintle Chain Assembly
5	11-0006-1	24	Link, Pintle Chain Extension
6	11-0006-2	2	Chain Slat W/Attachments
7	51-0001	1	Handle less Grip
	51-0004	1	Black Plastic Grip
8	45-0002	1	Frame Extension 12"
	45-0002-RH	1	Frame Extension 12" Right Hand Unload
	45-0002-FB	1	Frame Extension 12" W/Hydraulic Lift Shaft
	45-0003-FB	1	Frame Extension 24" W/Hydraulic Lift Shaft
	45-0003-FB-RH	1	Frame Extension 24" Right Hand Unload W/Hydraulic Lift Shaft
	45-0004-FB	1	Frame Extension 36" W/Hydraulic Lift Shaft
9	45-0004-FB-RH	1	Frame Extension 36" Right Hand Unload W/Hydraulic Lift Shaft
	45-0002-7	1	Rod, Tubular Spacer
10	25-0076	1	Bracket, Handle Catch W/Grip
	51-0006	1	Black Plastic Grip
11	29-0005	1	Spring
12	23-0064	2	Chain Hold Down Shaft
13	814-5013-Z	2	1/2-13 Indented Locknut
14	851-5013-2.25Z	2	1/2-13 x 2-1/4" M.B.
15	44-0051	2	Extension Hold Down Shaft Assembly w/Bolt
16	955-3703	1	Gas Shock (2011 Model Year and Later)
17	39-0017-2	1	Deflector (2011 Model Year and Later)

**#52-0021 HYDRAULIC LIFT EXTENSION PARTS (NOT ILLUSTRATED)**

PART NUMBER	QTY	DESCRIPTION
55-0093	1	2" x 8" Hydraulic Cylinder
25-0235	1	Upper Cylinder Mount Plate
955-0002	2	3/8" x 27" hydraulic Hose
55-0054	1	3/8" x 21" Hydraulic Pipe
55-0067	1	3/8" x 14" Hydraulic Pipe
955-3605	2	3/8" x 90 Degree Elbow
955-3609	4	3/8" NPT Coupler
955-0003	2	3/8" x 90 Degree Street Elbow
933-3602	1	Hydraulic Pipe Bracket
25-0234	1	Hydraulic Pipe Mount Bracket
55-0052	2	3/8" x 24" Hydraulic Pipe
29-0012	1	Hydraulic Hose Support Spring
55-0033-S	1	1/4" Twin hose Clamp
55-0051	2	1/4" x 130" Hydraulic Hose
811-3118-2Z	1	5/16"-18 x 2" Eyebolt
823-.18-1.25Z	1	3/16" x 1-1/4" Cotter Pin

