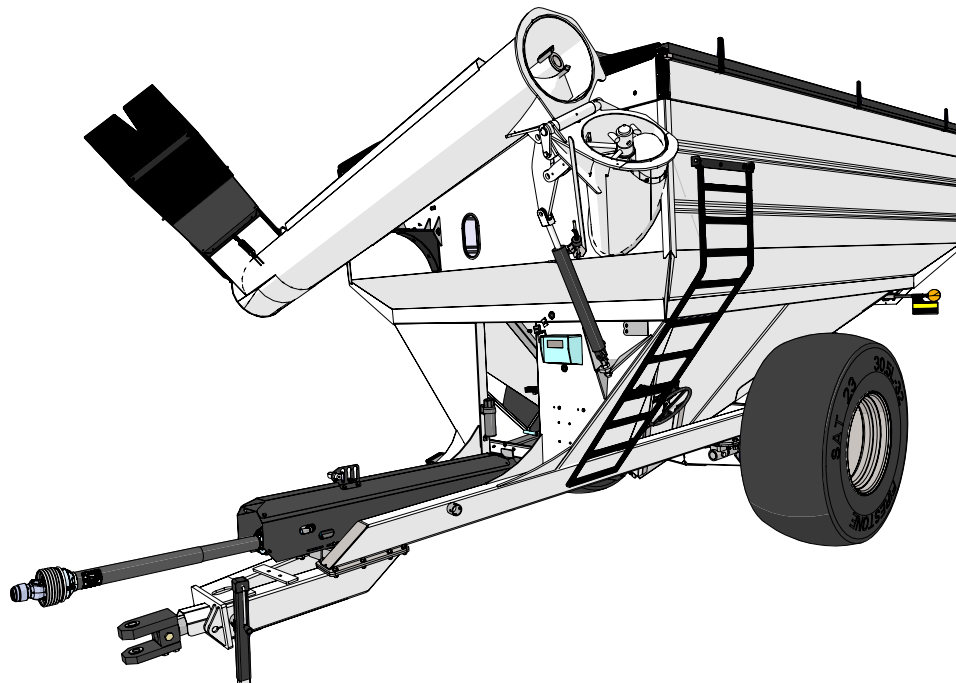




Manual

GRAIN CART OPERATOR'S MANUAL

MODEL



Rev. 10.23.2023

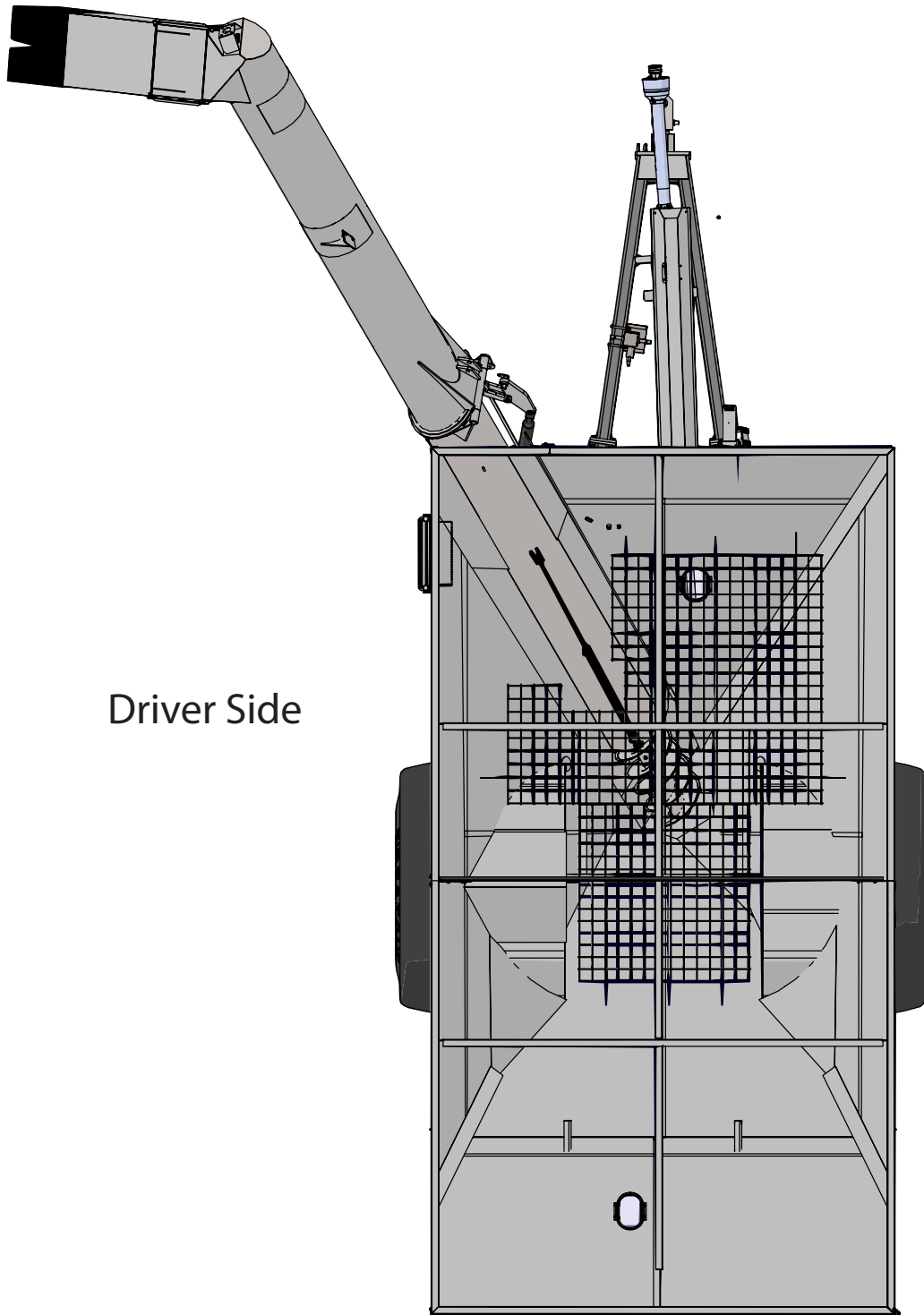
J&M Manufacturing Co, Inc

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www.jm-inc.com

Stance

Front



Driver Side

Passenger Side

Rear

Table of Contents

To the Dealer	4
General Information	5
Specifications.....	6
Dimensions.....	6
Bolt Torque Chart	7
Stud and Wheel Nut Torque Specifications	7
Decals	8
Decals	9
Safety Rules.....	10
Initial Operation and Maintenance.....	11
Operating Instructions	12
Routine Maintenance	13
Lubrication Service Schedule.....	14
Removing Dirt from the Restrictors on the Hydraulic Cylinder	15
Troubleshooting	15
Adjusting the Lower and Upper Flighting	16
Storage.....	17
Repair Parts List and Diagrams	
Wheel Rims and Tires.....	17
Non-Scale Hub & Spindle Assembly.....	18
Power Take-Off (PTO) Shaft Assembly.....	19
130 Degree Gearbox Assembly (Superior).....	20
Drive Line Assembly	21
Hitch and Jack Assembly	22
Bolt-On Frame	22
Lower Auger Assembly.....	23
Upper Auger Linkage	24
Upper Auger Assembly.....	25
Spout Assembly	26
Lock and Load Switch Assembly	27
Hydraulic Hoses & Cylinders	28
Auto-Gate Shut-Off	30
Lights and Wiring	31
5-Point Scale System for Single Wheel Bolt on Axles.....	32
3 Point Scale System	34
Fully Adjustable Axle.....	35
Auto-Log Kit for GT560 Only.....	35
Sideboards	36
Inspection Windows	37
Door Wheel Assembly (2016 & Newer)	37
Ladder Assembly.....	38
Auger Rest Assembly.....	39
Roll Tarp Assembly	40
Spring Return Assembly.....	42

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: 812 **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 Single Wheel Option 	
Capacity	875 Bushels
Auger, One Vertical	18"
Unload Time (minutes)	2.1 Minutes
Wheels (2)	21x32, 27x32, or 30x32
Tires (2)	24.5x32, 30.5x32, IF800/60R32, or 900/60R32
Hubs (2)	10 Bolt
Spindles (2)	4-1/2" Diameter
Tongue Weight	
Empty	1,275 lbs.
Loaded	3,800 lbs.
Total Weight (approx.)	10,870 lbs.

* Bushel capacity measured with #2 corn at 15% moisture content (56 lb. test weight)

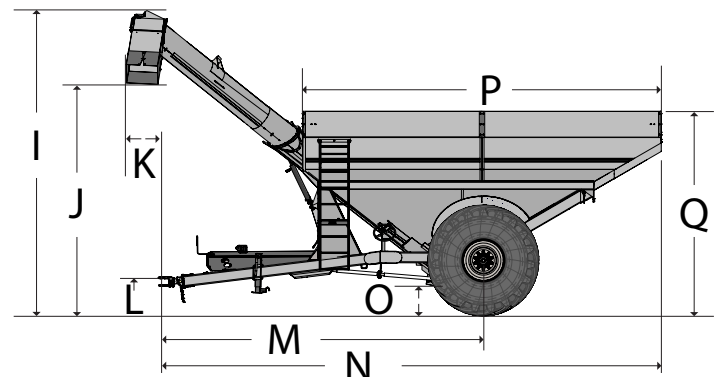
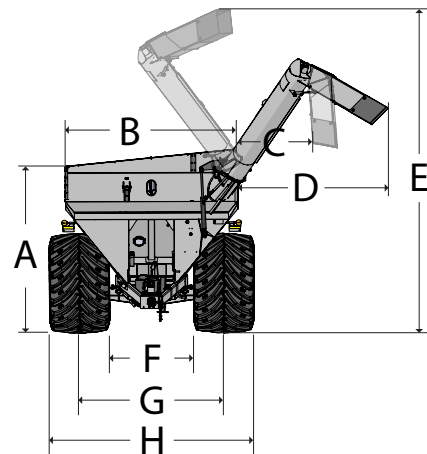
** Time varies with RPM and moisture content of grain

Required Tractor HP					
Driving Speed HP (Fully Loaded)			Unloading HP		
5 mph	10 mph	15 mph	Dry Corn (15%)	Wet Corn (27%)	
86	182	319	122	205	

Dimensions

	
A	11'-3"
B	11'-9"
C	6'-3"
D	11'-7"
E	21'-10"
F	7'-3"
G	10'-0"
H	12'-9"
I	16'-5"
J	13'-7"
K	0'-1"
L	1'-10"
M	16'-10"
N	24'-5"
O	1'-4"
P	16'-0"
Q	11'-8"

*Max Tarp Height: 12'-2"
Measured using
800/60R32-R1-2 tires



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				
	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	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				
<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	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

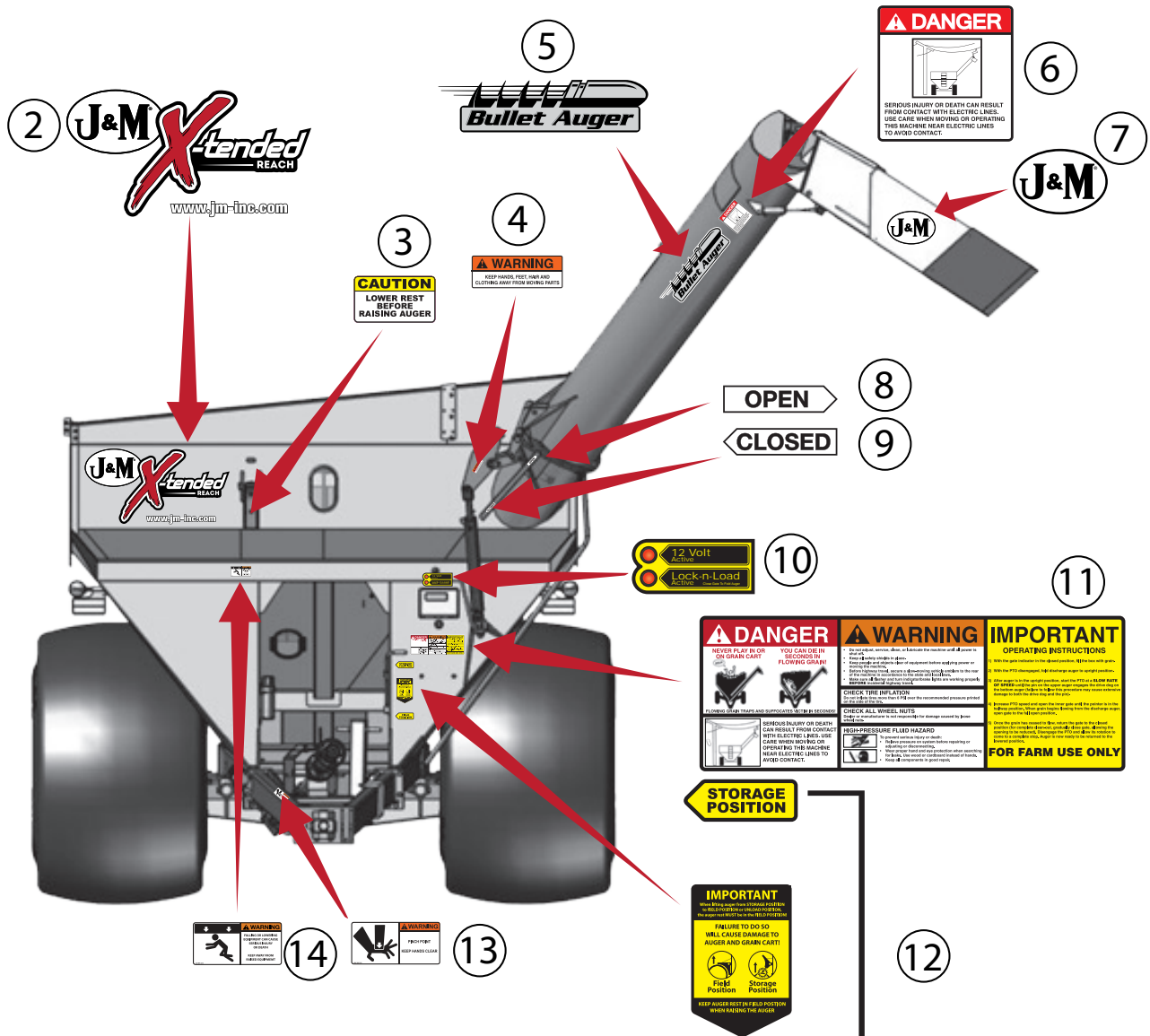
Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application. Fasteners must always be replaced with the same grade as specified in the manual parts list. Always use the proper tool for tightening hardware. Make sure fastener threads are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

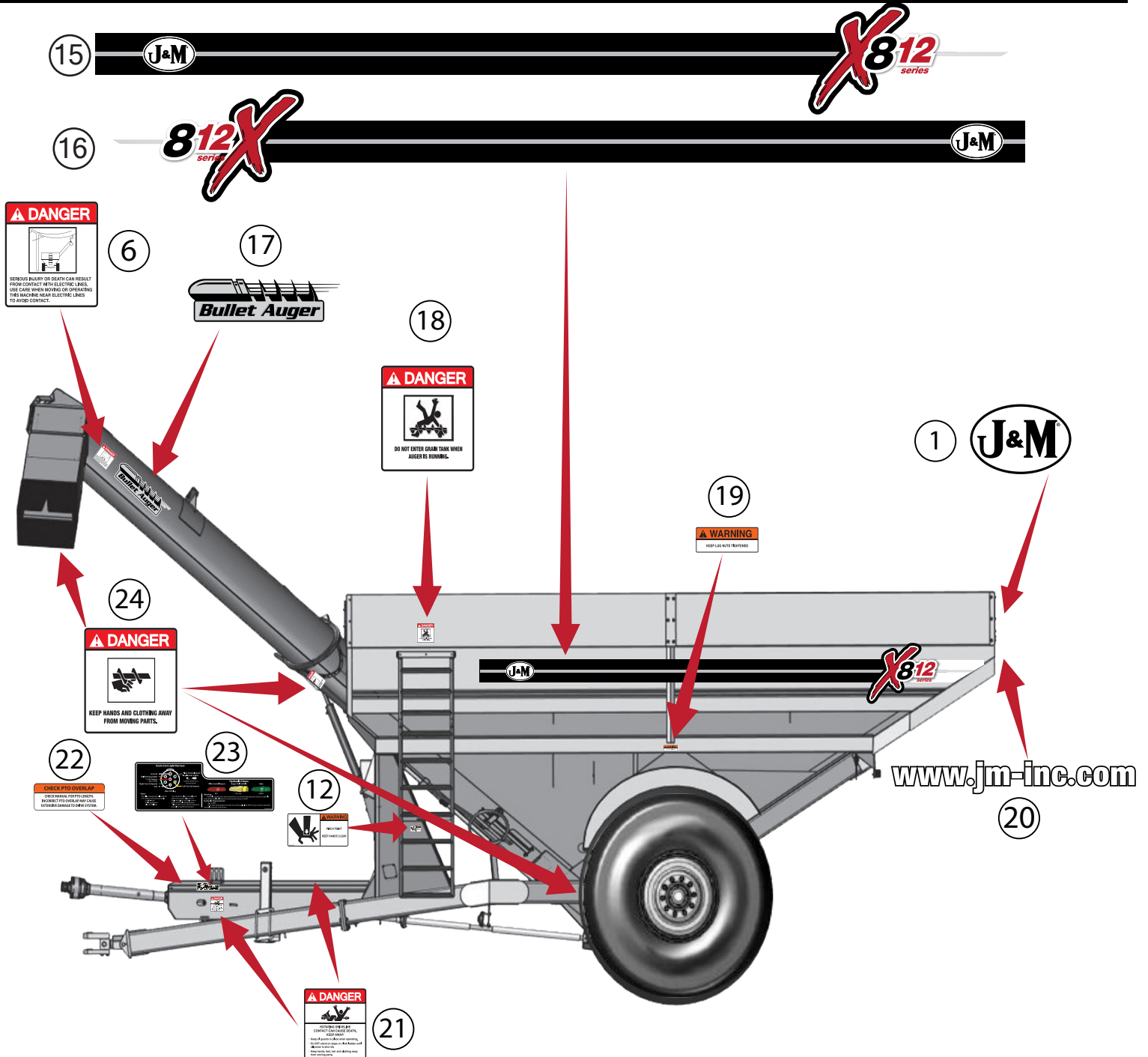
Decals

⚠ 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.
15 812 Auger Side Stripe Kit	JM0050077
16 812 Opposite Auger Side Stripe Kit	JM0050078
17 Bullet Auger AS Decal	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 storage 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.

