

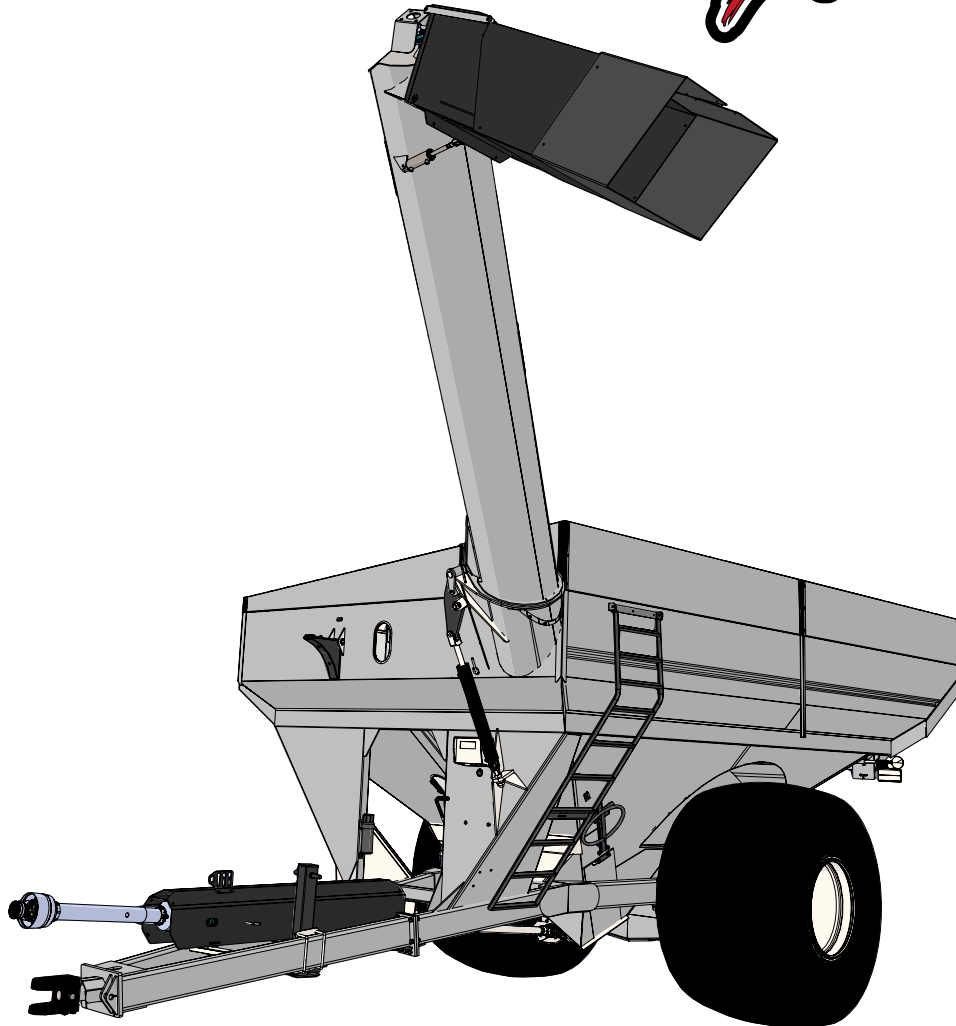


# Manual

## GRAIN CART OPERATOR'S MANUAL

MODEL

**X1412**  
series



Rev. 9.30.2020

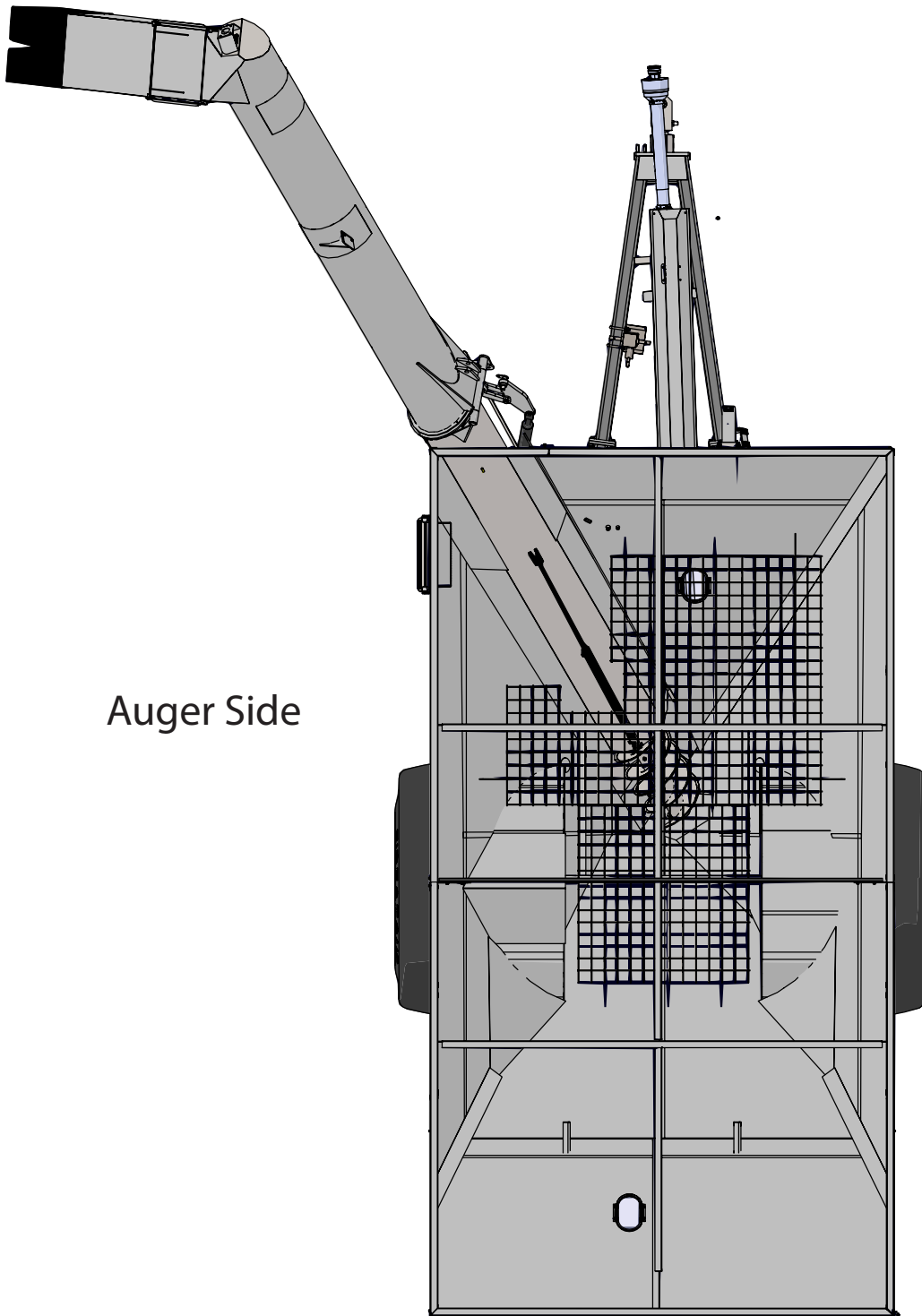
**J&M Manufacturing Co, Inc**

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

# Stance

Front



Auger Side

Opposite  
Auger Side

Rear

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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](http://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:** 1412    **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**

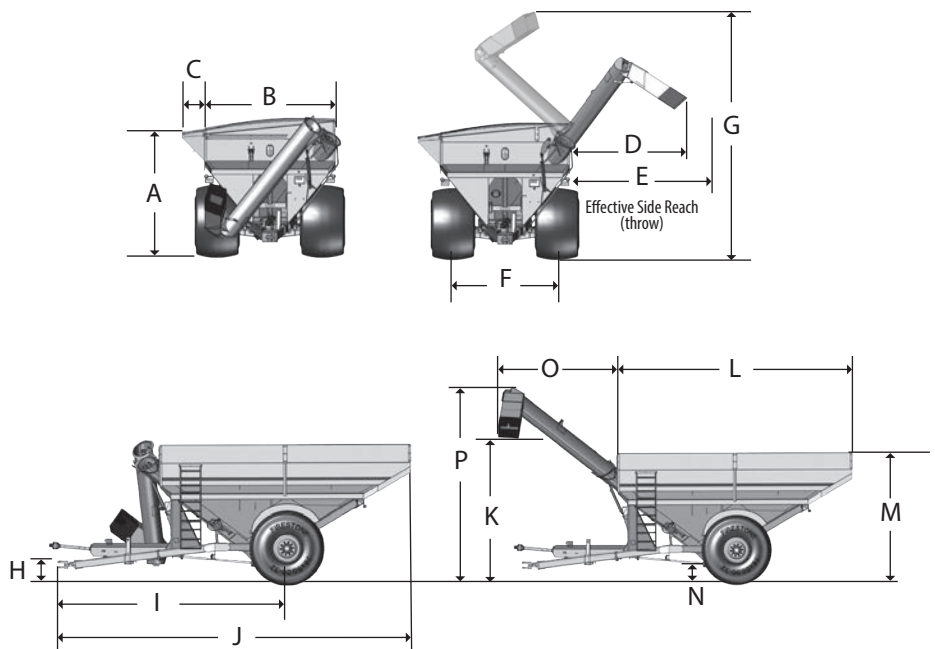
Indicates helpful information.

# Specifications

SPECIFICATIONS 	
<b>Single Wheel Option</b>	
Capacity	1,400 Bushels
Auger, One Vertical	20" Bullet
Unload Time (minutes)	2.3 minutes
Wheels (2)	44x32
Tires (2)	1250/50R32
Hubs (2)	10 Bolt or 20 Bolt
Spindles (2)	6" Diameter
Tongue Weight	
Empty	2,400 lbs.
Loaded	4,800 lbs.
Total Weight (approx.)	16,300 lbs.
<b>Walking Tandem Dual Wheels Option</b>	
Capacity	1,375 Bushels
Wheels (4)	18x42 Heavy
Tires (4)	520/85R42
Spindles (4)	4-1/2" Diameter
Total Weight (approx.)	19,300 lbs.
<b>Tracks Option</b>	
Capacity	1,425 Bushels
Total Weight (approx.)	23,000 lbs.
Compaction Rate	12.75 lbs/sq inch

# Dimensions

	
A	11'-8"
B	11'-9"
C	NA
D	10'-5"
E	13'-1"
F	10'-0"
G	20'-11"
H	1'-6"
I	21'-10"
J	34'-5"
K	13'-6"
L	25'-6"
M	12'-2"
N	1'-5"
O	11'-8"
P	18'-0"



# Bolt 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 bolts and nuts with the exception of wheel nuts.**

## SAE Fasteners

Coarse Thread Series				
	Grade 5		Grade 8	
<i>Diameter and Pitch (Inches)</i>	<i>Dry</i>	<i>Oiled</i>	<i>Dry</i>	<i>Oiled</i>
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	30	23	45	35
7/16"-14	50	35	70	55
1/2"-13	75	55	110	80
9/16"-12	110	80	150	110
5/8"-11	150	110	220	170
3/4"-10	260	200	380	280
7/8"-9	430	320	600	460
1"-8	640	480	900	680
Fine Thread Series				
<i>Diameter and Pitch (Inches)</i>	<i>Dry</i>	<i>Oiled</i>	<i>Dry</i>	<i>Oiled</i>
1/4"-28	10 ft-lbs	7 ft-lbs	14 ft-lbs	10 ft-lbs
5/16"-24	19	14	29	20
3/8"-24	35	25	50	40
7/16"-20	55	40	80	60
1/2"-20	90	65	120	90
9/16"-18	120	90	170	130
5/8"-18	180	130	240	180
3/4"-16	300	220	420	320
7/8"-14	470	360	660	500

## Stud and Wheel Nut Torque Specifications

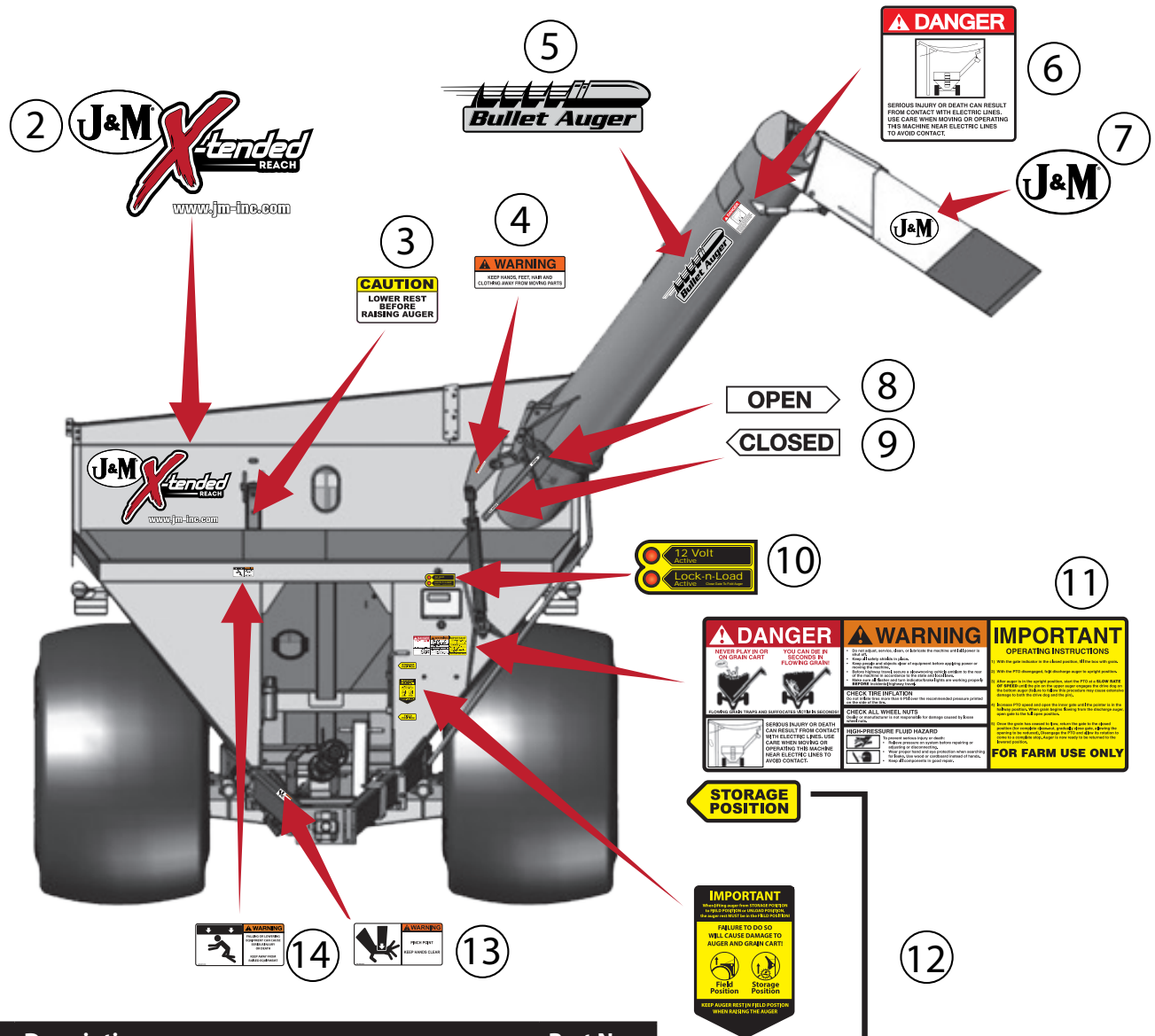
Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are 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** and standard **22mm wheel studs should be tightened to torque 640 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.

# Decals

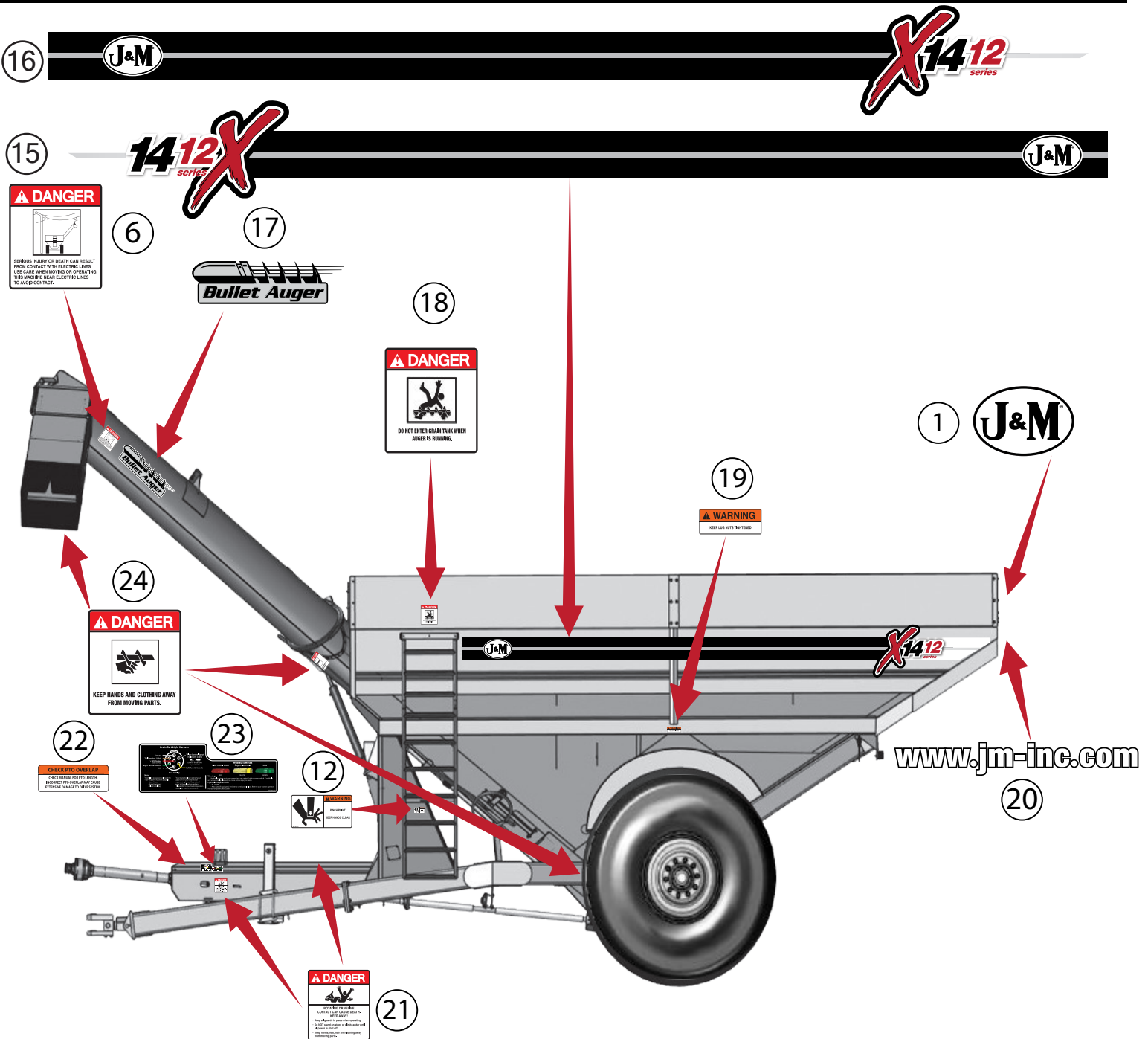
**⚠ ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! ⚠**  
**Replace Immediately If Damaged or Missing**



Description	Part No.
1 J&M Oval Decal (Large) 9-1/2" x 15"	JM0015151
2 X-Tended Reach Decal	JM0037663
3 Caution Lower Rest Decal	JM0037662
4 Warning, Keep Hands Away Decal	JM0018039
5 Bullet Auger Decal	JM0037664
6 Danger, Electric Lines Decal	JM0015099
7 J&M Oval Decal (Medium) 5-1/2" x 8-1/2"	JM0010179
8 Open Decal	JM0025433
9 Closed Decal	JM0025434
10 Lock and Load Indicator Lights Decal	JM0044289
11 Danger Warning Important Decal	JM0037665
12 Field Position/Storage Position Decal	JM0037661
13 Warning, Pinch Point Decal	JM0014994
14 Warning, Falling Or Lowering Decal	JM0014992



# Decals



Description	Part No.
15 1412 Auger Side Stripe Kit	JM0050090
16 1412 Opposite Auger Side Stripe Kit	JM0050089
17 Bullet Auger Decal AS	JM0041315
18 Danger, Do Not Enter Grain Tank Decal	JM0018033
19 Warning, Keep Lug Nuts Tightened Decal 1-5/8" x 4"	JM0010150
20 www.jm-inc.com Decal	JM0019239
21 Danger, Rotating Driveline Decal	JM0018036
22 Check PTO Overlap Decal	JM0025435
23 X-Tended Reach Light Harness and Hydraulic Hoses Decal	JM0046492
24 Danger, Keep Hands and Clothing Away Decal	JM0018035

# 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 that 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 that 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 the manufacturer 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 that the grain cart is fastened securely to the tractor by using a high strength hitch pin, clip and safety chains. Make sure that 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 that 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. Make certain that 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?

**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.

**FOLDING AND UNFOLDING THE AUGER:** X-Tended Reach grain carts offer three positions for the auger, depending on your use:

- Storage - For when the grain cart is stationary and not in use.
- Field - For when using the grain cart in the field. The auger must be elevated in the field to avoid ground interference and kicking soil into the tip spout.
- Unload - For when the auger is in use. To maximize the life of the grain cart, return the auger to field position between unloading.

To unfold the auger from the storage position, keep the throw handle in field position and unfold the auger.

To use in field position, move the auger above the flip-up auger rest (the throw handle will remain in field position) and lower the auger onto the rest. The auger rest prevents the auger from moving into storage position as it unfolds.

To return to the storage position, unfold the auger, lift the auger above the rest, move the throw handle and flip auger rest to the storage position, and fold the auger completely. The auger rest will automatically move to field position through this pass.



**GREASE BEARINGS:** Are all bearings on the drive line properly greased? Are all set screws in the bearings and U-joints tight? Has the power-take-off 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?