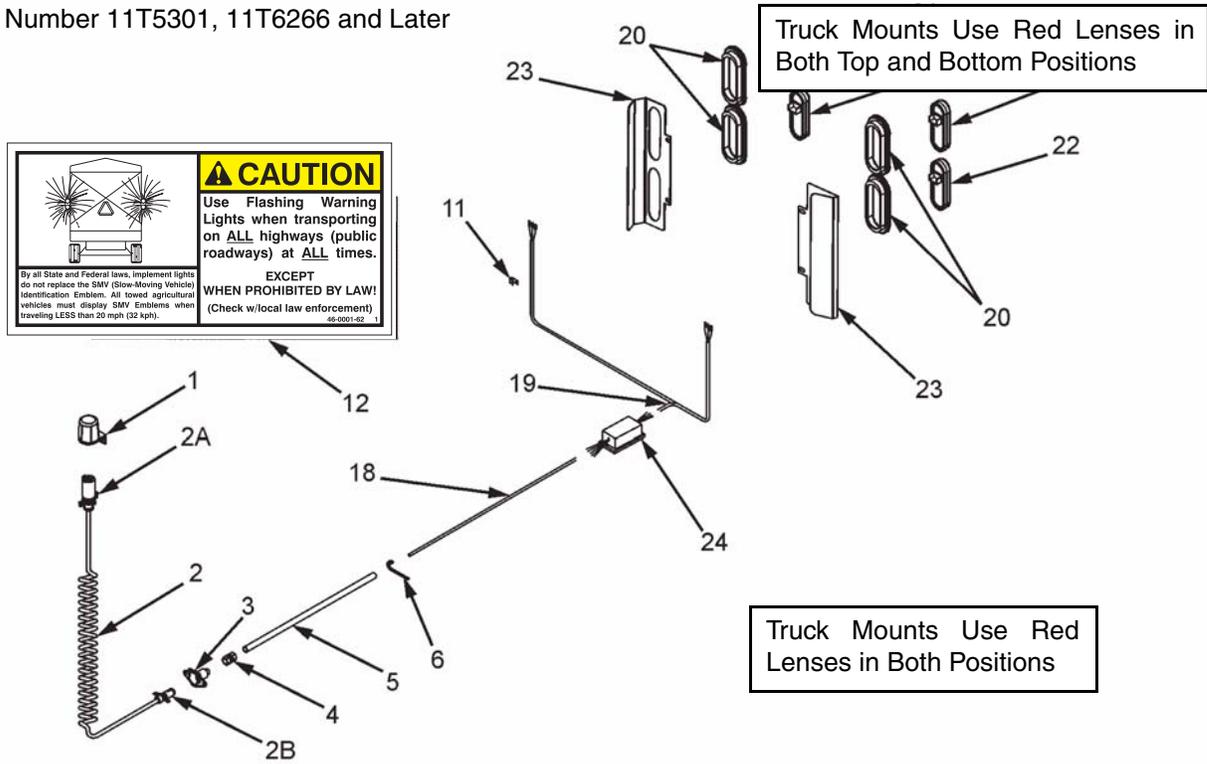
# HIGHWAY TRANSPORT AG LIGHTS

Prior To Serial Number 11T5301, 11T6266



## 52-0019-LED-PKG

Serial Number 11T5301, 11T6266 and Later

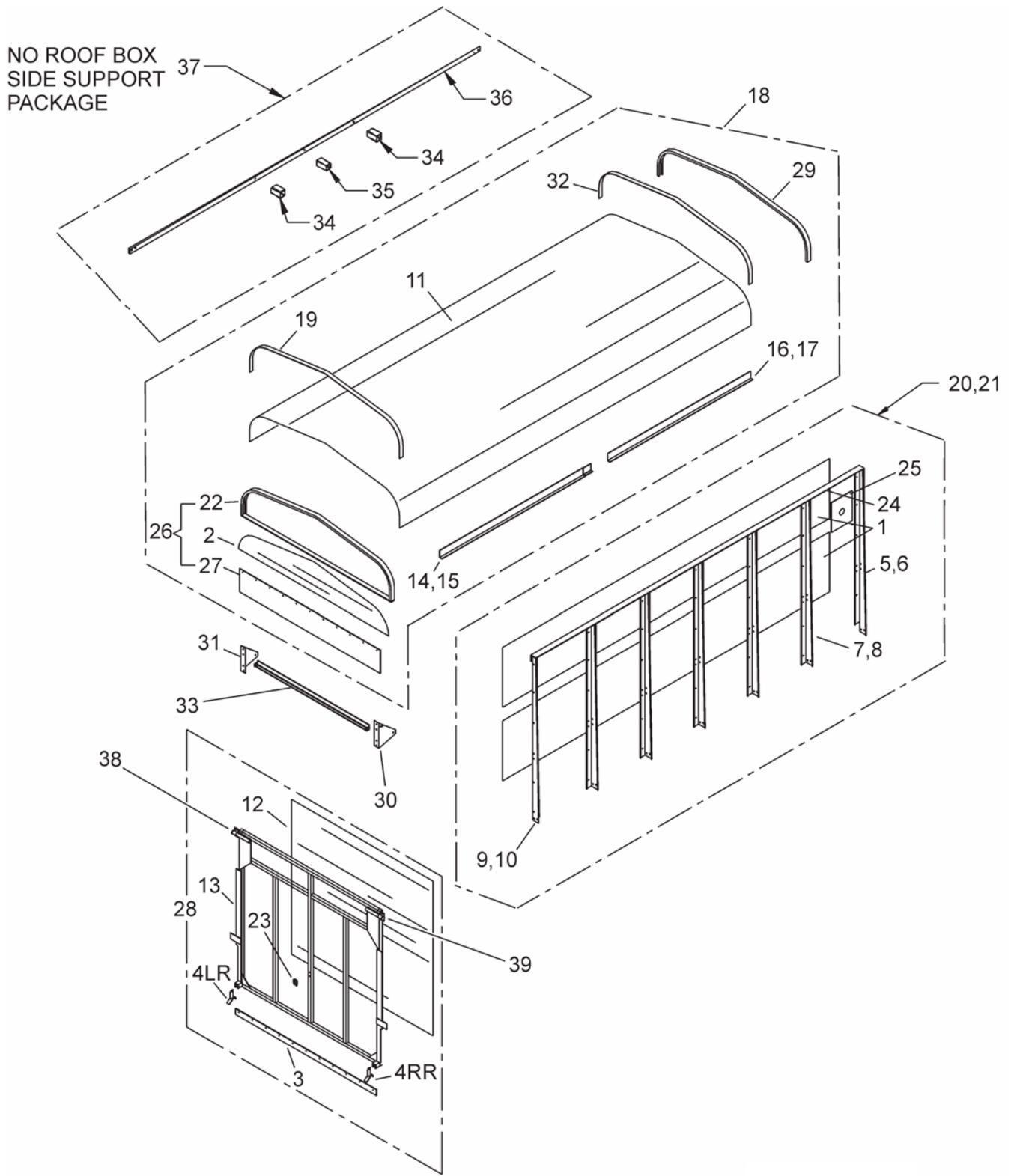


3500-HighwayLightPackageKit.cdr

## HIGHWAY TRANSPORT AG LIGHTS

KEY	PART NUMBER	QTY	DESCRIPTION
	52-0019-LED-PKG	AR	LED Light Package
1	56-0009	1	7-Way "Stor-A-Way"
2	56-0005	1	Coil Cable Assembly
2a	56-0005-4	1	7-Contact Plug W/Spring Only
2b	56-0005-1	1	4 Pole Plug
3	56-0004	1	#1232 4-way Socket (4 pin)
4	56-0007	1	1/2" EMT Coupler #260-D
5	56-0006	1	Light Wire Tube Deburred, 1/2" Conduit 22" Long
6	32-0026	8	14" Nylon Tie Strap
7	52-0019-LED-PKG	1	LED Light Package Update
8	56-0031	1	Dual Light RH w/4-Plug
8a	56-0031-TR	1	Truck Mount Dual Light RH w/4-Plug
8/8a	56-0034	AR	Adapter Harness 3-Plug to 4-Plug (Needed in addition to light for Serial#'s Prior to 06T2201 with 3-Plug Lights)
9	56-0030	1	Dual Light LH w/4-Plug
9a	56-0030-TR	1	Truck Mount Dual Light LH w/4-Plug
9/9a	56-0034	AR	Adapter Harness 3-Plug to 4-Plug (Needed in addition to light for Serial #'s Prior to 06T2201 with 3-Plug Lights)
10	25-0255	2	Light Mount Bracket (Universal)
11	32-0024	4	3/8" Plated Loom Clamp
12	46-0001-62	1	Caution Tail Light Decal
13	56-0001-3	2	Bezel Blank, (Fit Inside Housing) (Prior to 09T2231)
	56-0030-3	2	Bezel Blank, (Fit Over Housing) (SN 09T2231 & Later)
14	56-0001-1	4	Amber Lens (Fit Inside Housing) (Prior to 09T2231)
	56-0030-1	4	Amber Lens (Fit Over Housing) (SN 09T2231 & Later)
15	56-0001-2	2	Red Lens (Fit Inside Housing) (Prior to 09T2231)
	56-0030-2	2	Red Lens (Fit Inside Housing) (SN 09T2231 & Later)
16A	56-0001-5	2	#1156 Single Filament Bulb
16B	56-0001-4	2	#1157 Dual Filament Bulb
17	56-0028	1	Tail Light Converter (Truck Mount Only)
18	56-0037	AR	4 Conductor Trailer Cable
19	56-0083	1	LED Light Y-Harness Less Module Plugs
20	56-0065	4	6" Oval Grommet
21	56-0064	2	6" Oval Amber LED Light
22	56-0063	2/4	6" Oval Red LED Light
23	25-0259	2	LED Light Bracket
24	56-0032-1	1	AG Module w/Connectors
	56-0084	1	AG Module w/Connectors (LED Light Harness)

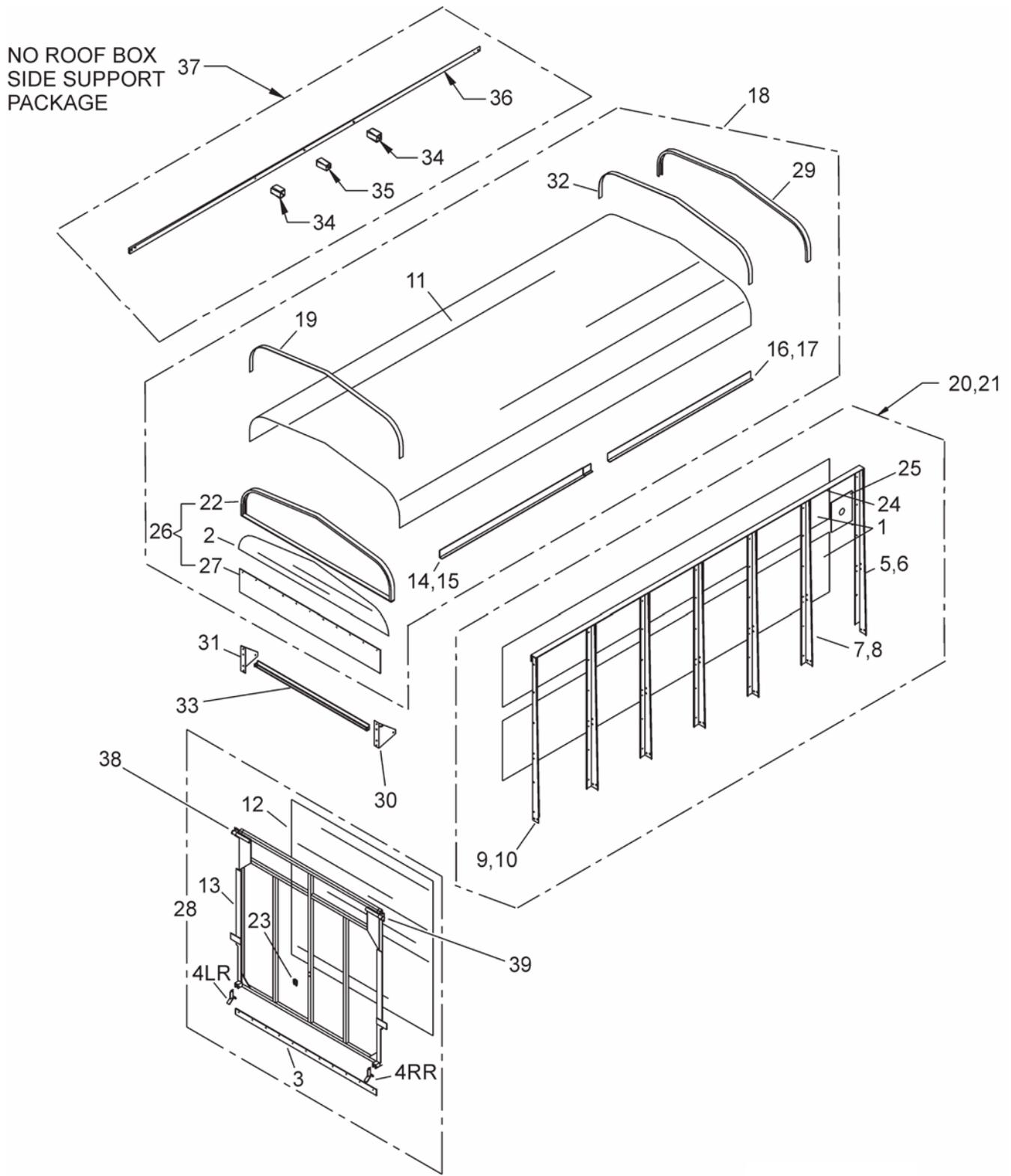
# 3200 SERIES SIDES, ROOF & REAR GATE (1 OF 2)



