

Airflo[®] MANUFACTURING CO., INC.

P.O. BOX 289 • PRATTSBURGH, NEW YORK 14873
PHONE 607/522/3574 • FAX 607/522/4412

**OPERATOR &
PARTS MANUAL
FLO IN DUMP[®]**

Airflo[®]

TABLE OF CONTENTS

<u>ITEM</u>	<u>PAGE</u>
Mounting	
Position on Chassis	1
Back Hinge	2
Body	3
Spinner Arm	4
Front Chute (Optional)	8
Body Prop	9-12
Lubrication & Hydraulic System	13-14
Flo 'N Dump Operation	15-17
Lift Cylinder Maintenance	
Disassembling	18
Reassembling	19
Illustration	20
Dump Body Trouble Shooting	21
Spreader Trouble Shooting	22
Hydraulic Schematic	23-27
Parts List	
Illustration and Part Numbers	28-51
Gear Box	53
Parts Not Illustrated	54-55
Warranty	62



DANGER

**USE OF BODY PROP (EMPTY BODY ONLY)
NEVER GET UNDER A RAISED EMPTY BODY FOR
ANY REASON WITHOUT THE BODY PROP
SUPPORTING THE BODY.**

- 1. RAISE THE BODY TO FULL "UP" POSITION.**
- 2. LIFT PROP OUT OF RETAINING BRACKET AND SWING BACK AGAINST STOP. NOTE: LARGER CAPACITY HOISTS HAVE A PROP ON BOTH SIDES. BOTH PROPS MUST BE UP.**
- 3. LOWER BODY UNTIL RESTING ON BODY PROPS.**



WARNING

- 1. NEVER GET UNDER RAISED BODY UNLESS IT IS SECURELY PROPPED UP.**
- 2. MAKE CERTAIN NO ONE IS BEHIND BED BEFORE DUMPING.**
- 3. ALWAYS DISENGAGE PTO WHEN HOIST IS NOT IN USE.**
- 4. MAKE CERTAIN THE LOAD IS EVENLY DISTRIBUTED.**
- 5. DO NOT RAISE A LOAD ON UNEVEN OR UNSTABLE GROUND.**
- 6. STAY AT CONTROLS THROUGHOUT DUMP CYCLE.**
- 7. DO NOT TRY TO FREE STUCK LOAD BY BACKING AND BRAKING ABRUPTLY.**
- 8. DO NOT LOAD ANY AXLE BEYOND VEHICLE MFG'S RATED CAPACITY.**

**FAILURE TO COMPLY WITH ANY OF THE ABOVE WARNINGS COULD RESULT
IN SERIOUS BODILY INJURY OR PROPERTY DAMAGE.**

**BODY "HOIST UNIT" WAS SHIPPED WITH A DETAILED OPERATORS MANUAL.
THIS MANUAL CONTAINS VITAL INFORMATION FOR THE SAFE USE AND
EFFICIENT OPERATION OF THIS UNIT. CAREFULLY READ THIS MANUAL
BEFORE STARING THE UNIT.**

POSITIONING ON TRUCK CHASSIS:

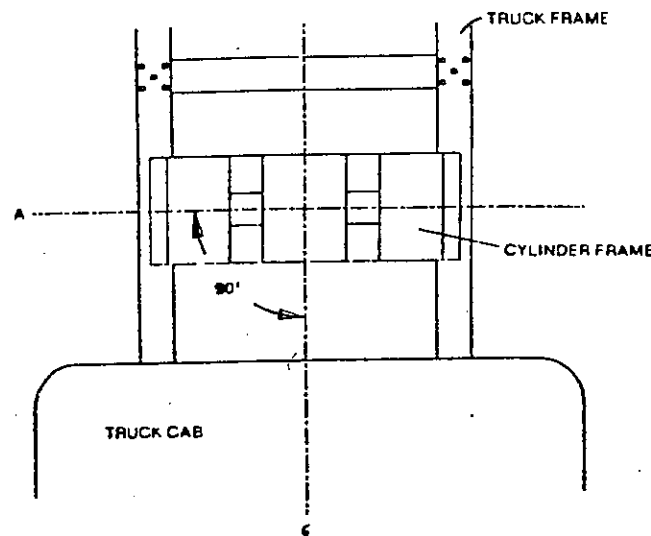
On your Flo ' N Dump Body measure from the rear of the longitudinal to the center of the lift cylinder mounting pin. Subtract 12" (for the overhang). Use this final measurement to position cylinder frame by measuring from center of the back hinge pin to the center of the cylinder frame.