**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 should stand up with no side wall buckling or distress as the tire rolls. Do not exceed the tire pressure indicated below:**

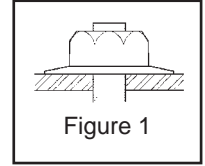
Tire	psi
IF520/85R42 Lug Tires (Firestone) (169 LI) (for 18x42-10 Hole Wheels)	44
520/85R42 Lug Tires (Alliance) (169 LI) (for 18x42-10 Hole Wheels)	50
IF1250/50R32 Lug Tires (Firestone) (201B LI) (for 44x32-10 Hole and 44x32-20 Hole Wheels)	46
IF1250/50R32 Lug Tires (Alliance) (201A8 LI) (for 44x32-10 Hole and 44x32-20 Hole Wheels)	46

# 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 640 Ft.-Lbs. for standard 22mm wheel studs and nuts. 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.** To ensure that wheel nuts do not loosen, it may be helpful to mark the location of one side of the nut and wheel rim with paint. This will help when observing if any rotation of the nut occurs. 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 1412 grain carts require a 250+ 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.** Check for adequate clearance between telescoping PTO and tractor hitch. Suggested clearance is 7 inches.
  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.



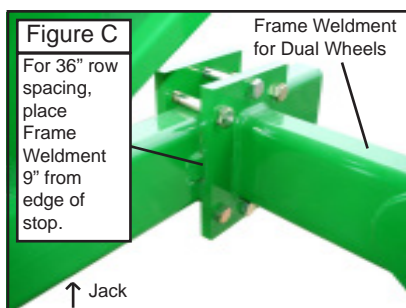
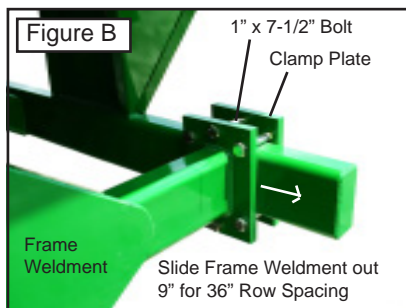
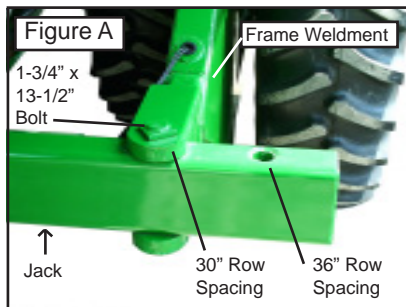
# Operating Instructions

- 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 Row Spacing for Walking Tandem Duals



- Securely position jacks under the frame of the grain cart as shown in Figures A and C.
- Loosen the rear of the frame weldment by removing the 1" x 7-1/2" Gr8 bolts and clamp plate.
- Remove the 1-3/4" x 13-1/2" bolt and jam nut from the front of the frame weldment.
- Slide the frame weldment out to the bolt location for 36" row spacings as shown in Figure A and secure using the 1-3/4" x 13-1/2" bolt and jam nut. If the grain cart is equipped with an electronic scale system, be sure not to damage the electronic cord when moving the frame weldment.
- Swing the frame weldment outward. Switch the tire location by removing both tires and remounting each tire to the hub on the opposite side of the weldment. The tire originally on the outside of the weldment will now be located on the inside of the weldment and vice versa. (The valve stems for 36" row spacing should be facing toward the frame weldment, or toward each other.) Be sure to keep the tire tread positioned in the same direction as before.
- After the wheels have been tightened to the hubs, swing the frame weldment until the new clamping location is 9" from the original 30" row spacing stop.
- Tighten the rear of the frame weldment to the grain cart frame using the six 1" x 7-1/2" Gr8 bolts, hex nuts, and clamp plate.
- Torque all bolts to specifications and repeat on other side.

# 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

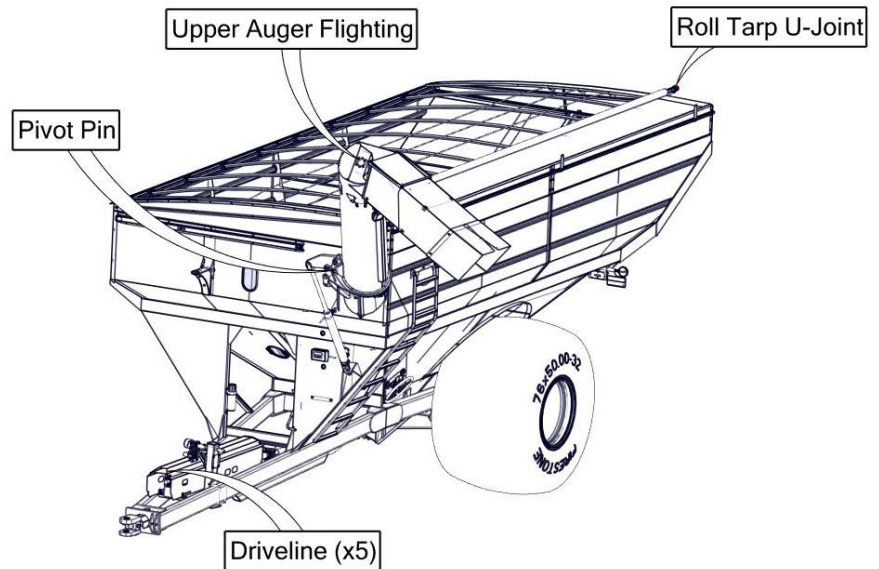
**BE CERTAIN ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART**

**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.

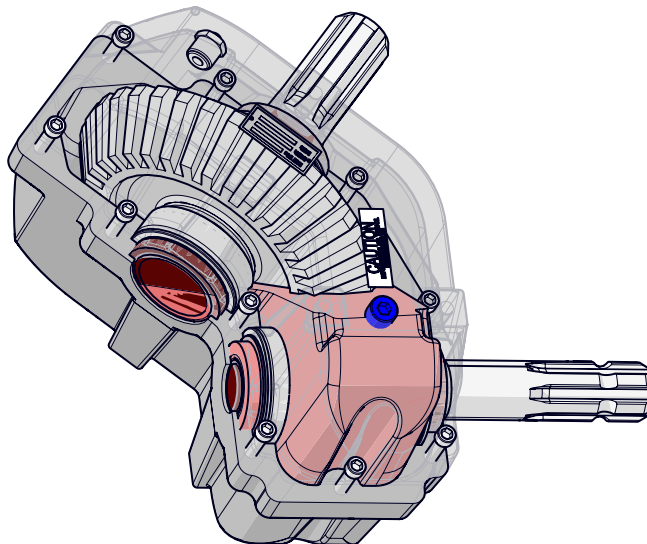
**AUGER FOLDING MECHANISM:** One grease fitting is located on the pivot pin of the folding auger. This fitting should be serviced after every 8 hours of use. Service the grease fitting on the hanger bushing assembly (top end of the lower auger assembly) after every 8 hours of use or as needed.

**SPRING LOADED UPPER AUGER BEARING:** Service the grease fitting on the upper auger bearing (1 pump) (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 hrs of use
Driveline	Every 8 hrs of use



**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. The fluid level should rest at the inspection plug, pictured in blue below. When filled to the proper level, the gearbox should have 96 ounces of SAE 80W-90 lubricant. Change the oil annually before use.



Gearbox Lubricant			
Model	Ounces	Input Shaft	Output Shaft
1412	96	1-3/4"	2"

# 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 11 for recommended instructions for tire pressure. It is important that tires are inspected before and after unit loaded.
- 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 16)
	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 flightings are disengaging before auger comes to a complete stop. Replace bolt in the drive dog. Never engage or disengage the upper and lower flightings 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.
Flip-up auger rest not flipping over center	Cable has loosened	With auger in field position, tighten cable to the handle.

# 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.

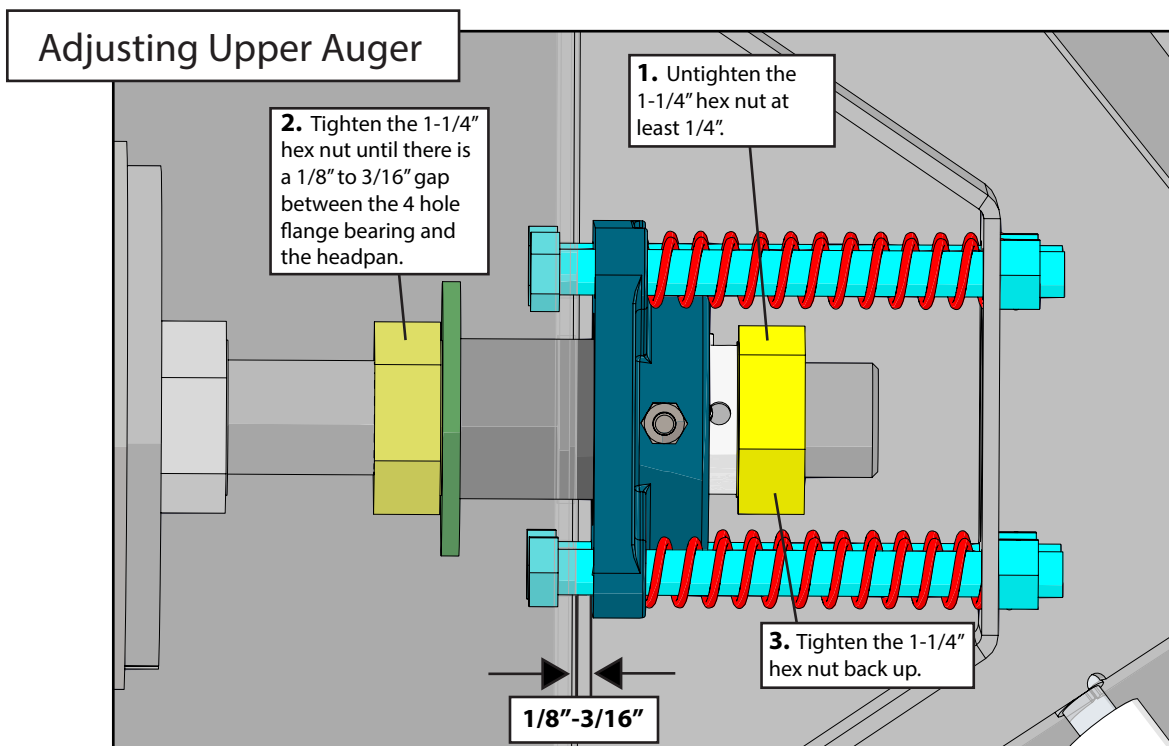
If the hanger can no longer be adjusted by moving it up or down on the elongated holes, both the hanger bushing assembly and the lower flighting will have to be removed. After removing them from the tube assembly, place a shim [between 1/8" (0,32cm) to 3/16" (0,48cm) thick] where the gearbox and the 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 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. There must be an 1/8" (0,32cm) 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 1/8" (0,32cm) 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 1/8" (0,32cm) 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 does 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 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 14.
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 Operator's Manual instructions to ensure safe and proper maintenance and repair.

Your local, authorized dealer can supply genuine replacement parts. Substitute parts 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 for Single Wheel Carts

44x32-10 Hole Wheel Rims
44x32-20 Hole Wheel Rims

### Tires for Single Wheel Carts

IF1250/50R32 Lug Tires (Firestone) (201B LI) (for 44x32-10 Hole and 44x32-20 Hole Wheels)
IF1250/50R32 Lug Tires (Alliance) (201A8 LI) (for 44x32-10 Hole and 44x32-20 Hole Wheels)

### Wheel Rims for Single Wheel Carts

44x32-10 Hole Wheel Rims
44x32-20 Hole Wheel Rims

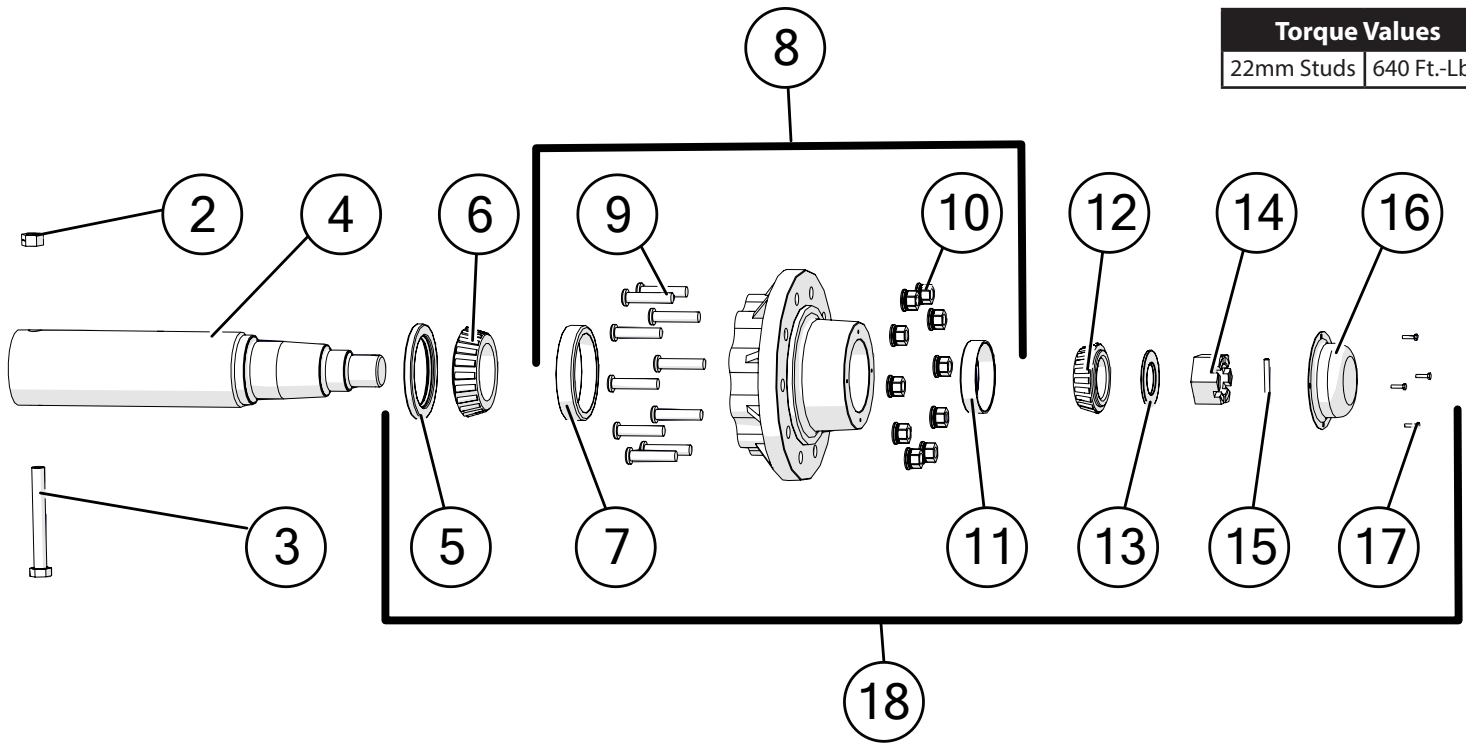
### Tires for Walking Tandem Dual Carts

IF520/85R42 Lug Tires (Firestone) (169 LI) (for 18x42-10 Hole Wheels)
520/85R42 Lug Tires (Alliance) (169 LI) (for 18x42-10 Hole Wheels)

# Hub & Spindle Assembly 250-10 (Single Wheels)

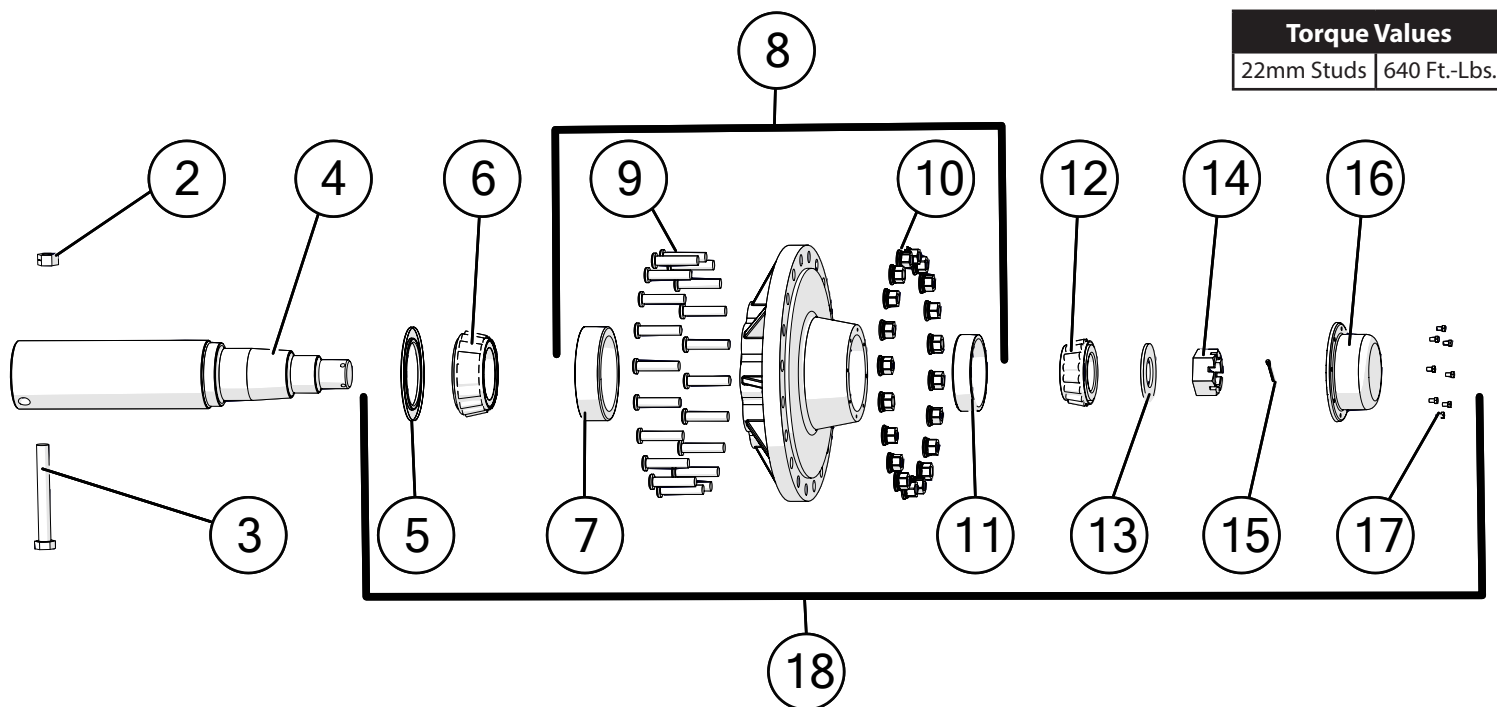
## Torque Values

22mm Studs | 640 Ft.-Lbs.



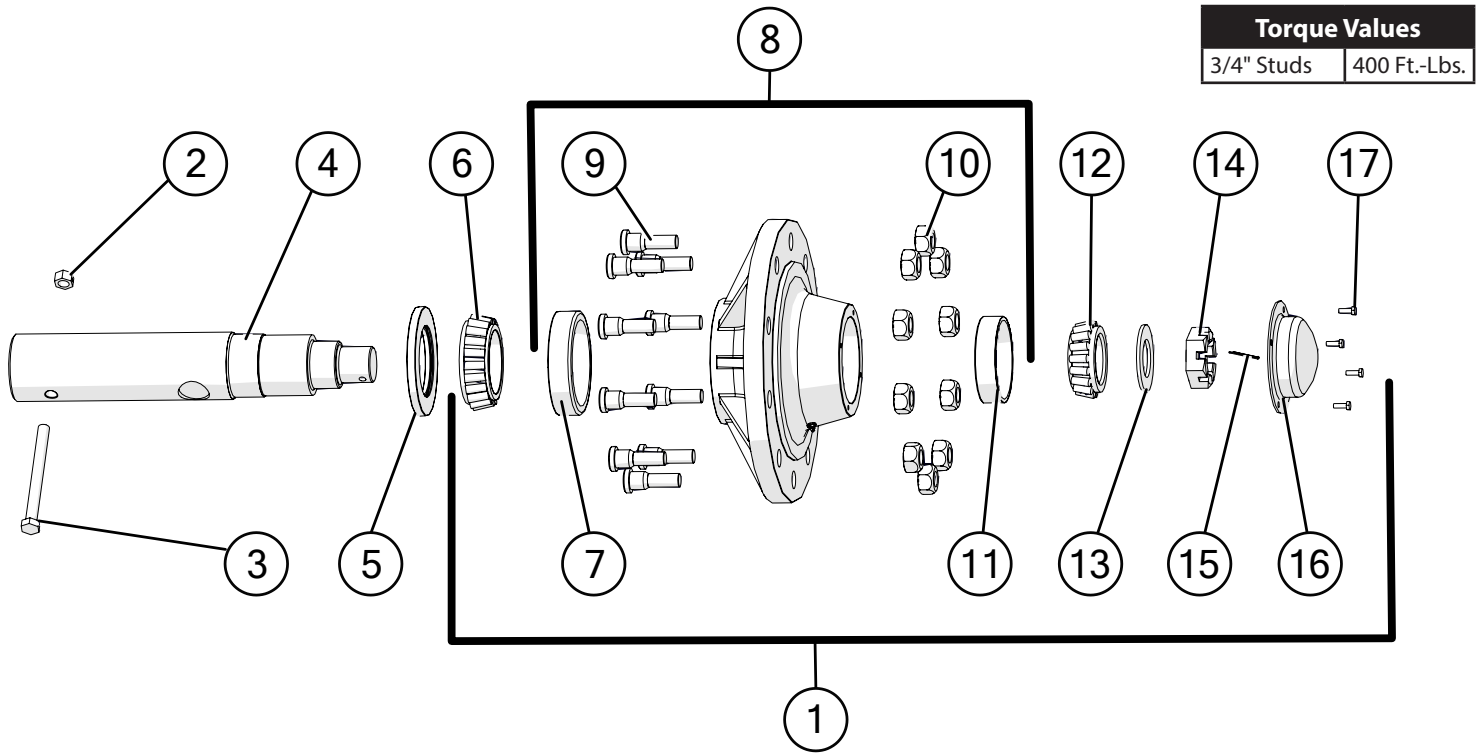
Description	Part No.
1 G250-10 Hub, Spindle, and Bearings Assembly with 22mm Studs, Races and Nuts (HSA-1075-22)	JM0019927
2 1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
3 1"-8 x 8" Gr5 Z Hex Bolt (165450)	JM0001487
4 Spindle, 6" x 29-3/8" (628)	JM0019102
5 Seal 55179 (Type C) for G250-10,G300-10B, Spring-assisted (CR55179)	JM0019179
6 Large Bearing (71455)	JM0019112
7 Large Race (71750)	JM0019198
8 Hub with Races, 22mm Studs & Nuts (13.19 Bolt Circle) (11.13 Pilot) (H25000)	JM0019300
9 Wheel Stud (22mm x 90mm) (22-MMS)	JM0019178
10 Wheel Nut 22mm with Washer (22-MMNW)	JM0019192
11 Small Race (653)	JM0019195
12 Small Bearing (663)	JM0019177
13 3/16" Spindle Washer (2-1/2" ID, 4-1/2" OD) (H25000) (EM-25M)	JM0019106
14 2-7/16"-12 Gr5 Z Slotted Spindle Nut (SF-2512)	JM0019108
15 3/8" x 3-1/2" Z Roll Pin (3754)	JM0020001
16 Dust Cap with Gasket (Bolt-on) 7-3/4" OD (D-25000)	JM0019109
17 1/4"-20 x 1" Gr5 Z Hex Bolt	JM0002095
18 G250-10 Hub, Seal, Bearings, Races, Studs, Nuts and Dust Cap	JM0048131