## 3200 SERIES SIDES, ROOF & REAR GATE (1 OF 2)

KEY	PART NUMBER	DESCRIPTION
1	761II-40.75-16	16' Side Panel, 20 GA. x 40-3/4" Painted
	761II-40.75-18	18' Side Panel, 20 GA. x 40-3/4" Painted
	761II-40.75-20	20' Side Panel, 20 GA. x 40-3/4" Painted
2	100-9990-37-3	Rear Roof Panel, 13" x 86" Painted
3	49-0022	Bottom Back Gate Belting
4RR	100-9992-1-7	Right Rear Back Gate Latch Catch
4LR	100-9992-1-8	Left Rear Back Gate Latch Catch
5	100-9990-8-2	Front Right/Rear Left Upright 10 GA. x 82-1/2" (Illustrated)
6	100-9990-8-1	Front Left/Rear Right Upright 10 GA. x 82-1/2" (Not Illustrated)
7	100-9990-8-6	Center Right Upright 10 GA. x 82-1/2" (Illustrated)
8	100-9990-8-5	Center Left Upright 10 GA. x 82-1/2" (Not Illustrated)
9	100-9990-8-1	Front Left/Rear Right Upright 10 GA. x 82-1/2" (Illustrated)
10	100-9990-8-2	Front Right/Rear Left Upright 10 GA. x 82-1/2" (Not Illustrated)
11	100-9990-14-2	Roof Panel Painted 17'-3"
	100-9990-15-8	Roof Panel Painted 19'-3"
	100-9990-51-1	Roof Panel Painted 21'-3"
12	761II-40.75-84	Back Gate Panel, 20 GA. x 40-3/4" x 84" Aluminized
13	100-9992-1-6	2-Way Back Gate Frame Only Welded Assy.
14	100-9990-61	Roof Angle Right (Illustrated)
15	100-9990-60	Roof Angle Left (Not Illustrated)
16	100-9990-65-1	Right Roof Angle Ext. 16' (Illustrated)
	100-9990-63-1	Right Roof Angle Ext. 18' (Illustrated)
	100-9990-70	Right Roof Angle Ext. 20' (Illustrated)
	100-9990-49-2	Right Roof Angle Ext. 22' (Illustrated)
17	100-9990-64-1	Left Roof Angle Ext. 16' (Not Illustrated)
	100-9990-62-1	Left Roof Angle Ext. 18' (Not Illustrated)
	100-9990-69	Left Roof Angle Ext. 20' (Not Illustrated)
	100-9990-49-1	Left Roof Angle Ext. 22' (Not Illustrated)
18	100-9992-23	3216, Roof Assy. Complete
	100-9992-24	3218, Roof Assy. Complete
	100-9992-25	3220, Roof Assy. Complete
19	100-9990-14-3	Roof Guard Strap - Rear
20	100-9992-5	Right Side Complete, 16' (Illustrated)
	100-9992-7	Right Side Complete, 18' (Illustrated)
	100-9992-13	Right Side Complete, 20' (Illustrated)
21	100-9992-6	Left Side Complete, 16' (Not Illustrated)
	100-9992-8	Left Side Complete, 18' (Not Illustrated)
	100-9992-14	Left Side Complete, 20' (Not Illustrated)
22	100-9990-37-1	Rear Roof Bow & Angle Welded Assy.-Red
23	33-1002	SMV Sign Bracket Only
24	100-9990-6-2	Top Rail 16'
	100-9990-8-8	Top Rail 18'
	100-9990-52-1	Top Rail 20'
25	25-0142	3rd Auger Bracket Less Tightener
26	100-9990-37	Rear Roof Bow Assy. Complete

# 3200 SERIES SIDES, ROOF & REAR GATE (2 OF 2)



## 3200 SERIES SIDES, ROOF & REAR GATE (2 OF 2)

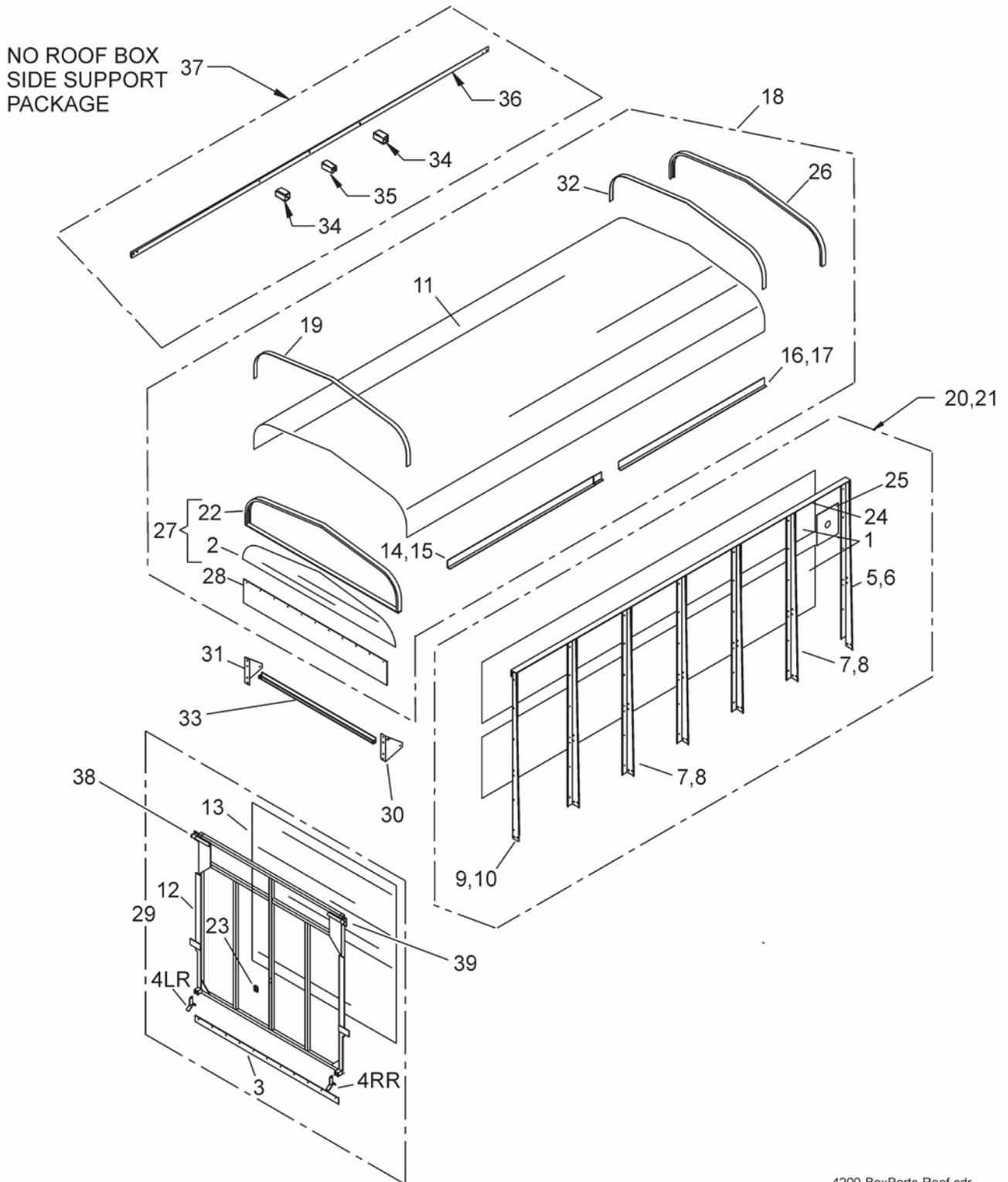
KEY	PART NUMBER	DESCRIPTION
27	49-0019	Top Back Gate Belting
28	100-9992-1	3200 Back Gate Assy. Complete w/Latches
29	100-9990-15-1	TSS Roof Bow
30	100-9990-115	Right Rear Gate Pivot Support Gusset
31	100-9990-116	Left Rear Gate Pivot Support Gusset
32	100-9990-14-4	Front Roof Protector
33	100-9990-87	No Roof Angle
34	100-9990-52-4	Side Support End Tube
35	100-9990-52-3	Side Support Center Tube
36	100-9990-8-11	16' & 18' Box Side Support Strap 171"
	100-9990-52-2	20' & 22' Box Side Support Strap 219"
37	TSS-SS-16-PKG	16' & 18' Side Support Package
	TSS-SS-20-PKG	20' & 22' Side Support Package
38	100-9990-25-15	RH Backgate Hinge Bracket Weldment W/Pivot Shaft Stop Washer (Ship Loose)
39	100-9990-25-17	LH Backgate Hinge Bracket Weldment W/Pivot Shaft Stop Washer (Ship Loose)



