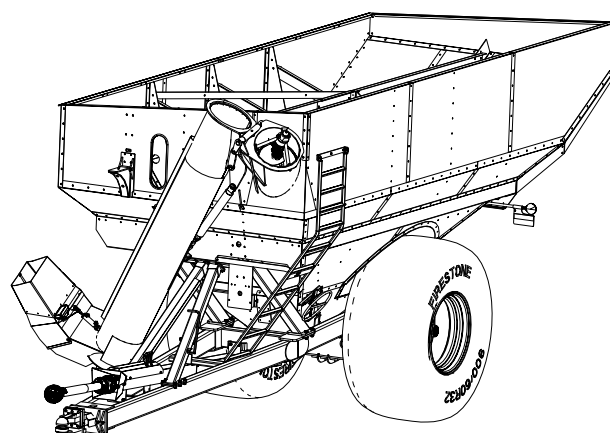


24XR
GRAIN CART

OPERATORS MANUAL



Rev. 3.10.2015

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Stance

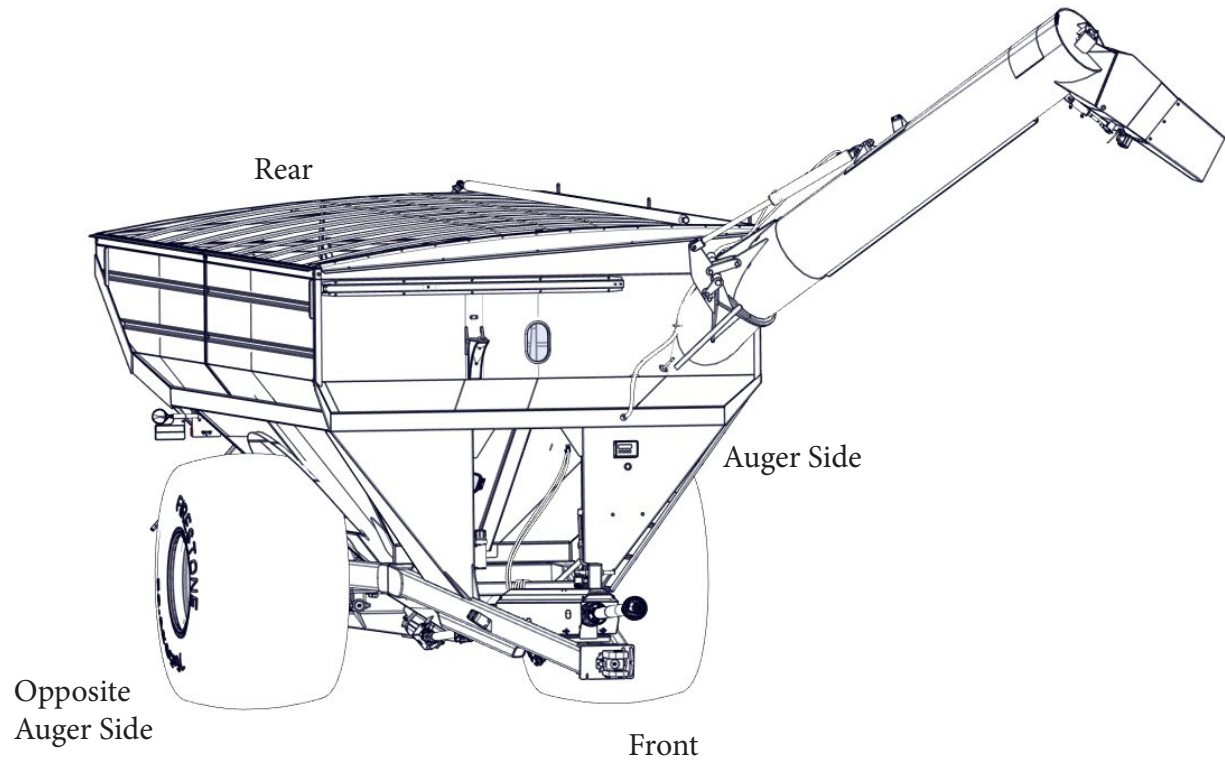


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To The Dealer

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

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

EXPRESS WARRANTY:

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

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

Each warranty term begins on the date of product delivery to the purchaser. Under no circumstance will warranty be approved unless (i) the product warranty registration card (attached to the inside of the Operator's Manual) 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 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: _____ **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, will result in death or serious injury, and includes hazards that are exposed when guards are removed.

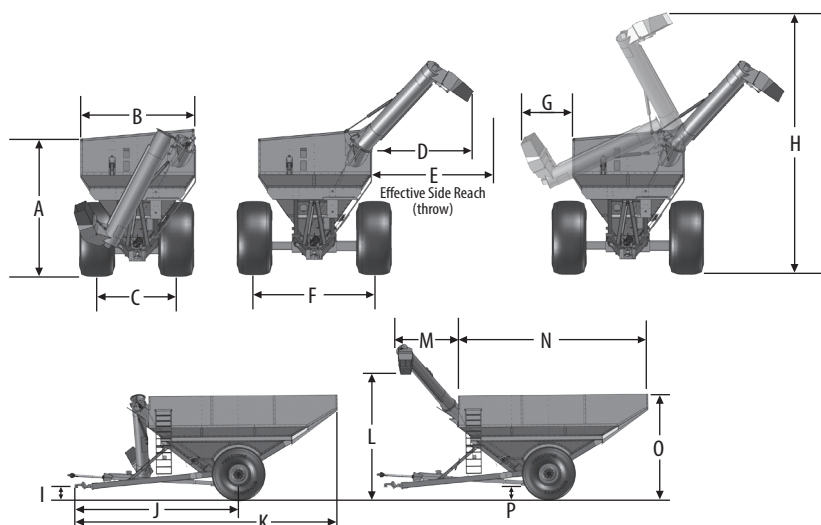
 **CAUTION** Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.


IMPORTANT Indicates that failure to observe can cause damage to equipment.

NOTE Indicates helpful information.

Specifications

SPECIFICATIONS 	
Capacity	24 Tons (30,8 m ³)
Auger, One Vertical	45.7 cm (18")
Unload Time (minutes)	2.5 min
Wheels (2)	21x32, 27x32, 30x32, 25x36
Tires (2)	24.5x32, 30.5x32, 900/60R32, 66x43.00
Spindles (2)	11,4 cm - 12,7 cm (4 1/2")
Tongue Weight	
Empty	1,091 kg (2,420 lbs.)
Loaded	1,863 kg (4,100 lbs.)
Total Weight (approx.)	5,114 kg (11,250 lbs.)



	
A	340 cm (11'-2")
B	290 cm (9'-6")
C	203 cm (6'-9")
D	262 cm (8'-7")
E	338 cm (11'-1")
F	305 cm (10'-0")
G	91 cm (3'-0")
H	638 cm (20'-11")
I	48 cm (1'-7")
J	539 cm (17'-8")
K	904 cm (29'-8")
L	373 cm (14'-3")
M	213 cm (7'-0")
N	671 cm (22'-0")
O	366 cm (12'-0")
P	46 cm (1'-6")

Specifications are subject to change without notice or obligation.

General Information

BOLT TORQUE CHART

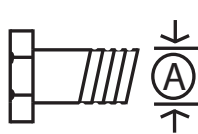
Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application.

Fasteners must always be replaced with the same grade as specified in the manual parts list.

Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for Metric hardware.

Make sure fastener threads are clean and you start thread engagement properly.

All torque values are given to specifications used on hardware defined by SAE J1701 & J1701M (JUL 96)



SAE SERIES TORQUE CHART



SAE Grade 2
(No Dashes)


SAE Bolt Head
Identification



SAE Grade 5
3 Radial Dashes



SAE Grade 8
6 Radial Dashes

 Diameter (Inches)	Wrench Size	MARKING ON HEAD					
		SAE 2		SAE 5		SAE 8	
		LBS.-FT.	N-m	LBS.-FT.	N-m	LBS.-FT.	N-m
1/4	7/16"	6	8	10	13	14	18
5/16	1/2"	12	17	19	26	27	37
3/8	9/16"	23	31	35	47	49	67
7/16	5/8"	36	48	55	75	78	106
1/2	3/4"	55	75	85	115	120	163
9/16	13/16"	78	106	121	164	171	232
5/8	15/16"	110	149	170	230	240	325
3/4	1-1/8"	192	261	297	403	420	569
7/8	1-5/16"	306	416	474	642	669	907
1	1-1/2"	467	634	722	979	1020	1383

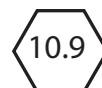


METRIC SERIES TORQUE CHART



Metric
Grade 8.8

Metric Bolt Head
Identification



Metric
Grade 10.9

Diameter & (Millimeters) Thread Pitch	Wrench Size	COARSE THREAD				FINE THREAD				Diameter & (Millimeters) Thread Pitch
		MARKING ON THREAD				MARKING ON THREAD				
		Metric 8.8		Metric 10.9		Metric 8.8		Metric 10.9		
6 x 1.0	10 mm	8	6	11	8	8	6	11	8	6 x 1.0
8 x 1.25	13 mm	20	15	27	20	21	16	29	22	8 x 1.0
10 x 1.5	16 mm	39	29	54	40	41	30	57	42	10 x 1.25
12.1.75	18 mm	68	50	94	70	75	55	103	76	12.1.25
14 x 2.0	21 mm	109	80	151	111	118	87	163	120	14 x 1.5
16 x 2.0	24 mm	169	125	234	173	181	133	250	184	16 x 1.5
18 x 2.5	27 mm	234	172	323	239	263	194	363	268	18 x 1.5
20 x 2.5	30 mm	330	244	457	337	367	270	507	374	20 x 1.5
22 x 2.5	34 mm	451	332	623	460	495	365	684	505	22 x 1.5
24 x 3.0	36 mm	571	421	790	583	623	459	861	635	24 x 2.0
30 x 3.0	46 mm	1175	867	1626	1199	1258	928	1740	1283	30 x 2.0

TIGHTENING WHEEL NUTS

Standard 3/4" (20MM) wheel studs and nuts should be tightened to torque 500 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.

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.

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.

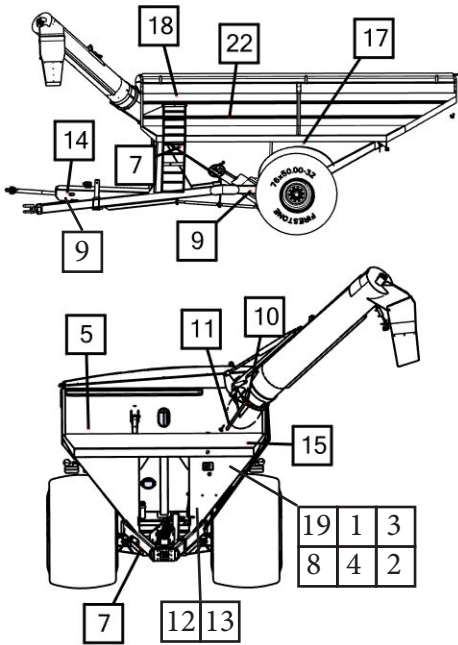
Before unhooking the grain cart from the tractor, be sure the jack stand is properly mounted and in place and the wheels are properly blocked to prevent the cart from moving.

Safety Rules

⚠ ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! ⚠

Replace Immediately If Damaged or Missing

IMPORTANT: Install new safety signs if the old signs are destroyed, lost, painted over or cannot be read. When parts are replaced that have safety signs, make sure you install a new sign with each new part. New signs are available from the manufacturer or your authorized dealer.



SAFETY DECALS

#	Part #	Description
1	JM0018044	Operating Instructions
2	JM0010163	Warning, High Pressure
3	JM0014979	Warning, General
4	JM0018038	Farm Use Only
5	JM0015151	J&M Oval Decal, Large
6	JM0010179	J&M Oval Decal, Medium
7	JM0014994	Warning, Pinch Point
8	JM0018037	Danger, Suffocation
9	JM0018036	Danger, Rotating Driveline
10	JM0025433	Open
11	JM0025434	Closed
12	JM0027472	Field Position
13	JM0027473	Storage Position
14	JM0025435	Check PTO Overlap
15	JM0018043	Warning, Check Lug Nuts
16	JM0018039	Warning, Keep Hands Away
17	JM0010150	Warning, Lug Nuts
18	JM0018033	Danger, Do Not Enter Tank
19	JM0015099	Danger, Electric Lines
20	JM0018034	Danger, Keep Off Ladder
21	JM0018035	Danger, Keep Hands Away
22	Specify	AS Stripe Kit
23	Specify	OAS Stripe Kit

IMPORTANT

OPERATING INSTRUCTIONS

- 1) With the gate indicator in the closed position, fill the box with grain.
- 2) With the PTO disengaged, fold the discharge auger to the upright position.
- 3) After the auger is in the upright position, start the PTO at a SLOW RATE OF SPEED until the pin on the upper auger engages the drive dog on the bottom auger (failure to follow this procedure may cause extensive damage to both the drive dog and the pin).
- 4) Increase PTO to the maximum r.p.m. speed and slowly open the inner gate until the pointer is in the halfway position. When grain begins flowing from the discharge auger, adjust the gate to control the rate of flow (Do not slow the speed of the PTO).
- 5) To stop unloading, FIRST return the inner gate to the closed position. For complete clean-out, gradually close the gate. Allow the unloading auger to clean-out before disengaging the PTO. Disengage the PTO and allow the auger to come to a complete stop. Fold the upper auger to the stow position.