# Hub & Spindle Assembly 550-20 (Single Wheels-20 Bolt Hubs)



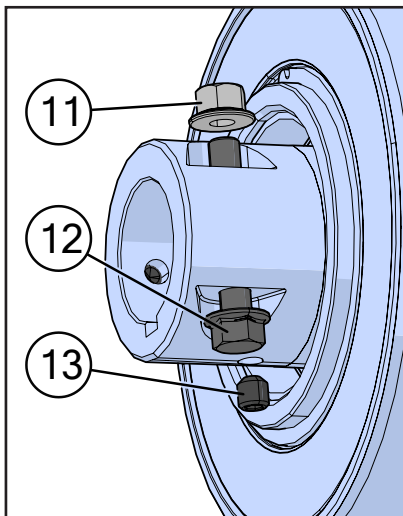
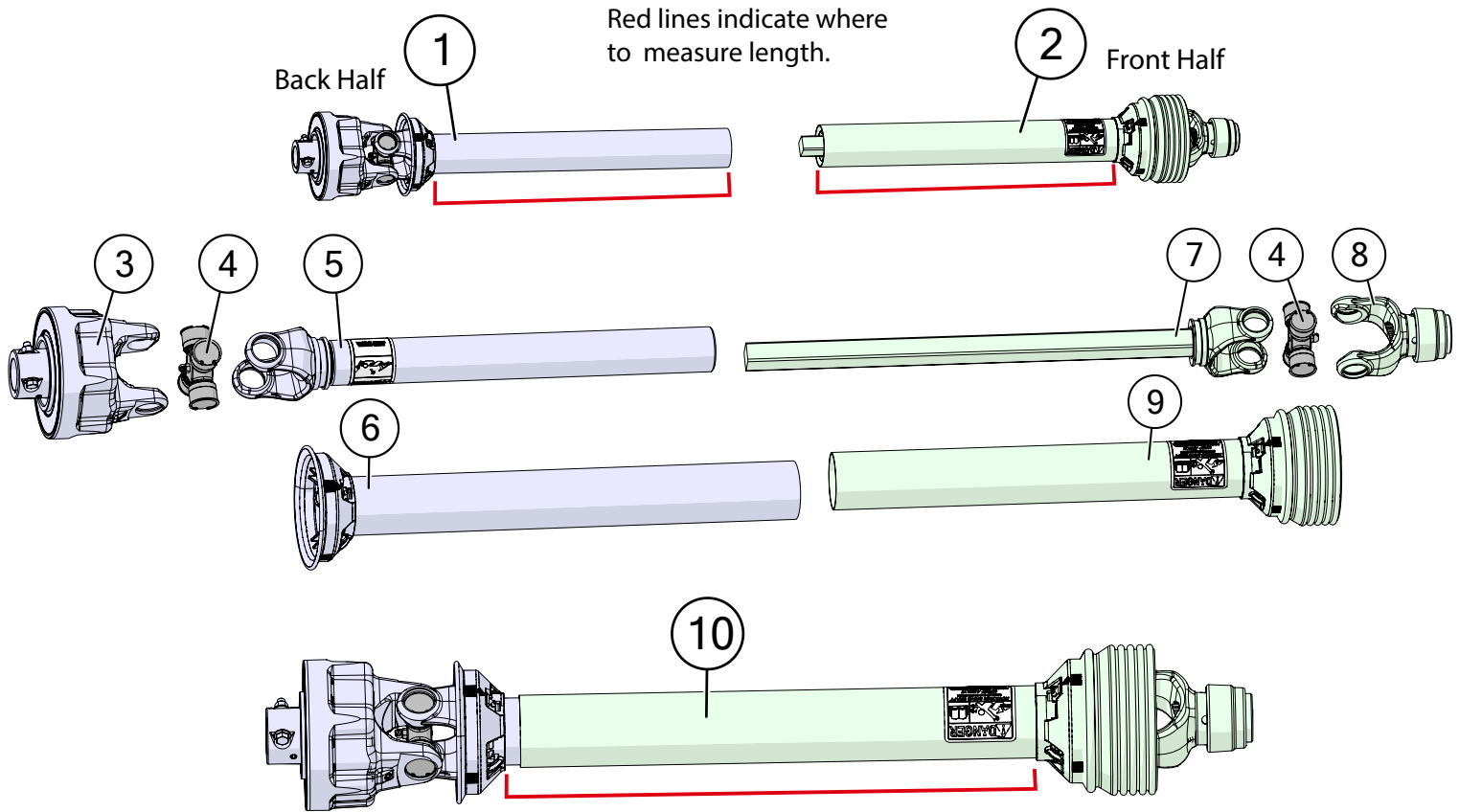
Description		Part No.
1	G550-20 Hub, Spindle, and Bearings Assembly with 22mm Studs, Races, and Nuts	JM0034272
2	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
3	1"-8 x 8" Gr5 Z Hex Bolt	JM0001487
4	Spindle, 6" x 29-3/8" for 20 Bolt Hub	JM0019723
5	Grease Seal, G550-20	JM0019219
6	Large Bearing (938)	JM0019214
7	Large Race (930)	JM0019211
8	G550-20 Hub with Studs, Lugs, and Races	JM0019209
9	Wheel Stud (22mm x 90mm) (22-MMS)	JM0019178
10	Wheel Nut 22mm with Washer (22-MMNW)	JM0019192
11	Small Race (832)	JM0019212
12	Small Bearing (842)	JM0019215
13	2-1/2" USS Flat Washer	JM0030690
14	2-1/2"-12 Gr5 Z Castle Hex Nut	JM0034274
15	3/16" X 2-1/2" Cotter Pin	JM0027684
16	G550-20 Dust Cap	JM0019217
17	5/16"-18 x 1/2" Gr5 Z Hex Bolt	JM0016674
18	G550-20 Hub, Seal, Bearings, Races, Studs, Nuts and Dust Cap	JM0048276

# Hub & Spindle Assembly W-881 (Walking Tandem Dual Wheels)



Description		Part No.
1	Hub and Spindle Assembly Complete 20-1/4" (3/4" Studs) (HSA-650D) (Walking Tandem Duals)(FAA)	JM0019940
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 20-1/4" for Walking Tandem Dual Wheel or Fully Adjustable Axle (2819005)	JM0019937
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	Wheel Stud (3/4"-16 x 1-3/4") 913564	JM0018957
10	Wheel Nut 3/4"-16	JM0018958
11	Small Race (HM212011)	JM0018854
12	Small Bearing (HM212049)	JM0018852
13	2-1/8" ID, 3-3/4" OD Flat Washer (3/16")	JM0015900
14	2"-12 Gr5 Z Castle Hex Nut (912973)	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

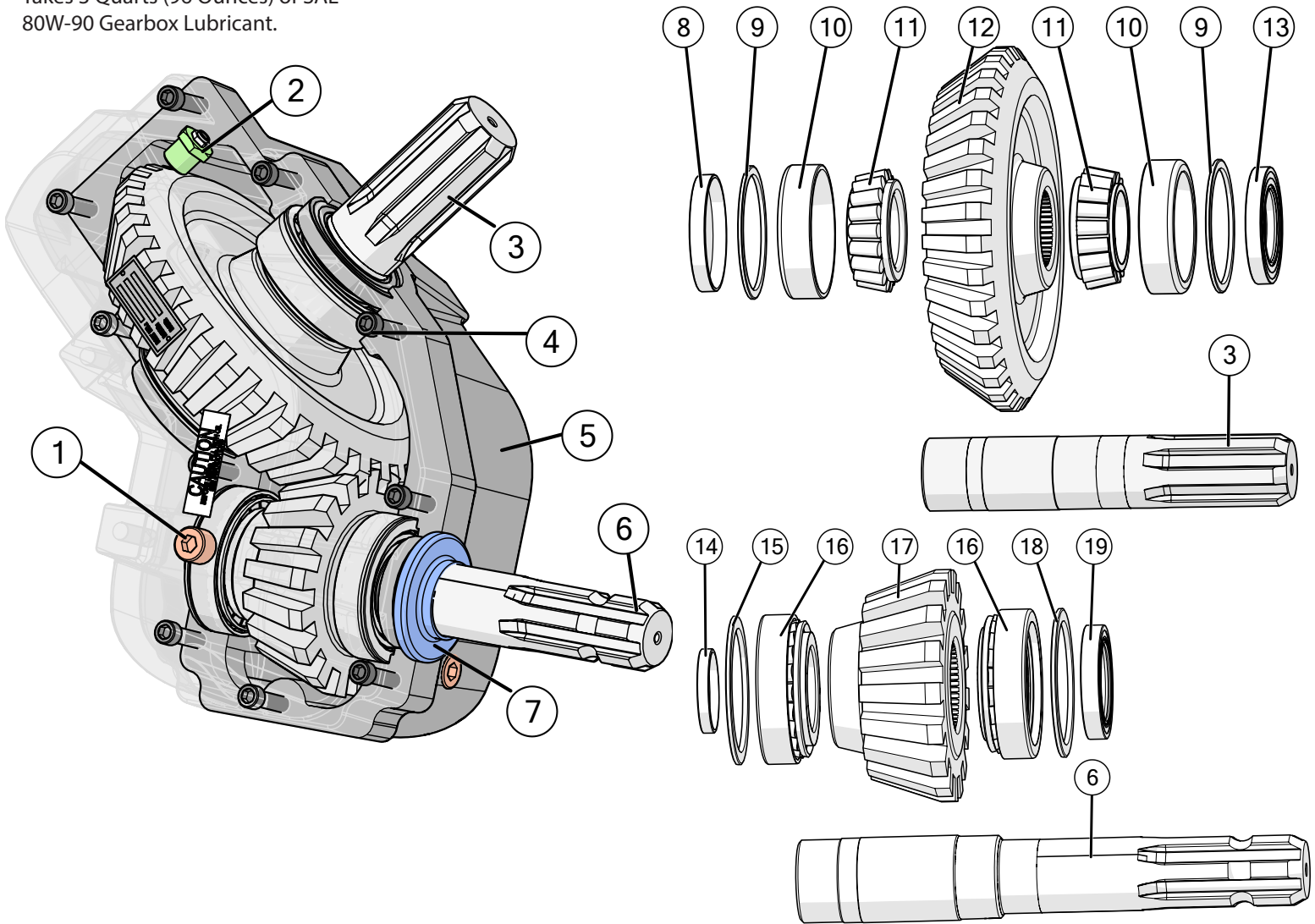
# Power Take-Off (PTO) Shaft Assembly 1-3/4"



	Description	Part No.
1	Back Half Weasler PTO (1-3/4") (Auto Clutch) 25-3/4"	JM0018513
1	Back Half Weasler PTO (1-3/4") (Auto Clutch) (XL) 31-3/4"	JM0030331
2	Front Half Weasler PTO (1-3/4") (Auto Clutch) 25"	JM0018514
2	Front Half Weasler PTO (1-3/4") (Auto Clutch) (XL) 30-1/4"	JM0030330
2	Front Half Weasler PTO (1-3/8") (Auto Clutch) 25"	JM0024367
2	Front Half Weasler PTO (1-3/8") (Auto Clutch) (XL) 30-1/4"	JM0030640
3	Auto Clutch for Weasler	JM0018500
4	55E Cross Kit (Auto Clutch PTO)	JM0018449
5	Yoke, Tube & Sleeve (Weasler Auto Clutch) (55E)	JM0018519
5	Yoke, Tube & Sleeve (XL) Weasler	JM0031647
6	Weasler Auto Clutch Back Guard (25-3/4")	JM0018517
6	Weasler XL Auto Clutch Back Guard (31-3/4")	JM0030645
7	Yoke & Shaft Assembly (Weasler Auto Clutch) (55E)	JM0018520
7	Yoke & Shaft Assembly (XL) Weasler	JM0031648
8	Spring Lock Yoke (1-3/4" PTO) (Weasler)	JM0018506
8	Spring Lock Yoke (1-3/8" PTO) (Weasler)	JM0024353
9	Weasler Auto Clutch Front Guard (25")	JM0018518
9	Weasler XL Auto Clutch Front Guard (30-1/4")	JM0030642
10	Complete 1-3/4" Weasler PTO (Auto Clutch) 25-3/4"	JM0018443
10	Complete 1-3/4" Weasler PTO (Auto Clutch) (XL) 31-3/4"	JM0030332
10	Complete 1-3/8" Weasler PTO (Auto Clutch) 25-3/4"	JM0024333
10	Complete 1-3/8" Weasler PTO (Auto Clutch) (XL) 31-3/4"	JM0030641
11	Lock Nut 3/8"-16 (55E PTO) (11-30028)	JM0054592
12	3/8"-16 x 2-1/4" Hex Bolt (55E PTO)	JM0054591
13	Set Screw 3/8"-16 x .38"	JM0018465

# 130 Degree Gearbox Assembly (Weasler)

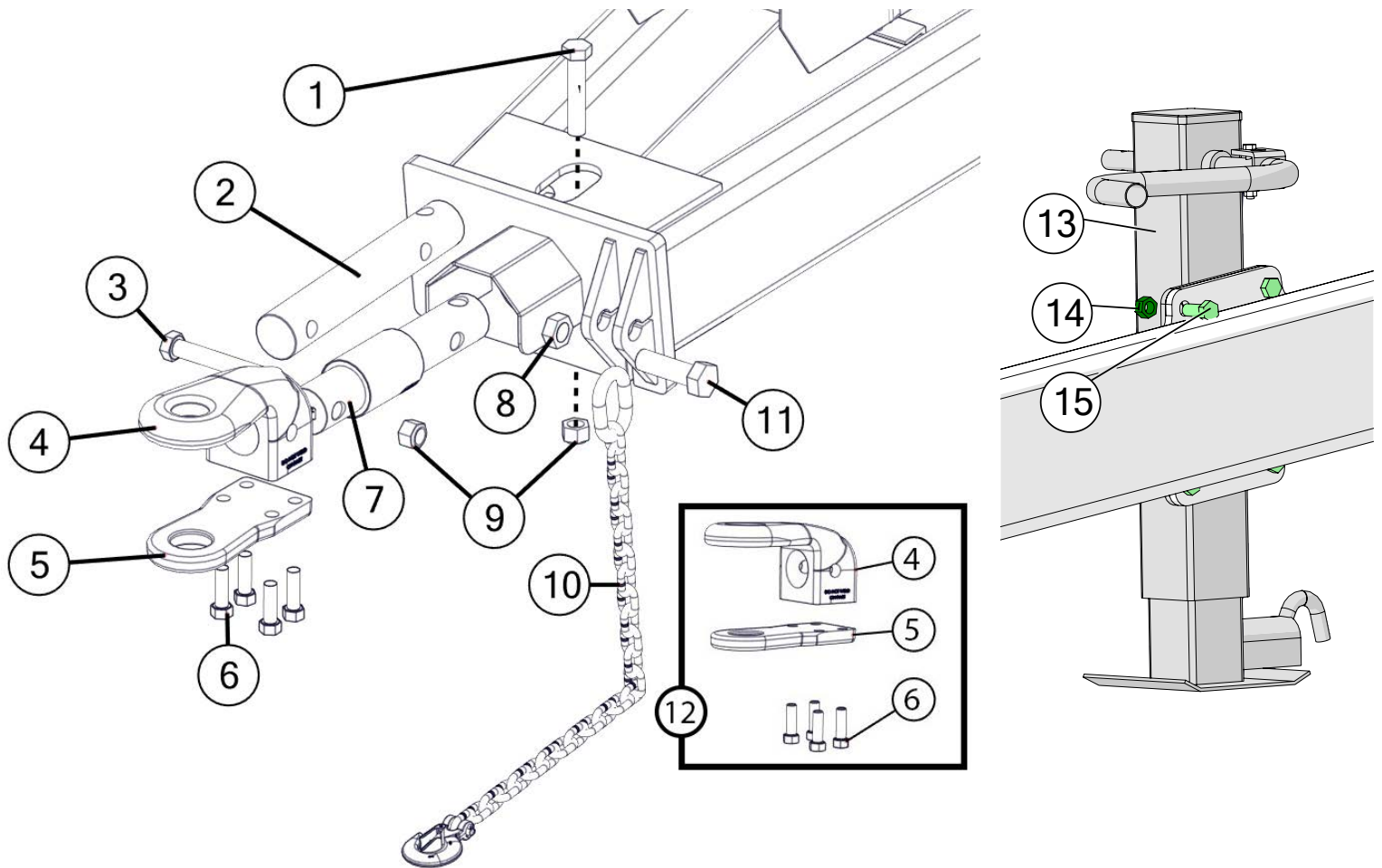
Takes 3 Quarts (96 Ounces) of SAE  
80W-90 Gearbox Lubricant.



Description	Part No.
1 1/2"-14 NPT Pipe Plug for Weasler Gearbox (72-20007)	JM0025068
2 1/2" NPT Bushing 1/8" NPT Relief Plug (72-20011)	JM0025067
3 2" Output Shaft & Gear Assembly for Weasler Gearbox (74-60125)	JM0025058
4 3/8"-16 UNC x 2-1/2" Gr5 Cap Screw for Weasler Gearbox (72-0002)	JM0025069
5 Housing Set For Weasler Gearbox (70-001114)	JM0025053
6 1-3/4" Input Shaft & Gear Assembly for Weasler Gearbox (74-60123)	JM0025057
7 Gearbox Eterior Dust Seal 1-3/4" ID	JM0049020
8 End Cap Seal (3-3/16" x 7/16") for Weasler Gearbox (71-40079)	JM0025063
9 Spacer for Weasler Gearbox (71-50072)	JM0025066
10 Bearing Cup (3720) for Weasler Gearbox (71-20033)	JM0025056
11 Bearing Cone (3780) for Weasler Gearbox (71-20044)	JM0025055
12 Gear - 34 Teeth (71-06135)	JM0046061
13 Seal (2 x 3.196 x 0.4333) for Weasler Gearbox (71-40080)	JM0025062
14 End Cap Seal (2" x 9/64") for Weasler Gearbox (71-40016)	JM0025060
15 Spacer for Weasler Gearbox (71-50160)	JM0025064
16 Bearing and Race Set (32210) for Weasler Gearbox (71-20017)	JM0025054
17 Gear - 17 Teeth (71-06134)	JM0046059
18 Spacer for Weasler Gearbox (71-50161)	JM0025065
19 Seal (1-3/4" x 2-23/32" x 33/64") for Weasler Gearbox (71-40052)	JM0025061
20 130° Gearbox (1-3/4" Input, 2" Output) (Weasler) (130-22W)	JM0018677

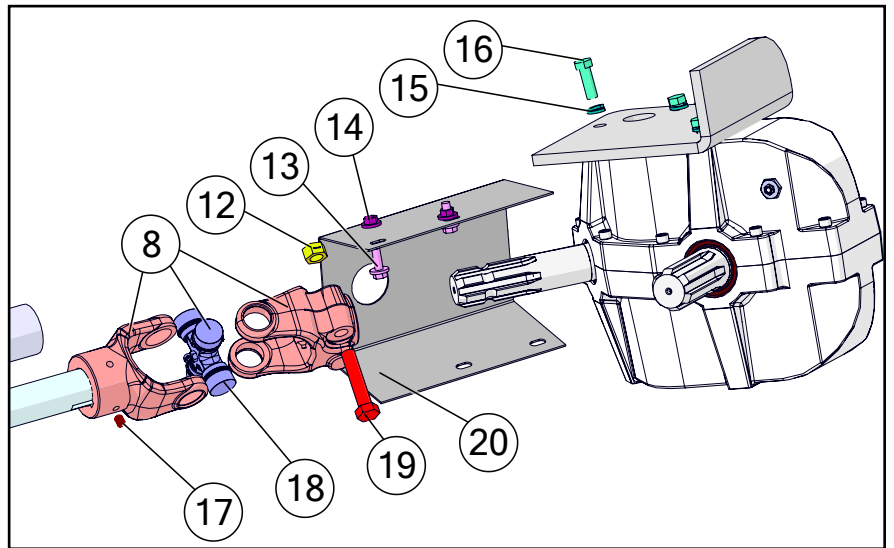
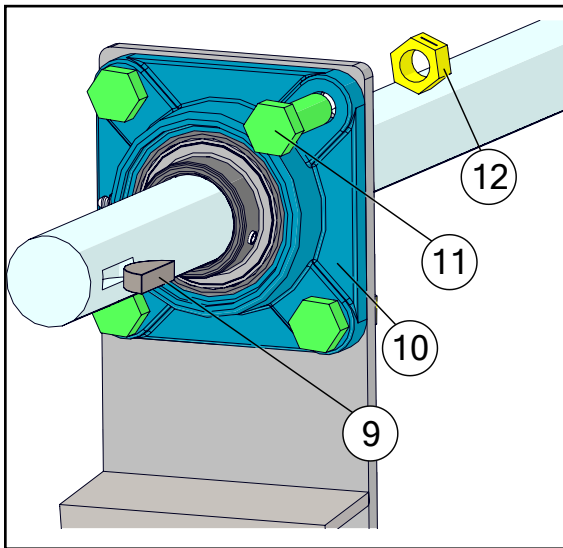
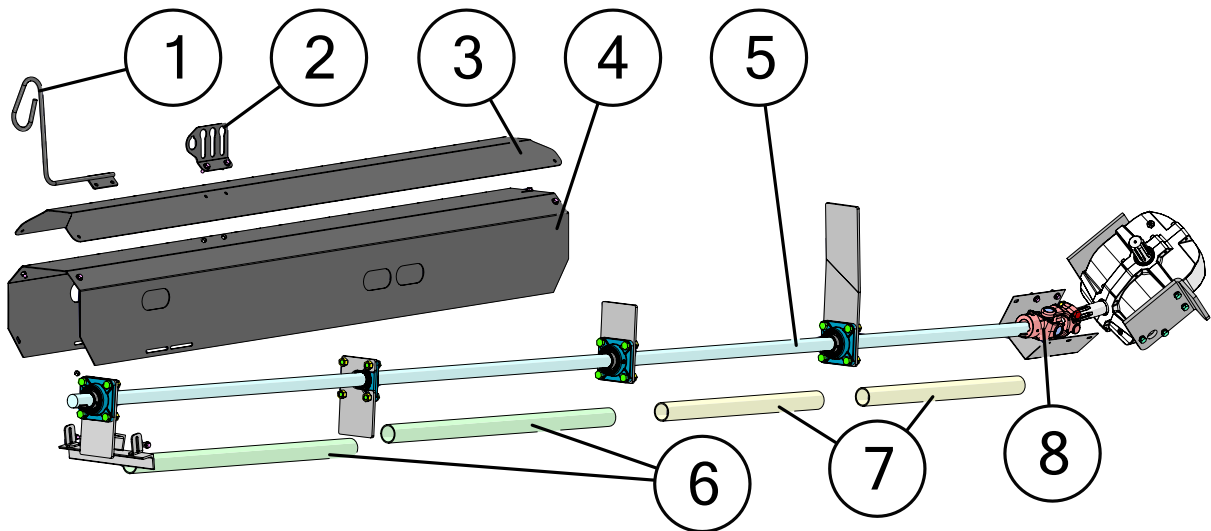