Position the two cylinder frame mounting angle irons (4"x4"x18 angles) at that cylinder frame mounting position. Drill (3) 5/8" holes on each frame mounting angle iron through the truck chassis. Mount with hardened bolts.

Position the cylinder frame to center it at the measurement derived above. Full weld the cylinder to the angle iron mounts.

FRAME ALIGNMENT

FIG. 1

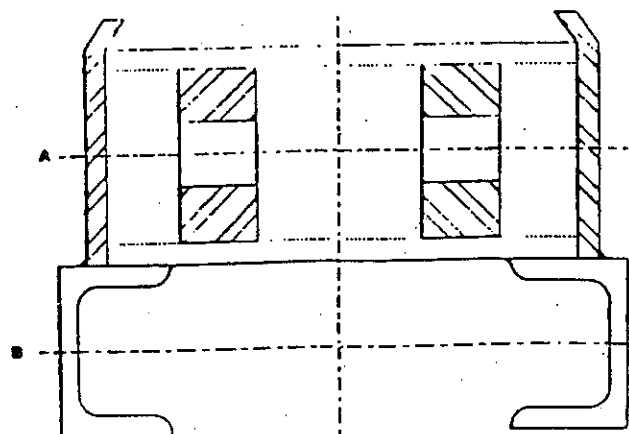


TRUCK & CYLINDER FRAME

Top view

From this angle, the cylinder frame axis (A) must be upright (90°) to the center line

FIG. 2



TRUCK & CYLINDER FRAME

Front view

From this angle, the cylinder frame horizontal axis (A) must be parallel to the truck frame horizontal axis (B).

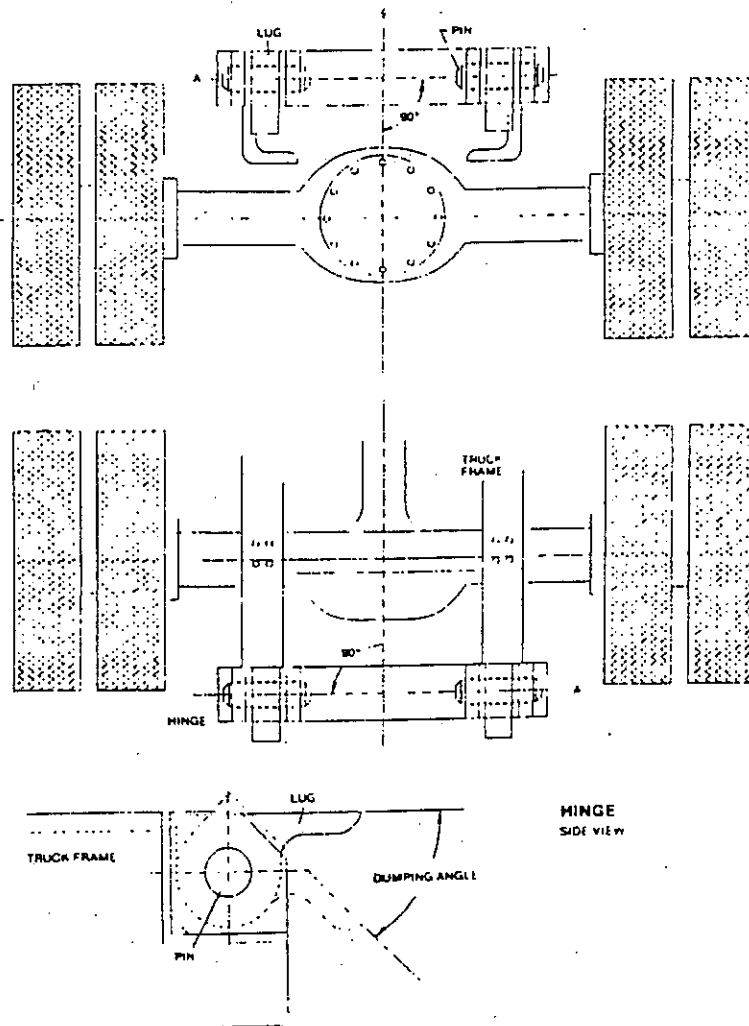
BACK HINGE MOUNTING:

Position back hinge to allow for a 12" overhang from the center of the hinge to the end of the channel longitudinals of the Flo 'N Dump Body.

Cut into chassis to place the top of back hinge lug $\frac{3}{8}$ " above the truck chassis rails. This allows for a $\frac{3}{8}$ " x 3" flat stock runner for the body longitudinals to ride on.

Weld both sides of the back hinge to the truck chassis on both the right and left rails.

BACK HINGE ALIGNMENT



BODY MOUNTING:

Place the body in position with 12" of overhang from center of hinge. Place a jack in position to lower the bottom of cylinder into position in the cylinder frame. Remove the cylinder pin lock caps in the cylinder frame. Carefully remove the safety chain over the cylinder and then lower into place.

WARNING - never work under a suspended body without first blocking under the body so it cannot fall down on you.

Place the cylinder lock caps back into place and tighten down with the hardened bolts provided.

Lower the body onto the truck chassis and full weld back hinge lugs to body longitudinals

BODY PROP:

Place the prop and mounting block in a convenient location towards the rear of the chassis. Drill the frame and mount the prop block with grade 8 bolts.

Raise the body until the prop extends past vertical. Mark this location and weld the upper block to the body longitudinal.

On 13' and 14' Flo 'N Dumps, two body props are provided. Mount the second prop directly across the chassis from the first prop.

WARNING - never work under a raised body unless it is empty and then securely supported with a body prop. (two are required on 13' and 14' bodies)

SPINNER ARM MOUNTING

Butt the top of the (#70007) spinner arm mounting bracket under the left side on the back hinge angle iron. Full weld the spinner arm mount bracket to the truck chassis.

Insert the (#70008) spinner arm tube into the bracket. The arm provided may be longer then needed. Set the arm so the spinner disc is approximately 20" from the road surface and the disc is under the spinner chute.

Place a lock collar (#70006) between the two support pipe brackets resting on the lower pipe bracket.

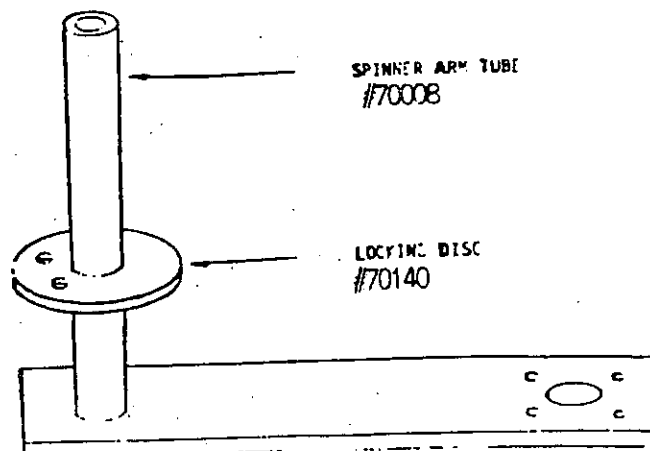
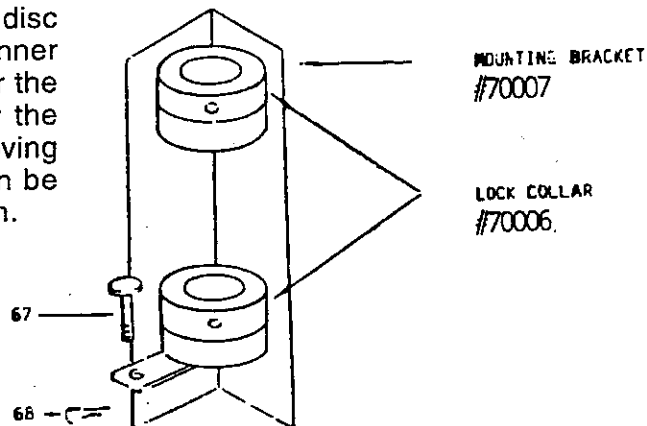
Insert the spinner arm tubing through the pipe brackets and place the second lock collar on the top of the arm.

