

AIR-FLO MANUFACTURING CO., INC.

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**OPERATOR &
PARTS MANUAL
LARGE HOPPER SPREADER
MODEL AF-2000**

Airflo

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SAFETY

PERSONS WHO INSTALL, MOUNT, OPERATE, OR SERVICE THIS EQUIPMENT MUST BE PROPERLY INSTRUCTED AND WARNED.

READ OPERATOR MANUALS COMPLETELY BEFORE OPERATING EQUIPMENT.

READ DECAL INSTRUCTIONS, CAUTIONS, AND WARNINGS.

CHECK SPREADER TO ENSURE THAT ALL SHIELDS AND GRATES ARE IN PLACE.

USE CARE WHEN MOUNTING AND DISMOUNTING.

THE DRIVE SHAFTS, CONVEYOR AND SPINNER ASSEMBLIES TRANSMIT GREAT AMOUNT OF POWER, AND ACCORDINGLY, ARE HAZARDOUS WHEN IN OPERATION. ALL MAINTENANCE, INSPECTIONS, OR OPERATOR ADJUSTMENTS MUST BE MADE WITH ALL POWER OFF.

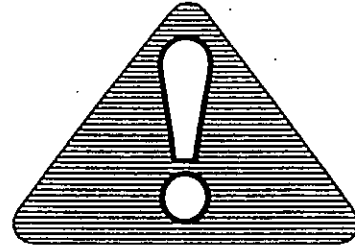
KEEP SPREADER AND SURROUNDING AREA CLEAR OF PERSONNEL AND PROPERTY WHEN OPERATING.

SAFETY

THE SAFETY ALERT SYMBOL

This symbol is on safety signs on the equipment and in this manual.

This symbol should indicate to you the potential For personal injury and / or property damage.



HAZARD SERIOUSNESS LEVELS

The **DANGER** signal word indicates immediate Hazards which **WILL** result in severe personal Injury or death.



The **WARNING** signal word indicates hazards or Unsafe practices which could result in severe personal injury or death.



The **CAUTION** signal word indicates hazards or Unsafe practices which could result in minor personal Injury or product or property damage.



Do not let anyone operate equipment without instruction.

Learn how to operate controls properly.

Read the safety messages in this manual and safety signs on the spreader unit.



Keep spreader unit and components in proper working condition. Replace missing or damaged safety signs.

Unauthorized modifications to the spreader and related components may impair the function and / or safety.

AIR-FLO MATERIAL SPREADERS INSTALLATION & OPERATING INSTRUCTIONS

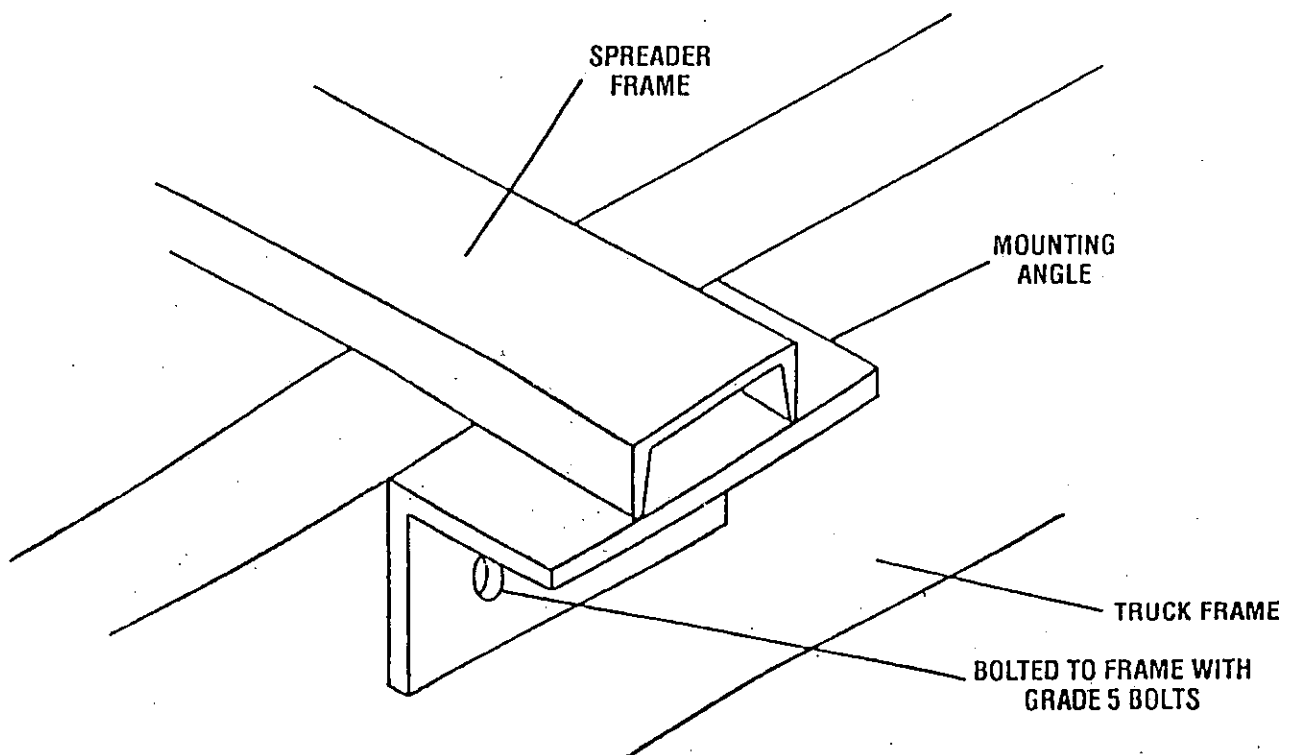
IMPORTANT! DO NOT WELD TO VEHICLE FRAME! Such welding can lead to fatigue cracking and must be avoided.