#1



#2



#3



#7

FOR FARM USE ONLY

#4



#8



#9



#5



#10



#11



#12



#13



#14



#15



#16



#17



#18



#19



#20



#21

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 EP-80-90 gearbox lubricant?
- Have all nuts, bolts, bearings and braces been properly fastened?
- Has the PTO been checked for proper overlap?

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

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

GREASE 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:**

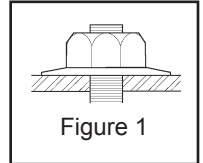
Tire Size	Pressure (PSI)
480/80R42 Lug Tire, 12 ply (for 16x42-10 wheel)	35
480/80R46 Lug Tire, 12 ply (for 16x46-10 wheel)	41
520/85R38 Lug Tire, 154 LI (for 18x38-10-8.7 and 18x38-10 wheels)	28
520/85R42 Lug Tire, 162 LI (for 18x42-10 wheel)	47
23.1x26 Lug Tire, 12 ply (for 20x26-10 and 20x26-10L wheels)	26
23.1x26 Diamond Tire, 12 ply (for 20x26-10 and 20x26-10L wheels)	30
24.5x32 Lug Tire, 12 ply (for 21x32-10-8.7 and 21x32-10 wheels)	30
24.5x32 Diamond Tire, 12 ply (for 21x32-10-8.7 and 21x32-10 wheels)	30
24.5x32 Diamond Tire, 16 ply (for 21x32-10HD heavy duty wheel)	36
30.5x32 Lug Tire, 12 ply (for 27x32-10 wheel)	26
30.5x32 Diamond Tire, 14 ply (for 27x32-10 wheel)	28
35.5x32 Diamond Tire, 20 ply (for 31x32-10 3-piece wheel)	34
900/60R32 Lug Tire, 176 LI (for 27x32-10)	41
900/60R32 Lug Tire, 185 LI (for 27x32-10)	35-43
66x43.00 Lug Tire, 16 ply (for 25x36-10 wheel)	46
73x44.00 Lug Tire, 16 ply (for 32x36-10 wheel)	46
76x50.00 Lug Tire, 20 ply (for 44x32-10 wheel)	51
1250/50R32 Lug Tire. 201 LI (for 44x32 -10 or 20 wheel)	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 600 Lbs.-Ft. for standard 22mm wheel studs and nuts. Torque to 500 Lbs.-Ft. for 3/4" wheel studs and nuts. Torque to 350 Lbs.-Ft. for 5/8" wheel studs and nuts. Wheel studs and nuts should be checked after each load during initial operation of the cart and then after every 10 hours of use. Failure to do so may damage wheel studs and nuts.** Once the seats are damaged, it will become impossible to keep the lug nuts tight.

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



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

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

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

Preparing the Grain Cart for Use: Model 810 requires a 150+ HP Tractor. Models 1010, 1110, and 1120 requires a 225+ HP Tractor. Models 1220, and 1310 requires a 250+ HP Tractor. Models 1410 and 1520 require a 300+ 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.

Road Travel (grain cart empty): Do not travel more than 32 km/hr (20 mph) 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 around the A-frame of the cart 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

- Secure the safety chain by looping it around the each side of the grain cart as shown and connecting to the towing machine's attaching bar.
- Do Not allow any more slack than necessary for articulation (maximum 11 inches)
- Do Not use any intermediate support as the attaching point.
- Store the safety chain by securing it around the main axle A-frame of the grain cart.
- Replace the safety chain if one or more links or end fittings are broken, stretched or otherwise damaged or deformed.

2) Attach the power-take-off shaft to the tractor. The PTO must have at least 10" of engagement. Check tractor drawbar for clearance and length and adjust if necessary. **Make sure the PTO does not bottom out when making sharp turns as it may bend the drive shaft.**

3) Make sure the jack stand is removed from the lower support position before the cart is moved. **Never use the jack to support a loaded grain cart.**

Operating Instructions (Continued)

- 4) Be sure that no debris or foreign objects are in the grain cart.
- 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 slip clutch is operating and 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 the 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 object (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.

Brake Set-Up

Embedding of the brakes before use.

1. Before starting the embedding be sure that the brake levers are properly adjusted. Push a full braking and check that the brake cylinder has a stroke of 35 - 45 mm-
2. Drive at 40 km/h.
3. Procedure a) - perform 10 braking applications at 3 bar pressure approx (half stroke of the pedal) from 40 km/h to stop. After each stop, release the brake, wait 1 minute then start speeding up to 40 km/h and then brake with the tractor in neutral.
4. Procedure b) - alternatively you can operate with a continuous braking at 1.5 - 2 bar for about 2 minutes, during this procedure the brakes repeatedly develop smoke. A first smoke emission is due to the combustion of the painting of the drums (about 200 °C). The second emission is due to the stabilization of the friction material (over 300 °C). At the occurrence of the second emission is appropriate to suspend the heating procedure.
5. If you have a thermometer, measure the temperature of the brake drums and resume the running when the temperature is below 100 °C. If you don't have the thermometer please wait about 30 minutes before running again.
6. Perform 5 brake applications to 3 bars with a 5-minute interval (cleaning of the friction material).
7. Cool the brake down to 100 °C.
8. Check the stroke of the cylinder and restore the values according to point 1.
9. Begin the test for approval. If the minimum performance for approval is not achieved, repeat the procedure from the beginning

Lubrication Service Schedule

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

⚠ WARNING

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

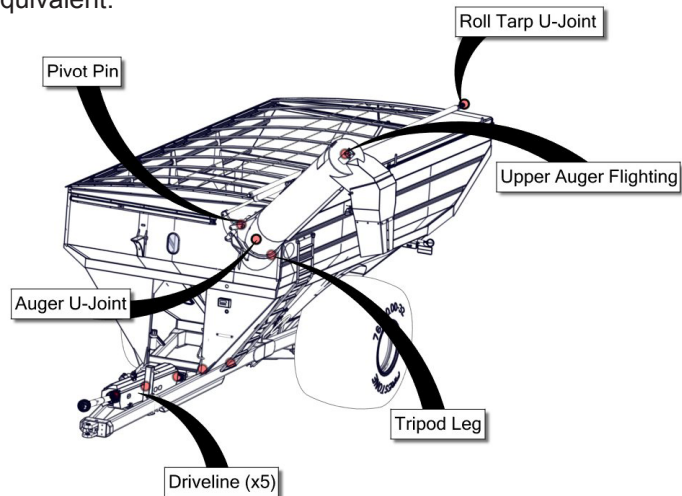
PTO & DRIVELINE: The grease fittings on the PTO should be serviced after every 8 hours of use. Service the grease fittings on each of the drive bearings and also the universal joint after every 8 hours of use.

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

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

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)(18" & 20" auger gearbox) or 3 quarts (22" auger gearbox) of gearbox lubricant. The gearbox is properly filled when half full of lubricant. **DO NOT OVERFILL.** Use EP 80-90 gearbox lubricant or equivalent.

Pivot Pin	Once Annually
Roll Tarp U-Joint	Once Annually
Upper Auger Flighting	Every 8hrs of use.
Tripod Leg	Every 8hrs of use.
Auger U-Joint	Every 8hrs of use.
Driveline	Every 8hrs of use.
Brake Bearing	Every 8hrs of use.



Routine Maintenance

⚠ WARNING

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

- Repack the wheel bearings at least once a year. Use Bearing Gard MK1 or equivalent lubricant. 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 in the Owner's Manual for recommended instructions for tire pressure. It is important that tires are inspected before and after unit loaded.
- Check PTO for wear of plates in the slip clutch. Replace if needed.
- Make sure that all guards and shields are in place before operating the grain cart.

Troubleshooting

WARNING

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

Trouble...	Possible Cause...	Possible Remedy...
Auger will not return to down position or move from stow position.	Dirt In Restrictor (see pg. 17) Faulty Check Valve Upper flighting and lower flighting are locked together (see pg. 16)	Remove restrictor fittings from outside hydraulic cylinder and clean out dirt Replace Check Valve Bearing on top of upper auger flighting need 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 UPPER AUGER FLIGHTING)
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 (See pg.17)	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 Drive shaft is bent	Straighten or replace auger flighting Replace or straighten drive shaft
Grain flow stoppage	Bolt sheared in drive dog Folding auger before complete stop PTO key sheared	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.) 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. 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 Filed position tighten cable to the handle.

Adjusting the Lower Flighting

WARNING

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

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 3/8" 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. See instructions on pg. 36 for flighting removal. 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 2 3/8" 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.

Adjusting the Upper Flighting

WARNING

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

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 dirt is in the restrictor or if a faulty check valve on the hydraulic cylinder used to raise and lower the upper auger assembly may be causing the problem. If dirt is in the restrictor, see "Removing Dirt From Restrictors On Hydraulic Cylinders" below.

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

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

Storage Preparation

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

Follow the procedure below when your grain cart is placed in storage for periods up to six months.

1. Cover electronic monitor (if equipped) with plastic before washing the grain cart. Wash or clean and completely lubricate the grain cart. See the lubrication service section in this manual.
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 EP 80-90 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. If the grain cart is equipped with an electronic weigh system, fully charge the battery to prevent freezing. Disconnect the negative (-) ground cable at the battery to prevent possible discharge.
7. Clean the tires before storage. Inflate the tires at regular intervals.
8. Open the clean-out door at the base of the grain tank.
9. Loosen the Slip Clutch Tension Bolts. **(Yellow Comer PTO only)**

Removing From Storage

- Check the gearbox to make sure it has the appropriate amount of oil.
- If equipped with an electronic scale system, check the battery and make sure that it is fully charged. Reconnect the negative (-) cable.
- Inflate the tires to the correct operating pressure.
- Close the clean out door at the base of the grain tank.
- Make sure all safety shields are in the proper position.
- Tighten the Slip Clutch Bolts on the PTO until the spring length is 1.27 inches (3,23cm). **(Yellow Comer PTO only)**

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 FOR GRAIN CARTS

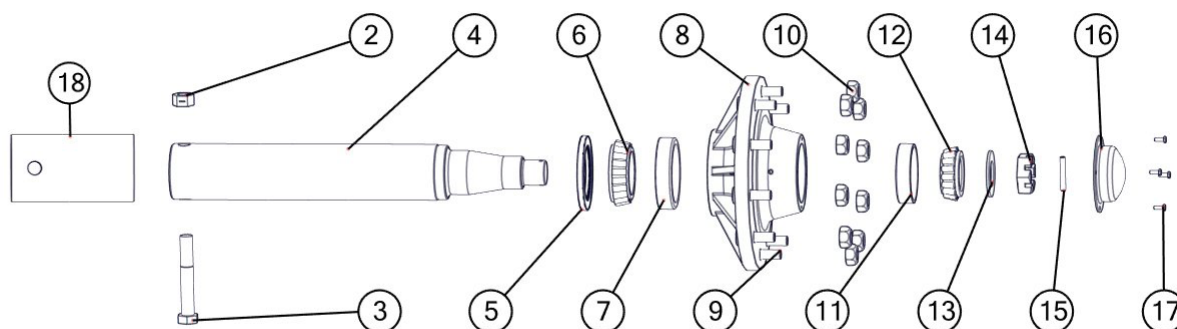
Description	Part. No.
Wheel Rim, 10 hole, 16x42 (11.13 pilot) (13.19 bolt circle)	JM0020015
Wheel, Rim, 10 hole, 16x46 (11.13 pilot) (13.19 bolt circle)	JM0026971
Wheel Rim, 10 hole, 18x38 (11.13 pilot) (13.19 bolt circle)	JM0020014
Wheel Rim, 10 hole, 18x42 (11.13 pilot) (13.19 bolt circle)	JM0020016
Wheel Rim, 10 hole, 20x26 (11.13 pilot) (13.19 bolt circle)	JM0020011
Wheel Rim, 10 hole, 20x30 (8.785 pilot) (11.25 bolt circle)	JM0026976
Wheel Rim, 10 hole, 21x32 (8.785 pilot) (11.25 bolt circle)	JM0026977
Wheel Rim, 10 hole, 21x32 (11.13 pilot) (13.19 bolt circle)	JM0020025
Wheel Rim, 10 hole, 25x36 (11.13 pilot) (13.19 bolt circle)	JM0020048
Wheel Rim, 10 hole, 27x32 (11.13 pilot) (13.19 bolt circle)	JM0017899
Wheel Rim, 10 hole, 31x32 (3 piece) (11.13 pilot) (13.19 bolt circle) (for 35.5x32 R-3 Tires)	JM0020037
Rubber O-Ring Seal for 31x32-10 Wheel Rim (52-49469-00)	JM0020030
Wheel Rim, 10 hole, 32x36 (11.13 pilot) (13.19 bolt circle)	JM0020052

