

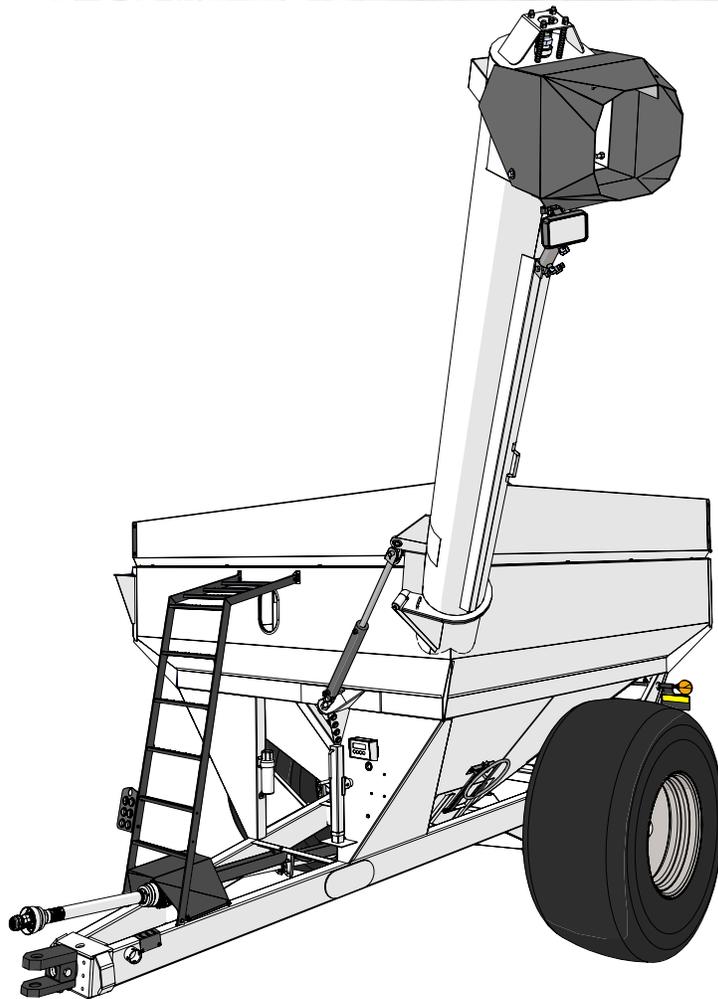


# Manual

## GRAIN CART OPERATOR'S MANUAL

MODEL

# 525



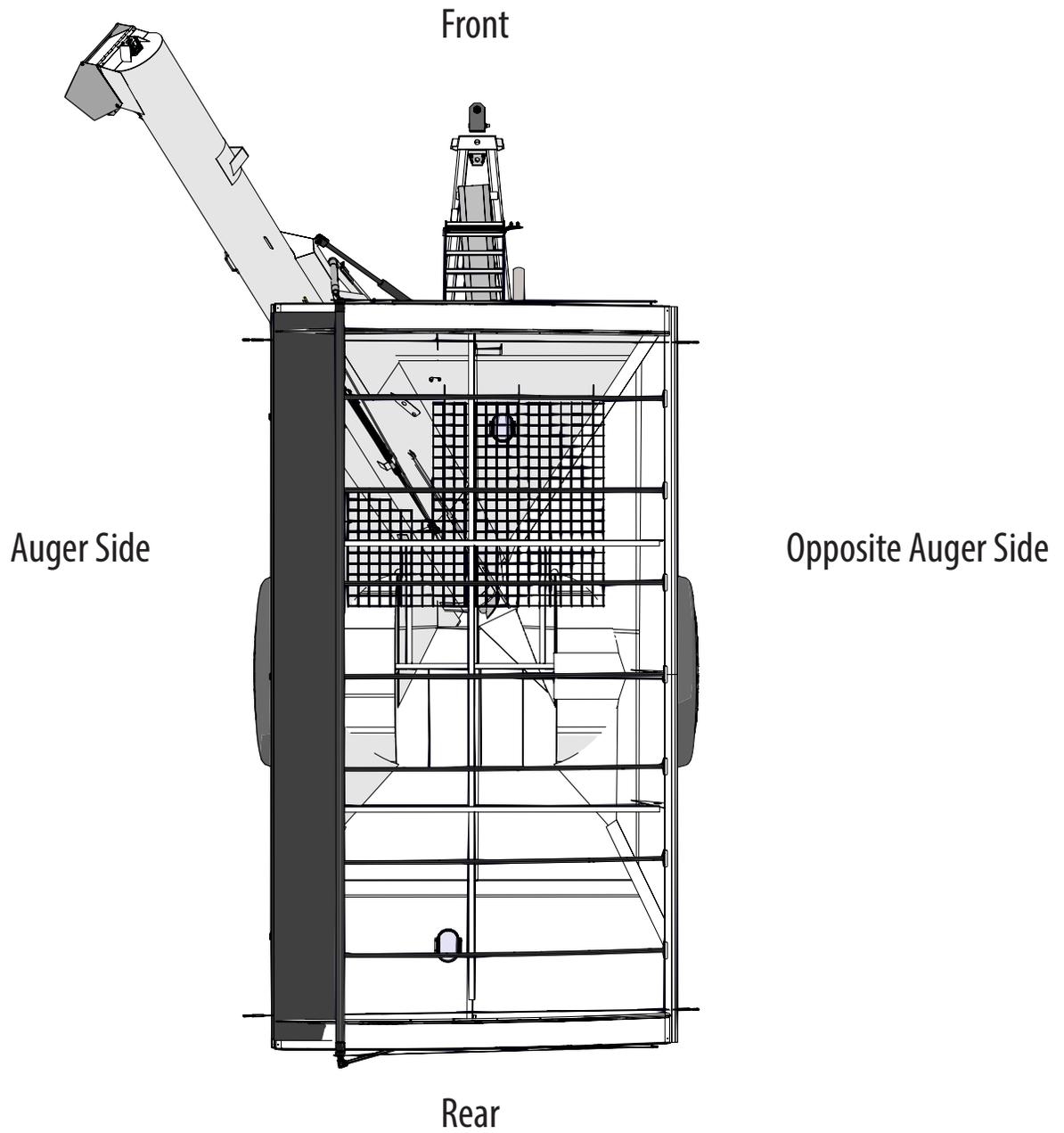
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**J&M Manufacturing Co, Inc**

284 Railroad Street - P.O. Box 547 | Fort Recovery, OH 45846 | Ph: (419) 375-2376 | Fax: (419) 375-2708

[www.jm-inc.com](http://www.jm-inc.com)

# Stance



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# To the Dealer

Read manual instructions and safety rules. Make sure all items on the Dealer's Pre-Delivery and Delivery Check Lists are completed before releasing equipment to the owner.

The dealer must complete the Warranty Registration found on the Dealer Portal website located at dealer.jm-inc.com and return it to J&M Mfg. Co., Inc. at the address indicated on the form. Warranty claims will be denied if the Warranty Registration has not been submitted.

## **EXPRESS WARRANTY:**

J&M Mfg. Co., Inc. warrants against defects in construction or materials for a period of ONE year. We reserve the right to inspect and decide whether material or construction was faulty or whether abuse or accident voids our guarantee.

Warranty service must be performed by a dealer or service center authorized by J&M Mfg. Co., Inc. to sell and/or service the type of product involved, which will use only new or remanufactured parts or components furnished by J&M Mfg. Co., Inc. Warranty service will be performed without charge to the purchaser for parts or labor based on the Warranty Labor Times schedule. Under no circumstance will allowable labor times extend beyond the maximum hours indicated in the Warranty Labor Times schedule for each warranty procedure. The purchaser will be responsible, however, for any service call and/or transportation of the product to and from the dealer or service center's place of business, for any premium charged for overtime labor requested by the purchaser, and for any service and/or maintenance not directly related to any defect covered under the warranty. Costs associated with equipment rental, product down time, or product disposal are not warrantable and will not be accepted under any circumstance.

Each Warranty term begins on the date of product delivery to the purchaser. Under no circumstance will warranty be approved unless (i) the product warranty registration card has been properly completed and submitted to the equipment manufacturer, and (ii) a warranty authorization number has been issued by the equipment manufacturer. This Warranty is effective only if the warranty registration card is returned within 30 days of purchase.

This Warranty does not cover a component which fails, malfunctions or is damaged as a result of (i) improper modification or repair, (ii) accident, abuse or improper use, (iii) improper or insufficient maintenance, or (iv) normal wear or tear. This Warranty does not cover products that are previously owned and extends solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this Warranty does not transfer to the third party purchaser in any way. J&M Mfg. Co., Inc. makes no Warranty, express or implied, with respect to tires or other parts or accessories not manufactured by J&M Mfg. Co., Inc. Warranties for these items, if any, are provided separately by their respective manufacturers.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

In no event shall J&M Mfg. Co., Inc. be liable for special, direct, incidental or consequential damages of any kind. The exclusive remedy under this Warranty shall be repair or replacement of the defective component at J&M Mfg. Co., Inc.'s option. This is the entire agreement between J&M Mfg. Co., Inc. and the Owner about warranty and no J&M Mfg. Co., Inc. employee or dealer is authorized to make any additional warranty on behalf of J&M Mfg. Co., Inc.

The manufacturer reserves the right to make product design and material changes at any time without notice. They shall not incur any obligation or liability to incorporate such changes and improvements in products previously sold to any customer, nor shall they be obligated or liable for the replacement of previously sold products with products or parts incorporating such changes.

## **SERVICE:**

The equipment you have purchased has been carefully manufactured to provide dependable and satisfactory use. Like all mechanical products, it will require cleaning and maintenance. Lubricate the unit as specified. Observe all safety information in this manual and safety signs on the equipment.

For service, your authorized J&M dealer has trained mechanics, genuine J&M service parts, and the necessary tools and equipment to handle all your needs.

Use only genuine J&M service parts. Substitute parts may void warranty and may not meet standards required for safety and satisfactory operation. Record the model number and serial number of your equipment in the spaces provided:

**Model No:** 525 Grain Cart    **Serial No:** \_\_\_\_\_    **Date of Purchase:** \_\_\_\_\_

**Purchased From:** \_\_\_\_\_

Provide this information to your dealer to obtain correct repair parts.

# General Information

## TO THE OWNER:

The purpose of this manual is to assist you in operating and maintaining your grain cart in a safe manner. Read it carefully. It furnishes information and instructions that will help you achieve years of dependable performance and help maintain safe operating conditions. If this machine is used by an employee or is loaned or rented, make certain that the operator(s), prior to operating:

1. Is instructed in safe and proper use.
2. Reviews and understands the manual(s) pertaining to this machine.

Throughout this manual, the term **IMPORTANT** is used to indicate that failure to observe can cause damage to equipment. The terms **CAUTION**, **WARNING** and **DANGER** are used in conjunction with the Safety-Alert Symbol (a triangle with an exclamation mark) to indicate the degree of hazard for items of personal safety. When you see this symbol, carefully read the message that follows and be alert to the possibility of personal injury or death.



This Safety-Alert symbol indicates a hazard and means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**



### **DANGER**

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



### **WARNING**

Indicates a potentially hazardous situation that, 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 that, if not avoided, may result in minor or moderate injury.

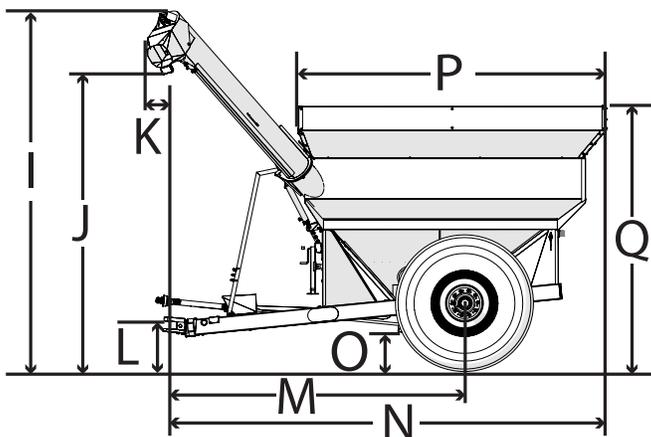
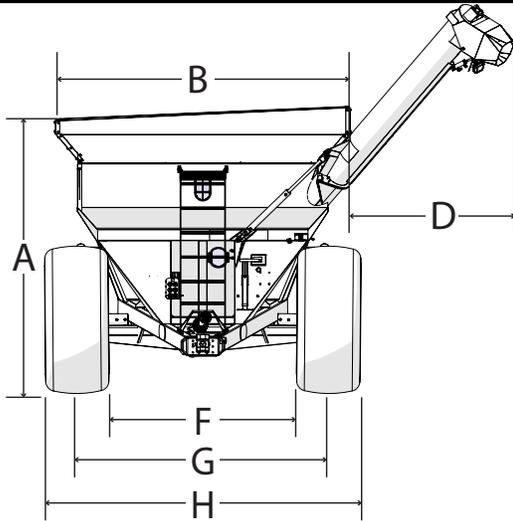
### **IMPORTANT**

Indicates that failure to observe can cause damage to equipment.

### **NOTE**

Indicates helpful information.

## Specifications and Dimensions



# 525

|                        |         |
|------------------------|---------|
| A                      | 10' 4"  |
| B                      | 10' 0"  |
| C                      | N/A     |
| D                      | 7' 6"   |
| E                      | N/A     |
| F                      | 7' 4"   |
| G                      | 10' 0"  |
| H                      | 12' 8"  |
| I                      | 15' 6"  |
| J                      | 13' 1"  |
| K                      | 0' 10"  |
| L                      | 2' 1"   |
| M                      | 12' 9"  |
| N                      | 17' 11" |
| O                      | 1' 6"   |
| P                      | 12' 0"  |
| Q                      | 10' 10" |
| <b>Max Tarp Height</b> | 11'-4"  |

\*Measurements taken using 30.5 x 32 tires.

### Specifications Single Wheel Option

|                               |                                  |
|-------------------------------|----------------------------------|
| <b>Capacity</b>               | 525 Bushels                      |
| <b>Auger, One Vertical</b>    | 14"                              |
| <b>Unload Time (minutes)</b>  | 3.2 Minutes                      |
| <b>Wheels (2)</b>             | 21x32 or 27x32                   |
| <b>Tires (2)</b>              | 24.5x32, 30.5x32, or IF800/60R32 |
| <b>Hubs (2)</b>               | 10 Bolt                          |
| <b>Spindles (2)</b>           | 4-1/2" Diameter                  |
| <b>Tongue Weight</b>          |                                  |
| <b>Empty</b>                  | 950 lbs.                         |
| <b>Loaded</b>                 | 1,950 lbs.                       |
| <b>Total Weight (approx.)</b> | 6,300 lbs.                       |

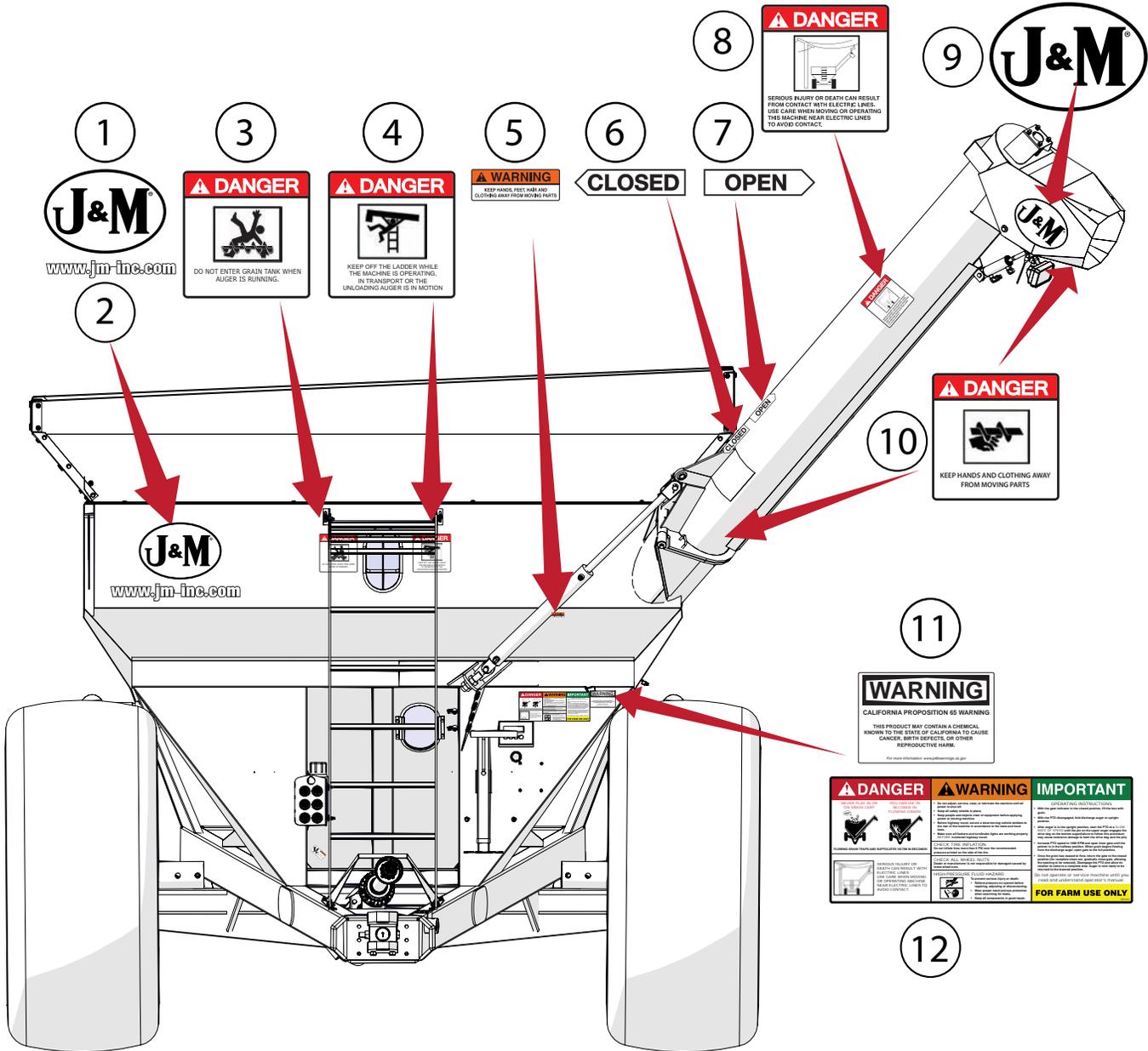
### Required Tractor HP

#### Driving Speed HP (Fully Loaded)

| 5 mph | 10 mph | 15 mph |
|-------|--------|--------|
| 54    | 110    | 215    |