MOUNTING SPREADER ON TRUCK CHASSIS

- (1) Spreader is mounted on truck frame in a position that will allow room between chain drive guard and back of cab and will align spreader frame with truck frame. Body can be suspended above truck frame by using a chain hoist hooked to the lifting brackets provided.
- (2) Wood filler strips approximately 1" thick, width of truck frame member and length of spreader frame are inserted between truck frame and spreader frame. Wood filler strips may be drilled out to accept rivet heads on truck frame.

NOTE: If cross braces on truck frame strike cross member on spreader frame use thicker filler strips to clear.

- (3) When spreader is positioned properly on truck frame with wood filler strips in place apply clamp to hold.
- (4) Mounting angles (4 furnished) are then positioned near front and back ends of spreader on the channel frame on both sides. These angles are welded and bolted into position on the truck frame and welded to the spreader frame.



AIR-FLO MATERIAL SPREADERS

INSTALLATION & OPERATING INSTRUCTIONS

SKID MOUNTING

Place body centered in truck body. To prevent lateral movement of spreader, adjust front telescopic cross members, placing legs flush to side of the truck body. To prevent longitudinal movement lock 1-1/4" diameter pins into tailgate latching mechanism. These are welded to steel angle that is welded to bottom rear of the unit to act as a forward stop upon contact with back edge of dump body floor.

Attach screw type clamping devices, two on each side. Crank handles should be adjusted to insure secure mounting of spreader. **CAUTION** should be used to insure that these clamping devices are checked periodically to tightness, as this is very important for spreader stability.

HYDRAULIC DRIVE

The hydraulic motor control valves are located in the cab. By individual adjusted of either the spinner or conveyor control knob, precise control of quantity and spread of material can be obtained. This valve has a relief valve built into it and is preset at 1500 PSI.

Hydraulic Cab Control Valve Installation

Select a suitable location for the valve so the operator has easy access to the controls. Check for clearance with the valve, seat, and transmission gearshift in all gears. Also, there are any other controls such as parking brake, plow, and wing controls, check for clearance.

Reservoir Tanks

Should be filled to within two inches of the top of the tank and maintained at that level. This oil should be changed after every 1000 hours.

AIR-FLO MATERIAL SPREADERS LUBRICATION & HYDRAULIC SYSTEM

HYDRAULIC OIL

Cleanliness in handling of the hydraulic oil cannot be stressed enough. To insure maximum performance of the system, the oil must be kept in closed containers and handled with clean measures and funnels. Also, the original hydraulic oil filter must be changed after 50 hours of operation and then changed every 250 hours, thereafter. The oil in the system should be changed after every 1000 hours of operation. Check with the chart below for proper oil type to be used.

<u>OIL WEIGHT</u>	<u>OPERATING TEMPERATURES</u>
SAE 5 HYDRAULIC OIL	-10°F and Below
SAE 10 HYDRAULIC OIL	-10°F to 100°F
SAE 15 HYDRAULIC OIL	100° and above

CONVEYOR GEAR CASE

The oil in the gear case should be drained, flushed, and refilled with light oil after the first 100 hours of operation. After the initial 100-hour change, the oil should be changed every 2000 hours or annually, whichever occurs first. Lubricate these gear cases with a non-corrosive type SAE 90 E.P. Gear Oil conforming to MIL-L-2105B multipurpose year lubricating oil requirements with ambient temperatures from 40 100 degrees Fahrenheit. Temperature below 40 degrees Fahrenheit require an SAE 80 E.P. lubricant, above 100 degrees Fahrenheit use and SAE 190 E.P. grade oil.

BALL BEARINGS

Periodically grease all ball bearings with a ball bearing lithium base lubricant, with a viscosity which assures easy handling at prevailing temperatures.

AIR-FLO MATERIAL SPREADERS LUBRICATION & HYDRAULIC SYSTEM

CONVEYOR CHAIN

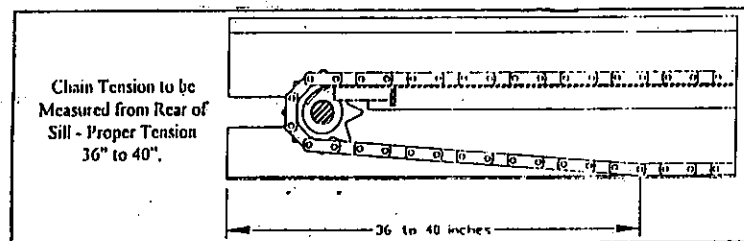
Hose down the machine and remove any material build-up on the sprockets or under the chain. If material is allowed to build up, the chain may ride up and damage the chain or body. NOTE: If material builds up under the chain, the chain will ride on the material instead of the bottom panel. The more material allowed to build, the closer the chain will come to the chain shields. If the chain should catch a chain shield, it could permanently distort the chain, the chain shields or the body. In the same manner, if material is allowed to build up, the closer the chain will run to the chain shields, until damage has occurred. Do not remove material while conveyor or spinner is running.

Lubricate the conveyor chain at least once a week. Use a mixture of 75% fuel oil and 25% SAE 10 oil in a pressurized hand spray gun.