## 3200 SERIES FLOOR & BOTTOM FRAME

KEY	PART NUMBER	DESCRIPTION
1	100-9990-170-2W	16' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-171-2W	18' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-172-2W	20' 2-Way Poly Floor Full Width W/Cutouts
	802T-3118-3SS	5/16"-18 x 3" Truss Head Stainless Steel Machine Screw
2	100-9992-10	Bottom Frame Complete 16'
	100-9992-11	Bottom Frame Complete 18'
	100-9992-12	Bottom Frame Complete 20'
3	100-9990-1-3	Front Cross Channel, 94-1/2"
	100-9994-1-3	Front Cross Channel Gusset
4	100-9990-1-2	Center Cross Channel, 94-1/2"
	100-9994-1-1	Cross Channel Gusset
5	100-9992-10-1	10" Channel Bed Piece (16')
	100-9992-11-1	10" Channel Bed Piece (18')
	100-9992-12-1	10" Channel Bed Piece (20')
6	100-9999-39	Stringer Reinforcing Channel
7	100-9994-1-2	Stringer Support Cross Angle
8	100-9999-2-3	Cross Channel Center U Piece
9	100-9998-8	16' Chain Slide
	100-9999-5	18' Chain Slide
	100-9999-74	20' Chain Slide
10	100-9997-2	Center Floor Support, 2" x 6" x 16'
	100-9999-6	Center Floor Support, 2" x 6" x 18'
	100-9999-75	Center Floor Support, 2" x 6" x 20'
11	100-9998-10	Outer Floor Support, 3" x 6" x 16"
	100-9999-7	Outer Floor Support, 3" x 6" x 18"
	100-9999-76	Outer Floor Support, 3" x 6" x 20"
12	100-9994-1-5	Chain Rail Tab
13	100-9990-1-11-1	Rear Cross Channel 93-1/4"
	100-9994-1-3	Rear/Front Cross Channel Gusset
14	100-9992-10-2	Cross Channel w/Tightener Mount Holes (Prior To 08 Serial#'s, 2 Per Box)
	100-9992-10-9	Cross Channel w/ Tightener Mount Hole (08 Serial #'s & Later, 1 Per Box)
	100-9994-1-1	Cross Channel Gusset (After 08 Serial #'s, 1 Per Box)
15	100-9990-181	4216 Poly Floor Support 1/8" x 2" x 192"
	100-9990-182	4218 Poly Floor Support 1/8" x 2" x 216"
	100-9990-183	4220 Poly Floor Support 1/8" x 2" x 240"
16	701-2X6-8-S	2" x 6" Pressure Treated Floor Support 8' Long
17	25-8022-1	Floor Cap 96"
	25-6005-1	Floor Cap 72"
	25-8030-1	Floor Cap 48"
	25-6006-1	Floor Cap Splice
	25-8023-1	Floor End Cap
18	100-9992-15-SL	16' Floor Update Kit from Poly Bonded to UVHMW (Superslick)
	100-9992-16-SL	18' Floor Update Kit from Poly Bonded to UVHMW (Superslick)
	100-9992-17-SL	20' Floor Update Kit from Poly Bonded to UVHMW (Superslick)

# 4200 SERIES SIDES, ROOF & REAR GATE (1 OF 2)



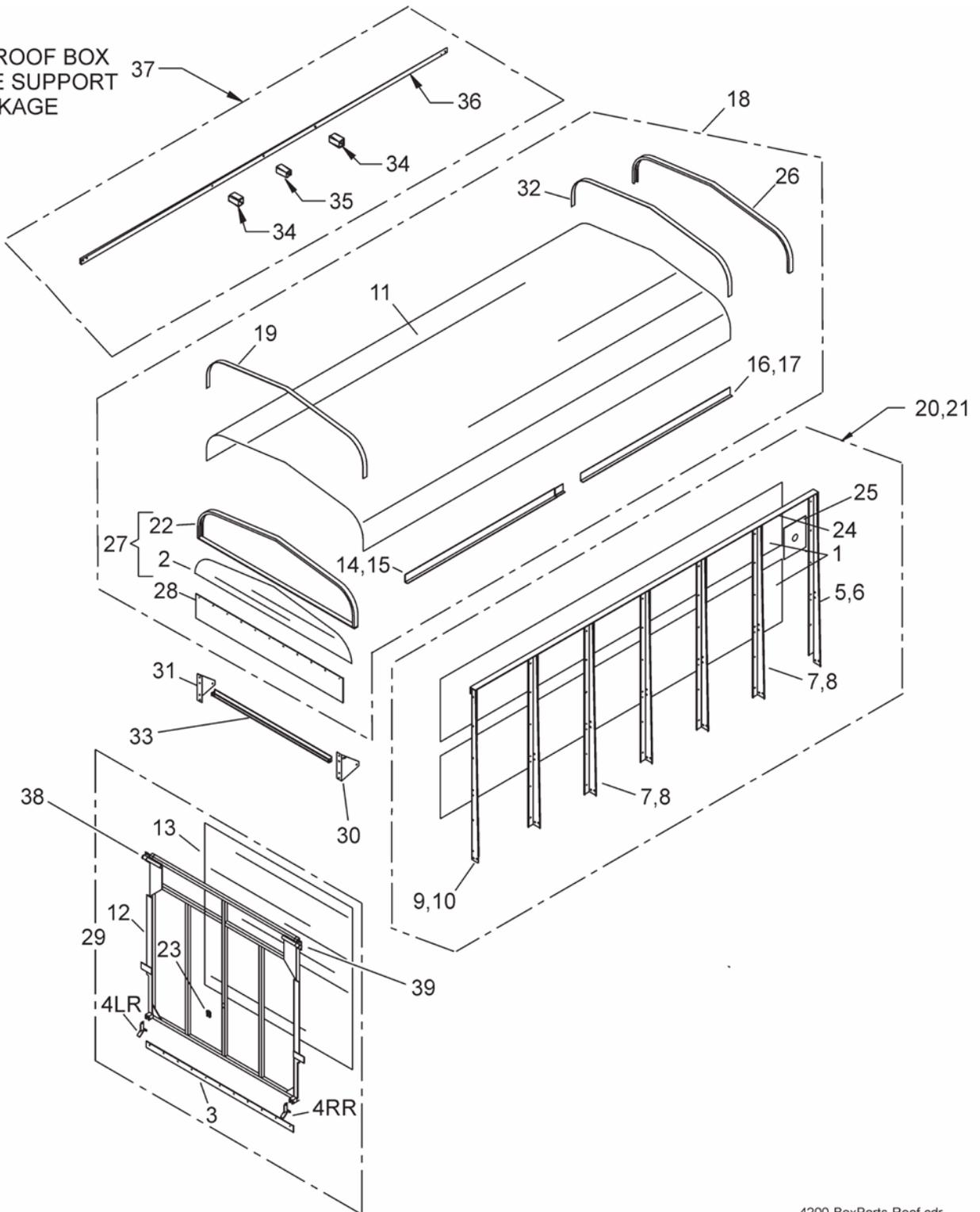
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## 4200 SERIES SIDES, ROOF & REAR GATE (1 OF 2)