DRILLING THE SPINNER ARM:

Drill a 7/16" hole through the spinner arm to accommodate a 3/8" grade 5 bolt in the upper and lower lock collar. Make sure that the bolt is positioned so when rotating the spinner arm 90°, the bolt head does not contact the side of the bracket. The spinner disc needs to be centered under the chute and then swung approximately 90° under the chassis for storage. A 3/8" grade 5 hardened bolt with a lock nut is needed to secure the spinner arm through the lock collars.

SPINNER ARM POSITIONING:

Slide the (#70140) locking disc over the spinner arm. Weld the disc at the proper position of alignment on the arm. Drill the disc with (2) 7/16" holes, so the spinner disc has two positions - under the chute for spreading or under the chassis for storage. By removing (#67) pin, the spinner arm can be moved 90° in either direction.



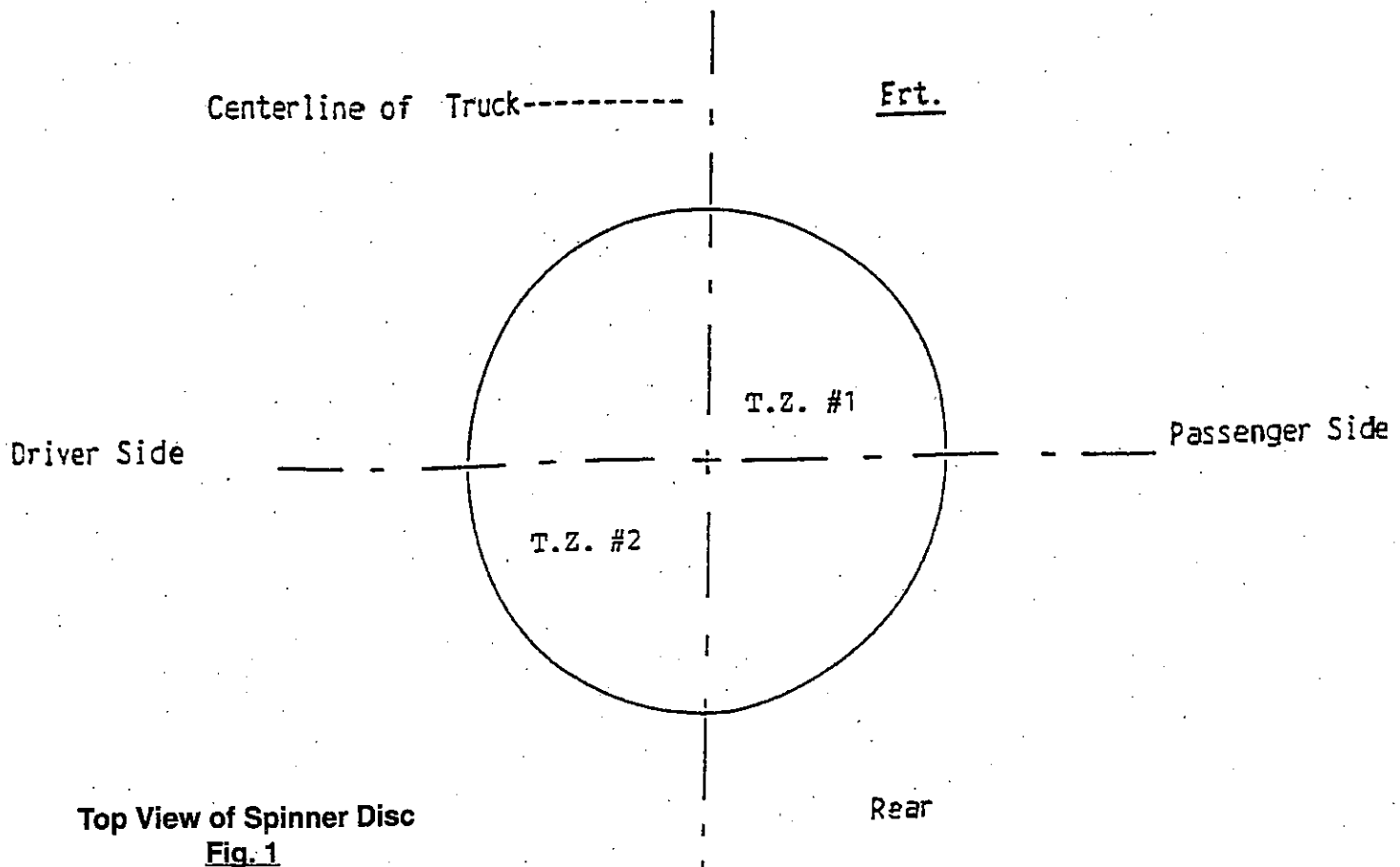
ADJUSTING THE FRONT CHUTE

The front chute allows for precise control of material to the spinner disc. Where the material hits the spinner disc in conjunction with the direction and speed of disc rotation will determine where the material is thrown onto the road surface.

The spinner disc must be set up for a counter clockwise rotation. The material hitting target zone #1 (T.Z. #1) will be thrown to the driver's side. Material hitting target zone #2 (T.Z. #2) will be thrown to the passenger's side.

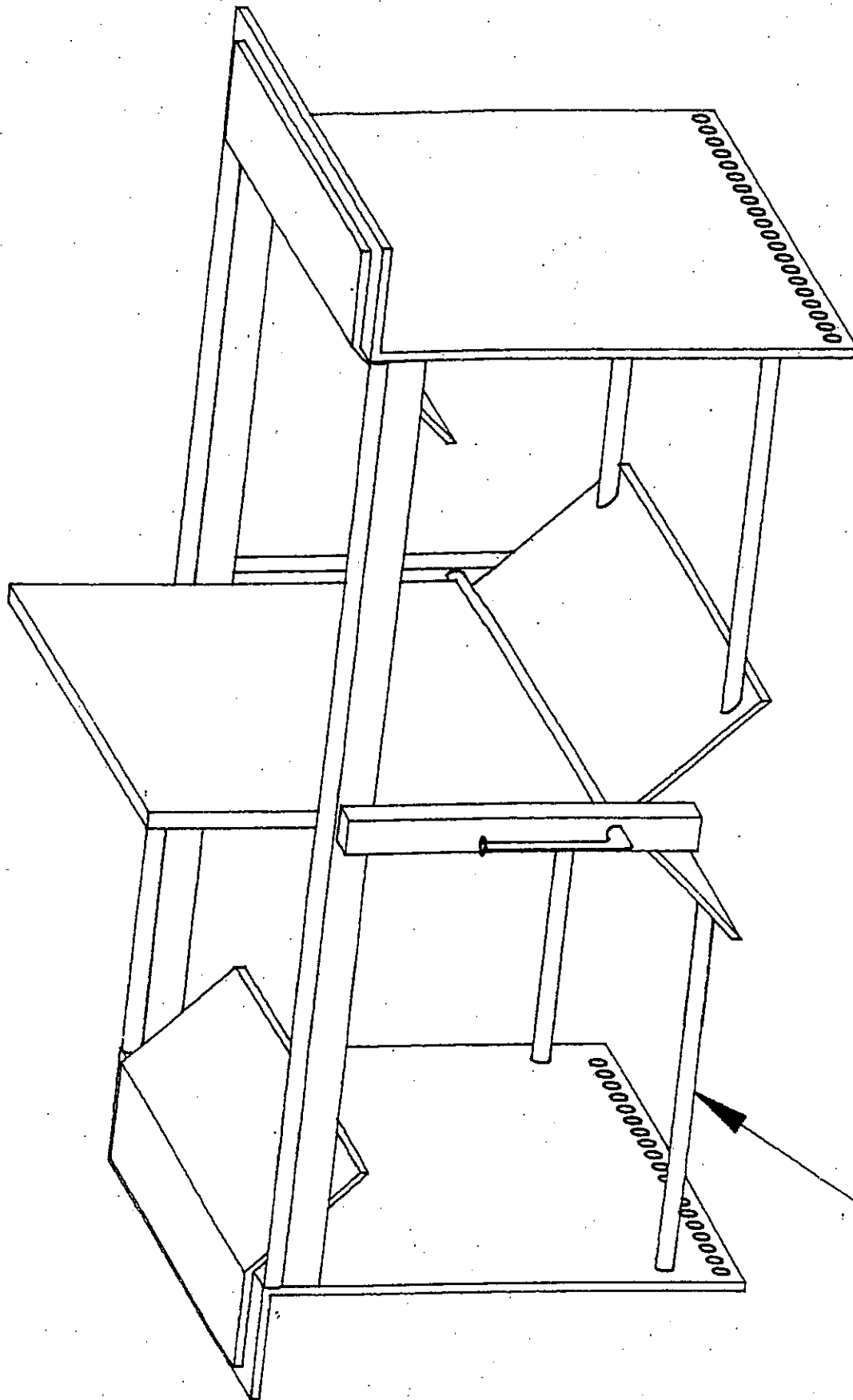
The four lower deflectors on the chute are used to guide the material to the proper quadrant on the spinner disc.

