

OPERATOR'S MANUAL

Model 525-14W Grain Cart

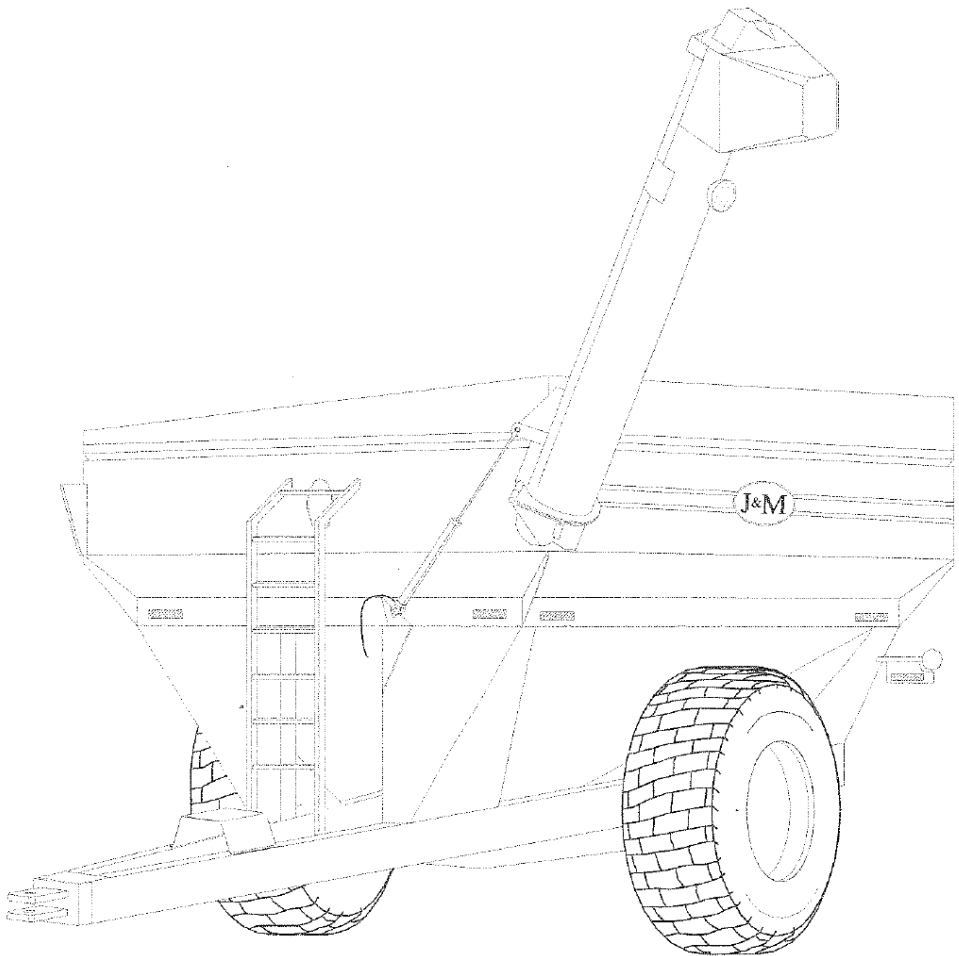
Model 620-14 Grain Cart

Model 750-14 Grain Cart

Model 750-16 Grain Cart

Model 875-16 Grain Cart

Model 1075-16 Grain Cart



J. & M. Manufacturing Co., Inc.

284 Railroad St., P.O. Box 547

Fort Recovery, OH 45846

J. & M. Mfg. Co. Inc.

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.

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 and tear.

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, including but not limited to labor charges.

The exclusive remedy under this Warranty shall be repair or replacement of the defective component at J. & M. Mfg. Co. Inc. 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.

INTRODUCTION:

J & M Models 525-14W, 620-14, 750-14, 750-16, 875-16 and 1075-16 Grain Carts are designed, manufactured and sold for farm use. It is not for use on highways except as incidental to farm use.

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.

(fill in the following for future reference)

Serial No. _____

Date of Purchase _____

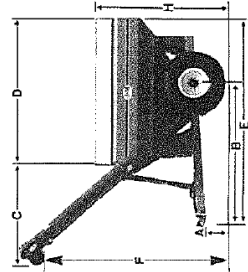
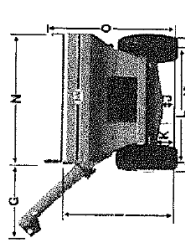
Purchased From _____

Patent Nos. 5,013,208; 5,100,281 and 5,340,265

SPECIFICATIONS		525-14W	620-14	750-14	750-16	875-16	1075-16
Capacity	up to 525 bu.*	up to 620 bu.*	up to 750 bu.*	up to 750 bu.*	up to 750 bu.*	up to 875 bu.*	up to 1,075 bu.*
Auger, one vertical	14"	21 x 32 or 27 x 32	21 x 32 or 27 x 32	21 x 32 or 27 x 32	21 x 32 or 27 x 32	27 x 32	31 x 32
Wheels	10 Bolt	10 Bolt	10 Bolt	10 Bolt	10 Bolt	10 Bolt	10 Bolt
Hubs	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	6"
Spindles	Weight: (approx.)	6,950#	7,200#	7,350#	7,350#	8,750#	10,400#
P/T O	1,000 rpm	1,000 rpm	1,000 rpm	1,000 rpm	1,000 rpm	1,000 rpm	1,000 rpm
Tire Size	23.1 x 26, 10 ply; or 24.5 x 32, 12 ply	24.5 x 32, 12 ply; or 30.5 x 32, 12 ply	24.5 x 32, 12 ply; or 30.5 x 32, 12 ply	24.5 x 32, 12 ply; or 30.5 x 32, 12 ply	24.5 x 32, 12 ply; or 30.5 x 32, 12 ply	30.5 x 32, 12 ply	35.5 x 32, 20 ply
Tongue Weight: Empty	950#	1,000#	1,100#	1,100#	1,100#	1,250#	1,300#
Tongue Weight: Loaded	1,950#	2,100#	2,700#	2,700#	2,700#	4,300#	4,600#
Construction	12 GA Steel	12 GA Steel	12 GA Steel	12 GA Steel	12 GA Steel	12 GA Steel	12 GA Steel
Hopper	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing	8" x 4" x 1/16" Tubing
Undercarriage	5" x 5" x 1/2" Tubing	5" x 5" x 1/2" Tubing	5" x 5" x 1/2" Tubing	5" x 5" x 1/2" Tubing	5" x 5" x 1/2" Tubing	5" x 5" x 1/2" Tubing	7" x 7" x 1/2" Tubing
Axle	Unloading Time** (approx.)	3.5 minutes	3.7 minutes	4 minutes	3.5 minutes	4 minutes	5 minutes

*Bushel capacities were measured with #2 corn at 15% moisture (56 lbs. test weight).