# Hitch and Jack Assembly



Description	Part No.
1 1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
2 2-7/8" x 16-3/4" Non-Scale Hitch Bar	JM0025227
3 1"-8 x 7" Gr8 YZ Hex Bolt	JM0042653
4 Cast Iron Spade 2-1/4" Pin Hole	JM0020529
5 Cast Iron Clevis (Bolt-On) 2-1/4" Pin Hole	JM0020527
6 3/4"-16 x 2-1/2" Gr8 YZ Fine Thread Hex Bolt	JM0015323
7 2-7/8" Digi-Star Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
8 1-1/4"-7 Gr5 Z Nylon Locking Hex Jam Nut	JM0027201
9 1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
10 40k Lb Safety Chain	JM0029261
11 1-1/4"-7 x 4" Gr8 Z Hex Bolt	JM0026073
12 Cast Iron Clevis Hitch Assembly	JM0014137
13 Jack Stand Assembly w/ Plate (10,000 lbs.)	JM0020936
14 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
15 5/8"-11 x 1-1/2" Gr5 Z Hex Bolt	JM0002103

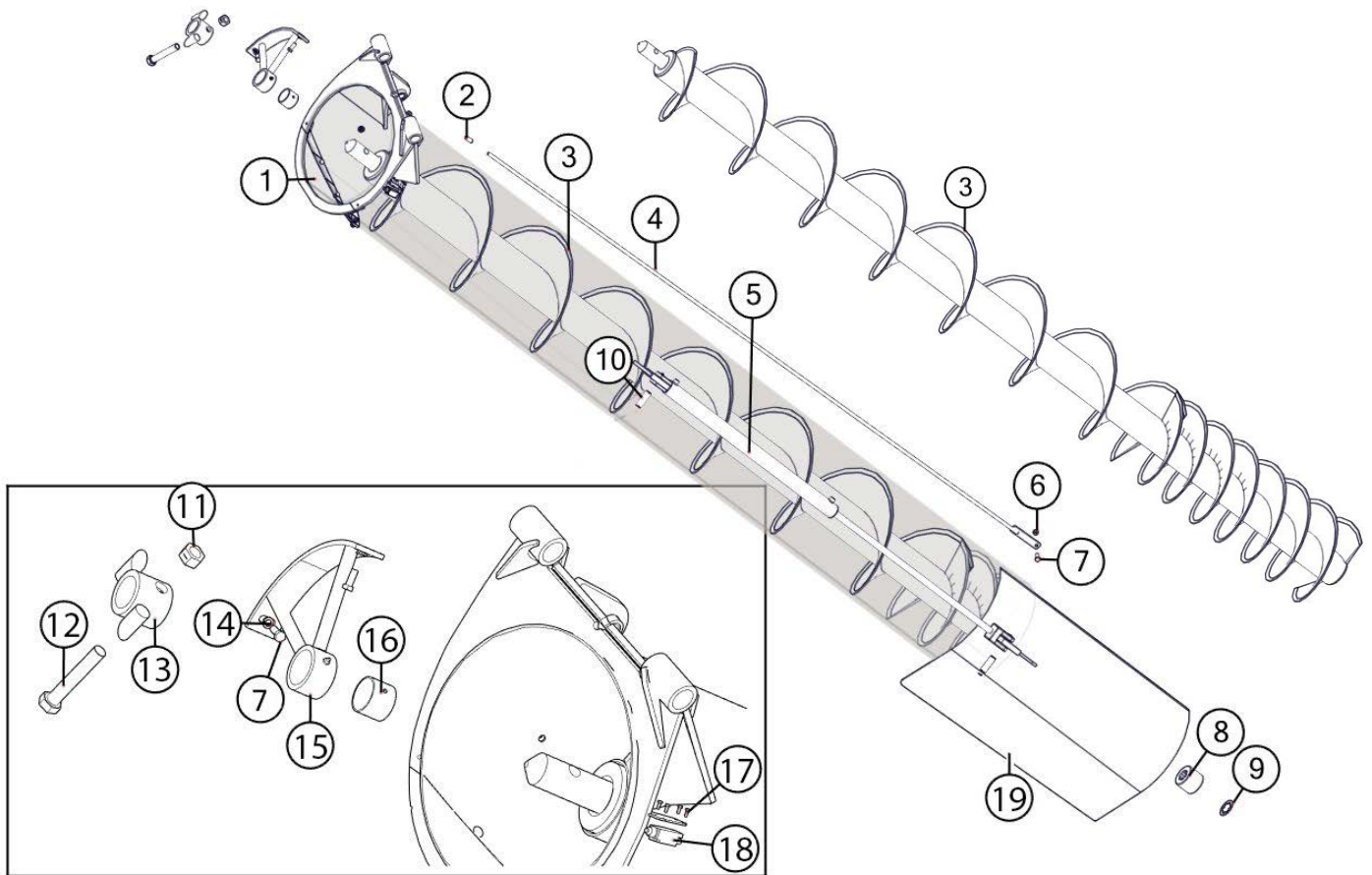
# Driveline Assembly



Description	Part No.
1 Long Fold Hydraulic Hose Holder Weldment	JM0049268
2 3 Keyed LF Hydraulic Hose Holder	JM0021437
3 97" Hydraulic Hose Shield (1312, 1412, 1522, 32 series)	JM0020941
4 97" PTO Shield (1312, 1412, 1522)	JM0020935
5 190" x 1-3/4" Drive Shaft (DS-134190)	JM0026235
6 2" x 44" PVC Pipe	JM0018795
7 2" x 31" PVC Pipe	JM0018799
8 44 Series U-Joint (252288) - Weasler 44063-A1	JM0017957
9 3/8" x 1-1/2" Half Moon Key	JM0018772
10 1-3/4" 4 Bolt Flange Bearing, 5/8" Bolt Hole (UCF-20928)	JM0018774
11 5/8"-11 x 1-3/4" Gr5 Z Hex Bolt	JM0016681
12 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
13 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
14 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
15 1/2" Gr2 Z Lock Washer	JM0019021
16 1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
17 3/8"-16 x 1/2" Hex Head Set Screw	JM0019044
18 Cross Kit (U-Joint) (44R) (CK-44R)	JM0017958
19 5/8"-11 x 3" Gr5 Z Hex Bolt	JM0002105
20 U-Joint Shield	JM0012698

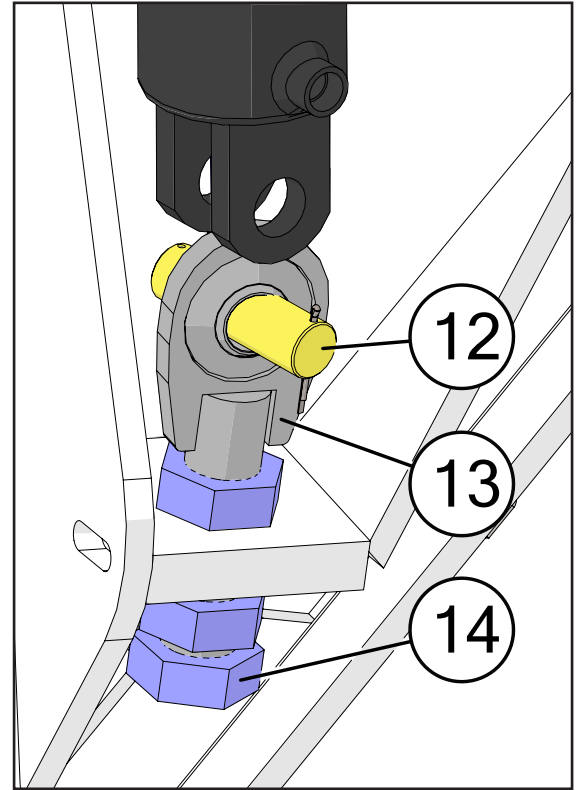
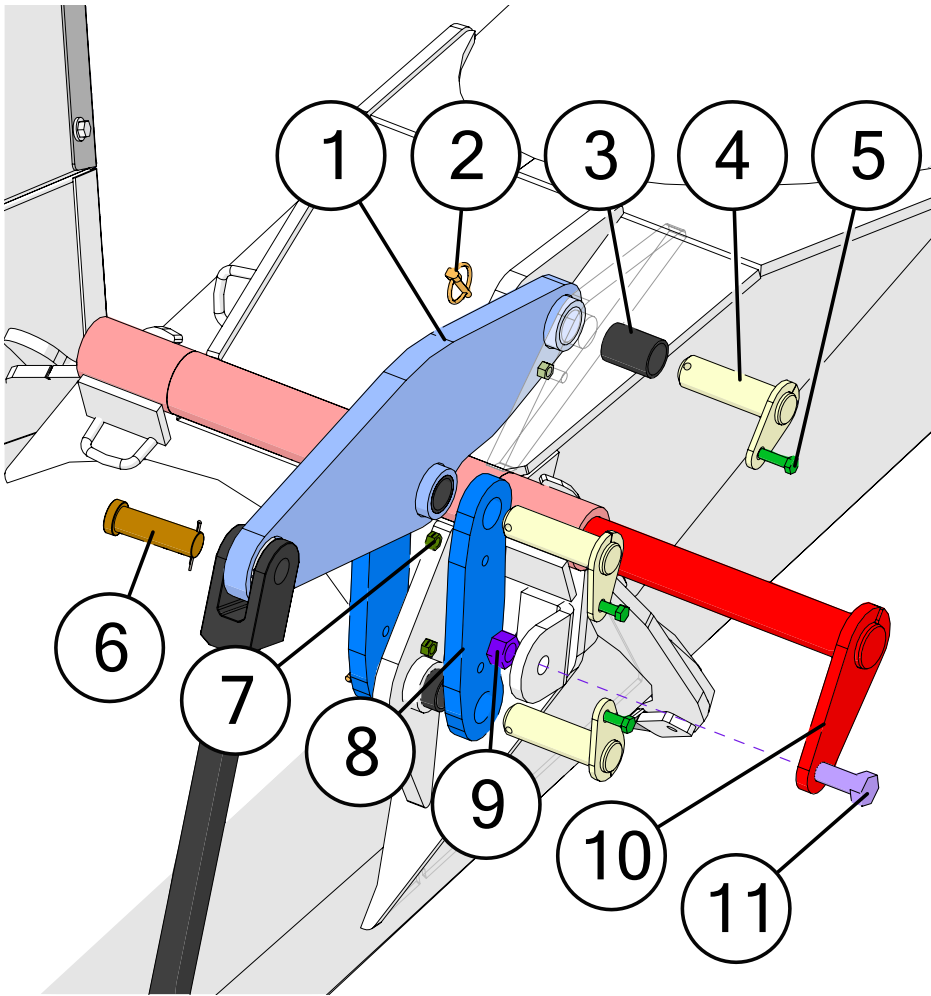


# Lower Auger Assembly



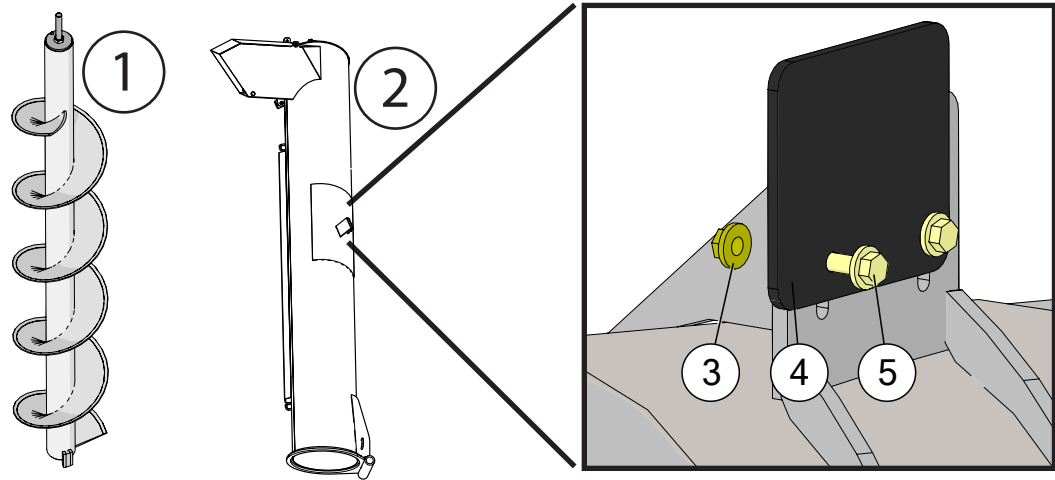
	Description	Part No.
1	Bottom Tube Liner X-Tended (1312, 1412, 1522)	JM0037287
2	S-Cap Yellow - 1/2" ID x 1-1/4" x 0.065" (REC-1)	JM0016842
3	20" Lower Flying Turbo (1312, 1412, 1522)	JM0035452
4	1/2" Gate Indicator Rod Weldment (127-1/2" Rod Length) (1312-1522)	JM0044965
5	2" x 36" Hydraulic Cylinder (JD236)	JM0018523
6	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
7	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
8	Spline Coupler 3" x 2" ID x 3-3/4" OD (for Weasler Gearbox) (SC-334X3)	JM0009701
9	2" Output Shaft Gearbox Spline Washer (3" OD)	JM0020638
10	1" x 3" Clevis Pin with Cotter Pins	JM0019407
11	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
12	1"-8 x 6" Gr8 YZ Hex Bolt	JM0074245
13	Drive Dog Weldment, 2-1/2" ID (18" & 20") (DDW-21218)	JM0000093
14	1/2" Gr2 Z Lock Washer	JM0019021
15	20" Auger Hanger (HBA-20)	JM0019655
16	2-1/2" ID Bronze Bushing (BB-212)	JM0016841
17	M5-0.8 x 12 Gr8.8 Z Hex Bolt	JM0036046
18	Limit Switch for Field Light (ME-8111)	JM0036040
19	Feed Gate Assembly for 12 Series Carts (1012 & Up)	JM0048539

# Upper Auger Linkage



Description	Part No.
1 Main Fold Link (22-1/2" x 7-7/16" x 1")	JM0034658
2 1/4" Diameter Snap Ring	JM0001870
3 1-1/4" ID x 1-1/2" OD x 2" Long Sleeve Composite Bushing	JM0021957
4 1-1/4" Pin Keeper (4-5/8" Lg)	JM0035930
5 3/8"-16 x 1-1/4" Gr5 Z Hex Bolt	JM0016675
6 1" x 3-1/4" Clevis Pin (X-Tended Reach)	JM0047300
7 3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
8 Master Link w/ Keeper (11-1/8" x 3" x 3/4")	JM0035075
9 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
10 22" Hinge Pin w/ Keeper Weldment (23" Lg) (12,22 & 32 Series)	JM0024966
11 5/8"-11 x 1-1/2" Gr5 Z Hex Bolt	JM0002103
12 1" x 3-1/2" Clevis Pin with Cotter Pins	JM0001817
13 HD Adjustable Pac Man Weldment	JM0021417
14 1-1/4"-12 Gr5 Z Hex Jam Nut	JM0002158

## Upper Auger Assembly

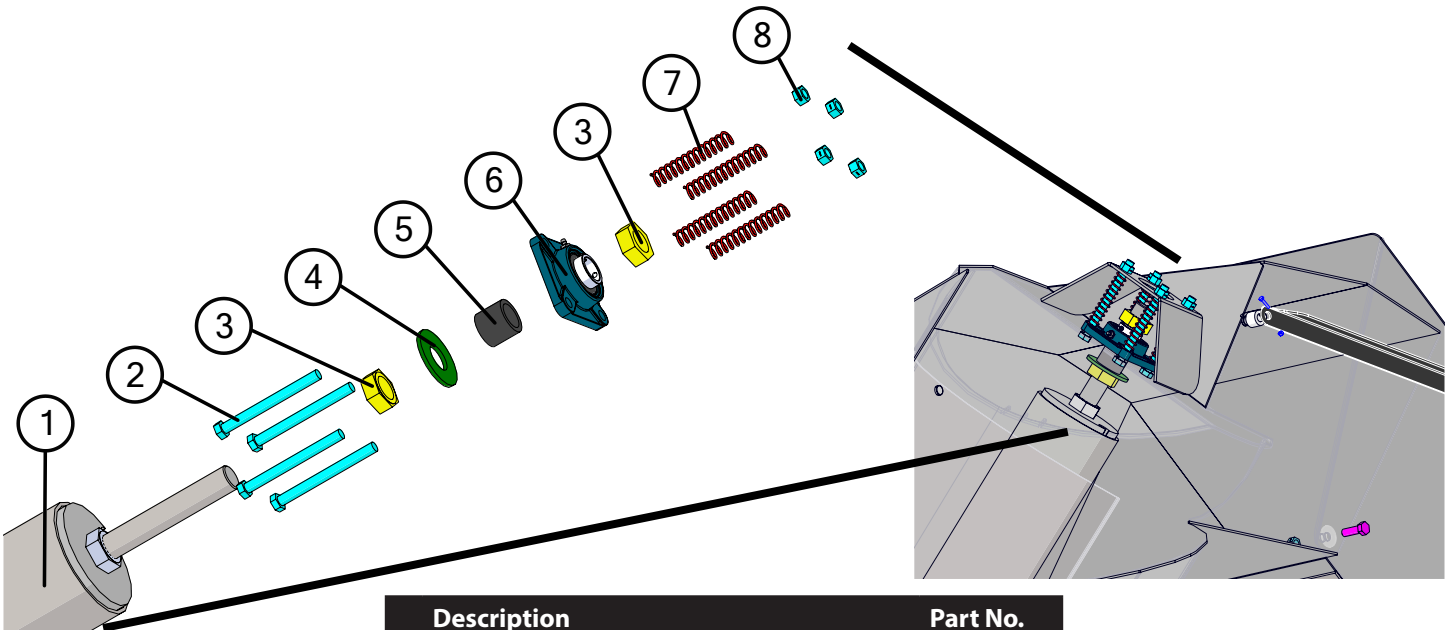


\*-R = Red  
 \*-B = Blue  
 \*-G = Green  
 \*-Y = Yellow  
 \*-BLK = Black

	Description	Part No.
1	20" Upper Flighting (All 20" 12-Series) (154-3/4")	JM0035058
2	20" Upper Auger Tube Weldment (12 Series)	JM0035994*
3	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
4	Upper Auger Rest Plate	JM0034981
5	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092