TIRES FOR GRAIN CARTS

Description	Part. No.
480/80R42 Lug Tire, 12 ply (for 16x42-10 wheel)	JM0020038
480/80R46 Lug Tire, 12 ply (for 16x46-10 wheel)	JM0021536
520/85R38 Lug Tire, 154 LI (for 18x38-10-8.7 and 18x38-10 wheels)	JM0020418
520/85R42 Lug Tire, 162 LI (for 18x42-10 wheel)	JM0020040
23.1x26 Lug Tire, 12 ply (for 20x26-10 and 20x26-10L wheels)	JM0021546
23.1x26 Diamond Tire, 12 ply (for 20x26-10 and 20x26-10L wheels)	JM0026978
24.5x32 Lug Tire, 12 ply (for 21x32-10-8.7 and 21x32-10 wheels)	JM0021550
24.5x32 Diamond Tire, 12 ply (for 21x32-10-8.7 and 21x32-10 wheels)	JM0021539
24.5x32 Diamond Tire, 16 ply (for 21x32-10HD heavy duty wheel)	JM0021549
30.5x32 Lug Tire, 12 ply (for 27x32-10 wheel)	JM0017665
30.5x32 Diamond Tire, 14 ply (for 27x32-10 wheel)	JM0030266
35.5x32 Diamond Tire, 20 ply (for 31x32-10 3-piece wheel)	JM0021557
66x43.00 Lug Tire, 16 ply (for 25x36-10 wheel)	JM0021535
73x44.00 Lug Tire, 16 ply (for 32x36-10 wheel)	JM0021537
76x50.00 Lug Tire, 20 ply (for 44x32-10 wheel)	JM0019728

HUB & SPINDLE ASSEMBLY W-881

For Model 810 and all Walker Equipped Grain Carts with 4-1/2" Diameter Spindles

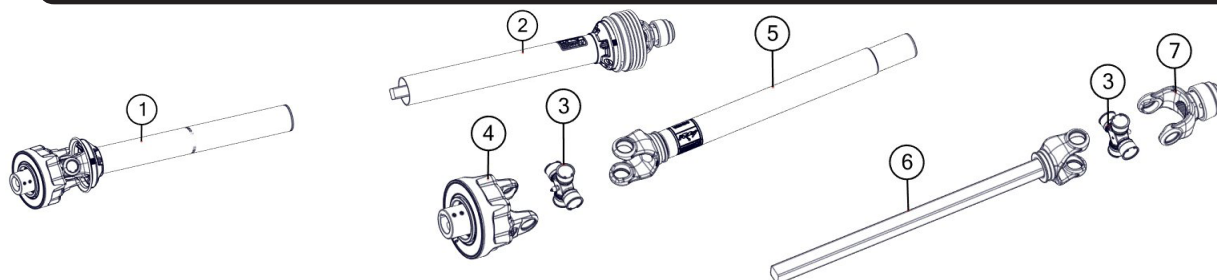


#	Description	Part. No.
1	Hub and Spindle Assembly Complete (Overseas)	JM0031622
2	1"-8 Gr5 Z Centerlock Hex Nut	JM0002149
3	1" x 7" Gr5 Z Hex Bolt (165400)	JM0016689
4	4-1/2" Spindle x 23-15/16" (281900)	JM0018794
5	Seal (6" OD - 3-3/4" ID) for hub w/ scales (since March 2000)(750-35)	JM0021456
5	Seal (6" OD) 1-906979 (CR-43771)	JM0018955
6	Large Bearing (910346)	JM0018849
7	Large Race (HM212049)	JM0018848
8	Hub with large bearing and small races, 3/4" studs & nuts (13.19 bolt circle) (11.13 pilot)(W-881)	JM0020510
9	3/4"-16 Wheel Stud (913564)	JM0018957
10	3/4"-16 Wheel Nut (913571)	JM0018958
11	Small Race (HM212011)	JM0018854
12	Small Bearing (910347)	JM0018852
13	Spindle Washer (913635)	JM0015900
14	Large Castle Nut (912973)	JM0015899
15	Cotter Pin (905945)	JM0018956
16	Dust Cap (909921)	JM0018954
17	1/4"-20 X 1" Gr5 Z Hex Bolt (141G5B)	JM0002095
18	Spindle Sleeve	JM0031626

Power Take-Off (PTO) Shaft Assembly

1-3/4" Weasler - Black in Color

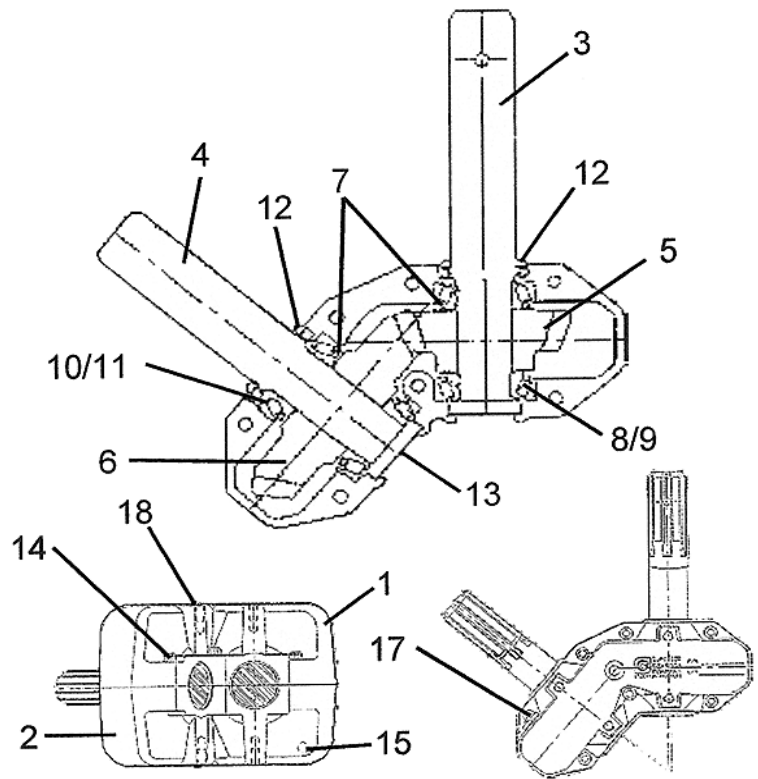
Used on all Extended Reach Grain Carts



#	Description	Part. No.	#	Description	Part. No.
1	Back Half PTO	JM0018513	6	Yoke & Shaft Assembly (XL)	JM0031648
1	Back Half PTO (XL)	JM0030331	7	1-3/4" Spring Lock Yoke	JM0018506
2	1-3/4" Front Half PTO	JM0018514	7	1-3/8" Spring Lock Yoke	JM0024353
2	1-3/4" Front Half PTO (XL)	JM0030330	8	Front Guard	JM0018518
2	1-3/8" Front Half PTO	JM0024367	8	Front Guard (XL)	JM0030642
2	1-3/8" Front Half PTO (XL)	JM0030640	8	Back Guard	JM0018517
3	55ECross Kit	JM0018449	8	Back Guard (XL)	JM0030645
4	Auto Clutch	JM0018500	9	1-3/4" PTO Complete	JM0018443
5	Yoke, Tube & Sleeve	JM0018519	9	1-3/4" PTO Complete (XL)	JM0030332
5	Yoke, Tube & Sleeve (XL)	JM0031647	9	1-3/8" PTO Complete	JM0024333
6	Yoke & Shaft Assembly	JM0018520	9	1-3/8" PTO Complete (XL)	JM0030641

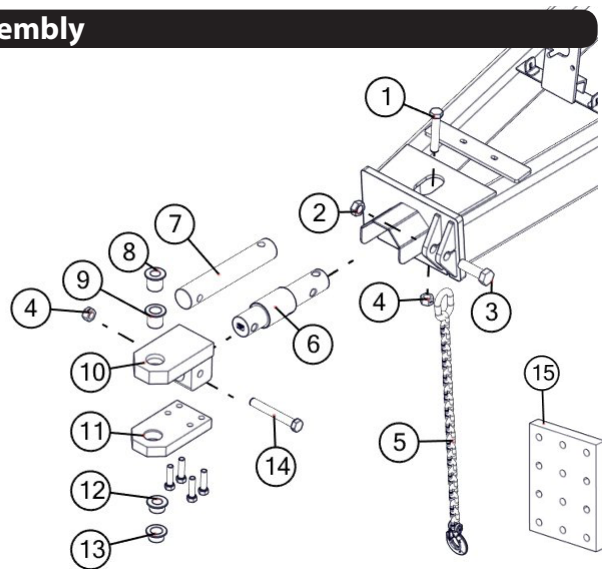
**130 Degree Gearbox Assembly for 18" & 20" Diameter Augers (SUPERIOR)
For Models 810 & 1010 Grain Carts**

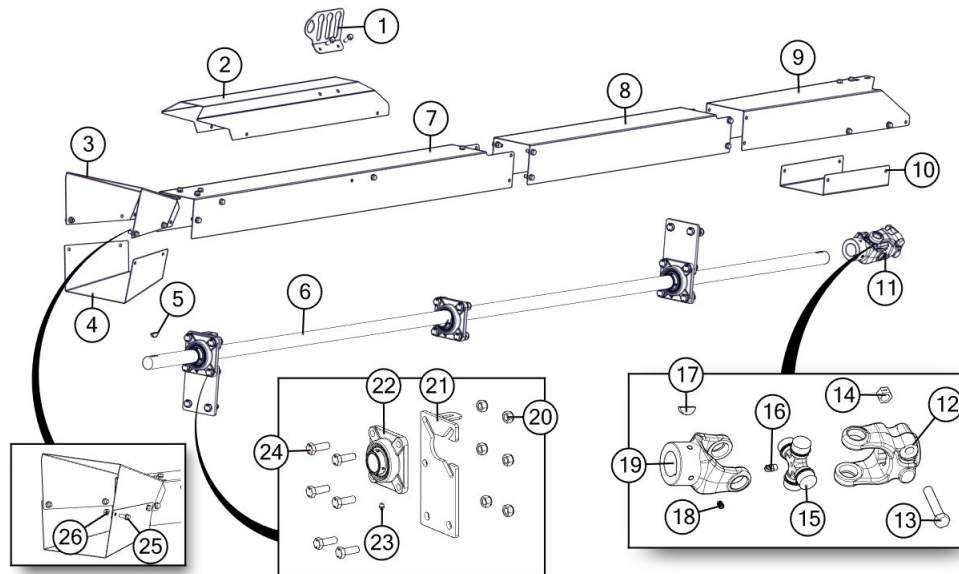
#	Description	Part. No.
1	Casting, Upper Half (A0150)	JM0025088
2	Casting, Lower Half (A0149)	JM0025089
3	1-3/4" Input Shaft (A0142)	JM0025090
4	1-3/4" Output Shaft (A0143)	JM0025091
5	18 Tooth Gear (H61S18)	JM0025092
6	29 Tooth Gear (H61S29)	JM0025093
7	Shim, Arbor (H00101-01)	JM0025094
8	Bearing, Cup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



Hitch Assembly

#	Description	Part. No.
1	1"-8 x 5-1/2" Gr5 Z Hex Bolt	JM0002110
2	1-1/4"-7 Gr5 Z Nylon Locking Hex Jam Nut	JM0027201
3	1-1/4"-7 x 4" Gr8 Z Hex Bolt	JM0026073
4	1"-8 Gr5 Z Centerlock Hex Nut	JM0002149
5	30k Lb Safety Chain	JM0027440
6	Digi-Star - 2-7/8" Weigh Bar	JM0000355
7	2-7/8" Long Non Scale Hitch Bar	JM0025227
8	1-1/4" Pin adapter for GC Spade Hitch	JM0019032
9	1-1/2" Pin adapter for GC Clevis Hitch Tang	JM0014203
10	Hitch Weldment	JM0017978
11	Draw Bar	JM0017976
12	1-1/4" Pin adapter for GC Clevis Hitch Tang	JM0019031
13	1-1/2" Pin adapter for GC Clevis Hitch Tang	JM0014206
14	1"-8 x 7-1/2" Gr8 YZ Hex Bolt	JM0017944
15	Universal Hitch Mount Plate	JM0029111

