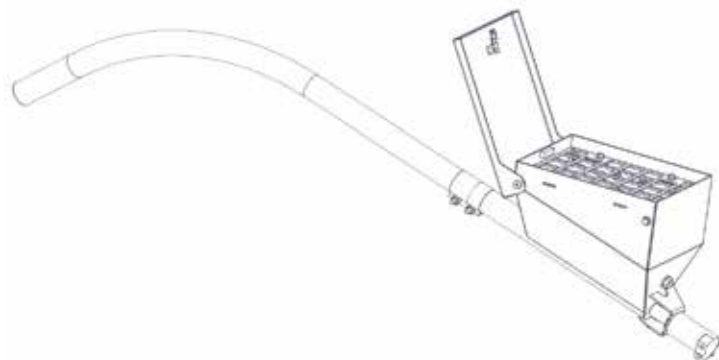


Talc Applicator  
(Hydraulic)

OPERATORS MANUAL



Rev.8.14.17

**J. & M. Mfg. Co., Inc.**  
**284 Railroad Street - P.O. Box 547**  
**Fort Recovery, OH 45846**  
**Ph: (419) 375-2376 Fax: (419) 375-2708**  
**www.jm-inc.com**



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

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

This warranty does not cover a component which fails, malfunctions, or is damaged as a result of (i) improper modification or repair, (ii) accident, abuse or improper use, (iii) improper or insufficient maintenance, or (iv) normal wear or tear. This warranty does not cover products that are previously owned and extends solely to the original purchaser of the product. Should the original purchaser sell or otherwise transfer this product to a third party, this 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 a safe 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 Talc Applicator 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.

## General Information

### BOLT TORQUE CHART

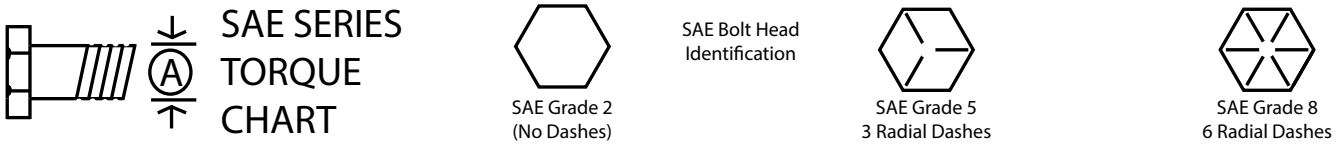
Always tighten hardware to these values unless a different torque or tightening procedure is listed for specific application.

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

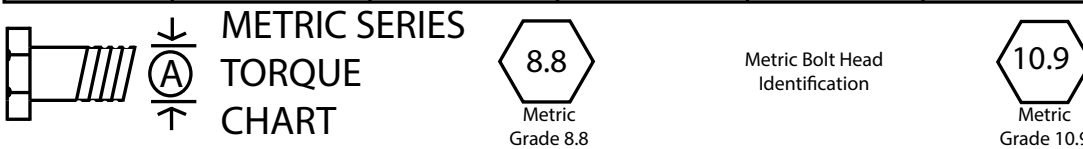
Always use the proper tool for tightening hardware: SAE for SAE hardware and Metric for Metric hardware.

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)



Ⓐ 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



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

## Safety Rules



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



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

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

Read this manual before you operate this machine. If you do not understand any part of this manual, or need more information, contact the manufacturer or your authorized dealer.

### SAFETY

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

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

- 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.
- Keep clear of moving parts at all times when operating the talc unit.
- Be sure that all safety shields are in place before operation.

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

### DECALS

<b>speedtender</b>						
<b>ADVANCED SEED DELIVERY</b>						
<b>TALC APPLICATOR FLOW CONTROL SETTINGS</b>						
Flow Control Setting	Cups/min	Cups/unit @ 24.4 units/min (1 door fully open)	Cups/unit @ 30 units/min (2 doors fully open)	Cups/unit @ 45 units/min (S35 Only) (2 doors fully open)	Lbs/min	
1.5	0.0	0.0	0.0	0.0	0.0	0.0
2.0	0.6	0.0	0.0	0.0	0.0	0.2
2.5	1.3	0.1	0.0	0.0	0.0	0.4
3.0	3.8	0.2	0.1	0.1	0.1	1.3
3.5	6.3	0.3	0.2	0.2	0.1	2.1
4.0	6.6	0.3	0.2	0.2	0.1	2.2
4.5	7.0	0.3	0.2	0.2	0.2	2.3
5.0	9.0	0.4	0.3	0.2	0.2	3.0
5.5	11.0	0.5	0.4	0.2	0.2	3.7
6.0	14.5	0.6	0.5	0.3	0.3	4.8
6.5	18.0	0.7	0.6	0.4	0.4	6.0
7.0	21.5	0.9	0.7	0.5	0.5	7.2
7.5	25.0	1.0	0.8	0.6	0.6	8.4
8.0	27.5	1.1	0.9	0.6	0.6	9.2
8.5	30.0	1.2	1.0	0.7	0.7	10.0
9.0	35.0	1.4	1.2	0.8	0.8	11.7
10.0	40.0	1.6	1.3	0.9	0.9	13.4