When conveyor is running, stay out of the body. Stay clear of all moving parts. Entanglement of clothes, any part of your body or anything you have in your hands can cause serious injury. Do not use a bar, rod or hammer on conveyor while it is moving. If it gets caught it could cause injury. With the spinner shut down and the conveyor running slowly, spray the mixture of oil between the links of the chain by spraying through openings at the rear end of sill or from front outside body when access clearance is adequate. Do this at least once a week and after each time the machine is washed down. Allow to become dry before lubricating.

If a chain oiler is used, fill the oiler reservoir daily with a mixture of 75% fuel oil and 25% SAE 10 oil. Before each filling of the spreader with material to be spread, open petcock and run the conveyor until the full length of chain has been oiled, then shut petcock.

Proper chain tension is also a factor in chain and sprocket life. The proper chain tension is illustrated in the drawing below. Be sure the chain is tensioned equally on both sides. This adjustment is made on each side of the unit at the idler bearings.



Conveyor chains that are too tight will tend to stretch. This will cause excess sprockets wear and eventually cause breakage. Excess slack presents the possibility of the chain catching on sub-frame parts. Bent or distorted chain bars will cause damage to the body as well. Straighten or replace bent or distorted chain bars immediately.

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ADJUSTABLE CHUTE

The spreader pattern is controlled by the External Baffle deflectors. Proper placement of these baffles will deliver and precise spread pattern desired.

Distributor Chute & Spinner Adjustment

- (1) Slide the outer chute vertically to give a spinner disc height of approximately 20" – 32".
- (2) To give a completely **LEFT** directional flow of material:
Raise the **LEFT** side of the four external deflector panels to the uppermost position. Drop the three remaining panels to the lower most position.
- (3) To give a completely **RIGHT** directional flow of material:
Raise the **RIGHT** side of the four external deflector panels to the uppermost position. Drop the three remaining panels to the lower most position.

Stockpiling

To unload material quickly, the material chute is constructed so as to swing above the bottom of the conveyor.

Hopper Care

Material, especially corrosives such as chlorides or fertilizer, should not be left in the hopper for any length of time between operations. Longest life of hopper and chain is assured if they are flushed out with water after each use and conveyor chain then saturated with kerosene or fuel oil. Also, at the end of each season, any rust on the spreader should be removed, and the spreader should be painted with high quality paint.

SAFETY

Keeping in mind a few safety rules can prevent needless and costly accidents. Please remember never to clean, oil or adjust a machine while that machine is in motion.

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; nor to any Spreader which shall have been repaired, altered, neglected or used in any way which, in the Manufacturer's 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 Manufacturer's Distributors or Service Centers, have been used; nor to 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 incurring any 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 the 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.

Air Flo Mfg. Co. Inc.