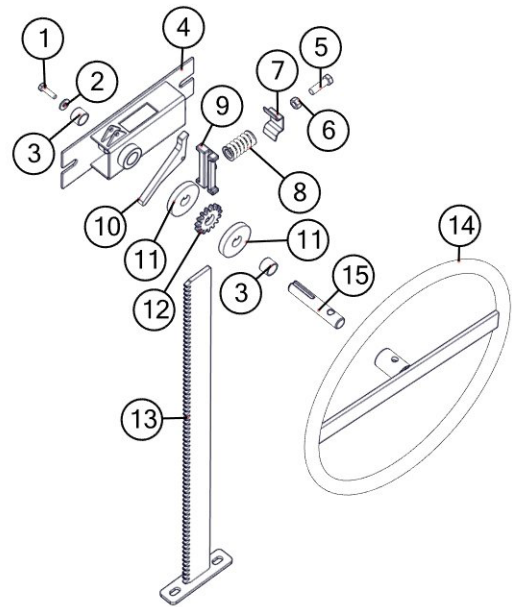




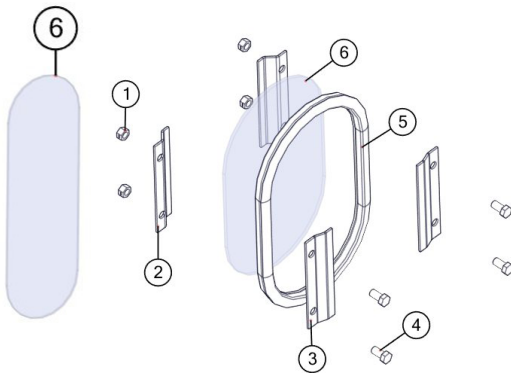
#	Description	Part. No.
1	3 Keyed Hydraulic Hose Holder	JM0021437
2	Shield Hydraulic Hose Conduit	JM0029764
3	PTO Knuckle Guard	JM0029525
4	PTO Clutch Under Cover	JM0029761
5	5/16" x 1-1/4" Half Moon Key	JM0024326
6	150" Driveline	JM0021345
7	Front Driveline Shield	JM0029524
8	Middle Driveline Shield	JM0029728
9	Rear Driveline Shield	JM0029736
10	U-Joint Bottom Shield	JM0029742
11	44 Series U-Joint	JM0017957
12	44 Series - Bottom Yolk	JM0017956
13	5/8"-11 x 3" Gr5 Z Hex Bolt	JM0002105
14	5/8"-11 Gr5 Z Centerlock Hex Nut	JM0002146
15	44 Series - Cross Kit	JM0017958
16	44 Series - Grease Zert	JM0017964
17	5/16" x 1-1/4" Half Moon Key	JM0024326
18	3/8"-16 x 1/2" Set Screw	JM0019044
19	44 Series - Top Yolk	JM0017966
20	M16-2 Gr8.8 YZ Nylon Locking Hex Nut	JM0002164
21	10-7/8" Drive Shaft Support Plate w/ Mount Tab	JM0030564
22	1-3/4" 4 Bolt Flange Bearing	JM0018774
23	3/8" Grease Zerk	JM0018193
24	M16-2 x 45 Gr8.8 YZ Hex Bolt	JM0002116
25	M10-1.5 x 25 Gr8.8 YZ SF Hex Bolt	JM0002093
26	M10-1.5 Gr8.8 YZ SF Hex Nut	JM0002154

Door Wheel Assembly (2015 & Newer)

#	Description	Part. No.
1	1/4"-20 X 1" Gr5 Z Hex Bolt	JM0002095
2	1/4" USS 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	Rack Track Guide (Scrubber Plate)	JM0002851
8	Small Compression Spring	JM0001688
9	Nylon Track Guide	JM0029354
10	Flip Lock	JM0029459
11	Keyway Washer	JM0029454
12	15 Tooth Sprocket - 3/4" Bore w/ Key	JM0029455
13	Nylon Guided Rack Track 20-1/4" Weldment	JM0030651
13	Nylon Guided Rack Track 27-1/2" Weldment	JM0030634
14	Rack Wheel Weldment	JM0028898
15	Stub Shaft - 3/4" x 4-1/8" with Threaded End	JM0029440
16	Complete Nylon Door Wheel Assembly (20-1/4")	JM0030652
16	Complete Nylon Door Wheel Assembly (27-1/2")	JM0029460

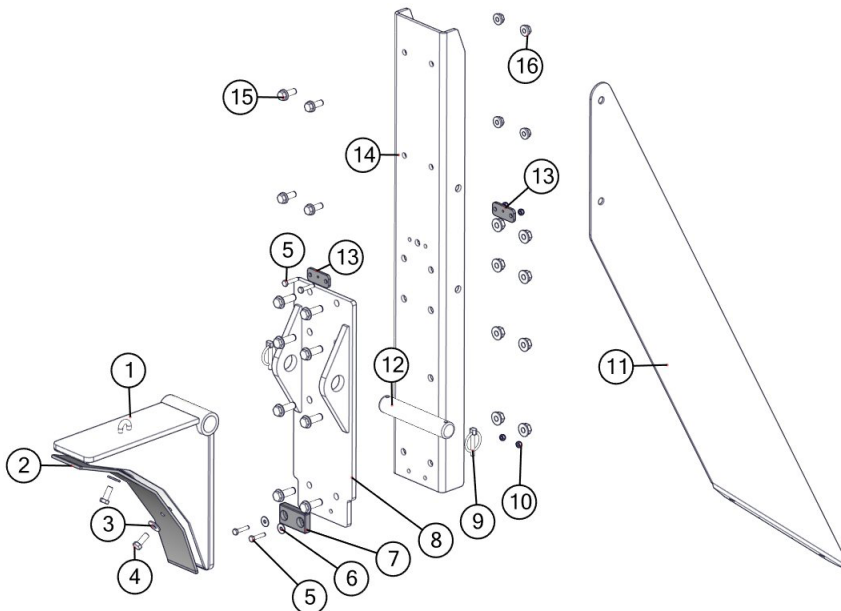


Inspection Windows

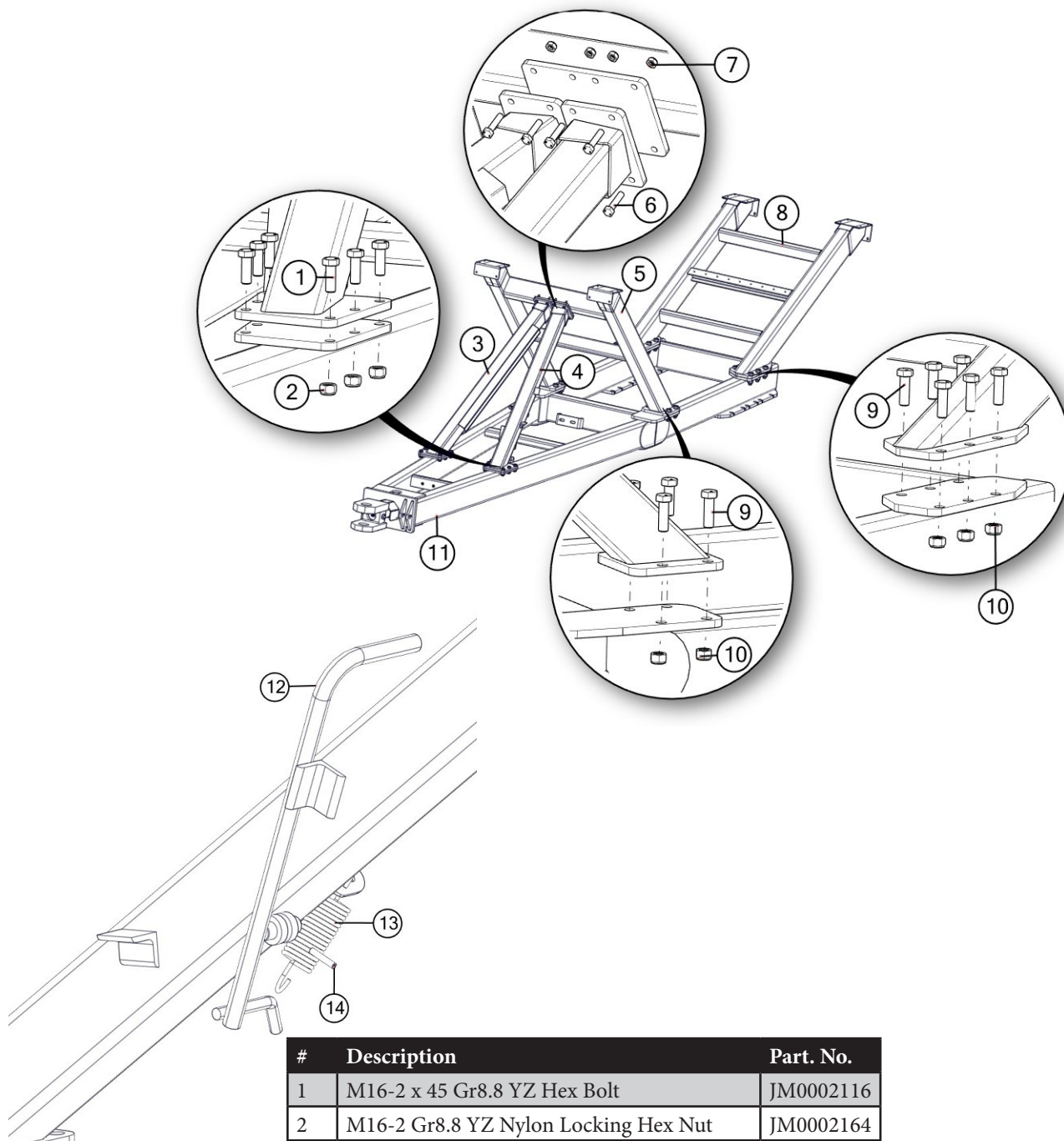


#	Description	Part. No.
1	M10 Gr8.8 YZ Nylon Locking Hex Nut	JM0002162
2	Inside Window Brace (WB-4)	JM0000253
3	Outside Window Brace (WB-4B)	JM0000256
4	M10 x 25 Gr8.8 YZ Hex Bolt	JM0031355
5	Oval Window Grommet (112500)	JM0002454
6	Oval Window (IW-71212)	JM0002455
6	Long Oval Window	JM0031251
7	Inspection Window Kit (IWK-1)	JM0025752

Auger Rest Assembly

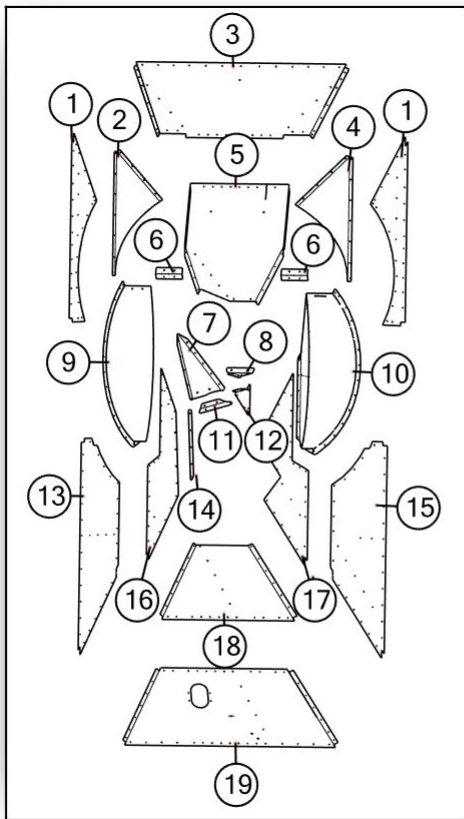


#	Description	Part. No.
1	Flip-Up Auger Rest Weldment	JM0020538
2	Guide Plate	JM0024456
3	3/8" USS Flat Washer	JM0003061
4	3/8"-16 x 1" Gr5 Z Hex Bolt	JM0001592
5	M6 x 360 Gr8.8 YZ Hex Bolt	JM0031474
6	M6 Flat Washers	JM0019447
7	Bounce Pad	JM0020802
8	Auger Rest Mount Bolt Plate	JM0030549
9	1/4" Dia. Snap Ring Zinc Plated	JM0001870
10	M6 Gr8.8 YZ Nylon Locking Hex Nut	JM0002167
11	Flip Auger Rest Brace	JM0029719
12	Flip Up Auger Rest Pin	JM0028218
13	Cable Guide	JM0021917
14	Slide Plate	JM0029715
15	M10 x 25 Gr8.8 YZ SF Hex Bolt	JM0002093
16	M10 Gr8.8 YZ SF Hex Nut	JM0002154



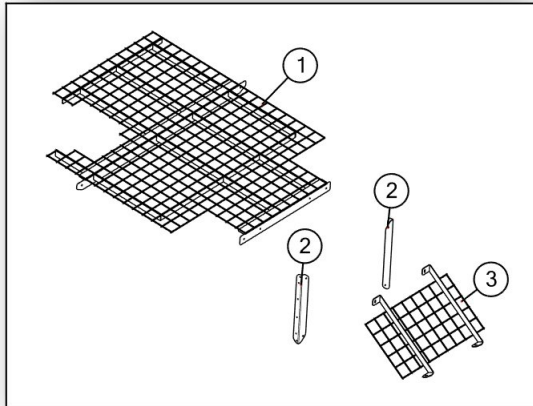
#	Description	Part. No.
1	M16-2 x 45 Gr8.8 YZ Hex Bolt	JM0002116
2	M16-2 Gr8.8 YZ Nylon Locking Hex Nut	JM0002164
3	OAS Front Leg Brace	JM0029522
4	AS Front Leg Brace	JM0029523
5	Front Leg Weldment	JM0029773
6	M12 x 50 Gr8.8 YZ Hex Bolt	JM0001490
7	M12 Gr8.8 YZ Nylon Locking Hex Nut	JM0002163
8	Rear Leg Weldment	JM0030020
9	M24-3 x 75 Gr8.8 Hex Bolt	JM0002118
10	M24-3 Gr8.8 YZ Nylon Locking Hex Nut	JM0002165
11	Main Frame Weldment	JM0029410
12	Auger Rest Handle	JM0021843
13	Extension Spring	JM0024976
14	Roll Pin	JM0009896