The center chute deflector can be adjusted from left to right and has a different function. The center deflector will divide the material coming from the conveyor. It can be adjusted to the right, which will provide more material to the passenger side or to the left which will provide more material to the driver's side. The result is a heavy material deposit on the one side of the truck and a light material deposit on the other.



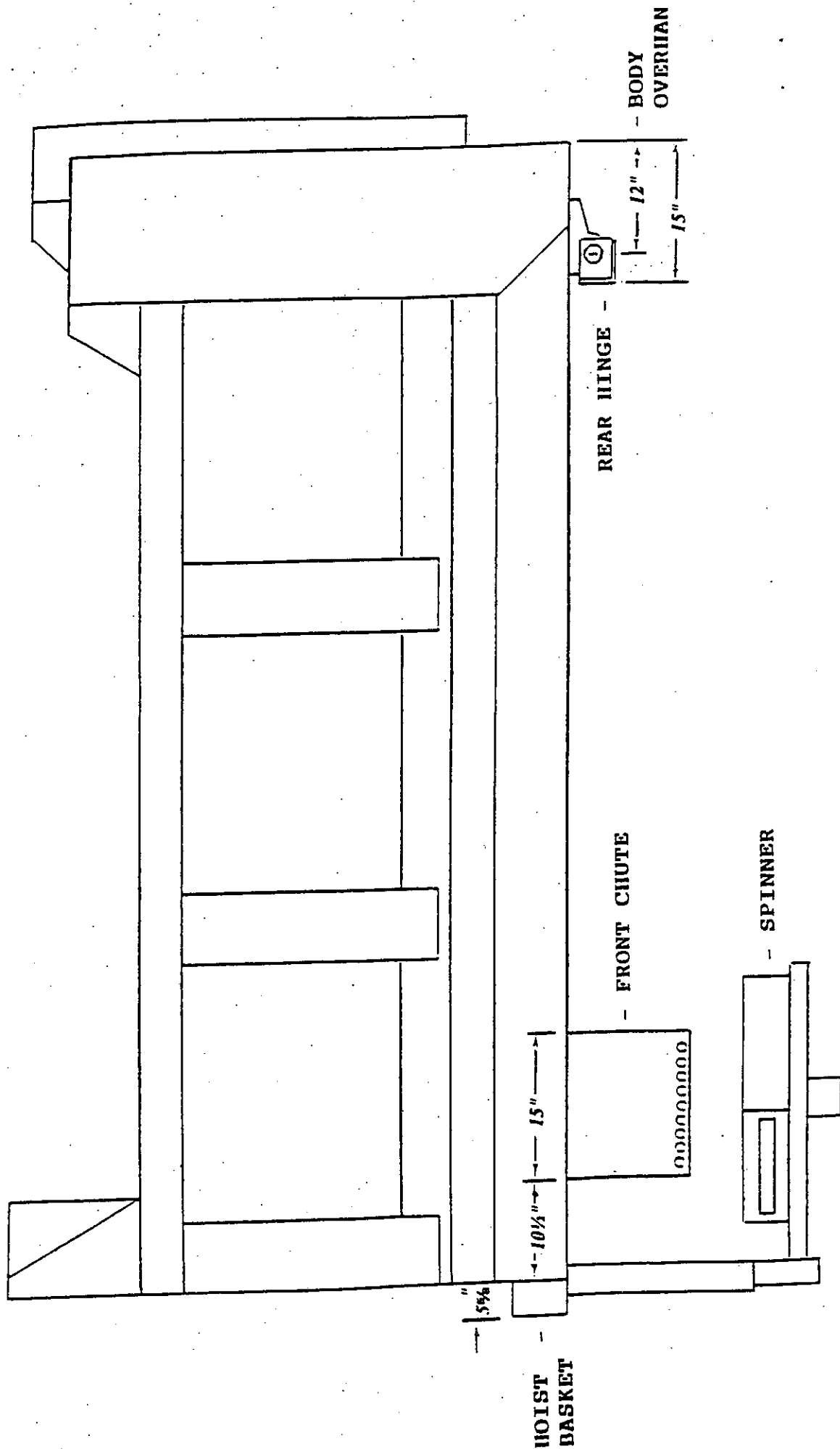
INSTALLATION OF FLO 'N DUMP FRONT SPREAD CHUTE

- 1) Place main frame into position 2" from hoist basket.
- 2) Position center deflector/drive shaft shield over drive shaft allowing approximately 1" of clearance between drive shaft and shield. Weld in place.
NOTE: It may be necessary to shorten the length of the square mounting tubing as truck drive shafts vary. It may also be necessary to modify the size of the drive shaft shield to make it only slightly larger than the drive shaft.
- 3) Cut the (4) 1/2" deflector hinge rods to fit at bottom of drive shaft shield and weld rod in place at each end.
- 4) Position lower deflectors to determine size. Trim lower deflectors as necessary for a proper fit.