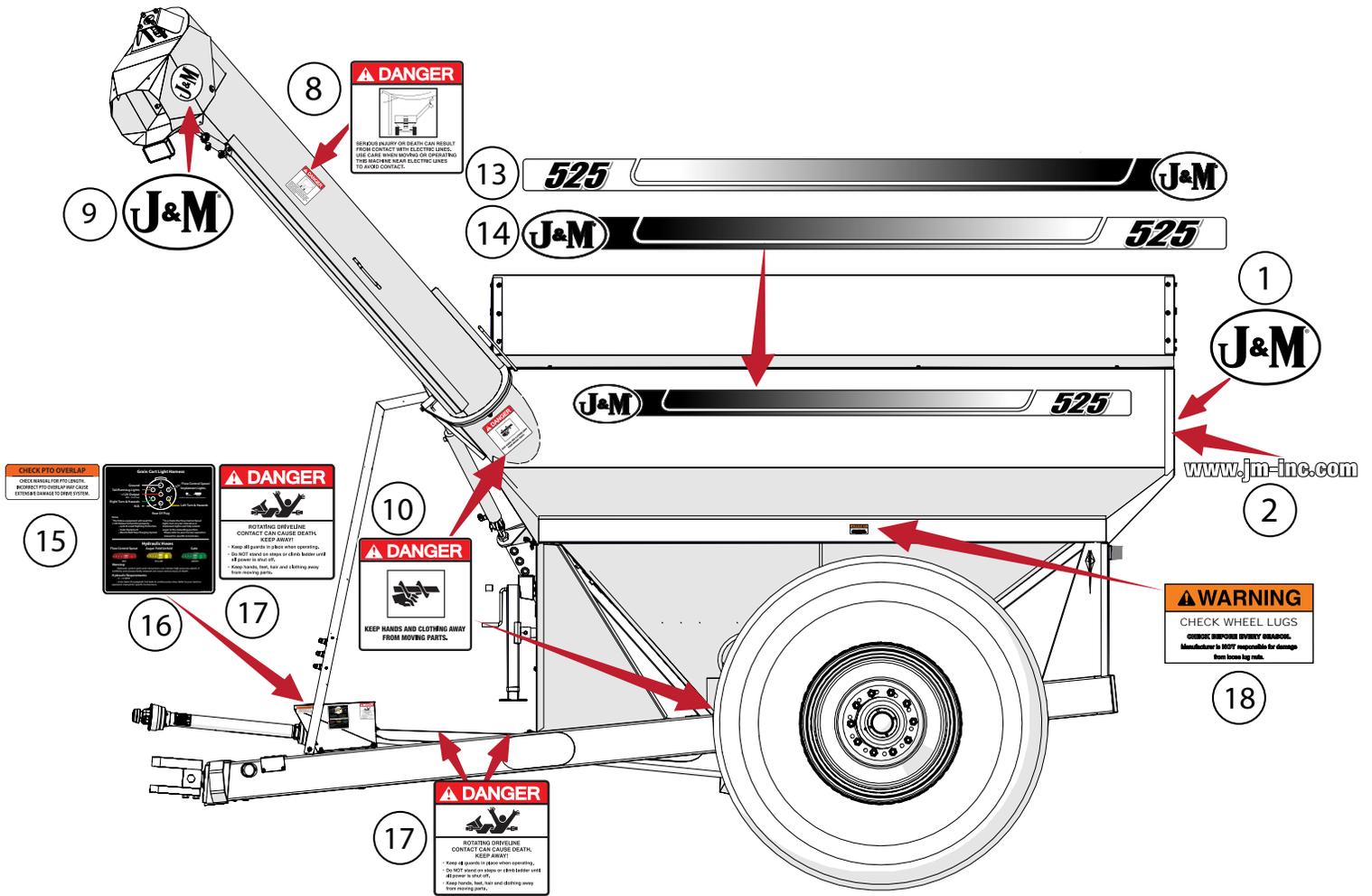
# Decals

**⚠ ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! ⚠**  
 Replace Immediately If Damaged or Missing



|    | Description                                | Part No.  |
|----|--|-----------|
| 1  | J&M Oval Decal (Large) 9-1/2" x 15"        | JM0015151 |
| 2  | www.jm-inc.com Decal                       | JM0019239 |
| 3  | Danger, Do Not Enter Grain Tank Decal      | JM0018033 |
| 4  | Danger, Keep Off Ladder Decal              | JM0018034 |
| 5  | Warning, Keep Hands Away Decal             | JM0018039 |
| 6  | Closed Decal                               | JM0025434 |
| 7  | Open Decal                                 | JM0025433 |
| 8  | Danger, Electric Lines Decal               | JM0015099 |
| 9  | J&M Oval Decal (Medium) 5-1/2" x 8-1/2"    | JM0010179 |
| 10 | Danger, Keep Hands and Clothing Away Decal | JM0018035 |
| 11 | California Proposition 65 Warning Decal    | JM0077568 |
| 12 | Danger Warning Important Decal             | JM0037665 |

# Decals



| Description   | Part No.  |
|---|-----------|
| 13 525 Opposite Auger Side Stripe Kit                   | JM0025936 |
| 14 525 Auger Side Stripe Kit                            | JM0025935 |
| 15 Check PTO Overlap Decal                              | JM0025435 |
| 16 Grain Cart Light Harness Decal (Standard Fold Carts) | JM0041058 |
| 17 Danger, Rotating Driveline Decal                     | JM0018036 |
| 18 Warning, Check Wheel Lugs Decal                      | JM0077567 |

# Bolt Torque Chart

Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are clean and you start thread engagement properly. **Use these values when tightening all bolts and nuts with the exception of wheel nuts.**

## SAE Fasteners

| Coarse Thread Series        |           |          |           |           |
|-----------------------------|-----------|----------|-----------|-----------|
| Diameter and Pitch (Inches) | Grade 5   |          | Grade 8   |           |
|                             | Dry       | Oiled    | Dry       | Oiled     |
| 1/4"-20                     | 8 ft-lbs  | 6 ft-lbs | 12 ft-lbs | 9 ft-lbs  |
| 5/16"-18                    | 17        | 13       | 25        | 18        |
| 3/8"-16                     | 31        | 23       | 44        | 33        |
| 7/16"-14                    | 49        | 37       | 70        | 52        |
| 1/2"-13                     | 75        | 57       | 106       | 80        |
| 9/16"-12                    | 109       | 82       | 154       | 115       |
| 5/8"-11                     | 150       | 113      | 212       | 159       |
| 3/4"-10                     | 267       | 200      | 376       | 282       |
| 7/8"-9                      | 429       | 322      | 606       | 455       |
| 1"-8                        | 644       | 483      | 909       | 681       |
| Fine Thread Series          |           |          |           |           |
| Diameter and Pitch (Inches) | Grade 5   |          | Grade 8   |           |
|                             | Dry       | Oiled    | Dry       | Oiled     |
| 1/4"-28                     | 10 ft-lbs | 7 ft-lbs | 14 ft-lbs | 10 ft-lbs |
| 5/16"-24                    | 19        | 15       | 27        | 20        |
| 3/8"-24                     | 35        | 26       | 49        | 37        |
| 7/16"-20                    | 55        | 41       | 78        | 58        |
| 1/2"-20                     | 85        | 64       | 120       | 90        |
| 9/16"-18                    | 121       | 91       | 171       | 128       |
| 5/8"-18                     | 170       | 127      | 240       | 180       |
| 3/4"-16                     | 297       | 223      | 420       | 315       |
| 7/8"-14                     | 474       | 355      | 669       | 502       |

## Stud and Wheel Nut Torque Specifications

Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are clean and you start thread engagement properly. **Use these values when tightening all studs and wheel nuts.**

| Stud     | Tightening Torque |
|----------|-------------------|
| 1/2"-20  | 120 ft-lbs        |
| 9/16"-18 | 170 ft-lbs        |
| 5/8"-18  | 300 ft-lbs        |
| 3/4"-16  | 400 ft-lbs        |
| 20mm     | 475 ft-lbs        |
| 22mm     | 640 ft-lbs        |

**TIGHTENING WHEEL NUTS:** Standard **3/4"** wheel studs and nuts should be tightened to torque **400 ft-lbs**. During initial operation of the grain cart and then checked for proper torque after every 10 hours of use. Failure to do so may damage wheel nut seats. Once seats are damaged, it will become impossible to keep nuts tight.

# Safety Rules

## **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED!**

Safety is a primary concern in the design and manufacture of our products. Unfortunately, our efforts to provide safe equipment can be erased by an operator's single careless act. In addition, hazard control and accident prevention are dependent upon the awareness, concern, judgment, and proper training of personnel involved in the operation, transport, maintenance and storage of equipment.

Make certain the operator(s), prior to operating, is instructed in safe and proper use and reviews and understands the manual(s) pertaining to this machine. Also make certain the operator(s) reviews and understands the operator's manual of the tractor prior to hooking up or operating the grain cart.

Read this manual before you operate this machine. If you do not understand any part of this manual, or need more information, contact J&M Mfg. Co., Inc. or your authorized dealer.

### **SAFETY**

Understand that your safety and the safety of other persons is measured by how you service and operate this machine. Know the positions and functions of all controls before you try to operate them. Make sure to check all controls in a safe area before starting your work.

The safety information given in this manual does not replace safety codes, federal, state or local laws. Make certain your machine has the proper equipment as designated by local laws and regulations.

A frequent cause of personal injury or death is from persons falling off equipment and being run over. Do not permit persons to ride on this machine.

Travel speeds should be such that complete control and machine stability is maintained at all times. Where possible, avoid operating near ditches, embankments and holes. Reduce speed when turning, crossing slopes and rough, slick or muddy surfaces.

Collision of high speed road traffic and slow moving machines can cause personal injury or death. On roads, use flasher lights according to local laws. Keep slow-moving-vehicle emblem visible. Pull over to let faster traffic pass.

Hydraulic oil leaking under pressure can penetrate skin and cause infection or other injury. To prevent personal injury,

- Relieve all pressure, before disconnecting fluid lines,
- Before applying pressure, make sure all connections are tight and components are in good condition,
- Never use your hand to check for suspected leaks under pressure. Use a piece of cardboard or wood for this purpose.
- If injured by leaking fluid, see your doctor immediately.

When transporting the grain cart, always keep the auger in the stow position.

Use care when moving or operating the grain cart near electric lines as serious injury or death can result from contact.

Never adjust, service, clean, or lubricate the grain cart until all power is shut off. Keep all safety shields in place. Keep hands, feet, hair and clothing away from moving parts while the grain cart is in operation.

The service ladder is for service work only. If you must climb into the grain tank, be certain that all power is shut off and then use extreme caution when climbing into the grain cart.

Make sure that everyone is clear of equipment before applying power or moving the machine.

Make sure the grain cart is fastened securely to the tractor using a high strength hitch pin, clip and safety chains. Make sure the grain cart hitch properly matches the hitch type of the tractor. Use a single prong (spade) grain cart hitch with a double prong (clevis) tractor hitch. Use a double prong (clevis) grain cart hitch with a single prong (spade) tractor hitch. Be sure the tractor pin is at least 1/4" smaller in diameter than the pin hole in the grain cart hitch to ensure enough free movement when traversing through uneven terrain.

Before filling the grain cart, make certain no one is inside the grain tank. Never allow children, or anyone, in, near, or on the grain cart during transport or during loading and unloading of grain. Be aware that moving grain is dangerous and can cause entrapment, resulting in severe injury or death by suffocation.

Never operate the auger system with anyone inside the grain tank. Hands, feet, hair and clothing can fit through the openings in and around the grate. Contact with the auger can cause severe injury or death. Ensure all power is shut off before service work is performed.

Before unhooking the grain cart from the tractor, be sure the jack stand is properly mounted and in place and the wheels are properly blocked to prevent the cart from moving.

# Initial Operation and Maintenance

## WARNING

### BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART.

Before the grain cart is put into service:

- Have the safety instructions been read and clearly understood by the operator(s) of this machine?
- Has the gearbox been properly filled with SAE 80W-90 gearbox lubricant?
- Have all nuts, bolts, bearings and braces been properly fastened?
- Has the PTO been checked for proper overlap?

**IMPORTANT:** Has the slip clutch on the PTO been serviced? If the slip clutch is left unchecked, damages to the power-take-off and drive shaft may result. Before using the grain cart, loosen the bolts around the slip clutch. Make sure the friction plates turn free of each other and are not corroded together. Re-tighten the tension bolts. Run the auger system EMPTY and check for proper engagement of the slip clutch.

**CHECK PTO OVERLAP LENGTH.** Overlap length may vary depending on the tractor model and hitch setting. Try to obtain the greatest possible overlap without bottoming out in the extreme operating conditions. Too much overlap may cause the PTO to bottom out and damage the driveline. Not enough overlap may cause the PTO front and back halves to separate. From the fully compressed (shortest) length the PTO should be telescoped (extended) between 10" and 22". Different PTO lengths may need to be purchased to accommodate your terrain. A 4" shorter or a 10" longer PTO can be ordered through your dealer from J&M Manufacturing.

**GREASE POINTS:** Are all bearings on the driveline properly greased? Are all set screws in the bearings and U-joints tight? Has the PTO shaft been properly greased at all points including the cross bearings? Has the universal joint at the gearbox been greased? Have all grease points at the auger hinge area, including the hanger bushing assembly been greased? If applicable, has the swivel ball hitch been greased?

**TIRE PRESSURE:** Are the tires properly inflated? The following is to be used as a **general guide** for tire inflation for cyclic use. Figures can vary depending on specific brand of tire used. It is important that tires are inspected before and after the unit is loaded. The tire pressures below are recommended by the manufacturer. **On select tires the listed pressure is lower than the max tire pressure to reduce compaction. If desired, the pressure MAY BE increased UP TO the max tire pressure for traveling long distance while empty on the road.**

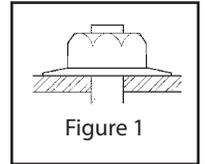
| Tire   | psi |
|--|-----|
| 24.5x32 Lug Tires-12 ply (Firestone) (for 21x32-10 Hole Wheels)            | 32  |
| 24.5x32 Diamond Tires-12 ply (Firestone) (for 21x32-10 Hole Wheels)        | 32  |
| 30.5x32 Lug Tires-16 Ply (Firestone) (for 27x32-10 Hole Wheels) (124" c/c) | 34  |
| 30.5x32 Lug Tires-18 ply (Alliance) (for 27x32-10 Hole Wheels) (124" c/c)  | 30  |
| IF800/60R32 Diamond Tires (Firestone) (181B) (for 27x32-10 Hole Wheels)    | 19  |

# Operating Instructions

**VERY IMPORTANT:** Under no circumstance is it recommended to tow a loaded grain cart in excess of 8 mph.

**WHEEL NUTS:** Are the wheel nuts properly fastened? **Torque to 400 Ft.-Lbs. for 3/4" wheel studs and nuts. Wheel studs and nuts should be checked after each load during initial operation of the cart and then after every 10 hours of use. Failure to do so may damage wheel studs and nuts.** Once the seats are damaged, it will become impossible to keep the lug nuts tight.

The drawing shows the proper way to mount the wheels using Budd-type nuts. The wheels supplied with your grain cart have straight holes and the Budd nuts will be mounted according to Figure 1. Wheels that are improperly installed on the grain cart, resulting in product failure, will nullify warranty and shift the burden of liability to the owner/operator. **We recommend you inspect your wheel nuts to make sure they are properly installed. Also, check the wheel nuts on a regular basis to ensure they are tight.**



**LIGHTING AND SAFETY DECALS:** Are the rear, amber extremity lights properly positioned? Extend the lights within 16" (40,6cm) of the left and right extremities of the grain cart. Is an SMV Emblem attached to the rear of the grain cart?

Are the lights working properly? Are all lights and reflective decals clean, visible and properly placed?

**BE CERTAIN THAT ALL POWER IS SHUT OFF WHEN HOOKING UP TO TRACTOR OR CONNECTING HYDRAULIC LINES TO TRACTOR.**

Tractor requirements for proper towing: Model 525 grain carts require a minimum of 100 HP tractor.

**IMPORTANT: Do NOT pull a loaded grain cart on highway. For incidental highway travel, observe the section below.**

## Tow Loads Safely

Stopping distance increases with speed and weight of towed loads, and on slopes. Towed loads with or without brakes that are too heavy for the tractor or are towed too fast can cause loss of control. Consider the total weight of the equipment and its load.

Observe these recommended maximum road speeds, or local speed limits which may be lower:

- **Grain cart empty:** Do not travel more than 20 mph (32 km/hr) and do not tow loads more than 1.5 times the pulling unit's weight.
- **Grain cart loaded:** Do not travel more than 8 mph (12 km/hr) and do not tow loads more than 1.5 times the pulling unit's weight.

Ensure the load does not exceed the recommended weight ratio. Use additional caution when towing loads under adverse surface conditions, when turning, and on inclines.

**⚠ WARNING:** For greater stability on uneven or steep terrain, position non-scale wheel spindles at the furthest out setting.

## ⚠ IMPORTANT:

1. Connect grain cart hitch to tractor drawbar using a good quality hitch pin. Attach the safety chain to the tractor and through one chain loop provided on either side of the grain cart frame as shown. Make sure the grain cart hitch properly matches the hitch of the tractor. Use a single prong (spade) grain cart hitch with a tractor double prong (clevis) hitch. Use a double prong (clevis) grain cart hitch with a single prong (spade) tractor hitch.



### Safety Chain User Instruction

- a) Secure the safety chain by looping it around each side of the grain cart as shown and connecting to the towing machine's attaching bar.
  - b) Do not allow any more slack than necessary for articulation.
  - c) Do not use any intermediate support as the attaching point.
  - d) Store the safety chain by securing it around the main axle A-frame of the grain cart.
  - e) Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.
2. Attach the power-take-off shaft to the tractor. The PTO must have at least 10" of engagement. Check tractor drawbar for clearance and length and adjust if necessary. **Make sure the PTO does not bottom out when making sharp turns as it may bend the drive shaft.**
  3. Make sure the jack stand is repositioned from the lower support position before the cart is moved. **Never use the jack to support a loaded grain cart.**
  4. Be sure that no debris or foreign objects are in the grain cart.

# Operating Instructions

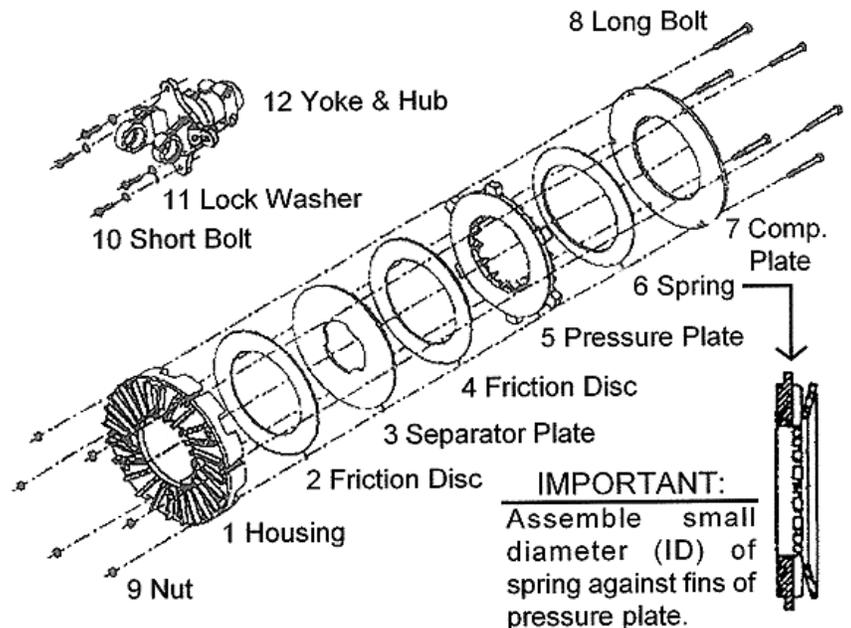
- Attach the hydraulic lines to the tractor. Two hydraulic lines (green band) operate the inside gate mechanism. Connect these lines to one service outlet on the tractor. Two hydraulic lines (yellow band) operate the folding mechanism of the auger. Connect these lines to a second service outlet on the tractor. The remaining two hydraulic lines (red band) operate the hydraulic flow control spout located at the end of the upper auger. Connect these lines to a third service outlet on the tractor. Make sure the air is bled from the hydraulic cylinders and hoses.
- Run the auger system EMPTY before loading grain into the tank for actual use. Make certain that the upper and lower augers are properly engaged.
- Connect the lighting 7-prong connector end on the main wiring harness to the tractor electrical outlet. Make sure that all flasher and turn indicator lights are working properly before incidental highway travel.