Lower Level Panels



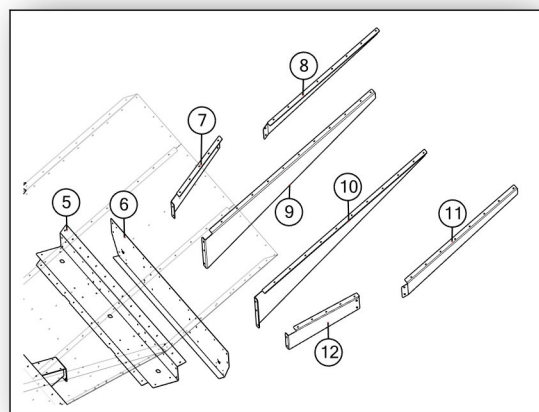
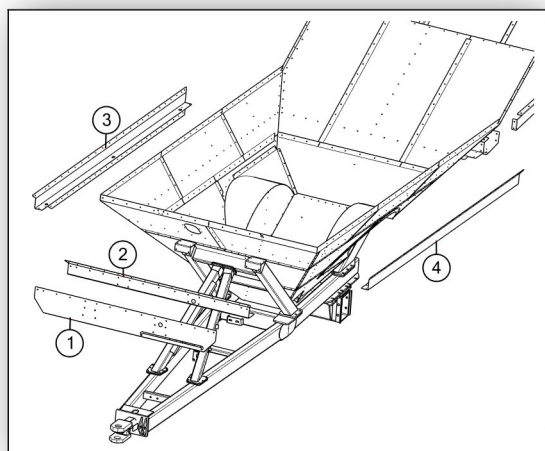
#	Description	Part. No.
1	AS Lower Middle Rear Panel	JM0029795
2	Wheel Well Shedder Panel - OAS	JM0030000
3	Rear Lower Middle Panel	JM0029804
4	Wheel Well Shedder Panel	JM0029629
5	Rear Bottom Panel	JM0029803
6	Wheel Well Corner	JM0002891
7	18" Inside Shedder Panel	JM0029602
8	Rear Wall Gearbox Splice Plate	JM0029607
9	Wheel Well OAS	JM0031408
10	Wheel Well AS	JM0031407
11	Shedder to Gearbox Splice Plate	JM0029726
12	AS Wall Gearbox Splice Plate	JM0029603
13	OAS Lower Mid Front Panel	JM0029924
14	OAS Wall to GB Splice Plate	JM0029611
15	AS Lower Mid Front Panel	JM0029794
16	OAS Bottom Panel	JM0029860
17	AS Bottom Panel	JM0029796
18	Front Lower Panel	JM0029790
19	Front Lower Middle Panel	JM0029789

Tank Screen



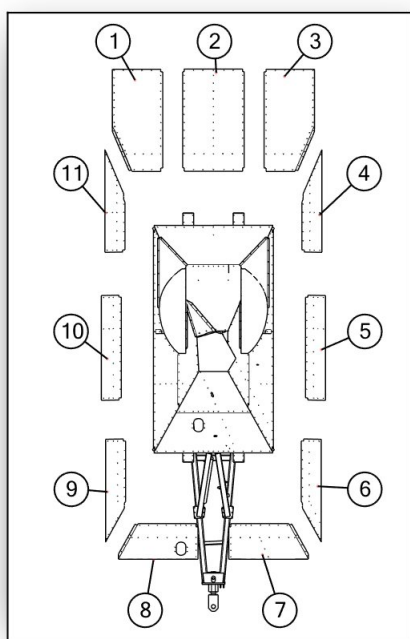
#	Description	Part. No.
1	Main Screen Weldment	JM0029703
2	Fender Well Brace	JM0029696
3	Rear Tank Screen	JM0029699

Rails



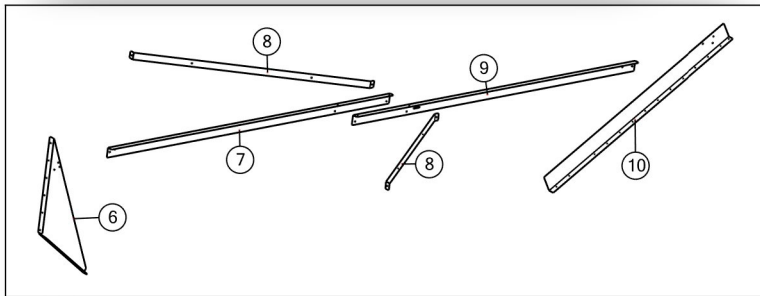
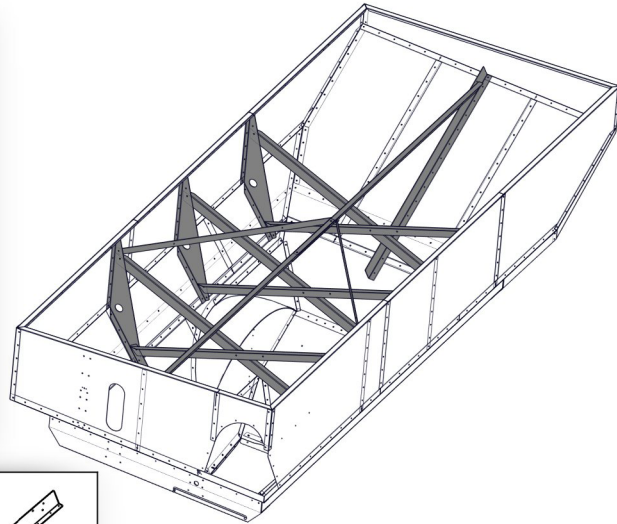
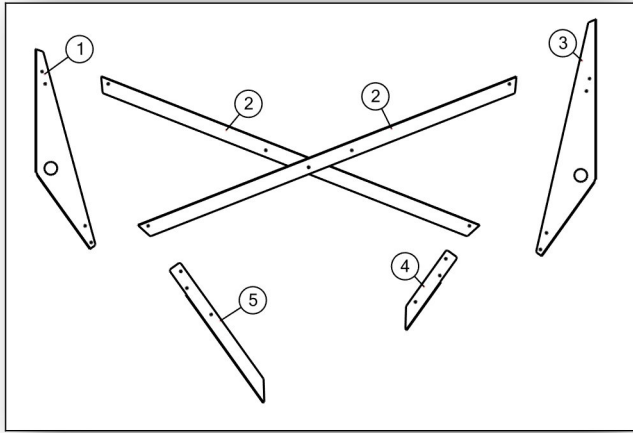
#	Description	Part. No.
1	Front Rail Cross Brace	JM0029965
2	Front Rail	JM0029148
3	OAS Rail	JM0029968
4	AS Rail	JM0029150
5	Rear Rail	JM0029241
6	Rear Rail Cross Brace	JM0029482
7	Rear Slope Corner Brace - OAS Bottom	JM0029996
8	Rear Slope Corner Braces - OAS	JM0029998
9	Rear Batman Wings - Mid OAS	JM0029994
10	Rear Batman Wings - Mid AS	JM0029675
11	Rear Slope Corner Braces - AS	JM0029718
12	Rear Slope Corner Braces - AS Bottom	JM0029720

Mid-Level Panels



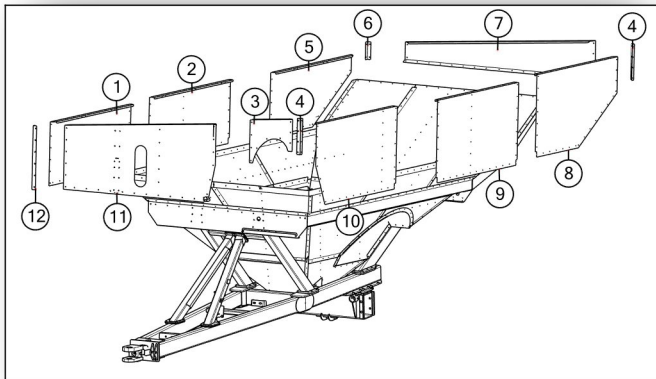
#	Description	Part. No.
1	Rear Top OAS Panel	JM0029858
2	Rear Top Center Panel	JM0029814
3	Rear Top AS Panel	JM0029812
4	AS Upper Middle Rear Panel	JM0029793
5	AS Upper Middle Mid Panel	JM0029792
6	AS Upper Middle Front Panel	JM0029791
7	Front AS Upper Middle Panel	JM0029787
8	Front OAS Upper Middle Panel	JM0029856
9	OAS Upper Middle Front Panel	JM0029874
10	OAS Upper Middle Mid Panel	JM0029872
11	OAS Upper Middle Rear Panel	JM0029870

Sideboard Braces



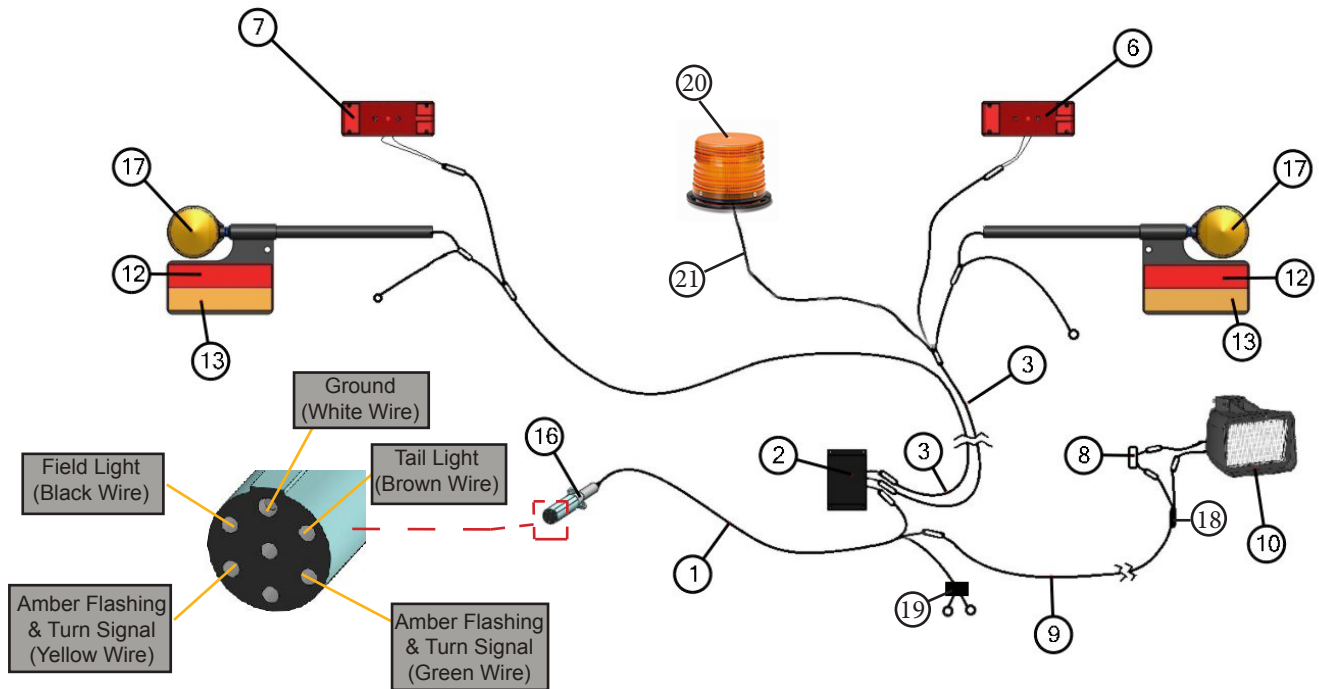
#	Description	Part. No.
1	OAS Tri Gusset	JM0029624
2	X-Bracing	JM0029706
3	AS Tri Gusset	JM0029623
4	AS Wall Slope Brace	JM0029694
5	OAS Wall Slope Brace	JM0029695
6	Front Tri Gusset	JM0029627
7	Front to Rear Brace (Front)	JM0002682
8	Front to Rear Brace Assist Bracing	JM0029724
9	Front to Rear Brace (Rear)	JM0002685
10	Rear Slope Brace	JM0029626