NOTE: Two of the lower deflectors are oversized to allow for "off-center" drive shafts. Allow lower deflectors to be as wide as possible and extend in length to within a few inches of spinner unit.
- 5) Install lower deflectors using the bolt-on hinge clips and adjust using the adjustment rods and pins (see "Adjusting the Front Spread FND Chute").



TRIM RODS TO LENGTH
THEN WELD IN PLACE

FLO 'N DUMP
(Side View)



FND BODY PROP

HOW TO USE THE DUMP BODY'S SAFETY PROP



MAKE SURE THAT THE DUMP BODY IS EMPTY BEFORE USING THE SAFETY PROP.



**MAKE SURE THAT THE SAFETY PROP IS IN THE REARWARD SAFETY POSITION BEFORE YOU WORK ON A RAISED BODY.
(See Instruction "A " Below)**

- A). **SAFETY POSITION (REARWARD)** (See Figure #1)
1. Take the pin off its case and tilt the prop back towards the dump body.
 2. Lift the dump body up to two (2) inches over the safety prop.
 3. Let the dump body come down on the safety prop, make sure that the control valve is in lock position.
 4. Visually verify that: the safety prop is resting on the stop block. The dump body is resting on the safety prop.
- B). **STOWED POSITION (VERTICAL)** (See Figure #2)
1. Slightly lift the dump body over the safety prop, make sure that the control valve is locked.
 2. Tilt the safety prop towards front to vertical position and insert the pin in its case.
 3. Bring down the dump body.