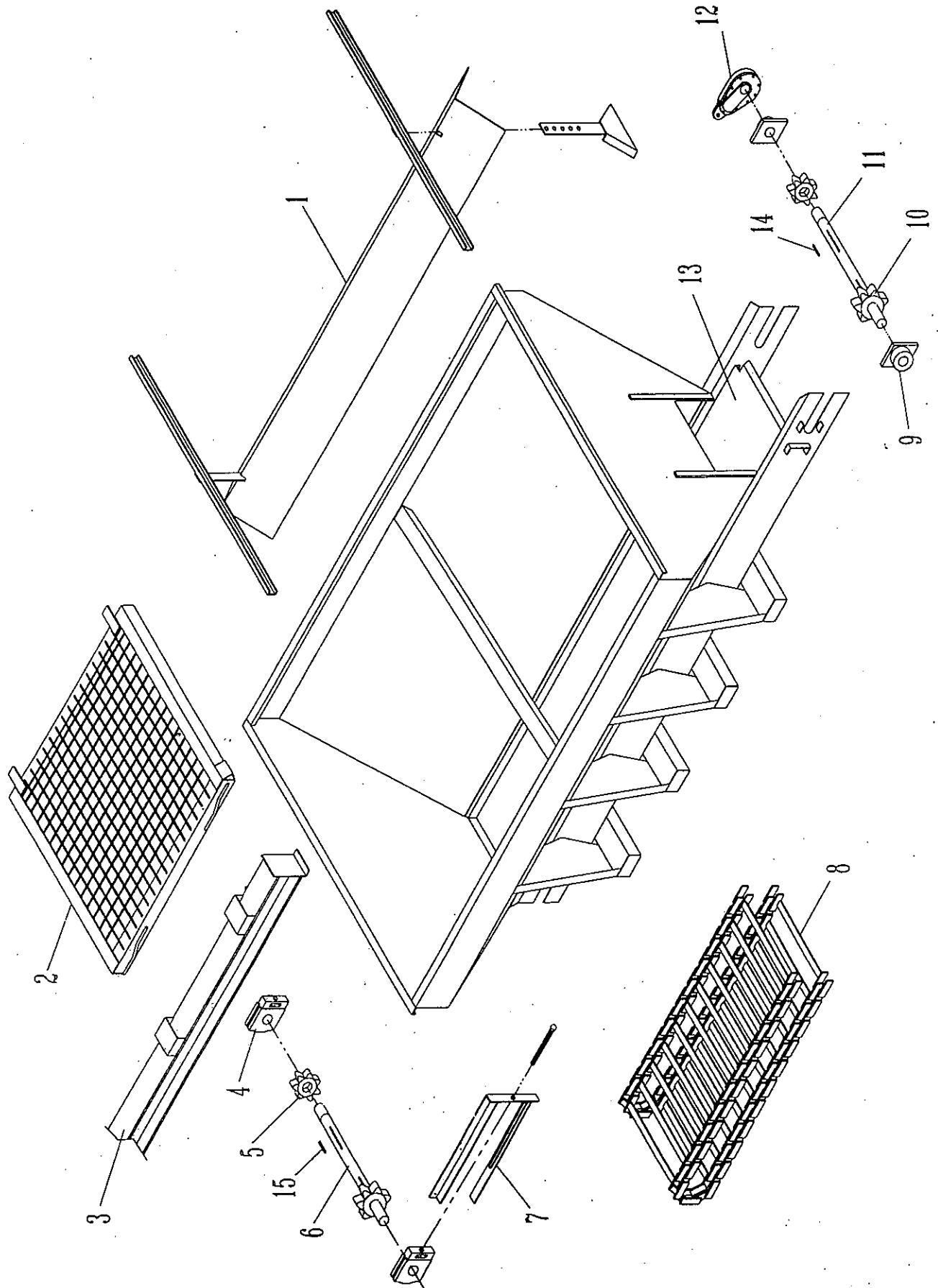
Prattsburg, New York 14873

PARTS

ILLUSTRATIONS

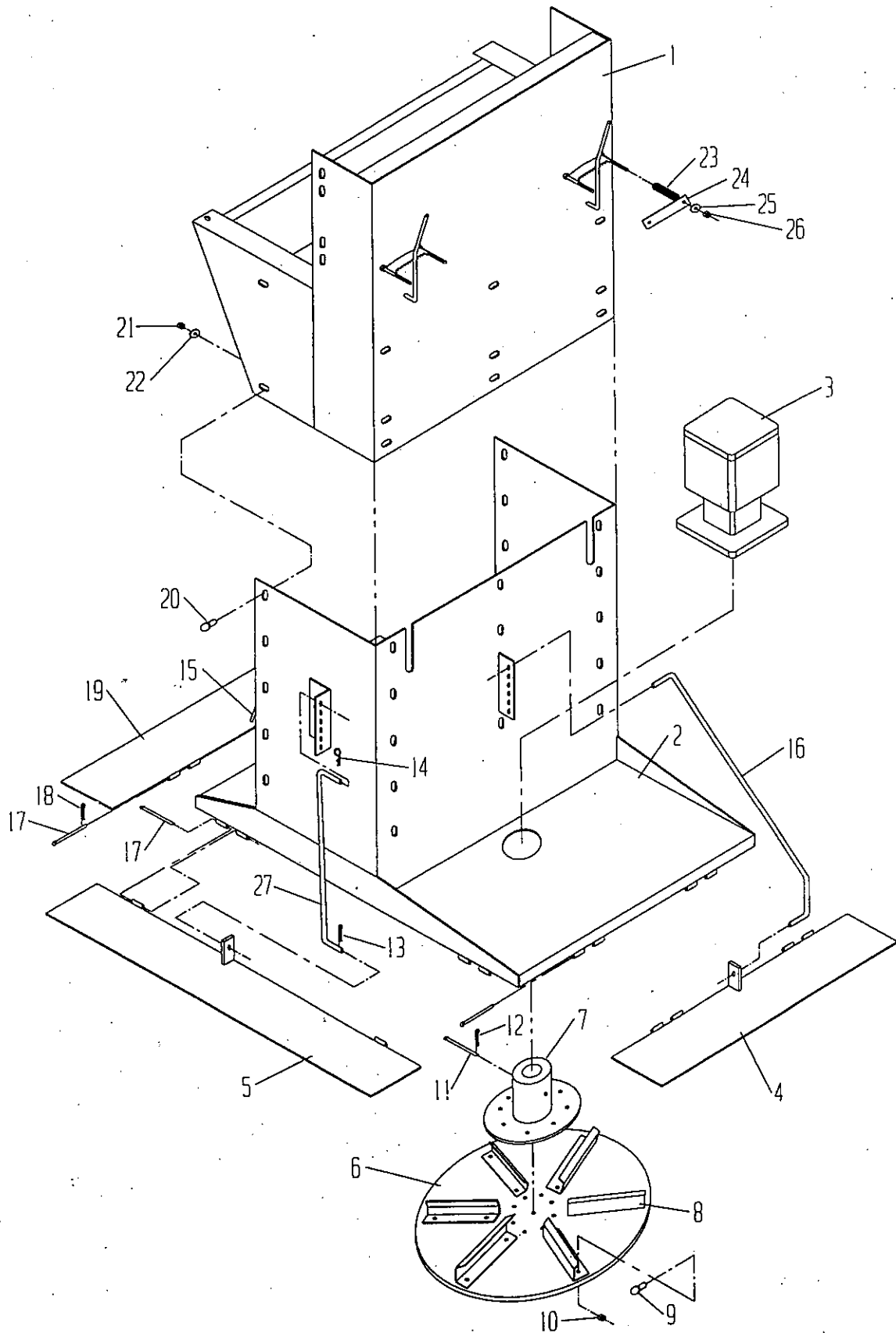
AND

PART NUMBERS



SPREADER ILLUSTRATION

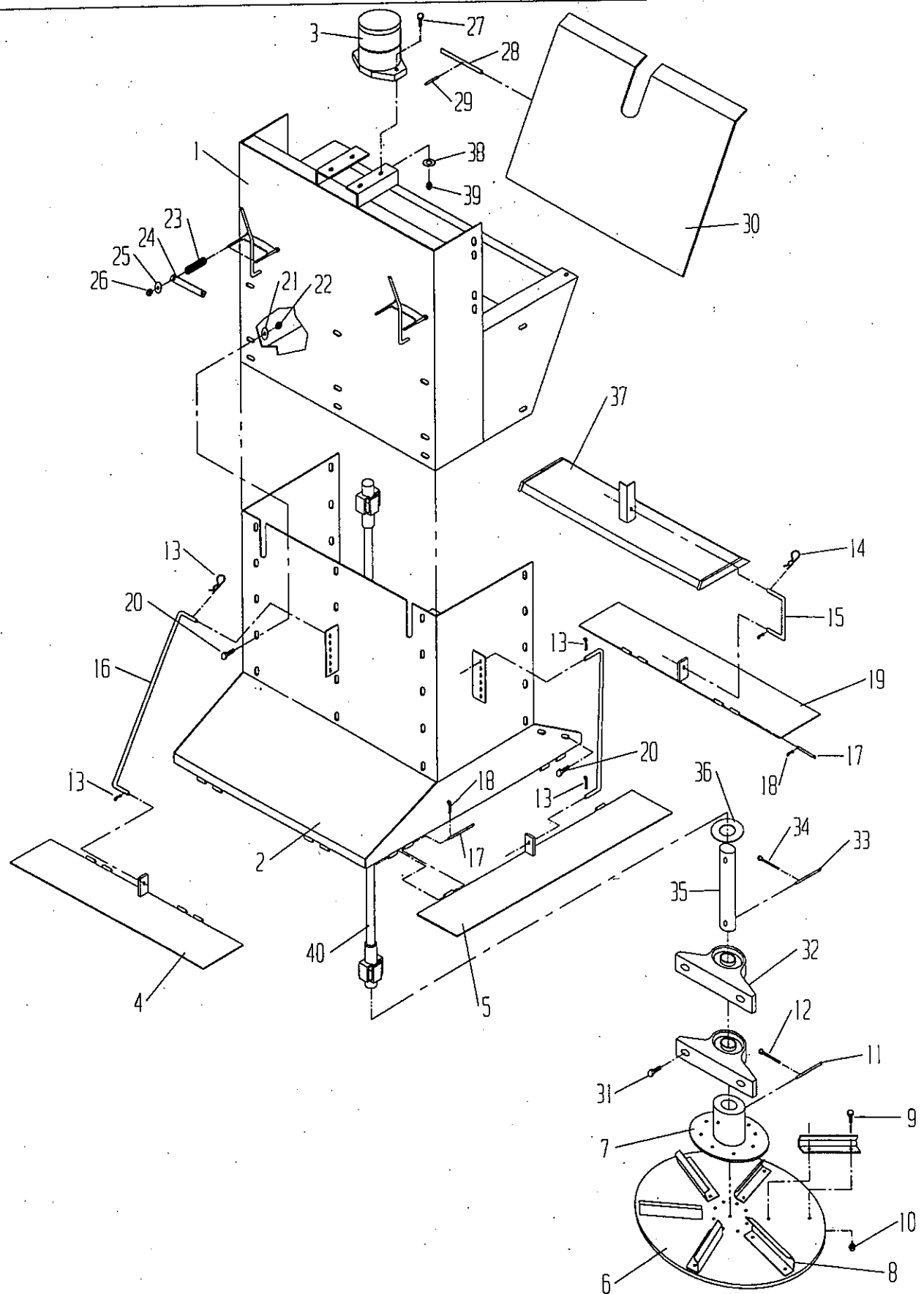
<u>ITEM #</u>	<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
1	1	SEE LIST	INVERTED "V"
2	1	SEE LIST	SCREENS (OPTIONAL)
3	1	SEE LIST	TOP RAIL
4	2	91123	TAKE - UP BEARING
5	2	91119	IDLER SPROCKET
6	1	91121	IDLER SHAFT
7	2	65084	TAKE-UP ASSEMBLY
8	1	SEE LIST	DRAG CHAIN
9	2	91122	DRIVE ASSM. BEARING
10	2	91118	DRIVE SPROCKET
11	1	91120	DRIVE SHAFT
12	1	03017	6:1 GEAR BOX
13	1	SEE LIST	BED PLATE
14	1	19001	3/8" KEY STOCK
15	1	19009	5/16" KEY STOCK



SPINNER ILLUSTRATION

<u>ITEM #</u>	<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
	1	91099	COMPLETE REAR CHUTE
1	1	65103	CHUTE INSERT
2	1	65104	SPINNER LESS MOTOR & SPINNER
3	1	91125	SPINNER MOTOR
4	1	65105	BAFFLE, END
5	2	65106	BAFFLE, SIDE
6	1	14021	SPINNER DISC, LESS HUB
7	1	91129	SPINNER HUB
8	6	91130	SPINNER VANES
9	18	01002	BOLT 1/4" X 3/4"
10	18	01019	LOCK NUT 1/4"
11	1	19011	SPINNER HUB PIN
12	1	21006	COTTER PIN
13	4	21008	COTTER PIN
14	4	21008	COTTER PIN
15	1	65107	CONTROL ROD, REAR
16	1	65108	CONTROL ROD, FRONT
17	8	21002	CLEVIS PIN
18	4	21008	COTTER PIN
19	1	65109	BAFFLE, REAR
20	10	01006	BOLT 3/8" X 1"
21	10	01020	LOCK NUT, 3/8"
22	10	01014	FLAT WASHER, 3/8"
23	4	10009	SPRING
24	2	65110	ADJUSTING PLATE
25	4	01014	FLAT WASHER, 3/8"
26	4	01020	LOCK NUT, 3/8"

