

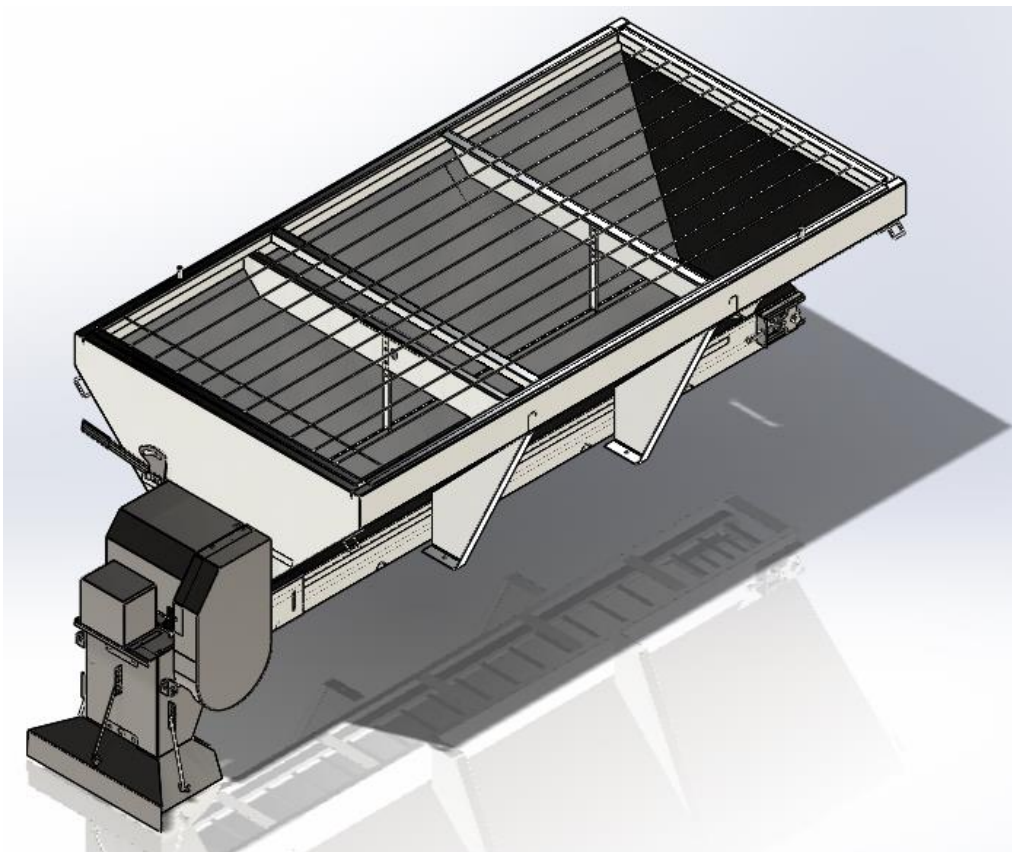
Airflo MANUFACTURING CO., INC.

365 UPPER OAKWOOD AVE, ELMIRA NY 14903

PHONE: 607-733-8284 / FAX: 607-733-0587

OPERATOR & PARTS MANUAL

PSV-8L ELECTRIC SPREADER



Visit our website at www.air-flo.com

Contents

Pre-Use Checklist	1
Vehicle Requirements	2
Spreader and Material Weights	3
Safety	3
Installation Instructions	4
Mounting the Spreader onto the Vehicle	4
Things to Know after Mounting the Spreader	
💡	5
Mounting the Spinner/Chute Assembly	5
Spreader Maintenance	7
Part List	9
Spinner/Chute Assembly	9
Hopper Assembly	14
MATERIAL SPREADER WARRANTY	15

Pre-Use Checklist

- Read this entire Owner's Manual before attempting to operate or install the spreader.
- To avoid overloading the sander check the recommended maximum payload for the sander before loading or operating.
- Check all CAUTION, WARNING and DANGER decals on the spreader before operating. Refer to figures 1-5.
- Make sure the motor cover is securely fastened to the spreader before operating.
- Verify that all personnel are clear of the spreader spray area before operating
- Make sure that the spreader is securely fastened to the vehicle.



Figure 1.



Figure 2.



Figure 4.



Figure 3.



Figure 5.

Vehicle Requirements

The spreader must be mounted on a $\frac{3}{4}$ to a 1 ton pick-up above 8500 # GVWR.