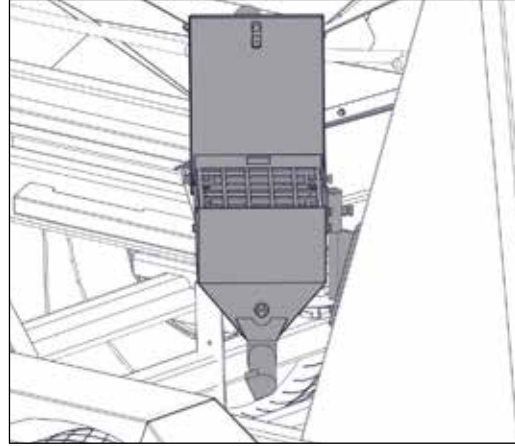
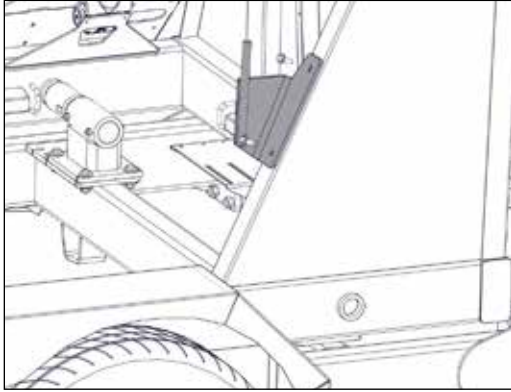


Place Decal on Talc Box. Place on side most visible to the user.

## Assembly

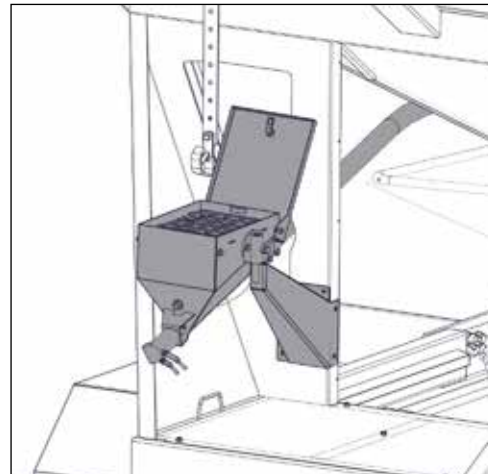
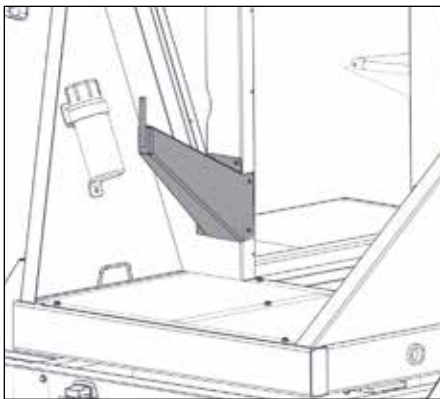
### STEP ONE 290 & 390 Units

- Bolt the 290/390 Talc Box Mounting Bracket (JM0037272) to the Seed Tenders front passenger side leg using two 3/8" x 1" flange screws and 3/8" flange nuts. Hand tighten fasteners.
- Slide the Talc Box (JM0037538) and Talc Rotation Bracket (JM0038395) onto the 290/390 Talc Box Mounting Bracket. Hand tighten fasteners.



### STEP ONE 535 Units

- Bolt the 535 Talc Box Mounting Bracket (JM0037641) to the Seed Tenders rear driver side leg using five 3/8" x 1" flange screws and 3/8" flange nuts. Hand tighten fasteners.
- Slide the Talc Box (JM0037538) and Talc Rotation Bracket (JM0038395) onto the 535 Talc Box Mounting Bracket. Hand tighten fasteners.

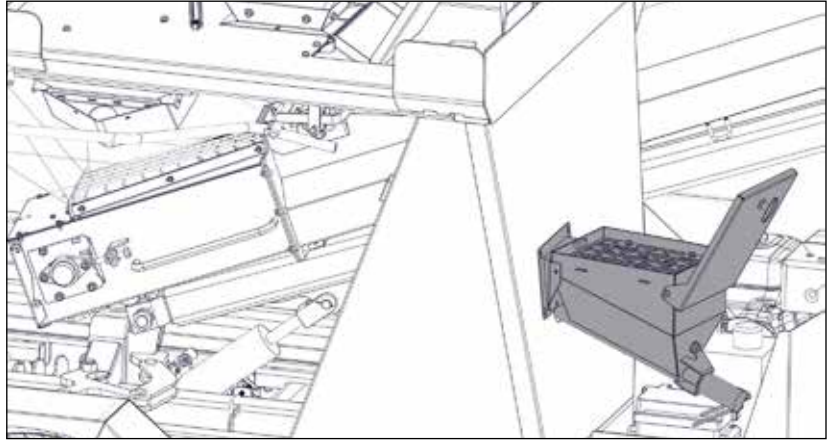
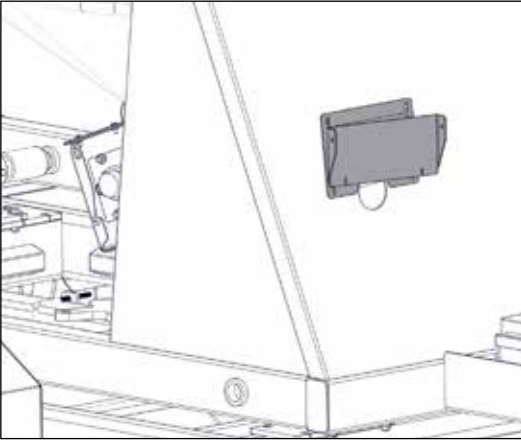




## Assembly

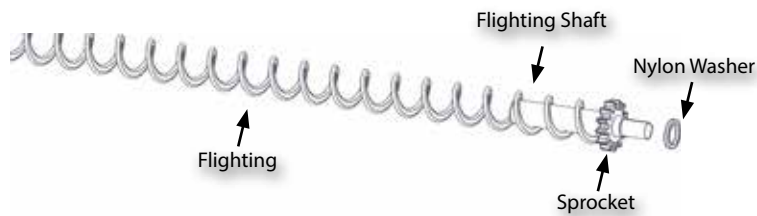
### STEP ONE C-450 Units

- Bolt the C4-50 Talc Box Mounting Bracket (JM0037645) to the Seed Tenders front passenger side leg using four 3/8" x 1" flange screws and 3/8" flange nuts. Hand tighten fasteners.
- Fasten the Talc Box (JM0037538) to the C4-50 Talc Box Mounting Bracket