Top Panels



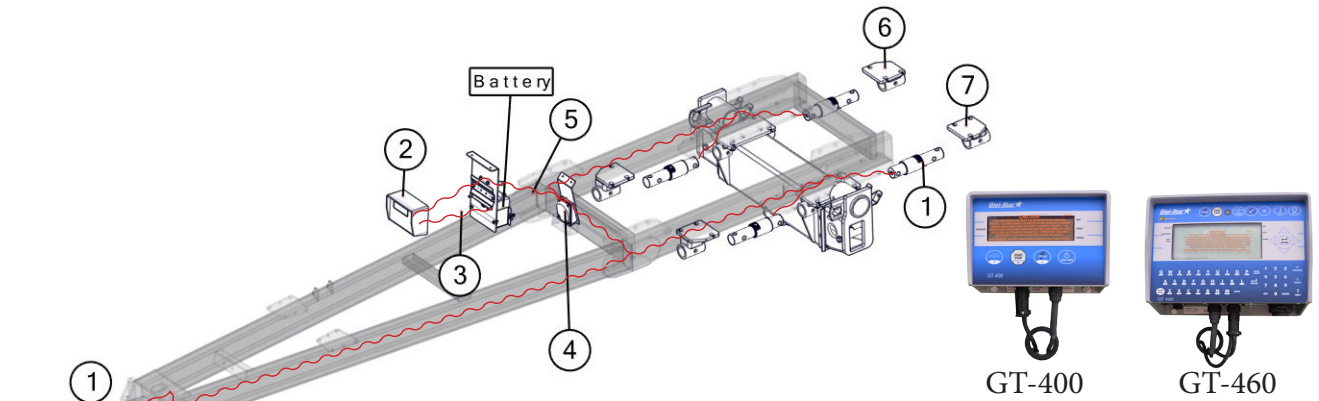
#	Description	Part. No.
1	OAS Top Front Panel	JM0029884
2	OAS Top Middle Sheet	JM0029882
3	Auger Front Corner Panel	JM0029617
4	AS Rear Corner	JM0029920
5	OAS Top Rear Panel	JM0029880
6	OAS Rear Corner	JM0029919
7	Rear Top Panel	JM0029805
8	AS Top Rear Panel	JM0029802
9	AS Top Middle Sheet	JM0029801
10	AS Top Front Panel	JM0029799
11	Front Top Panel	JM0029766
12	OAS Front Corner	JM0029899

Light Kit Assembly



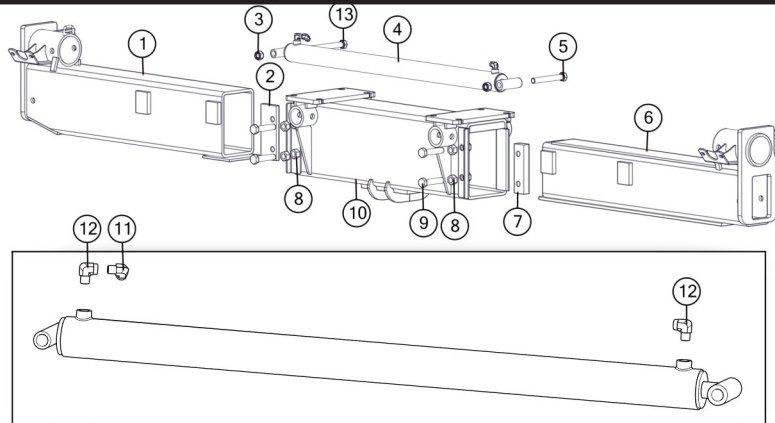
#	Description	Part. No.
1	Main Wiring Harness with 7-Prong Connector End	JM0020439
2	Light Enhancer	JM0010566
3	Wiring Harness for Rear Lights (Each)	JM0020437
4	Extendable Amber Light Assembly (Left Side)	JM0018817
5	Extendable Amber Light Assembly (Right Side)	JM0018826
6	Rear Red Light, Right Side	JM0018838
7	Rear Red Light , Left Side	JM0018837
8	Mercury Switch	JM0017896
9	Field Light Wire	JM0020438
10	Field Light	JM0001881
11	Reflective Amber Decal	JM0009946
12	Reflective Red Decal	JM0009945
13	Reflective Orange Decal	JM0009944
14	Slow Moving Vehicle Emblem	JM0001616
15	Rubber Grommet	JM0016924
16	7-Prong Connector End Only	JM0010528
17	Amber Light Only	JM0018819
18	Wire Loom	JM0020450
19	12 Volt to 12 Volt Battery Charger	JM0027090
20	Strobe Light	JM0000322
21	Strobe Light Extension	JM0000323

WEIGH SCALE SYSTEMS
Digi-Star 5-Point Scale System
For Single Wheel Applications with Bolt-on Axles



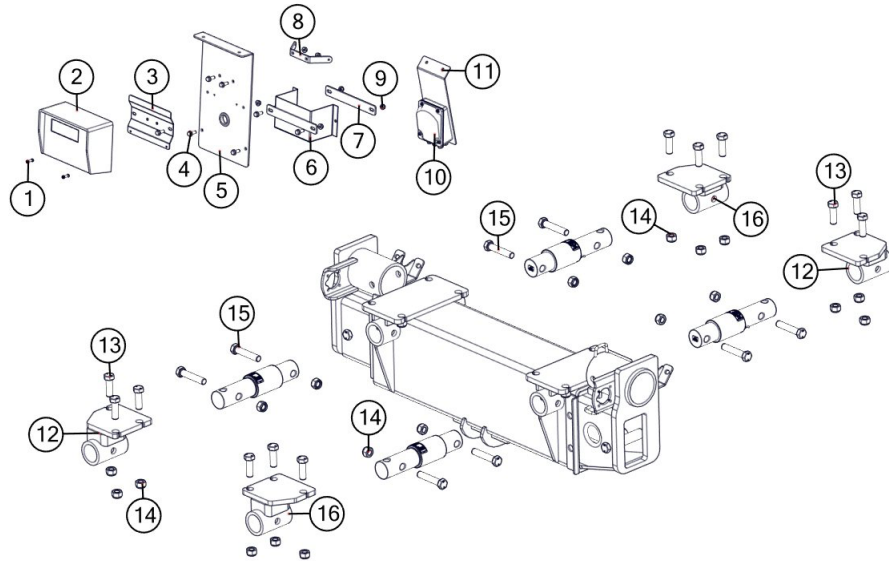
#	Description	Part. No.
1	2-7/8" Weigh Bar, 1" Pin Hole (278WB-T1)	JM0000355
2	GT400 Indicator with Serial Port EZ-150, EZ-2000, EZ-400 (GT400)	JM0019040
2	GT 460 Indicator "Upgrade" includes serial port, downloader USB port and alpha-numeric key pad (GT-460)	JM0015453
3	Power Cord to Battery, Digi Star (PC-1)	JM0025812
4	5 Point Junction Box (JB-5)	JM0019038
5	30' Standard Cable for J-Box to Indicator (141837)	JM0025820
5	10' Long Extension Cord to Mount Indicator in Cab (ECI-1)	JM0025815
5	20' Long Extension Cord to Mount Indicator in Cab (ECI-2)	JM0025816
6	External Scale Mount Rear OAS	JM0030032
7	External Scale Mount Rear AS	JM0029540
8	Optional "Y" Cable to Connect both Printer and Downloader (403037)	JM0025817
9	Flashdrive memory stick-programmed (114991)	JM0025819

Adjustable Axle



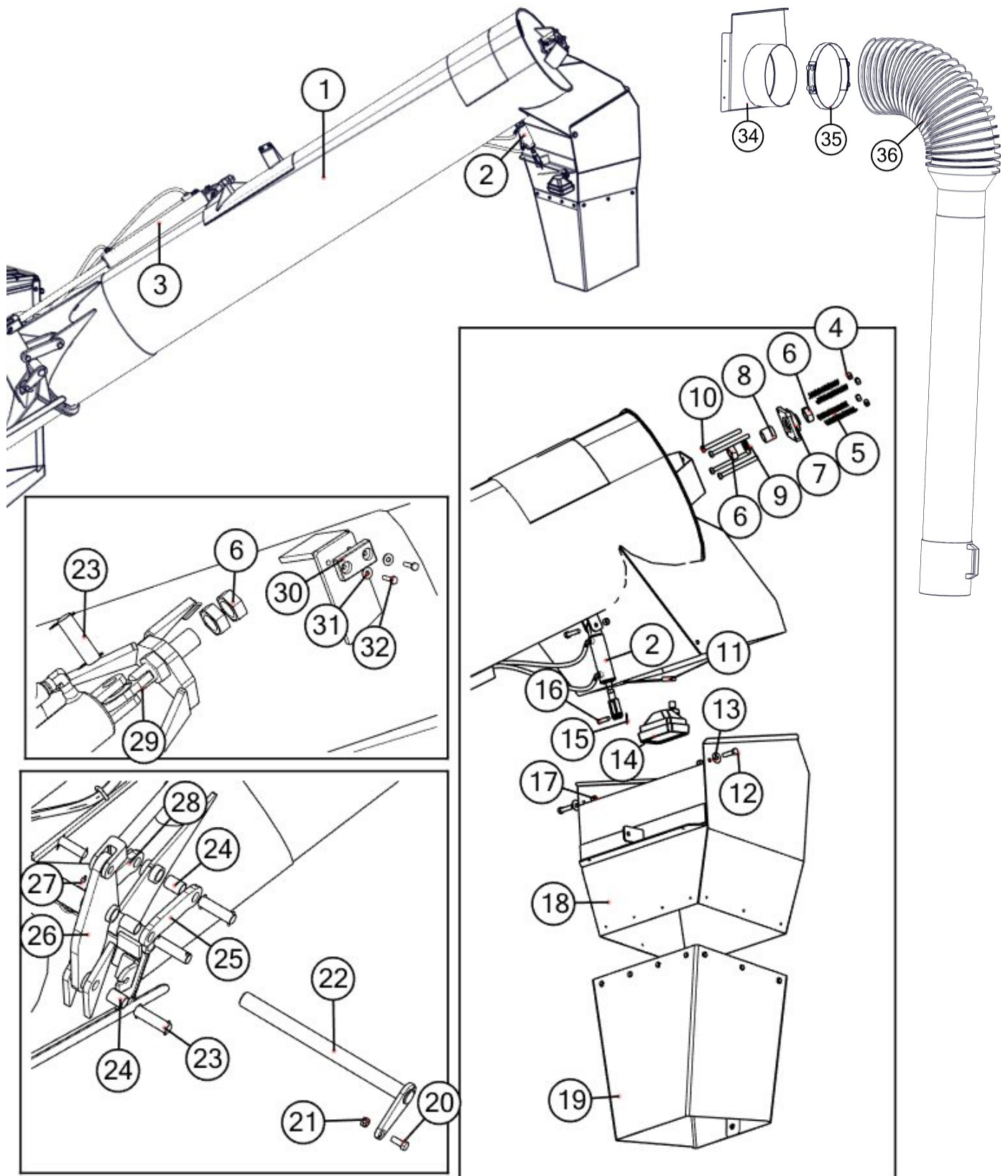
#	Description	Part. No.
1	AS Axle Insert	JM0030596
2	AS Clamp Plate	JM0030313
3	M24-3 Gr8.8 YZ Nylon Locking Hex Nut	JM0002165
4	Welded 3" x 40" Stroke Hydraulic Cylinder	JM0031363
5	M24-3 x 180 Gr8.8 YZ Hex Bolt	JM0031353
6	OAS Axle Insert	JM0030300
7	OAS Clamp Plate	JM0030288
8	1"-14 Gr8 YZ Hex Nut	JM0019926
9	1"-8 X 4-1/2" Gr5 Z Hex Bolt	JM0016687
10	Main Axle Weldment	JM0030623
11	3/8" male NPT x 3/8" female NPT Street 90	JM0030059
12	3/8" female NPT x 1/2" male NPT; 90 degree elbow	JM0010292
13	M24-3 x 220 Gr8.8 YZ Hex Bolt	JM0031357

WEIGH SCALE SYSTEMS
Digi-Star 5-Point Scale System Hardware
Hardware for Single Wheel and Track System Bolt-on Axles



#	Description	Part. No.
1	M6-1 x 20 Gr8.8 YZ Hex Bolt	JM0002120
2	GT400 Indicator with Serial Port EZ-150, EZ-2000, EZ-400 (GT400)	JM0019040
2	GT 460 Indicator "Upgrade" includes serial port, downloader USB port and alpha-numeric key pad (GT-460)	JM0015453
3	Indicator Mounting Bracket, GT460 (MBI-1)	JM0019648
3	Indicator Mounting Bracket, GT400 (MBI-1S)	JM0000361
4	M10-1.5 x 25 Gr8.8 YZ SF Hex Bolt	JM0002093
5	Scale Mount Plate	JM0000362
6	Battery Box with Strap (BB-2)	JM0000365
7	Battery Box Strap	JM0000364
8	Chord Wrap	JM0000363
9	M10-1.5 Gr8.8 YZ SF Hex Nut	JM0002154
10	5 Point Junction Box (JB-5)	JM0019038
11	Junction Box Mount	JM0000366
12	External Scale Mount Rear AS	JM0029540
13	M24-3 x 75 Gr8.8 Hex Bolt	JM0002118
14	M24-3 Gr8.8 YZ Nylon Locking Hex Nut	JM0002165
15	M24-3 x 130 Gr8.8 YZ Hex Bolt	JM0031228
16	External Scale Mount Rear OAS	JM0030032