KEY	PART NUMBER	DESCRIPTION
1	100-9990-6-1	16' Side Panel 20 GA. x 40-3/4" Painted
	100-9990-8-7	18' Side Panel 20 GA. x 40-3/4" Painted
	100-9990-57	20' Side Panel 20 GA. x 40-3/4" Painted
	100-9990-97-2	22' Side Panel 20 GA. x 40-3/4" Painted
2	100-9990-37-3	Rear Roof Panel Painted, 13" x 86"
3	49-0022	Bottom Back Gate Belting
4RR	100-9992-1-7	Right Rear Back Gate Latch Catch
4LR	100-9992-1-8	Left Rear Back Gate Latch Catch
5	100-9990-8-2	Front Right/Rear Left Upright 10 GA. x 82-1/2" (Illustrated)
	100-9990-8-2-12	Front Right/Rear Left Upright 10 GA. x 94-1/2" (Illustrated)
6	100-9990-8-1	Front Left/Rear Right Upright 10 GA. x 82-1/2" (Not Illustrated)
	100-9990-8-1-12	Front Left/Rear Right Upright 10 GA. x 94-1/2" (Not Illustrated)
7	100-9990-8-6	Center Right Upright 10 GA. x 82-1/2" (Illustrated)
	100-9990-8-6-12	Center Right Upright 10 GA. x 94-1/2" (Illustrated)
8	100-9990-8-5	Center Left Upright 10 GA. x 82-1/2" (Not Illustrated)
	100-9990-8-5-12	Center Left Upright 10 GA. x 94-1/2" (Not Illustrated)
9	100-9990-8-1	Front Left/Rear Right Upright 10 GA. x 82-1/2" (Illustrated)
	100-9990-8-1-12	Front Left/Rear Right Upright 10 GA. x 94-1/2" (Illustrated)
10	100-9990-8-2	Front Right/Rear Left Upright 10 GA. x 82-1/2" (Not Illustrated)
	100-9990-8-2-12	Front Right/Rear Left Upright 10 GA. x 94-1/2" (Not Illustrated)
11	100-9990-14-2	Roof Panel Painted 17'-3"
	100-9990-15-8	Roof Panel Painted 19'-3"
	100-9990-51-1	Roof Panel Painted 21'-3"
	100-9990-54-1	Roof Panel Painted 23'-3"
12	100-9992-1-6	2-Way Back Gate Frame Only Welded Assy. Std. Height
	100-7040	2-Way Back Gate Frame Only Welded Assy. - High Side
13	100-9990-25-14	Back Gate Panel, 20GA X 40-3/4 X 84 Painted
14	100-9990-61	Roof Angle Right (Illustrated)
15	100-9990-60	Roof Angle Left (Not Illustrated)
16	100-9990-65-1	Right Roof Angle Ext. 16' (Illustrated)
	100-9990-63-1	Right Roof Angle Ext. 18' (Illustrated)
	100-9990-70	Right Roof Angle Ext. 20' (Illustrated)
	100-9990-97-4	Right Roof Angle Ext. 22' (Illustrated)
	100-9990-49-2	Right Roof Angle Ext. 22' (Illustrated)
17	100-9990-64-1	Left Roof Angle Ext. 16' (Not Illustrated)
	100-9990-62-1	Left Roof Angle Ext. 18' (Not Illustrated)
	100-9990-69	Left Roof Angle Ext. 20' (Not Illustrated)
	100-9990-97-3	Left Roof Angle Ext. 22' (Not Illustrated)
	100-9990-49-1	Left Roof Angle Ext. 22' (Not Illustrated)
18	100-9990-47	4216, Roof Assy. Complete
	100-9990-48	4218, Roof Assy. Complete
	100-9990-51	4220, Roof Assy. Complete
	100-9990-49	4222, Roof Assy. Complete
19	100-9990-14-3	Roof Guard Strap - Rear

# 4200 SERIES SIDES, ROOF & REAR GATE (2 OF 2)

NO ROOF BOX  
SIDE SUPPORT  
PACKAGE

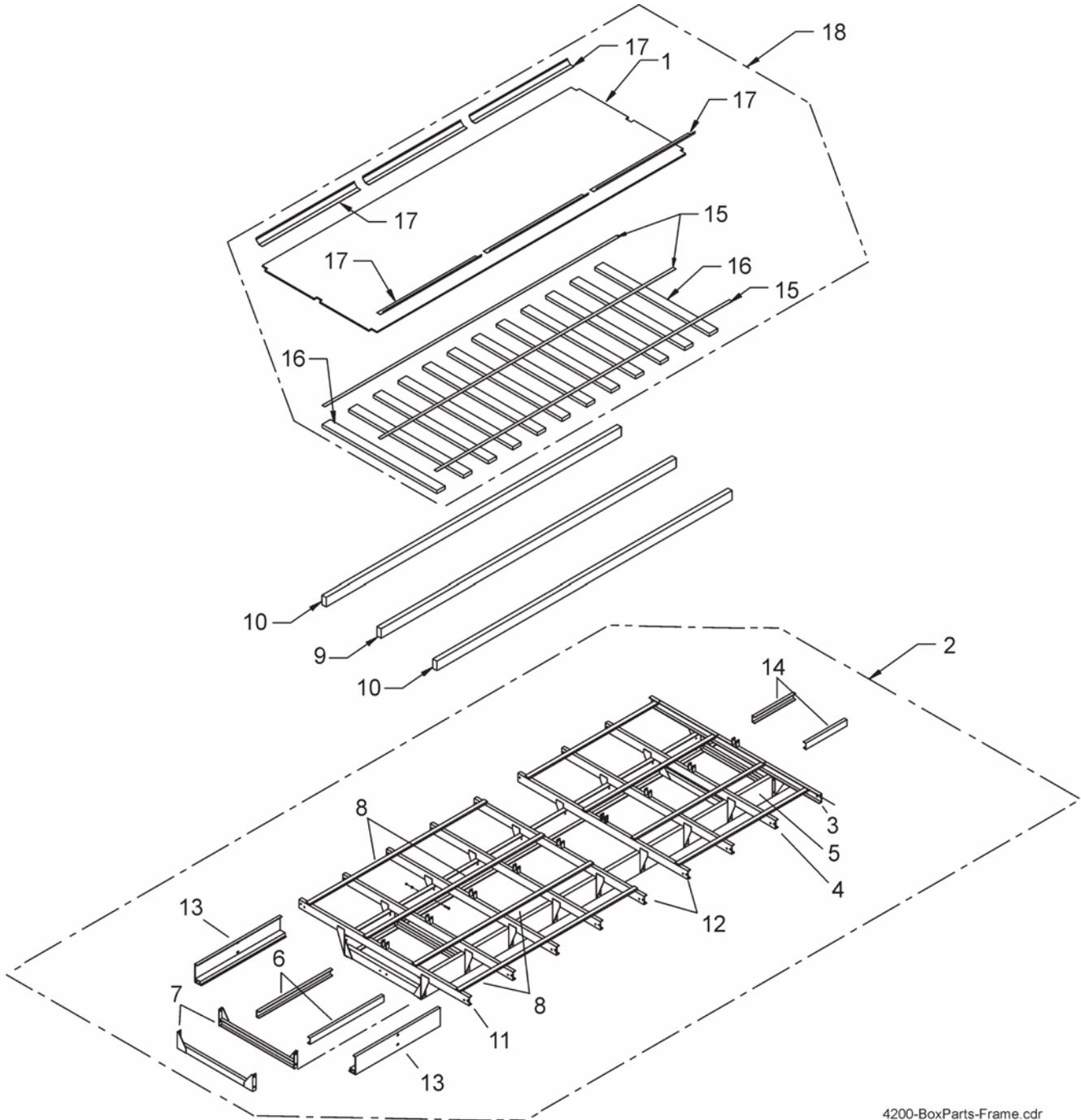


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## 4200 SERIES SIDES, ROOF & REAR GATE (2 OF 2)