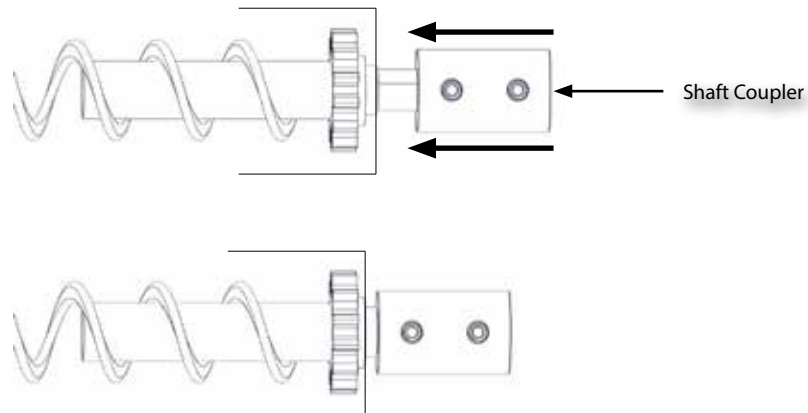
### STEP TWO

- Insert the Flex Flighting Weldment (390-JM0042587, 290-JM0042838, C4-50/535-JM0043060) with the Nylon Washer (JM0035079) into the Talc Box and make sure the Nylon washer is seated firmly against the side of the box and the flighting weldment sprocket is meshed with the agitator sprocket



### STEP THREE

- Slide the Shaft Coupler (JM0042842) onto the flighting weldment shaft and fasten using the set screws provided. Be sure the shaft coupler is slid as far up the flighting weldment shaft as possible.



## Assembly



### STEP FOUR

- Align the motor shaft key with the keyway in the shaft coupler.
- Attach the Hydraulic Motor (JM0042491) to the Talc Box using the three 1/4"-28 x 3/8" Hex Bolts and tighten.

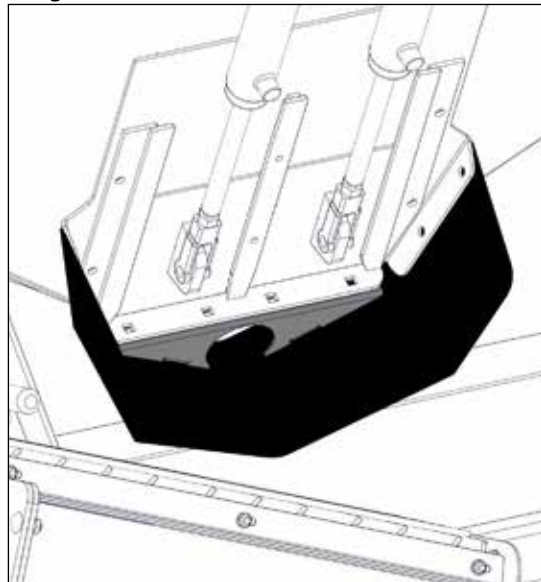
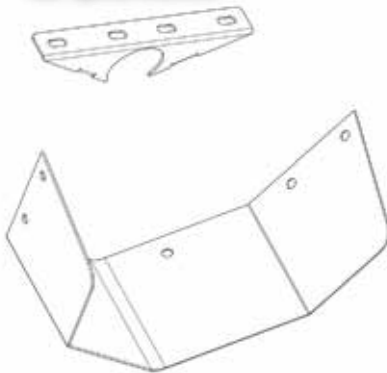
### STEP FIVE

- Again, be sure the Nylon washer on the flighting weldment is firmly seated against the inside face of the Talc Box. Tap the flighting with a hammer to confirm that the flighting washer is properly seated. Tighten the set screw on the Hydraulic motor shaft.

### STEP SIX (Skip this step for 535 units)

- Remove the rubber door skirt from the seed tender and fasten the Talc Spout Bracket (JM0042542) and Talc Rubber Door Skirt (JM0042688) to the bottom of the seed tender door. Hand tighten fasteners.

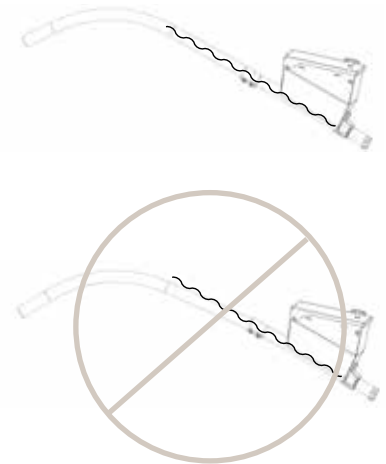
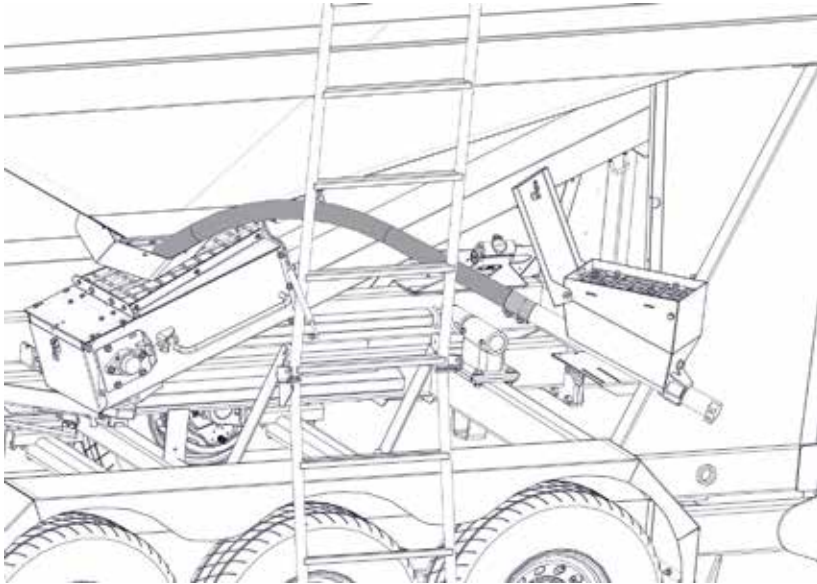
Talc Spout Bracket