**Time varies with rpm and moisture content of grain.



DIMENSIONS	525-14W	620-14	750-14	750-16	875-16	1075-16
A	17"	17"	18"	19"	19"	21"
B	154"	154"	153"	153"	161"	172"
C	71"	71"	69"	75"	76"	74"
D	144"	158"	168"	168"	192"	224"
E	217"	226"	229"	229"	251"	276"
F	153"	153"	150"	153"	153"	156"
G	87"	87"	76"	80"	80"	82"
H	124"	136"	134"	135"	137"	145"
I	103"	103"	120"	124"	124"	125"
J	14"	18"	18"	18"	18"	16"
K	19"	24"	24"	24"	24"	29"
L	120" / 144"	120" / 144"	120" / 144"	120" / 144"	120" / 144"	136"
M	144" / 160"	144" / 160"	144" / 160"	144" / 160"	151" / 169"	172"
N	120"	142"	141"	141"	141"	150"
O	118"	129"	128"	129"	131"	137"

Specifications are subject to change without notice or obligation.

Revised 4-1-00

TO THE OWNER



THIS SAFETY ALERT SYMBOL INDICATES IMPORTANT SAFETY MESSAGES IN THIS MANUAL. WHEN YOU SEE THIS SYMBOL, CAREFULLY READ THE MESSAGE THAT FOLLOWS AND BE ALERT TO THE POSSIBILITY OF PERSONAL INJURY OR DEATH.

IMPORTANT

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 The Machine.**

Read this manual before you operate the machine. If you need more information, see your J & M 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 speed 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 grain cart, always keep auger in stow position.

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

Never adjust, service, clean, or lubricate grain cart until all power is shut off.

Keep all safety shields in place.

Keep hands, feet, and clothing away from moving parts while unit is in operation.

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

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.

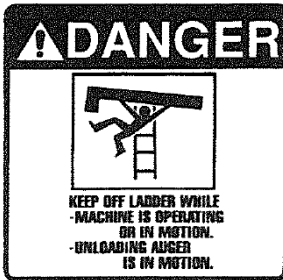
Never operate the auger system with anyone inside of the grain tank. Hands, feet, hair, and clothing can fit through the openings in and around the grate. Contact with the auger can cause severe injury or death. Make certain that all power is shut off before service work is performed.



SAFETY SIGNS

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 your J. & M. dealer or write to:

J. & M. Mfg. Co. Inc.
Parts Department
284 Railroad Street, Box 547
Ft. Recovery, OH 45846



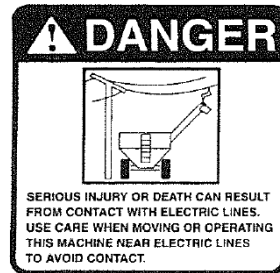
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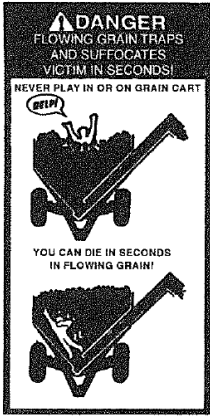
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4

Reference

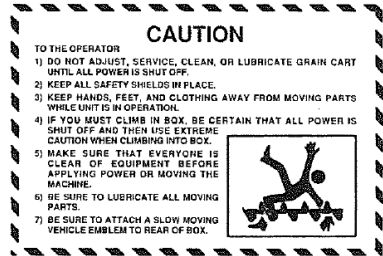
Number	Description	Part #	Req'd
1	Sign, Danger	DD-1	1
2	Sign, Danger	DD-2	3
3	Sign, Danger	DD-3	1
4	Sign, Danger	DD-4	3
5	Sign, Caution	DC-5	1
6	Sign, Important	DI-6	1
7	Sign, Warning	DW-7	1
8	Sign, Farm Use	DF-8	1
9	Sign, Open	DO-9	1
10	Sign, Closed	DC-10	1



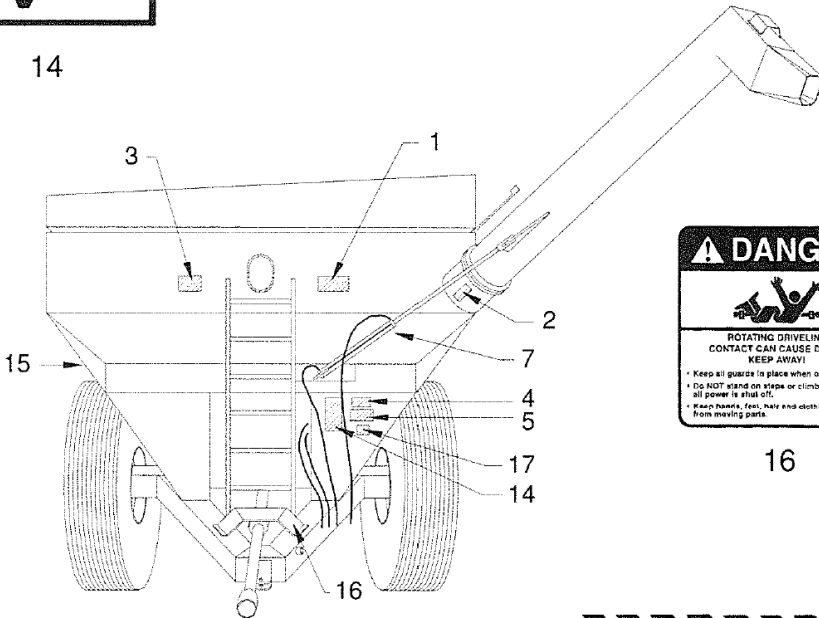
14



17



5



16



15



7

Reference

Number	Description	Part #	Req'd
11	Sign, J&M – Sm.	DD-11	2
12	Sign, J&M – Lg.	DD-12	4
13	Sign, Vinyl	DD-13	1
14	Sign, Danger	DD-14	1
15	Sign, Caution	DD-15	2
16	Sign, Danger	DD-16	5
17	Sign, Warning	DD-17	1



INITIAL OPERATION/MAINTENANCE

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

Before the grain cart is put into service, make certain that:

The gearbox is properly filled with EP 80-90 gearbox lubricant.

All nuts, bolts, bearings, and braces are properly fastened.

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

All bearings on the driveline are properly greased. Also grease the power-take-off at all grease points including cross-bearings. Grease the universal-joint at the gearbox.

The hanger bushing assembly at the auger hinge has been greased and that all grease points at the hinge area have been greased.

The tires are properly inflated. See tire manufacturer's recommendation for proper inflation.

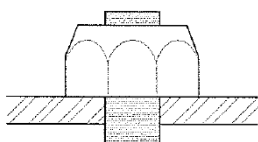
The safety instructions have been read and clearly understood by the operator(s) of this machine.

The wheel nuts are properly fastened (torque to 380 ft. lbs.) They should be checked after each load during initial operation of cart and then after every 10 hours of use.

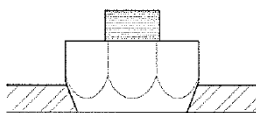
NOTE: The drawing below shows the proper ways of mounting the wheels using Budd-type nuts. The wheels supplied with your J & M Grain Cart have straight holes and the Budd nuts will be mounted according to Figure 1 below.

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 of the equipment.