## CAUTION

- Do NOT operate the grain cart before reading and understanding this Operator's Manual and ALL danger, warning and caution signs.
- Be sure that a Slow-Moving-Vehicle emblem is attached to the rear of the grain cart.
- Never exceed 1,000 rpm on the PTO and driveline system.
- Never fold or extend the auger until the PTO has come to a complete stop.
- Never fill the grain cart unless the gate indicator is in the closed position.
- Never allow foreign objects (shovels, etc.) to be placed inside the grain cart.
- Never engage the lugs and drive dogs on the augers when the system is moving at a high rate of speed.
- Never perform maintenance work or service the grain cart with the tractor running.

## Adjusting the Slip Clutch

- Make sure the tractor is off and the PTO is disengaged.
- Disconnect the driveline from the tractor.
- Locate the six (6) long bolts (item 8 in diagram) on the O.D. of the clutch pack. Loosen the bolts until they rotate freely, finger tighten each bolt, and then tighten each bolt one half turn.
- Attach the implement to the tractor with a hitch pin and the drive line to the tractor PTO shaft.
- Start the tractor. Engage the PTO and run a few seconds, or until the friction clutch visibly smokes.
- Disengage the tractor PTO and shut the tractor off.
- Disconnect the driveline from the tractor.
- Tighten the six (6) long bolts (item 8 in diagram) on the O.D. of the clutch pack until the compression plate (item 7 in diagram) is in contact with the housing (item 1 in diagram), then keep tightening each bolt to 30 ft.-lbs.
- Locate the four (4) short bolts (item 10 in diagram) that attach the yoke & hub (item 12 in diagram) to the clutch pack and check that each bolt is tightened to 30 ft.-lbs.



# Lubrication Service Schedule

**IMPORTANT:** Your grain cart has grease fittings at all critical points. These should be serviced before the grain cart is put into operation.

**⚠ WARNING**

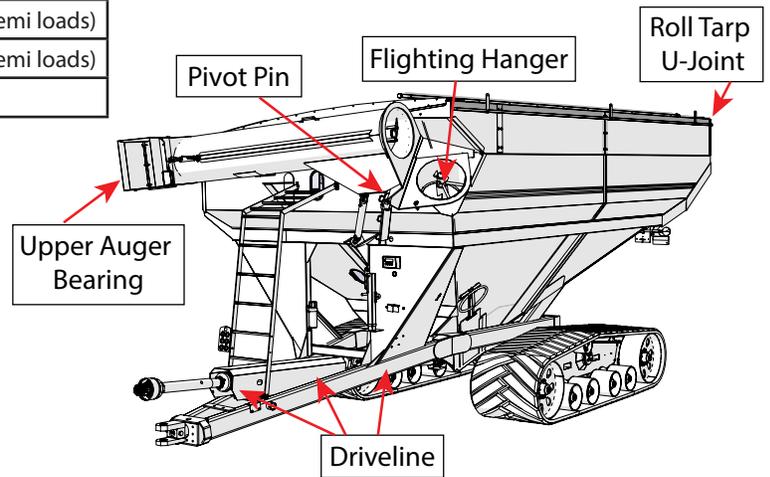
**BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART**

**PTO & DRIVELINE:** The grease fittings on the PTO should be serviced after every 8 hours of use. Service the grease fittings on each of the drive bearings and also the universal joint after every 8 hours of use.

**AUGER FOLDING MECHANISM:** One grease fitting is located on the pivot pin of the folding auger. This fitting should be serviced after every 8 hours of use. Service the grease fitting on the hanger bushing assembly (top end of the lower auger assembly) after every 8 hours of use or as needed.

**SPRING LOADED UPPER AUGER BEARING:** Service the grease fitting on the upper auger bearing (located at the top end of the upper auger assembly) after every 8 hours of use. Lubricate the springs and retaining bolts on the bearing before prolonged storage of the grain cart.

| Grease Fittings            |  |
|----------------------------|--|
| Pivot Pin                  | Once Annually  |
| Roll Tarp U-Joint          | Once Annually  |
| Upper Auger Flighting      | Every 8 hours of PTO run time (roughly 150 semi loads) |
| Driveline                  | Every 8 hours of PTO run time (roughly 150 semi loads) |
| Vertical Flighting Hangers | Every 8 hours of PTO run time (roughly 150 semi loads) |
| Swivel Ball Hitch          | Weekly   |



**GEARBOX:** Gearbox lubricant has been added to the gearbox during final assembly. Recheck the lubricant level before initial operation of the grain cart, then periodically according to use. An inspection plug is located in the center of the top of the gearbox mount plate. To check the fluid level, remove the vented inspection plug and drain plug at the bottom of the gearbox. Drain the lubricant. Return the drain plug and refill the gearbox with **24 ounces** (0,71 liters) of gearbox lubricant. **DO NOT OVERFILL.** Use SAE 80W-90 gearbox lubricant or equivalent. Change the oil annually before use.

| Gearbox Lubricant |        |             |              |
|-------------------|--------|-------------|--------------|
| Model             | Ounces | Input Shaft | Output Shaft |
| 525               | 24     | 1-3/4"      | 1-3/4"       |

# Routine Maintenance

## WARNING

### BE CERTAIN ALL POWER IS SHUT OFF WHEN SERVICING THE GRAIN CART

- Repack the bearings in the hub assembly once a year or as needed. Use a good quality LS EP2 severe duty, high shock load, lithium-based grease. Also check the seal for wear and replace if necessary.
- Check the grain cart periodically for cracks in welds and for other structural damage. Have cracked welds fixed immediately. Failure to do so could result in extensive damage to the grain cart and greatly reduce the life of the cart.
- Lubricate the slides on the clean-out door.
- Check all hydraulic hoses for wear and replace as necessary.
- Make sure all tires are properly inflated. See “Initial Operation and Maintenance” on page 10 in the Owner’s Manual for recommended instructions for tire pressure. It is important that tires are inspected before and after unit loaded.
- Check PTO for wear of plates in the slip clutch. Replace if needed.
- Make sure that all guards and shields are in place before operating the grain cart.

# Troubleshooting

## WARNING

MAKE SURE THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART. MAINTENANCE AND REPAIR SERVICE WORK TO BE PERFORMED BY QUALIFIED SERVICE PERSONNEL ONLY.

| Trouble  | Possible Cause   | Possible Remedy  |
|--|--|--|
| Auger will not return to down position or move from stow position  | Faulty check valve   | Replace check valve  |
|  | Faulty lock and load solenoid  | Disconnect power to lock and load. If the auger is able to move, the lock and load solenoid needs to be replaced   |
|  | Upper flighting and lower flighting are locked together                      | Bearing on top of upper auger flighting needs adjusting. When the auger is in the engaged position, there must be 1/8" (0,32cm) gap between bottom of top bearing and top of upper tube housing (See “Adjusting the Lower and Upper Flighting” on page 15) |
|  | Feed gate open   | Close the feed gate  |
|  | Lock and Load not operating correctly  | Make sure the limit switch on the feed gate indicator assembly is functioning properly   |
| Hanger bushing assembly at the top of the lower auger flighting is hot   | Top of the hanger bushing assembly is rubbing against the drive dog          | Loosen the two bolts and re-adjust the position of the hanger bushing assembly. Re-tighten bolts   |
|  |  | Remove the lower flighting assembly and place a shim between the spline coupler and the gearbox  |
| Excessive vibration  | Auger flighting or shaft is bent   | Straighten or replace auger flighting  |
|  | Drive shaft is bent  | Replace or straighten drive shaft  |
| Grain flow stoppage  | Bolt sheared in drive dog  | Replace bolt in drive dog. Engage upper and lower flighting at a slow rate of speed. (Drive dogs and lugs are being engaged too fast.)   |
|  | Folding auger before complete stop   | Upper and lower flighting are disengaging before auger comes to a complete stop. Replace bolt in the drive dog. Never engage or disengage the upper and lower flighting until the augers come to a complete stop.  |
|  | PTO key sheared  | Replace key and tighten set screw  |
| Auger tube is breaking away from the grain cart at the hinge area or the ram in the hydraulic folding cylinder is bent | Upper auger is extended in the upright position while traveling in the field | Repair or place folding cylinder if necessary. Remember to lower auger to the field position after unloading.  |

# Adjusting the Lower and Upper Flighting

## ⚠ WARNING

**MAKE SURE THAT ALL POWER IS SHUT OFF BEFORE ADJUSTING THE FLIGHTING ASSEMBLY.**

**LOWER FLIGHTING** - If the drive-dog and hanger assembly are becoming excessively hot during unloading, the lower flighting and/or hanger may need adjusting. The hanger bushing assembly has elongated holes where it attaches to the outer tube assembly. Loosen the two 1/2" bolts on the hanger bushing assembly. Adjust the hanger either up or down and vertically center it between the flighting and drive dog. Re-tighten the bolts. Make certain that the flighting center and drive-dogs do not rub the hanger bushing assembly, causing them to become hot.

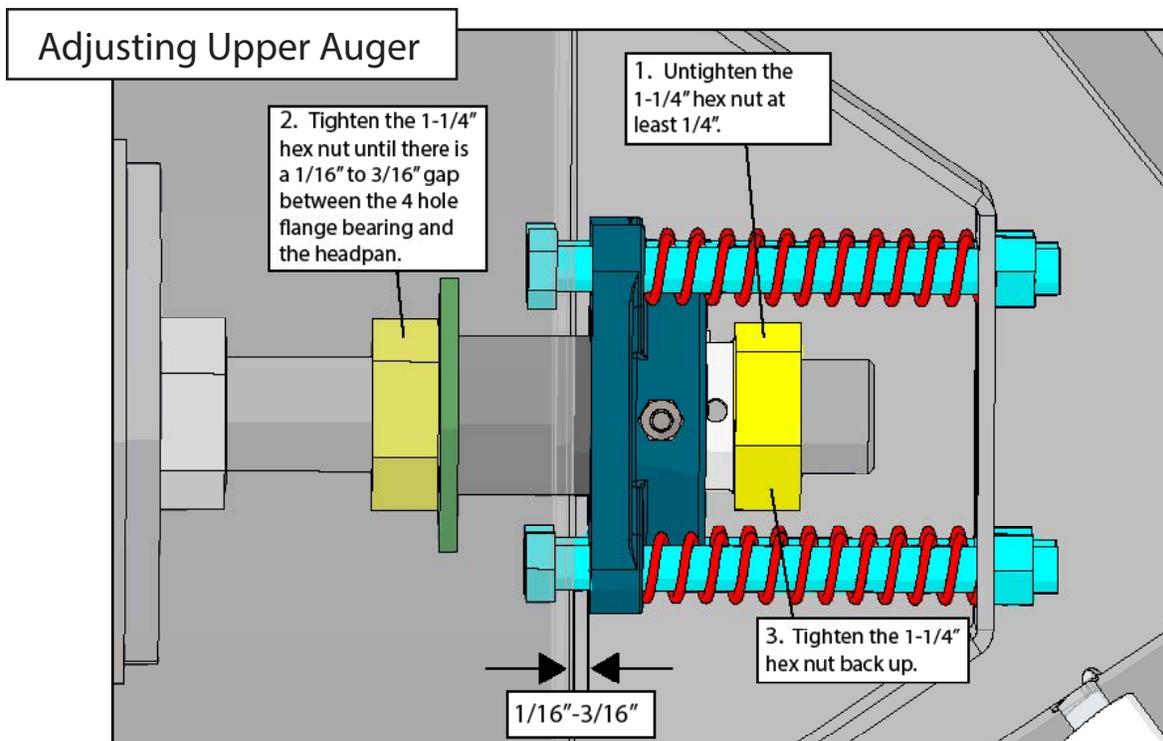
If the hanger can no longer be adjusted by moving it up or down on the elongated holes, both the hanger bushing assembly and the lower flighting will have to be removed. After removing them from the tube assembly, place a shim [between 1/8" (0,32cm) to 3/16" (0,48cm) thick] next to the gearbox and the spline coupler (welded to the lower flighting). Replace the lower flighting and reattach the hanger to the tube assembly. Readjust the hanger assembly. NOTE: The bottom of the lower flighting is not attached to the gearbox with any bolts or set screws but may be 'frozen' fast. Be careful when removing the lower flighting from the gearbox. For easier removal of the lower flighting, keep the gearbox at the bottom intact, remove the two 1/2" bolts from the hanger bushing assembly and pull the lower flighting off of the gearbox.

After adjusting the lower flighting, move the upper auger to the unload position and check the upper flighting for readjustment.

**UPPER FLIGHTING** - If the upper and lower augers do not properly separate during the unfolding sequence, the upper flighting may need adjusting. Before making an adjustment to the upper flighting, check to see if the lugs and drive dogs on the auger assemblies are locking together. If they are not locked together, check to see if a faulty check valve on the hydraulic cylinder used to raise and lower the upper auger assembly may be causing the problem.

Fold the upper tube assembly into the upright position. Position the upper flighting in the engaged position with the lower flighting. Locate the four-hole flange bearing on the top of the upper auger tube housing. With the upper flighting in the engaged position, check the spacing between the upper bearing and the upper tube housing. We want this bearing to float so there must be an 1/16"-3/16" (0,15cm-0,47cm) space between the base of the four-hole flange bearing and the upper tube housing. If there is NOT a space between the bearing and the upper tube housing, or if there is more than 1/16"-3/16" (0,15cm-0,47cm) space, the upper flighting will need to be adjusted. To adjust the upper flighting, loosen the 1-1/4" hex nuts both above and below the four-hole flange bearing. Move the 1-1/4" hex nuts up or down the threaded shaft on the top of the auger flighting shaft until the bearing moves to approximately 1/16"-3/16" (0,15cm-0,47cm) above the base of the upper tube housing. When the four-hole flange bearing is properly located, tighten both 1-1/4" hex nuts together to secure the bearing position.

If the upper and lower flighting still do not separate properly during the folding sequence, a small bevel may need to be removed from the inside of the lugs where they engage the drive dogs on the auger assemblies. Grind approximately 1/8" (0,32cm) from the corner of the lugs where they touch against the drive dogs.



# Removing Dirt from the Restrictors on the Hydraulic Cylinder

## WARNING

**MAKE SURE THAT ALL POWER IS SHUT OFF AND THE UPPER AUGER TUBE IS IN THE DOWN POSITION BEFORE REMOVING THE RESTRICTORS**

Remove restrictors from the 90 degree elbow on the tip spout hydraulic cylinder. Remove dirt from the fitting to allow hydraulic oil to flow through the restrictor. Reattach the restrictor to the street elbow. Use Teflon sealant tape or equivalent on the threads of the restrictor before re-attaching.

If the restrictor continues to plug with dirt, replace the restrictor or filter the hydraulic oil in your system.

## Storage Preparation

**IMPORTANT:** When the grain cart is not going to be used for a period of time, store the cart in a dry, protected place. Leaving your grain cart outside, open to the weather will shorten its life.

### Procedure for Storage Preparation

1. Cover electronic monitor (if equipped) with plastic before washing the grain cart. Wash or clean and completely lubricate the grain cart. See "Lubrication Service Schedule" on page 13.
2. Remove all grain from inside the grain tank, auger tube assemblies, and at the clean-out door.
3. Check the gearbox oil and replace with new SAE 80W-90 gearbox lubricant or equivalent if necessary.
4. Touch up areas where paint may have worn away. Use a good quality primer paint, especially before re-applying graphite paint to the interior slopes of the grain tank.
5. Retract all hydraulic cylinders to prevent the piston rods from rusting.
6. Clean the tires before storage. Inflate the tires at regular intervals.
7. Open the clean-out doors at the base of the grain tank.

### Removing from Storage

1. Check the gearboxes to make sure they have the appropriate amount of oil.
2. Inflate the tires to the correct operating pressure.
3. Close the clean out doors at the base of the grain tank.
4. Make sure all safety shields are in the proper position.

## Repair Parts List and Diagrams

When performing maintenance work, wear sturdy, rough-soled work shoes and protective equipment for eyes, hair, hands, hearing and head. Follow the instructions in this Operator's Manual to ensure safe and proper maintenance and repair.

Your local, authorized dealer can supply genuine replacement parts. Substitute parts that are not genuine may not meet original equipment specifications and may be dangerous.