CAUTION

Do not overload the vehicle beyond its GVWR or GAWR. Check the vehicle's load rating certification sticker for maximum vehicle capacity.

Spreader and Material Weights

MATERIAL	WEIGHT (POUNDS PER CUBIC YARD)
PSV-8E	650 lbs.
#1 Rock Salt	950 lbs.
#2 Rock Salt	1,215 lbs.
Coarse Sand-Dry	2,565 lbs.
Coarse Sand- Wet	3,240 lbs.

Safety

WARNING

Observe the following Safety Precautions before, during and after operating the spreader. By following these precautions and common sense, possible injury to persons and potential damage to this may be avoided.

1. Persons who install, mount, operate, or service this equipment must be properly instructed and warned.
2. Read operator manuals completely before operating the equipment.
3. Read all instructional, cautionary, and warning decals.
4. Check the spreader to ensure that all shields and gates are in place.
5. Use care when mounting and dismounting the spreader.
6. Make sure to turn off all power to the spreader before performing any repairs, maintenance, or inspections.
7. Keep all personnel and property away from the chute/spinner assembly while the spreader is in operation.
8. Keep the spreader unit and components in proper working condition. Replace any missing or damaged safety signs.
9. Any unauthorized modifications to the spreader and related components may impair its functions and/or safety.
10. Check to make sure all safety guards are securely mounted into place before operating the spreader.
11. Keep all loose clothing, hair, jewelry and limbs clear of the spreader before starting or operating the spreader.
12. Do not adjust, clean, oil or unclog material jams without first turning off the spreader, removing the engine spark plug and control panel fuse.
13. Do not climb on or in the spreader during operation.
14. Do not ride the spreader while in operation.
15. Do not attempt to operate the spreader when it is in need of maintenance or repair.

Installation Instructions

Mounting the Spreader onto the Vehicle

1. Install the inverted "V" in the spreader using the 3/8 - 16X 1" hex bolts, 3/8" nuts, and 3/8" washers provided.
2. Remove the tailgate from the vehicle.
3. Lift the spreader by attaching the lifting device to the slot on the passenger side of the rear inside brace.

CAUTION

Check the rated maximum payload of the lifting device before lifting the spreader.

4. Place the spreader on top of two pieces of lumber so that the lumber rests under the side gussets as shown in figure 7. **NOTE: This will help to remove any excess material that accumulates under the spreader.**
5. Place the spreader in the back of the vehicle so that it is centered to the vehicle and the rails of the spreader are 14" from the rear of the truck.
6. Bolt the spreader to the vehicle frame through side gussets and the lumber.
7. Tie the spreader to the vehicle from the tie-down eyes to the vehicles anchor points.

Bill of Materials

ITEM NO.	PART NAME	PART NUMBER	QTY.
6	INVERTED "V"	40134	1
9	SCREEN	34039	1
11	HEX BOLT 3/8 - 16 X 1"	01227	4
12	HEX BOLT 3/8" - 16	01006	4
13	FLAT WASHER 3/8"	01014	4
14	LOCK WASHER 3/8"	01016	4

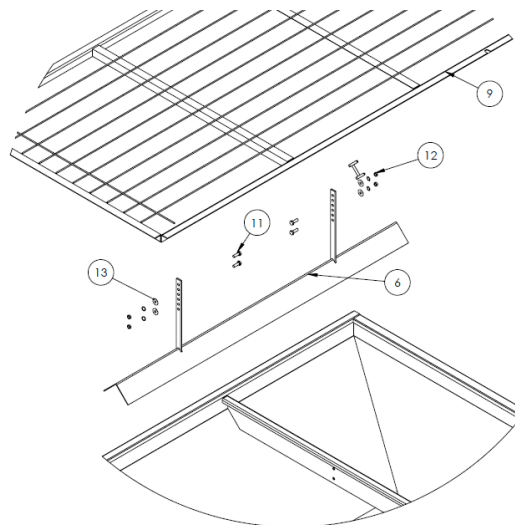


Figure 6.

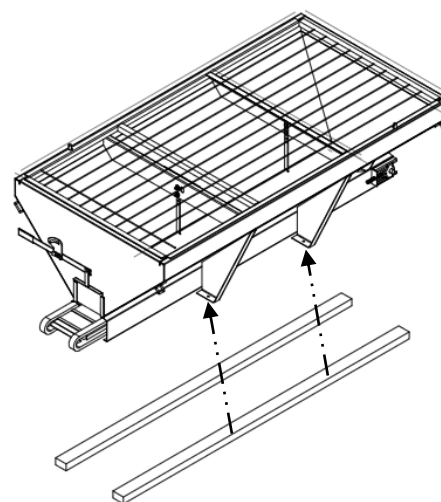


Figure 7.