## Assembly

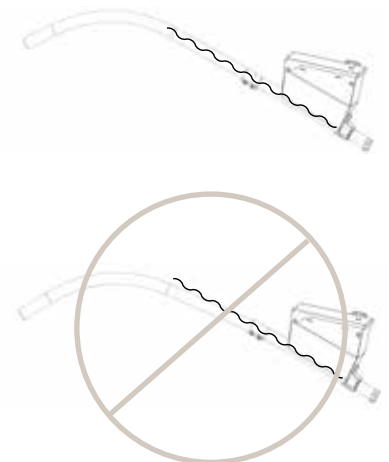
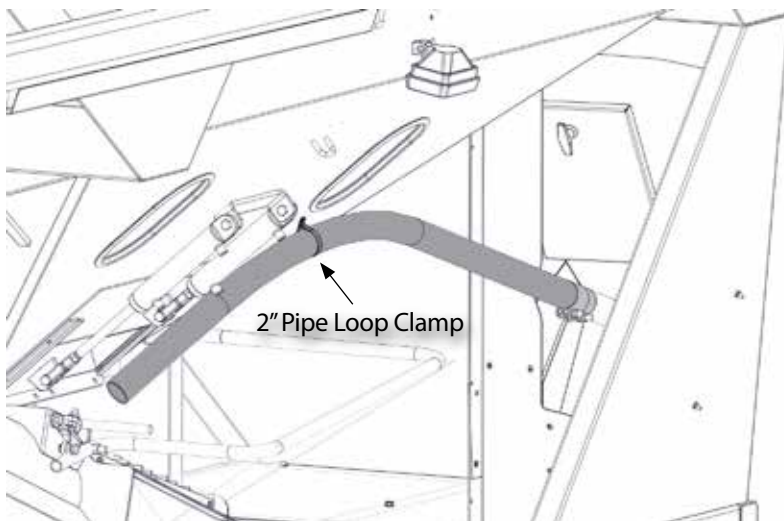
### STEP SEVEN 290, 390 & C-450 Units

- Attach the Talc Fighting PVC Tube (390-JM0042810, 290- JM0042809, C4-50/535-JM0043049) over the fighting with the 2" Exhaust clamp. (JM0037668)
- Before tightening the 2" Exhaust Clamp have the Talc Fighting PVC Tube spout inserted in the Talc Spout Bracket. Make sure the Talc Box is oriented so the Talc Fighting PVC tube is in line with the Talc Box Pipe (shown below). Tighten the 2" Exhaust Clamp. Tighten all fasteners left untightened.



### STEP SEVEN 535 Units

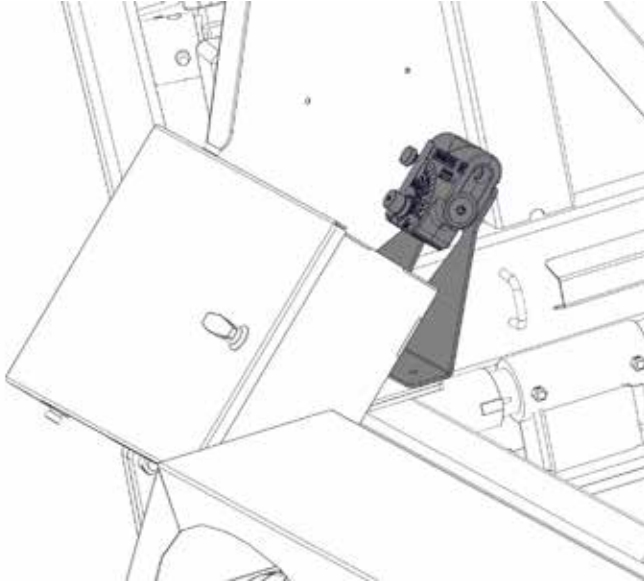
- Attach the Talc Fighting PVC Tube (390-JM0042810, 290- JM0042809, C4-50/535-JM0043049) over the fighting with the 2" Exhaust clamp.
- Before tightening the 2" Exhaust Clamp make sure the Talc Box is oriented so the Talc Fighting PVC tube is in line with the Talc Box Pipe (shown below) and the spout is hanging over the conveyor hopper inlet. Tighten the 2" Exhaust Clamp. Tighten all fasteners left untightened.
- Use the 2" Pipe Loop Clamp (JM0043498), 3/8" x 1" flange bolt and 3/8" flange nut to fasten the Talc Fighting PVC Tube to the 535 tank.