Replace the safety chains immediately if you have an event where they are used near their max strength.

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 POINTS: 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? 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.**

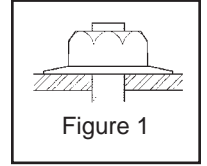
Tires	psi
24.5x32 Diamond Tires-16 ply (Titan) (for 21x32-10 Hole Wheels) (120" c/c)	30
30.5x32 Lug Tires-14 Ply (Firestone) (for 27x32-10 Hole Wheels) (124" c/c)	34
30.5x32 Lug Tires-18 ply (Alliance) (for 27x32-10 Hole Wheels) (124" c/c)	30
IF800/60R32 Diamond Tires (Firestone) (181 LI) (for 27x32-10 Hole Wheels) (124" c/c)	46
900/60R32 Lug Tires (Firestone) (176LI) (for 30x32-10 Hole Wheels) (136" c/c)	35
900/60R32 Lug Tires (Alliance) (176 LI) (for 30x32-10 Hole Wheels) (136" c/c)	35

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 812 grain carts require a minimum of 180 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

5. 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.
6. 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.
7. 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.
- Replace the safety chains immediately if you have an event where they are used near their max strength.

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.

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

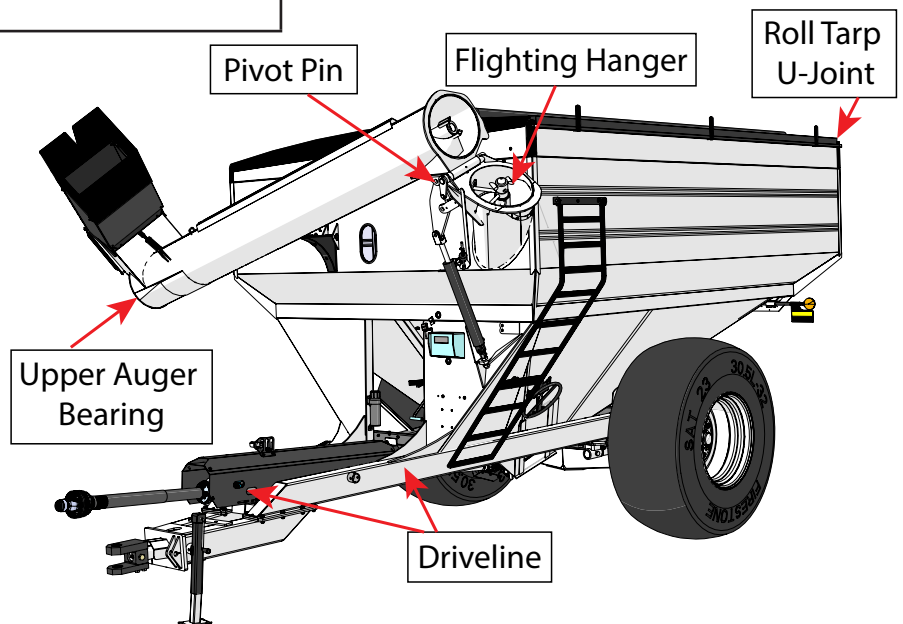
BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART

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 (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 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
812	24	1-3/4"	1-3/4"

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.

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 reattaching.

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

Adjusting the Lower and Upper Flighting

WARNING

MAKE SURE 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.

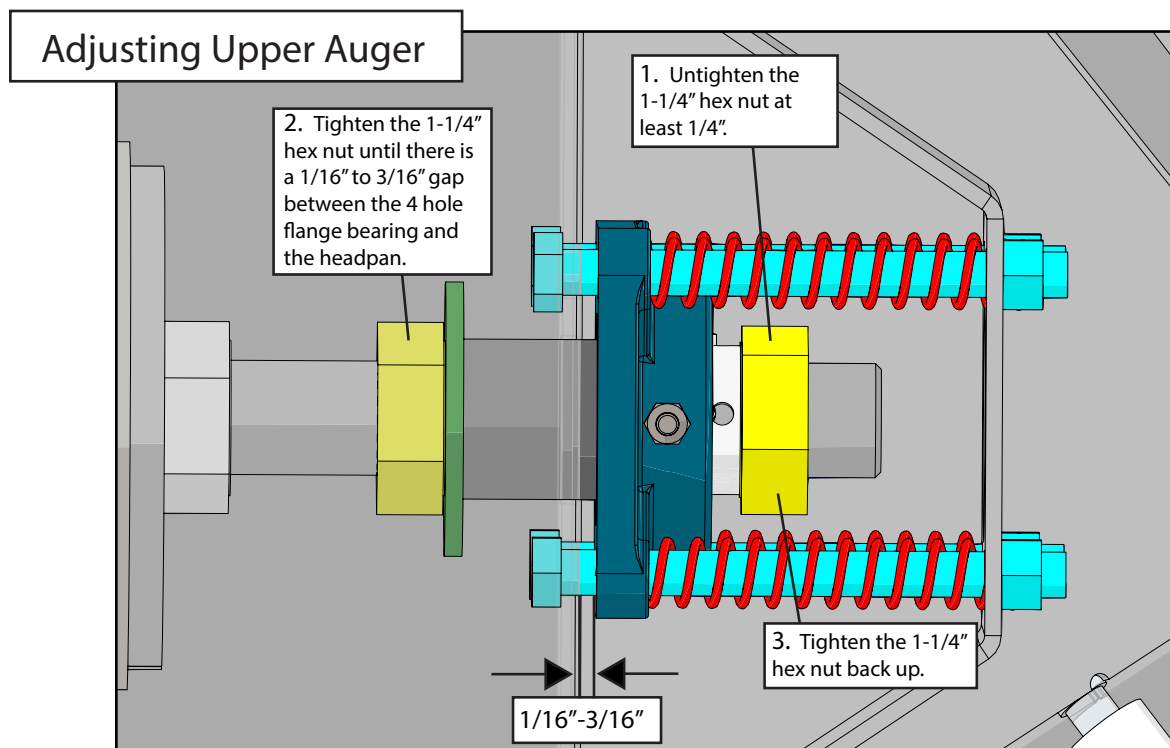
If the hanger can no longer be adjusted by moving it up or down on the elongated holes, both the hanger bushing assembly and the lower flighting will have to be removed. After removing them from the tube assembly, place a shim [between 1/8" (0,32cm) to 3/16" (0,48cm) thick] where the gearbox and the 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.



Storage

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

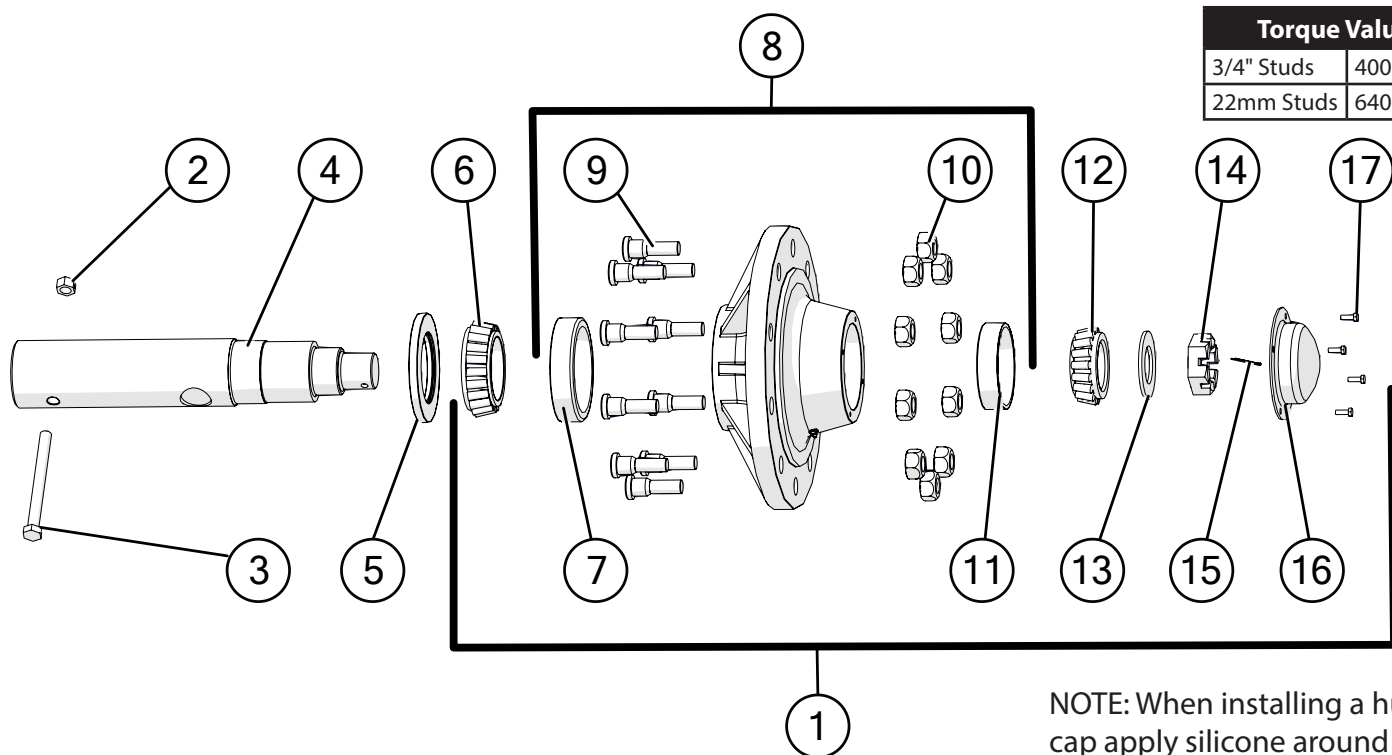
Wheel Rims for Grain Carts

21x32-10 Hole Wheel Rims
27x32-10 Hole Wheel Rims
30x32-10 Hole Wheel Rims

Tires for Grain Carts

24.5x32 Diamond Tires-16 ply (Titan) (for 21x32-10 Hole Wheels) (120" c/c)
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) (181 LI) (for 27x32-10 Hole Wheels) (124" c/c)
900/60R32 Lug Tires (Firestone) (176LI) (for 30x32-10 Hole Wheels) (136" c/c)
900/60R32 Lug Tires (Alliance) (176 LI) (for 30x32-10 Hole Wheels) (136" c/c)

Non-Scale Hub & Spindle Assembly

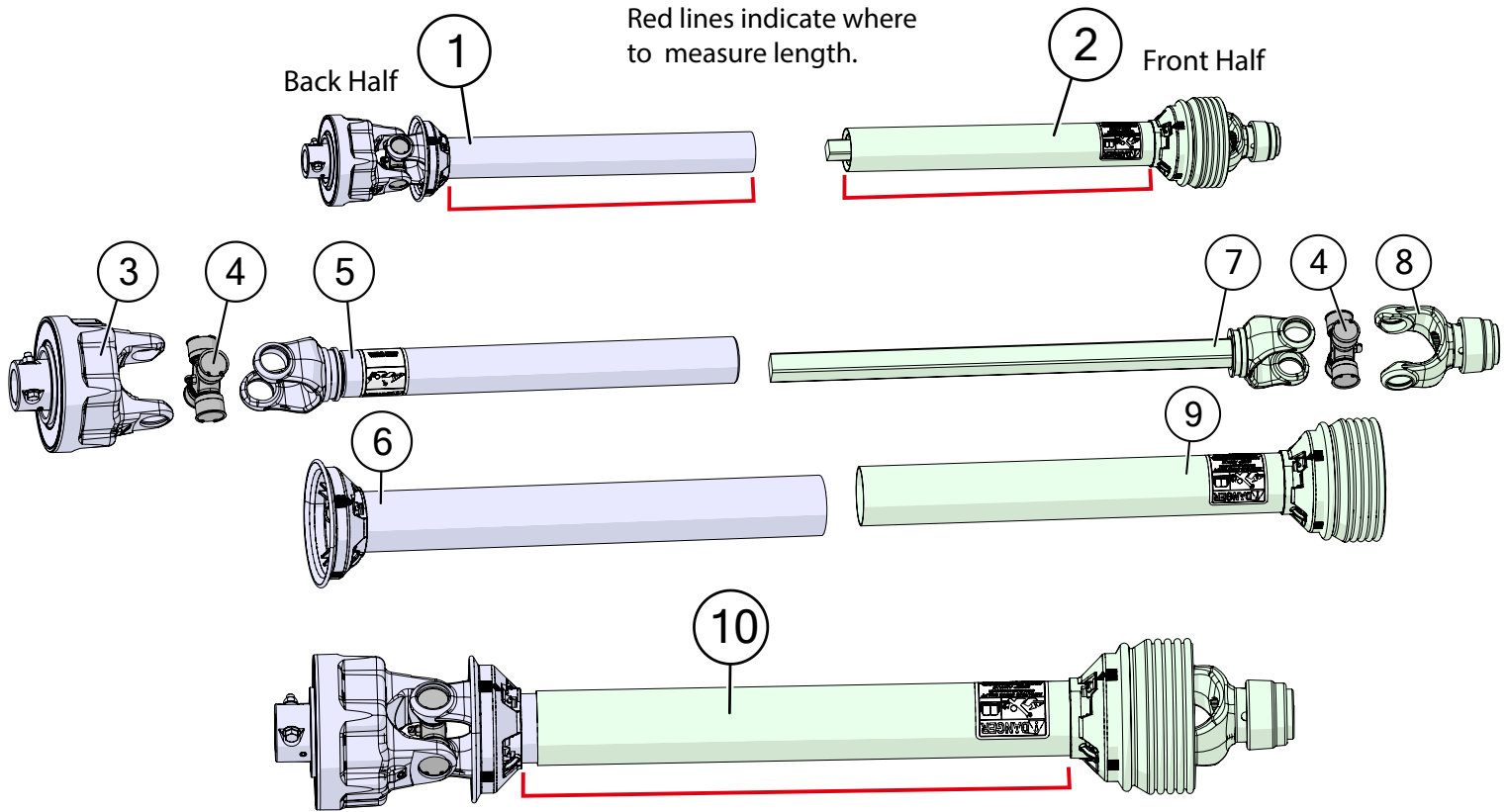


NOTE: When installing a hub cap apply silicone around the rim for a better seal.

When there is a conflict, highlighted rows are parts for carts with 900 wide tires.

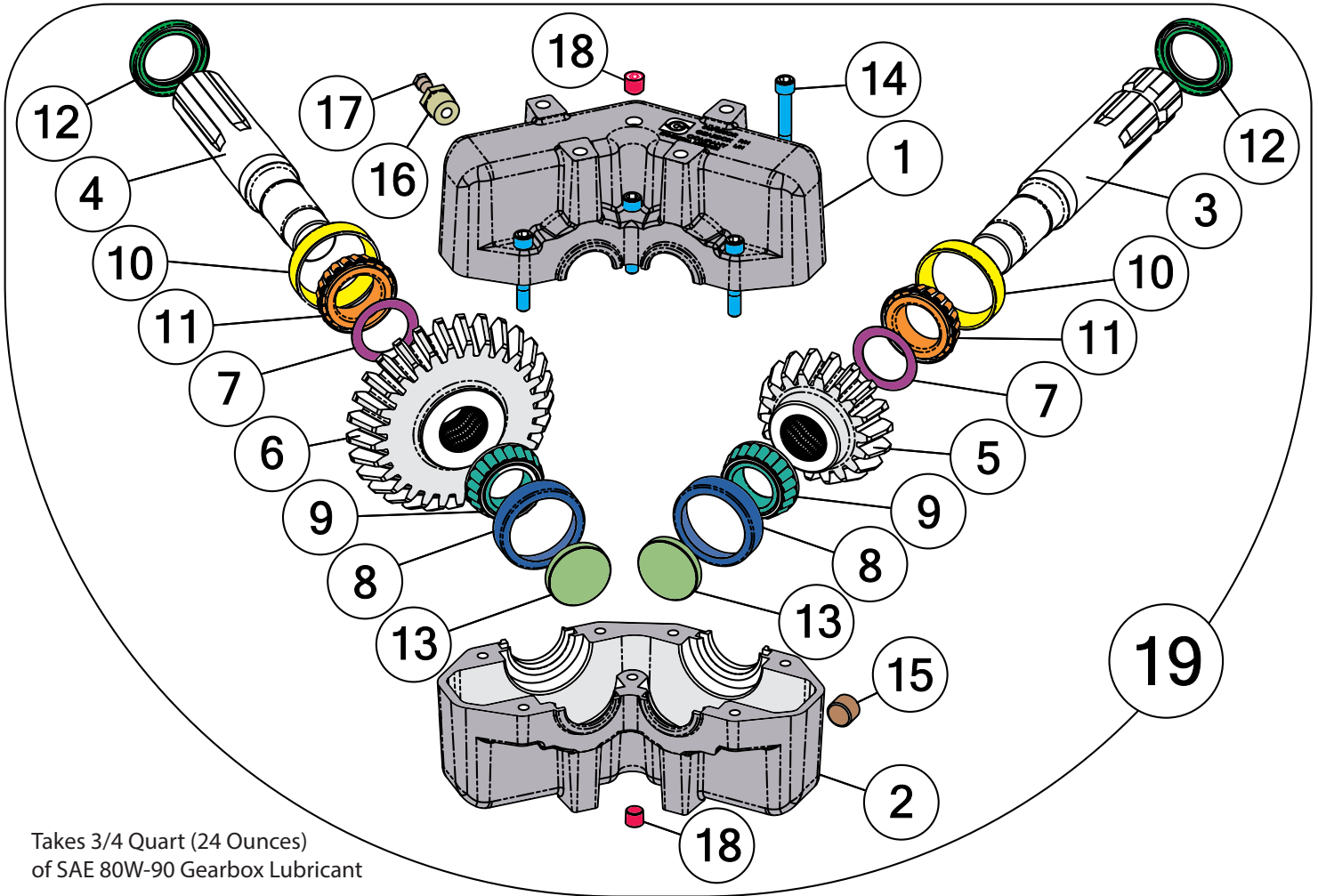
Description		Part No.
1	W-881 Hub Assembly Complete with 3/4" Studs and Nuts (Less Seal and Spindle)	JM0050402
1	W-891 Hub Assembly Complete with 22mm Studs and Nuts (Less Seal and Spindle)	JM0050400
2	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
3	1"-8 x 7" Gr5 Z Hex Bolt	JM0016689
4	Spindle, 4-1/2" x 27-1/2" for Non Scale Bolt on Axle (750, 875, 812) (281900BOA)	JM0007132
4	Spindle, 4-1/2" x 20-1/4" for Walking Tandem Dual Wheel or Fully Adjustable Axle (281900S)	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
8	Hub with Large and Small Races, 22mm Studs & Nuts (11.13 Pilot) (W-891)	JM0034356
9	3/4"-16 x 1-3/4" Wheel Stud	JM0018957
9	Stud 22MM 1.5 x 90MM 3.55L 1.005 Knurl (22-MMS)	JM0019178
10	Wheel Nut 3/4"-16	JM0018958
10	Wheel Nut 22mm with Washer (22-MMNW)	JM0019192
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