Top Auger Assembly



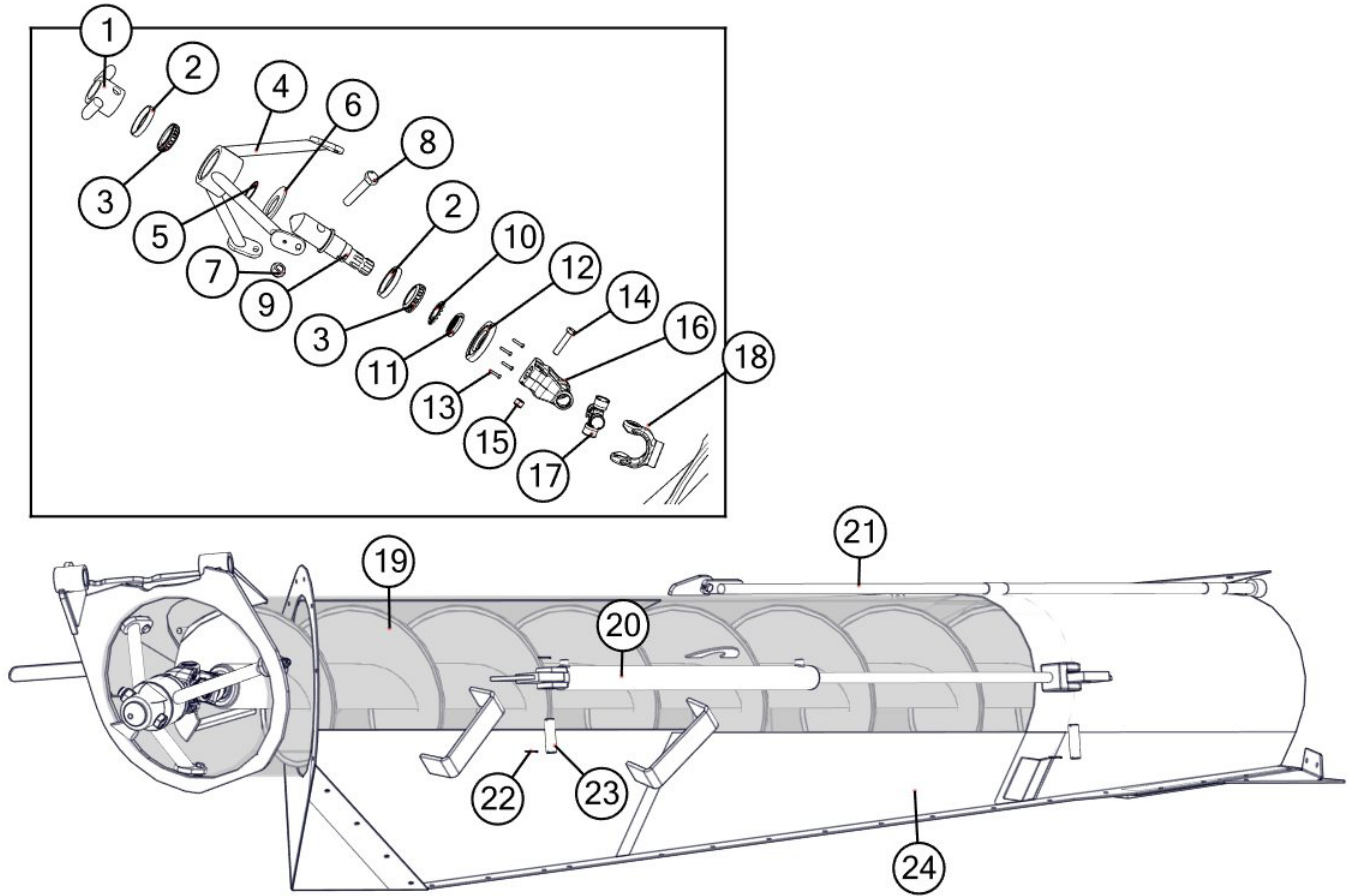
Top Auger Assembly

#	Description	Part. No.
1	18" Upper Auger Tube Assembly	JM0025351
2	1-3/4" x 4" Hydraulic Cylinder	JM0018564
3	3" x 24" Welded Cushion Cylinder	JM0025661
4	1/2"-13 Gr5 Z Centerlock Hex Nut	JM0001511
5	Springs	JM0018559
6	1/4"-12 PN Gr5 Hex Jam Nut	JM0001606
7	1-1/4" Flange Bearing	JM0018560
8	Spacer 1-1/4" Long	JM0021646
9	1-1/4" USS Flat Washer	JM0020322
10	1/2"-13 x 5-1/2" Gr5 Z Hex Bolt	JM0001498
11	Mercury Switch	JM0017896
12	1/2"-13 x 2" Gr5 Z Hex Bolt	JM0001593
13	1/2" USS Flat Washer	JM0003082
14	Field Light Assembly	JM0001881
15	Cotter Pin	JM0016381
16	Clevis Pin	JM0018264
17	1/2"-13 Gr5 Z Centerlock Hex Nut	JM0001511
18	18" Side Shooter Tip Spout	JM0017868
19	18" Rubber Tip Spout Addition	JM0026081
20	5/8"-11 x 1-1/2" Gr5 Z Hex Bolt	JM0002103
21	5/8"-11 Gr5 Z Centerlock Hex Nut	JM0002146
22	18" Hinge Pin	JM0022086
23	Linkage Pin	JM0021649
24	Sleeve	JM0021956
25	Master Link	JM0020451
26	Main Fold Link	JM0020452
27	1/8" Grease Zerk	JM0009756
28	Master Link with Keeper	JM0024178
29	HD Pac Man Weldment	JM0021417
30	Bounce Pad	JM0020802
31	1/4" USS Flat Washer	JM0003090
32	1/4"-20 X 1" Gr5 Z Hex Bolt	JM0002095
33	18" Upper Auger Flighting	JM0025412
34	Seed Discharge Spout Weldment	JM0030879
35	10" Hose Clamp	JM0010502
36	XL 2 Stage Telescoping Spout	JM0030265

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

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

Lower Auger Assembly

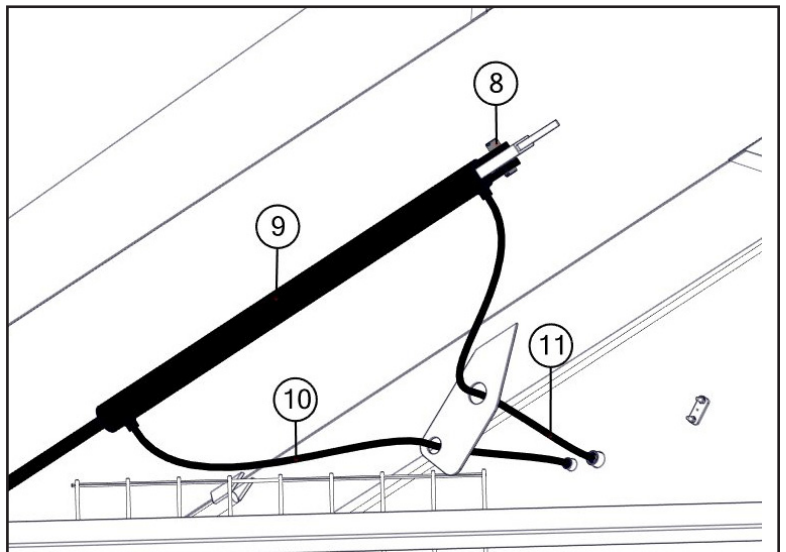
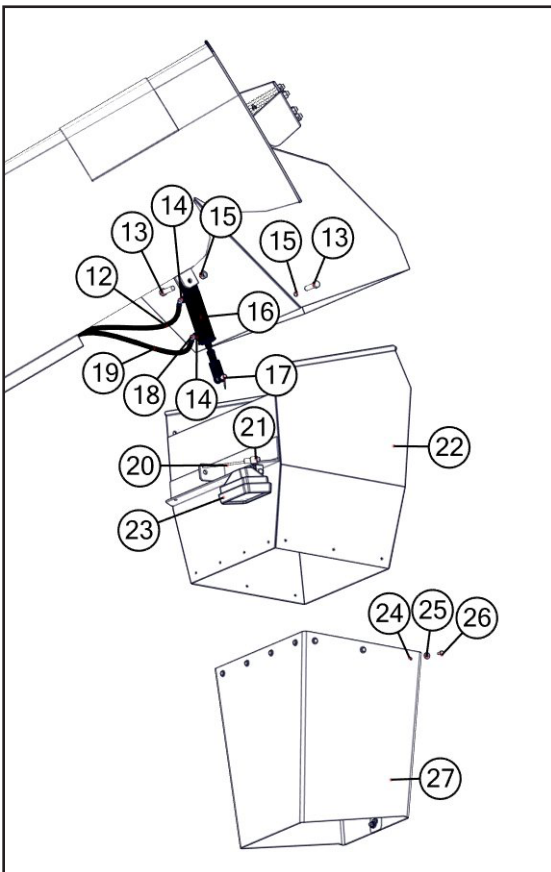
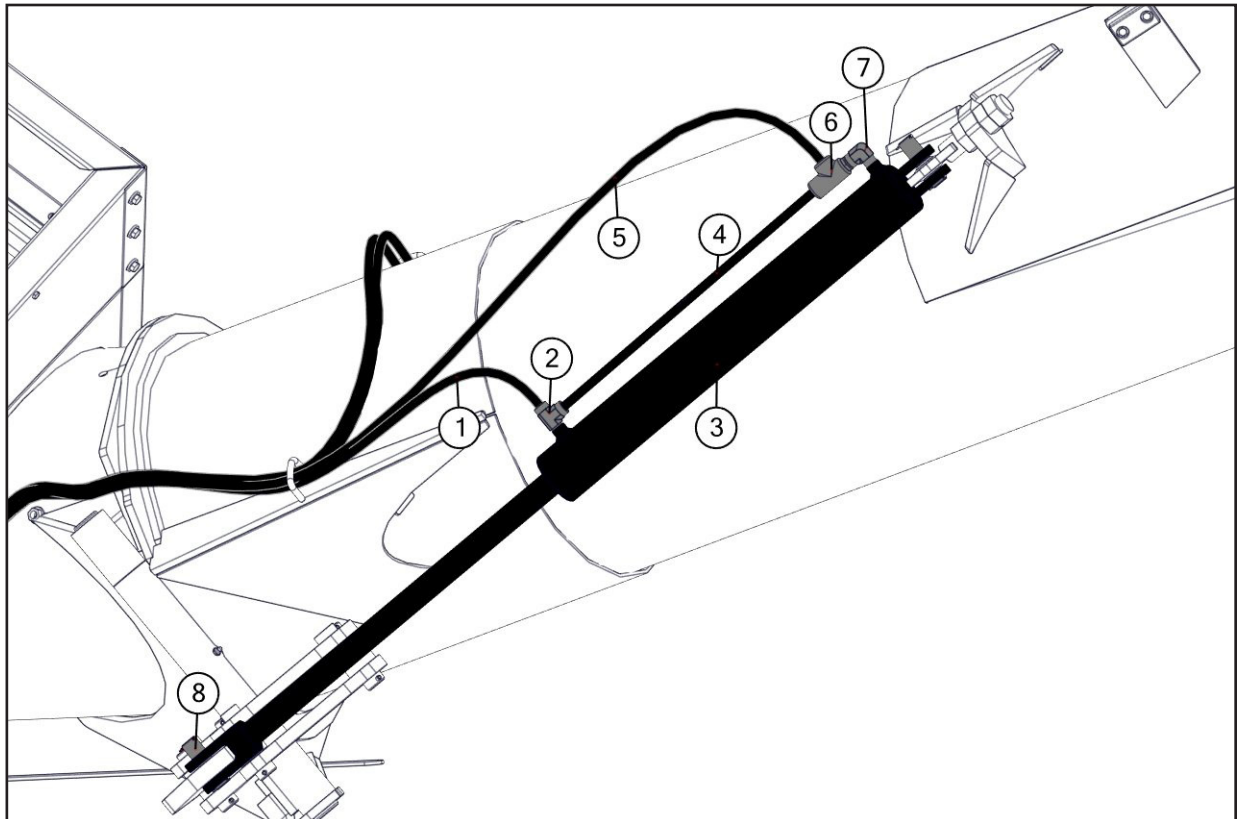


*-R = Red
 *-B = Blue
 *-G = Green
 *-Y = Yellow

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

Lower Auger Assembly

#	Description	Part. No.
1	18" Drive Dog	JM0000093
2	Tapered Single - Cup 382A	JM0018100
3	Tapered Single - Cone 387A	JM0018101
4	Long Fold Bearing Hanger Tripod	JM0027449
5	2-1/2" ID Gasket	JM0027444
6	2-1/2" USS Flat Washer	JM0030690
7	M24-3 Gr8.8 YZ Nylon Locking Hex Nut	JM0002165
8	M24-3 x 125 Gr8.8 YZ Hex Bolt	JM0031228
9	Universal Bearing Bullet Nose	JM0015898
10	Bearing Nut	JM0020773
11	Internal Race	JM0020772
12	Hollow Point Hub Cap	JM0019921
13	1/4" x 1-1/4" Gr5 Z Hex Bolt	JM0016673
14	M16-2 x 75 Gr8.8 YZ Hex Bolt	JM0031282
15	M16-2 Gr8.8 YZ Nylon Locking Hex Nut	JM0002164
-----	55 Series U-Joint	JM0021235
16	55 Series Top Yolk	JM0027423
17	55 Series E-Kit Cross	JM0018449
18	55 Series Bottom Yolk	JM0027422
19	Lower Auger	JM0029682
20	2" x 36" Welded Cylinder	JM0018523
21	Guide Rod	JM0016646
22	1" x 3" Cotter Pin	JM0003064
23	1" x 3.4" Clevis Pin	JM0001816
24	Bottom Auger Weldment	JM0029610
25	Indicator Rod (Not Shown)	JM0016646
26	Bottom Tube Replacment Liner (Not Shown)	JM0031793