We suggest that you inspect your wheel nuts to make sure that they are properly installed. Also, check the wheel nuts on a regular basis to ensure they are tight.



WHEELS WITH STRAIGHT HOLES
FIGURE 1



WHEELS WITH CHAMFERED HOLES
FIGURE 2



OPERATING INSTRUCTIONS

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

Preparing Grain Cart for Use

Model 525-14W Grain Cart requires 100 hp tractor or larger.

Model 620-14 Grain Cart requires 130 hp tractor or larger.

Model 750-14 Grain Cart requires 130 hp tractor or larger.

Model 750-16 Grain Cart requires 130 hp tractor or larger.

Model 875-16 Grain Cart requires 150+ hp or 4 WD tractor.

Model 1075-16 Grain Cart requires a 4 WD tractor.

NOTE: Do NOT pull loaded grain cart on highway. For incidental highway travel, observe the following:

<u>Road Speed</u>	<u>Weight of the grain cart relative to the weight of the tractor _____.</u>
Up to 32 km/h (20 mph)	1 to 1, or less
Up to 16 km/h (10 mph)	2 to 1, or less
Do not tow	More than 2 to 1

- 1) Hook-up grain cart to tractor using a good quality hitch pin. Attach a safety chain (not included) to the tractor and around the A-frame of the cart.
- 2) Attach power-take-off shaft to tractor. PTO must have at least 5" of engagement. Check tractor drawbar for clearance and length and adjust if needed. Make sure that the PTO does not bottom out when making sharp turns as it may bend the drive shaft.
- 3) Make sure that jack stand is removed from lower support position before cart is moved.
- 4) Be sure that no debris or foreign objects are in grain cart.
- 5) Attach hydraulic lines to tractor. Two hydraulic lines operate the gate mechanism. Connect these lines to one service outlet on the tractor. The remaining two lines operate the folding mechanism of the auger. Connect these lines to a second service outlet on the tractor. Make sure that air is bled from hydraulic cylinders and lines.
- 6) Run auger system EMPTY before actual use. Make certain that slip clutch is operating and that upper and lower augers engage properly.
- 7) Connect lighting hook-up to tractor electric outlet.



LOADING AND UNLOADING THE GRAIN CART

- 1) With the gate indicator in the closed position, fill the box with grain.
- 2) With the PTO disengaged, fold discharge auger to upright position.
- 3) **IMPORTANT:** After the auger is in the upright position, be sure to start the PTO at a **SLOW RATE OF SPEED** until the lugs 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 drive line).
- 4) Increase PTO speed and open the inner gate until the pointer is in the halfway position. When grain begins flowing from the discharge auger, open gate to the full open position.
- 5) Once the grain has ceased to flow, return the gate to the closed position (for complete clean-out, gradually close gate, allowing the opening to be reduced). Disengage the PTO and allow its rotation to come to a complete stop. Auger is now ready to be returned to the lowered position. (Important - Do Not pull the grain cart through the field with the unloading auger in the upright position. Failure to return auger to the lowered position may damage hinge and greatly reduce the life of the auger system.)



CAUTION TO THE OPERATOR(S)

- Do Not operate 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 system.
- Never fold or extend the auger until PTO has come to a complete stop.
- Never fill grain cart unless gate indicator is in the closed position.
- Never allow foreign objects (shovels, etc.) to be placed inside the grain cart.
- Never engage lugs and drive dog when system is moving at a high rate of speed.
- Never do maintenance work or service the cart with the tractor running.



LUBRICATION SERVICE SCHEDULE

Your J & M grain cart has grease fittings at all critical points. These should be serviced before the cart is put into operation. **BE CERTAIN THAT ALL POWER IS SHUT OFF BEFORE SERVICING THE GRAIN CART.**

Hitch: There is a grease fitting located on the pivot shaft of the swivel hitch.

PTO & Drive Line: 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 if use.

Folding Mechanism of Auger: 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 Top Auger Bearing: Service the grease fitting on the upper auger bearing (located on the top end of the upper auger assembly) after every 8 hours of use. Lubricate 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 lubricant level before initial operation of the cart. The fluid level should be checked from time to time. An inspection plug is located in the center of the top of the gearbox mount plate. To check the fluid level, remove drain plug at bottom of gearbox and also the vented inspection plug. Drain lubricant. Return drain plug and refill gearbox with 24 ounces of gearbox lubricant. (Gearbox is properly filled when half full of lubricant). **DO NOT OVERFILL.** Use EP 80-90 gearbox lubricant or equivalent.



ROUTINE MAINTENANCE

IMPORTANT – WHEN SERVICING THE GRAIN CART, BE CERTAIN THAT ALL POWER IS SHUT OFF.

- Repack the wheel bearings at least once a year. Use Bearing Gard MK 1 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.



ROUTINE MAINTENANCE (Continued)

- Lubricate the slides on the clean-out door.
- Check hydraulic hoses for wear and replace if needed.
- Make sure that the tires are properly inflated. Inflate according to tire manufacturers recommendations.
- Check PTO for wear of plates in slip clutch. Replace if needed.
- Make sure that all guards and shields are in place before operating the grain cart.



TROUBLE SHOOTING

IMPORTANT – 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.

<u>Trouble . . .</u>	<u>Possible Cause . . .</u>	<u>Possible Remedy . . .</u>
Auger will not return to down position or move from stow position	Dirt in restricter	Remove restricter fittings from outside hydraulic cylinder and clean out dirt
	Upper fighting and lower fighting locked together	Bearing on top of upper fighting needs adjusting. When auger is in engaged position, there must be 1/8" gap between bottom of top bearing and top of upper tube assembly (SEE ADJUSTING THE UPPER FIGHTING)
Slip clutch not working properly	Pressure plates (lining) corroded together	Loosen bolts around slip clutch, remove dirt and corrosion, and retighten bolts to proper tension
Hanger bushing assy. at top of lower fighting is hot	Top of hanger bushing assembly is rubbing against drive-dog	Adjust position of hanger bushing assembly
		Remove lower fighting assembly and place a shim between spline & gearbox



TROUBLE SHOOTING (Continued)

Trouble . . .	Possible Cause . . .	Possible Remedy . . .
Excessive Vibration	Auger flighting or shaft is bent	Straighten or replace auger flighting assembly
	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-dog and lugs are being engaged at too fast a rate of speed)
	Bolt sheared in drive-dog	Upper and lower flighting are disengaged before auger comes to a complete stop. Replace bolt in drive-dog. Never engage or disengage upper and lower flighting until auger comes to a complete stop
	Slip clutch not working properly	Inspect clutch linings and replace if worn
	PTO key sheared	Replace key and tighten set screw
Auger tube breaking away from grain cart at hinge	Auger is extended in upright position while traveling in field	Lower auger to stow position after unloading