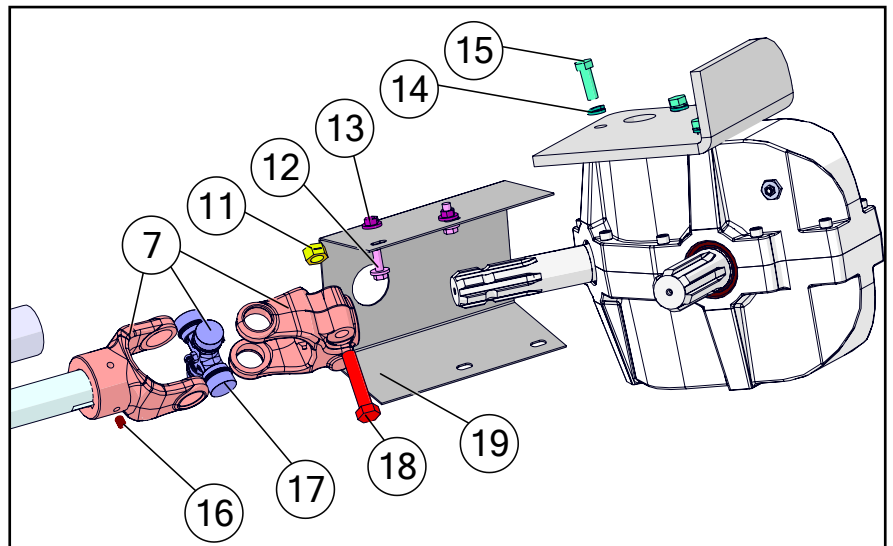
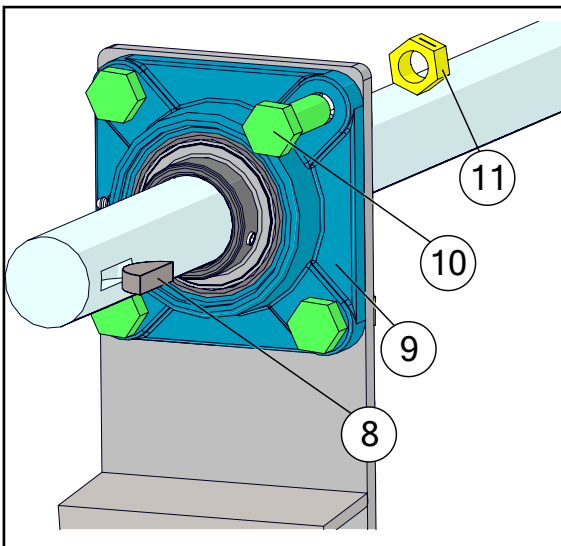
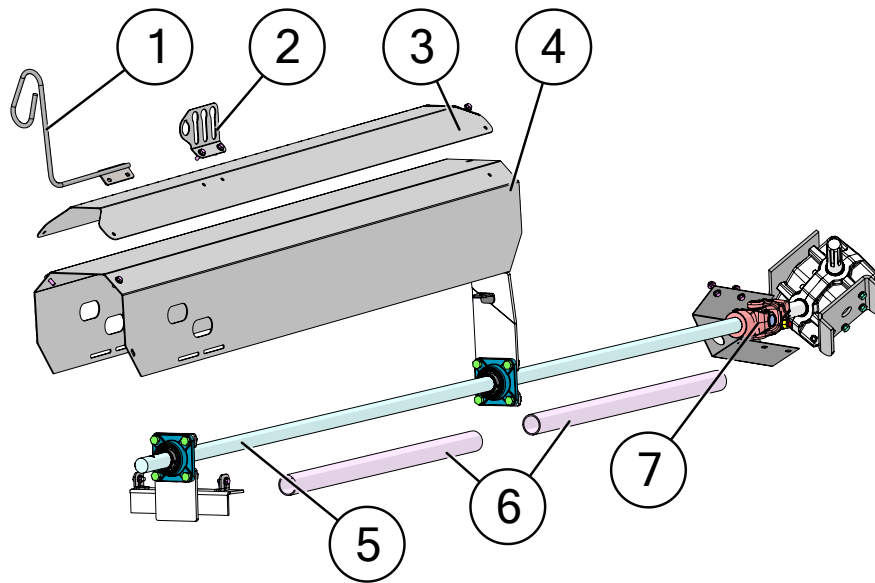
	Description	Part No.
1	Back Half Weasler PTO 24k (1-3/4") (Auto Clutch) 25-3/4"	JM0018513
1	Back Half Weasler PTO 24k (1-3/4") (Auto Clutch) (XL) 31-3/4"	JM0030331
2	Front Half Weasler PTO 24k (1-3/4") (Auto Clutch) 25"	JM0018514
2	Front Half Weasler PTO 24k (1-3/4") (Auto Clutch) (XL) 30-1/4"	JM0030330
2	Front Half Weasler PTO 24k (1-3/8") (Auto Clutch) 25"	JM0024367
2	Front Half Weasler PTO 24k (1-3/8") (Auto Clutch) (XL) 30-1/4"	JM0030640
3	Auto Clutch for Weasler 24k	JM0018500
4	55E Cross Kit (Auto Clutch PTO)	JM0018449
5	Yoke, Tube & Sleeve (24k Weasler Auto Clutch) (55E)	JM0018519
5	Yoke, Tube & Sleeve (XL) 24k Weasler	JM0031647
6	24k Weasler Auto Clutch Back Guard (25-3/4")	JM0018517
6	24k Weasler XL Auto Clutch Back Guard (31-3/4")	JM0030645
7	24k Yoke & Shaft Assembly (Weasler Auto Clutch) (55E)	JM0018520
7	24k 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	24k Weasler Auto Clutch Front Guard (25")	JM0018518
9	24k Weasler XL Auto Clutch Front Guard (30-1/4")	JM0030642
10	Complete 1-3/4" Weasler PTO 24k (Auto Clutch) 25-3/4"	JM0018443
10	Complete 1-3/4" Weasler PTO 24k (Auto Clutch) (XL) 31-3/4"	JM0030332
10	Complete 1-3/8" Weasler PTO 24k (Auto Clutch) 25-3/4"	JM0024333
10	Complete 1-3/8" Weasler PTO 24k (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 (Superior)



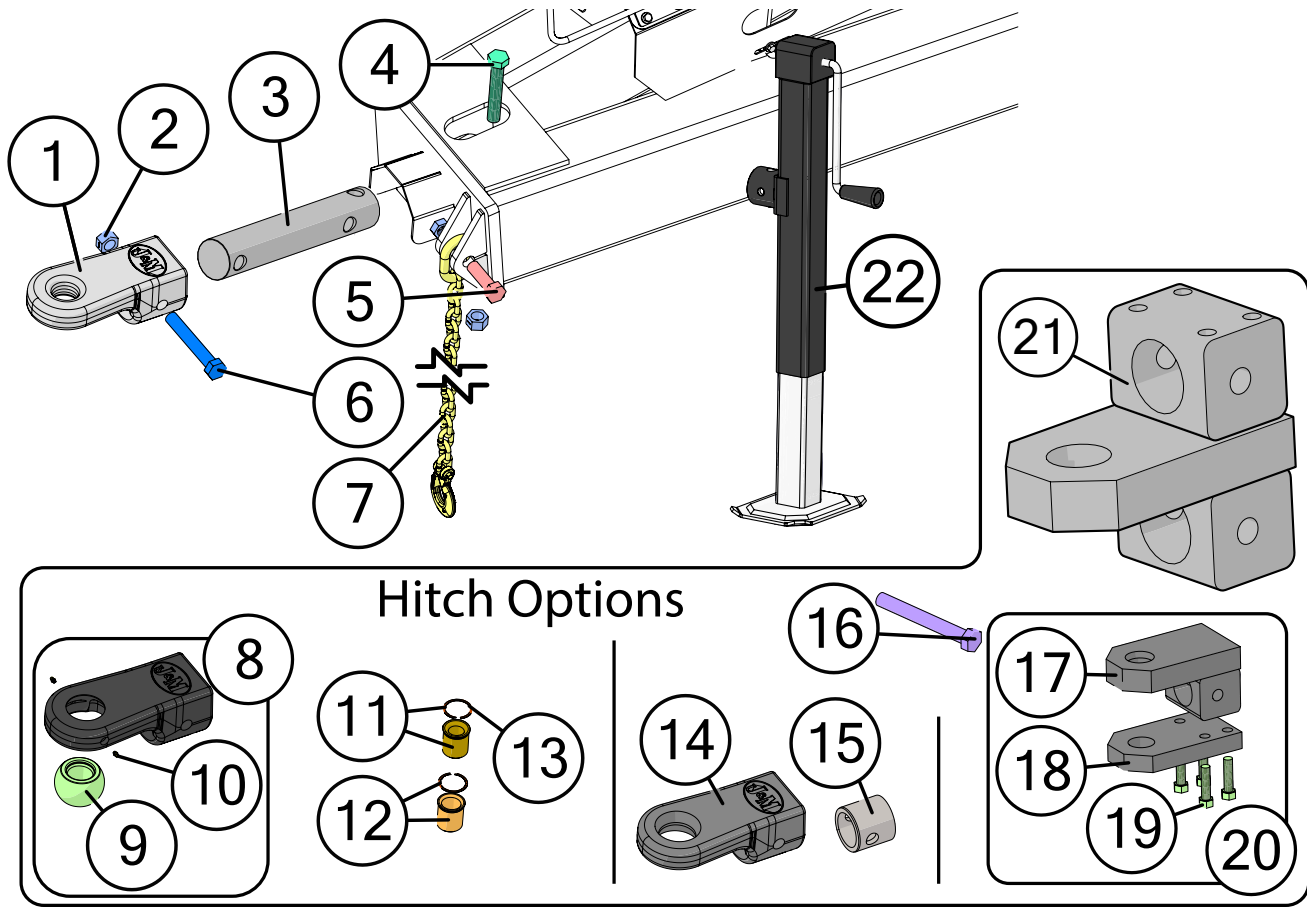
	Description	Part No.
1	Casting, Upper Half for Superior Gearbox (18-20") (A0150)	JM0025088
2	Casting, Lower Half for Superior Gearbox (18-20") (A0149)	JM0025089
3	1-3/4" Input Shaft for Superior Gearbox (18-20") (A0142)	JM0025090
4	1-3/4" Output Shaft for Superior Gearbox (18-20") (A0143)	JM0025091
5	18 Tooth Gear for Superior Gearbox (18-20") (H61S18)	JM0025092
6	29 Tooth Gear for Superior Gearbox (18-20") (H61S29)	JM0025093
7	Shim, Arbor for Superior Gearbox (18-20") (H00101-01)	JM0025094
8	Bearing Cup for Superior Gearbox (14-20") (414276)	JM0025077
9	Bearing Cone for Superior Gearbox (14-20") (514137)	JM0025078
10	Bearing Cup for Superior Gearbox (18-20") (413620)	JM0025095
11	Bearing Cone for Superior Gearbox (18-20") (413687)	JM0025096
12	Seal for Superior Gearbox (18-20") (617285)	JM0025097
13	End Cap for Superior Gearbox (14-20") (400301)	JM0025076
14	2-1/4" Bolt for Superior Gearbox (438225)	JM0025085
15	Solid Plug for Superior Gearbox (14-20") (400300)	JM0025080
16	Bushing (1/2" x 1/4" reducer) for Superior Gearbox (4003VB)	JM0025073
17	Vented Plug for Superior Gearbox (2003PR)	JM0025081
18	Plain Plug for Superior Gearbox (200300)	JM0025075
19	130 Degree Gearbox Complete (Superior) (18-20) (H130-9)	JM0017840

Drive Line Assembly



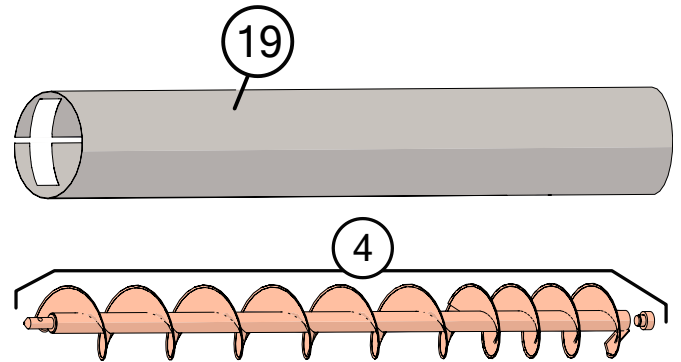
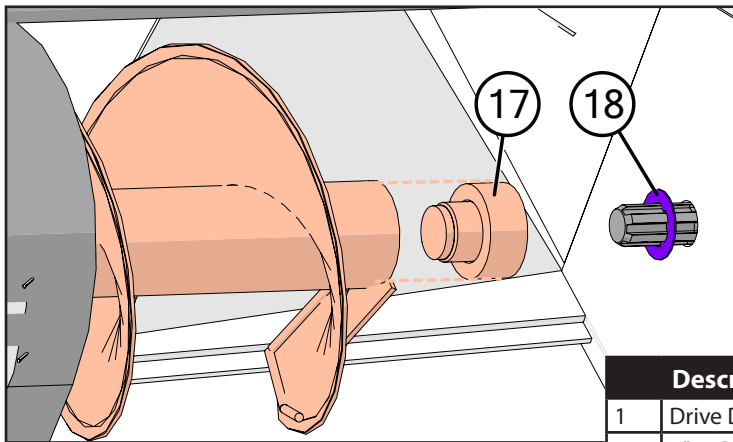
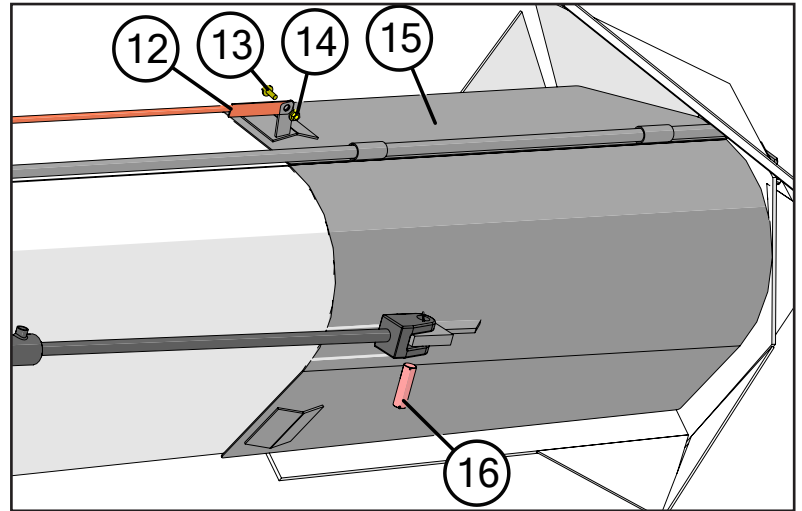
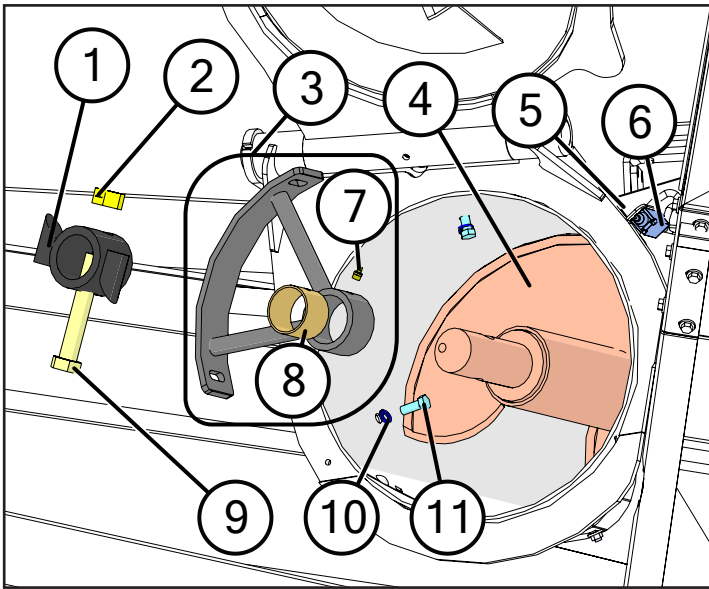
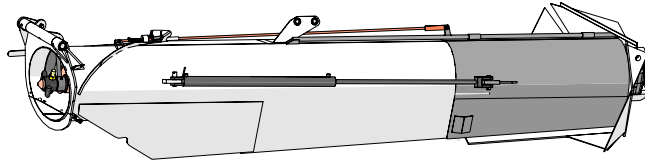
Description	Part No.
1 Long Fold Hydraulic Hose Holder Weldment	JM0049268
2 3 Keyed LF Hydraulic Hose Holder	JM0021437
3 Hydraulic Hose Shield 82-1/2" (812, 1012, 1112, 1122, 1222)	JM0036484
4 PTO Shield 85-1/4" (812, 1012, 1112, 1122, 1222)	JM0036430
5 130" x 1-3/4" Drive Shaft	JM0036413
6 2" x 40" PVC Pipe	JM0022060
7 44 Series U-Joint (252288) - Weasler 44063-A1 (set screw)	JM0017957
8 3/8" x 1-1/2" Half Moon Key	JM0018772
9 1-3/4" 4 Bolt Flange Bearing, 5/8" Bolt Hole (UCF-20928)	JM0018774
10 5/8"-11 x 1-3/4" Gr5 Z Hex Bolt	JM0016681
11 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
12 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
13 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
14 1/2" Gr2 Z Lock Washer	JM0019021
15 1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
16 3/8"-16 x 1/2" Hex Head Set Screw	JM0019044
17 Cross Kit (U-Joint) (44R) (CK-44R)	JM0017958
18 5/8"-11 x 3" Gr5 Z Hex Bolt	JM0002105
19 U-Joint Shield	JM0012698