KEY	PART NUMBER	DESCRIPTION
20	100-9993-5	Right Side Complete 16' (Illustrated)
	100-9993-7	Right Side Complete 18' (Illustrated)
	100-9993-7-HST	Right Side Complete 18' (Illustrated) (Optional High Sides - No Roof)
	100-9993-11	Right Side Complete 20' (Illustrated)
	100-9993-11-HST	Right Side Complete 20' (Illustrated) (Optional High Sides - No Roof)
	100-9993-14	Right Side Complete 22' (Illustrated)
	100-9993-14-HST	Right Side Complete 22' (Illustrated) (Optional High Sides - No Roof)
21	100-9993-6	Left Side Complete 16' (Not Illustrated)
	100-9993-8	Left Side Complete 18' (Not Illustrated)
	100-9993-8-HST	Left Side Complete 18' (Not Illustrated) (Optional High Sides - No Roof)
	100-9993-12	Left Side Complete 20' (Not Illustrated)
	100-9993-12-HST	Left Side Complete 20' (Not Illustrated) (Optional High Sides - No Roof)
	100-9993-15	Left Side Complete 22' (Not Illustrated)
	100-9993-15-HST	Left Side Complete 22' (Not Illustrated) (Optional High Sides - No Roof)
22	100-9990-37-1	Rear Roof Bow & Angle Welded Assy. - Black
23	33-1002	SMV Sign Bracket Only
24	100-9990-6-2	Top Rail 16'
	100-9990-8-8	Top Rail 18'
	100-9990-52-1	Top Rail 20'
	100-9990-97-7	Top Rail 22'
25	25-0142	3rd Auger Bracket Less Tightener
26	100-9990-15-1	TSS Roof Bow
27	100-9990-37	Rear Roof Bow Assy. Complete
28	49-0019	Top Back Gate Belting
29	100-9993-10	4200 Back Gate Assy. Complete W/Latches - Std. Height
	100-7030	4200 Back Gate Assy. Complete W/Latches - High Side
30	100-9990-115	Right Rear Gate Pivot Support Gusset
31	100-9990-116	Left Rear Gate Pivot Support Gusset
32	100-9990-14-4	Front Roof Protector
33	100-9990-87	No Roof Angle
34	100-9990-52-4	Side Support End Tube
35	100-9990-52-3	Side Support Center Tube
36	100-9990-8-11	16' & 18' Box Side Support Strap 171"
	100-9990-52-2	20' & 22' Box Side Support Strap 219"
37	TSS-SS-16-PKG	16' & 18' Side Support Package
	TSS-SS-20-PKG	20' & 22' Side Support Package
38	100-9990-25-15	RH Backgate Hinge Bracket Weldment W/Pivot Shaft Stop Washer (Ship Loose)
39	100-9990-25-17	LH Backgate Hinge Bracket Weldment W/Pivot Shaft Stop Washer (Ship Loose)

# 4200 SERIES FLOOR & BOTTOM FRAME

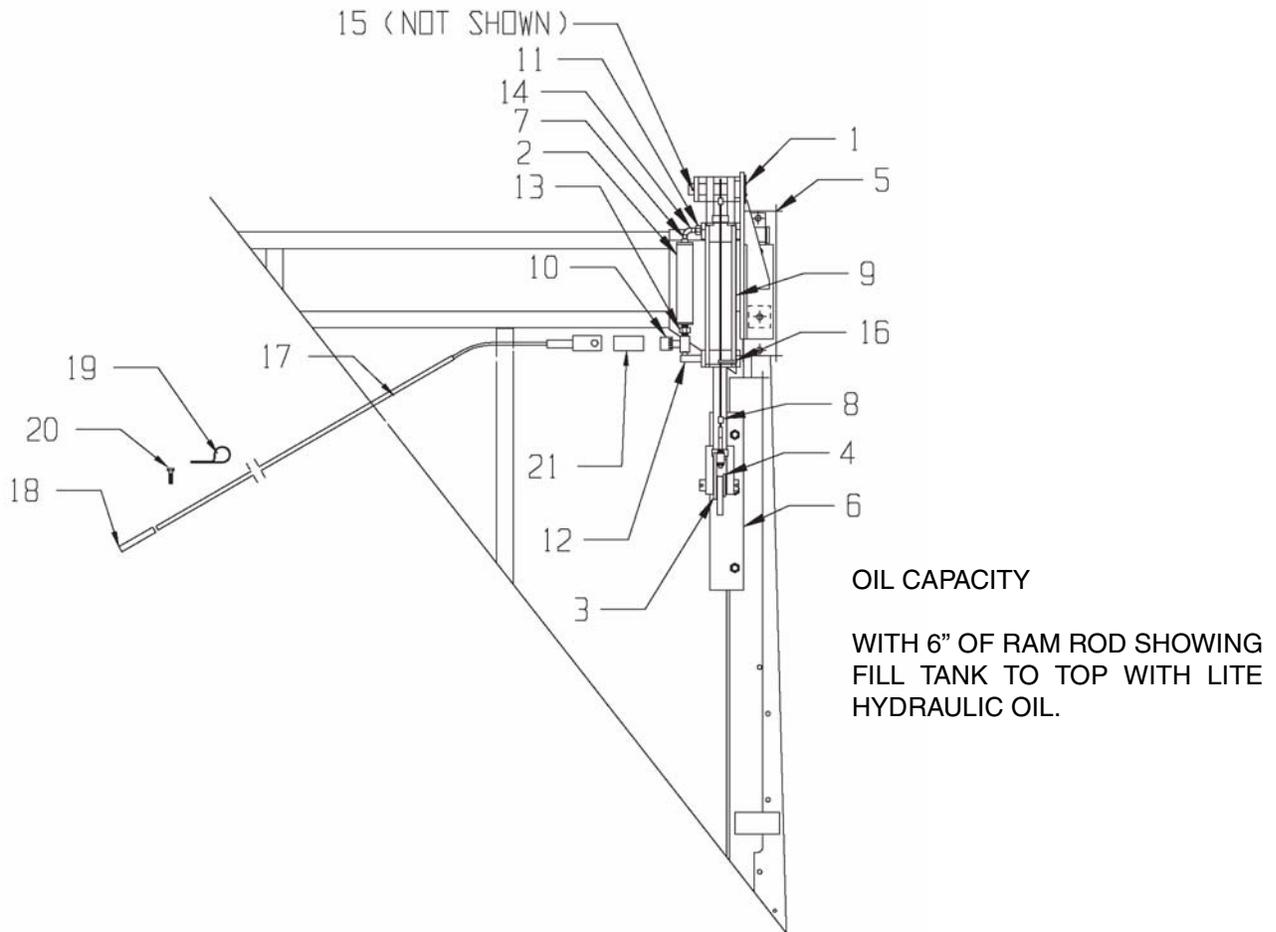


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## 4200 SERIES FLOOR & BOTTOM FRAME

KEY	PART NUMBER	DESCRIPTION
1	100-9990-170-2W	16' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-171-2W	18' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-172-2W	20' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-173-2W	22' 2-Way Poly Floor Full Width W/Cutouts
	100-9990-174-2W	24' 2-Way Poly Floor Full Width W/Cutouts
	802T-3118-3SS	5/16"-18 x 3" Truss Head Stainless Steel Machine Screw
2	100-9993-3	Bottom Frame Complete 16'
	100-9993-2	Bottom Frame Complete 18'
	100-9993-1	Bottom Frame Complete 20'
	100-9993-13	Bottom Frame Complete 22'
3	100-9990-1-4	Front Cross Channel, 94-1/2"
4	100-9990-1-5	Center Cross Channel, 94-1/2"
5	100-9999-41	10" Channel Bed Piece (16')
	100-9999-1	10" Channel Bed Piece (18')
	100-9993-1-1	10" Channel Bed Piece (20')
	100-9993-13-1	10" Channel Bed Piece (22')
6	100-9999-39	Stringer Reinforcing Channel (16' & Shorter)
7	100-9999-38	Stringer Support Cross Channel Assy.
8	100-9998-8	16' Chain Slide
	100-9999-5	18' Chain Slide
	100-9999-74	20'/22' Chain Slide
9	100-9997-2	Center Floor Support, 2" x 6" x 16'
	100-9999-6	Center Floor Support, 2" x 6" x 18'
	100-9999-75	Center Floor Support, 2" x 6" x 20'
	100-9999-77	Center Floor Support, 2" x 6" x 22'
10	100-9998-10	Outer Floor Support, 3" x 6" x 16'
	100-9999-7	Outer Floor Support, 3" x 6" x 18'
	100-9999-76	Outer Floor Support, 3" x 6" x 20'
	100-9999-78	Outer Floor Support, 3" x 6" x 22'
11	100-9990-1-11	Rear Cross Channel W/Gussets 93-1/4"
12	100-9992-10-5	Cross Channel W/Tightener Holes & Gussets
13	100-9990-1-10	Stringer Reinforcing Plate (18' & Longer)
14	100-9990-53-2	Front Stringer Support Channel
15	100-9990-181	4216 Poly Floor Support 1/8" x 2" x 192"
	100-9990-182	4218 Poly Floor Support 1/8" x 2" x 216"
	100-9990-183	4220 Poly Floor Support 1/8" x 2" x 240"
	100-9990-184	4222/4224 Poly Floor Support 1/8" x 2" x 230"
	100-9990-185	4224 Ext Poly Floor Support 1/8" x 2" x 34"
16	701-2X6-8-S	2" x 6" Pressure Treated Floor Support 8' Long
17	25-8022-1	Floor Cap 96"
	25-6005-1	Floor Cap 72"
	25-8030-1	Floor Cap 48"
	25-6006-1	Floor Cap Splice
	25-8023-1	Floor End Cap
18	100-9992-15-SL	16' Floor Update Kit from Poly Bonded to UVHMMW (Superslick)
	100-9992-16-SL	18' Floor Update Kit from Poly Bonded to UVHMMW (Superslick)
	100-9992-17-SL	20' Floor Update Kit from Poly Bonded to UVHMMW (Superslick)
	100-9992-18-SL	22' Floor Update Kit from Poly Bonded to UVHMMW (Superslick)