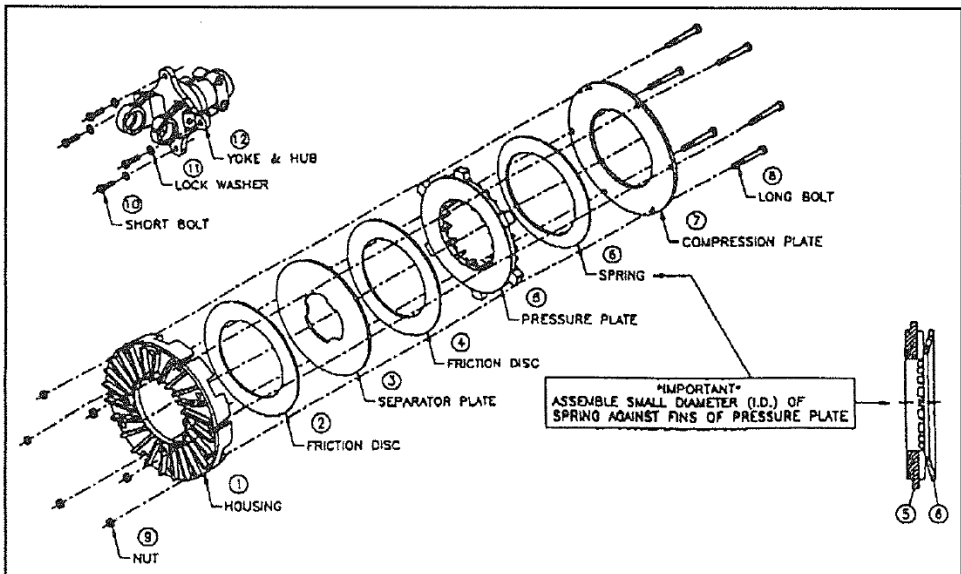
ADJUSTING THE SLIP CLUTCH

If the machine has never been used or has not been operated for (1) season, the following is recommended.

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

TOOLS REQUIRED:

- (1) $\frac{1}{2}$ " Box wrench or socket.





ADJUSTING THE LOWER FLIGHTING AND HANGER BUSHING ASSEMBLY

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

If the drive-dog and hanger bushing 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 locate in center between flighting center and drive-dog. Retighten the bolts. (Make certain that the flighting center and drive-dog does 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 (1/8" – 3/16") where the gearbox and the spline coupler (welded to lower flighting) meet. 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 "froze" 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, check the upper flighting for readjustment.



ADJUSTING THE UPPER FLIGHTING

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

If the upper and lower flightings do not properly separate during the unfolding sequence, the upper flighting may need adjusting. Before making adjustment to upper flighting, check to see if the lugs and drive-dog are locking together (If not, dirt in the restricter of hydraulic cylinder on the upper tube may be the cause of the problem. *See instruction for removing dirt from the restricter).

Fold the upper tube assembly into upright position. Position upper flighting in engaged position with lower flighting. Locate 4-hole flange bearing on top of the upper 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 a 1/8" space between the base of the 4-hole flange bearing and the upper tube housing. If there is NOT a space between the bearing and the upper tube housing, the upper flighting will need adjusting. To adjust the upper flighting, loosen the 1 1/4" hex nuts both below and above the 4-hole flange bearing. Move the 1 1/4" hex nuts either up or down the threaded shaft on top of the upper flighting until a 1/8" gap is between the base of the bearing and the upper tube housing. Tighten the 1 1/4" hex nuts.

If the upper and lower flighting still does not separate properly during the unfolding sequence, a small bevel may need to be ground out of the inside of the lugs where they meet the drive-dog. Grind approximately 1/8" off of the corner of the lugs where they touch against the drive-dog.



REMOVING DIRT FROM RESTRICTERS ON HYDRAULIC CYLINDER

NOTE: MAKE SURE THAT ALL POWER IS SHUT OFF AND THE UPPER AUGER TUBE IS IN THE DOWN POSITION BEFORE REMOVING THE RESTRICTERS.

Remove restricters (ref. #49) from 90 degree street elbow on hydraulic cylinder. Remove dirt from fitting to allow hydraulic oil to flow freely through the restricter. Reattach the restricter to the street elbow. Use teflon sealant tape or equivalent on the threads of the restricter before reattaching.

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

STORAGE PREPARATION

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

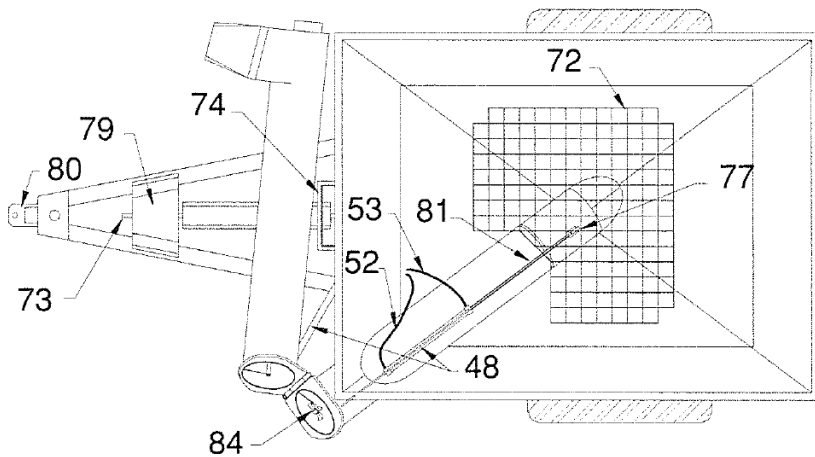
Follow the procedure below when your grain cart is placed in storage for periods up to six months.

- 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 gearbox oil in the gearbox and replace with new EP-80-90 gearbox lubricant if necessary.
- 4) Touch-up spots where paint has been worn away (use a good quality primer paint – especially before applying graphite paint to the inside 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.

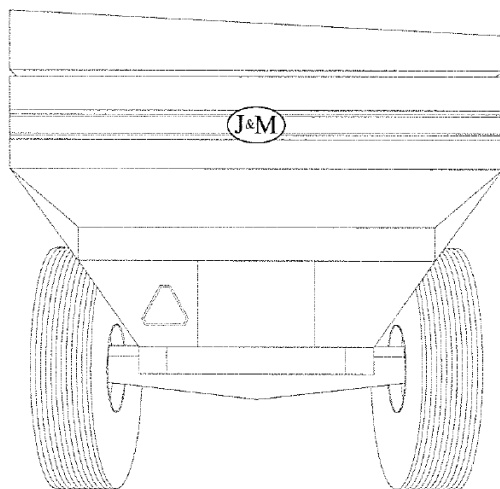
REMOVING FROM STORAGE

- 1) Check the oil in the gearbox.
- 2) Check the battery and make sure that it is fully charged (if equipped with an electronic weigh system). Reconnect the negative (-) cable.
- 3) Inflate the tires to the correct operating pressures.
- 4) Close the clean-out door at the base of the grain tank.
- 5) Make sure that all shields are in the proper position.