AIR FLO AF2000

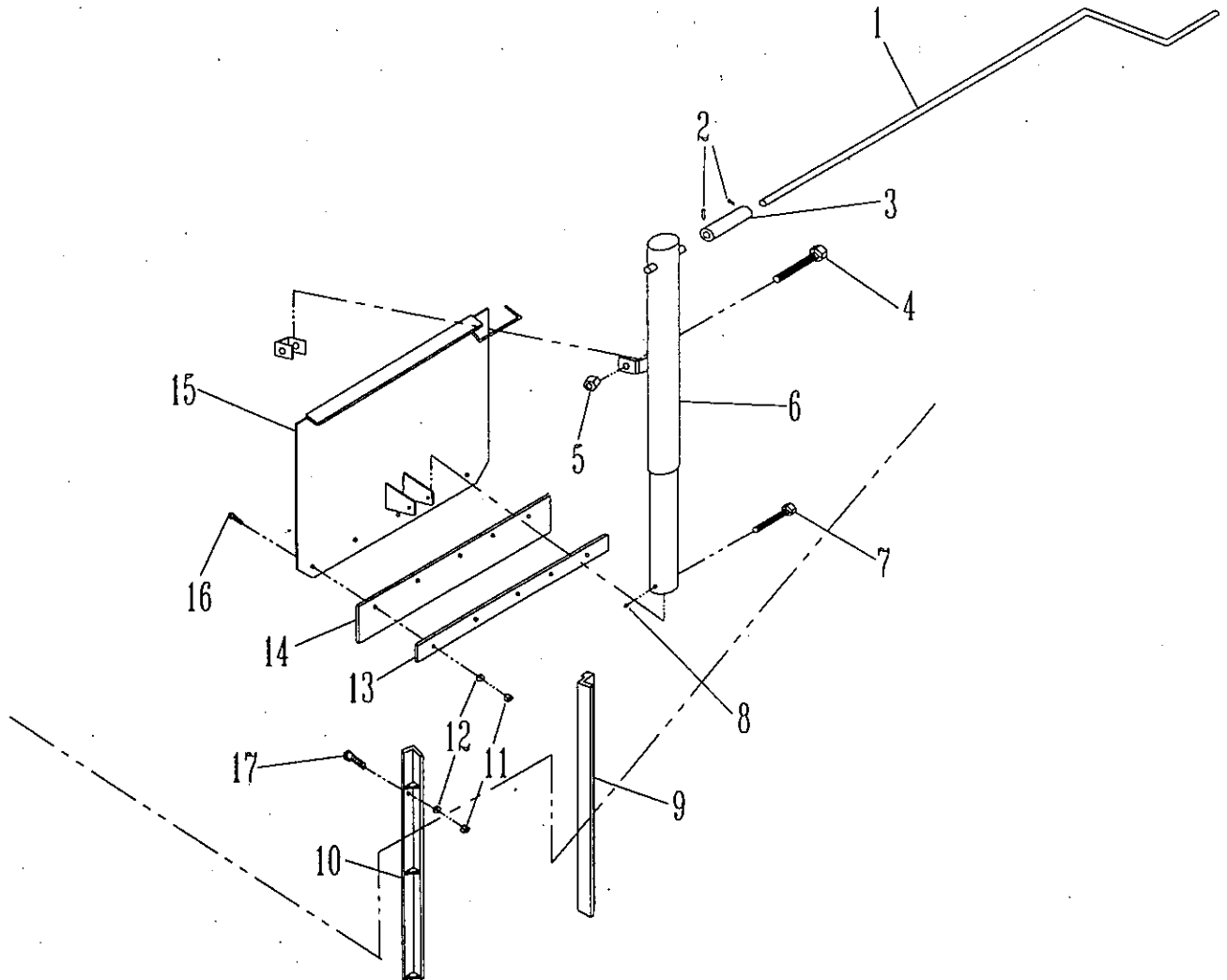


SPINNER ILLUSTRATION

TELESCOPING SHAFT DRIVE CHUTE (OPTION)