Hitch and Jack Assembly



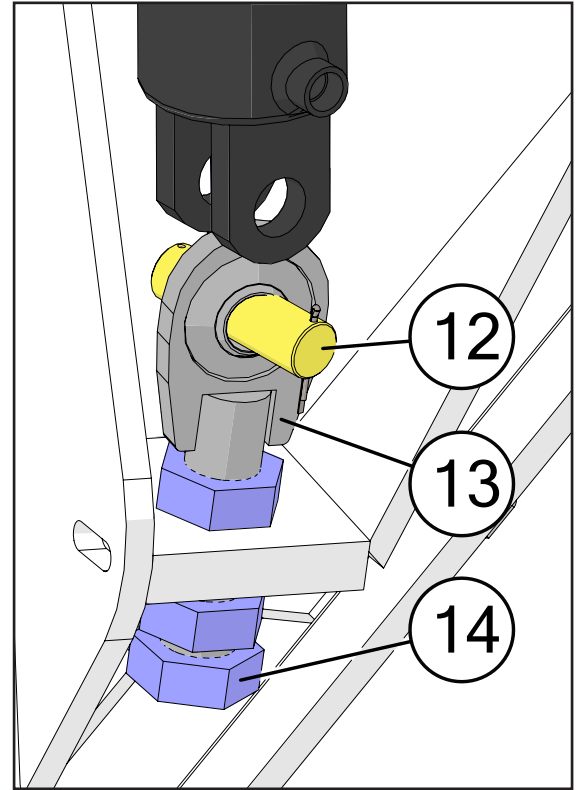
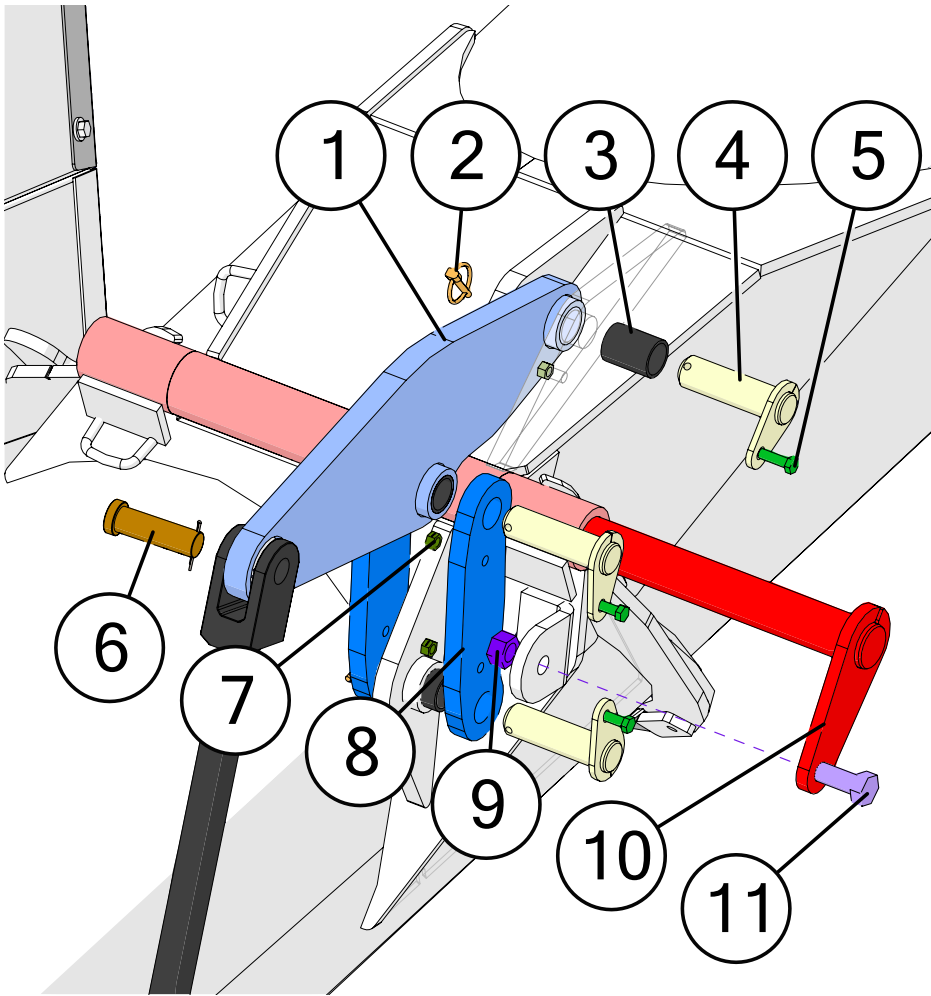
Description	Part No.
1 2-7/8" Cast Spade Hitch CAT 4 - 2" Pin (GC)	JM0074581
2 1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
3 2-7/8" x 16-3/4" Non-Scale Hitch Bar	JM0025227
4 1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
5 1"-8 x 4" Gr8 YZ Hex Bolt	JM0074434
6 1"-8 x 6" Gr8 YZ Hex Bolt - 1-1/2" Thread	JM0078449
7 20k Lb Safety Chain (69")	JM0078226
8 2-7/8" Cast Swivel Ball Spade Hitch CAT 4 - 2" Pin (GC)	JM0076296
9 CAT 4 (2") Swivel Hitch Ball	JM0077126
10 1/4"-28 Male, 0.547 Length, Zinc Grease Fitting	JM0074580
11 Sleeve Kit for 1.25" Drawpin (CAT 2)	JM0077917
12 Sleeve Kit for 1.5" Drawpin (CAT 3)	JM0077906
13 2-1/4" Housing Diameter VH-225-S02 Retaining Ring	JM0077338
14 3-3/4" Cast Spade Hitch CAT 5 - 2-3/4" Pin (GC)	JM0077938
15 Hitch Sleeve Reducer (3-3/4" to 2-7/8")	JM0077921
16 1"-8 x 8" Gr8 YZ Hex Bolt	JM0042652
17 Bolt On Spade Hitch with 2-1/4" Hourglass Pin Hole	JM0017978
18 Tang with 4 Bolts (2-1/4" Hourglass Pin Hole)	JM0017976
19 3/4"-16 x 3" Gr8 YZ Fine Thread Hex Bolt	JM0002107
20 Clevis Bolt-On Hitch Assembly (2-1/4" Hourglass Pin Hole)	JM0018191
21 Bolt On Rice Hitch with 2-1/4" Hourglass Pin Hole	JM0073969
22 Jack Stand Assembly including 5/8" Pin (7,000 lbs. Lift Capacity) (TWL-200)	JM0010191

Lower Auger Assembly



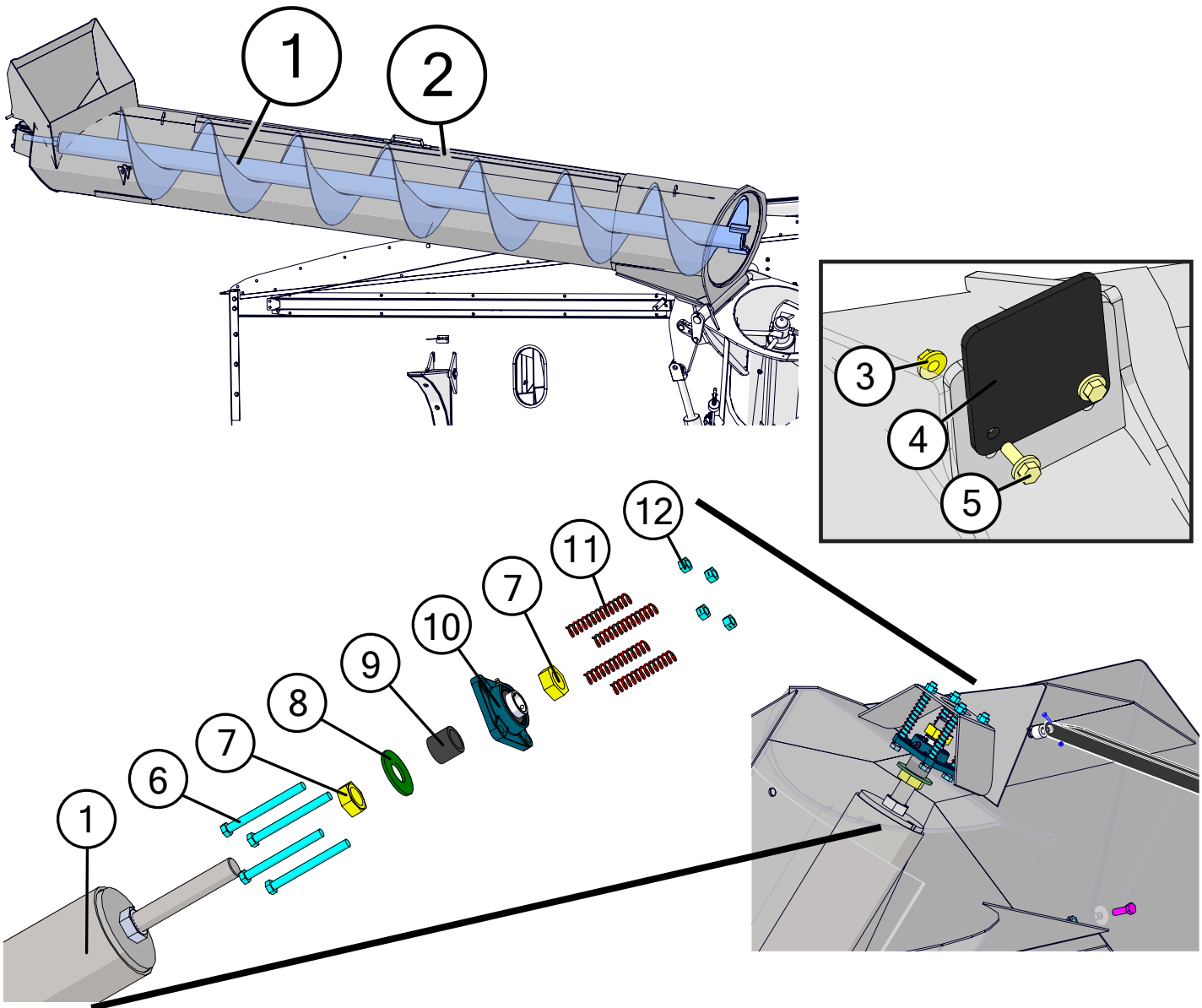
	Description	Part No.
1	Drive Dog Weldment, 2-1/2" ID (18" & 20") (DDW-21218)	JM0000093
2	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
3	18" Hanger Bushing Assembly with Bronze Bushing (HBA-18)	JM0000090
4	18" Bottom Flighting Weldment 4-1/2" x 143" (812)	JM0037957
5	M5-0.8 x 12 Gr8.8 Z Hex Bolt	JM0036046
6	Limit Switch for Field Light (ME-8111)	JM0036040
7	1/8" NPT Male x 11/16" Straight Grease Fitting	JM0009756
8	2-1/2" ID Bronze Bushing (BB-212)	JM0016841
9	1"-8 x 6" Gr8 YZ Hex Bolt	JM0074245
10	1/2" Gr2 Z Lock Washer	JM0019021
11	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
12	1/2" Gate Indicator Rod Weldment (80" Rod Length) (812)	JM0027872
13	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
14	1/2"-13 x 1-1/4" Gr5 Z Hex Bolt	JM0001513
15	Feed Gate Assembly for 812	JM0048558
16	1" x 3-1/2" Clevis Pin with Cotter Pins	JM0001817
17	Spline Coupler 1-3/4" ID x 4" OD Weldment (18" & 20" Flighting)	JM0016883
18	1-3/4" Output Shaft Gearbox Spline Washer (3" OD) (18" & 20")	JM0000083
19	812 Lower Auger Liner (18"D x 112"L)	JM0082133

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 18" Top Auger Hinge Pin Weldment	JM0022086
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

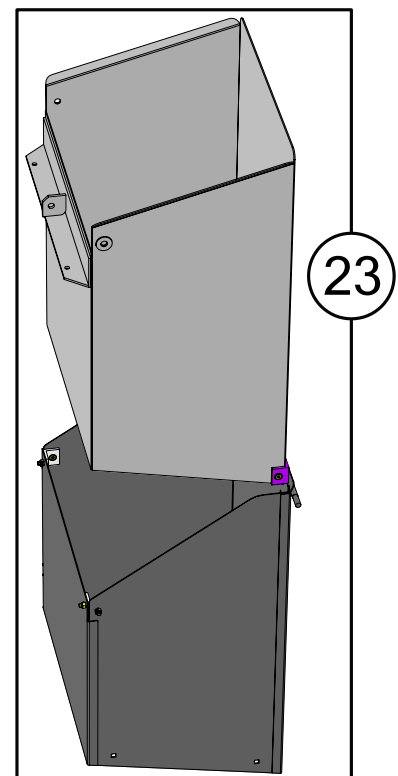
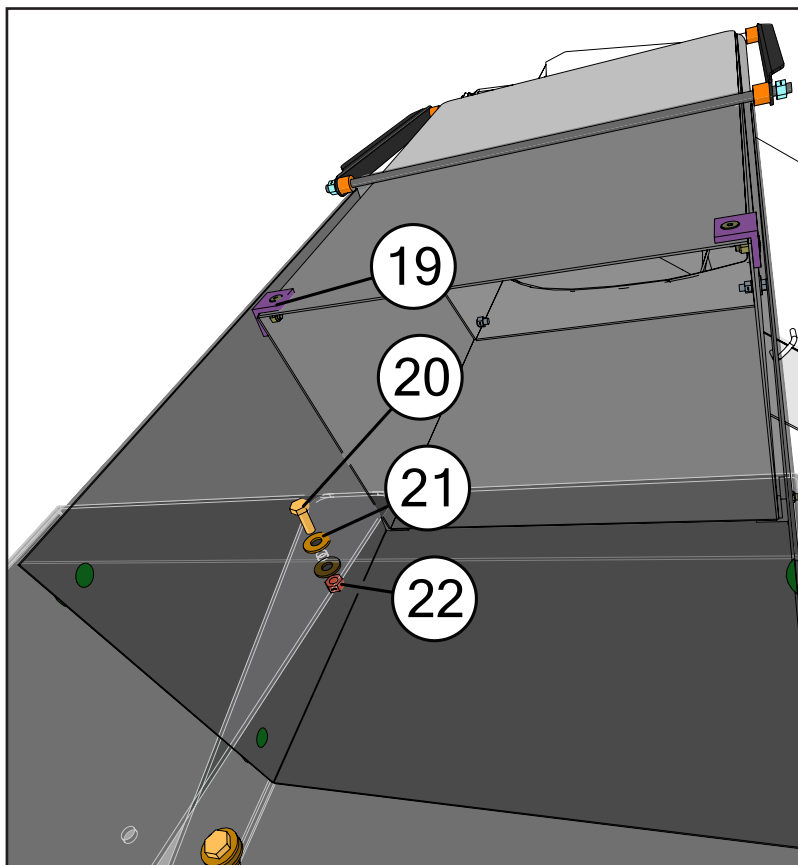
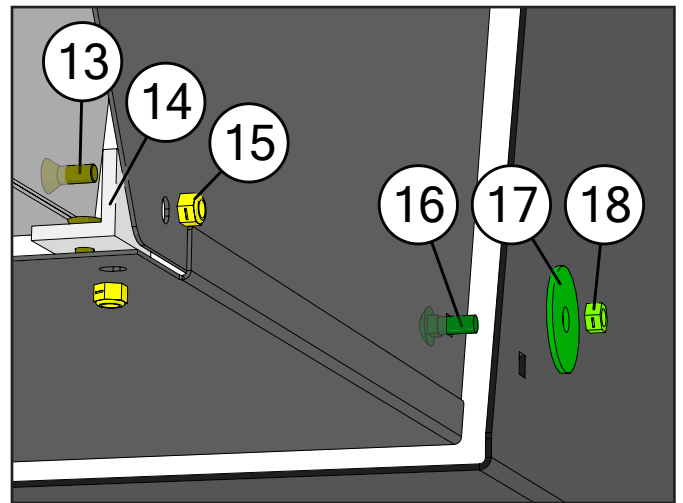
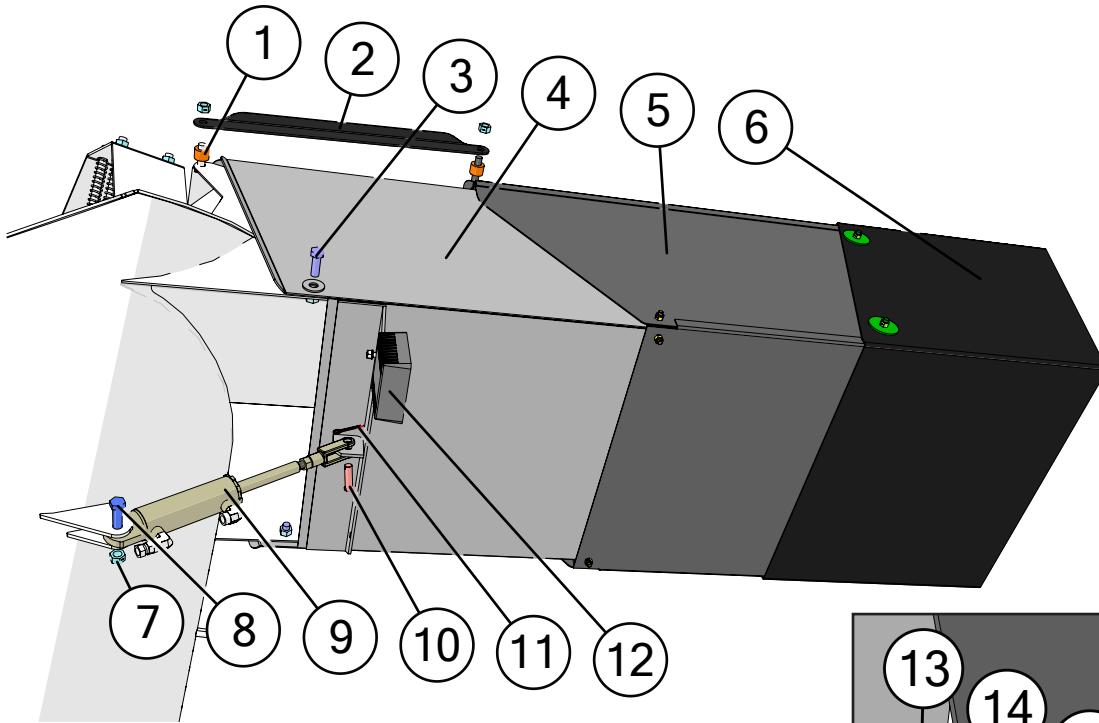