## WARNING

**MAKE SURE ALL POWER IS SHUT OFF BEFORE PERFORMING ANY MAINTENANCE OR REPAIR WORK.**

## Wheel Rims and Tires

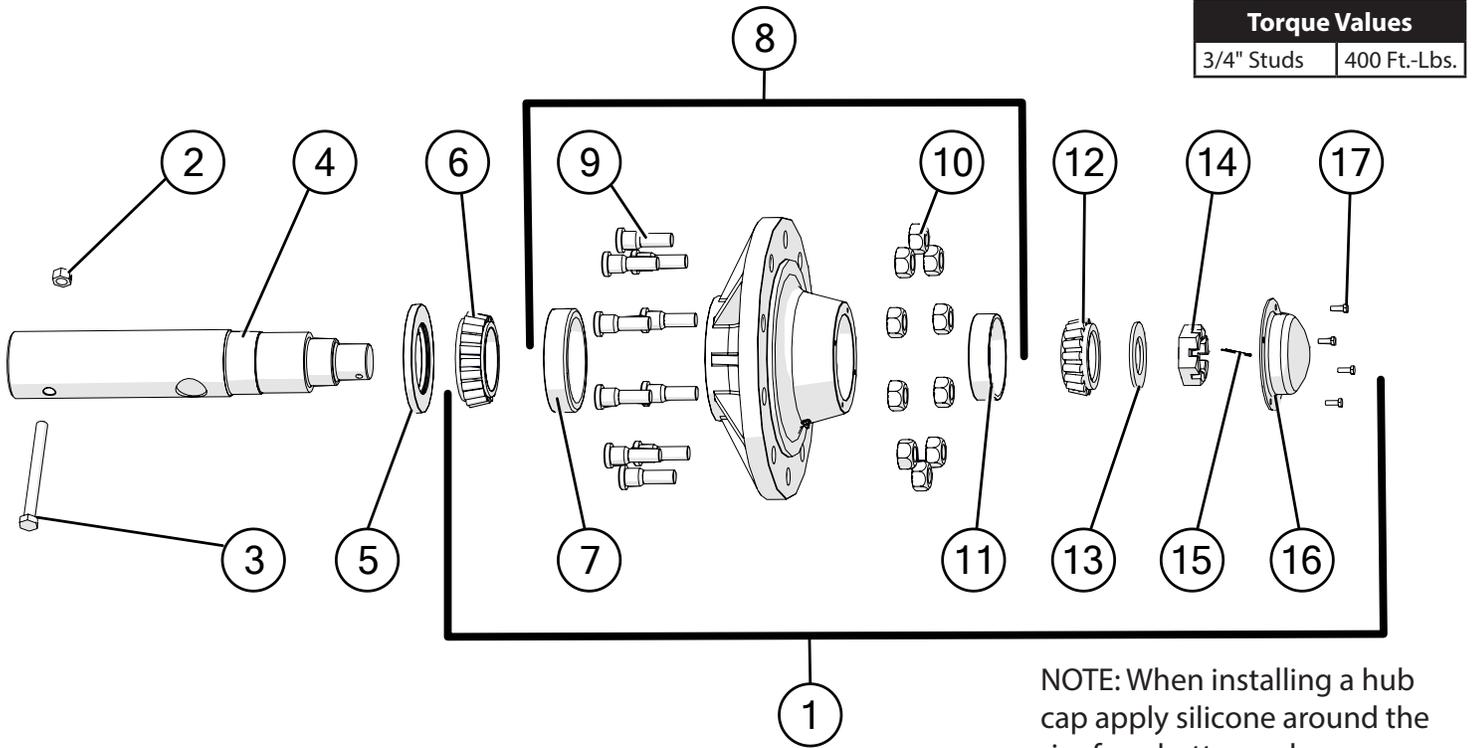
### Wheel Rims

|                          |
|--------------------------|
| 21x32-10 Hole Wheel Rims |
| 27x32-10 Hole Wheel Rims |

### Tires

|  |
|--|
| 24.5x32 Lug Tires-12 ply (Firestone) (for 21x32-10 Hole Wheels)            |
| 24.5x32 Diamond Tires-12 ply (Firestone) (for 21x32-10 Hole Wheels)        |
| 30.5x32 Lug Tires-14 Ply (Firestone) (for 27x32-10 Hole Wheels) (124" c/c) |
| 30.5x32 Lug Tires-18 ply (Alliance) (for 27x32-10 Hole Wheels) (124" c/c)  |
| IF800/60R32 Diamond Tires (Firestone) (181B) (for 27x32-10 Hole Wheels)    |

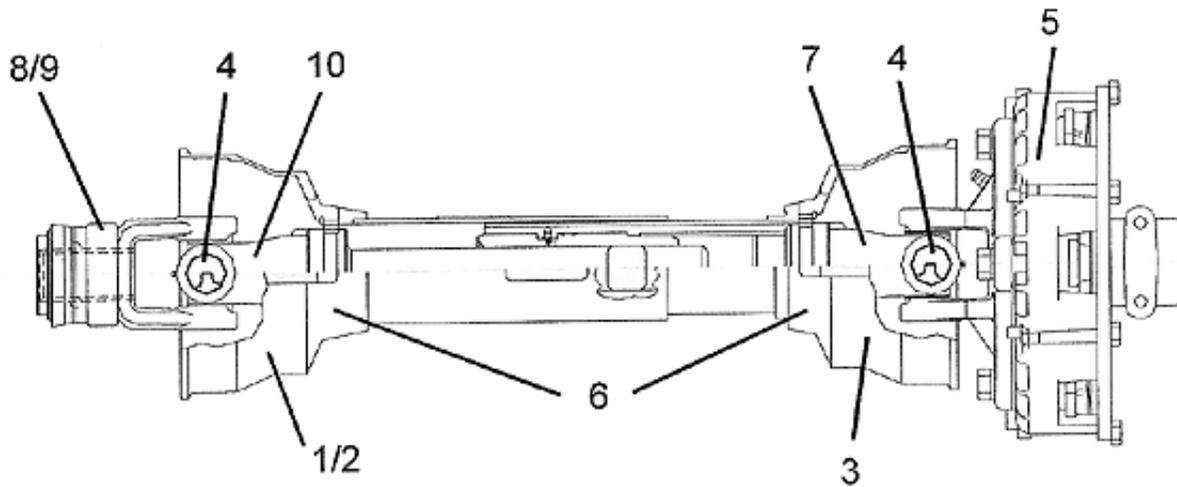
# Non-Scale Hub & Spindle Assembly



NOTE: When installing a hub cap apply silicone around the rim for a better seal.

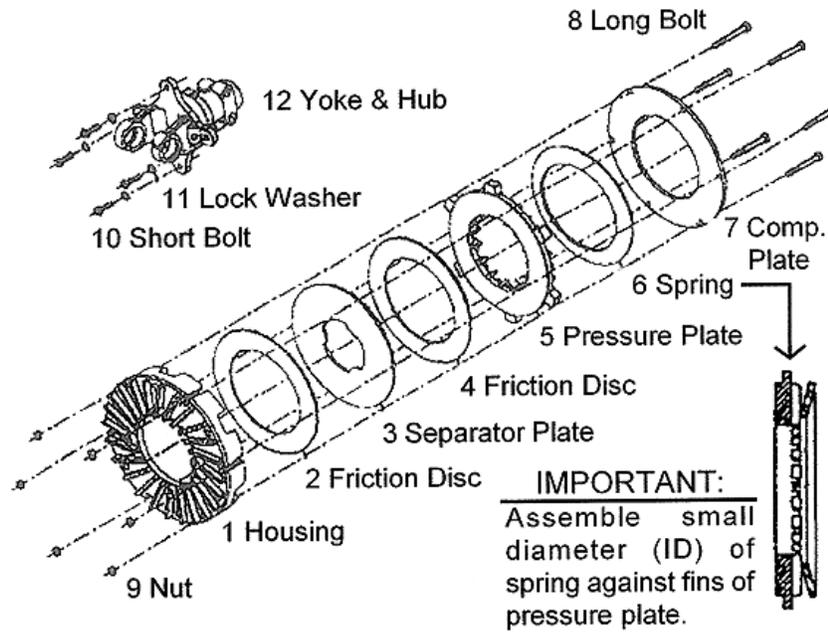
| Description  | Part No.  |
|--|-----------|
| 1 W-881 Hub Assembly Complete with 3/4" Studs and Nuts (Less Seal and Spindle) | JM0050402 |
| 2 1"-8 Gr2 Z Centerlock Hex Nut  | JM0002149 |
| 3 1"-8 x 7" Gr5 Z Hex Bolt   | JM0016689 |
| 4 Spindle, 4-1/2" x 30-1/2" - Standard Axle (525-875, 5000)                    | JM0018794 |
| 5 Seal (4-1/4" ID, 6" OD) for Hub (CR-43771)                                   | JM0018955 |
| 6 Large Bearing (HM218248)   | JM0018849 |
| 7 Large Race (HM218210)  | JM0018848 |
| 8 W-881 Hub with Large and Small Races, 3/4" Studs & Nuts (11.13 Pilot)        | JM0020510 |
| 9 3/4"-16 x 1-3/4" Wheel Stud  | JM0018957 |
| 10 Wheel Nut 3/4"-16   | JM0018958 |
| 11 Tapered Bearing Cup (HM212011)  | JM0018854 |
| 12 Tapered Bearing Cone (HM212049)   | JM0018852 |
| 13 2-1/8" ID, 3-3/4" OD Flat Washer (3/16")                                    | JM0015900 |
| 14 2"-12 Gr2 Castle Hex Nut  | JM0015899 |
| 15 3/8" x 2-3/4" Z Roll Pin (905945)   | JM0018956 |
| 16 Dust Cap 6-1/4" OD (for W-881 & W-891 Hub) (909921)                         | JM0018954 |
| 17 1/4"-20 x 1" Gr5 Z Hex Bolt   | JM0002095 |

# Power Take-Off (PTO) Shaft Assembly - Weasler



|    | Description   | Part No.  |
|----|---|-----------|
| 1  | Front Half Weasler PTO (1-3/8") (Slip Clutch) (91-1400-F-138)         | JM0026025 |
| 2  | Front Half Weasler PTO (1-3/4") (Slip Clutch) (91-1400-F-134)         | JM0026026 |
| 3  | Back Half Weasler PTO with Slip Clutch, Self Adjusting (97-18615B)    | JM0026027 |
| 4  | 14R Cross Kit Weasler (PTO or U-Joint) (03-10134)                     | JM0024310 |
| 5  | Friction Disc, Weasler PTO (2 Required) (11-10143) (1997 and Earlier) | JM0026029 |
| 5  | Friction Disc, Weasler PTO (2 Required) (11-11167) (1997 and Later)   | JM0026031 |
| 6  | Complete Shield with Retainer (Weasler, Slip Clutch) (1628ICS)        | JM0026032 |
| 6  | Front Half Shield with Retainer (Weasler, Slip Clutch) (1628ICS-F)    | JM0026033 |
| 6  | Back Half Shield with Retainer (Weasler, Slip Clutch) (1628ICS-B)     | JM0026034 |
| 7  | Yoke & Tube Assembly (PTO) (Weasler) (30") (98-15972)                 | JM0026035 |
| 8  | Spring-Lok Yoke (Weasler, Slip Clutch) 1-3/8" (14122-1012)            | JM0026036 |
| 9  | Spring-Lok Yoke (Weasler, Slip Clutch) 1-3/4" (14011-1960)            | JM0026037 |
| 10 | Yoke & Shaft Assembly (PTO) (Weasler) (99-16281)                      | JM0026038 |
| 11 | Weasler PTO 1-3/8" Complete (Slip Clutch) (91-1400-138)               | JM0026039 |
| 11 | Weasler PTO 1-3/4" Complete (Slip Clutch) (91-1400-134)               | JM0026045 |

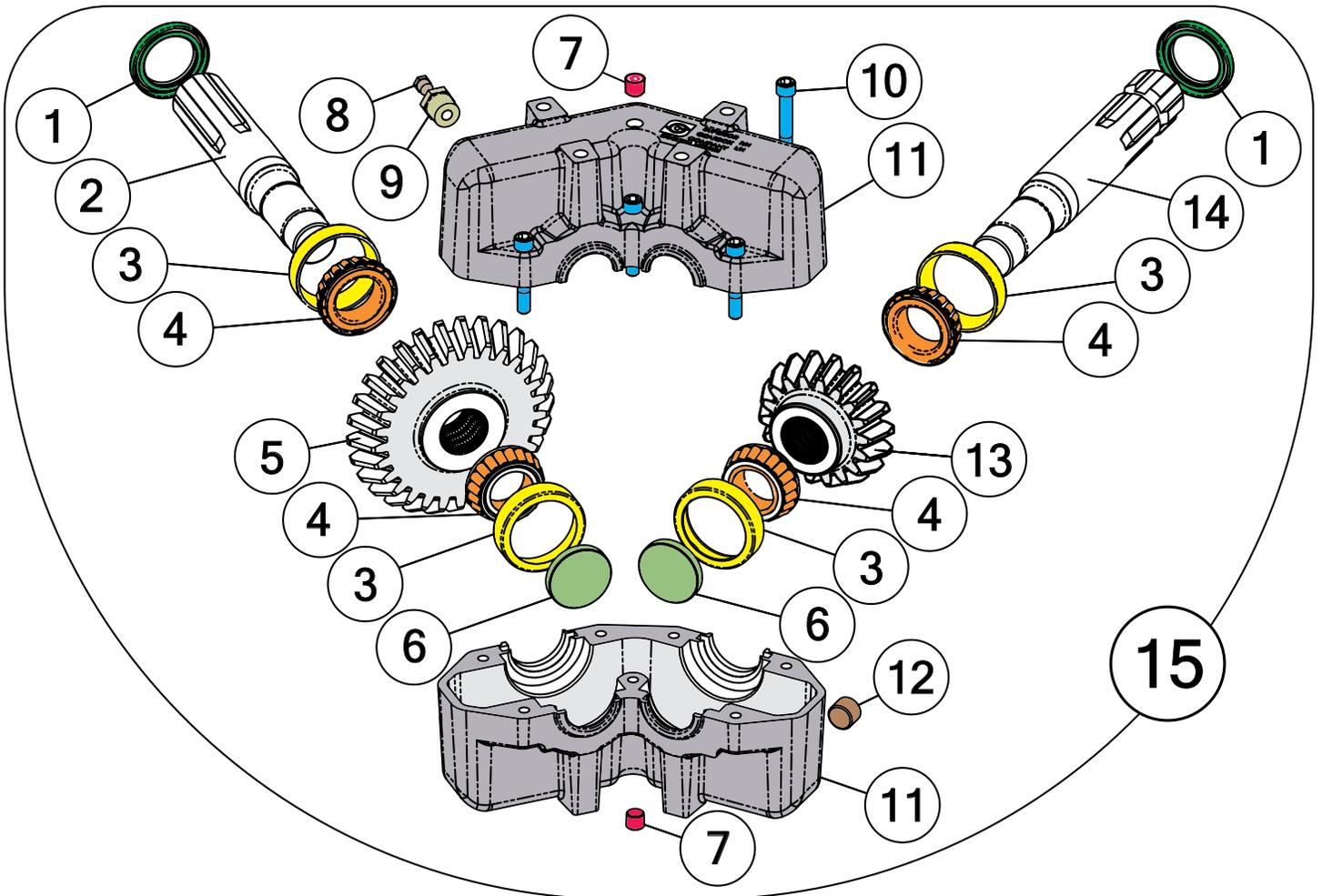
# Self Adjusting Slip Clutch



|    | Description  | Part No.  |
|----|--|-----------|
| 1  | Housing for Weasler PTO Slip Clutch (11-01HS)                                  | JM0026046 |
| 2  | Friction Disc, Weasler PTO (2 Required) (11-11167) (1997 and Later)            | JM0026031 |
| 3  | Separator Plate (Weasler PTO Slip Clutch) (11-02SP)                            | JM0026047 |
| 4  | Friction Disc, Weasler PTO (2 Required) (11-11167) (1997 and Later)            | JM0026031 |
| 5  | Pressure Plate (Weasler PTO Slip Clutch) (11-05PP)                             | JM0026048 |
| 6  | Bell Spring Washer (Weasler PTO Slip Clutch) (11-06SP)                         | JM0026049 |
| 7  | Compression Plate (Weasler PTO Slip Clutch) (11-07CP)                          | JM0026050 |
| 8  | Long Bolt (Weasler PTO Slip Clutch) (11-08LB)                                  | JM0026051 |
| 9  | Nut (Weasler PTO Slip Clutch) (11-09NT)  | JM0026052 |
| 10 | Short Bolt (Weasler PTO Slip Clutch) (11-10SB)                                 | JM0026053 |
| 11 | Lock Washer (Weasler PTO Slip Clutch) (11-11LW)                                | JM0026054 |
| 12 | Yoke & Hub Assembly (Weasler PTO Slip Clutch) (11-12YH)                        | JM0026055 |
| 13 | Slip Clutch Complete (Weasler PTO Slip Clutch) (Includes Yoke & Hub) (11-13SC) | JM0026056 |

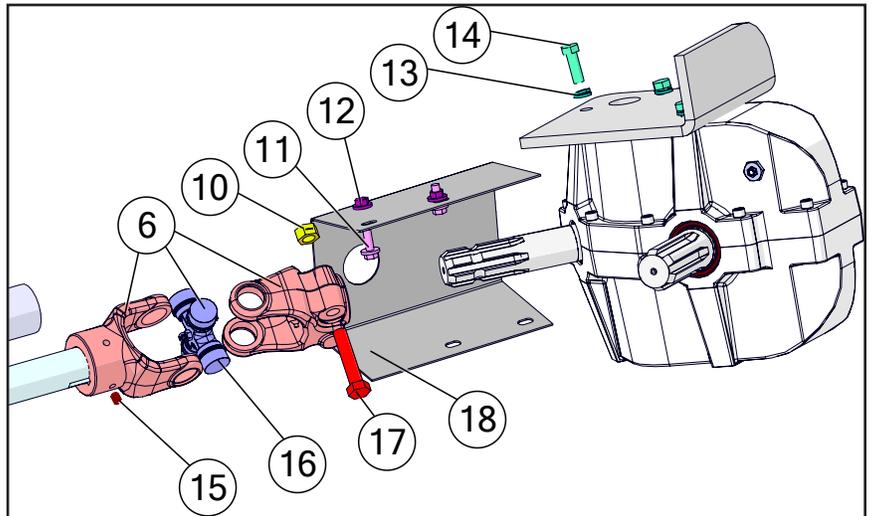
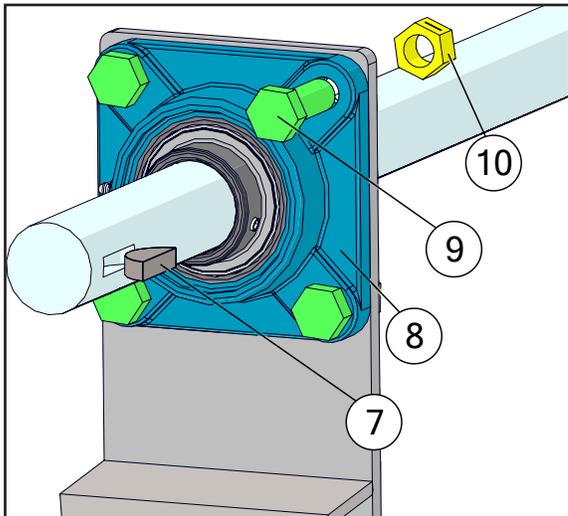
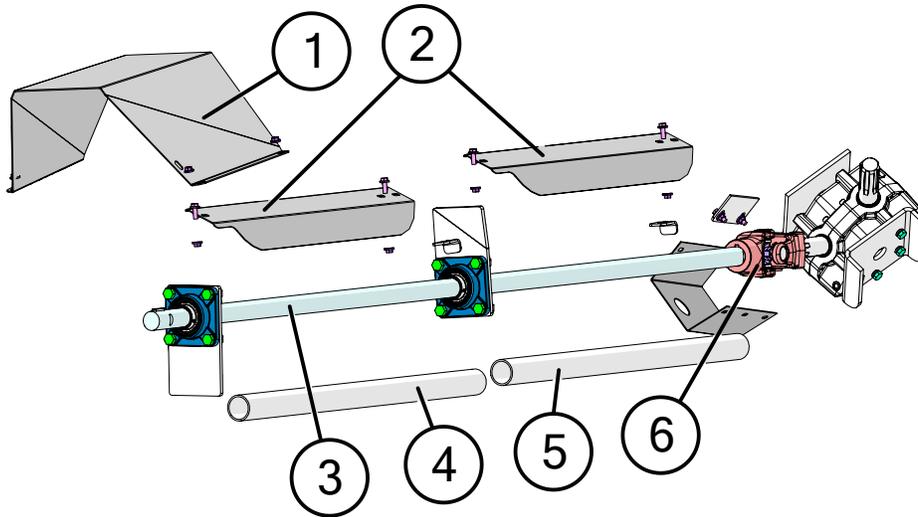
# 130 Degree Gearbox Assembly - Superior

Takes 24 ounces of SAE 80W-90  
Gearbox Lubricant.