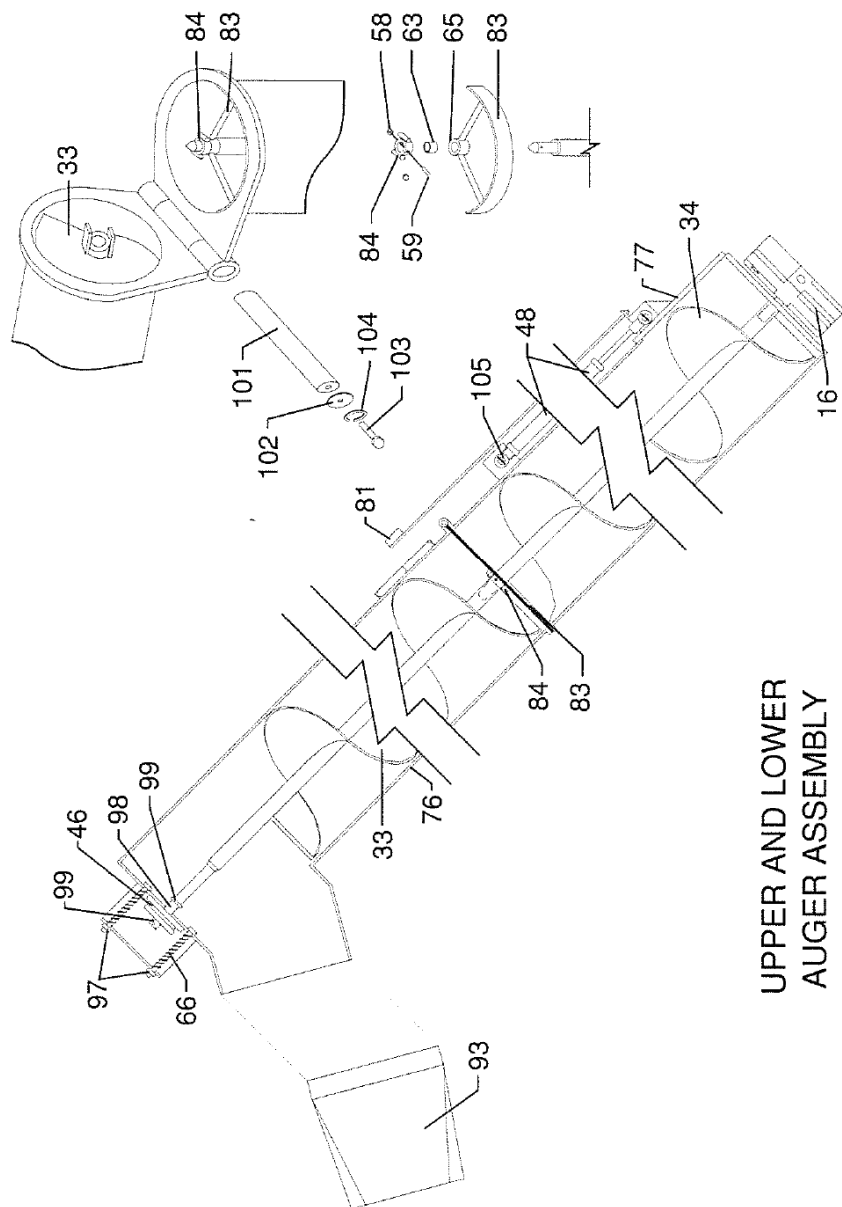


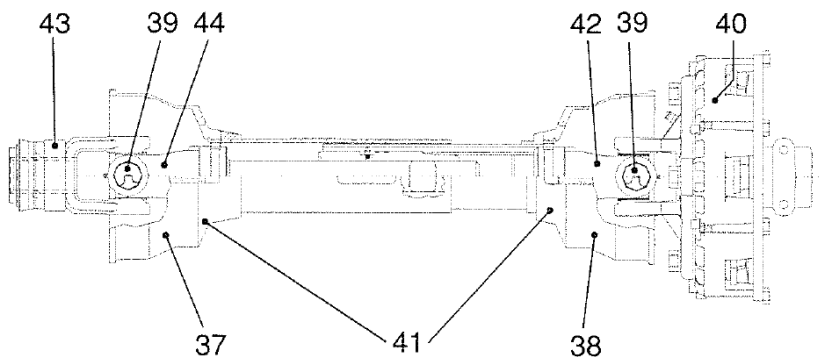


Top View of Grain Cart



Rear of Grain Cart



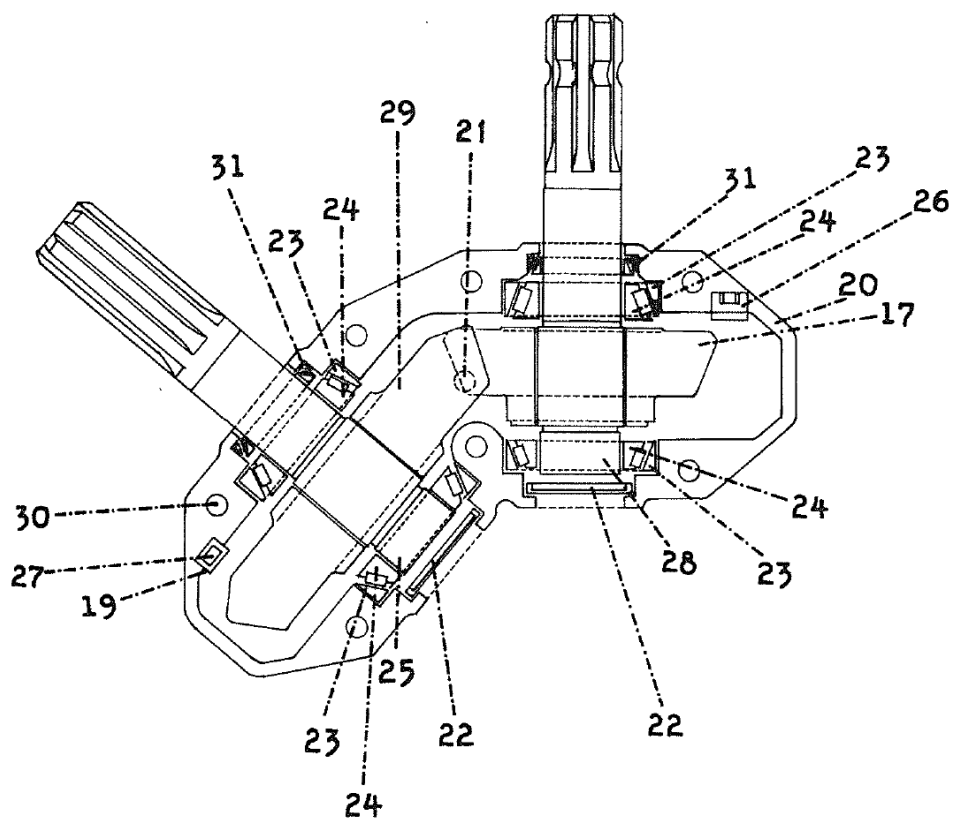


POWER TAKE-OFF SHAFT

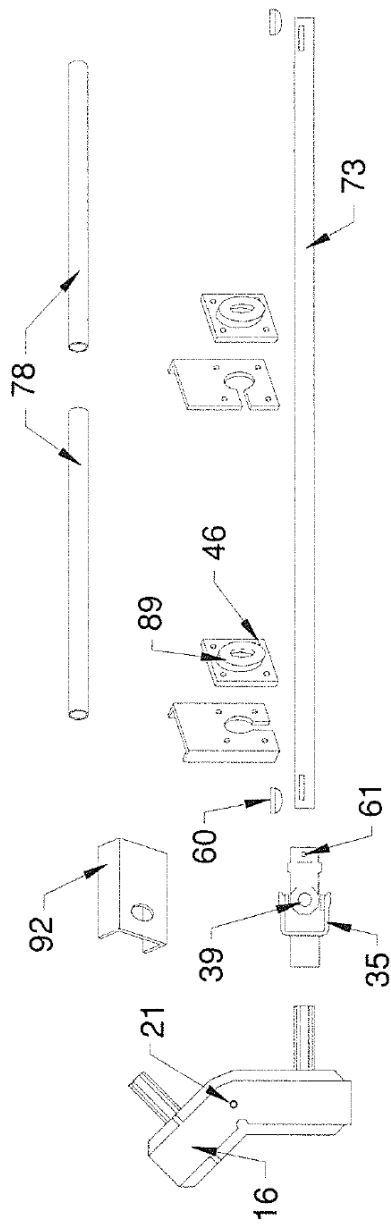
Parts List for New Style Power Take-Off Shaft for Models
525-14W, 620-14, 750-14, 750-16, 875-16, 1075-16

37	91-1400-F-138	Front Half of PTO (1 3/8")
	91-1400-F-134	Front Half of PTO (1 3/4")
38	97-18615B	Back Half of PTO
39	03-10134	Cross Kit