## Assembly

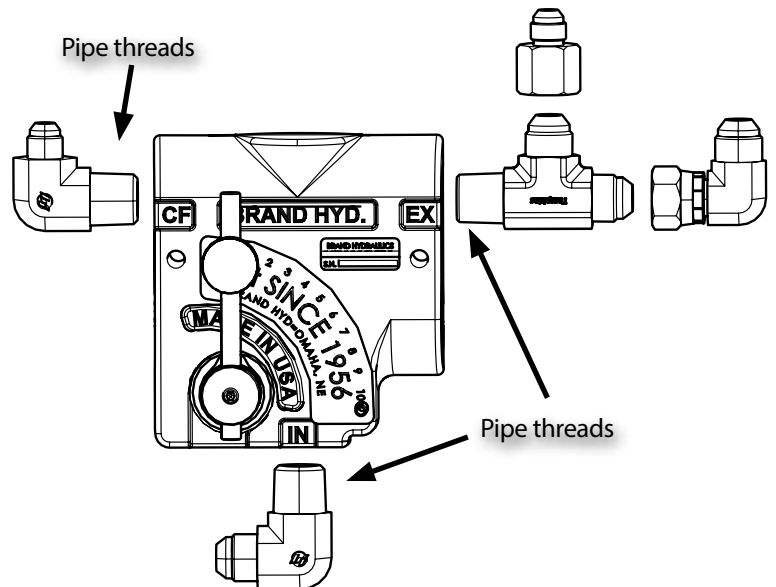
### STEP EIGHT

- Mount the Flow Control Valve (JM0026104) using the Flow Control Mounting Bracket. (290/390/C4-50-JM0043097, 535-JM0025400) Mount in the location shown below by removing the scale box bolts. Remove and attach 1 bolt at a time to keep the scale box secure.



### STEP NINE

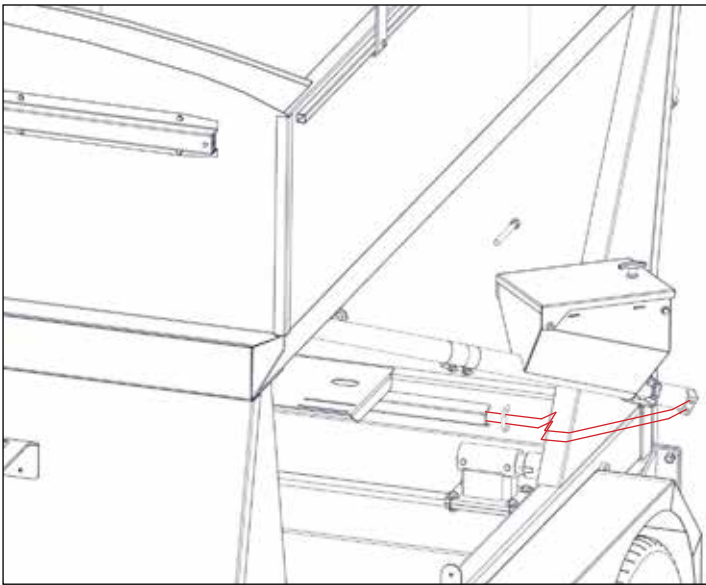
- Bolt the Flow Control Valve (JM0026104) to the Flow Control Mounting bracket using (2) 1/4" x 2" hex bolts and (2) 1/4" lock nuts.
- Assemble the fittings to the Flow Control Valve as shown below. Teflon Tape should be used on pipe threads.



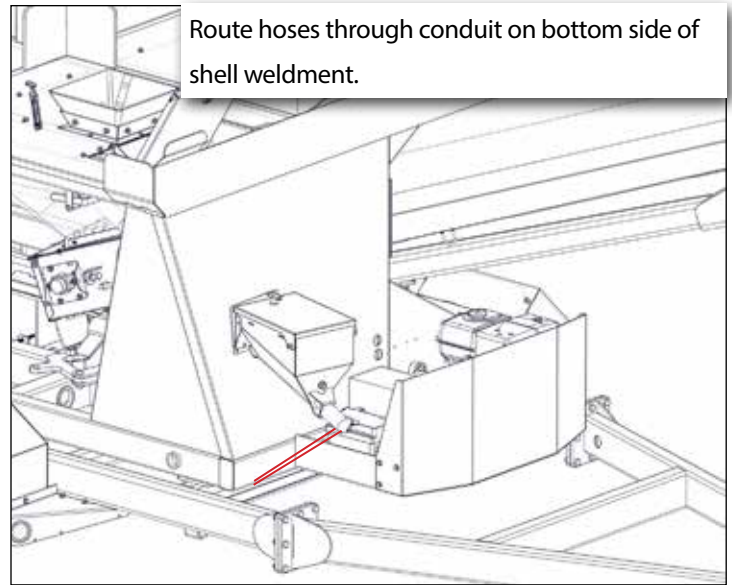
## Assembly

### STEP TEN

- Route the Talc Motor Hydraulic Hoses (JM0042861) through the conduits on the trailer as shown below. Tighten the hoses to the Flow Control Valve and Hydraulic Talc motor.