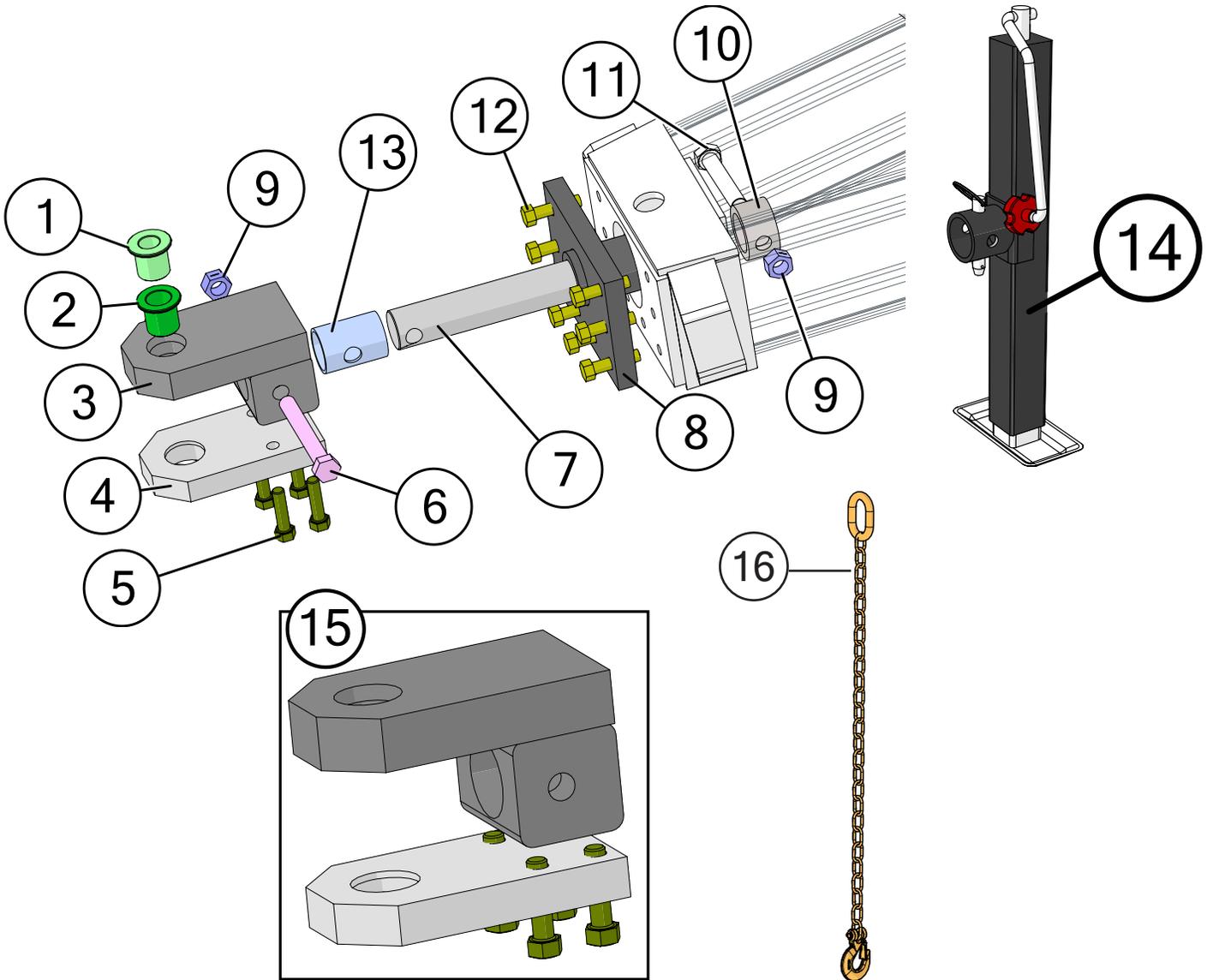
| Description   | Part No.  |
|---|-----------|
| 1 Superior Gearbox Seal 1-3/8" (CR13569) (513569)                     | JM0025086 |
| 2 Output Shaft for Superior Gearbox, 8-3/8" Long (14-16") (H00111-02) | JM0025079 |
| 3 Bearing Cup for Superior Gearbox (14-20") (414276)                  | JM0025077 |
| 4 Bearing Cone for Superior Gearbox (14-20") (514137)                 | JM0025078 |
| 5 29 Tooth Gear for Superior Gearbox (14-16") (H51S29)                | JM0025083 |
| 6 End Cap for Superior Gearbox (14-20") (400301)                      | JM0025076 |
| 7 Plain Plug for Superior Gearbox (200300)                            | JM0025075 |
| 8 Vented Plug for Superior Gearbox (2003PR)                           | JM0025081 |
| 9 Bushing (1/2" x 1/4" reducer) for Superior Gearbox (4003VB)         | JM0025073 |
| 10 2-1/4" Bolt for Superior Gearbox (438225)                          | JM0025085 |
| 11 Superior Gearbox Casting Mod Complete, 2 Pieces (H00001-1)         | JM0025074 |
| 12 Solid Plug for Superior Gearbox (14-20") (400300)                  | JM0025080 |
| 13 18 Tooth Gear for Superior Gearbox (14-16") (H51S18)               | JM0025071 |
| 14 Input Shaft for Superior Gearbox, 7-7/8" Long (14-16") (H00111-01) | JM0025082 |
| 15 130 Degree Gearbox Complete (Superior) (14-16") (H51AES)           | JM0018766 |

# Driveline Assembly



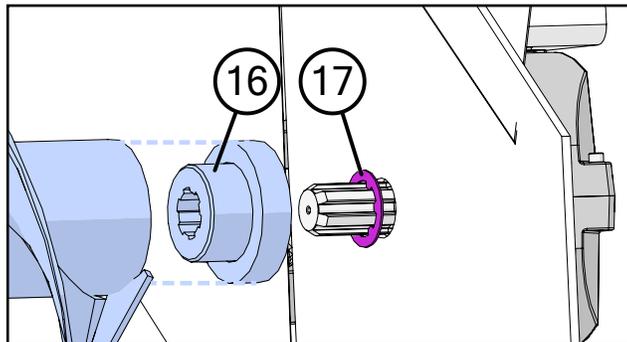
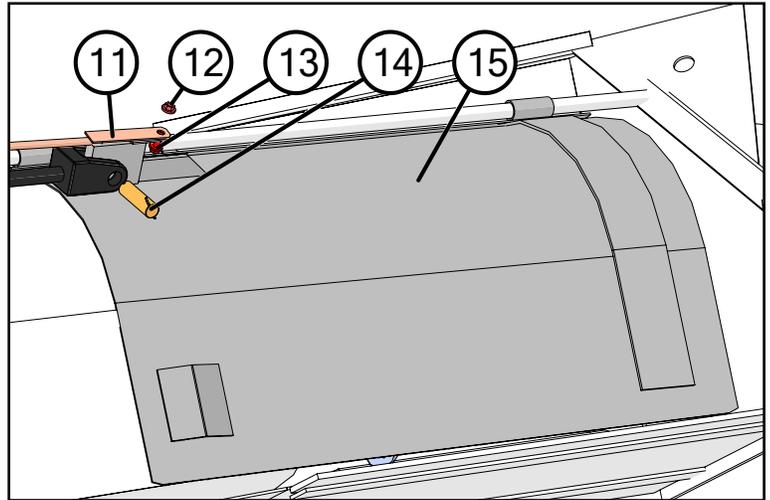
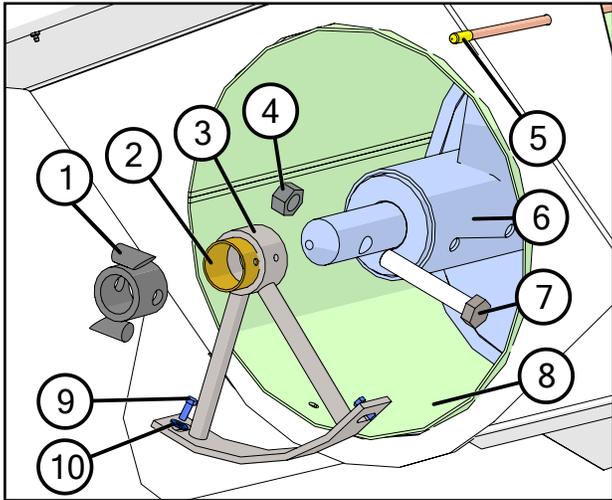
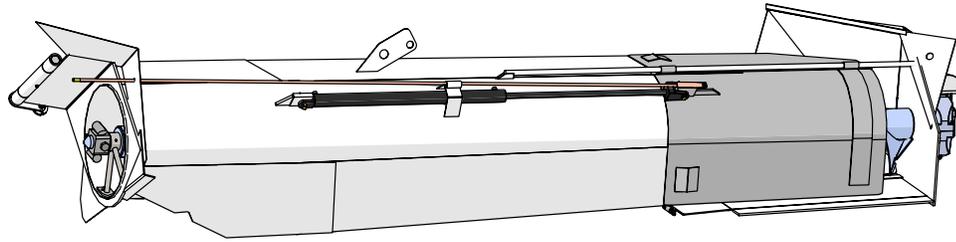
| Description  | Part No.  |
|--|-----------|
| 1 Guard for PTO-Drive Shaft (Step Shield) (GPDS-114) | JM0013388 |
| 2 Driveline Shield (34") (GDS-114-F)                 | JM0012692 |
| 3 Drive Shaft 88" x 1-1/4" (DS-114-F)                | JM0024460 |
| 4 1-1/2" x 33" PVC                                   | JM0039465 |
| 5 1-1/2" x 37" PVC                                   | JM0039464 |
| 6 14R U-Joint Assembly (525, 620) (M-6635-A)         | JM0024318 |
| 7 5/16" x 1-1/4" Half Moon Key (516114)              | JM0024326 |
| 8 1-1/4" Flange Bearing, 4 Hole (GRAF-206)           | JM0018560 |
| 9 5/8"-11 x 1-3/4" Gr5 Z Hex Bolt                    | JM0016681 |
| 10 5/8"-11 Gr2 Z Centerlock Hex Nut                  | JM0002146 |
| 11 3/8"-16 x 1" Gr5 Z SF Hex Bolt                    | JM0002092 |
| 12 3/8"-16 Gr5 Z SF Hex Nut                          | JM0002152 |
| 13 1/2" Gr2 Z Lock Washer                            | JM0019021 |
| 14 1/2"-13 x 1-1/2" Gr5 Z Hex Bolt                   | JM0002100 |
| 15 3/8"-16 x 1/2" Hex Head Set Screw                 | JM0019044 |
| 16 14R Cross Kit Weasler (PTO or U-Joint) (03-10134) | JM0024310 |
| 17 5/8"-11 x 3" Gr5 Z Hex Bolt                       | JM0002105 |
| 18 U-Joint Shield                                    | JM0012698 |

# Hitch and Jack Assembly



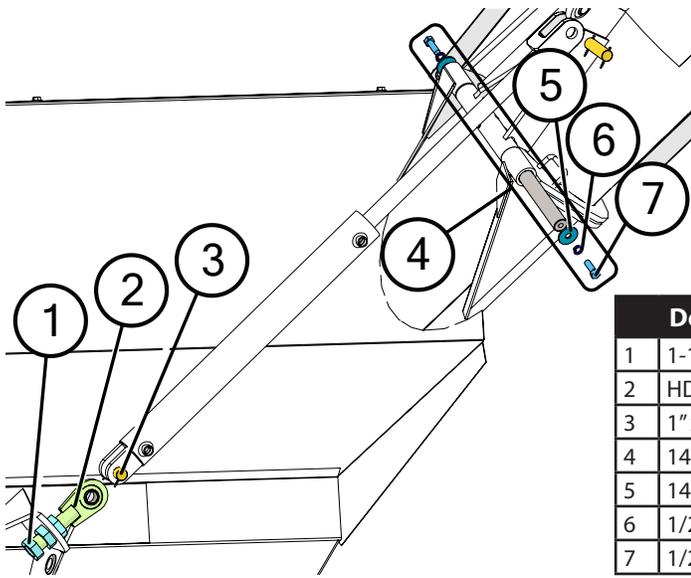
| Description  | Part No.  |
|--|-----------|
| 1 1-1/4" Pin Adapter for Hitch (1 Adapter)                   | JM0019032 |
| 2 1-1/2" Pin Adapter for Hitch (1 Adapter)                   | JM0014203 |
| 3 Bolt On Spade Hitch with 2-1/4" Hourglass Pin Hole         | JM0017978 |
| 4 Tang with 4 Bolts (2-1/4" Hourglass Pin Hole)              | JM0017976 |
| 5 3/4"-16 x 3" Gr8 YZ Fine Thread Hex Bolt                   | JM0002107 |
| 6 1"-8 x 7-1/2" Gr8 YZ Hex Bolt                              | JM0017944 |
| 7 2-1/2" x 13-1/4" Pin and Collar (212PC)                    | JM0018259 |
| 8 2-1/2" Hitch Spool Plate (HSPS-1)                          | JM0018195 |
| 9 1"-8 Gr2 Z Centerlock Hex Nut                              | JM0002149 |
| 10 2-1/2" Hitch Spindle Collar                               | JM0018219 |
| 11 1"-8 x 4-1/2" Gr5 Z Hex Bolt                              | JM0016687 |
| 12 3/4"-16 x 3" Gr8 Z Hex Bolt                               | JM0018542 |
| 13 Hitch Block Reducer (Sleeve) (2-7/8" to 2-1/2")           | JM0018258 |
| 14 5,000 lb Max Lift Capacity Jack (TWL-178T)                | JM0001480 |
| 15 Clevis Bolt-On Hitch Assembly (2-1/4" Hourglass Pin Hole) | JM0018191 |
| 16 20k Lb Safety Chain (69")                                 | JM0078226 |

# Lower Auger Assembly



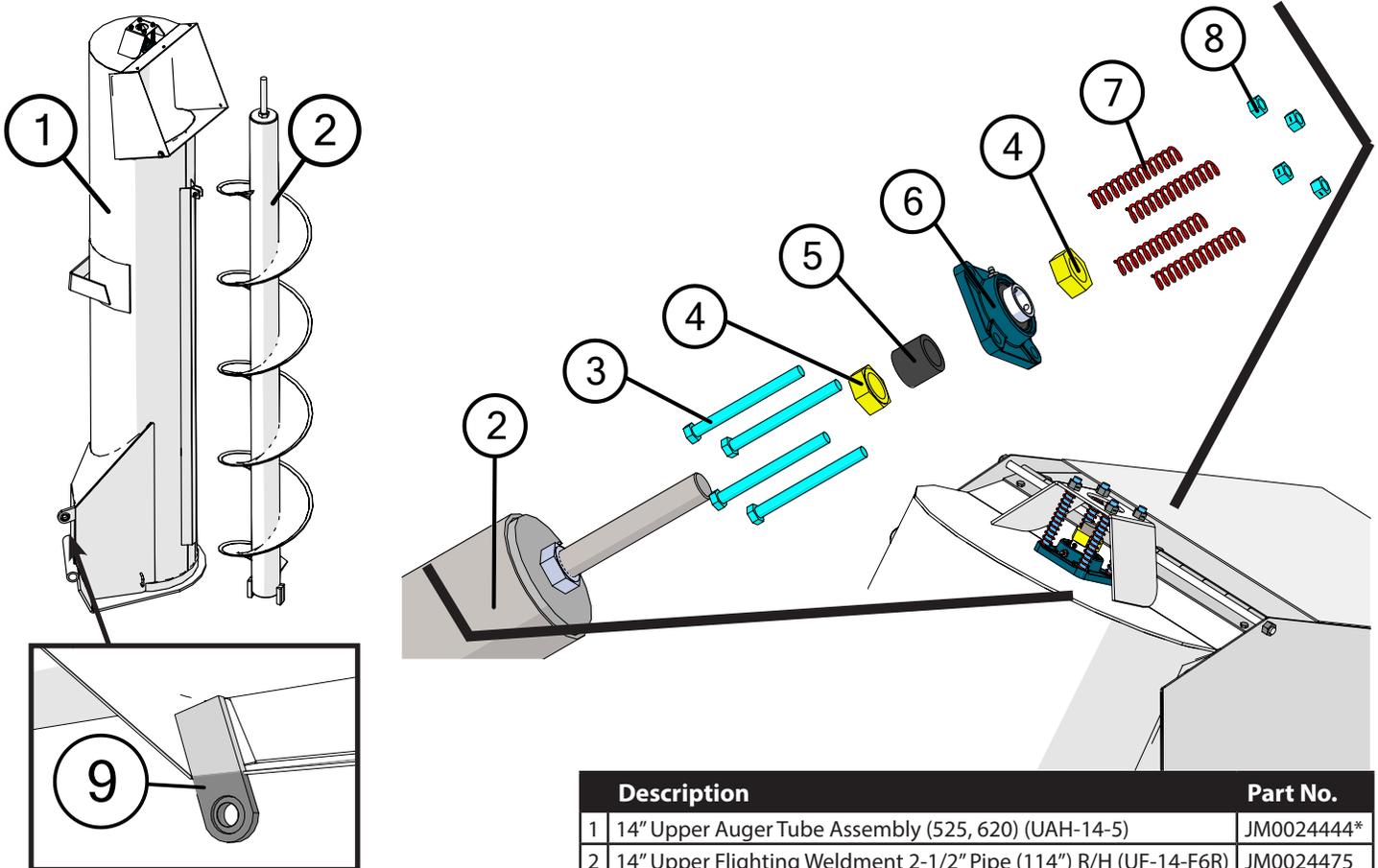
|    | Description  | Part No.  |
|----|--|-----------|
| 1  | Drive Dog Weldment, 1-3/4" ID (16") (DDW-214)                        | JM0024412 |
| 2  | 1-3/4" ID Bronze Bushing (2" OD x 1" Length) (EB-134)                | JM0002244 |
| 3  | Hanger Bushing Assembly (14") (HBA-500-F)                            | JM0024421 |
| 4  | 5/8"-11 Gr2 Z Nylon Locking Hex Nut                                  | JM0008428 |
| 5  | S-Cap Yellow - 1/2" ID x 1-1/4" x 0.065" (REC-1)                     | JM0016842 |
| 6  | 14" Bottom Auger Flighting Weldment LF-14-F5R 119-5/8" (Right Hand)  | JM0024474 |
| 7  | 5/8"-11 x 4-1/2" Gr8 YZ Hex Bolt                                     | JM0075570 |
| 8  | Lower Auger Liner for 14" Diameter Auger Cart (LAL-14)               | JM0026478 |
| 9  | 3/8"-16 x 1" Gr8 YZ Hex Bolt   | JM0001485 |
| 10 | 3/8" USS Flat Washer   | JM0003061 |
| 11 | Gate Indicator (1/2" Rod with Arrow) (525,620) (GI-12)               | JM0026486 |
| 12 | 3/8"-16 Gr5 Z SF Hex Nut   | JM0002152 |
| 13 | 3/8"-16 x 1" Gr5 Z SF Hex Bolt                                       | JM0002092 |
| 14 | 1" x 3" Clevis Pin with Cotter Pins                                  | JM0019407 |
| 15 | Auger Gate Cover for 14" Diameter Auger (AGC-500-F)                  | JM0017602 |
| 16 | Spline Coupler 2-7/16" x 2-3/8" OD x 1-3/8" ID (14" & 16" Flighting) | JM0057888 |
| 17 | Gearbox Washer 14" and 16" Augers                                    | JM0031879 |