40	11-11167	Lining
41	16281CS	Complete Shield w/Nylon Bearing, Retainer
42	98-15972	Yoke & Tube
43	14122-1012	Spring-Lok Yoke (1 3/8")
	14011-1960	Spring-Lok Yoke (1 3/4")
44	99-16281	Yoke & Shaft

130 DEGREE GEARBOX ASSEMBLY



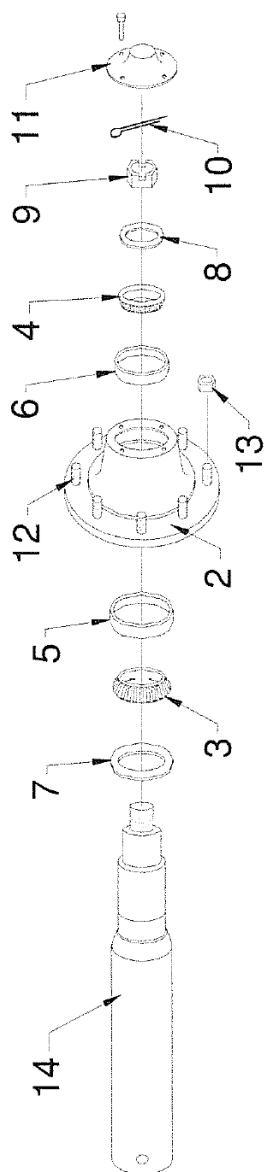
GRAIN CART DRIVE-LINE ASSEMBLY



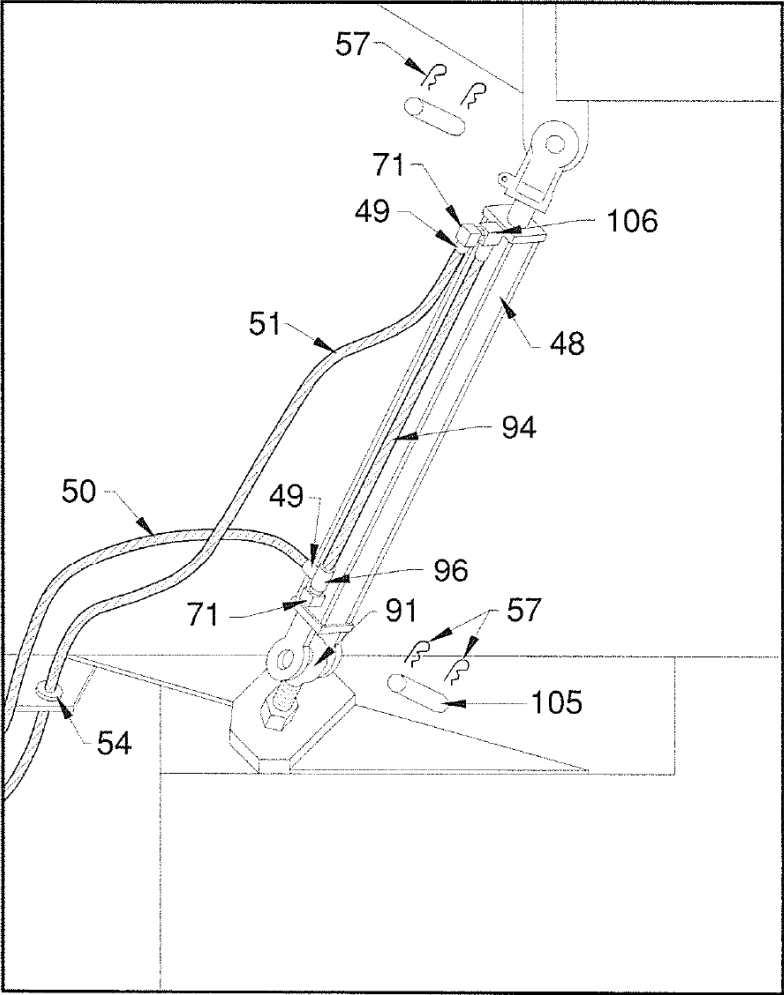
For Illustration Only

WARNING: Never operate the driveline/auger system unless all guards and shields are properly installed.