290/390



C450

### STEP ELEVEN

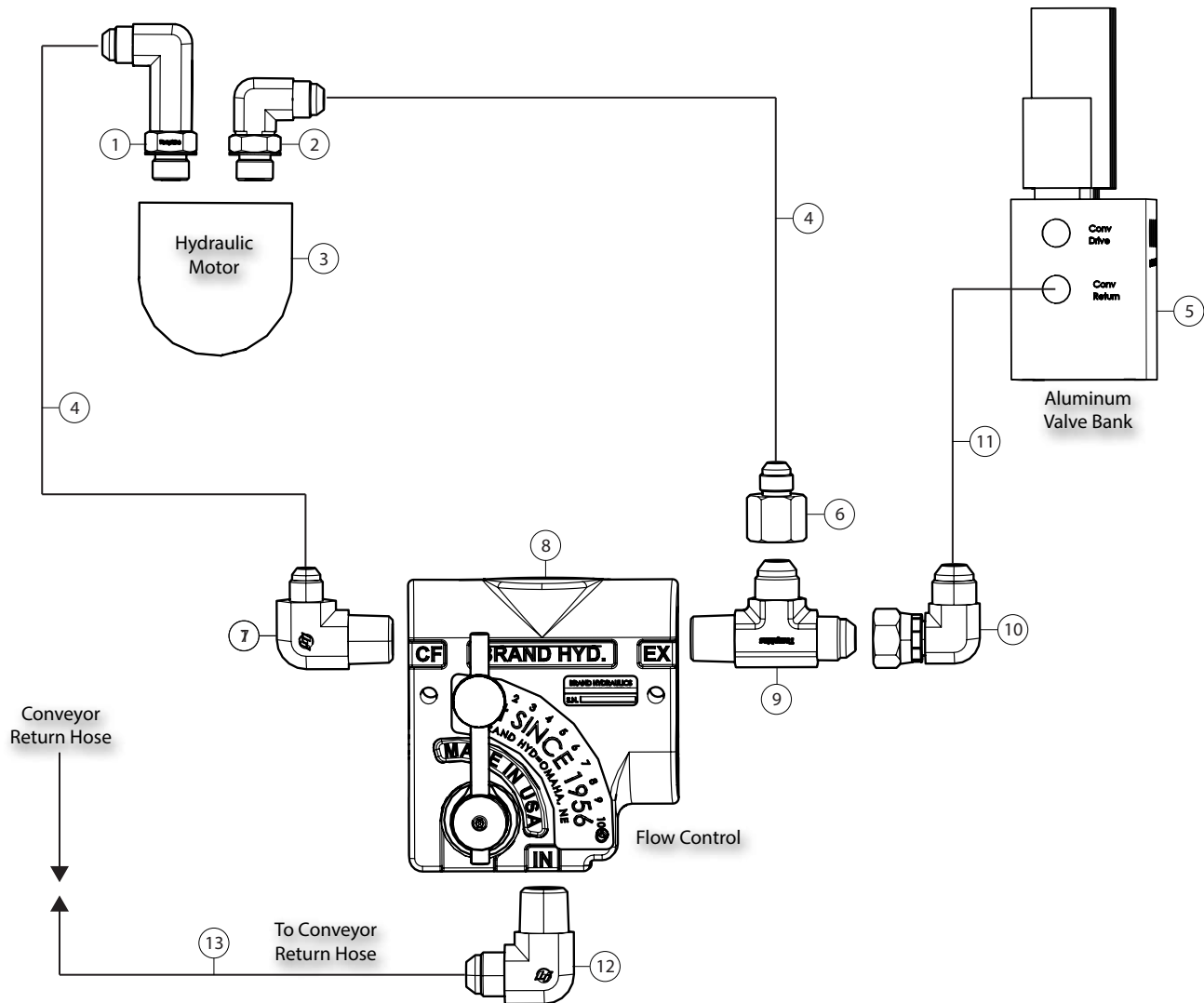
- Remove the conveyor motor return hose from the conveyor return port on the seed tender valve bank and attach the 20" Supply Hose (JM0042862) to the conveyor motor return hose and to the "IN" port elbow on the flow control valve. See Page 14.

### STEP TWELVE

- Attach the 30" Return Hose (JM0042863) to the "EX" port elbow on the flow control valve and the "Conveyor Return" port on the seed tender valve bank. See page 14.