Things to Know after Mounting the Spreader 💡

- A. The tie-down straps are provided for the purpose of securing the spreader to the vehicle only and are not to be used for any other purpose. It is imperative that the spreader be tied to the vehicle at all times.
- B. Be sure to verify with vehicles manufacturer that the factory installed anchor points are designed for this application.
- C. Periodically check to see if the spreader mounting hardware is securely tightened.



Figure 8.



Figure 9.

Mounting the Spinner/Chute Assembly

- 1. Attach the Spinner/Chute Assembly to the spreader inserting the lock pins, shown in Figure 8, into the two holes located at the end of the rails of the spreader as shown in Figure 9.
- 2. Install the roller chain between the sprocket mounted to the Spinner/Chute Assembly and the Motor Sprocket. Make sure both sprockets are in-line with one another. Tighten the gearbox sprocket set screw. Install the roller chain master link. See Figure 10.



Figure 10.

3. Adjust the tension of the roller chain by loosening the Pillow Block Bearings that are supporting the Spinner Shaft. Move the shaft either towards or away from the Motor Sprocket to adjust the tension. The correct chain tension should allow a 5/16" deflection in the chain midway between both chain sprockets. See Figures 11-12.

NOTE: Be sure to maintain the vertical alignment between the Spinner Shaft and the bearings before re-tightening the hardware.

CAUTION ⚠

Do not over-tighten the chain tension. This can cause damage to the chain, shaft, bearings and the Motor.

4. Install the chain guard using the three ¼-20 X ¾" hex head bolts, lock washers, and nuts.
5. Torque the 3/8-16 x 1-1/4" Pillow Block Bolts to 236 Inch-Pounds (20 Foot-Pounds).

NOTE: At this point the spreader control unit is ready to be installed. For installation and operation instructions, please refer to the "Electric Spreader Control Manual" that has been provided.

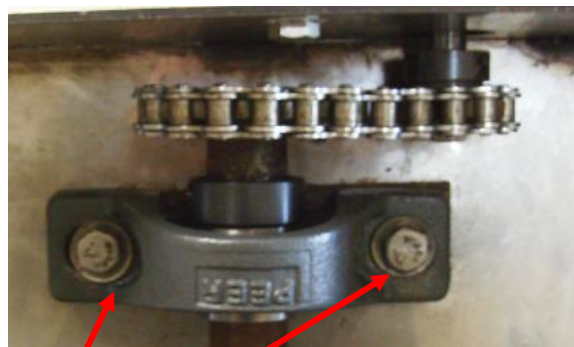


Figure 11.

Pillow Block Bolts

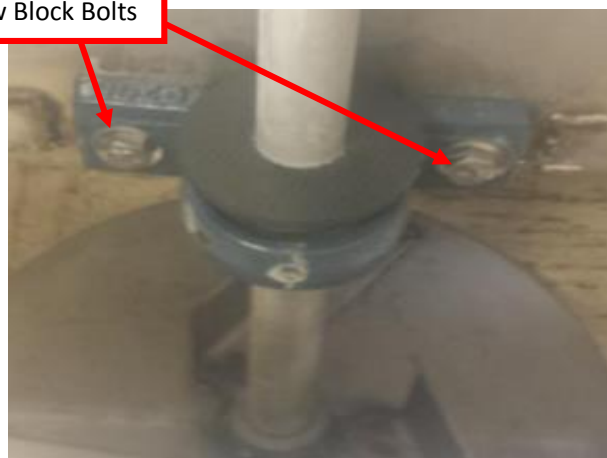


Figure 12.

Spreader Maintenance

1. Use dielectric grease on all electrical connections before an electrical connection is made or after a connector is disconnected.
2. Grease the following:
 - a. Idler Shaft Bushings (2)
 - b. Drive Shaft Bushings (2)
 - c. Spinner Shaft Bushings (2)
 - d. Flanged Bearing located between gearbox and clutch
 - e. Gearbox Input Shaft Bearing.

NOTE: Do not over grease. Can cause seal damage.