GRAIN CART HUB & SPINDLE ASSEMBLY

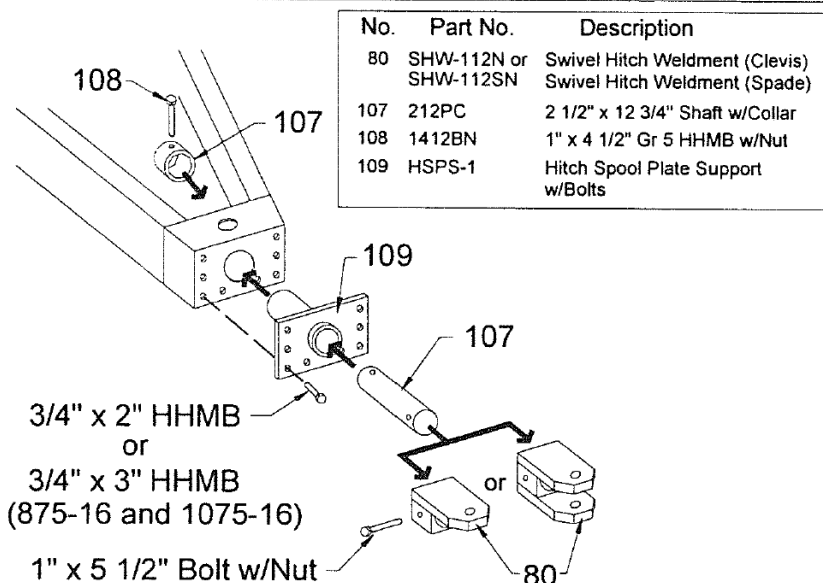


HYDRAULIC CYLINDER REPAIR PARTS



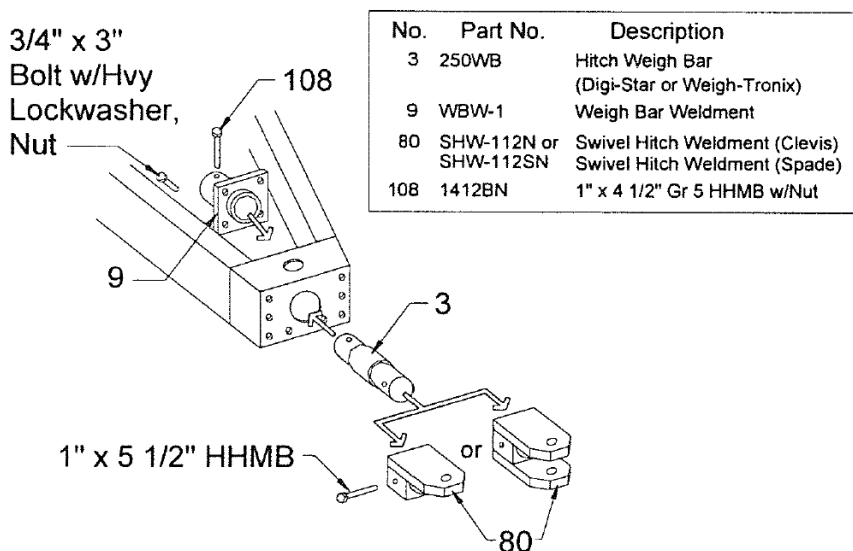
Bolt On Hitch System for J&M Grain Cart

For Models 525-14W, 620-14, 750-14, 750-16, 875-16 & 1075-16



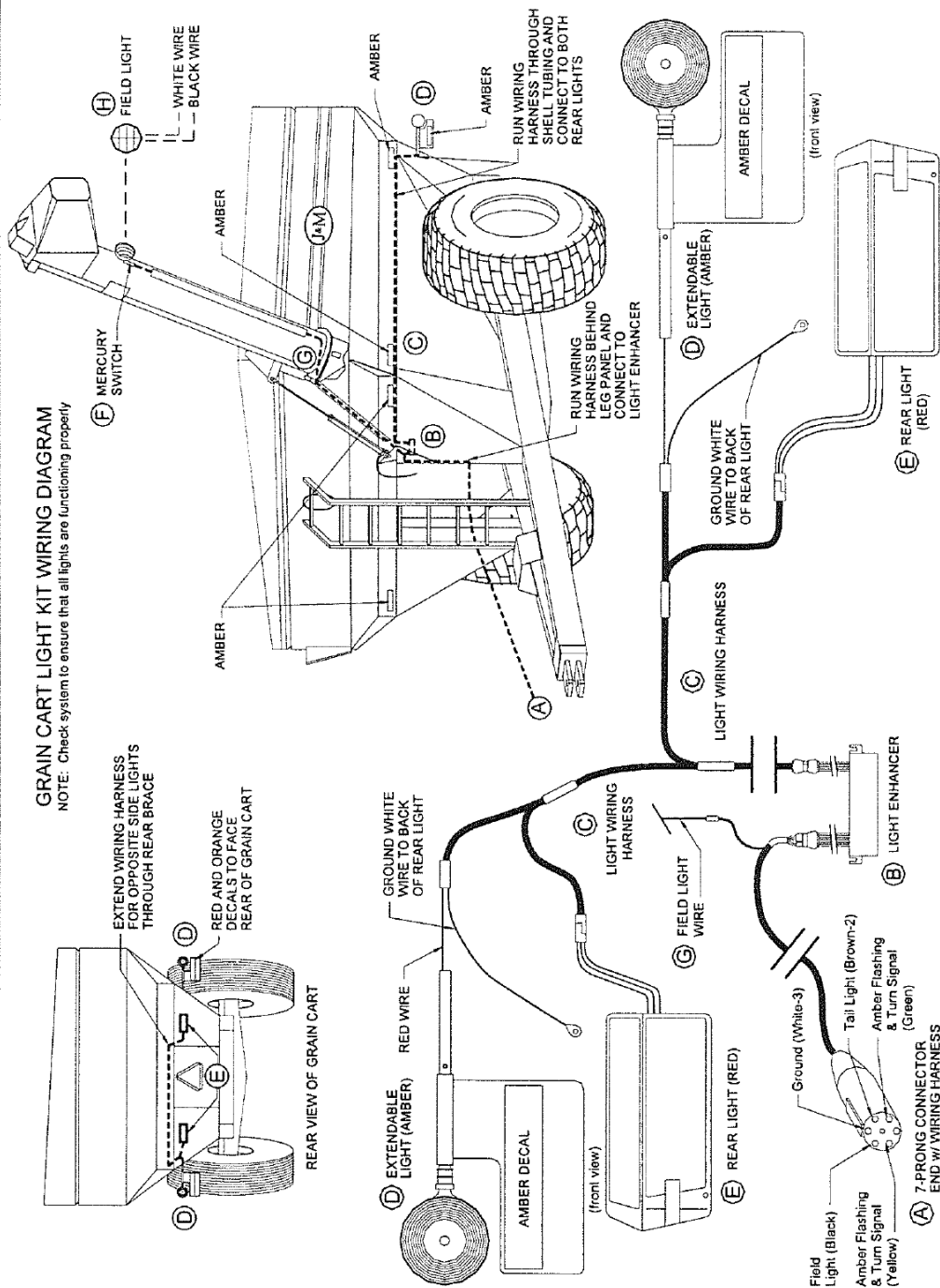
Bolt On Hitch System for J&M Electronic Scale Cart