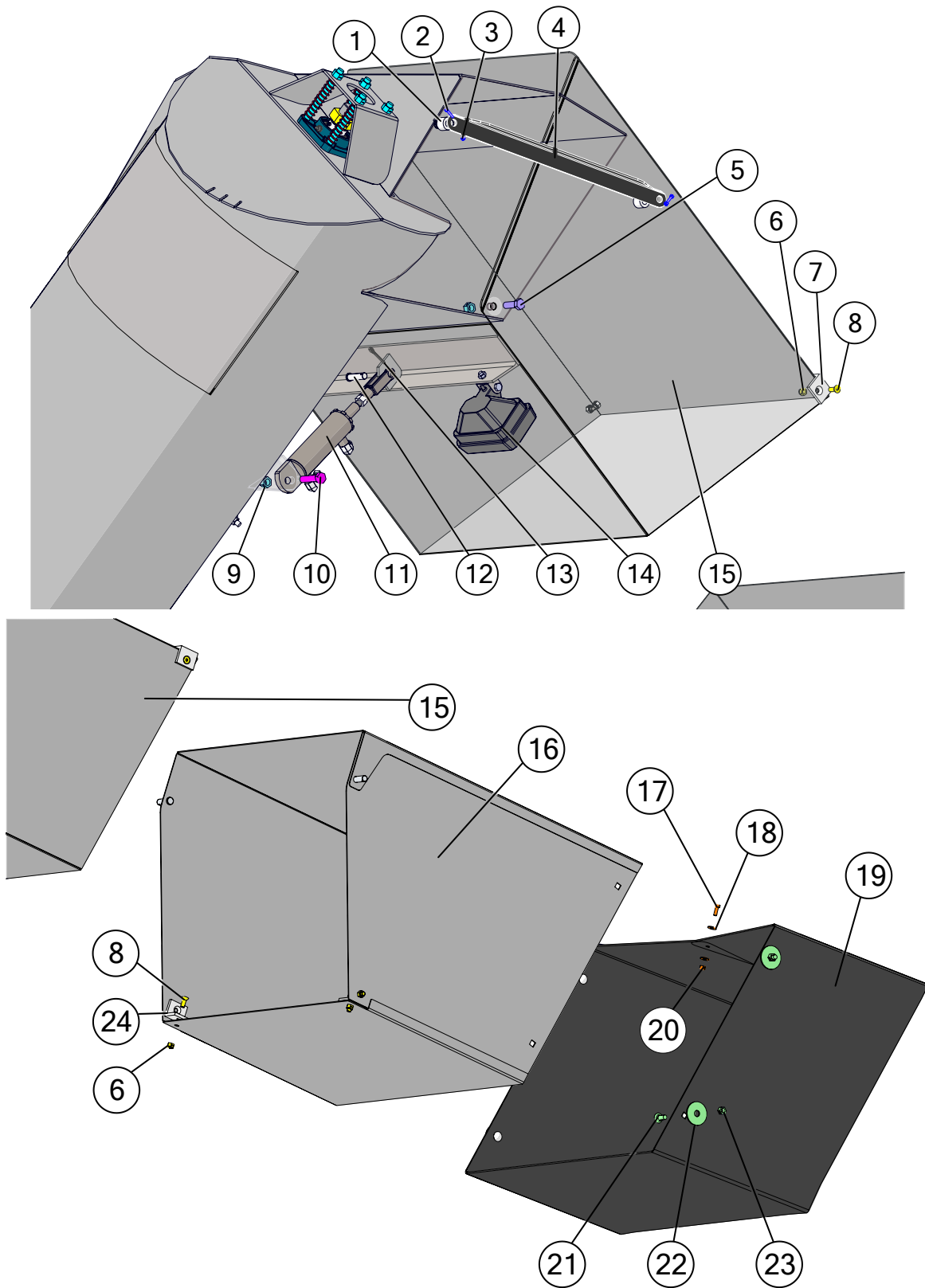
When requesting an item with color, end the part number with -R, -B, -G, -Y, or -BLK. (e.g. JM0000000-R)

## Upper Auger Bearing Assembly



	Description	Part No.
1	20" Upper Flighting (All 20" 12-Series) (154-3/4")	JM0035058
2	1/2"-13 x 5-1/2" Gr5 Z Hex Bolt	JM0001498
3	1-1/4"-12 PN Gr5 Hex Jam Nut	JM0001606
4	1-3/8", ID 3" OD Flat Washer	JM0015731
5	Top Auger Collar (1-3/4" OD x 1-1/2" Lg)	JM0021646
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

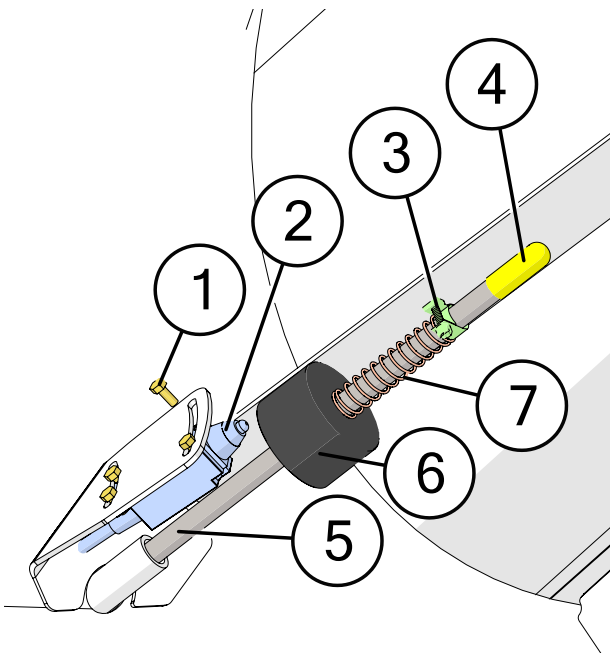
# Spout Assembly



# Spout Assembly

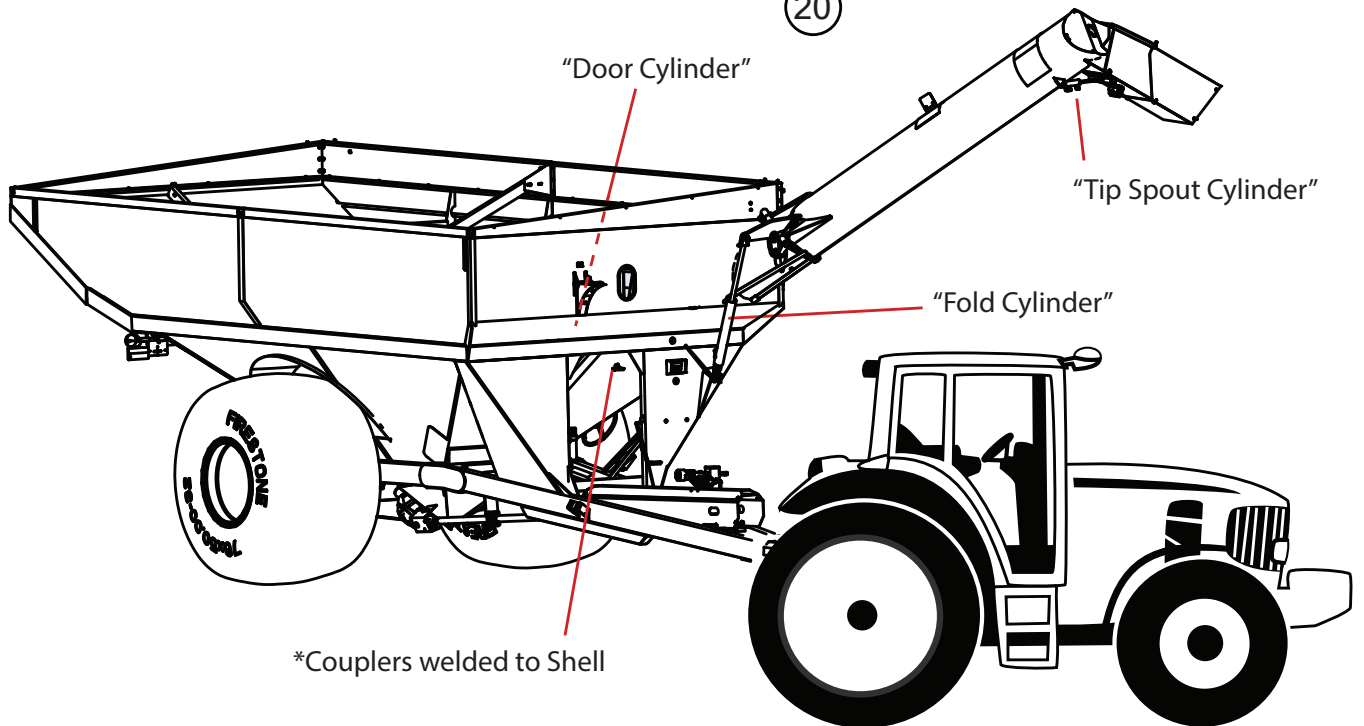
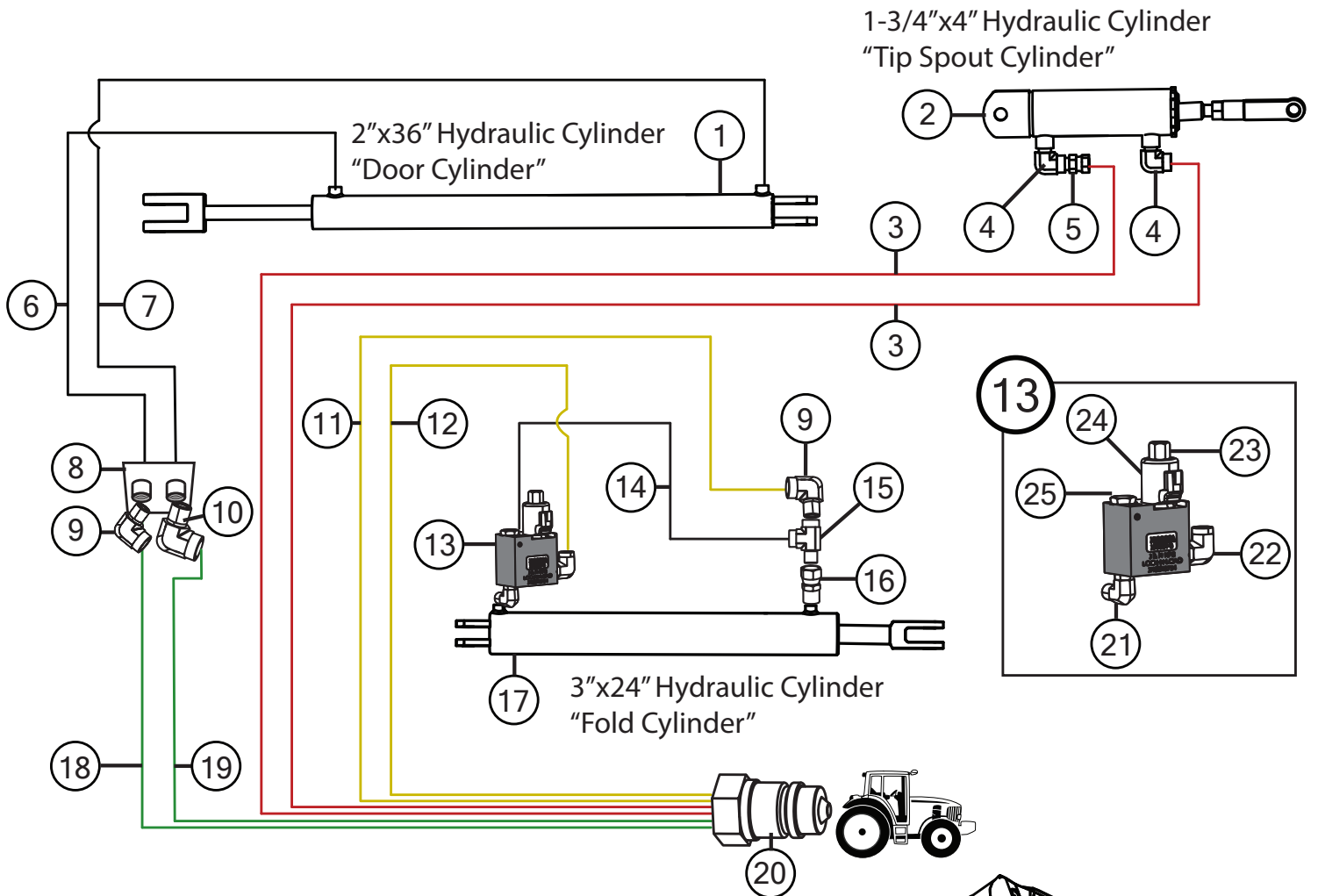
	Description	Part No.
1	1" OD 33/64" ID x 3/4" L Black UV Nylon Spacer	JM0001962
2	M4-0.7 x 20 Gr8.8 Z Hex Bolt	JM0049074
3	M4-0.7 Gr8.8 YZ Nylon Locking Hex Nut	JM0049075
4	Telescoping Spout Main Linkage Rod	JM0034363
5	1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
6	5/16" - 18 Gr5 Z Nylon Locking Hex Nut	JM0049059
7	Spout Guide (Nylon)	JM0035132
8	5/16"-18 x 5/8" Flat Head Bolt Z	JM0024963
9	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
10	1/2"-13 x 2" Gr5 Z Hex Bolt	JM0001593
11	1-3/4" x 4" Hydraulic Cylinder (1/2" Clevis and Tab Ends) (HC-FCS)	JM0018564
12	1/2" x 1-3/4" Clevis Pin, Usable Length 1-1/2"	JM0018264
13	5/32" x 1-1/2" Cotter Pin	JM0014348
14	LED Field Light with Bullet Connector	JM0050949
15	Inner Tip Spout (12 & 22-Series)	JM0034291
16	Outer Tip Spout (12 & 22-Series)	JM0034365
17	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
18	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
19	4-Sided Telescoping Spout Rubber Extension (20") (12 & 22-Series)	JM0034417
20	1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
21	3/8"-16 x 1" Gr5 Z Carriage Bolt	JM0001632
22	1/2" ID x 2-1/4" OD Flat Washer - 1/8" Thick	JM0019081
23	3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
24	UHMW - 0.25 Angle Iron - Spout Guide	JM0034308
25	12 Series Tip Spout Assembly	JM0048158

# Lock and Load Switch Assembly



	Description	Part No.
1	M5-0.8 x 12 Gr8.8 Z Hex Bolt	JM0036046
2	Limit Switch for Lock and Load (72" Long Cable)	JM0046717
3	0.53125 to 0.59375 Bolt Hose Clamp - SS	JM0046697
4	S-Cap Yellow - 1/2" ID x 1-1/4" x .065" (REC-1)	JM0016842
5	1/2" Gate Indicator Rod Weldment (127-1/2" Rod Length) (1312-1522)	JM0044965
6	Lock and Load Switch Trigger	JM0044793
7	0.72 OD, 3" Free Length 0.059 Wire Compression Spring	JM0045011

# Hydraulic Hoses & Cylinders

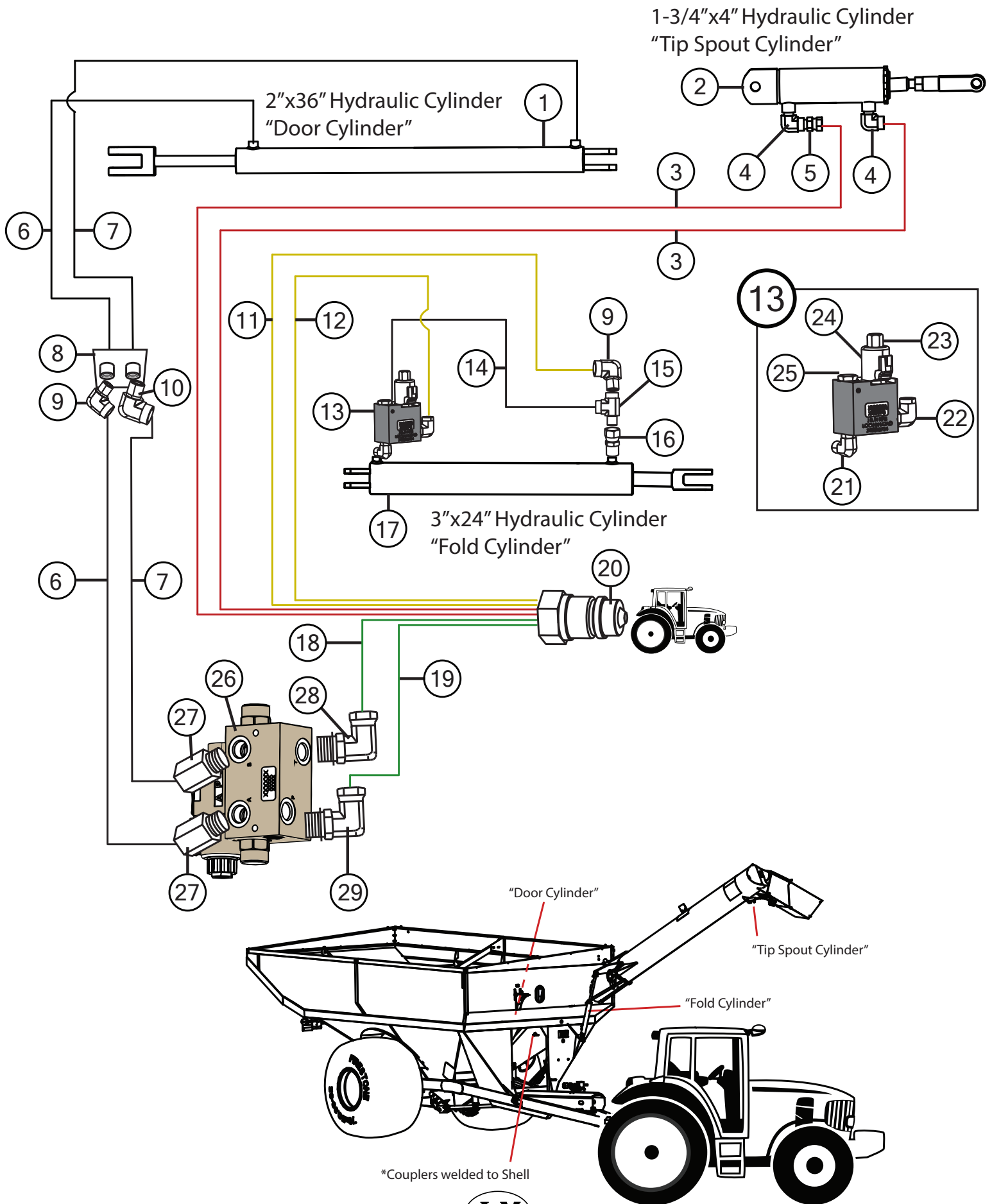


# Hydraulic Hoses & Cylinders

	Description	Part No.
1	2" x 36" Hydraulic Cylinder (JD236)	JM0018523
1	Seal Kit for 2" x 36" Hydraulic Cylinder (JD472)	JM0026544
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 478" Hydraulic Hose 478inch4M3k-4G-8MP-4G-4MP	JM0046246
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 43inch4M3k-4G-6MPX-4G-6MP	JM0024904
7	1/2" x 43" Hydraulic Hose 43inch8M3k-8G-8MPX-8G-6MP	JM0024906
8	3/8" Standard Coupling	JM0019562
8	1/2" Standard Coupling	JM0020407
9	3/8" Male NPT x 3/8" Female NPT; 90 Degree Elbow	JM0030059
10	1/2" Male NPT x 1/2" Female NPT; 90 Degree Elbow	JM0047371
11	1/4" x 304" Hydraulic Hose 304inch4M3k-4G-8MP-4G-6MP	JM0046245
12	1/4" x 286" Hydraulic Hose 286inch4M3k-4G-8MP-4G-6MP	JM0047274
13	Lock N Load Assembly	JM0048754
14	1/4" x 21" Hydraulic Hose 21inch4M3k-4G-4MP-4G-6MPX	JM0024896
15	3/8" Male NPT x 3/8" Female NPT x 3/8" Female NPT; Street T	JM0018266
16	3/8" Male NPT x 3/8" Female NPT Swivel with .062 Orifice (Restrictor)	JM0018362
17	3" x 24" x 1-1/2" Welded Cylinder (JD324)	JM0019644
17	Seal Kit 3" x 24" Cylinder (JD324-1) (JD480)	JM0037895
18	1/4" x 236" Hydraulic Hose 236inch4M3k-4G-6MPX-4G-8MP	JM0046664
19	1/2" x 236" Hydraulic Hose 236inch8M3k-8G-8MP-8G-8MPX	JM0047376
20	1/2" Female NPT Pioneer (PQC-1)	JM0018254
21	3/8" Male ORB x 3/8" Male NPT; 90 Degree Elbow	JM0047350
22	1/2" Male ORB x 3/8" Female NPT; 90 Degree Elbow	JM0047348
23	Solenoid Valve for Lock and Load (Black)	JM0026256
24	Solenoid Coil for Lock and Load (Black)	JM0026255
25	Check Valve for Lock and Load (Black)	JM0026250