3. Check the alignment of the sprockets periodically.
4. Inspect the bearings in the motor and the pillow blocks for proper lubrication periodically.
5. Maintain the correct tension on the following chains using the following information:
 - a. **Drag Chain Tension**-Check to make sure that the distance between the end of the rail and the point of contact between the chain and the lower flange of the rail is 26" to 30". See Figure 13. Turn the screws shown in Figures 14 and 15 to adjust the chain tension as needed.

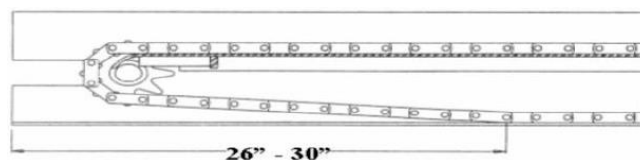


Figure 13.



Figure 14.



Figure 15.

b. Motor to Conveyor Shaft Drive

Chains-Adjust the chain tension for the sprocket assembly which transmits power to the conveyor shaft by loosening the pillow block bearing bolts and sliding the shaft and bearings in the desired direction. Then torque the 3/8-16 Pillow Block Bolts back to 236 Inch-Pounds (20 Foot-Pounds) when finished. See Figure 16. **NOTE: Be sure to maintain the horizontal alignment of the shafts to the chains. Failure to do so could result in damage to the sprockets, motor, shafts, and chains.**



Figure 16.

c. Motor to Spinner Shaft Drive

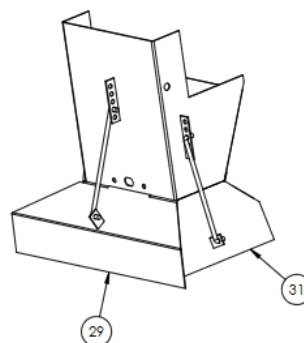
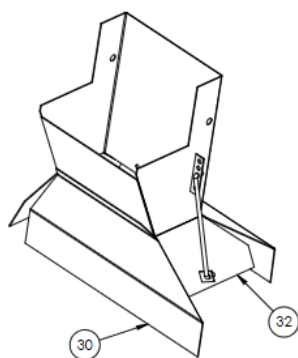
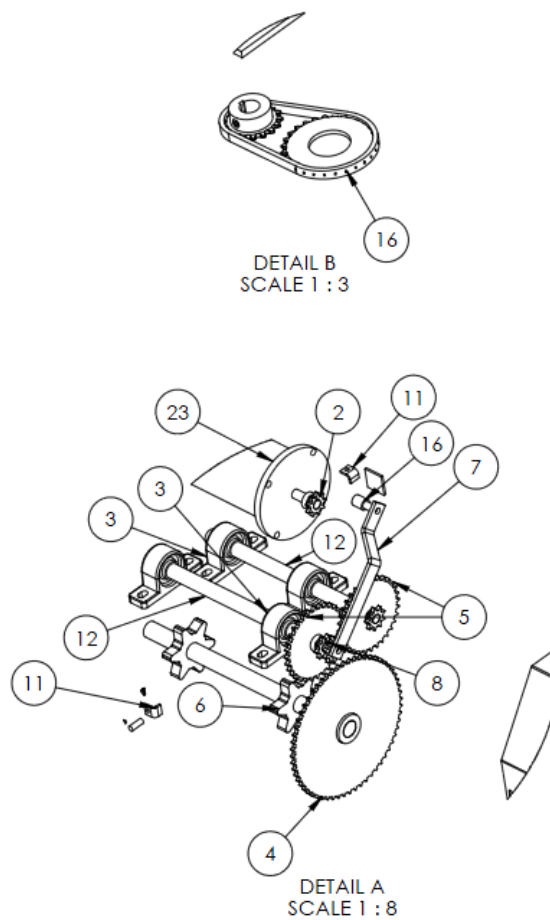
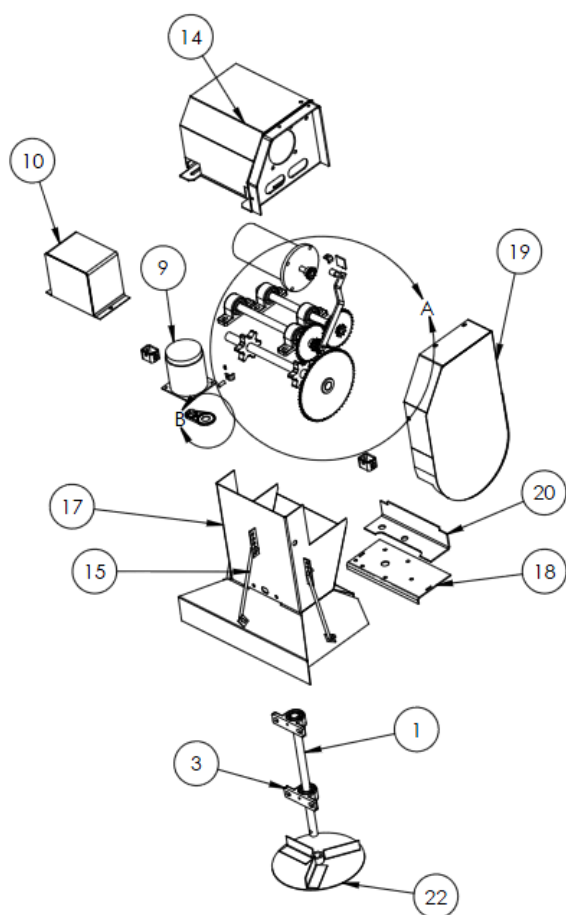
Chain-Correct tension for the Drive Chain is also a 5/16" deflection at the mid-point between the two sprockets. Adjust the chain by loosening the Pillow Block Bolts as was shown in Figures 11 and 12 and