For Models 525-14W, 620-14, 750-14, 750-16, 875-16 & 1075-16



GRAIN CART LIGHT KIT WIRING DIAGRAM

NOTE: Check system to ensure that all lights are functioning properly



PARTS LIST

Ref. #	525-14W		620-14		750-14		750-16		875-16		1075-16		Description
	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	
1	20 x 26 - 10	21 x 32 - 10	21 x 32 - 10	21 x 32 - 10	21 x 32 - 10	21 x 32 - 10	21 x 32 - 10	21 x 32 - 10	27 x 32 - 10	27 x 32 - 10	31 x 32 - 10	31 x 32 - 10	Wheel Rim
2	21 x 32 - 10	W-881	W-881	W-881	W-881	W-881	W-881	W-881	W-881	W-881	H25000	H25000	Hub
3	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	4T-HM218248	71455	71455	Large Bearing
4	HM212049	HM212049	HM212049	HM212049	HM212049	HM212049	HM212049	HM212049	HM212049	HM212049	663	663	Small Bearing
5	910344	910344	910344	910344	910344	910344	910344	910344	910344	910344	71750	71750	Large Race
6	910384	910384	910384	910384	910384	910384	910384	910384	910384	910384	653	653	Small Race
7	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR-43771	CR55179	CR55179	Seal
8	913635	913635	913635	913635	913635	913635	913635	913635	913635	913635	EM-25M	EM-25M	Spindle Washer
9	912973	912973	912973	912973	912973	912973	912973	912973	912973	912973	SF-2512	SF-2512	Slotted Spindle Nut
10	905945	905945	905945	905945	905945	905945	905945	905945	905945	905945	3754	3754	Cotter Pin
11	909921	909921	909921	909921	909921	909921	909921	909921	909921	909921	D-25000	D-25000	Dust Cap
12	913564	913564	913564	913564	913564	913564	913564	913564	913564	913564	750-35	750-35	Wheel Studs
13	913571	913571	913571	913571	913571	913571	913571	913571	913571	913571	913571	913571	Wheel Nuts
14	281900	281900	281900	281900	281900	281900	281900	281900	281900	281900	628	628	Spindle
15	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-650	HSA-1075	HSA-1075	Hub, Spindle Assy. complete
16	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	H51AES	Gearbox
17	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	H51S19	Gear
19	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	4003V8	Bushing (1/2" to 1/4")
20	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	H00001-1	Casting Mod
21	200300	200300	200300	200300	200300	200300	200300	200300	200300	200300	200300	200300	Inspection Plug
22	400301	400301	400301	400301	400301	400301	400301	400301	400301	400301	400301	400301	End Cap
23	414276	414276	414276	414276	414276	414276	414276	414276	414276	414276	414276	414276	Bearing Cup
24	514137	514137	514137	514137	514137	514137	514137	514137	514137	514137	514137	514137	Bearing Cone
25	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	H00111-02	Output Shaft
26	400300	400300	400300	400300	400300	400300	400300	400300	400300	400300	400300	400300	Solid Plug
27	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	2003PR	Vented Plug
28	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	H00111-01	Input Shaft
29	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	H51S28	Gear
30	438225	438225	438225	438225	438225	438225	438225	438225	438225	438225	438225	438225	Bolt
31	513569	513569	513569	513569	513569	513569	513569	513569	513569	513569	513569	513569	Seal
32	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	SC-2X2716	Spine Coupler
33	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	UF-14-F6R	Upper Flighting
34	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	LF-14-F5R	Lower Flighting
35	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	M-6635-A	U-Joint
36	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	91-1400-138	PTO Shaft Complete (1 3/8")
	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	91-1400-134	PTO Shaft Complete (1 3/4")

Ref. #	525-14W		620-14		750-14		750-16		875-16		1075-16		Description
	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	Part #	
37	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	91-1400-F-138	Front Half of PTO (1 3/8")
38	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	91-1400-F-134	Front Half of PTO (1 3/4")
39	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	91-1400-B	Back Half of PTO
40	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	03-10134	Cross Kit
41	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	11-11167	Lining
42	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	16281CS	Complete Shield w/ Nylon Bearing/Retainer
43	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	98-15972	Yoke + Tube
44	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	14122-1012	Spring-Lok Yoke
45	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	99-16281	Yoke + Shaft
46	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-178T	TWL-200	TWL-200	Jack Stand Assy.
47	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	GRAF-206	1 1/4" Flange Bearing
48	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	JD20024	Hydraulic Cylinder
49	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	1404-062	Orifice Fitting (restrictor)
50	14144	14144	14144	14144	14144	14144	14144	14144	14144	14144	14144	14144	Rubber Hose x 144"
51	14160	14160	14160	14160	14160	14160	14160	14160	14160	14160	14160	14160	Rubber Hose x 160"
52	3841	3841	3841	3841	3841	3841	3841	3841	3841	3841	3841	3841	Rubber Hose x 41"
53	3829	3829	3829	3829	3829	3829	3829	3829	3829	3829	3829	3829	Rubber Hose x 29"
54	26012	26012	26012	26012	26012	26012	26012	26012	26012	26012	26012	26012	Rubber Grommet
55	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	CP-316	Cotter Pin
56	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	LN-58	5/8" Lock Nut
57	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	58412GR8	5/8" x 4 1/2" HMMB
58	516114	516114	516114	516114	516114	516114	516114	516114	516114	516114	516114	516114	Half Moon Key
59	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	SS-3812	3/8" x 1/2" Set Screw
60	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	EB-134	Bronze Bushing
61	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	1610BL	Grease Fitting
62	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	CMSUAA-4	Compression Spring
63	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	PGW-71212	Plexiglass Window
64	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	62095-7	Window Molding
65	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	38BLCP	Coupling
66	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	1238SBU	Steel Bushing
67	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	38SE90	90 Degree Street Elbow
68	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	SG-500-F	Grate
69	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	DS-114F	Drive Shaft
70	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	LA-6S-F	Ladle Assembly
71	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	TTE-525	Tapered Top Extensions
72	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	UAH-14-5	Upper Auger Tube (housing)
73	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	AGC-500-F	Auger Gate Cover Assembly
74	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	GDS-114-F	Guard for Drive Shaft
75	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	GPDS-114	Guard for PTO-Drive Shaft

Ref. #	525-14W		620-14		750-14		750-16		875-16		1075-16		Description
	Part #	SHW-112 SHW-112S GI-12 CODW500	Part #	SHW-112N SHW-112SN GI-12-6 CODW675	Part #	SHW-112N SHW-112SN GI-12-6 CODW875	Part #	SHW-112N SHW-112SN GI-12-6 CODW875	Part #	SHW-112N SHW-112SN GI-12-6 CODW875	Part #	SHW-112N SHW-112SN GI-12-6 CODW875	
80													Swivel Hitch Weldment (clevis)
81													Swivel Hitch Weldment (spade)
82													Gate Indicator
													Clean-out Door & Wheel Assy.
83													Hanger Bushing Assy.
84													Drive-Dog Weldment
85													Seal for Hydraulic Cylinder
88													75 Degree Grease Fitting
89													Grease Fitting
90													Light Kit (not installed)
91													Ball Joint Weldment with Nut
92													Shield for U-joint
93													Steel Funnel Spout
94													Rubber Hose x 20 1/2"
96													Check Valve
97													1/2" x 5 1/2" HHMB w/ Nut
98													Spacer
99													1 1/4" Hex Nut
100													Ex Pan Pin 1/4" x 1 3/4"
101													Pin in Hinge Assy.
102													1/2" Hvy. Washer
103													1/2" x 1 1/4" HHMB
104													1/2" Lock Washer
105													1" x 4" Pin
106													Tee
107													Shaft w/Collar
108													1" x 4 1/2" Bolt w/Nut
109													Hitch Spool Plate
110													Hyd. Cylinder, 2 1/2" x 24"
Parts for Electronic Weigh Carts													
1													Indicator
2													Weigh Spindle
3													Hitch Weigh Bar
4													Junction Box
5													Power Cord
6													Extension Cord
7													Battery Box
8													Mount Bracket (indicator)
9													Weigh Bar Weldment