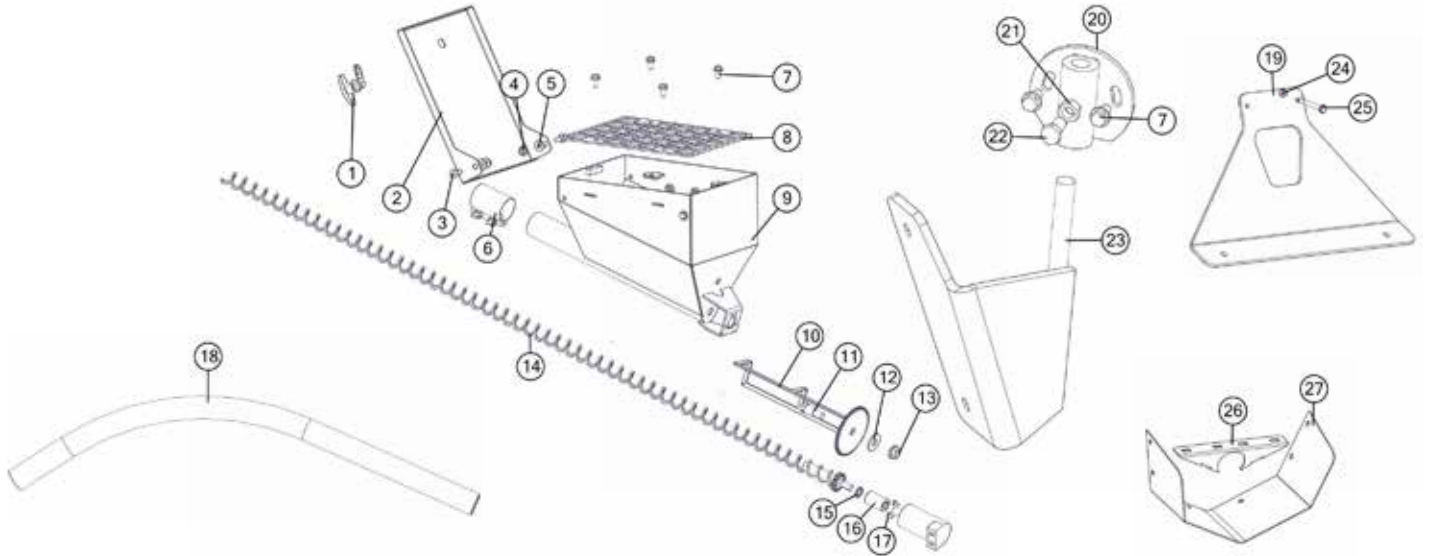


## Hydraulic Schematic



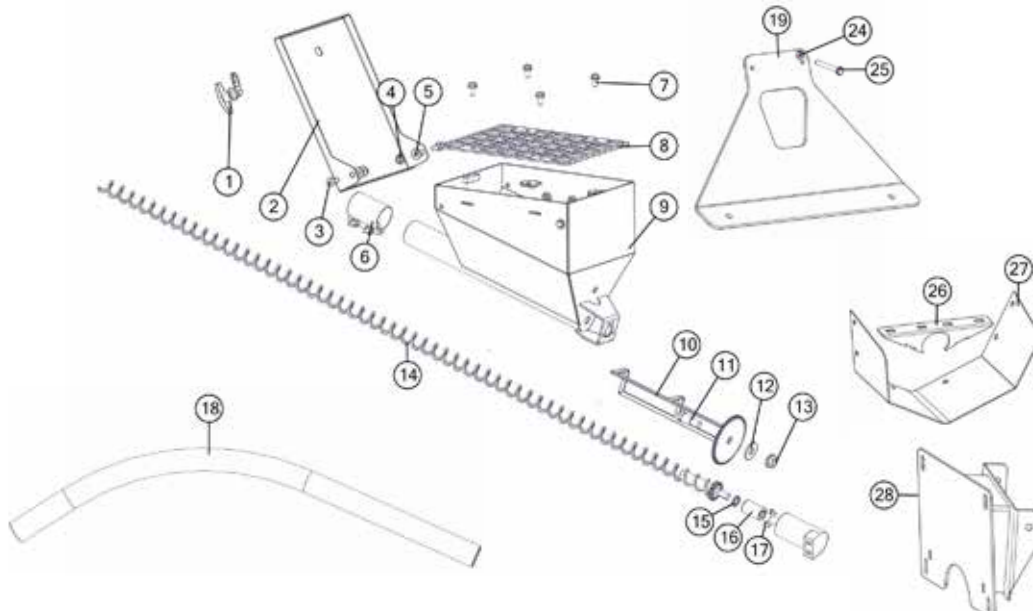
Description	JM#
1 #6 male JIC X #6 male o-ring - Extra Long 90 degree elbow	JM0039050
2 #6 male JIC X #6 male o-ring - 90 degree elbow	JM0026121
3 White Drive Hydraulic Motor - 125032JL5C3AAAAA or Danfoss equivalent	JM0042491
4 116" Long x 3/8" Hydraulic Hose (4M3K-4G-6FJX-4G-6FJX-116in)	JM0042861
5 5 Function Aluminum Valve Block	JM0029973
6 #8 female JIC x #6 male JIC reducer (2406-08-06)	JM0026117
7 #6 male JIC x 1/2" male NPT; 90 degree elbow (2501-06-08)	JM0042849
8 Flow Control Talc Applicator FC51 - .5 (0-2 GPM)	JM0026104
9 #8 male JIC x 1/2" male NPT x #8 male JIC tee (2605-08-08-08)	JM0026119
10 #8 male JIC x #8 female JIC swivel; 90 degree elbow (6500-08-08)	JM0010296
11 30" Hydraulic Hose x 3/8" (8M3K8G8FJX8G8FJX-30)	JM0042863
12 #8 male JIC x 1/2" male NPT; 90 degree elbow (2501-08-08)	JM0042847
13 20" Hydraulic Hose x 3/8" (8M3K8G8MJ8G8FJX-20)	JM0042862

## ST290 & ST390 Repair Parts



Description	JM#
1 T-Handle Non-Locking Chrome	JM0001911
2 17 Deg. Talc Box Door	JM0037237
3 1/2" x 3/8" LG Shoulder Bolt	JM0009998
4 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
5 3/8 USS Flat Washer	JM0003061
6 2" Exhaust Clamp w/ fasteners	JM0037668
7 3/8-16 x 3/4" Gr5 Z SF Hex Bolt	JM0001750
8 Large Talc Box Screen	JM0037456
9 17 Deg. Talc Box Weldment	JM0037538
10 Large Agitator 17 Degree	JM0037241
11 3/4" x 2-1/2" Shoulder Bolt	JM0003181
12 3/4" USS Flat Washer	JM0010006
13 5/8"-18 Gr5 Z SF Hex Nut	JM0043101
14 290 Flex Auger Flighting Weldment	JM0042838
14 390 Flex Auger Flighting Weldment	JM0042587
15 3/4" Flatwasher Nylon	JM0035079
16 5/8" Keyed Shaft Coupling	JM0042842
17 1/4"-28 x 3/8" Gr5 Z Hex Bolt	JM0043100
18 290 Flex Auger Heat Bent PVC Pipe	JM0042809
18 390 Flex Auger Heat Bent PVC Pipe	JM0042810
19 290/390 Hydraulic Talc Flow Control Mounting Bracket	JM0043097
20 Talc Rotation Bracket Weldment	JM0038395
21 1/2"-13 Gr5 Z Hex Nut	JM0002124
22 1/2"-13 x 1" Gr5 Z Hex Bolt	JM0010225
23 275/375 Mounting Bracket Weldment	JM0037272
24 1/4"-20 Gr5 Centerlock Hex Nut	JM0001505
25 1/4"-20 x 2-1/2" Gr5Z Hex Bolt	JM0001506
26 Spout Clamp	JM0042542
27 Rubber Door Skirt	JM0042688