Description	Part No.
1 18" Straight Auger Upper Flighting (137-1/2")	JM0036981
2 18" Upper Straight Auger - Housing Weldment (812) SPECIFY COLOR	JM0036583*
3 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
4 Upper Auger Rest Plate (5 x 4-1/2)	JM0034981
5 3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
6 1/2"-13 x 5-1/2" Gr5 Z Hex Bolt	JM0001498
7 1-1/4"-12 PN Gr2 Hex Jam Nut	JM0001606
8 1-3/8", ID 3" OD Flat Washer	JM0015731
9 Top Auger Collar (1-3/4" OD x 1-1/2" Lg)	JM0021646
10 1-1/4" Flange Bearing, 4 Hole (GRAF-206)	JM0018560
11 4-1/2" Compression Spring (CMSUAA-4)	JM0018559
12 1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511

*-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)

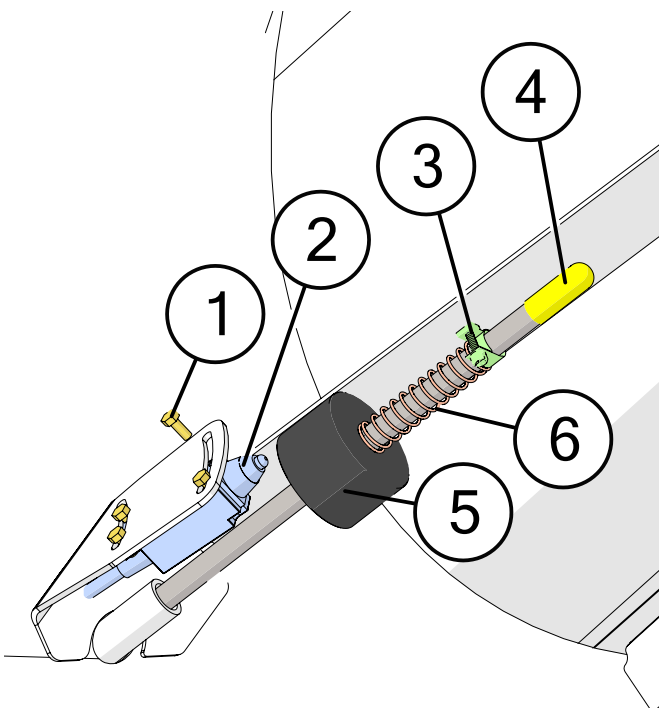
Spout Assembly



Spout Assembly

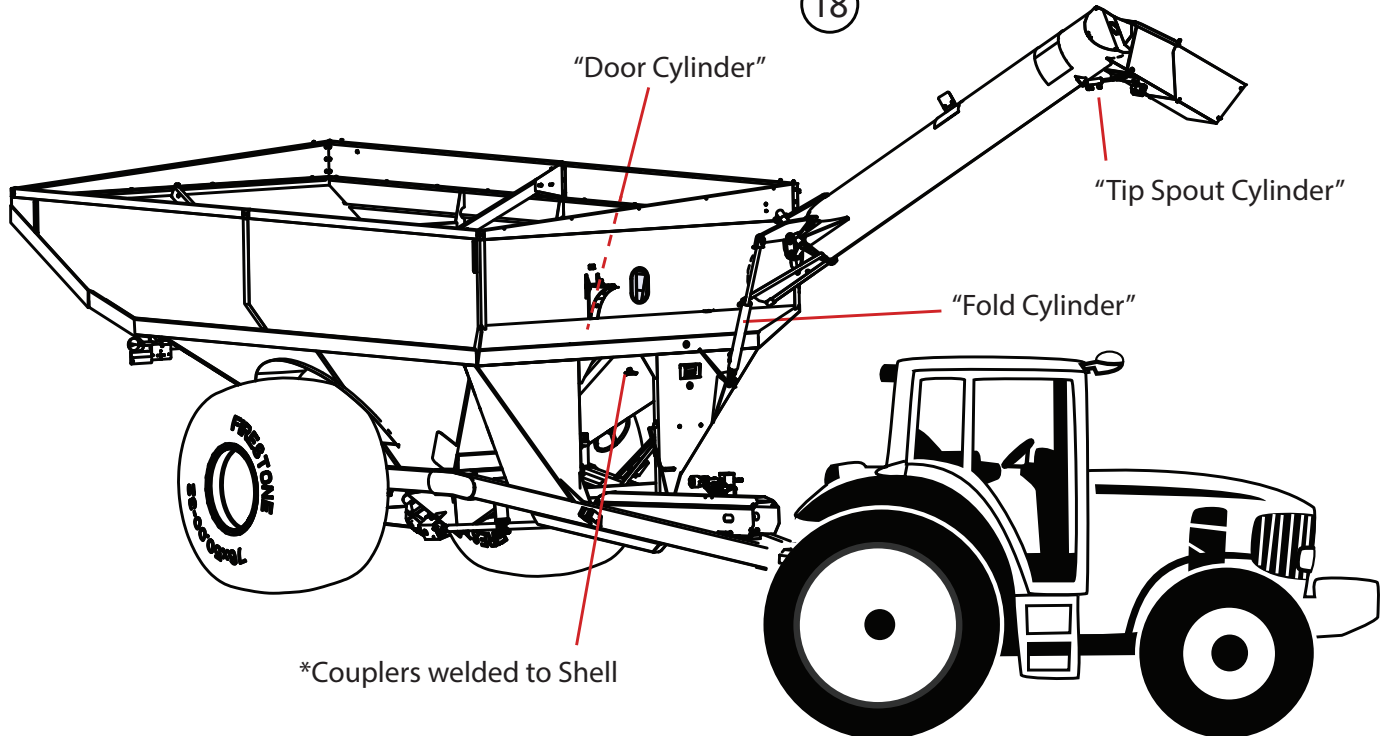
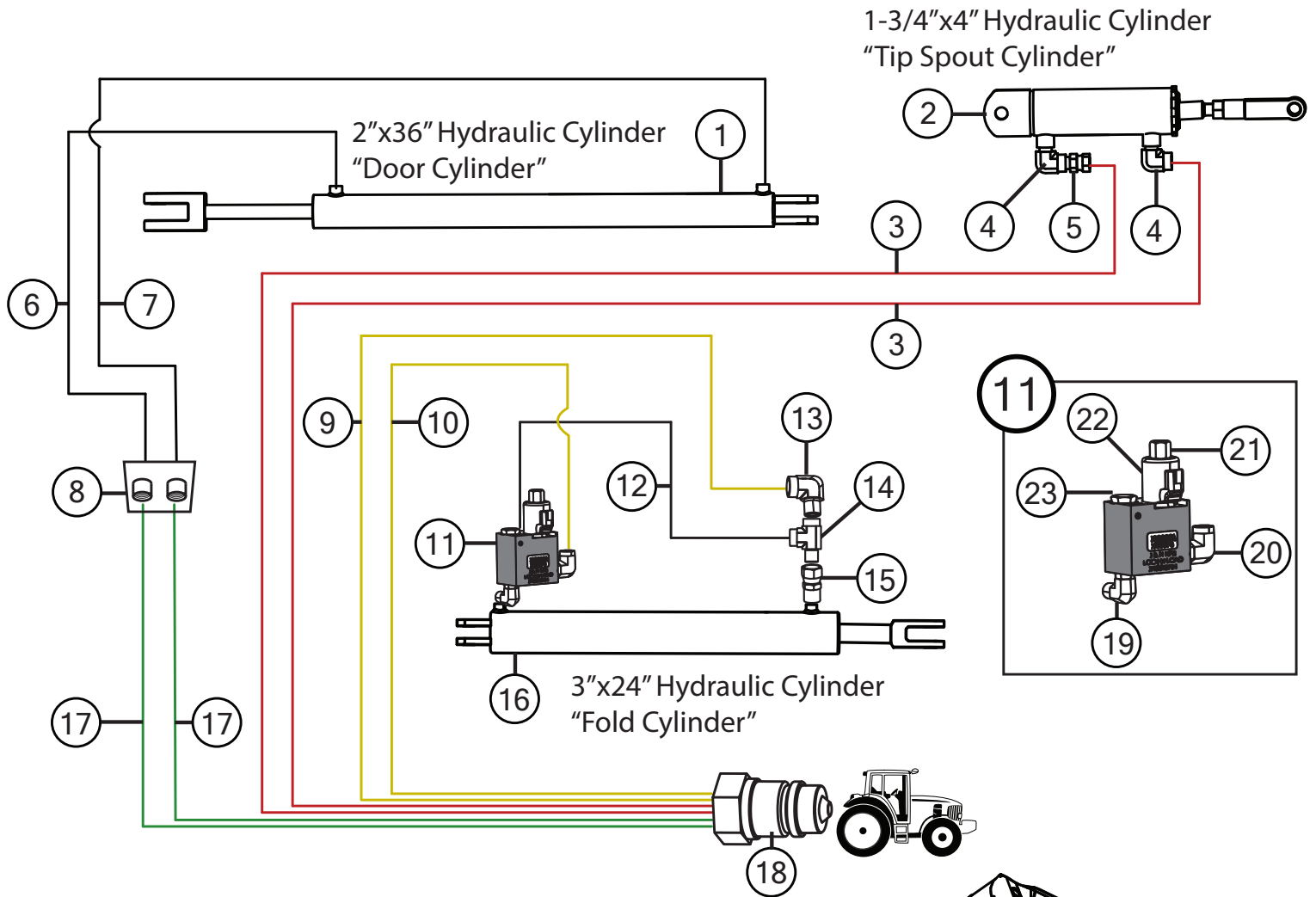
	Description	Part No.
1	33/64" ID x 1" OD x 3/4" L Black UV Nylon Spacer	JM0001962
2	Telescoping Spout Main Linkage Rod	JM0034363
3	1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
4	Inner Tip Spout (12 & 22-Series)	JM0034291
5	Outer Tip Spout (12 & 22-Series)	JM0034365
6	4-Sided Telescoping Spout Rubber Extension (20") (12 & 22-Series)	JM0034417
7	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
8	1/2"-13 x 2" Gr5 Z Hex Bolt	JM0001593
9	1-3/4" x 4" Hydraulic Cylinder (1/2" Clevis and Tab Ends) (HC-FCS)	JM0018564
10	1/2" x 1-3/4" Clevis Pin, Usable Length 1-1/2"	JM0018264
11	5/32" x 1-1/2" Cotter Pin	JM0014348
12	LED Field Light with Bullet Connector	JM0050949
13	5/16"-18 x 5/8" Flat Head Bolt Z	JM0024963
14	Nylon Spout Guide (Taper Inside)	JM0034308
15	5/16" - 18 Gr5 Z Nylon Locking Hex Nut	JM0049059
16	3/8"-16 x 1" Gr5 Z Carriage Bolt	JM0001632
17	1/2" ID x 2-1/4" OD Flat Washer - 1/8" Thick	JM0019081
18	3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
19	Nylon Spout Guide (Taper Outside)	JM0035132
20	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
21	1/4" ID, 3/4" OD Z Flat Washer	JM0003090
22	1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
23	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 0.065" (REC-1)	JM0016842
5	Lock and Load Switch Trigger (2.281 O.D. x 1.438)	JM0044793
6	0.72OD, 3" Free Length, 0.059 Wire Compression Spring	JM0045011