# Hydraulic Hoses & Cylinders for Auto-Gate Shut-Off

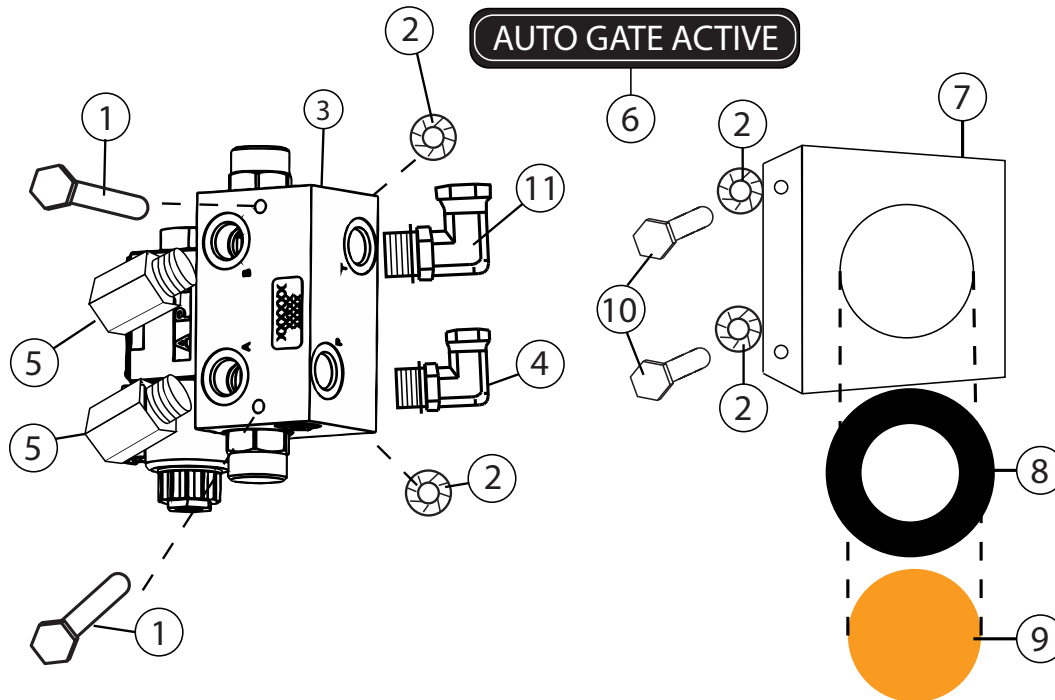




# Hydraulic Hoses & Cylinders for Auto-Gate Shut-Off

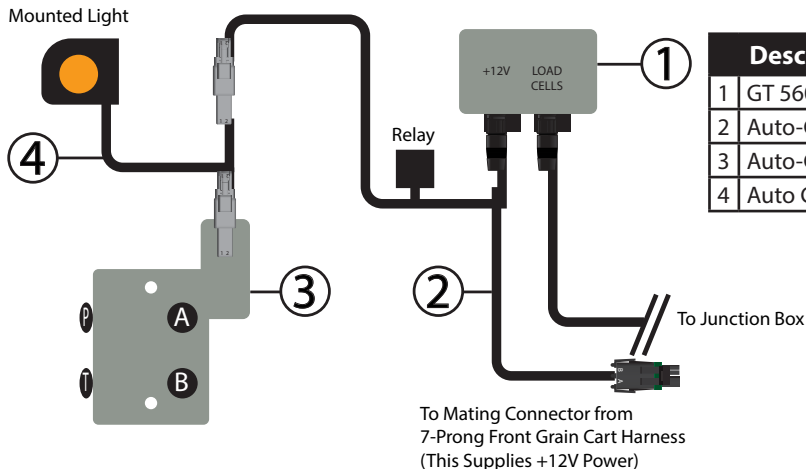
	Description	Part No.
1	2" x 36" Hydraulic Cylinder (JD236)	JM0018523
1	Seal Kit for 2" x 36" Hydraulic Cylinder (JD472)	JM0026544
2	1-3/4" x 4" Hydraulic Cylinder (1/2" Clevis and Tab Ends) (HC-FCS)	JM0018564
2	Seal Kit for 1-3/4" x 4" Cylinder (SKHC-FCS) (JD459)	JM0024892
3	1/4" x 478" Hydraulic Hose 478inch4M3k-4G-8MP-4G-4MP	JM0046246
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 43inch4M3k-4G-6MPX-4G-6MP	JM0024904
7	1/2" x 43" Hydraulic Hose 43inch8M3k-8G-8MPX-8G-6MP	JM0024906
8	3/8" Standard Coupling	JM0019562
8	1/2" Standard Coupling	JM0020407
9	3/8" Male NPT x 3/8" Female NPT; 90 Degree Elbow	JM0030059
10	1/2" Male NPT x 1/2" Female NPT; 90 Degree Elbow	JM0047371
11	1/4" x 304" Hydraulic Hose 304inch4M3k-4G-8MP-4G-6MP	JM0046245
12	1/4" x 286" Hydraulic Hose 286inch4M3k-4G-8MP-4G-6MP	JM0047274
13	Lock N Load Assembly	JM0048754
14	1/4" x 21" Hydraulic Hose 21inch4M3k-4G-4MP-4G-6MPX	JM0024896
15	3/8" Male NPT x 3/8" Female NPT x 3/8" Female NPT; Street T	JM0018266
16	3/8" Male NPT x 3/8" Female NPT Swivel with .062 Orifice (Restrictor)	JM0018362
17	3" x 24" x 1-1/2" Welded Cylinder (JD324)	JM0019644
17	Seal Kit 3" x 24" Cylinder (JD324-1) (JD480)	JM0037895
18	1/4" x 236" Hydraulic Hose 236inch4M3k-4G-6MPX-4G-8MP	JM0046664
19	1/2" x 236" Hydraulic Hose 236inch8M3k-8G-8MP-8G-8MPX	JM0047376
20	1/2" Female NPT Pioneer (PQC-1)	JM0018254
21	3/8" Male ORB x 3/8" Male NPT; 90 Degree Elbow	JM0047350
22	1/2" Male ORB x 3/8" Female NPT; 90 Degree Elbow	JM0047348
23	Solenoid Valve for Lock and Load (Black)	JM0026256
24	Solenoid Coil for Lock and Load (Black)	JM0026255
25	Check Valve for Lock and Load (Black)	JM0026250
26	Auto-Gate Hydraulic Valve	JM0026247
27	3/8" Female NPT x 1/2" Male ORB; Straight	JM0034657
28	1/2" Male ORB x 1/2" Female NPT Swivel; 90 Degree Elbow	JM0047392
29	1/2" Male ORB x 3/8" Female NPT Swivel; 90 Degree Elbow	JM0027285

# Auto-Gate Shut-Off Assembly



	Description	Part No.
1	1/4"-20 x 3-1/2" Gr5 Z Hex Bolt	JM0046621
2	1/4"-20 Gr5 Z SF Hex Nut	JM0001630
3	Auto-Gate Hydraulic Valve	JM0026247
4	1/2" Male ORB x 3/8" Female NPT Swivel; 90 Degree Elbow	JM0027285
5	3/8" Female NPT x 1/2" Male ORB; Straight	JM0034657
6	Auto Gate Active Decal	JM0046612
7	3-1/2" Round LED Mount	JM0034956
8	3-1/2" Round LED Grommet	JM0001902
9	3-1/2" Amber Round LED Light	JM0001895
10	1/4"-20 x 3/4" Gr5 Z SF Hex Bolt	JM0001642
11	1/2" Male ORB x 1/2" Female NPT Swivel; 90 Degree Elbow	JM0047392

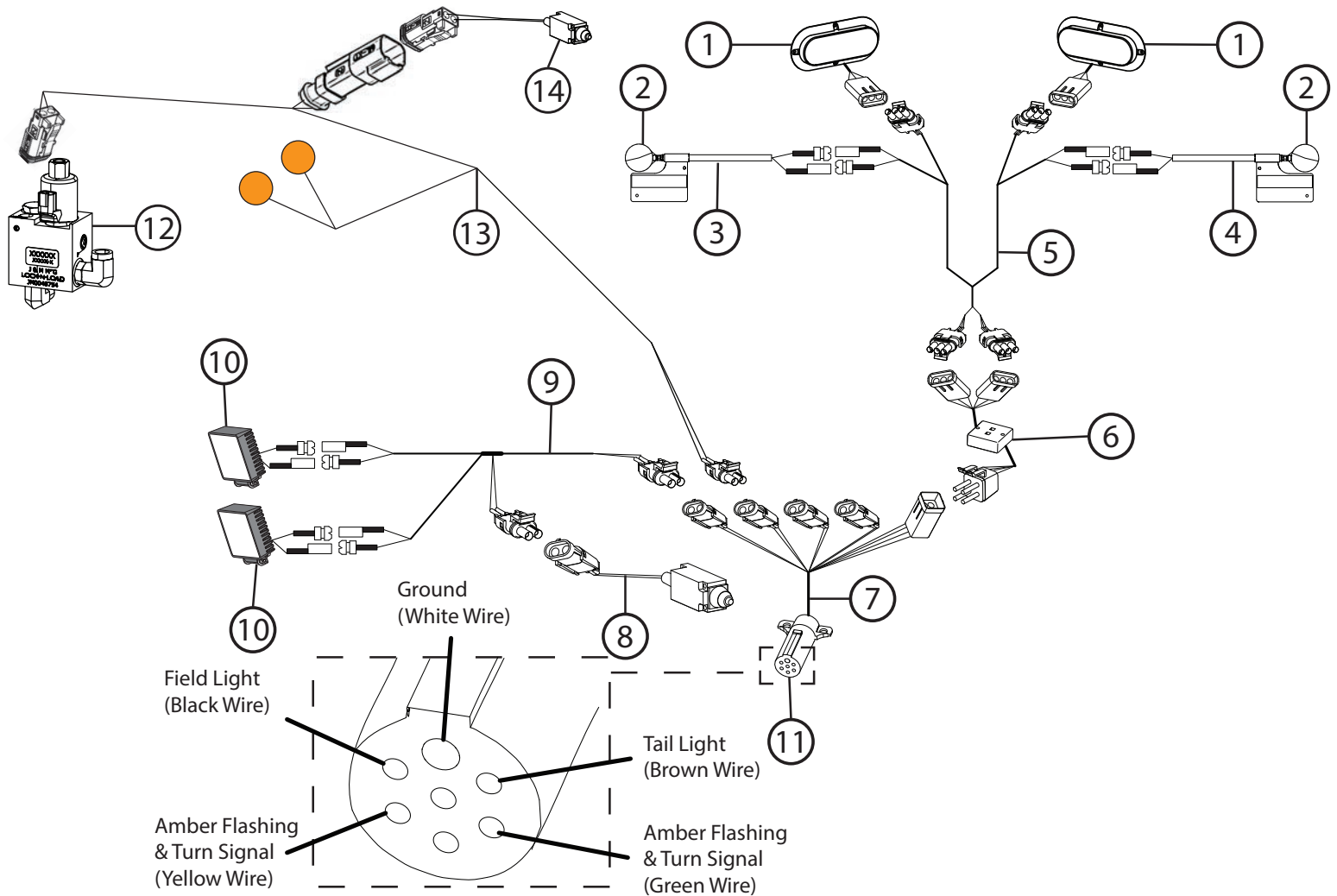
# Auto-Gate Shut-Off Wiring Schematic



	Description	Part No.
1	GT 560 Digi-Star Scale Display Monitor	JM0044177
2	Auto-Gate Harness (Standard GT 560)	JM0026813
3	Auto-Gate Hydraulic Valve	JM0026247
4	Auto Gate Light Harness (LED Light "Y" Cable)	JM0046624

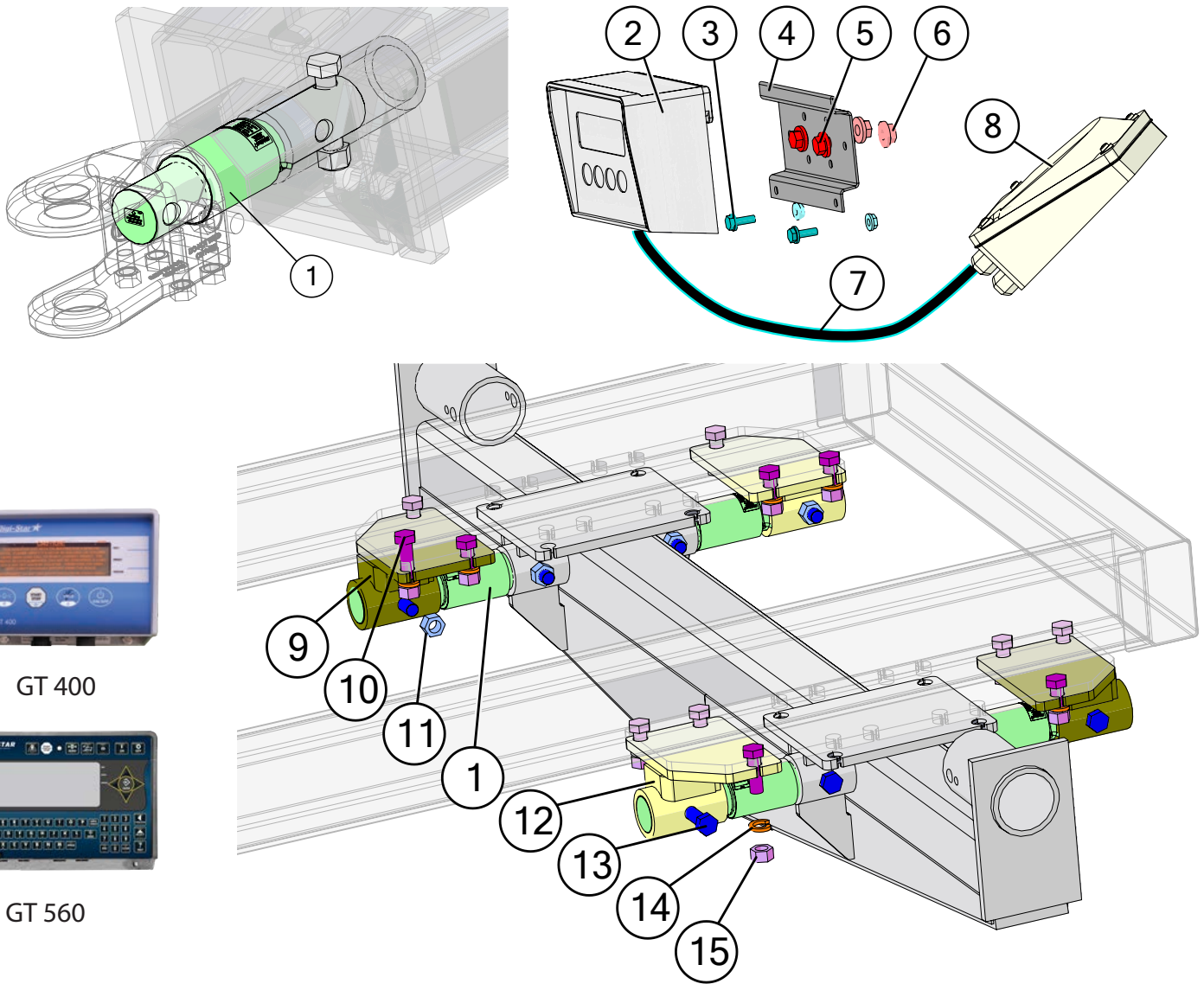
Note: Mount the hydraulic valve after all the hoses are attached but not tightened. This will ensure the hoses will reach.

# 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 Limit Switch for Field Light (ME-8111)	JM0036040
9 Field Light Wire (Limit Switch)	JM0048128
10 LED Field Light with Bullet Connector	JM0050949
11 7-Prong Connector	JM0010528
12 Lock and Load Assembly	JM0048754
13 Grain Cart Lock and Load Harness	JM0044755
14 Limit Switch for Lock and Load - 72" Long Cable	JM0046717

# 5-Point Scale System for Single Wheel Bolt on Axles



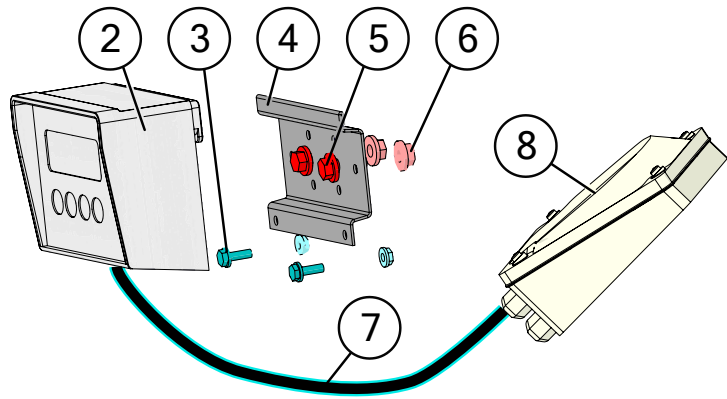
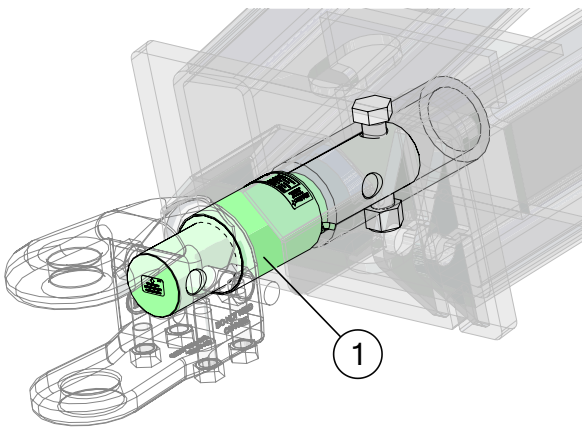
GT 400



GT 560

Description	Part No.
1 2-7/8" Digi-Star Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
2 GT 400 Digi-Star Scale Display Monitor	JM0019040
2 GT 560 Digi-Star Scale Display Monitor	JM0044177
3 1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
4 GT 560 Scale Monitor Display Bracket	JM0046976
4 GT 400 Scale Monitor Display Bracket	JM0000361
5 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
6 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
7 8' Cable from J-Box to Indicator (Digi-Star)	JM0047238
8 Digi-Star 6-Point Junction Box (JB-5)	JM0019038
9 2-7/8" Weigh Bar Weldment, Rear Left, Front Right (6-1/8" Spool)	JM0000354
10 1"-8 x 3" Gr5 Z Hex Bolt	JM0016686
11 1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
12 2-7/8" Weigh Bar Weldment, Rear Right, Front Left (6-1/8" Spool)	JM0018985
13 1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
14 1" Zinc Finish Lock Washer	JM0019203
15 1"-8 Gr5 Z Hex Nut	JM0002127
16 30' Extension Cable Kit (Load Cell and Power) (ECI-3)	JM0041218
17 Flash Drive Memory Stick for Digi-Star GT 560 (114991)	JM0025819

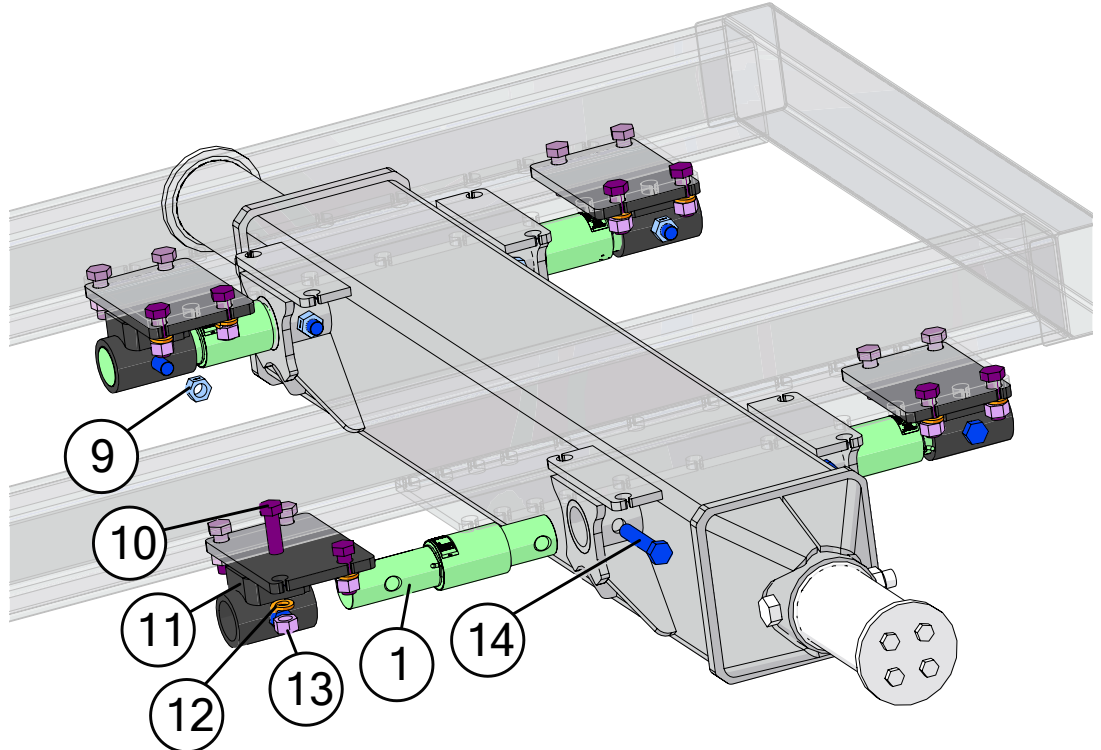
## 5-Point Scale System for Tracks



GT 400



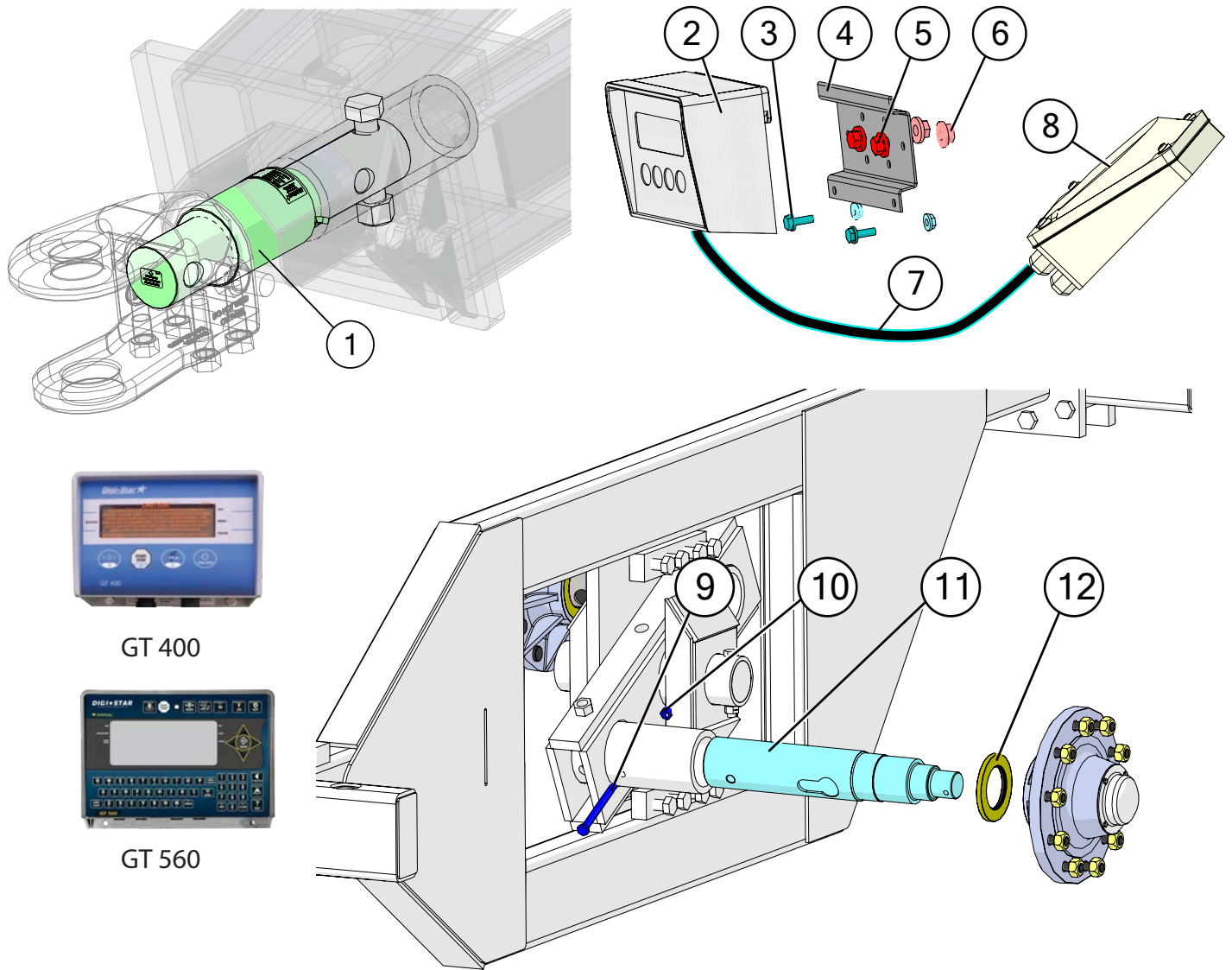
GT 560



	Description	Part No.
1	2-7/8" Digi-Star Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
2	GT 400 Digi-Star Scale Display Monitor	JM0019040
2	GT 560 Digi-Star Scale Display Monitor	JM0044177
3	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
4	GT 560 Scale Monitor Display Bracket	JM0046976
4	GT 400 Scale Monitor Display Bracket	JM0000361
5	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
6	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
7	8' Cable from J-Box to Indicator (Digi-Star)	JM0047238
8	Digi-Star 6-Point Junction Box (JB-5)	JM0019038
9	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
10	1"-8 x 3" Gr5 Z Hex Bolt	JM0016686
11	2-7/8" Weigh Bar Weldment for Track Beam (6-1/8" Spool)	JM0036176
12	1" Zinc Finish Lock Washer	JM0019203
13	1"-8 Gr5 Z Hex Nut	JM0002127
14	1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
15	30' Extension Cable Kit (Load Cell and Power) (ECI-3)	JM0041218
16	Flash Drive Memory Stick for Digi-Star GT 560 (114991)	JM0025819