slide the pillow blocks in the desired direction.

6. Empty the spreader of all snow control material when not in use to prevent a frozen feed chain.
7. Wash out the spreader when it is not in use and at the end of the season to remove all snow control materials. Thoroughly dry all metal surfaces. Paint and oil all bare carbon steel surfaces to help protect against rust build-up. Properly store spreader during the off-seasons.

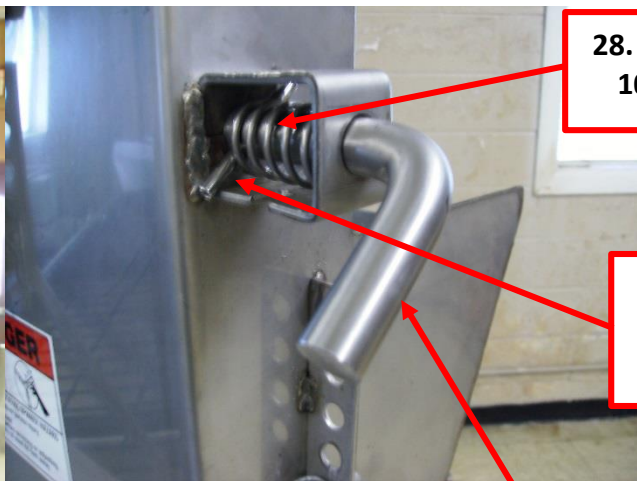
Part List

Spinner/Chute Assembly



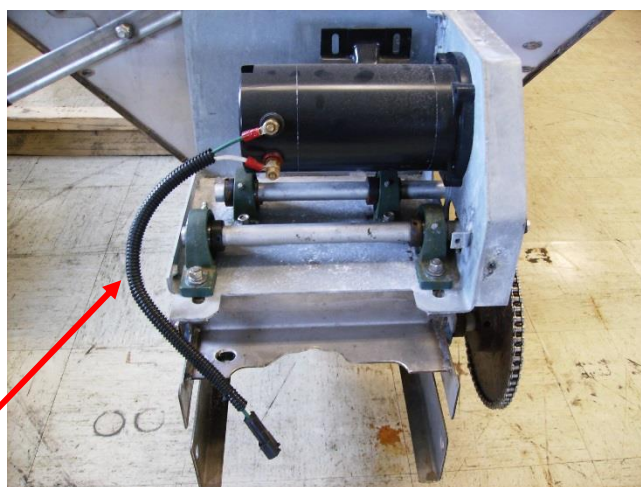


**24. Spinner
Motor Power
Harness
07262**



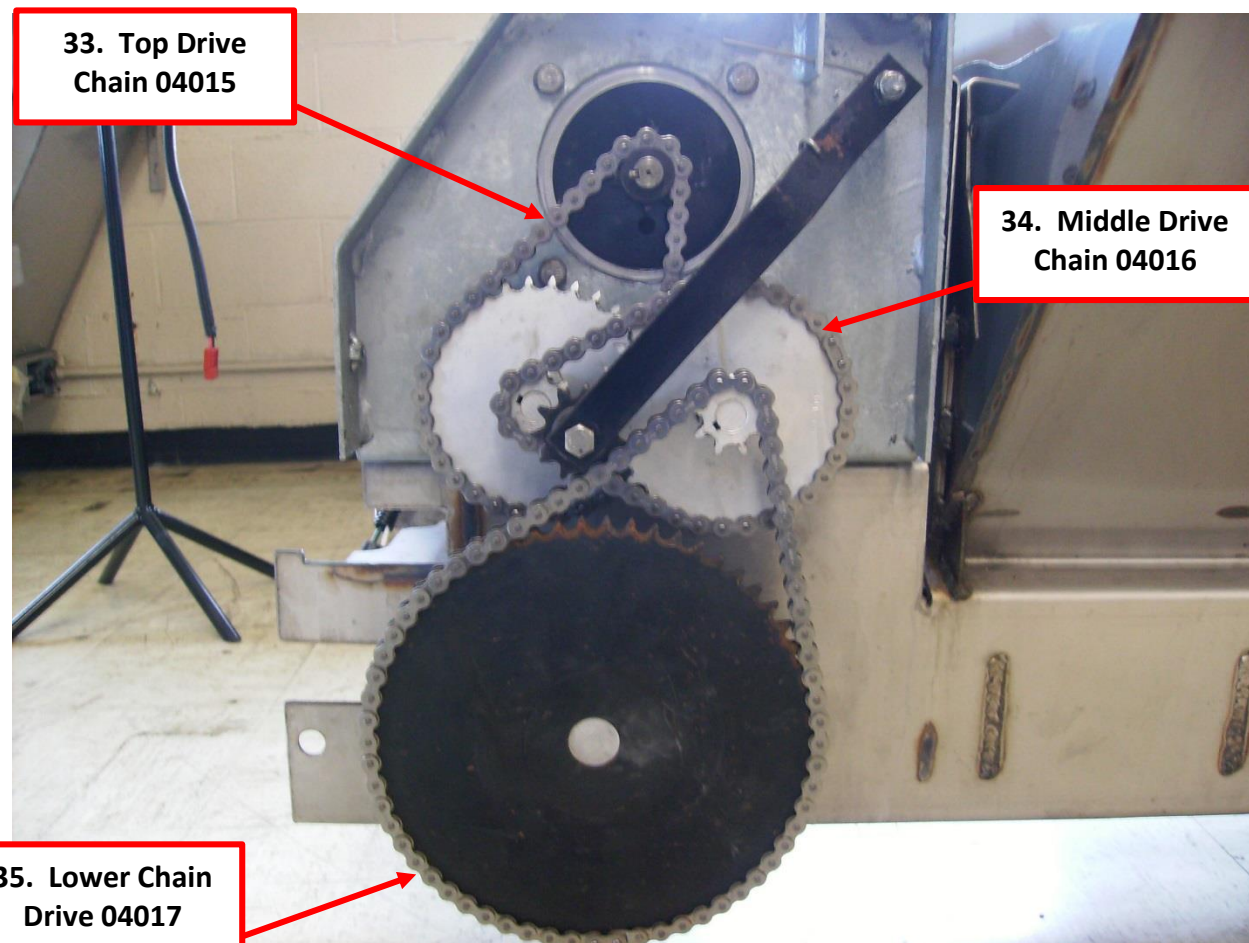
**28. Spring
10,036**