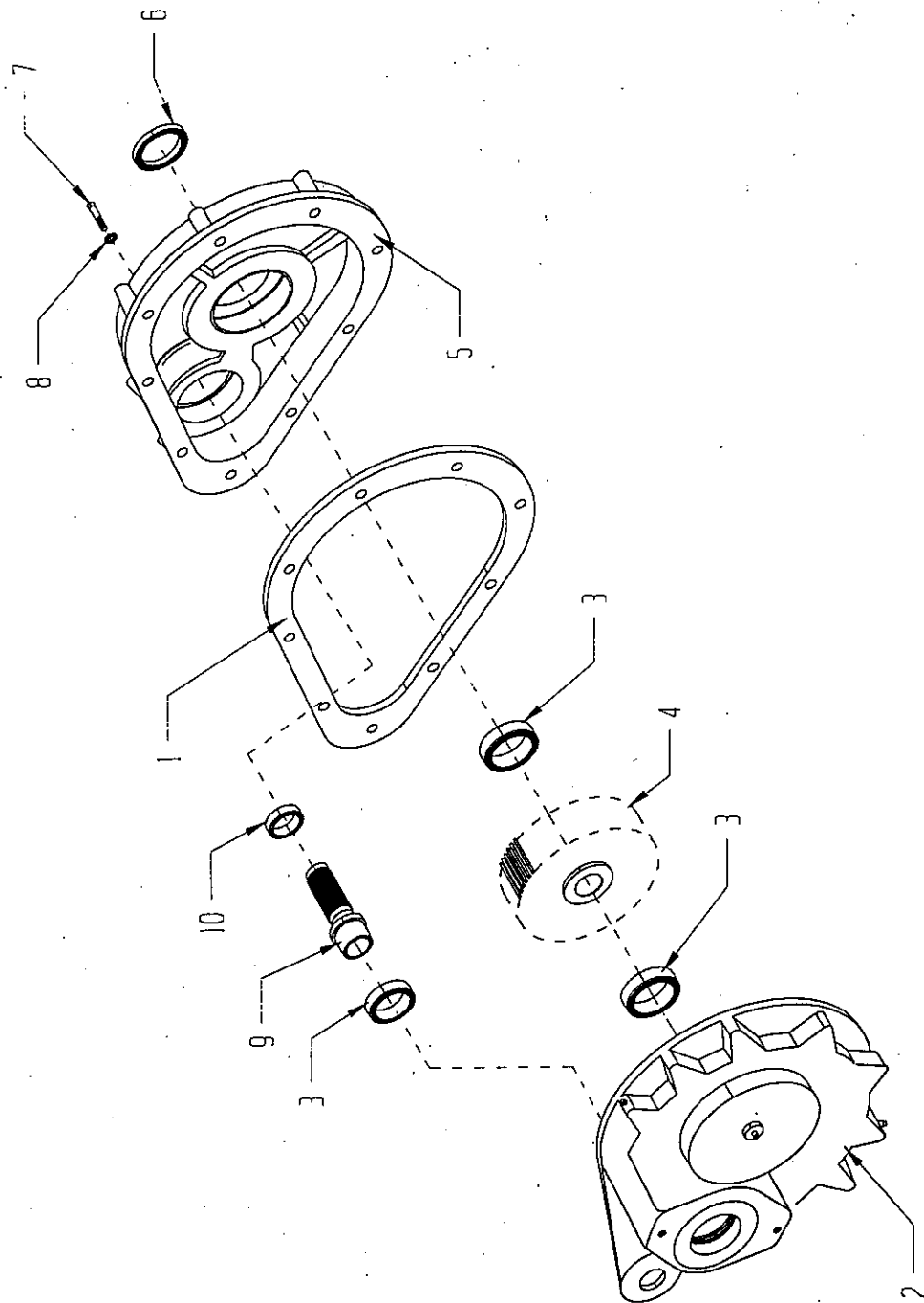
<u>ITEM #</u>	<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
	1	65083	TELESCOPING SHAFT DRIVE CUTE (COMPLETE)
1	1	65111	CHUTE INSERT
2	1	65112	SPINNER LESS MOTOR & SPINNER DISC
3	1	12025	SPINNER MOTOR
4	1	65113	BAFFLE, FRONT
5	2	65114	BAFFLE, SIDE
6	1	14021	SPINNER DISC
7	1	91129	SPINNER HUB
8	6	91130	SPINNER VANES
9	18	01002	BOLT, 1/4" X 3/4"
10	18	01019	LOCK NUT, 1/4"
11	1	19011	SPINNER HUB PIN
12	1	21006	COTTER PIN
13	8	21008	COTTER PIN
14	8	21008	COTTER PIN
15	1	65115	CONTROL ROD
16	1	65116	CONTROL ROD
17	8	21002	CLEVIS PIN
18	8	21008	COTTER PIN
19	1	65117	BAFFLE, REAR
20	10	01006	BOLT, 3/8" X 1"
21	10	01020	LOCK NUT, 3/8"
22	10	01014	FLAT WASHER, 3/8"
23	4	10009	SPRING
24	2	65110	ADJUSTING PLATE
25	4	01014	FLAT WASHER, 3/8"
26	4	01020	LOCK NUT, 3/8"
27	4	01006	BOLT, 3/8" X 1"
28	2	19003	ROLL PIN
29	2	21006	COTTER PIN
30	1	65118	CHUTE BAFFLE
31	4	01032	BOLT 1/2" X 1 1/2"
32	2	91127	BEARING
33	2	19003	ROLL PIN
34	2	21006	COTTER PIN
35	1	91128	SPINNER SHAFT
36	1	01098	WASHER
37	1	65119	FRONT BAFFLE SUPPORT
38	4	01020	LOCK NUT, 3/8"
39	4	01014	FLAT WASHER, 3/8"
40	1	91126	TELESCOPING SPINNER DRIVE SHAFT ASSEMBLY

AIR FLO AF2000



FEED GATE DOOR & JACK ASSEMBLY

<u>ITEM #</u>	<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
1	1	60053	SCREW JACK HANDLE
2	2	19009	ROLL PIN
3	1	65120	U-JOINT
4	1	01118	BOLT 1/2" X 3 3/4"
5	1	01079	LOCK NUT 1/2"
6	1	91098	SCREW JACK
7	1	01111	BOLT 3/8" X 2 3/4"
8	1	01020	LOCK NUT 3/8"
9	1	65121	SLIDE – FEEDGATE RH
10	1	65122	SLIDE – FEEDGATE LH
11	11	01019	LOCK NUT 1/4"
12	11	01042	WASHER 1/4"
13	1	60030	WIPER RUBBER MOUNT
14	1	02007	WIPER RUBBER
15	1	60004	FEEDGATE DOOR
16	5	01002	BOLT 1/4" X 3/4"
17	2	01004	BOLT 1/4" X 1 1/2"