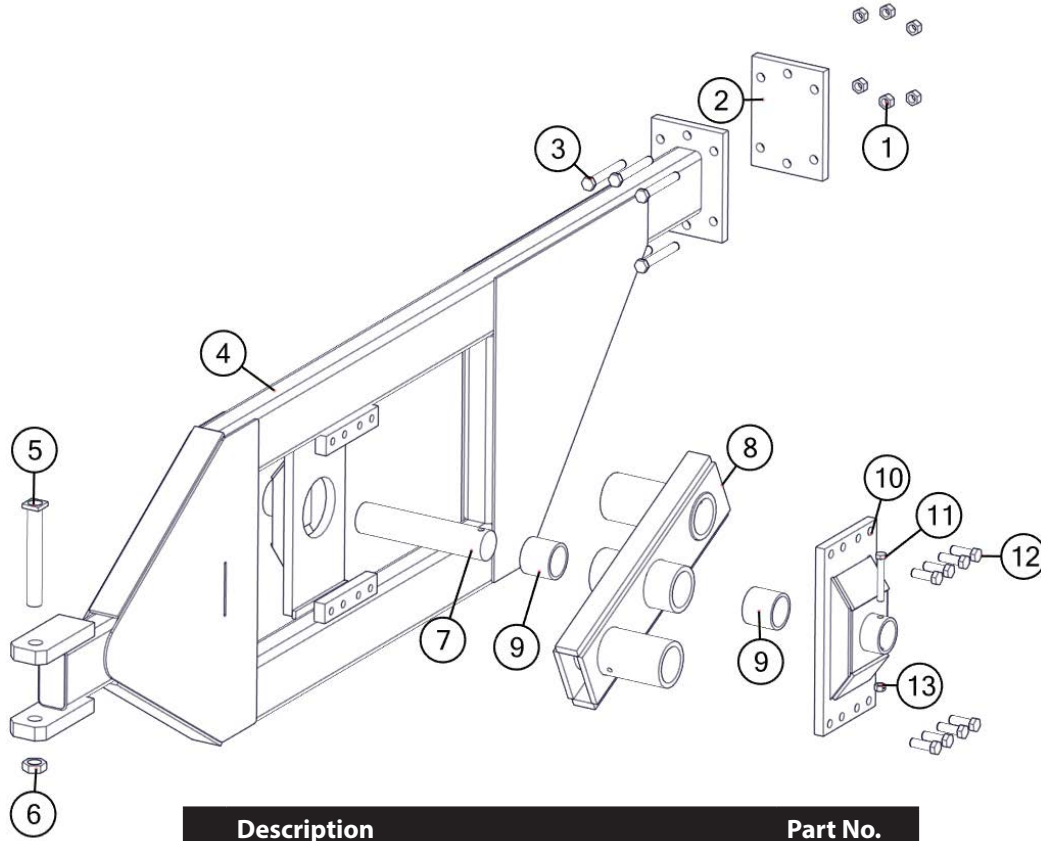


# 5-Point Scale System for Walking Tandem Dual Wheels



Description	Part No.
1 2-7/8" Weigh Bar, Weigh-Tronix (1" Hole) (278WB)	JM0019969
2 GT 400 Digi-Star Scale Display Monitor	JM0019040
2 GT 560 Digi-Star Scale Display Monitor	JM0044177
3 1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
4 GT 560 Scale Monitor Display Bracket	JM0046976
4 GT 400 Scale Monitor Display Bracket	JM0000361
5 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
6 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
7 15' Cable from J-Box to Indicator (Weigh-Tronix)	JM0050445
8 Avery Weigh-Tronix 5-Point Junction Box (JB-5-WT)	JM0019960
9 5/8"-11 x 6.5" Gr8 YZ Hex Bolt	JM0050351
10 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
11 4-1/2" Weigh-Tronix Weigh Spindle (AWT27-500002) (450WTS)	JM0019970
12 Seal (4-1/4" ID, 6" OD) for Hub (CR-43771)	JM0018955
13 30' Extension Cable Kit (Load Cell and Power) (ECI-3)	JM0041218
14 Flash Drive Memory Stick for Digi-Star GT 560 (114991)	JM0025819

# Walking Tandem Dual Wheel Assembly

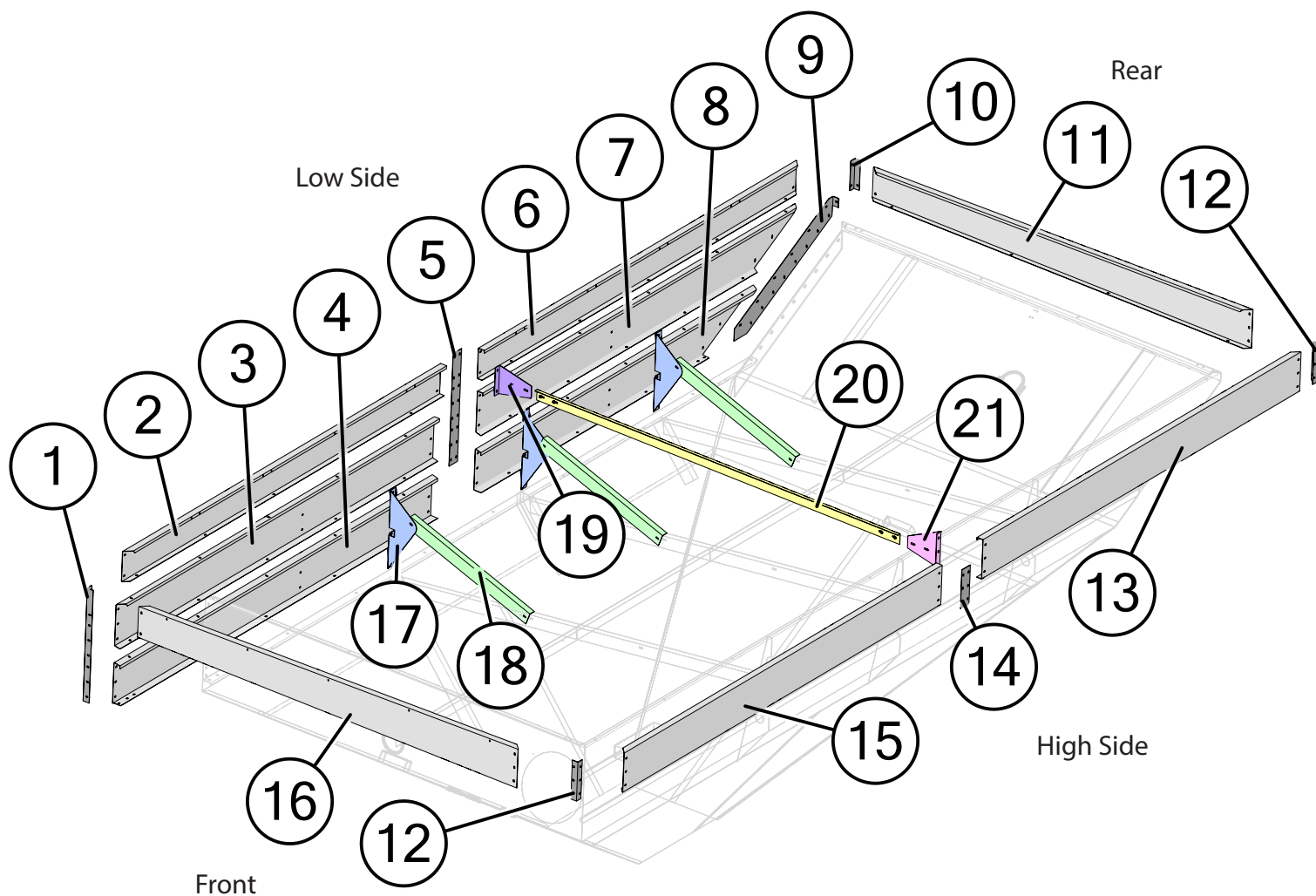


	Description	Part No.
1	1"-14 Gr8 YZ Hex Nut	JM0019926
2	1-1/4" x 8" x 14" Walker Frame Clamp Plate (114814CP)	JM0010145
3	1"-14 x 7-1/2" Gr8 YZ Hex Bolt	JM0019925
4	Walker Main Frame Weldment (Left) (FW-1L)	JM0019922*
4	Walker Main Frame Weldment (Right) (FW-1R)	JM0010082*
5	1-3/4" x 13-1/2" Bolt (1341312HB)	JM0019981
6	1-3/4"-12 Z Gr5 Hex Jam Nut	JM0009752
7	3-3/4" x 17-1/2" Pivot Pin (334PP)	JM0019928
8	Walker - Triple Pivot Weldment - OAS (PBW-1R)	JM0010170*
8	Walker - Triple Pivot Weldment - AS (PBW-1L)	JM0025721*
9	3-3/4" ID, 4-1/2" OD Bronze Bushing (4" Lg) (BB-334)	JM0010570
10	Walker Pivot Center Weldment (PCW-1)	JM0010076*
11	3/4"-10 x 5-1/2" Gr5 Z Hex Bolt	JM0015522
12	1"-14 x 3" Gr8 YZ Hex Bolt	JM0019924
13	3/4"-10 Gr2 Z Centerlock Hex Nut	JM0002147

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

When requesting an item with color, end the part number with -R, -B, -G, -Y, or -BLK. (e.g. JM0000000-R)

# Sideboards



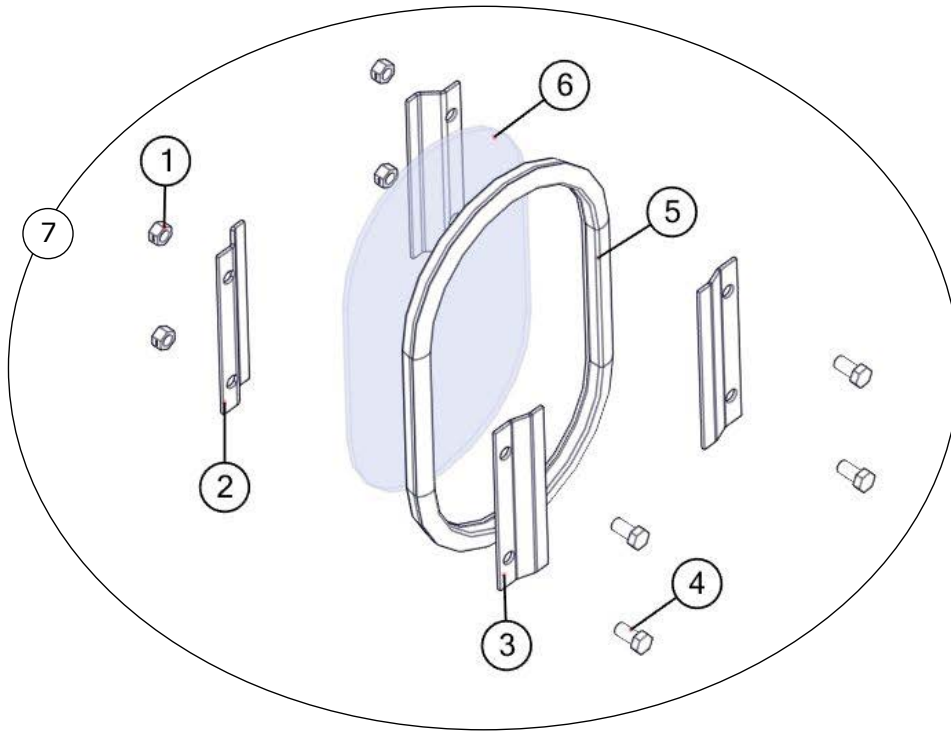
\*-R = Red  
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 \*-G = Green  
 \*-Y = Yellow  
 \*-BLK = Black

When requesting an item with color, end the part number with -R, -B, -G, -Y, or -BLK. (e.g. JM0000000-R)



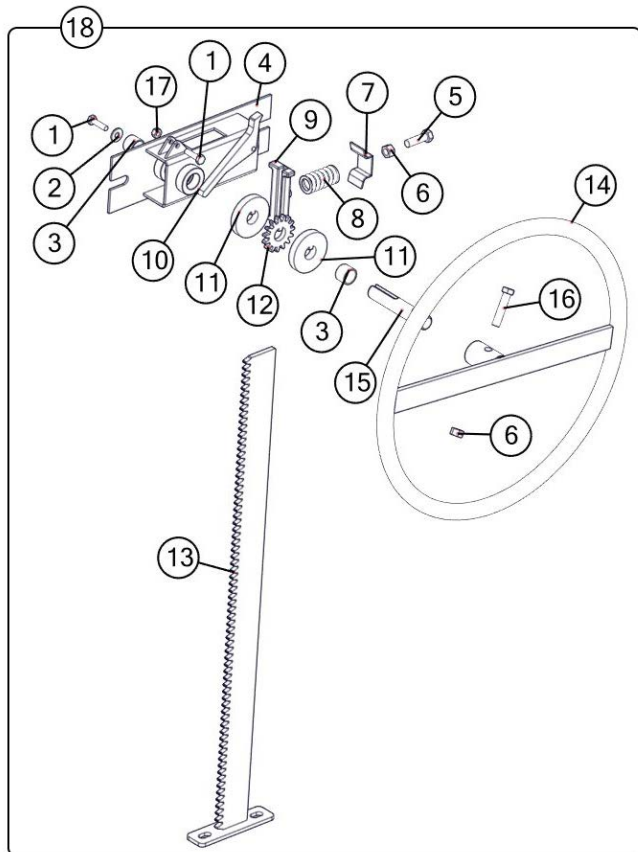
	Description	Part No.
1	Front Corner Uni Shell 1412	JM0053917
2	Front Low Sideboard 153" x 10-1/4" (1412, 1401)	JM0020609*
3	Front High Uni Shell Panel (1312, 1412)	JM0053899*
4	Front Low Uni Shell Panel (1312, 1412)	JM0053895*
5	37-5/8" Low Splice Uni Shell (1412)	JM0053916
6	Back Low Sideboard 153" x 10-1/4" (1412, 1401)	JM0020606*
7	Back Top Uni Shell Panel (1312, 1412)	JM0053901*
8	Back Low Uni Shell Panel (1312, 1412)	JM0053900*
9	Back Splice Plate Uni Shell (1312, 1412)	JM0053919
10	Low Sideboard Corner 10" (1412, 1401, 1432)	JM0020613
11	Back Endboard 141" x 13" (1412, 1401)	JM0020605*
12	High Sideboard Corner 13" (1312, 1412, 1522, 1326, 1401) (TTE-1325HSC)	JM0009700
13	Back Half High Sideboard 153" x 13-1/4" (1312, 1412, 1522, 1326, 1401) (TTE-1325HSR)	JM0017484*
14	High Sideboard Splice 13" x 4" (1312, 1412, 1522, 1326, 1401) (TTE-1325HSP)	JM0009702
15	Front Half High Sideboard 153" x 13-1/4" (1312, 1412, 1522)	JM0020342*
16	Front Endboard (1412)	JM0027697*
17	Uni Shell Gusset for (1312, 1412)	JM0053936
18	Inside Grain Cart Brace 48"	JM0029921
19	Low Sideboard Brace End 9-1/2" (1412, 1401)	JM0020611
20	Sideboard Brace 135" (1012, 1112, 1412, 620, 1000-1151, 1401)	JM0020624
21	High Sideboard Brace Plate 12-1/2" (1312, 1412, 1326, 1401)	JM0021202
22	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
23	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
24	3/8"-16 x 1" Gr5 Z Pan Head Bolt	JM0002892
25	7/16" ID x 2-1/2" OD x 1/8" Z USS Flat Washer	JM0018982
26	1412 Sideboard Set Complete	JM0041391*

## Inspection Windows



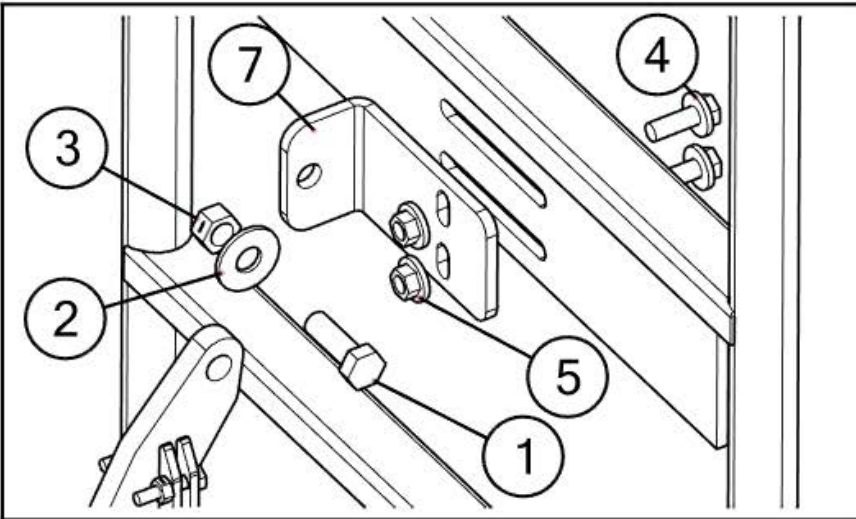
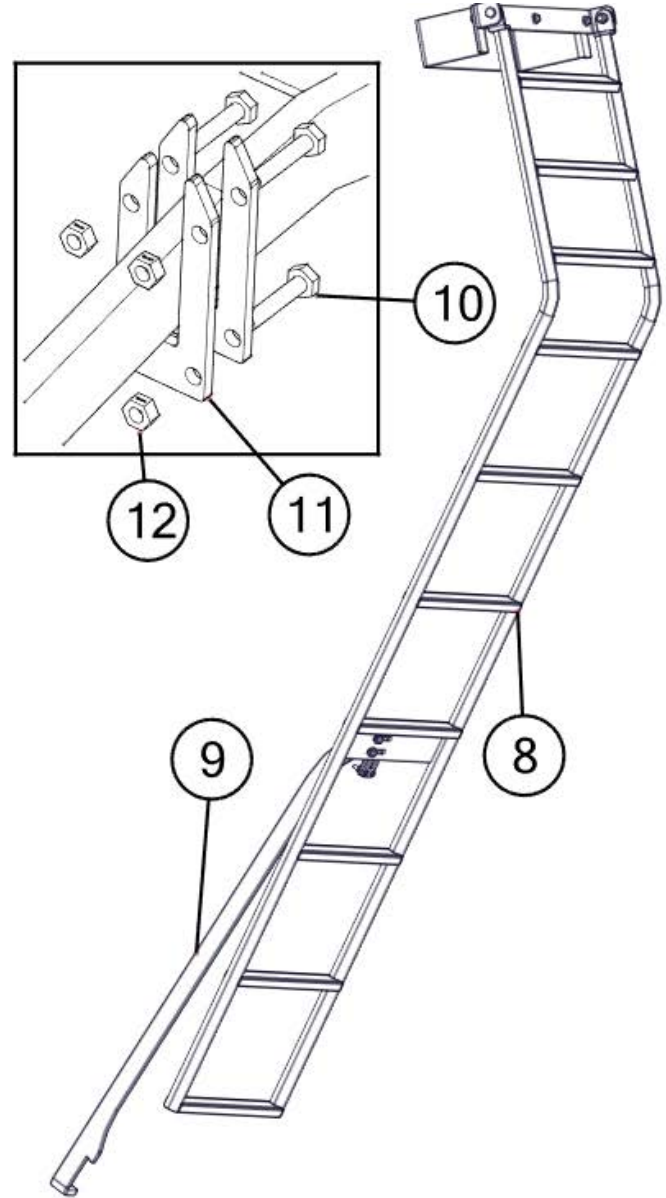
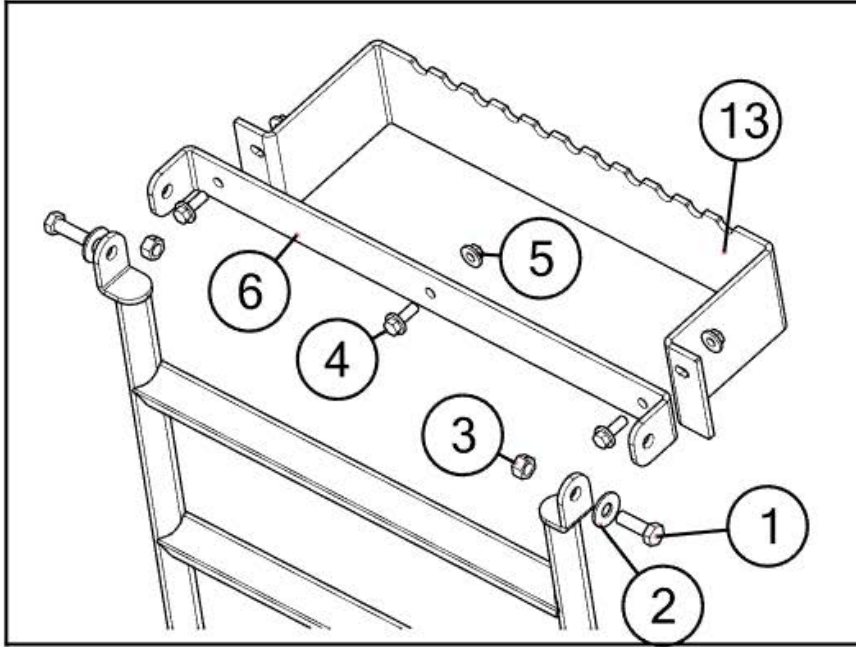
	Description	Part No.
1	3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
2	Inside Window Clip - Deep	JM0000253
3	Outside Window Clip - Shallow	JM0000256
4	3/8"-16 x 3/4" Gr5 Z Hex Bolt	JM0001663
5	Window Seal 3/4" S' Strip	JM0000254
6	Standard Inspection Window	JM0000255
7	Inspection Window Kit	JM0025752