**27. Roll
Pin
19,029**



**25. Conveyor
Motor Power
Harness
07261**

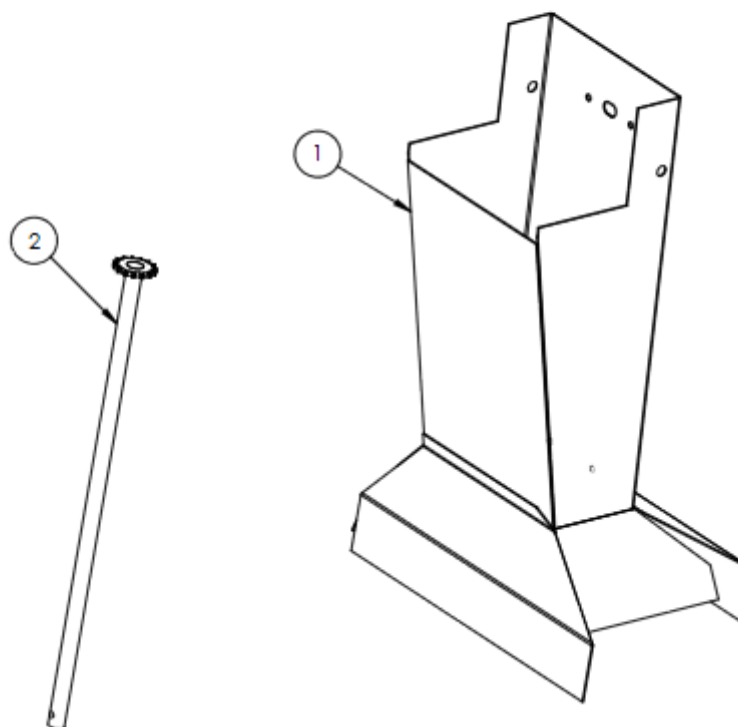
**26. Pin
51,143**



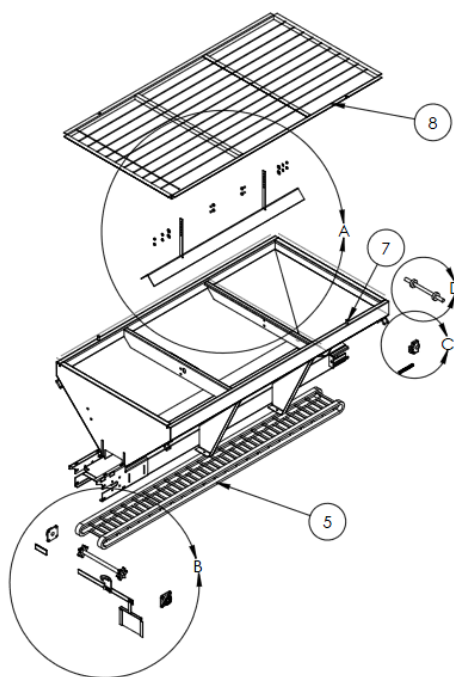
ITEM NO.	PART NAME	PART NUMBER	QTY.
1	SPINNER SHAFT	121073	1
2	9 TOOTH SPROCKET	06072	3
3	BASIC PILLOW BLOCK BEARING	05001	6
4	60x2 DRIVE SPROCKET	06068	1
5	32x1	06069	2
6	DRIVE SHAFT SPROCKET ASSEMBLY	40148L	1
7	CHAIN TENSIONER BAR	51105	1
8	11x38	06007	1
9	SPINNER MOTOR	07001-W	1
10	SPINNER MOTOR COVER	40250	1
11	MOUNT COVER MOUNT BRACKET	51029	2
12	CONVEYOR MOTOR IDLER SHAFT	40242	2
13	SPRING (NOT SEEN ON DRAWING)	10033	1
14	CONVEYOR MOTOR COVER	40249	1
15	CHUTE FLAP ADJUSTMENT ROD W/ WASHER	04068	3
16	SPINNER CHAIN, MASTER LINK, AND CLIP	04067	1
17	SHORT CHUTE SHELL	40253	1
18	CHUTE TOP COVER	121068	1
19	CHAIN DRIVE COVER	40251	1
20	UPPER ANGLE SUPPORT	51097	1
21	RUBBER WASHER (Not Seen in drawing)	17013	1
22	SPINNER DISK W/ SPINNER VANES AND HUB	40151	1
23	LARGE MOTOR	07001-C	1
24	SPINNER MOTOR POWER HARNESS	07262	1
25	SPINNER CONVEYOR MOTOR	07261	1
26	PIN	51143	2
27	ROLL PIN	19029	2
28	SPRING	10036	2
29	CHUTE REAR FLAP	51048	1
30	CHUTE FRONT FLAP	51102	1
31	CHUTE FLAP DRIVERS SIDE	51103	1
32	CHUTE FLAP PASSENGERS SIDE	51104	1
33	TOP DRIVE CHAIN	04015	1
34	MIDDLE CHAIN DRIVE	04016	1
35	LOWER DRIVE CHAIN	04017	1