6:1 GEAR BOX

<u>ITEM #</u>	<u>QTY</u>	<u>P/N</u>	<u>DESCRIPTION</u>
	1	03017	6:1 GEAR BOX
	1	03030	6:1 GEAR BOX W/SENSOR
1	1	03046	GASKET
2	1	03042	HOUSING – OUTBOARD
3	3	03043	BEARING
4	1	03040	GEAR
5	1	03041	HOUSING – INBOARD
6	1	03045	SEAL – OIL
7	9	03048	CAP SCREW 5/16" X 2"
8	9	03047	WASHER – LOCK 5/16"
9	1	03039	GEAR – PINION
10	1	03044	BEARING

AIR-FLO MATERIAL SPREADERS
PART NUMBERS NOT LISTED ON DRAWINGS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
65065	8' REPLACEABLE BED PLATE
65066	9' REPLACEABLE BED PLATE
65067	10' REPLACEABLE BED PLATE
65068	11' REPLACEABLE BED PLATE
65069	12' REPLACEABLE BED PLATE
65070	13' REPLACEABLE BED PLATE
65071	14' REPLACEABLE BED PLATE
65072	15' REPLACEABLE BED PLATE
65073	16' REPLACEABLE BED PLATE
13010	HYDRAULIC CONTROL VALVE 10/30
13011	HYDRAULIC CONTROL VALVE 10/15
91100	8' SINGLE BAR ROLLER CHAIN
91101	9' SINGLE BAR ROLLER CHAIN
91102	10' SINGLE BAR ROLLER CHAIN
91103	11' SINGLE BAR ROLLER CHAIN
91104	12' SINGLE BAR ROLLER CHAIN
91105	13' SINGLE BAR ROLLER CHAIN
91106	14' SINGLE BAR ROLLER CHAIN
91107	15' SINGLE BAR ROLLER CHAIN
91108	16' SINGLE BAR ROLLER CHAIN
91075	4' HINGED SCREEN SECTION (1)
91076	5' HINGED SCREEN SECTION (1)
91077	6' HINGED SCREEN SECTION (1)
91078	8' TOP RAIL
91079	9' TOP RAIL
91080	10' TOP RAIL
91081	11' TOP RAIL
91082	12' TOP RAIL
91083	13' TOP RAIL
91084	14' TOP RAIL
91085	15' TOP RAIL
91086	16' TOP RAIL

AIR-FLO MATERIAL SPREADERS
PART NUMBERS NOT LISTED ON DRAWINGS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
91141	8' SET OF HINGED SCREENS AND TOP RAIL
91142	9' SET OF HINGED SCREENS AND TOP RAIL
91143	10' SET OF HINGED SCREENS AND TOP RAIL
91144	11' SET OF HINGED SCREENS AND TOP RAIL
91145	12' SET OF HINGED SCREENS AND TOP RAIL
91146	13' SET OF HINGED SCREENS AND TOP RAIL
91147	14' SET OF HINGED SCREENS AND TOP RAIL
91148	15' SET OF HINGED SCREENS AND TOP RAIL
91149	16' SET OF HINGED SCREENS AND TOP RAIL
60102	8' FULL LENGTH DIAMOND PLATE FENDERS
60103	9' FULL LENGTH DIAMOND PLATE FENDERS
60104	10' FULL LENGTH DIAMOND PLATE FENDERS
60105	11' FULL LENGTH DIAMOND PLATE FENDERS
60106	12' FULL LENGTH DIAMOND PLATE FENDERS
60107	13' FULL LENGTH DIAMOND PLATE FENDERS
60108	14' FULL LENGTH DIAMOND PLATE FENDERS
60109	15' FULL LENGTH DIAMOND PLATE FENDERS
60110	16' FULL LENGTH DIAMOND PLATE FENDERS
65010	8' INVERTED "V"
65011	9' INVERTED "V"
65012	10' INVERTED "V"
65013	11' INVERTED "V"
65014	12' INVERTED "V"
65015	13' INVERTED "V"
65016	14' INVERTED "V"
65017	15' INVERTED "V"
65018	16' INVERTED "V"
60131	TRUCK CHASSIS MOUNTING KIT
60061	DUMP BODY MOUNTING KIT

AIR-FLO MATERIAL SPREADERS
PART NUMBERS NOT LISTED ON DRAWINGS

<u>PART NUMBER</u>	<u>DESCRIPTION</u>
65085	8' CHAIN SHIELD
65086	9' CHAIN SHIELD
65087	10' CHAIN SHIELD
65088	11' CHAIN SHIELD
65089	12' CHAIN SHIELD
65090	13' CHAIN SHIELD
65091	14' CHAIN SHIELD
65092	15' CHAIN SHIELD
65093	16' CHAIN SHIELD
65094	8' BELT SHIELD
65095	9' BELT SHIELD
65096	10' BELT SHIELD
65097	11' BELT SHIELD
65098	12' BELT SHIELD
65099	13' BELT SHIELD
65100	14' BELT SHIELD
65101	15' BELT SHIELD
65102	16' BELT SHIELD

NOTES