## Door Wheel Assembly



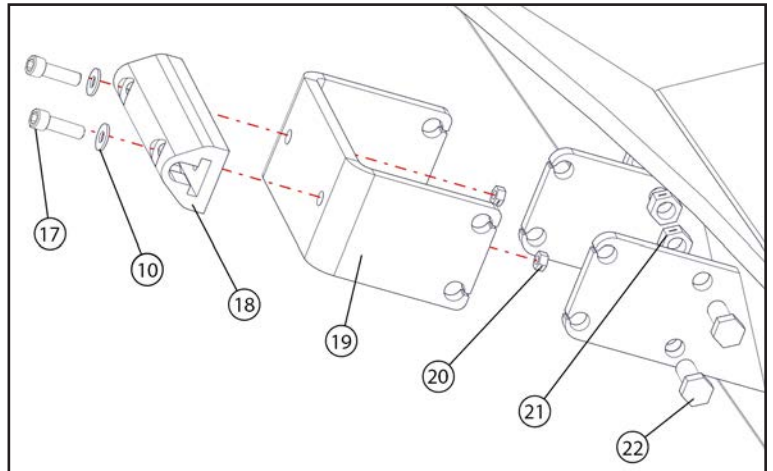
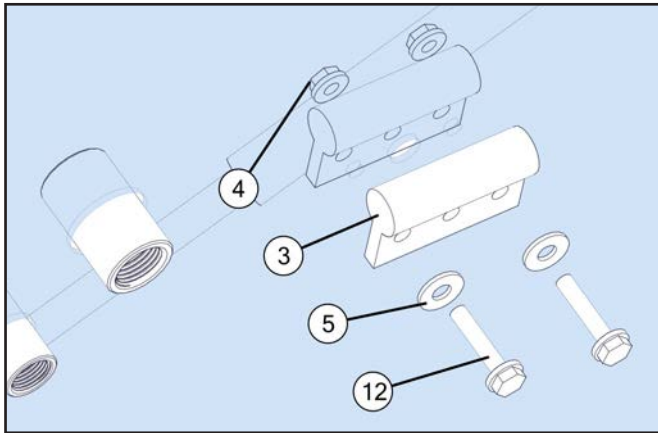
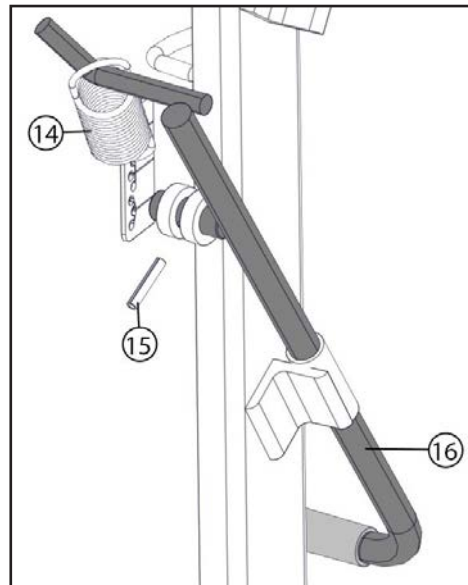
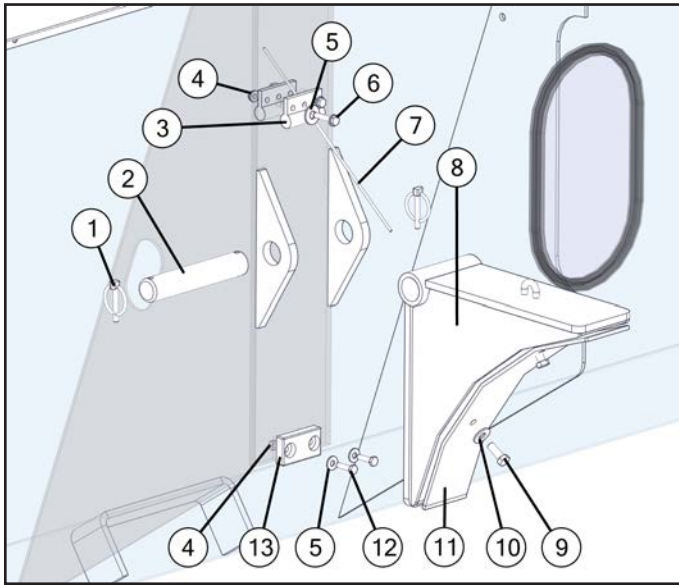
	Description	Part No.
1	1/4"-20 x 1" Gr5 Z Hex Bolt	JM0002095
2	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
3	.754 ID x .874 OD x .625 LG Bronze Bushing (BB-34)	JM0009455
4	Nylon Guided Rack Housing Weldment	JM0030635
5	3/8"-16 x 1-1/4" Gr5 Z Hex Bolt	JM0016675
6	3/8"-16 Gr5 Z Hex Nut	JM0001707
7	Scrubber 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	JM0029354
10	Flip Lock For Door Rack	JM0029459
11	Keyway Washer for Door Rack	JM0029454
12	15 Tooth Sprocket - 3/4" Bore w/ Key	JM0029455
13	Rack Track Weldment for Door (27-1/2")	JM0030634
14	Rack Wheel Weldment	JM0028897
15	Stub Shaft 3/4" x 4 1/8" w/ Threaded End	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 (27-1/2") (2016 & Newer)	JM0029460

# Ladder Assembly



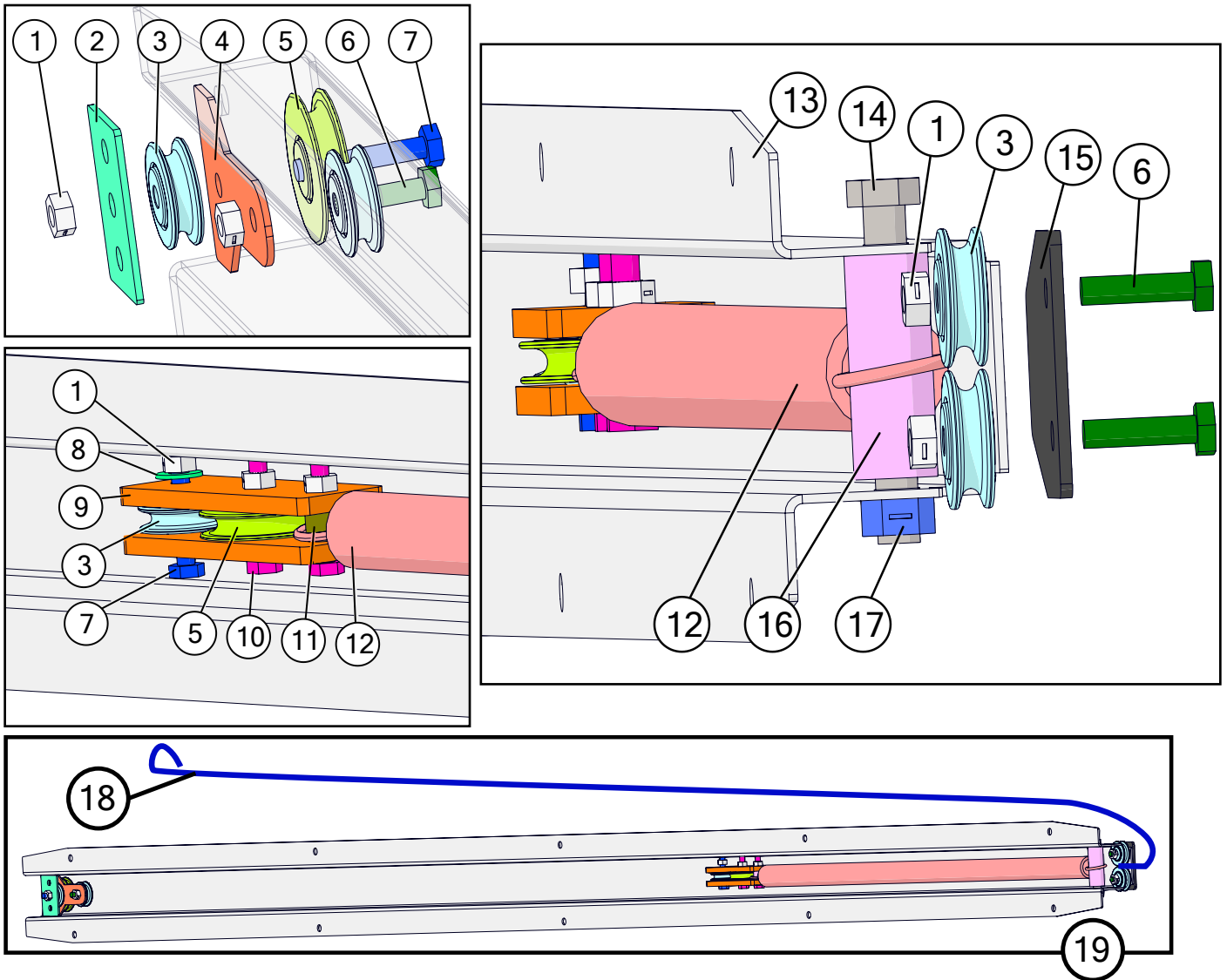
Description	Part No.
1 1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
2 1/2" ID, 1-3/8" OD Z Flat Washer	JM0003082
3 1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
4 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
5 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
6 Side Swing Ladder Mount Bracket	JM0012865
7 Swing Out Ladder Adjustable Tab	JM0020977
8 12 and 22 Series Ladder	JM0012858
9 Ladder Support Leg	JM0012926
10 1/4"-20 x 1-1/4" Gr5 Z Hex Bolt	JM0016673
11 Ladder Guide - 3/16" Thick	JM0021947
12 1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
13 Inside Step - 12 Series Ladder	JM0035078

# Auger Rest Assembly



Description	Part No.
1 1/4" Diameter Snap Ring	JM0001870
2 Flip Up Auger Rest Pin (6-7/8" x 1-1/4")	JM0028218
3 Cable Guide for X-tended Reach Auger Rest	JM0046922
4 1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
5 1/4" ID, 3/4" OD Z Flat Washer	JM0003090
6 1/4"-20 x 2" Gr5 Z Hex Bolt	JM0001591
7 1/8" Auger Rest Cable	JM0037202
8 Flip Up Auger Rest - Long Fold	JM0020538
9 3/8"-16 x 1" Gr5 Z Hex Bolt	JM0001592
10 3/8" ID, 1" OD Z Flat Washer	JM0003061
11 3" x 17-1/2" Auger Rest Guide Plate UHMW	JM0024456
12 1/4"-20 x 1-1/2" Gr5 Z Hex Bolt	JM0002447
13 2-3/4" x 1-1/2" Rest Pad	JM0020802
14 Extension Spring 5-3/8" OAL x 1-1/2" OD x .148" Wire, Zinc Plated	JM0024976
15 1/4" x 1-3/8" Roll Pin	JM0009896
16 Flip Up Auger - Throw Handle	JM0021843
17 3/8"-16 x 1-1/4" Socket Head Cap Screw	JM0047163
18 6" x 2" Storage Position Auger Rest Triangle Pad	JM0037644
19 Storage Position Auger Rest	JM0020787
20 3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
21 1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
22 1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100

# Spring Return Assembly

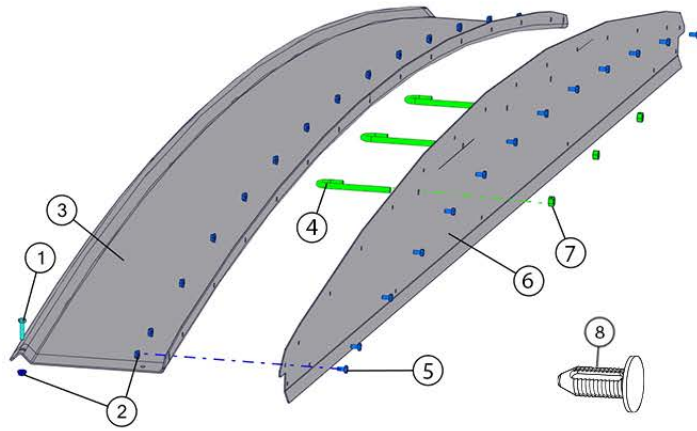


Description	Part No.
1 1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
2 Aluminum Spacer for Spring Return (1-3/8" x 2-3/16") Rectangular	JM0002445
3 1-1/4" Idler Pulley (1/4" ID)	JM0002439
4 Large Spring Return Pulley Spacer (2 Holes)	JM0018897
5 1-5/8" Idler Pulley (Long Spring Return)	JM0012970
6 1/4"-20 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 Grain Cart Spring Return Housing	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 (Grain Cart)	JM0002911



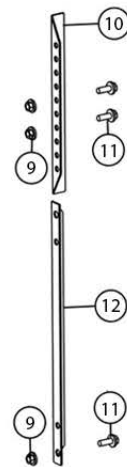
# Roll Tarp Assembly

Endcap

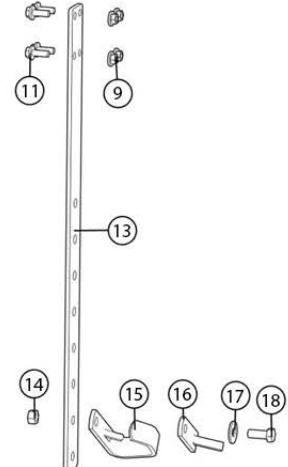


\*Hardware shown in green not used in Front Endcap Assembly. Use ribbed rivets in holes where J-bolts aren't used.

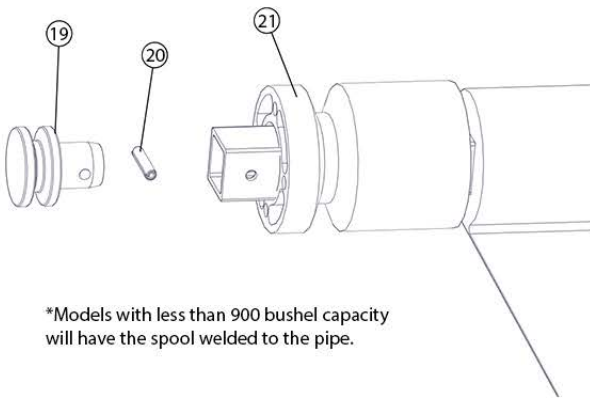
Prop-Up Bars



Crank Handle Holder

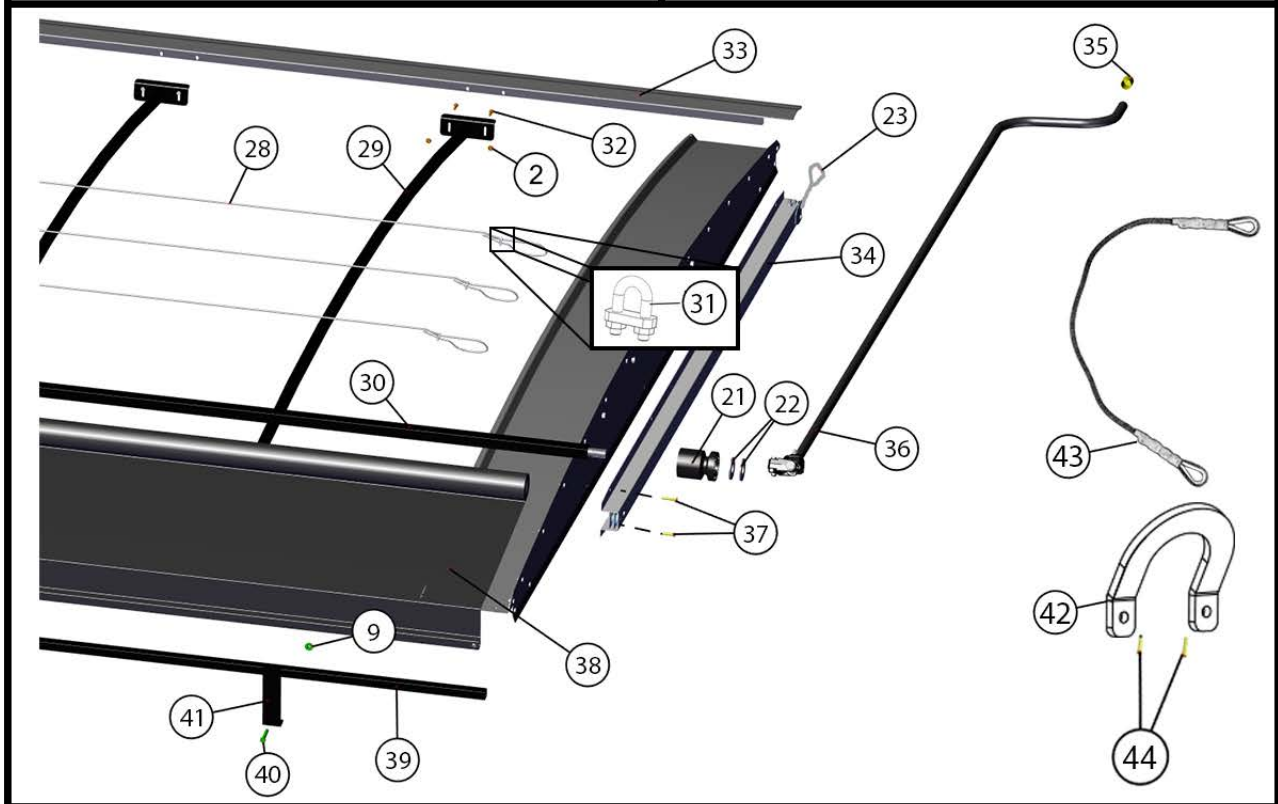
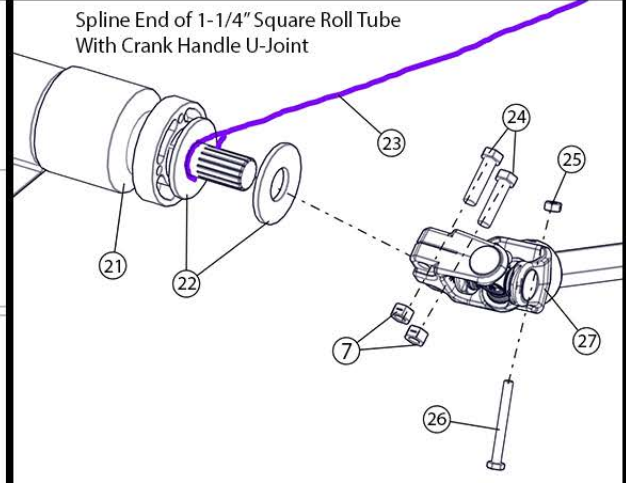


Spool End of 1-1/4" Square Roll Tube



\*Models with less than 900 bushel capacity will have the spool welded to the pipe.

Spline End of 1-1/4" Square Roll Tube With Crank Handle U-Joint





# Roll Tarp Assembly

	Description	Part No.
1	1/4"-20 x 1-1/4" Gr5 Z Hex Bolt	JM0016673
2	1/4"-20 Gr5 Z SF Hex Nut	JM0001630
3	Arched Top Endcap for Glide Right - Grain Cart 141-1/2"	JM0044731
4	3/8"-16 Gr5 Z J-Bolt (384JB)	JM0001519
5	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
6	End Cap Plate for Glide Right - Grain Cart 140-7/8"	JM0045315
7	3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
8	3/8" Ribbed Push in Rivet	JM0037396
9	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
10	End Cap Prop - Upper 19"	JM0021404
11	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
12	Endcap Prop - Lower 19" (ABS-2)	JM0000179
13	1/4"x 2" x 29" Bar for Crank Holder (1000 Bushel Carts and Higher (ABCH-1EL))	JM0000164
14	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
15	Crank Holder (Zinc Plated) (CH-1)	JM0002967
16	Roll Tarp - Handle Hanger Rubber Flap	JM0002551
17	1/2" ID 1-3/8" OD Z Flat Washer	JM0003082
18	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
19	Spool End for Roll Tube	JM0002449
20	1/4"x 1-1/4" HD Spiro Roll Pin	JM0046782
21	Roll Tarp Guide Roller	JM0038446
22	1" USS Flat Washer	JM0003063
23	Spring Return Cable (Grain Carts)	JM0012981
24	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
25	1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
26	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
27	Universal Joint - Roll Tarp (SUJ-1)	JM0001517
28	3/16" Cable x 306" (1326, 1401, 1312, 1412, 1522) (316C-1325)	JM0015701
29	137" Arched Tarp Bows (Regular) (137ATB)	JM0000157
30	1-1/4" x 309" Roll Tube for Glide Right (1326, 1401, 1312, 1412, 1522)	JM0048404
31	1/8" Cable Clamp	JM0001514
32	1/4"-20 x 1" Gr5 Z Hex Bolt	JM0002095
33	Tightening Lip Front 153" (1326, 1401, 1312, 1412, 1522)	JM0017842
33	Tightening Lip Rear 153" (1326, 1401, 1312, 1412, 1522)	JM0017843
34	Spring Return Assembly Complete (Grain Cart)	JM0002911
35	S-Cap Yellow - 1.062 ID x 1-1/2" x 1/16	JM0018963
36	12' Crank w/ Splined U-Joint (CUJ-1LN)	JM0019888
37	1/4" x 3/4" Self Tapping Screw	JM0001570
38	Tarp with Rivets (1326, 1401, 1312, 1412) 25'2" x 13'6"	JM0018966
39	1" x 306" Square Tie-Down Tube (1326, 1401, 1312, 1412, 1522)(1325TT)	JM0018962
40	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
41	Tarp Stop Bracket (TSB-1)	JM0000187
42	Tarp Rope Bracket	JM0047700
43	Tarp Rope Assembly 14' 8" Glide Right Standard Cart	JM0048662
44	1/4" x 1-1/2" Self Tapping Screw	JM0001571