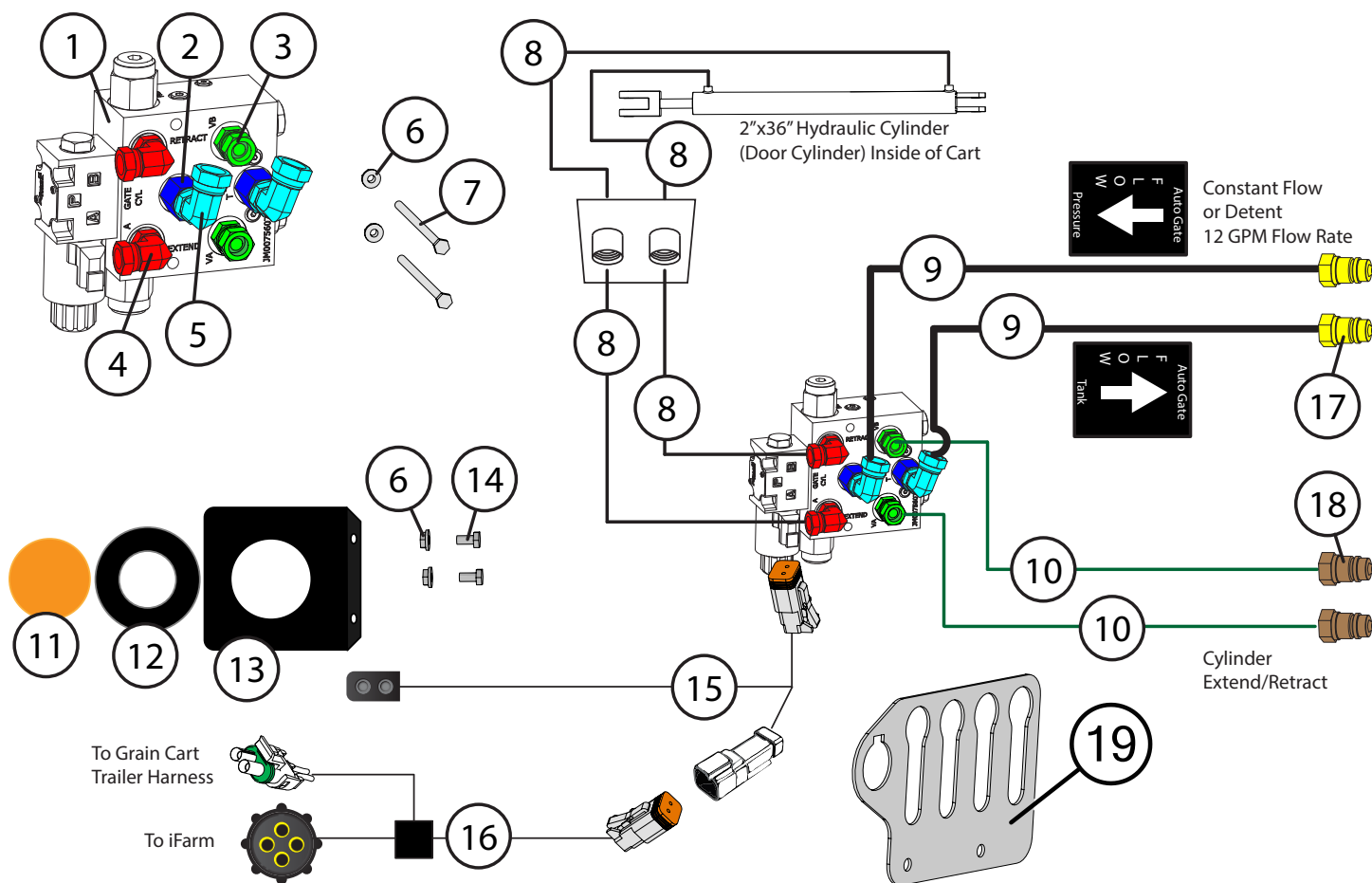
Hydraulic Hoses & Cylinders



Hydraulic Hoses & Cylinders

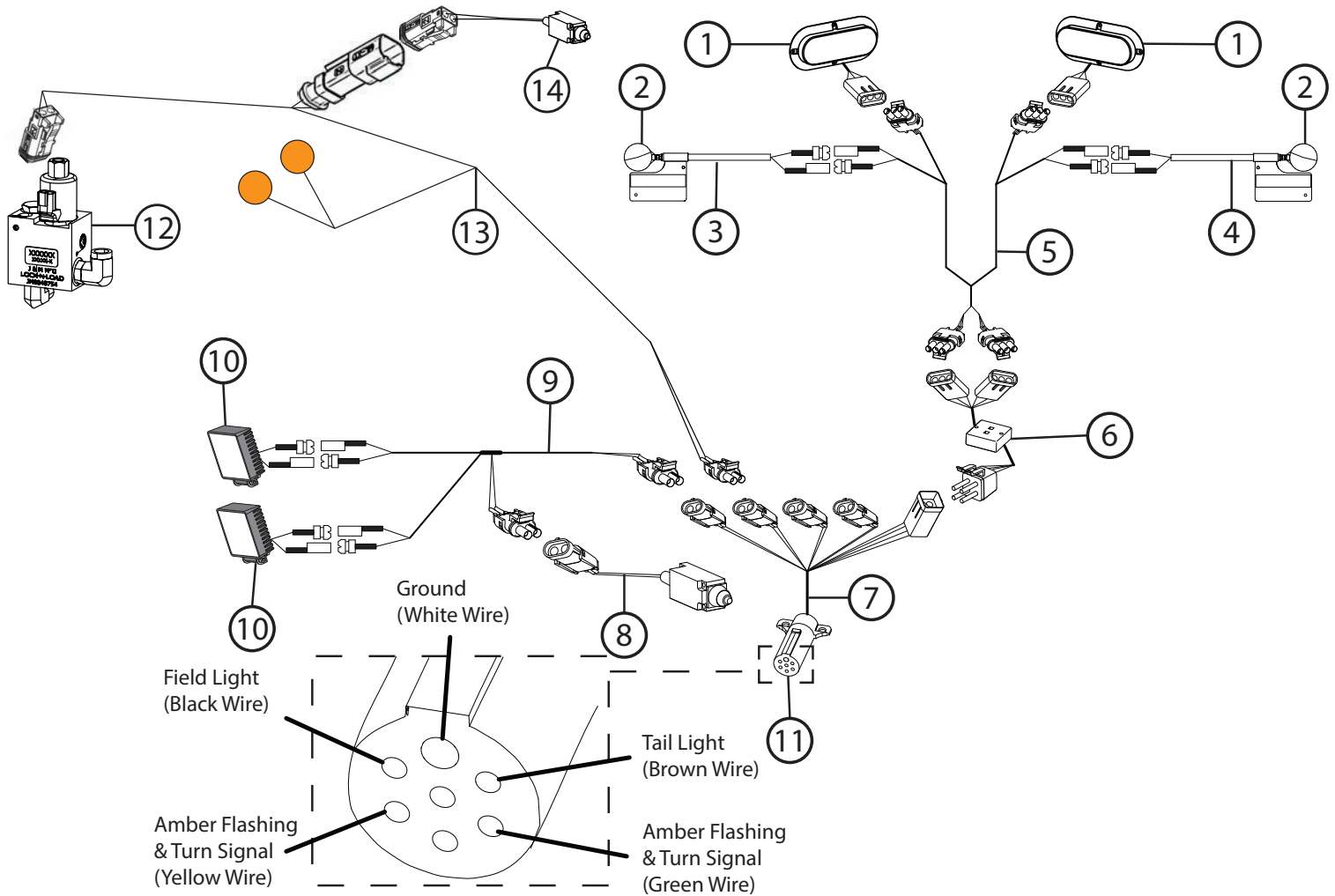
	Description	Part No.
1	2" x 36" Hydraulic Cylinder (JD236)	JM0018523
1	Seal Kit for 2" x 36" Hydraulic Cylinder (JD472)	JM0026544
2	1-3/4" x 4" Hydraulic Cylinder (1/2" Clevis and Tab Ends) (HC-FCS)	JM0018564
2	Seal Kit for 1-3/4" x 4" Cylinder (SKHC-FCS) (JD459)	JM0024892
3	1/4" x 456" Hydraulic Hose 456 inch 4M3k-4G-8MP-4G-4MP	JM0030610
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 61" Hydraulic Hose 61 inch 4M3k-4G-6MPX-4G-6MP	JM0024905
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 286" Hydraulic Hose 286 inch 4M3k-4G-8MP-4G-6MP	JM0047274
10	1/4" x 264" Hydraulic Hose 264inch4M3k-4G-8MP-4G-6MP	JM0047275
11	Lock & Load Assembly (1106640) With Check Valve Built In	JM0048754
12	1/4" x 21" Hydraulic Hose 21 inch 4M3k-4G-4MP-4G-6MPX	JM0024896
13	3/8" Male NPT x 3/8" Female NPT; 90 Degree Elbow	JM0030059
14	3/8" Male NPT x 3/8" Female NPT x 3/8" Female NPT; Street T	JM0018266
15	3/8" Male NPT x 3/8" Female NPT Swivel with .062 Orifice (Restrictor)	JM0018362
16	3" x 24" x 1-1/2" Welded Cylinder (JD324)	JM0019644
16	Seal Kit 3" x 24" Cylinder (JD324-1) (JD480)	JM0037895
17	Hydraulic Hose 1/4" x 212" 212inch4M3k-4G-8MP-4G-6MPX	JM0030611
18	1/2" Female NPT x Male Pioneer - High Flow, Cone Style	JM0018254
19	3/8" Male ORB x 3/8" Male NPT; 90 Degree Elbow	JM0047350
20	1/2" Male ORB x 3/8" Female NPT; 90 Degree Elbow	JM0047348
21	Solenoid Valve for Lock and Load (Black)	JM0026256
22	Solenoid Coil for Lock and Load (Black)	JM0026255
23	Check Valve for Lock and Load (Black)	JM0026250

Auto-Gate Shut-Off



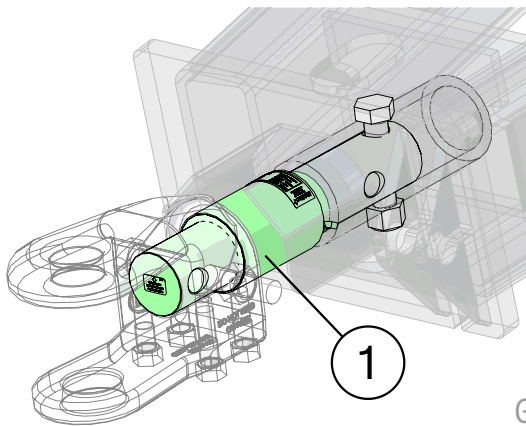
	Description	Part No.
1	Auto Gate Control Manifold Assembly (Small and Dual Auger Carts)	JM0080323
2	#8 Male ORB x #8 Female ORB - Straight	JM0080267
3	1/2" Male ORB x 3/8" Female NPSM Swivel; Straight	JM0010298
4	#8 Male ORB Swivel x #6 Female NPSM Swivel - Elbow	JM0080266
5	1/2" Male ORB x 1/2" Female NPSM Swivel; 90 Degree Elbow	JM0047392
6	1/4"-20 Gr5 Z SF Hex Nut	JM0001630
7	1/4"-20 x 3-1/2" Gr5 Z Hex Bolt	JM0046621
8	1/4"x 43" Hydraulic Hose 43 inch 4M3k-4G-6MPX-4G-6MP	JM0024904
9	1/2"x 236" Hydraulic Hose 236inch8M3k-8G-8MP-8G-8MPX	JM0047376
10	Hydraulic Hose 1/4" x 212" 212inch4M3k-4G-8MP-4G-6MPX	JM0030611
11	2-1/2" Amber Round LED Light/Reflector	JM0001895
12	Round Grommet for LED 2-1/2" Light/Reflector	JM0001902
13	3-1/2" Round LED Mount	JM0034956
14	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
15	Auto Gate Light Harness (LED Light "Y" Cable)	JM0046624
16	J&M Relay Harness (1 per IFM-GS-1P(auto-gate))	JM0037374
17	1/2" Female NPT x Male Pioneer - Low Flow, Ball Style	JM0039220
18	1/2" Female NPT x Male Pioneer - High Flow, Cone Style	JM0018254
19	4 Keyed 12 Series Hydraulic Hose Holder	JM0032434

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 & Load Assembly (1106640) With Check Valve Built In	JM0048754
13	Grain Cart Lock and Load Harness with Indicator Lights	JM0044755
14	Limit Switch for Lock and Load (72" Long Cable)	JM0046717

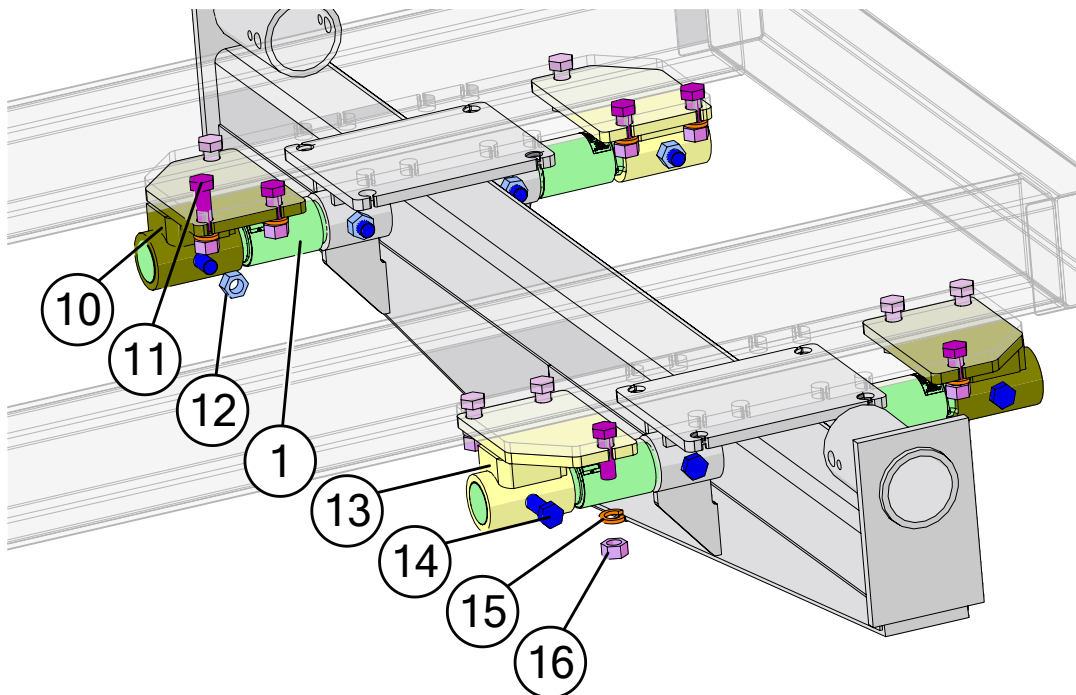
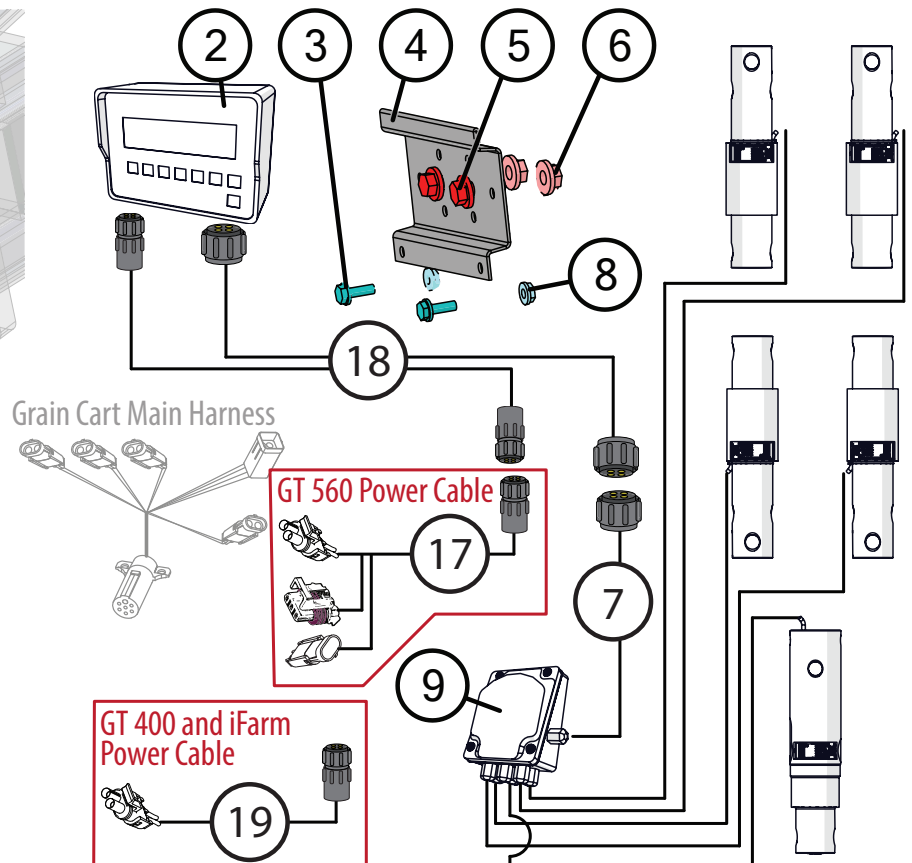
5-Point Scale System for Single Wheel Bolt on Axles



GT 400



GT 560

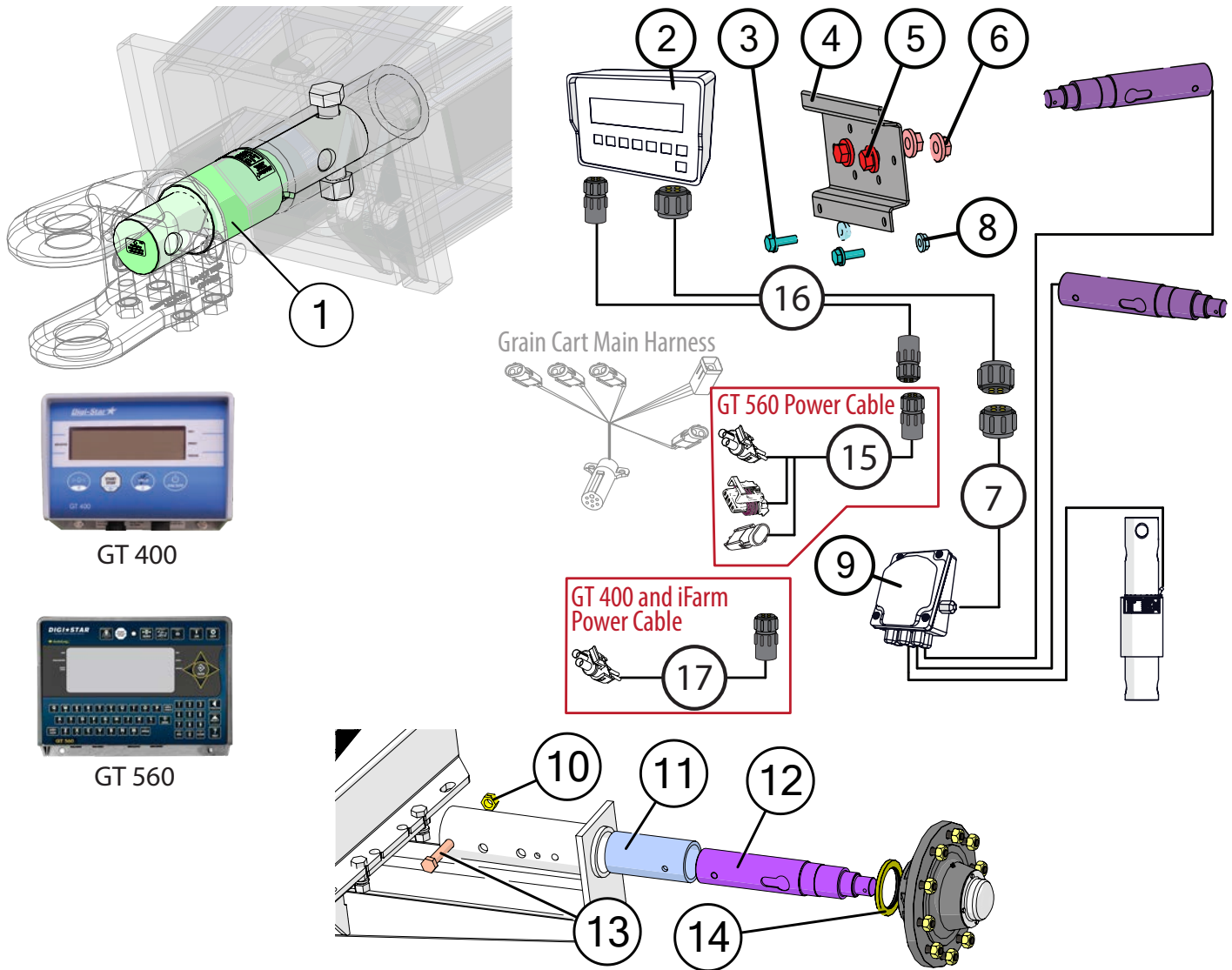


5-Point Scale System for Single Wheel Bolt on Axles

When there is a conflict, highlighted rows are parts for Avery Weigh-Tronix scale systems.

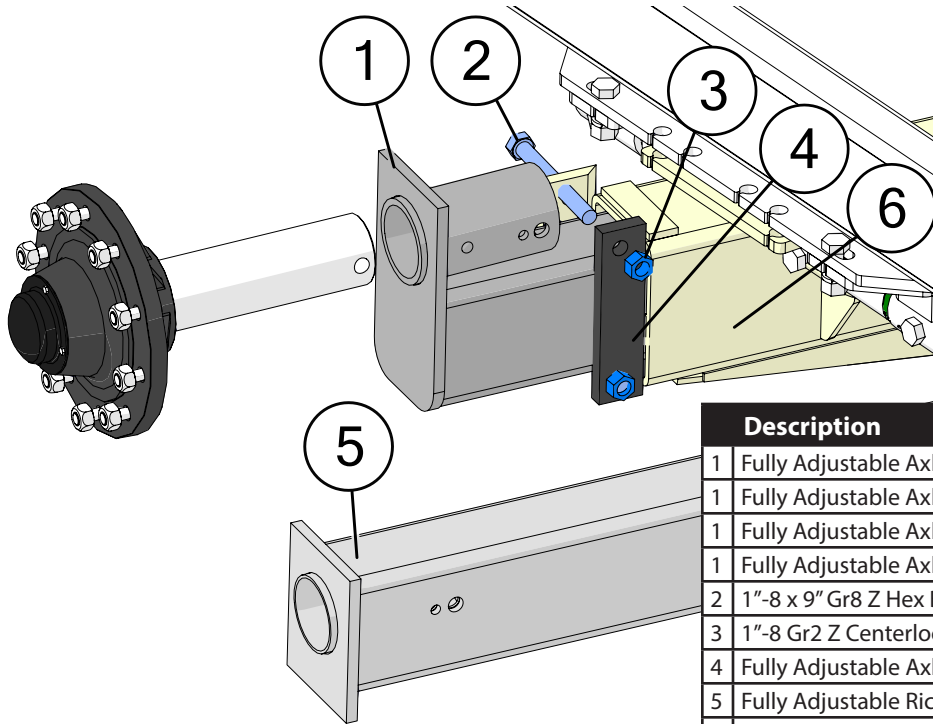
	Description	Part No.
1	2-7/8" Digi-Star Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
1	2-7/8" Weigh Bar, Weigh-Tronix (1" Hole) (278WB)	JM0019969
2	GT 400 Digi-Star Scale Display Monitor	JM0019040
2	GT 560 Digi-Star Scale Display Monitor	JM0044177
3	1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
4	GT 400 Scale Monitor Display Bracket	JM0000361
4	GT 560 Scale Monitor Display Bracket	JM0046976
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
7	15' Cable from J-Box to Indicator (Weigh-Tronix)	JM0050445
8	1/4"-20 Gr5 Z SF Hex Nut	JM0001630
9	Digi-Star 6-Point Junction Box (JB-5)	JM0019038
9	Avery Weigh-Tronix 5-Point Junction Box (JB-5-WT)	JM0019960
10	2-7/8" Weigh Bar Weldment, Rear Left, Front Right (6-1/8" Spool)	JM0000354
11	1"-8 x 3" Gr5 Z Hex Bolt	JM0016686
12	1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
13	2-7/8" Weigh Bar Weldment, Rear Right, Front Left (6-1/8" Spool)	JM0018985
14	1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
15	1" Zinc Finished Lock Washer	JM0019203
16	1"-8 Gr5 Z Hex Nut	JM0002127
17	Power Cable for GT560 Indicator (PC-GT560)	JM0078634
18	30' Extension Cable Kit (Load Cell and Power) (ECI-3)	JM0041218
19	iFarm and GT400 Standard Power Cable 18" (74132)	JM0041060
20	Flash Drive Memory Stick for Digi-Star GT 560 (114991)	JM0025819