## Top Auger Linkage



|   | Description   | Part No.  |
|---|---|-----------|
| 1 | 1-1/4"-12 PN Gr2 Hex Jam Nut                                  | JM0001606 |
| 2 | HD Adjustable Pac Man Weldment                                | JM0021417 |
| 3 | 1" x 3" Clevis Pin with Cotter Pins                           | JM0019407 |
| 4 | 14" Top Auger Hinge Pin Assembly (1-1/4" x 14-3/4") (114-PIH) | JM0026501 |
| 5 | 14" Auger Hinge Pin Washer (1.75" OD, .525" ID)               | JM0024885 |
| 6 | 1/2" Gr2 Z Lock Washer  | JM0019021 |
| 7 | 1/2"-13 x 1-1/4" Gr5 Z Hex Bolt                               | JM0001513 |

## Top Auger Assembly

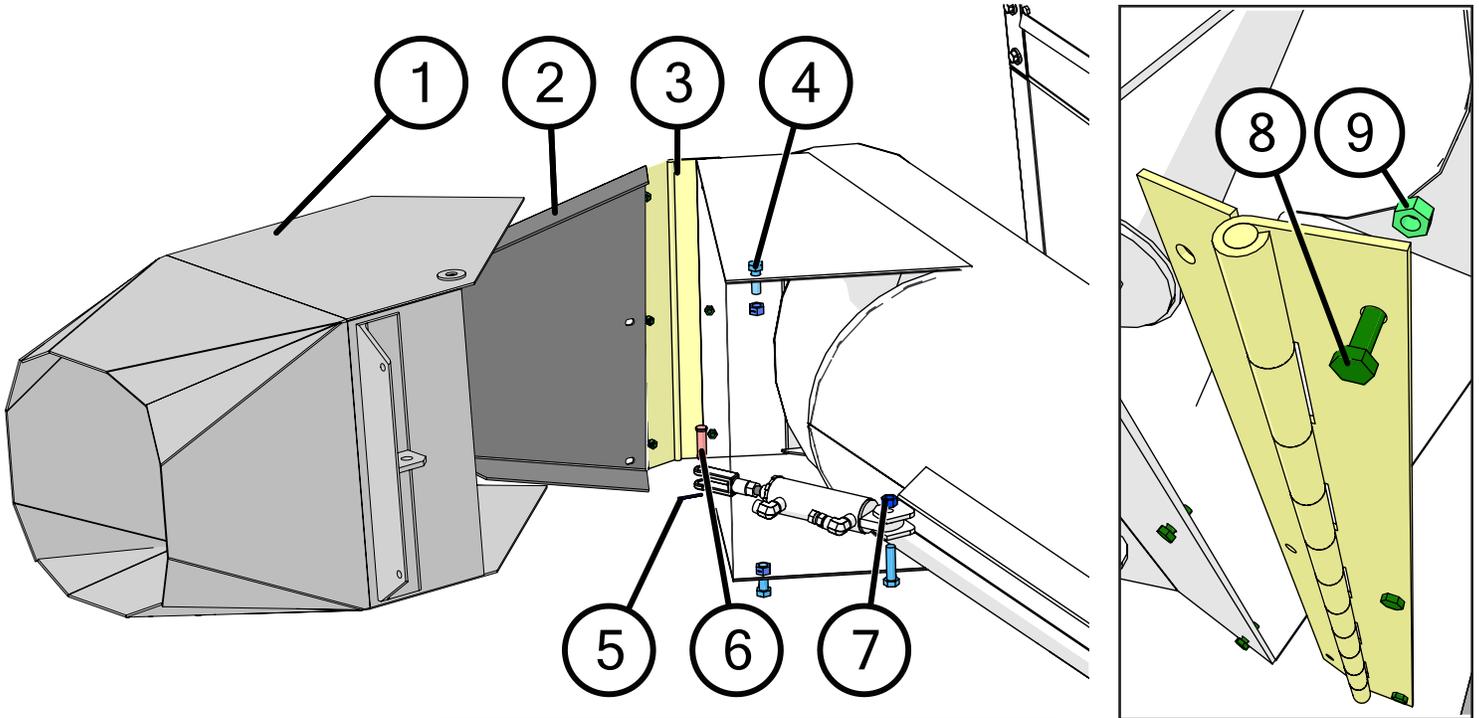


|   | Description  | Part No.   |
|---|--|------------|
| 1 | 14" Upper Auger Tube Assembly (525, 620) (UAH-14-5)          | JM0024444* |
| 2 | 14" Upper Flying Weldment 2-1/2" Pipe (114") R/H (UF-14-F6R) | JM0024475  |
| 3 | 1/2"-13 x 5-1/2" Gr5 Z Hex Bolt                              | JM0001498  |
| 4 | 1-1/4"-12 PN Gr2 Hex Jam Nut                                 | JM0001606  |
| 5 | Top Auger Collar 1-1/2" Long (1-3/4" OD)                     | JM0016920  |
| 6 | 1-1/4" Flange Bearing, 4 Hole (GRAF-206)                     | JM0018560  |
| 7 | 4-1/2" Compression Spring (CMSUAA-4)                         | JM0018559  |
| 8 | 1/2"-13 Gr2 Z Centerlock Hex Nut                             | JM0001511  |
| 9 | Top Tube Ball Joint Weldment                                 | JM0078232  |

\*-R = Red  
 \*-B = Blue  
 \*-G = Green  
 \*-Y = Yellow  
 \*-BLK = Black

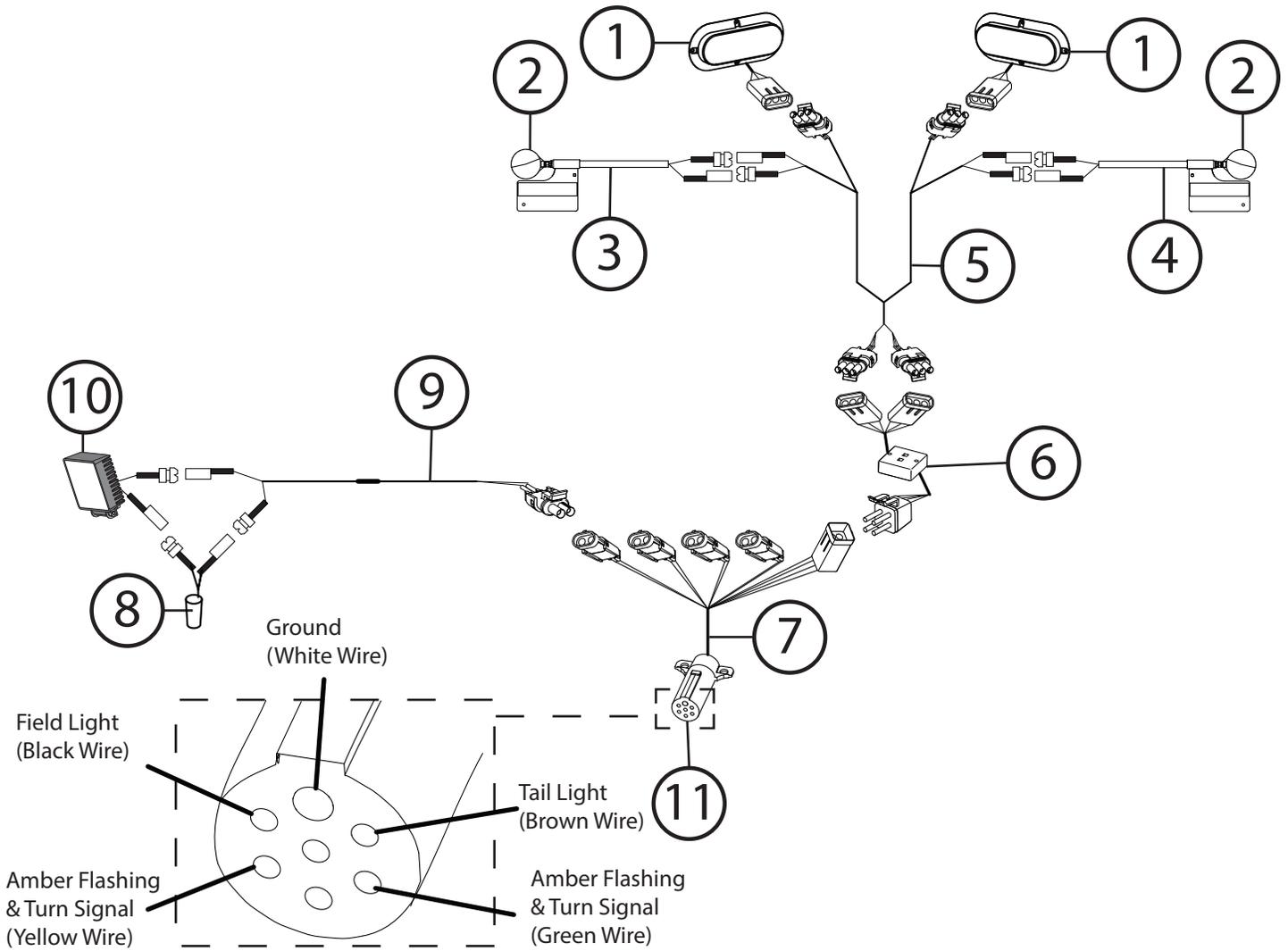
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# Flow Control Spout



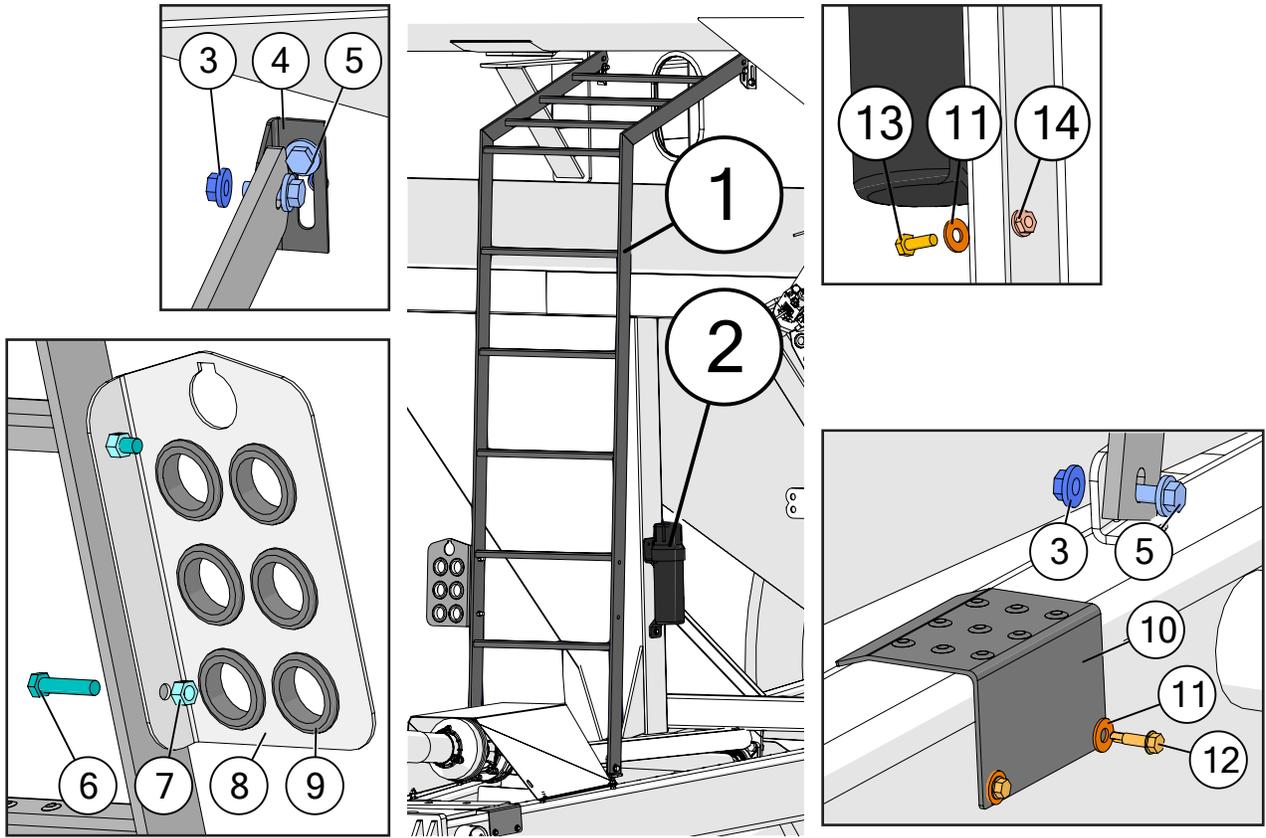
|   | Description                                    | Part No.  |
|---|--|-----------|
| 1 | 14" Flow Control Spout Housing (FSH-14)        | JM0024441 |
| 2 | 14" Baffle Plate (BP-14)                       | JM0012702 |
| 3 | 14" Hinge Plate (HP-14)                        | JM0024445 |
| 4 | 1/2"-13 x 2" Gr5 Z Hex Bolt                    | JM0001593 |
| 5 | 5/32" x 1-1/2" Cotter Pin                      | JM0014348 |
| 6 | 1/2" x 1-3/4" Clevis Pin, Usable Length 1-1/2" | JM0018264 |
| 7 | 1/2"-13 Gr2 Z Centerlock Hex Nut               | JM0001511 |
| 8 | 1/4"-20 x 3/4" Gr5 Z Hex Bolt                  | JM0001507 |
| 9 | 1/4"-20 Gr2 Z Centerlock Hex Nut               | JM0001505 |

# Lights and Wiring



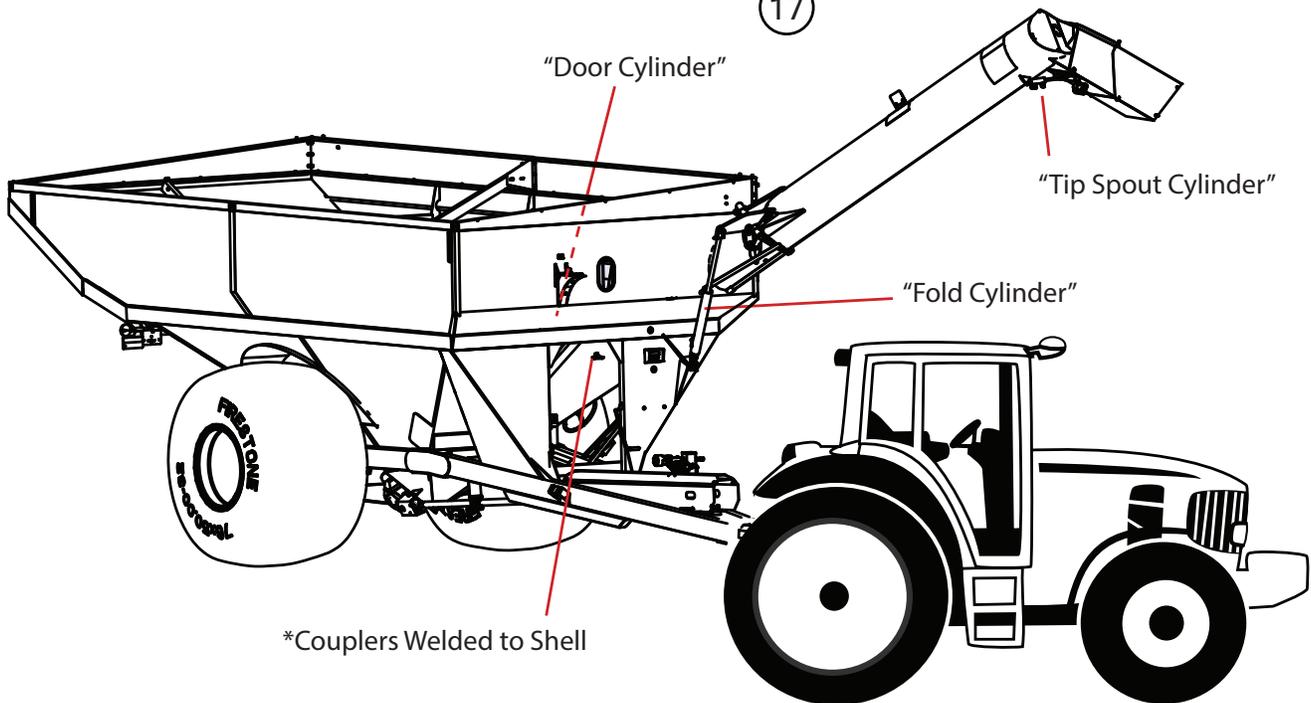
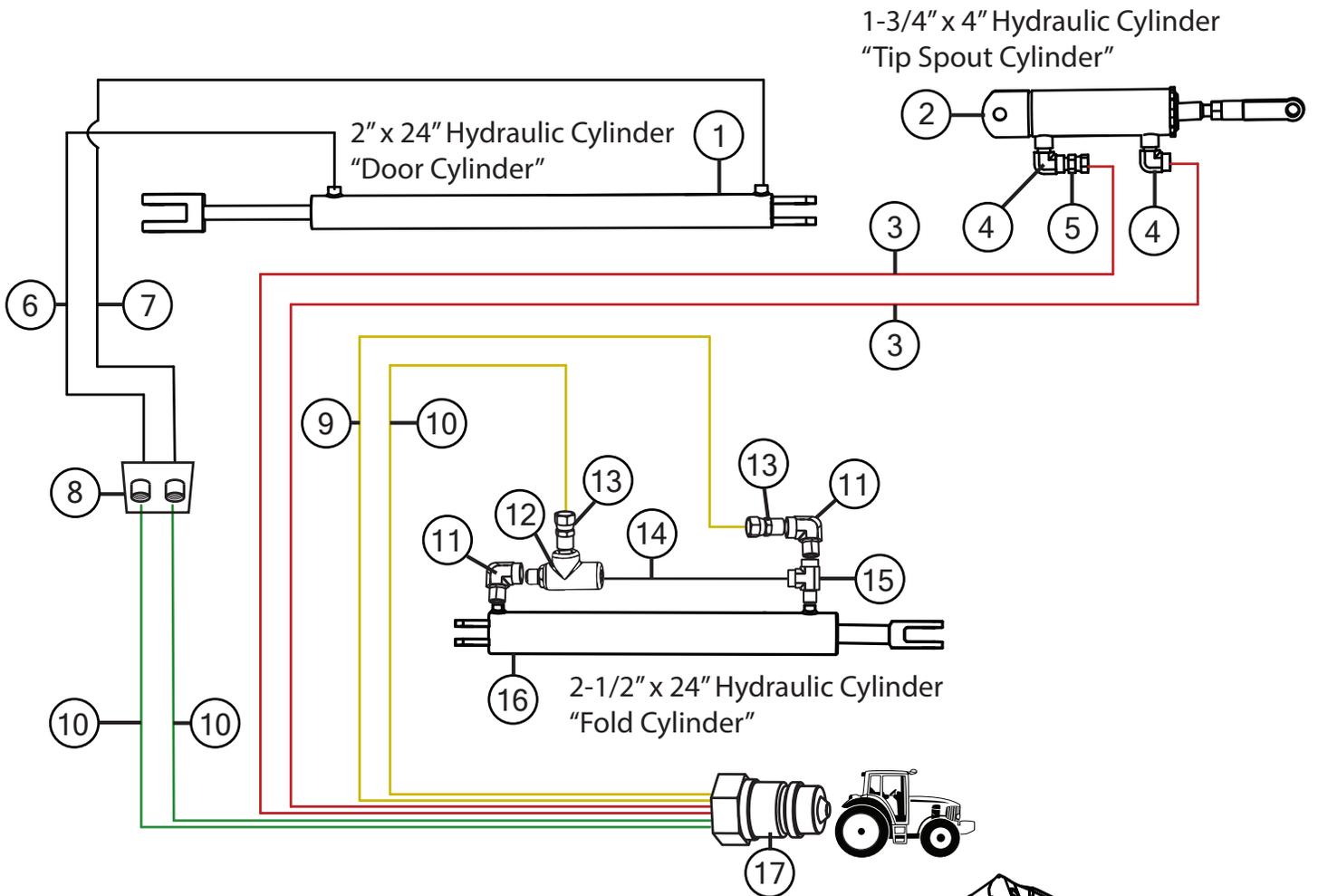
| Description  | Part No.  |
|--|-----------|
| 1 Red Oval LED Tail Light                                | JM0034389 |
| 2 LED Amber Light (Circular)                             | JM0018819 |
| 3 Extendable Amber Light Assembly (Left Side)            | JM0018817 |
| 4 Extendable Amber Light Assembly (Right Side)           | JM0018826 |
| 5 Wiring Harness, Rear Half of Grain Cart                | JM0020437 |
| 6 Light Enhancer and Adapter Kit (3 Wires)               | JM0010566 |
| 7 Main Harness with 7-Prong Connector End for Grain Cart | JM0020439 |
| 8 Mercury Switch (MS-1)                                  | JM0017896 |
| 9 Field Light Wire Harness (Mercury)                     | JM0020438 |
| 10 LED Field Light with Bullet Connector                 | JM0050949 |
| 11 7-Prong Connector                                     | JM0010528 |