## GATE DELAY W/GROUND CONTROL 3100/3200/4100/4200 BOX



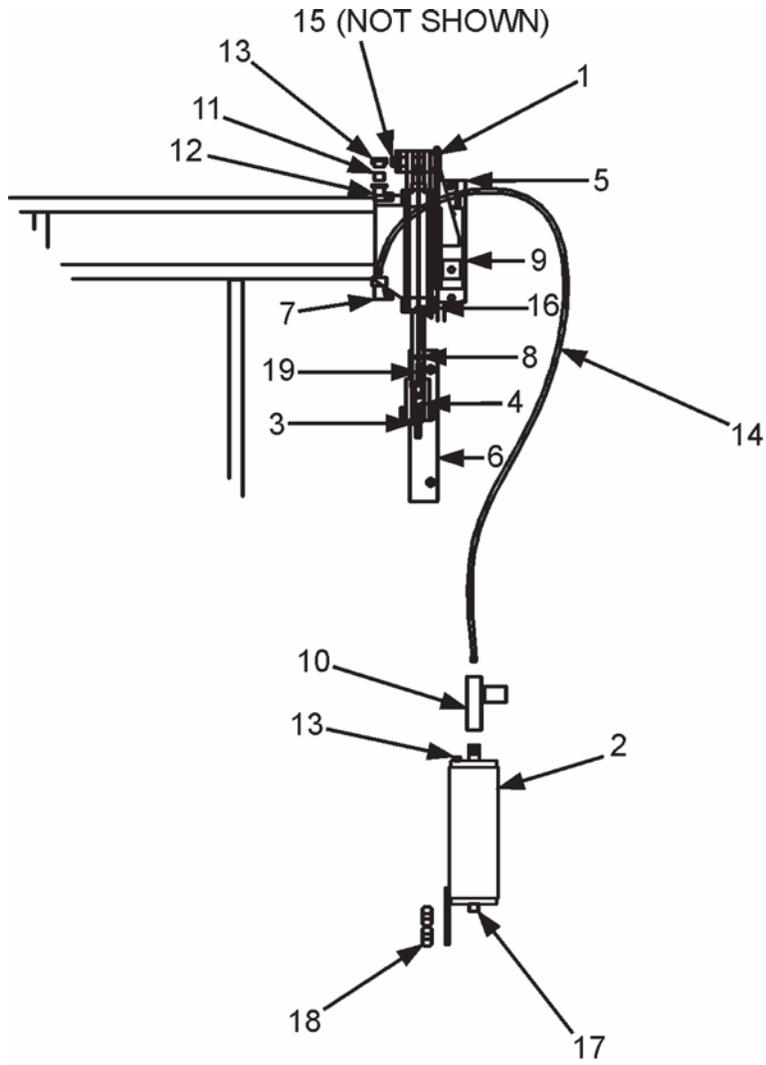
### GATE DELAY ADJUSTMENTS

When the gate is completely closed (Tight to rear upright) cable and eyebolt assembly should be adjusted so cable has no slack. Cable should be tight but not overtightened. If cable and eyebolt is overtightened lower cylinder will trip out of the L-shaped slot on the lower bracket too soon and the gate will try to close before the cylinder is stroked out. If the cable and eyebolt is too loose the lower cylinder will not trip out of the L-shaped slot and the cylinder will reach its maximum stroke and the gate will still not be in the closed position. The gate will be held open by the top cylinder bracket and the bracket may become damaged over time. Eyebolt and cable will need to be adjusted periodically to maintain proper operation.

**GATE DELAY W/GROUND CONTROL  
3100/3200/4100/4200 BOX**

<b>KEY</b>	<b>PART NUMBER</b>	<b>DESCRIPTION</b>
	4200-GATE	Gate Delay Closing Option
1	25-8092-1	Gate Regulator Top Shaft
2	25-8095	Oil Reservoir Assembly
3	25-8096	Gate Release Trip Arm Assembly
4	25-8097-1	Lower Sleeve Spacer
5	25-8099	Top Cylinder Bracket
6	25-8100	Lower Mount Plate Welded Assembly
7	30-0015	1/4" Fitting x 90 Degree Elbow
8	25-8098	Cable Eyebolt Assembly
9	55-0093	Hydraulic Cylinder
10	55-0094	Flow Control
11	55-0095	1/8" to 3/8" NPT Reducer
12	55-0096	3/8" NPTF x 90 Degree Male Pipe Elbow
13	55-0097	3/8" to 3/8" Nipple
14	735-.25CT	1/4" Copper Tubing (.25 Ft. Req)
15	823-19-2	3/16" x 2" Cotter Pin
16	952-0001-7	Nylon Tie Strap
17	25-8101	Ground Control Rod Assy. W/Grip
18	51-0007	Handle Grip
19	933-3804	5/16" x 4" Eyebolt
20	825-25-1Z	1/4" x 1" Self Tapping Screw
21	25-8102-2	Drag Sleeve (Hose)

# SIDE MOUNT GATE DELAY 3100/3200/4100/4200 BOX

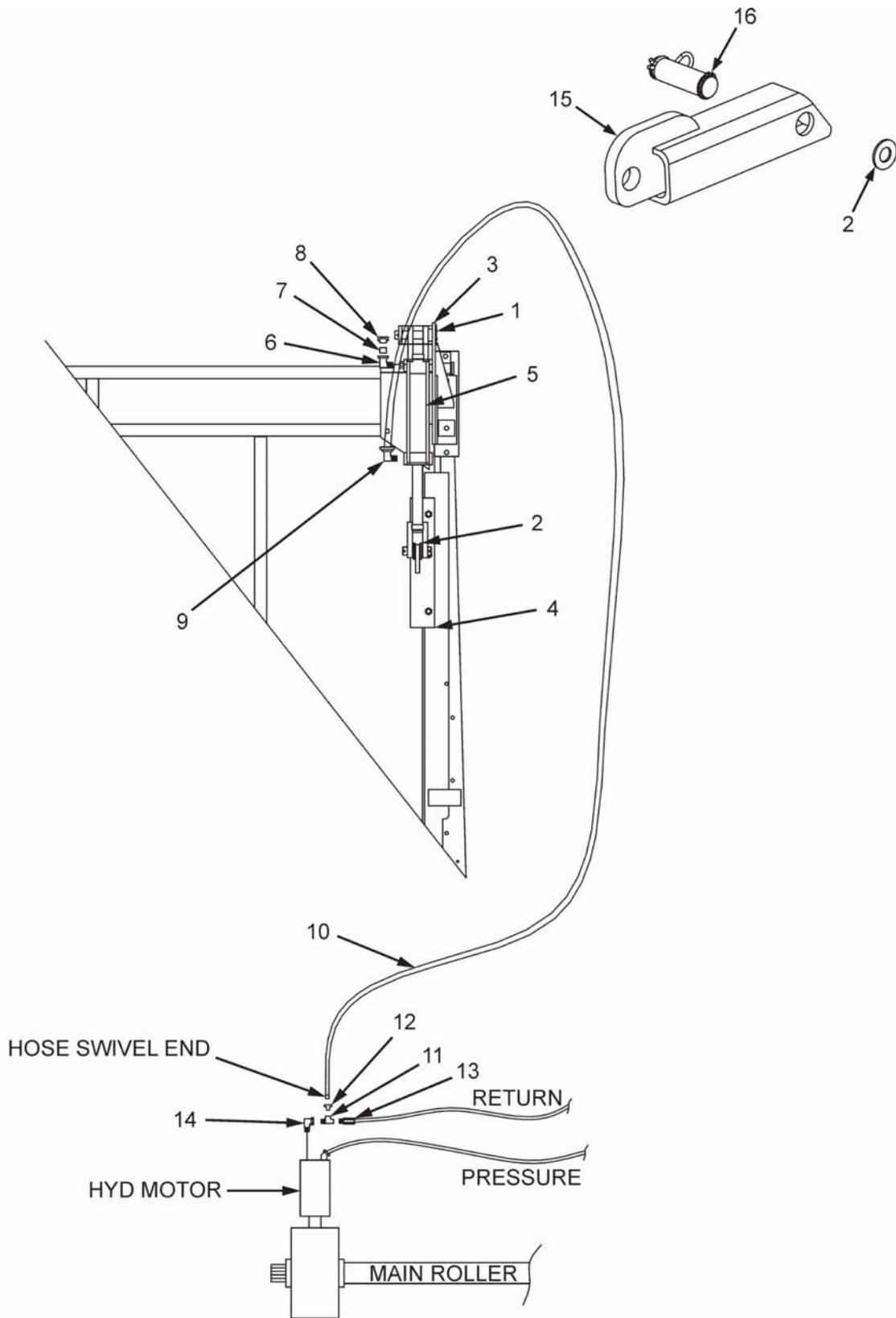


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## SIDE MOUNT GATE DELAY 3100/3200/4100/4200 BOX