3 Point Scale System



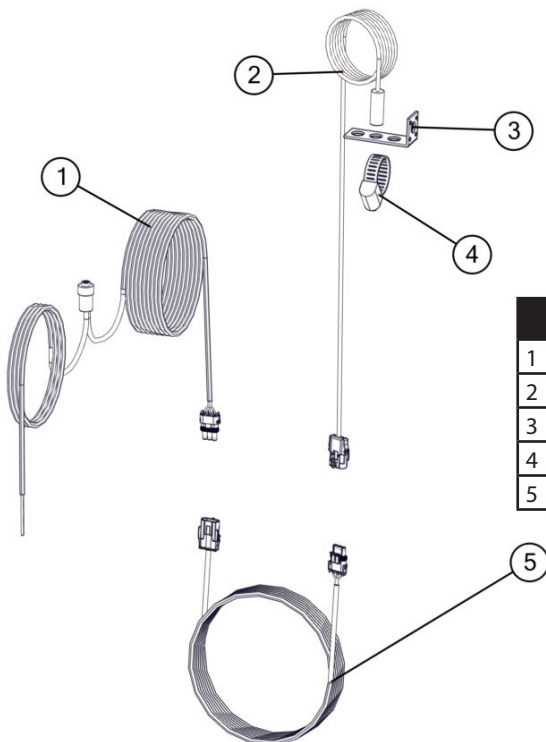
Description	Part No.
1 2-7/8" Digi-Star Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
2 GT 400 Digi-Star Scale Display Monitor	JM0019040
2 GT 560 Digi-Star Scale Display Monitor	JM0044177
3 1/4"-20 x 3/4" Gr5 Z Hex Bolt	JM0001507
4 GT 560 Scale Monitor Display Bracket	JM0046976
4 GT 400 Scale Monitor Display 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 1/4"-20 Gr5 Z SF Hex Nut	JM0001630
9 Digi-Star 6-Point Junction Box (JB-5)	JM0019038
10 5/8"-11 Gr2 Z Centerlock Hex Nut	JM0002146
11 3-3/4" ID x 4-1/2" OD x 9-3/8" Adapter Pipe Tubing (ATP-375-GS)	JM0021453
12 3-3/4" Digi-Star Weigh Spindle (375WS)	JM0021451
13 5/8"-11 x 7" Socket Head Cap Screw	JM0050413
14 Seal (3-3/4" ID, 6" OD) for Hub with Scales (37605SA)	JM0021456
15 Power Cable for GT560 Indicator (PC-GT560)	JM0078634
16 30' Extension Cable Kit (Load Cell and Power) (ECI-3)	JM0041218
17 iFarm and GT400 Standard Power Cable 18" (74132)	JM0041060
18 Flash Drive Memory Stick for Digi-Star GT 560 (114991)	JM0025819

Fully Adjustable Axle



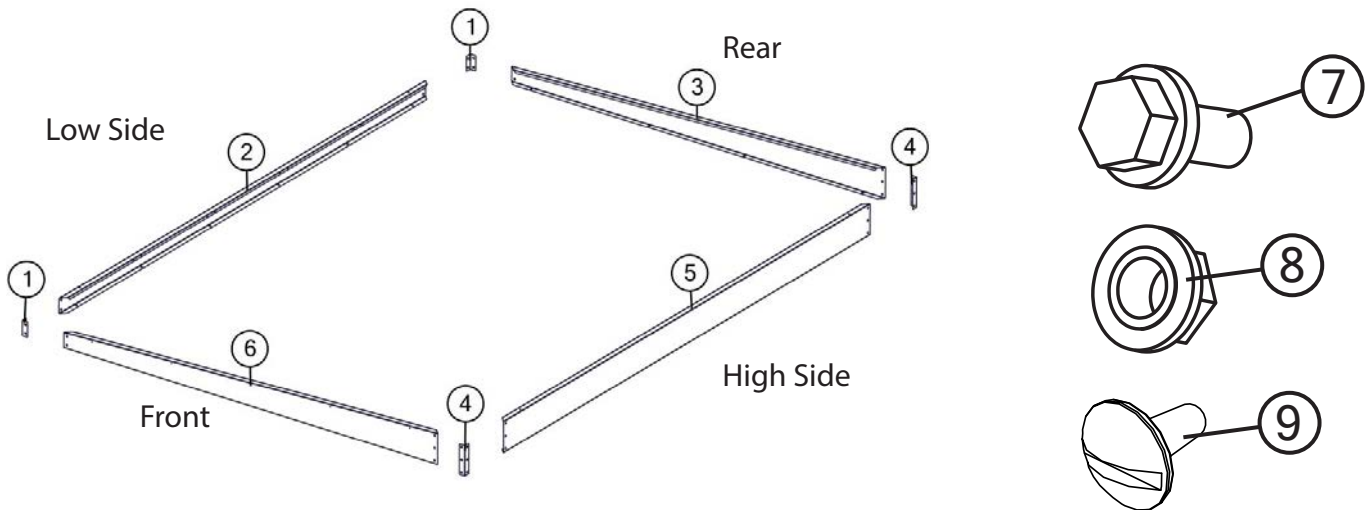
Description	Part No.
1 Fully Adjustable Axle Insert 54" (Auger Side)	JM0022249
1 Fully Adjustable Axle Insert 54" (Opposite Auger Side)	JM0022250
1 Fully Adjustable Axle Insert (XL 58") (Auger Side)	JM0022243
1 Fully Adjustable Axle Insert (XL 58") (Opposite Auger Side)	JM0022240
2 1"-8 x 9" Gr8 Z Hex Bolt	JM0001708
3 1"-8 Gr2 Z Centerlock Hex Nut	JM0002149
4 Fully Adjustable Axle Clamp Plate (CP-1B)	JM0024183
5 Fully Adjustable Rice Axle Insert 54" (Auger Side)	JM0021902
5 Fully Adjustable Rice Axle Insert 54" (Auger Side)	JM0021901
5 Fully Adjustable Rice Axle Insert (XL 58") (Opposite Auger Side)	JM0021884
5 Fully Adjustable Rice Axle Insert (XL 58") (Auger Side)	JM0021900
6 Bolt on Fully Adjustable Axle Weldment (875, 750)	JM0034529

Auto-Log Kit for GT560 Only



Description	Part No.
1 Auto-Logger 25' Wire Bundle (Digi Star 407201)	JM0015445
2 Sensor-Rotation Counter w/Connector (Autolog)(Digi Star 407199)	JM0015447
3 Rotation Counter Mounting Bracket (Auto Log)	JM0015448
4 1 1/2" diameter Hose Clamp (Size 24) Steel Sensor (Autolog)	JM0015450
5 Rotation Counter Sensor Extension Wire Bundle 16' (Digi Star 407200)	JM0015452

Sideboards

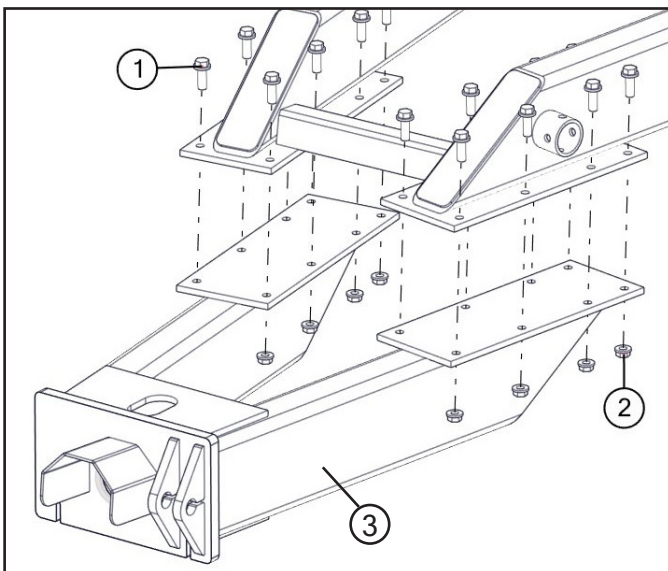


	Description	Part No.
1	Low Sideboard Corner 5-1/8" (812, 875)	JM0013113
2	Low Sideboard 192" x 5-5/16" (812, 875) SPECIFY COLOR	JM0014019*
3	Back Endboard 141" x 10-11/16" (812, 875) SPECIFY COLOR	JM0014021*
4	High Sideboard Corner 10-1/4" (812, 875)	JM0013112
5	High Sideboard 192" x 10-11/16" (812, 875) SPECIFY COLOR	JM0014020*
6	Front Endboard 141" x 10-11/16" (812, 875) SPECIFY COLOR	JM0014022*
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	Sideboard Complete Set (812, 875) SPECIFY COLOR	JM0027980*

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

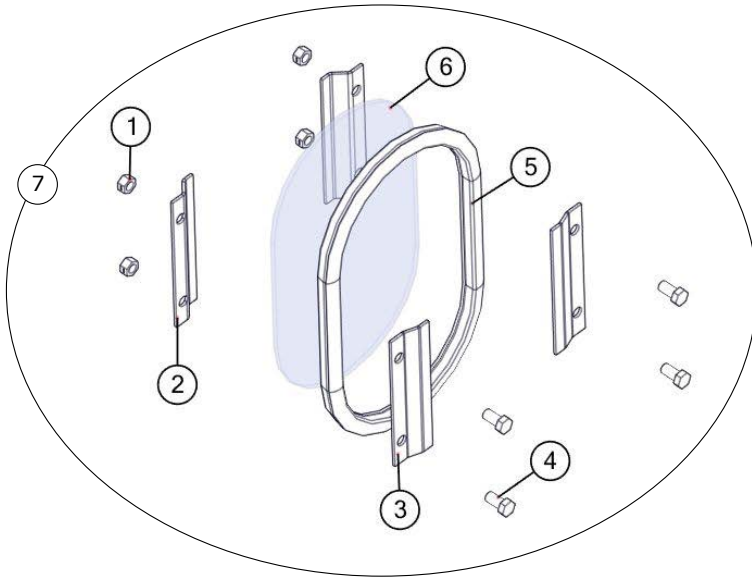
When requesting an item with color, end the part number with -R, -B, -G, -Y, or -BLK. (e.g. JM0000000-R)

Bolt-On Frame



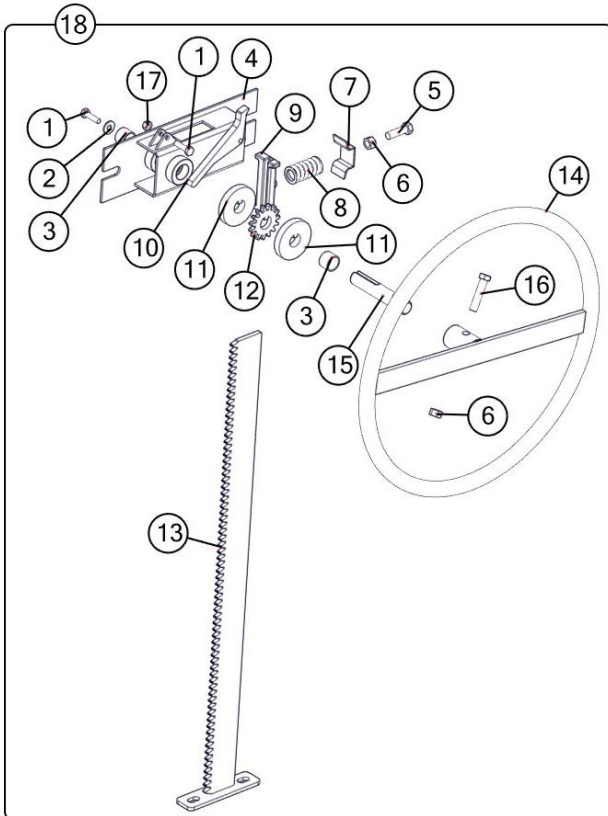
	Description	Part No.
1	5/8"-11 x 1-3/4" Gr5 Z SF Hex Bolt	JM0027674
2	5/8"-11 Gr5 Z SF Hex Nut	JM0002151
3	812 Front Hitch Weldment	JM0036473

Inspection Windows



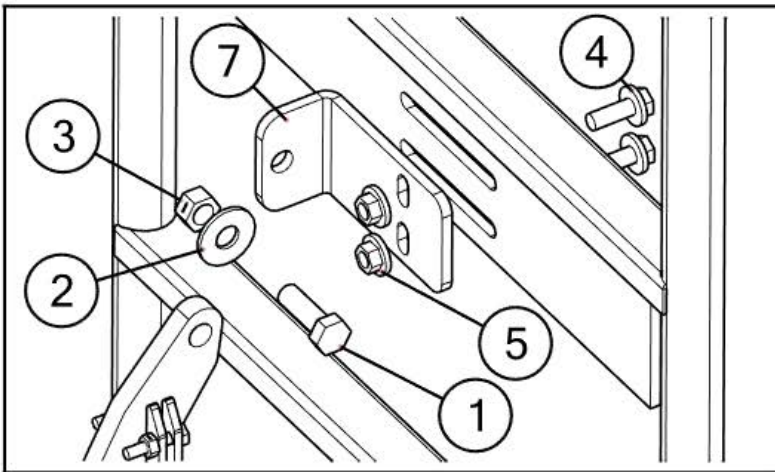
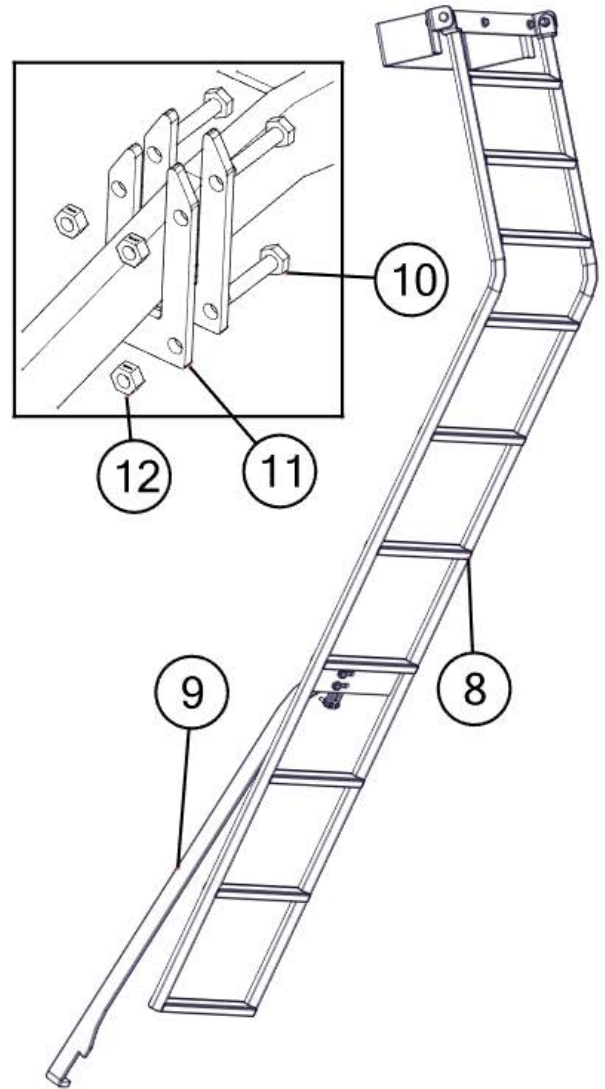
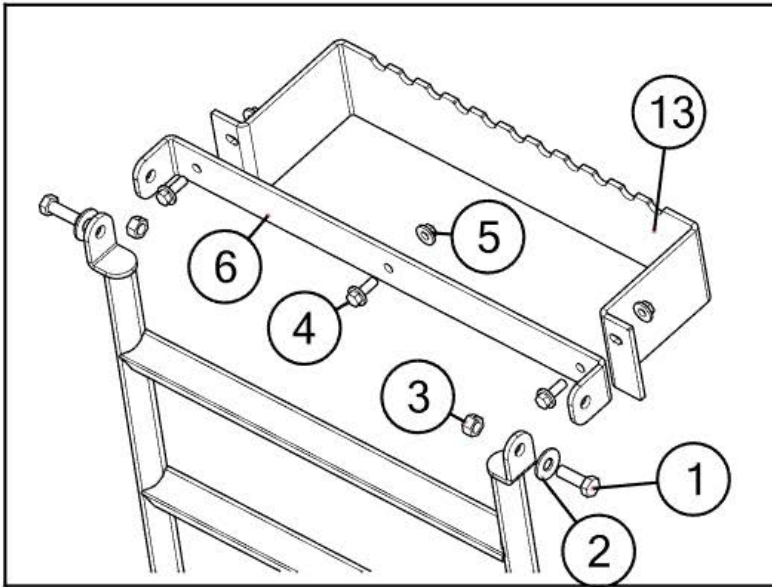
Description	Part No.
1 3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
2 Inside Window Clip - Deep	JM0000253
3 Outside Window Clip - Shallow	JM0000256
4 3/8"-16 x 3/4" Gr5 Z Hex Bolt	JM0001663
5 Window Seal 3/4" S Strip	JM0000254
6 Standard Inspection Window	JM0000255
7 Inspection Window Kit	JM0025752

Door Wheel Assembly (2016 & Newer)