Chute Body with 12 Inch Extension

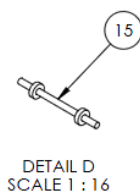
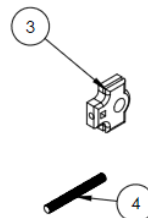
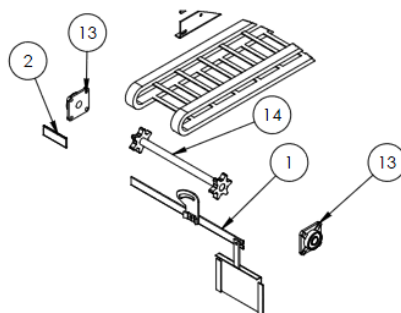
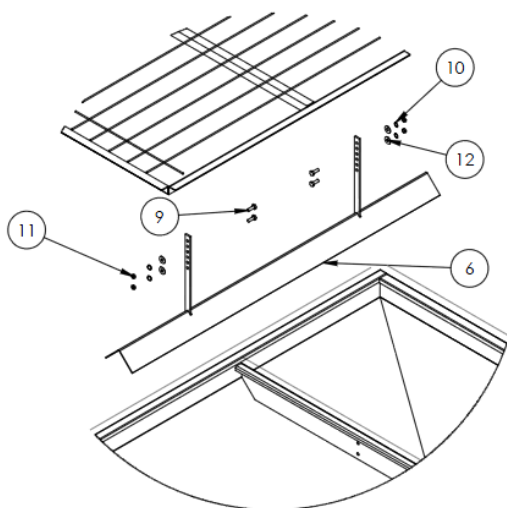
ITEM NO.	PART NUMBER	PART NAME	QTY.
1	40253	LONG CHUTE SHELL	1
2	121074	SPINNER SHAFT + 12 W/ 40A 15 SPROCKET	1



Hopper Assembly



ITEM NO.	PART NAME	PART NUMBER	QTY.
1	DOOR HANDLE	40138	1
2	DOOR HANDLE PLASTIC SLEEVE	09038	1
3	BEARING SLIDER	05004	2
4	TAKE UP THREADED ROD	91024	2
5	DRAG CHAIN	40155	1
6	INVERTED "V"	40134	1
7	SCREEN MOUNT PIN	120068	1
8	SCREEN	34039	2
9	HEX BOLT - 3/8" - 16 X 1"	01227	4
10	LOCK WASHER 3/8"	01006	4
11	HEX NUT 3/8" - 16	01014	4
12	FLAT WASHER 3/8"	01016	4
13	FLANGE BEARING	05008	2
14	CONVEYOR SHAFT	40148L	1
15	IDLER SHAFT	40186	1



MATERIAL SPREADER WARRANTY

AIR-FLO MANUFACTURING CO., INC., hereinafter referred to as “Manufacturer”, warrants each new material spreader sold by the manufacturer to be free from defects in material and workmanship, under normal use and service, for a period of One (1) year after the date of delivery to the original retail purchaser, and Manufacturer will, at its option, replace or repair, at one of the Manufacturer’s Dealers, or at a point designated by the Manufacturer, any part or parts which shall appear to the satisfaction of the Manufacturer upon inspection at such point, to have been defective in material or workmanship. This warranty does not obligate the Manufacturer to bear any transportation charges in connection with the replacement or repair of defective parts.

This warranty shall not apply to any spreader which shall have been installed or operated in a manner not recommended by the Manufacturer; not to any spreader which shall have been repaired, altered, neglected, or used in any way which, in the Manufacturers opinion, adversely affects its performance; nor to any spreader in which parts not manufactured by the Manufacturer, or supplied by the Manufacturer or by one of the Manufacturers distributors or service centers, have been used; nor any accessories installed on the spreader where the accessory manufacturer has its own warranty; nor to normal maintenance services or replacement of normal service items.

Manufacturer reserves the right to modify, alter, and improve any spreader or parts without obligation to replace any spreader or parts previously sold with such modified, altered, or improved spreader or part.

THIS WARRANTY, AND THE MANUFACTURER’S OBLIGATION HEREUNDER, IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS IMPLIED, OR STATUTORY, INCLUDING ANY WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, and all other obligations or liabilities, including special or consequential damages or contingent liabilities arising out of failure of any spreader or part to operate properly. No person is authorized to give any other warranty or to assume any additional obligation on the Manufacturer’s behalf unless made in writing and signed by the Manufacturer.

OPERATORS MANUAL-PSV-8L (ELECTRIC) REVISION HISTORY

<u>REVISION LEVEL</u>	<u>REVISION DATE</u>	<u>PAGES REVISED</u>	<u>DESCRIPTION OF REVISION</u>
---------------------------	--------------------------	--------------------------	--------------------------------