# Ladder Assembly



|    | Description  | Part No.  |
|----|--|-----------|
| 1  | Ladder with 3 Rung Platform (525-875)                | JM0000262 |
| 2  | Operator's Manual Canister                           | JM0010115 |
| 3  | 3/8"-16 Gr5 Z SF Hex Nut                             | JM0002152 |
| 4  | Universal Ladder Bracket                             | JM0016922 |
| 5  | 3/8"-16 x 1" Gr5 Z SF Hex Bolt                       | JM0002092 |
| 6  | 3/8"-16 x 1-3/4" Gr5 Z Hex Bolt                      | JM0002097 |
| 7  | 3/8"-16 Gr2 Z Centerlock Hex Nut                     | JM0001512 |
| 8  | Hose Holder Bracket for Standard Grain Cart (HHB-1C) | JM0012711 |
| 9  | Rubber Grommet (1-1/2" ID, 2-1/8" OD, 3/16" Gap)     | JM0016924 |
| 10 | Small Step on Grain Cart Frame                       | JM0028444 |
| 11 | 1/4" ID, 3/4" OD Z Flat Washer                       | JM0003090 |
| 12 | 1/4" x 1" Self Tapping Screw                         | JM0001716 |
| 13 | 1/4"-20 x 3/4" Gr5 Z Hex Bolt                        | JM0001507 |
| 14 | 1/4"-20 Gr5 Z SF Hex Nut                             | JM0001630 |

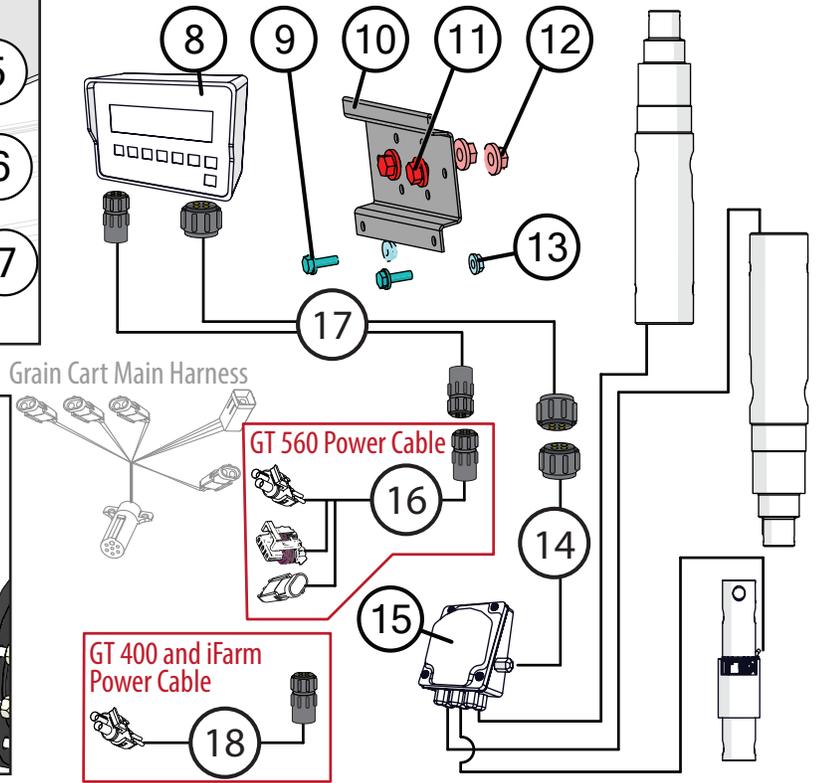
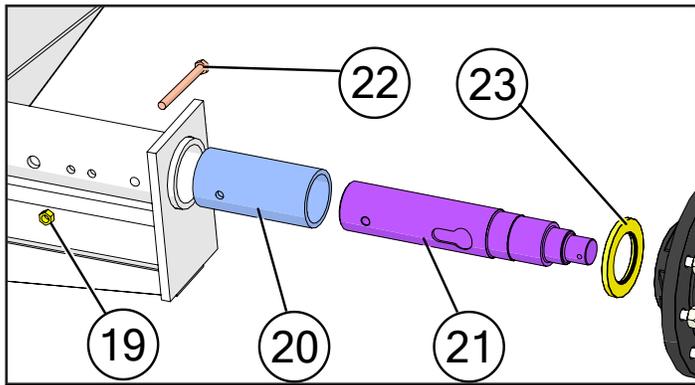
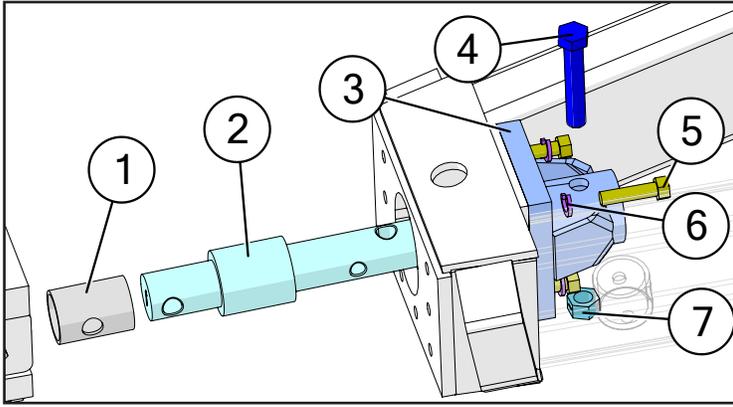
# Hydraulic Hoses & Cylinders



# Hydraulic Hoses & Cylinders

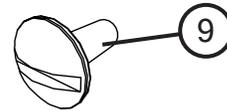
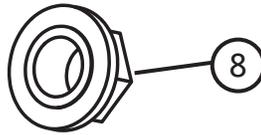
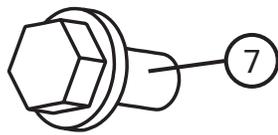
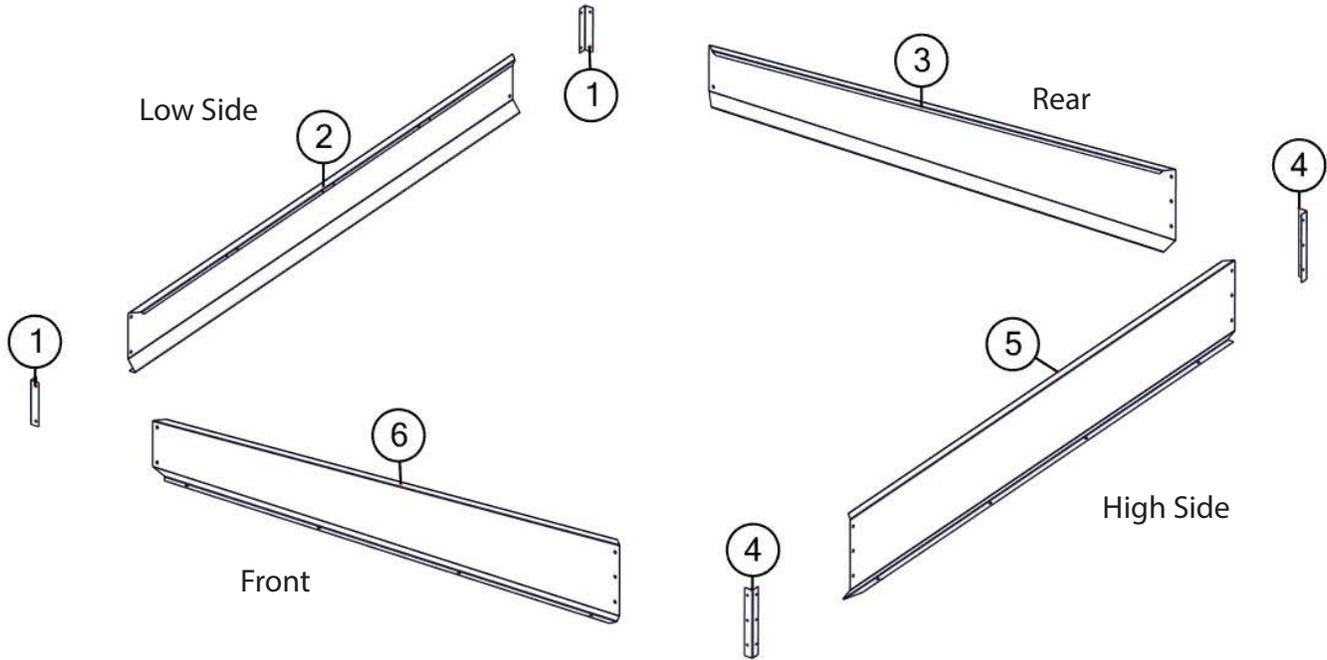
|    | Description   | Part No.  |
|----|---|-----------|
| 1  | 2" x 24" Hydraulic Cylinder (JD20024)                                 | JM0018210 |
| 1  | Seal Kit for 2" x 24" Hydraulic Cylinder (JD244)                      | JM0024894 |
| 2  | 1-3/4" x 4" Hydraulic Cylinder (1/2" Clevis and Tab Ends) (HC-FCS)    | JM0018564 |
| 2  | Seal Kit for 1-3/4" x 4" Cylinder (SKHC-FCS) (JD459)                  | JM0024892 |
| 3  | 1/4" x 336" Hydraulic Hose 336 inch 4M3k-4G-8MP-4G-4MP                | JM0053208 |
| 4  | 1/4" Male NPT x 1/4" Female NPT; 90 Degree Elbow                      | JM0020115 |
| 5  | 1/4" Male NPT-Swivel with .032 Orifice (Restrictor)                   | JM0020113 |
| 6  | 1/4" x 43" Hydraulic Hose 43 inch 4M3k-4G-6MPX-4G-6MP                 | JM0024904 |
| 7  | 1/4" x 29" Hydraulic Hose 29 inch 4M3k-4G-6MPX-4G-6MP                 | JM0030609 |
| 8  | 3/8" Standard Coupling  | JM0019562 |
| 9  | 1/4" x 176" Hydraulic Hose 176inch4M3k-4G-8MP-4G-6MP                  | JM0048443 |
| 10 | 1/4" x 160" Hydraulic Hose 160inch4M3k-4G-8MP-4G-6MP                  | JM0047092 |
| 11 | 3/8" Male NPT x 3/8" Female NPT; 90 Degree Elbow                      | JM0030059 |
| 12 | PC-37 Check Valve   | JM0018233 |
| 13 | 3/8" Male NPT x 3/8" Female NPT Swivel with .062 Orifice (Restrictor) | JM0018362 |
| 14 | 1/4" x 21" Hydraulic Hose 21 inch 4M3k-4G-4MP-4G-6MPX                 | JM0024896 |
| 15 | 3/8" Male NPT x 3/8" Female NPT x 3/8" Female NPT; Street T           | JM0018266 |
| 16 | 2-1/2" x 24" Welded Hydraulic Cylinder (JD21224)                      | JM0021280 |
| 16 | Seal Kit for 2-1/2" x 24" Hydraulic Cylinder (JD469)                  | JM0024891 |
| 17 | 1/2" Female NPT x Male Pioneer - High Flow, Cone Style                | JM0018254 |

# 3-Point Scale System



|    | Description   | Part No.  |
|----|---|-----------|
| 1  | Hitch Block Reducer (Sleeve) (2-7/8" to 2-1/2")                 | JM0018258 |
| 2  | 2-1/2" Hitch Weigh Bar (Digi-Star) (3/4" & 1" Holes) (250WB)    | JM0024207 |
| 3  | 2-1/2" Hitch Weigh Bar Weldment Receiver (WBW-1)                | JM0024208 |
| 4  | 1"-8 x 5-1/2" Gr5 Z Hex Bolt                                    | JM0002110 |
| 5  | 3/4"-16 x 3" Gr8 Z Hex Bolt                                     | JM0018542 |
| 6  | 3/4" Z Lock Washer  | JM0018544 |
| 7  | 1"-8 Gr2 Z Centerlock Hex Nut                                   | JM0002149 |
| 8  | GT 400 Digi-Star Scale Display Monitor                          | JM0019040 |
| 8  | GT 560 Digi-Star Scale Display Monitor                          | JM0044177 |
| 9  | 1/4"-20 x 3/4" Gr5 Z Hex Bolt                                   | JM0001507 |
| 10 | GT 400 Scale Monitor Display Bracket                            | JM0000361 |
| 10 | GT 560 Scale Monitor Display Bracket                            | JM0046976 |
| 11 | 3/8"-16 x 1" Gr5 Z SF Hex Bolt                                  | JM0002092 |
| 12 | 3/8"-16 Gr5 Z SF Hex Nut  | JM0002152 |
| 13 | 1/4"-20 Gr5 Z SF Hex Nut  | JM0001630 |
| 14 | 8' Cable from J-Box to Indicator (Digi-Star)                    | JM0047238 |
| 15 | Digi-Star 4-Point Junction Box (JB-1)                           | JM0019649 |
| 16 | Power Cable for GT560 Indicator (PC-GT560)                      | JM0078634 |
| 17 | 30' Extension Cable Kit (Load Cell and Power) (ECI-3)           | JM0041218 |
| 18 | iFarm and GT400 Standard Power Cable 18" (74132)                | JM0041060 |
| 19 | 5/8"-11 Gr2 Z Centerlock Hex Nut                                | JM0002146 |
| 20 | 3-3/4" ID x 4-1/2" OD x 9-3/8" Adapter Pipe Tubing (ATP-375-GS) | JM0021453 |
| 21 | 3-3/4" Digi-Star Weigh Spindle (375WS)                          | JM0021451 |
| 22 | 5/8"-11 x 7" Socket Head Cap Screw                              | JM0050413 |
| 23 | Seal (3-3/4" ID, 6" OD) for Hub with Scales (37605SA)           | JM0021456 |

# Sideboards

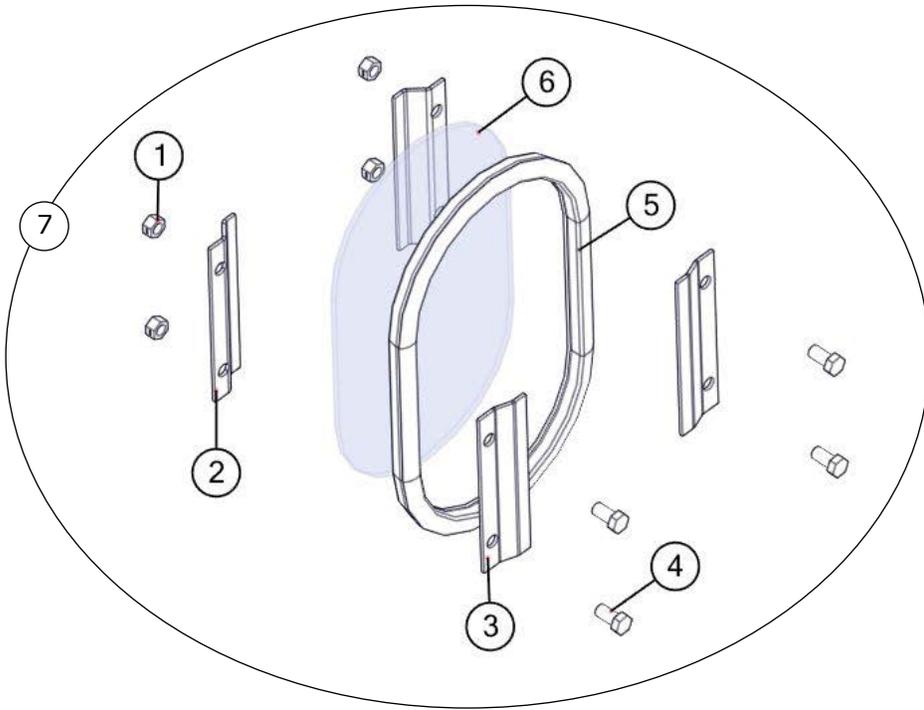


|    | Description  | Part No.   |
|----|--|------------|
| 1  | Low Sideboard Corner 10-1/2" (525) (TTE-525LC)       | JM0012707  |
| 2  | Low Sideboard (525) (TTE-525LS)                      | JM0012673* |
| 3  | Back Endboard (525) (TTE-525TR)                      | JM0012675* |
| 4  | High Corner 16-1/4" (525) (TTE-525HC)                | JM0012708  |
| 5  | High Sideboard (525) (TTE-525HS)                     | JM0012672* |
| 6  | Front Endboard (525) (TTE-525TF)                     | JM0012674* |
| 7  | 3/8"-16 x 1" Gr5 Z SF Hex Bolt                       | JM0002092  |
| 8  | 3/8"-16 Gr5 Z SF Hex Nut                             | JM0002152  |
| 9  | 3/8"-16 x 1" Gr5 Z Pan Head Bolt                     | JM0002892  |
| 10 | 525 Sideboards Complete Set, with Hardware (TTE-525) | JM0028046  |