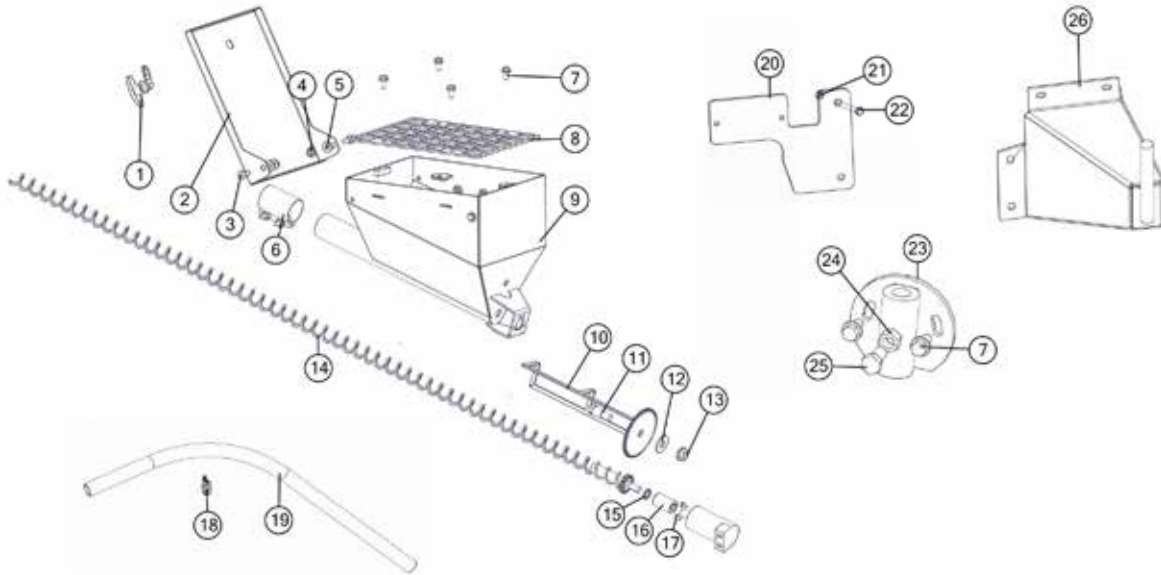
## C450 Repair Parts



Description	JM#
1 T-Handle Non-Locking Chrome	JM0001911
2 17 Deg. Talc Box Door	JM0037237
3 1/2" x 3/8" LG Shoulder Bolt	JM0009998
4 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
5 3/8 USS Flat Washer	JM0003061
6 2" Exhaust Clamp	JM0037668
7 3/8-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
8 Large Talc Box Screen	JM0037456
9 17 Deg. Talc Box Weldment	JM0037538
10 Large Agitator 17 Degree	JM0037241
11 3/4" x 2-1/2" Shoulder Bolt	JM0003181
12 3/4" USS Flat Washer	JM0010006
13 5/8"-18 Gr5 Z SF Hex Nut	JM0043101
14 C450 & 535 Flex Auger Flighting Weldment	JM0043060
15 3/4" Flatwasher Nylon	JM0035079
16 5/8" Keyed Shaft Coupling	JM0042842
17 1/4"-28 x 3/8" Gr5 Z Hex Bolt	JM0043100
18 535/C4-50 Flex Auger Heat Bent PVC Pipe	JM0043049
19 290/390 Hydraulic Talc Flow Control Mounting Bracket	JM0043097
20 Talc Rotation Bracket Weldment	JM0038395
21 1/2"-13 Gr5 Z Hex Nut	JM0002124
22 1/2"-13 x 1" Gr5 Z Hex Bolt	JM0010225
23 275/375 Mounting Bracket Weldment	JM0037272
24 1/4"-20 Gr5 Centerlock Hex Nut	JM0001505
25 1/4"-20 x 2-1/2" Gr5Z Hex Bolt	JM0001506
26 Spout Clamp	JM0042542
27 Rubber Door Skirt	JM0042688
28 C4-50 Mounting Bracket Weldment	JM0037645



## ST535 Repair Parts



Description	JM#
1 T-Handle Non-Locking Chrome	JM0001911
2 17 Deg. Talc Box Door	JM0037237
3 1/2" x 3/8" LG Shoulder Bolt	JM0009998
4 3/8"-16 Gr5 Z SF Hex Nut	JM0002152
5 3/8 USS Flat Washer	JM0003061
6 2" Exhaust Clamp	JM0037668
7 3/8-16 x 1" Gr5 Z SF Hex Bolt	JM0002092
8 Large Talc Box Screen	JM0037456
9 17 Deg. Talc Box Weldment	JM0037538
10 Large Agitator 17 Degree	JM0037241
11 3/4" x 2-1/2" Shoulder Bolt	JM0003181
12 3/4" USS Flat Washer	JM0010006
13 5/8"-18 Gr5 Z SF Hex Nut	JM0043101
14 C4-50 & 535 Flex Auger Flighting Weldment	JM0043060
15 3/4" Flatwasher Nylon	JM0035079
16 5/8" Keyed Shaft Coupling	JM0042842
17 1/4"-28 x 3/8" Gr5 Z Hex Bolt	JM0043100
18 2" Pipe Loop Clamp	JM0043498
19 535/C4-50 Flex Auger Heat Bent PVC Pipe	JM0043049
20 535 Bolt on Plate Talc Valve	JM0025400
21 1/4"-20 Gr5 Centerlock Hex Nut	JM0001505
22 1/4"-20 x 2-1/2" Gr5Z Hex Bolt	JM0001506
23 Talc Rotation Bracket Weldment	JM0038395
24 1/2"-13 Gr5 Z Hex Nut	JM0002124
25 1/2"-13 x 1" Gr5 Z Hex Bolt	JM0010225
26 535 Talc Mounting Bracket Weldment	JM0037641