KEY	PART NUMBER	DESCRIPTION
	4200-GDS-SM	Side Mount Gate Delay System
1	25-8092-1	Gate Regulator Top Shaft
2	25-8108	Oil Reservoir Assembly
3	25-8096	Gate Release Trip Arm Assembly
4	25-8097-1	Lower Sleeve Spacer
5	25-8099	Top Cylinder Bracket
6	25-8100	Lower Mount Plate Welded Assembly
7	55-0219	3/8" x 1/2" 90 Degree Swivel Fitting
8	25-8098	Cable Eyebolt Assembly
9	55-0093	Hydraulic Cylinder
10	55-0094	Flow Control
11	55-0108	1/4" x 1/8" Reducer
12	55-0195	3/8" x 1/4" 90 Degree Fitting
13	55-0107	1/8" NPT Open Breather
14	955-3611	3/8" x 1/2" x 108" Hose
15	823-19-2	3/16" x 2" Cotter Pin
16	952-0001-7	7-1/4" Nylon Tie Strap
17	55-0167	1/4" Plug
18	800548	Rubber Stopper
19	811-3816-3Z	3/8" x 5" OAL Eyebolt
NS	56-0033	3/4" Loom Clamp
NS	65-0006-5	14" Nylon Tie Strap
NS	851-2520-.75Z	1/4" x 3/4" Hex Head Machine Bolt Grade 5
NS	810-2520-Z	1/4" Spin Lock Nut

# RETURN LINE GATE DELAY



4200-GDS-RL-GATEPARTSs.CDR

## RETURN LINE GATE DELAY

KEY	PART NUMBER	DESCRIPTION
	4200-GDS-RL-PKG	Return Line Gate Delay Closing Option
	4200-GDS-RL-KIT	Update Package to Switch from Ground Control Rod to Return Line
1	25-8092-1	Gate Regulator Top Shaft
2	25-8097-1	Lower Sleeve Spacer
3	25-8099	Top Cylinder Bracket
4	25-8112	Lower Mount Plate Welded Assembly
5	55-0093	Hydraulic Cylinder
6	55-0195	3/8" Male x 1/4" Female Street Elbow
7	55-0108	1/4" x 1/8" Male to Female Bushing
8	55-0107	1/8" NPT Vent
9	55-0196	3/8" M x 1/4" Swivel Female x 90 Degree Elbow
10	55-0202	1/4" x 228" Hose
11	55-0201	3/4" Tee Fitting
12	55-0174	3/4" x 1/4" Bushing
13	55-0007-B-RF-GDRL	Reverse Flow Check Valve w/Back Pressure Spring
14	655-0015-1	64-10-12 90 Degree adaptor
15	25-8111	Top Pivot Weldment (Truck Mounts Only)
16	955-3802-10	Cylinder Pivot Pins With Clips (Truck Mounts Only)
NS	32-0033	1/2" Loom Clamp Vinyl Coated
NS	810-2520-Z	1/4"-20 Spin Locknuts
NS	851-2520-.75Z	1/4"-20 x 3/4" M.B. Zinc
NS	65-0006-5	14" Nylon Tie Strap

## MEYER FRONT & REAR FORAGE BOXES TROUBLE SHOOTING

	SYMPTOM	PROBLEM	SOLUTION
AUGERS	Augers shake or chatter.	Stiff roller chains - dry.	Lubricate roller chains.
		Loose roller chains.	Tighten roller chains.
		Worn sprockets/chains.	Replace sprockets/chains.
		Bad roller bearings.	Replace roller bearings.
	Under load, augers do not start in 1st or 2nd notch.	Variable speed not adjusted.	Adjust variable speed.
BELT DRIVE "VARIABLE SPEED"	Belt slippage.	Sheaves greasy or wet.	Clean sheaves.
		Use of "HI" Range w/full load.	Use "LO" Range w/full loads.
	Belt wear/breakage.	Variable speed not adjusted.	Adjust variable speed.
		PTO starting w/belt engaged.	Start PTO w/belt in "Neutral."
	Sheave pin breakage.	Incorrect operating procedures.	Follow correct operating procedures.
PTO starting w/belt engaged.		Start PTO w/belt in "Neutral."	
CROSS APRON	Material build-up under chain.	Loose cross apron.	Tighten cross apron.
	Bent apron slats.	Dirty cross apron, too much carry back.	Clean apron and return area.
	Broken pintle chain.	Build-up in clean-out panel.	Clean out "Clean-Out" panel.
GEAR BOXES	Clunking sounds.	Gears/bearings wearing-low oil.	Replace gears/bearings-fill with oil.
	Excessive gear wear.	Full load "HI" Range unloading.	Start full loads in "LO" Range.
		Wrong gear lube oil.	See Lubrication Section for Proper Oil.
	Broken gears.	High speed start-up/no oil.	Slow start-up/fill with oil.
		Worn out gears.	Replace gears.
"HI-LO" RANGE	Hard to shift lever.	Unit not running.	Run unit with variable speed lever engaged.
	"HI-LO" is not engaging.	Worn brass shifting collar.	Replace brass shifting collar.
	Slipping out of range.	Excessive clutch wear.	Adjust range control linkage.
Flip over or replace clutches.			
MAIN APRON	Jumping links.	Loose main apron.	Tighten main apron.
	Bent apron slats.	Worn/broken chain.	Clean/tighten/replace apron.
	Broken pintle chain.	Front unit sagging.	Lift unit and replace front cross channel.

## MEYER FRONT & REAR FORAGE BOXES SPECIFICATIONS

MODEL	3216	3218	3220	4216	4218	4220	4222
Floor Length	16'-6"	18'-6"	20'-6"	16'-6"	18'-6"	20'-6"	22'-6"
Overall Length	20'-2"	22'-2"	24'-2"	20'-2"	22'-2"	24'-2"	26'-2"
Weight	5000#	5280#	5560#	5340#	5620#	5900#	6180#
Main Apron	667H Standard (667X Optional)			667X Standard			
Overall Width	All Models 107"						
Inside Width	All Models 87"						
Overall Height	All Models 113-1/2" w/Roof						
Inside Height	All Models 94" w/Roof						
Speed Selection Front Unload	All Models- Low Range: 0 - 7.5'/minute - High Range 0 - 17'/minute						
Speed Selection Rear Unload	(PTO Drive) All Models-Approximately 30 Second Unloading Time (Hyd. Drive) All Models-Approximately 2-Minute Unloading Time						
Auger Feathering System	All Models-Standard Equipment						
Power Source	540 PTO and Hydraulic						
Cross Feed Delivery	Either Left or Right Hand Discharge						
Unloading Auger	3 Large 18" Diameter Augers						
Cross Conveyor Chain	D662 Pintle Chain						
Cross Conveyor Width	All Models-21"						
Box Tie Down Kit	All Models-Standard Equipment						
Cross Conveyor Outfeed	12" Extension Standard (24" Fold-up Optional)						
Safety Clutch	All Models Standard Equipment						

**SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.**

See the "Forage Box Truck Mount Specifications and Mounting Instructions" for additional information. These instructions may also be found at [www.meyermfg.com/specifications.php](http://www.meyermfg.com/specifications.php).











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