- \*-R = Red
- \*-B = Blue
- \*-G = Green
- \*-Y = Yellow
- \*-BLK = Black

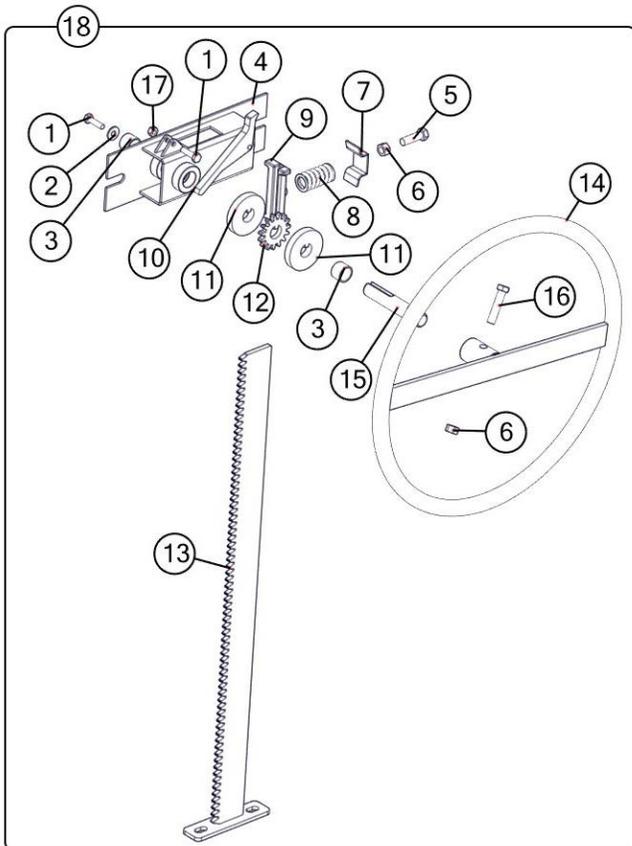
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# Inspection Windows



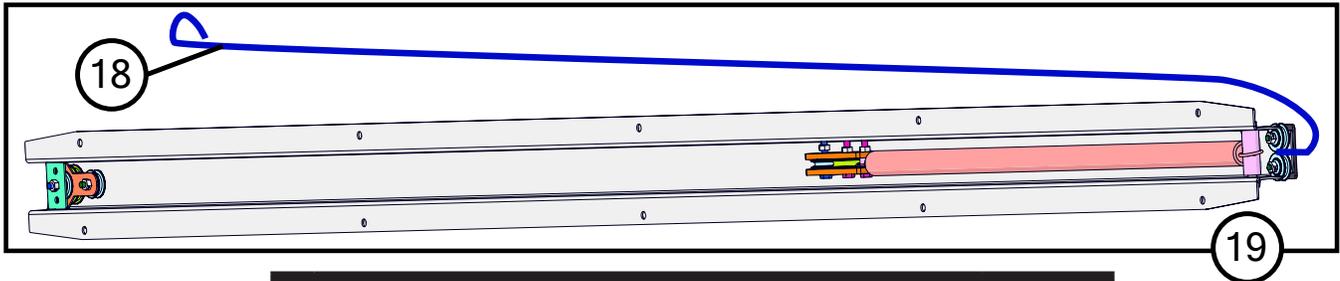
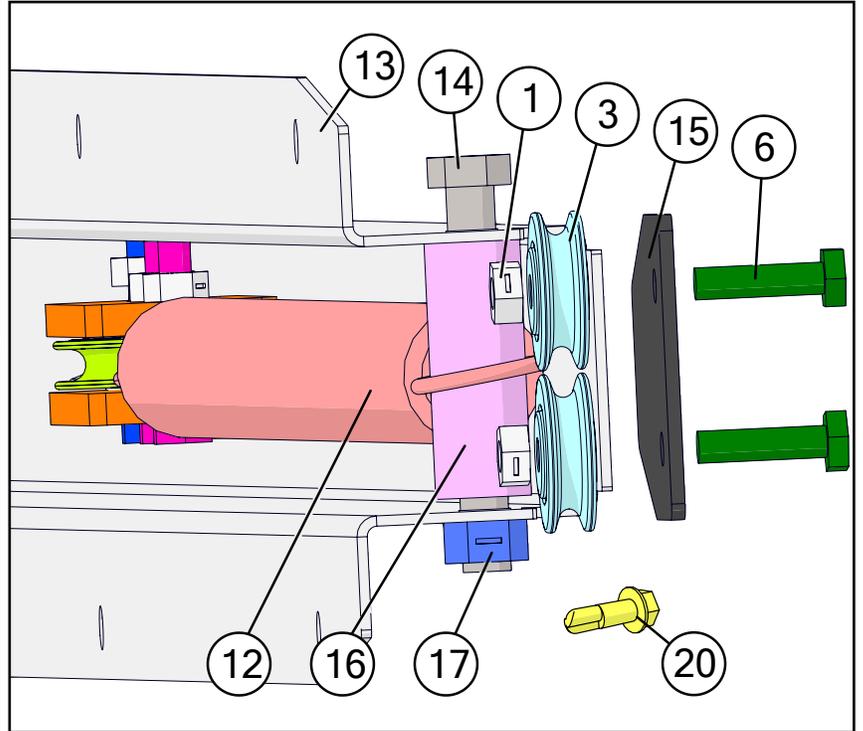
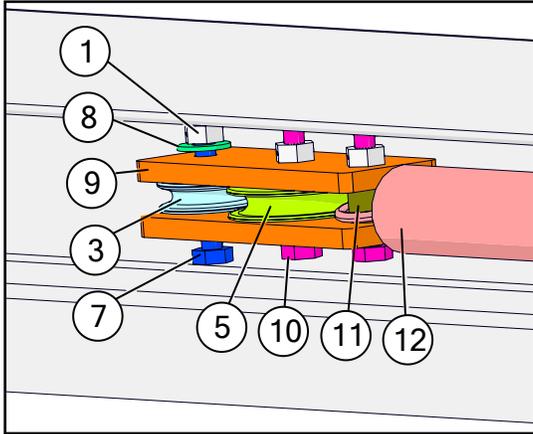
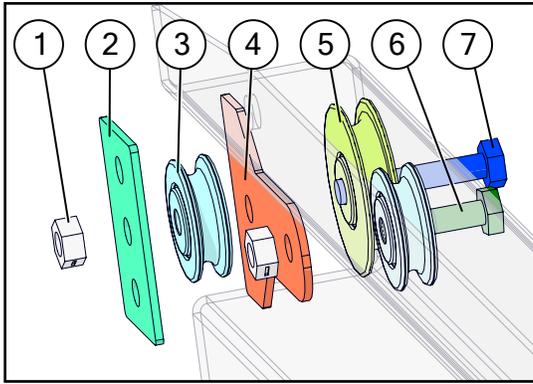
|   | Description                      | Part No.  |
|---|----------------------------------|-----------|
| 1 | 3/8"-16 Gr2 Z Centerlock Hex Nut | JM0001512 |
| 2 | Inside Window Clip - Deep        | JM0000253 |
| 3 | Outside Window Clip - Shallow    | JM0000256 |
| 4 | 3/8"-16 x 3/4" Gr5 Z Hex Bolt    | JM0001663 |
| 5 | Window Seal 3/4" S' Strip        | JM0000254 |
| 6 | Standard Inspection Window       | JM0000255 |
| 7 | Inspection Window Kit            | JM0025752 |

# Door Wheel Assembly



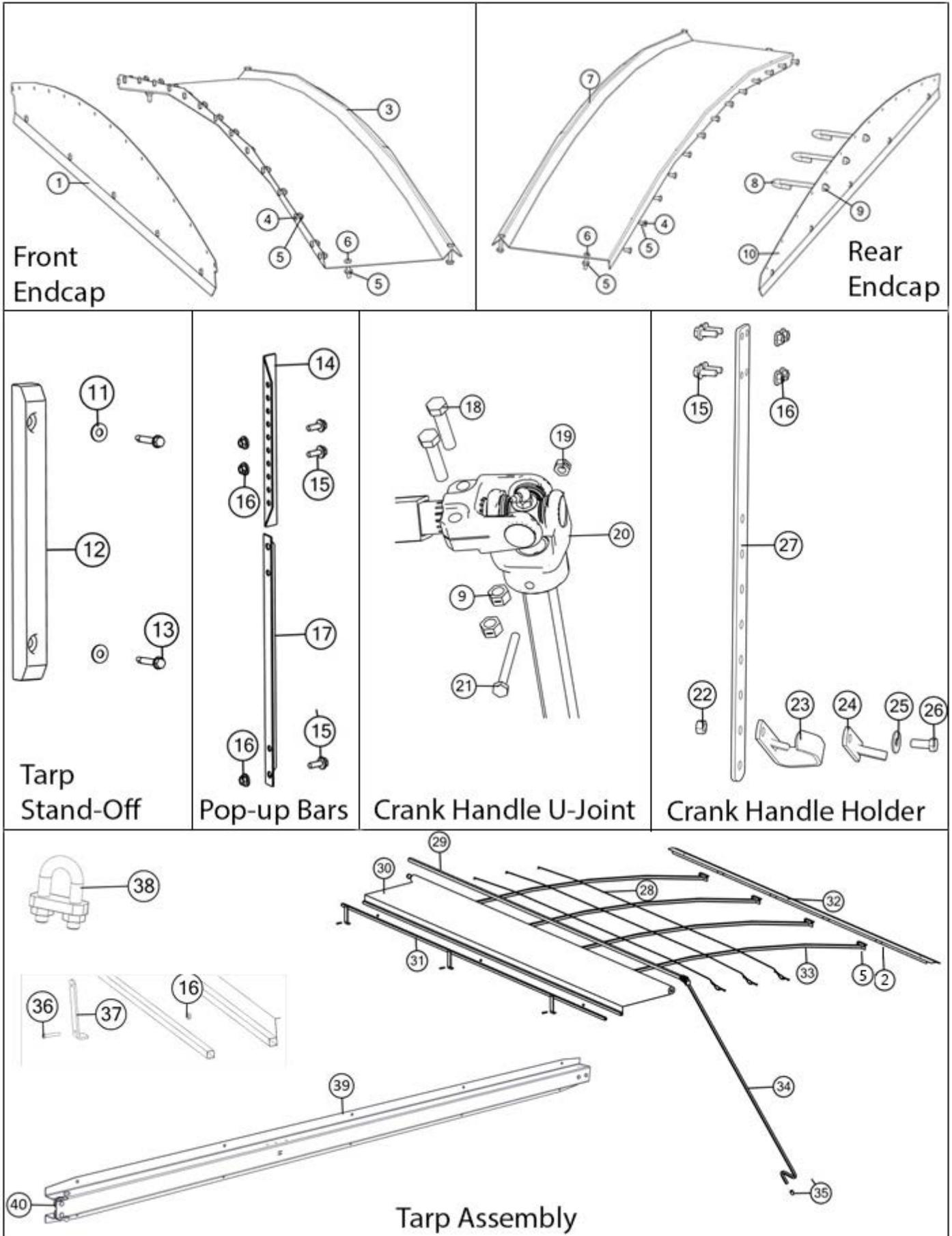
|    | Description   | Part No.  |
|----|---|-----------|
| 1  | 1/4"-20 x 1" Gr5 Z Hex Bolt                                       | JM0002095 |
| 2  | 1/4" ID, 3/4" OD Z Flat Washer                                    | JM0003090 |
| 3  | 3/4" ID x 7/8" OD x 5/8" LG Bronze Bushing (BB-34)                | JM0009455 |
| 4  | Nylon Guided Rack Housing Weldment (2015 & Newer)                 | JM0030635 |
| 5  | 3/8"-16 x 1-1/4" Gr5 Z Hex Bolt                                   | JM0016675 |
| 6  | 3/8"-16 Gr5 Z Hex Nut   | JM0001707 |
| 7  | Scrubber Spring Plate (ST Manual Door) (Door Wheel)               | JM0002851 |
| 8  | Compression Spring (1" x 1-3/4") for Door Assembly & Tongue Latch | JM0001688 |
| 9  | Nylon Track Guide For Door Wheel (2015 & Newer)                   | JM0029354 |
| 10 | Flip Lock For Door Rack (2015 & Newer)                            | JM0029459 |
| 11 | Keyway Washer for Door Rack (2015 & Newer)                        | JM0029454 |
| 12 | 15 Tooth Sprocket - 3/4" Bore w/ Key (2015 & Newer)               | JM0029455 |
| 13 | Rack Track Weldment for Door (20-1/4") 2015 & Newer               | JM0030651 |
| 14 | Rack Wheel Weldment (2015 & Newer)                                | JM0028897 |
| 15 | Stub Shaft 3/4" x 4-1/8" w/ Threaded End (2015 & Newer)           | JM0029440 |
| 16 | 3/8"-16 x 1-3/4" Gr5 Z Hex Bolt                                   | JM0002097 |
| 17 | 1/4"-20 Gr2 Z Centerlock Hex Nut                                  | JM0001505 |
| 18 | Complete Door Wheel Assembly (20-1/4") 2015 & Newer               | JM0030652 |

# Spring Return Assembly



|    | Description  | Part No.  |
|----|--|-----------|
| 1  | 1/4"-20 Gr2 Z Centerlock Hex Nut                                 | JM0001505 |
| 2  | Aluminum Spacer for Spring Return (1-3/8" x 2-3/16") Rectangular | JM0002445 |
| 3  | 1-1/4" Idler Pulley (1/4" ID)                                    | JM0002439 |
| 4  | Large Spring Return Pulley Spacer (2 Holes)                      | JM0018897 |
| 5  | 1-5/8" Idler Pulley (Long Spring Return)                         | JM0012970 |
| 6  | 1/4"-20 x 1" Gr5 Z Hex Bolt                                      | JM0002095 |
| 7  | 1/4"-20 x 1-1/2" Gr5 Z Hex Bolt                                  | JM0002447 |
| 8  | 1/4" ID, 3/4" OD Z Flat Washer                                   | JM0003090 |
| 9  | Rectangular Plastic Spacer for Spring Return                     | JM0012973 |
| 10 | 1/4"-20 x 1-1/4" Gr5 Z Hex Bolt                                  | JM0016673 |
| 11 | 2" Black Plastic Spacer (1/4" ID x 1/2" OD)                      | JM0002442 |
| 12 | Spring Return Spring   | JM0000207 |
| 13 | Spring Return Housing for Grain Cart Roll Tarp                   | JM0012974 |
| 14 | 3/8"-16 x 3" Gr5 Z Hex Bolt                                      | JM0001666 |
| 15 | Spring Return Stiffening Plate                                   | JM0034548 |
| 16 | 3/4" x 2" Plastic Spacer   | JM0002444 |
| 17 | 3/8"-16 Gr2 Z Centerlock Hex Nut                                 | JM0001512 |
| 18 | Spring Return Cable (Grain Carts)                                | JM0012981 |
| 19 | Spring Return Assembly Complete (Grain Cart)                     | JM0002911 |
| 20 | 1/4" x 3/4" Self Tapping Screw                                   | JM0001570 |

# Roll Tarp Assembly



# Roll Tarp Assembly

|    | Description   | Part No.  |
|----|---|-----------|
| 1  | Front End Cap Plate (525)   | JM0020232 |
| 2  | 1/4"-20 x 1" Gr5 Z Hex Bolt                                       | JM0002095 |
| 3  | Front Arched End Cap (525) (525FAEC)                              | JM0020230 |
| 4  | 1/4"-20 x 1/2" Gr5 Z Hex Bolt                                     | JM0001481 |
| 5  | 1/4"-20 Gr5 Z SF Hex Nut  | JM0001630 |
| 6  | 1/4"-20 x 1-1/4" Gr5 Z Hex Bolt                                   | JM0016673 |
| 7  | Rear Arched End Cap (525) (525RAEC)                               | JM0020231 |
| 8  | 3/8"-16 x 2-3/8" Thread Length x 5" Overall Length Gr5 Z J-Bolt   | JM0001519 |
| 9  | 3/8"-16 Gr2 Z Centerlock Hex Nut                                  | JM0001512 |
| 10 | Rear End Cap Plate (525)  | JM0020229 |
| 11 | 1/4" ID, 3/4" OD Z Flat Washer                                    | JM0003090 |
| 12 | Tarp Standoff   | JM0001889 |
| 13 | 1/4" x 1-1/2" Self Tapping Screw                                  | JM0001571 |
| 14 | End Cap Prop - Upper 19"  | JM0021404 |
| 15 | 3/8"-16 x 1" Gr5 Z SF Hex Bolt                                    | JM0002092 |
| 16 | 3/8"-16 Gr5 Z SF Hex Nut  | JM0002152 |
| 17 | Endcap Prop - Lower 19" (ABS-2)                                   | JM0000179 |
| 17 | Endcap Prop - Lower 27" (ABS-2L)                                  | JM0021403 |
| 18 | 3/8"-16 x 1-1/2" Gr5 Z Hex Bolt                                   | JM0001659 |
| 19 | 1/4"-20 Gr2 Z Centerlock Hex Nut                                  | JM0001505 |
| 20 | Universal Joint - Roll Tarp (SUJ-1)                               | JM0001517 |
| 21 | 1/4"-20 x 2-1/2" Gr5 Z Hex Bolt                                   | JM0001506 |
| 22 | 1/2"-13 Gr2 Z Centerlock Hex Nut                                  | JM0001511 |
| 23 | Crank Holder (Zinc Plated) (CH-1)                                 | JM0002967 |
| 24 | Roll Tarp - Handle Hanger Rubber Flap                             | JM0002551 |
| 25 | 1/2" ID, 1-3/8" OD Z Flat Washer                                  | JM0003082 |
| 26 | 1/2"-13 x 1-1/4" Gr5 Z Hex Bolt                                   | JM0001513 |
| 27 | 1/4" x 2" x 23" Bar for Crank Holder (875 Bushel Carts and Lower) | JM0029818 |
| 28 | 3/16" Cable x 150" Long (385, 525) (316C-150)                     | JM0024881 |
| 29 | 1-1/4" x 150" Roll Tube (525) (150RT)                             | JM0024498 |
| 30 | 11'8" x 11'8" Tarp with Rivets (525)                              | JM0021375 |
| 31 | 1" x 144" Square Tie-Down Tube (525) (144TT)                      | JM0021364 |
| 32 | Tightening Lip x 144" (525) (TL-144)                              | JM0012670 |
| 33 | Arch Tarp Bows (525) (116ATB)                                     | JM0021406 |
| 34 | 9-1/2' Crank w/ Splined U-Joint (CUJ-1L)                          | JM0000185 |
| 35 | S-Cap Yellow - 1.062" ID x 1-1/2" x 1/16"                         | JM0018963 |
| 36 | 3/8"-16 x 2" Gr5 Z Hex Bolt                                       | JM0001510 |
| 37 | Tarp Stop Bracket (TSB-1)   | JM0000187 |
| 38 | 3/16" Cable Clamp (316CC)   | JM0025406 |
| 39 | Spring Return Assembly Complete (Grain Cart)                      | JM0012965 |
| 40 | Spring Return Cable (Grain Carts)                                 | JM0012981 |