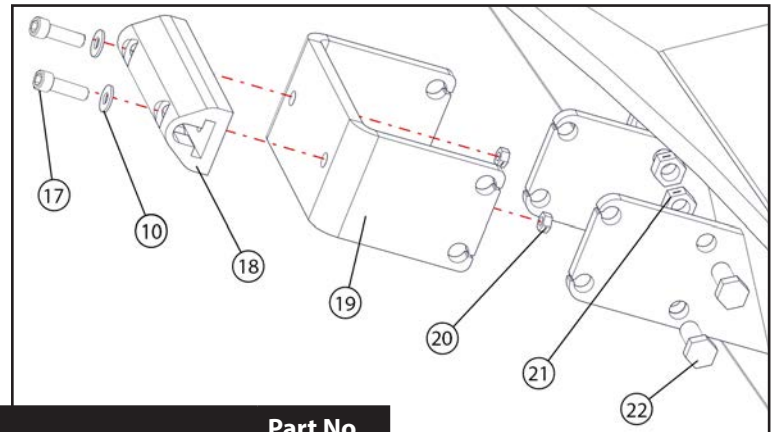
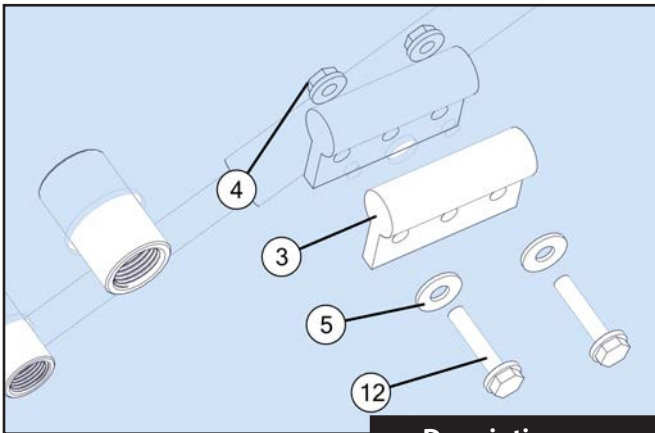
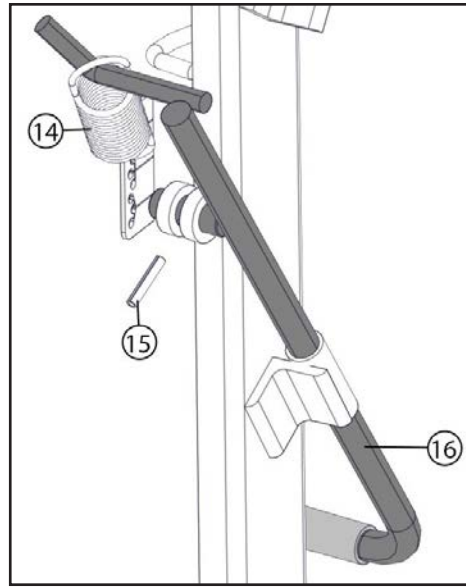
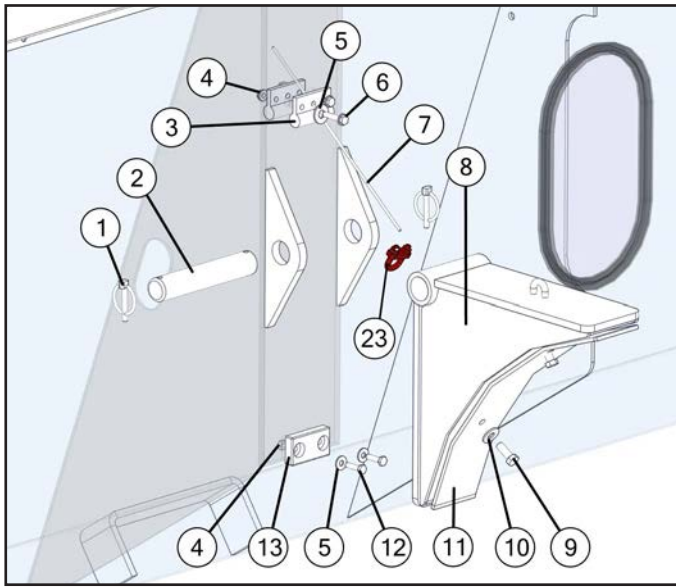
Description	Part No.
1 1/4"-20 x 1" Gr5 Z Hex Bolt	JM0002095
2 1/4" ID, 3/4" OD Z Flat Washer	JM0003090
3 3/4" ID x 7/8" OD x 5/8" LG Bronze Bushing (BB-34)	JM0009455
4 Nylon Guided Rack Housing Weldment (2015 & Newer)	JM0030635
5 3/8"-16 x 1-1/4" Gr5 Z Hex Bolt	JM0016675
6 3/8"-16 Gr5 Z Hex Nut	JM0001707
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 (27-1/2") 2015 & Newer	JM0030634
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 (27-1/2") (2016 & Newer)	JM0029460

Ladder Assembly



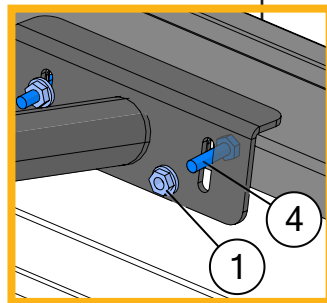
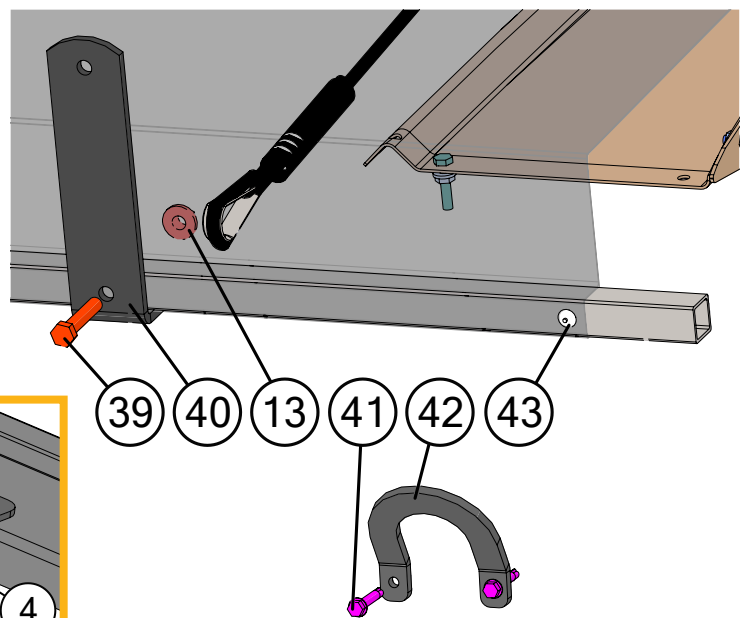
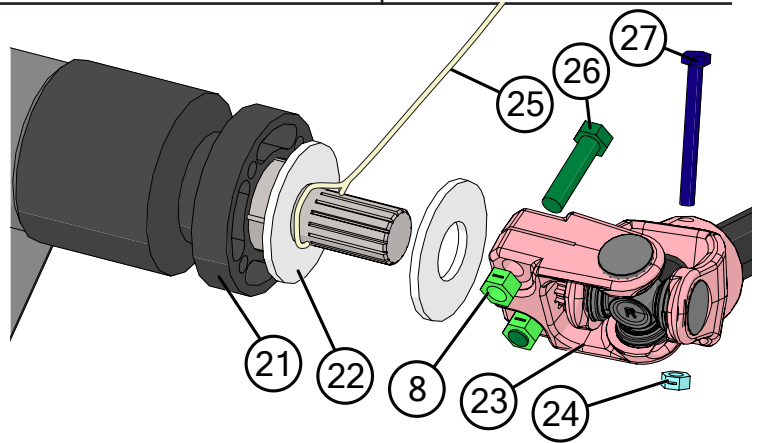
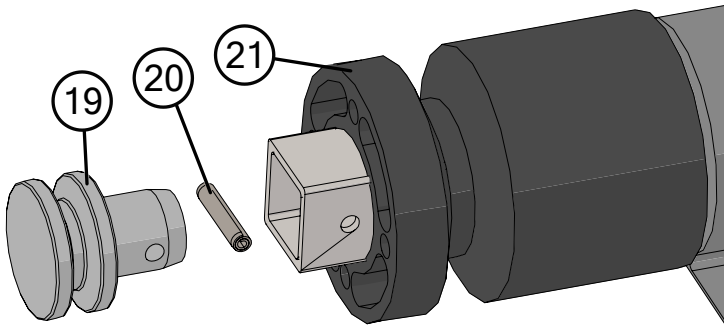
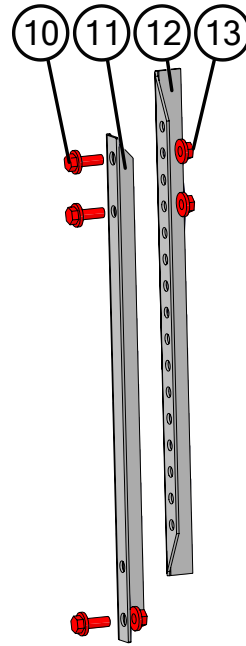
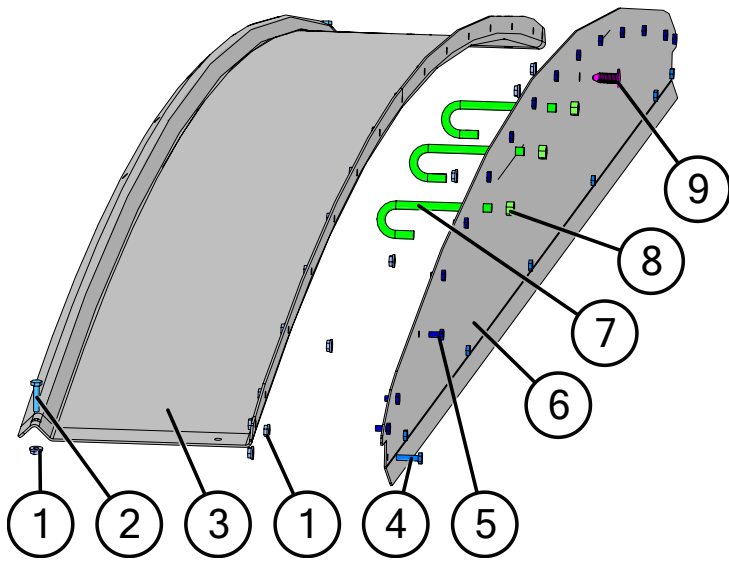
	Description	Part No.
1	1/2"-13 x 1-1/2" Gr5 Z Hex Bolt	JM0002100
2	1/2" ID, 1-3/8" OD Z Flat Washer	JM0003082
3	1/2"-13 Gr2 Z Centerlock Hex Nut	JM0001511
4	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
5	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
6	Side Swing Ladder Mount Bracket	JM0012865
7	Swing Out Ladder Adjustable 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 (White)	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" USS 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 x 1.5 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 1-7/8" 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
23	1/8" Cable Clamp	JM0001514

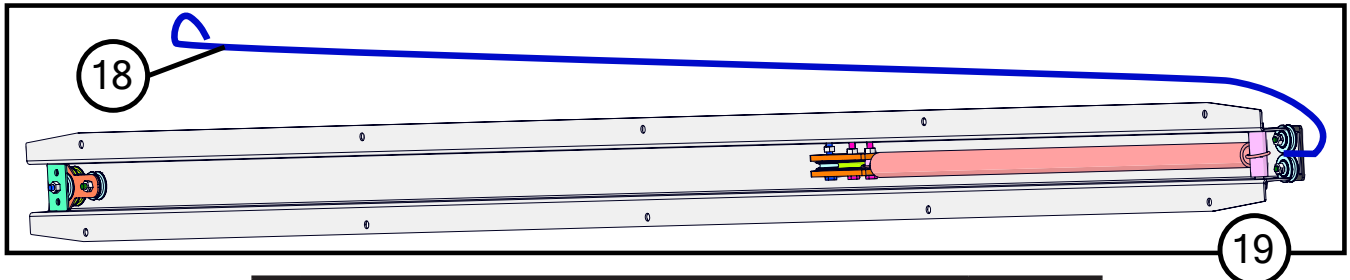
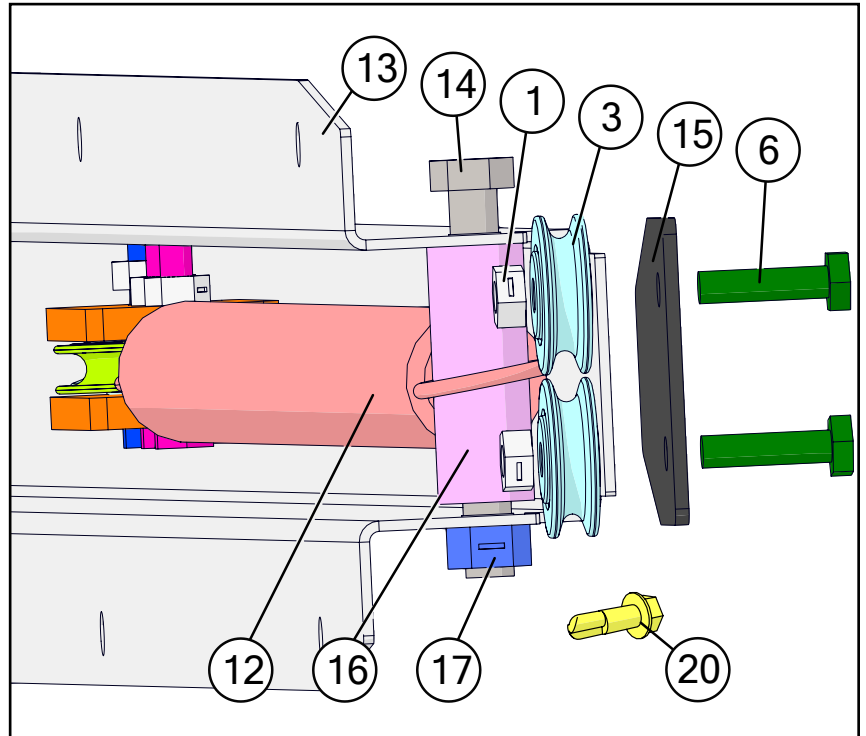
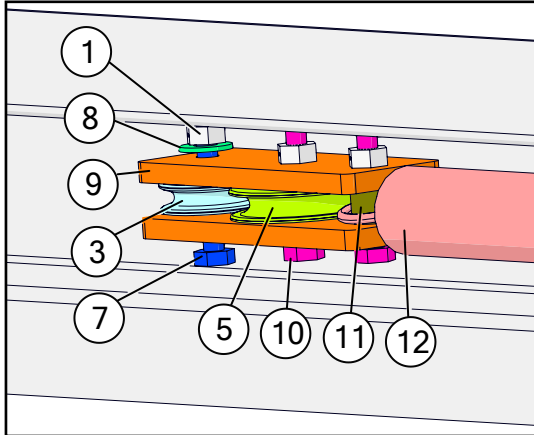
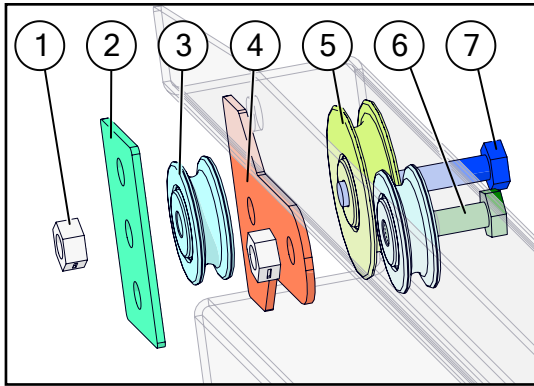
Roll Tarp Assembly



Roll Tarp Assembly

	Description	Part No.
1	1/4"-20 Gr5 Z SF Hex Nut	JM0001630
2	1/4"-20 x 1-1/4" Gr5 Z Hex Bolt	JM0016673
3	Arched Top Endcap for Glide Right - Grain Cart 141-1/2"	JM0044731
4	1/4"-20 x 1" Gr5 Z Hex Bolt	JM0002095
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 x 2-3/8" Thread Length x 5" Overall Length Gr5 Z J-Bolt	JM0001519
8	3/8"-16 Gr2 Z Centerlock Hex Nut	JM0001512
9	3/8" Ribbed Push in Rivet	JM0037396
10	3/8"-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
11	Endcap Prop - Lower 19" (ABS-2)	JM0000179
12	End Cap Prop - Upper 19"	JM0021404
13	3/8"-16 Gr5 Z SF Hex Nut	JM0002152
14	1/4" x 2" x 23" Bar for Crank Holder (875 Bushel Carts and Lower)	JM0029818
15	3/8" USS Flat Washer	JM0003061
16	3/8"-16 x 1-1/4" Gr5 Z Carriage Bolt	JM0001639
17	Roll Tarp Handle Top Hook (3-3/4" x 1-1/4")	JM0080035
18	Crank Handle Hook	JM0081371
19	Spool End for Roll Tube (2" Long x 1-3/4" O.D.)	JM0002449
20	1/4" x 1-1/4" HD Spiro Roll Pin	JM0046782
21	Roll Tarp Guide Roller (4-1/8" Long x 3-1/4" O.D.)	JM0038446
22	1" USS Flat Washer	JM0003063
23	Universal Joint - Roll Tarp (SUJ-1)	JM0001517
24	1/4"-20 Gr2 Z Centerlock Hex Nut	JM0001505
25	Spring Return Cable (Grain Carts)	JM0012981
26	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
27	1/4"-20 x 2-1/2" Gr5 Z Hex Bolt	JM0001506
28	3/16" Cable x 198" Long (316C-198)	JM0022194
29	3/16" Cable Clamp (316CC)	JM0025406
30	137" Arched Tarp Bows (Regular) (137ATB)	JM0000157
31	Tightening Lip x 192" (875, 812, GC24t-1)	JM0000155
32	Tarp Rope Assembly 14' 8" Glide Right Standard Cart	JM0048662
33	S-Cap Yellow - 1.062" ID x 1-1/2" x 1/16"	JM0018963
34	12' Crank Grain Cart (CUJ-1LN)	JM0019888
35	Spring Return Assembly Complete (Grain Cart)	JM0002911
36	1-1/4" x 195" Roll Tube for Glide Right (875, 812, GC24t-1, 455, 555)	JM0048406
37	15'8" x 13'6" Tarp w/ 10 Rivets (875, 812, GC24t-1)	JM0018184
38	1" x 192" Square Tie-Down Tube (875, 812, GC24t-1, 455, 555)	JM0000188
39	3/8"-16 x 2" Gr5 Z Hex Bolt	JM0001510
40	Tarp Stop Bracket (TSB-1)	JM0000187
41	1/4" x 1-1/2" Self Tapping Screw	JM0001571
42	Tarp Rope Bracket	JM0047700
43	1/4" Tarp Rivet	JM0001518

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