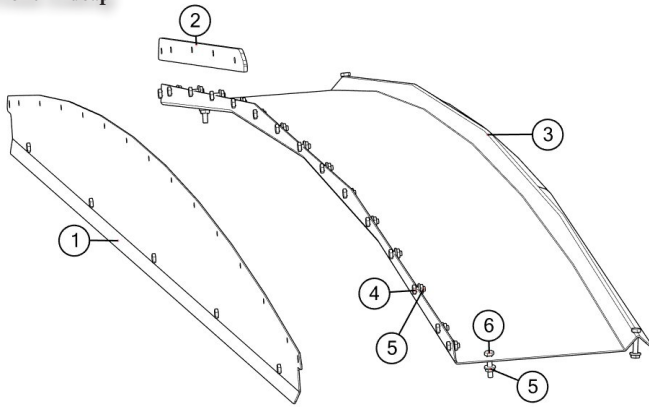


Hydraulic Cylinders

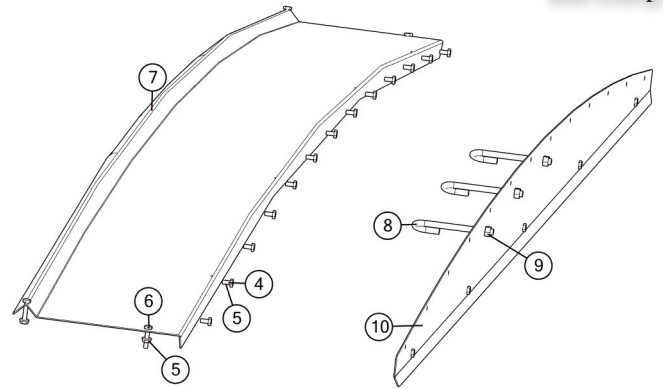
#	Description	Part. No.
1	Hydraulic Hose 1/4" x 356"	JM0024983
2	3/8" male NPT x 3/8" female NPT x 3/8" female NPT; Street T	JM0018266
3	3" x 24" Welded Cushion Cylinder	JM0019644
4	Lift Cylinder Hydraulic Hose 1/4" x 21"	JM0024896
5	Hydraulic Hose 1/4" x 374"	JM0024984
6	PC-37 Check Valve	JM0018233
7	3/8" female NPT x 1/2" male NPT; 90 degree elbow	JM0010292
8	1" x 3.4" Clevis Pin with Cotter Pins	JM0001816
9	2" x 36" Welded Cylinder	JM0018523
10	Hydraulic Hose 1/4" x 43"	JM0024904
11	Hydraulic Hose 1/4" x 43"	JM0024904
12	Hydraulic Hose 1/4" x 474"	JM0024982
13	1/2"-13 x 2" Gr8 Z Hex Bolt	JM0001620
14	1/4" male NPT X 1/4" female NPT rigid; 90 degree elbow	JM0020115
15	1/2"-13 Gr5 Z Centerlock Hex Nut	JM0001511
16	1-3/4" x 4" Hydraulic Cylinder with Rod Clevis and Butt Tab	JM0018564
17	1/2" x 1-3/4" Pin	JM0018264
18	1/4" male NPT swivel with .032 orifice	JM0020113
19	Hydraulic Hose 1/4" x 474"	JM0024982
20	Mercury Switch	JM0017896
21	3/8" Wire Loom	JM0020450
22	18" Side Shooter Tip Spout	JM0017868
23	Field Light Assembly	JM0001881
24	1/4"-20 Gr5 Centerlock Hex Nut	JM0001505
25	1/4" USS Flat Washer	JM0003090
26	1/4"-20 x 1/2" Gr5 Z Hex Bolt	JM0001481
27	18" Rubber Tip Spout Addition	JM0026081
28	Hydraulic Hose 1/4" x 240"	JM0024985
29	Hydraulic Hose 1/4" x 240"	JM0024985

Roll Tarp Assembly

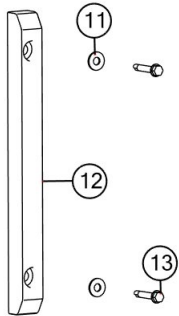
Front Endcap



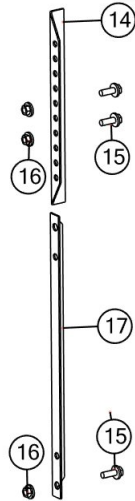
Rear Endcap



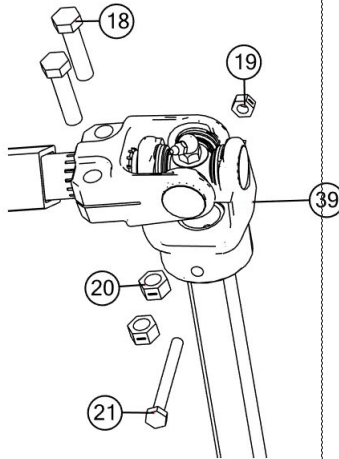
Tarp Stand-Off



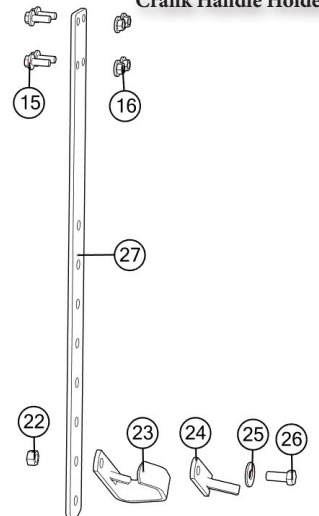
Prop-Up Bars



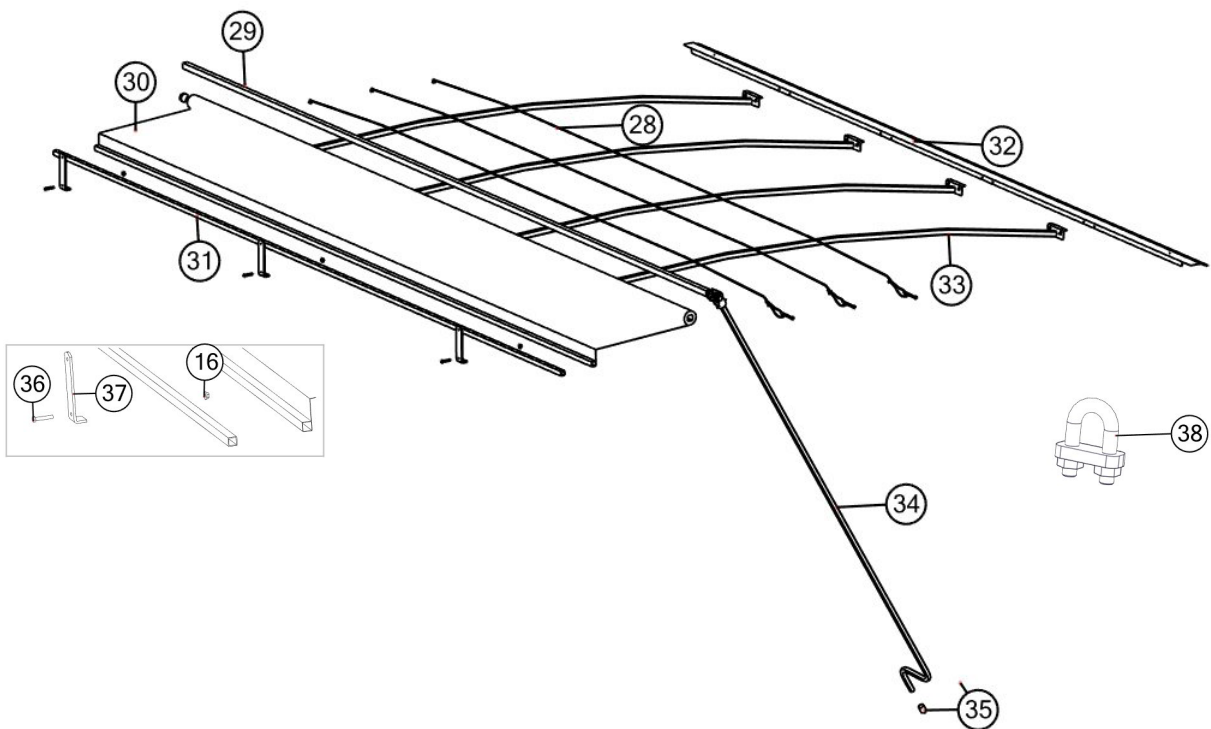
Crank Handle U-Joint



Crank Handle Holder



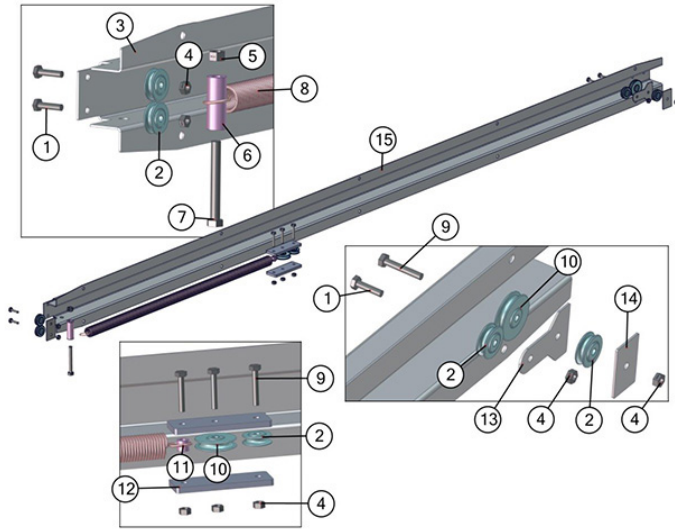
Tarp Assembly



Roll Tarp Assembly

#	Description	Part. No.
1	Front End Cap Plate	JM0001573
2	Tarp Nylon Riser	JM0000196
3	Front Arched End Cap	JM0001572
4	M6 x 14 Gr8.8 YZ Hex Bolt	JM0031837
5	M6 Gr8.8YZ SF Nylon Locking Hex Nut	JM0002167
6	M6 x 16 Gr8.8 YZ Hex Bolt	JM0031839
7	Rear Arched End Cap	JM0001574
8	3/8"-16 Gr5 Z J-Bolt	JM0001519
9	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
10	Rear End Cap Plate	JM0001575
11	M6 Flat Washer	JM0019447
12	Tarp Standoff	JM0001889
13	1/4" x 1-1/2" Self Tapping Screw	JM0001571
14	Upper Adjustable Bow Support 13"	JM0021404
15	M10 x 25 Gr8.8 YZ Hex Bolt	JM0031355
16	M10 Gr8.8 YZ Nylon Locking Hex Nut	JM0002162
17	Lower Adjustable Bow Support 19"	JM0000179
17	Lower Adjustable Bow Support 27"	JM0021403
18	3/8"-16 x 1-1/2" Gr5 Z Hex Bolt	JM0001659
19	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
20	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
21	M6 x 65 Gr8.8 YZ Hex Bolt	JM0002121
22	M12 Gr8.8 YZ Nylon Locking Hex Nut	JM0002163
23	Roll Tarp - Handle Hanger PP	JM0002967
24	Roll Tarp - Handle Hanger Rubber Flap	JM0002551
25	1/2" USS Flat Washer	JM0003082
26	M12 x 35 Gr8.8 YZ Hex Bolt	JM0020955
27	Crank Holder	JM0000164
28	3/16" Cable (1010, 1120)	JM0021408
29	1 1/4" Square Roll Tube	JM0021334
30	Tarp with Rivets	JM0021336
31	1" Square Tie-Down Tube	JM0021331
32	Tightening Lip Front	JM0031102
32	Tightening Lip Rear	JM0031107
33	Arched Tarp Bows	JM0001585
34	Crank with Splined U-Joint	JM0019888
35	Yellow Cap	JM0018963
36	M10 x 50 Gr8.8 YZ Hex Bolt	JM0001486
37	Tarp Stop Bracket	JM0000187
38	Cable Clamp-Small	JM0001514
39	U-Joint	JM0001517

Spring Return Assembly



#	Description	Part. No.
1	1/4"-20 x 1.0" Gr5 Z Hex Bolt	JM0002095
2	Roller Small	JM0002439
3	Grain Cart Spring Return Housing	JM0012974
4	1/4"-20 Gr5 Z Centerlock Hex Nut	JM0001505
5	3/8"-16 Gr5 Z Centerlock Hex Nut	JM0001512
6	Tall Plastic Spacer	JM0002444
7	3/8"-16 x 3.0" Gr5 Z Hex Bolt	JM0001666
8	Spring Return Spring	JM0000207
9	1/4"-20 x 1-1/2" Gr5 Z Hex Bolt	JM0002447
10	Roller Large	JM0012970
11	Short Plastic Spacer	JM0002442
12	Rectangular Spacer Tab	JM0012973
13	Aluminum Spacer Tab	JM0018897
14	Aluminum Spacer Square	JM0002445
15	Spring Return Assembly	JM0012965
16	Spring Return Cable	JM0012981