FLO 'N DUMP

BODY PROP AND HOIST BASKET
REARWARD (SAFETY) POSITION

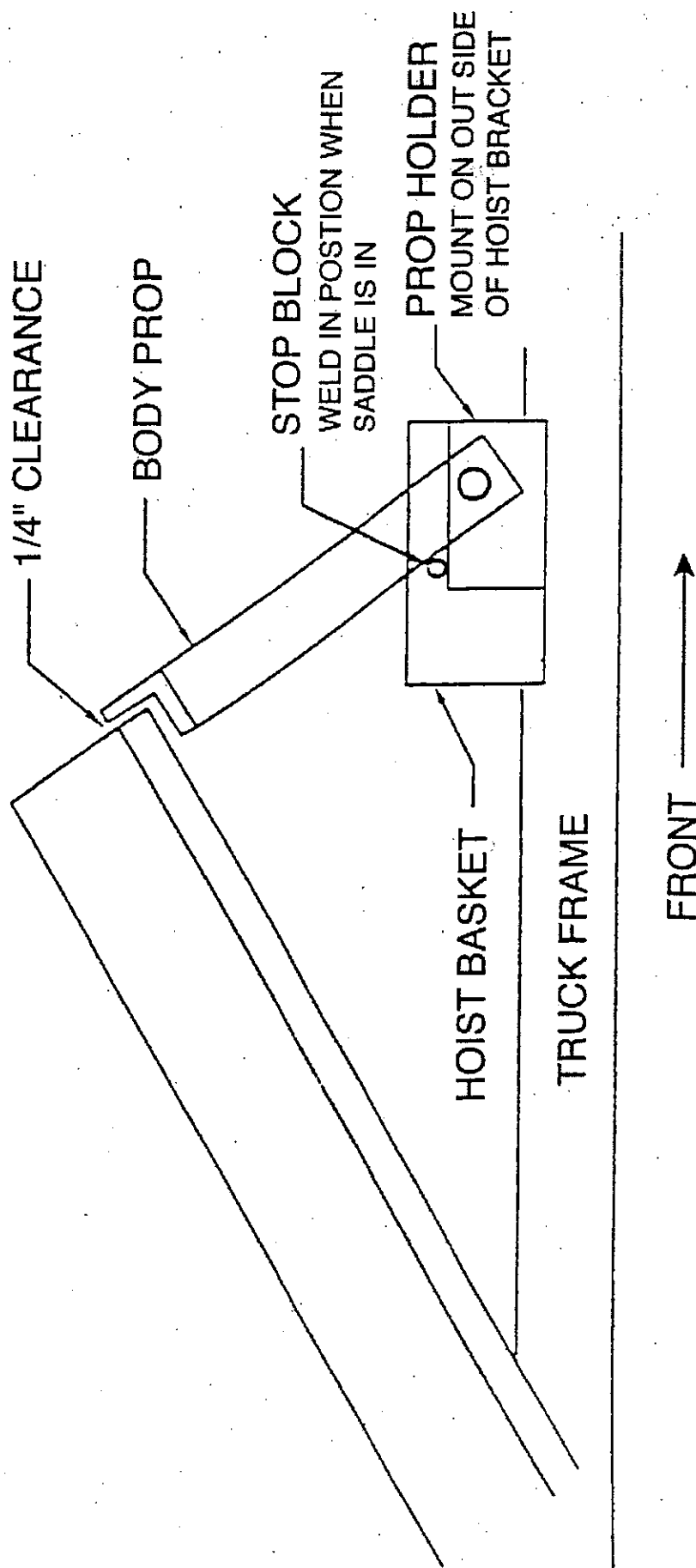
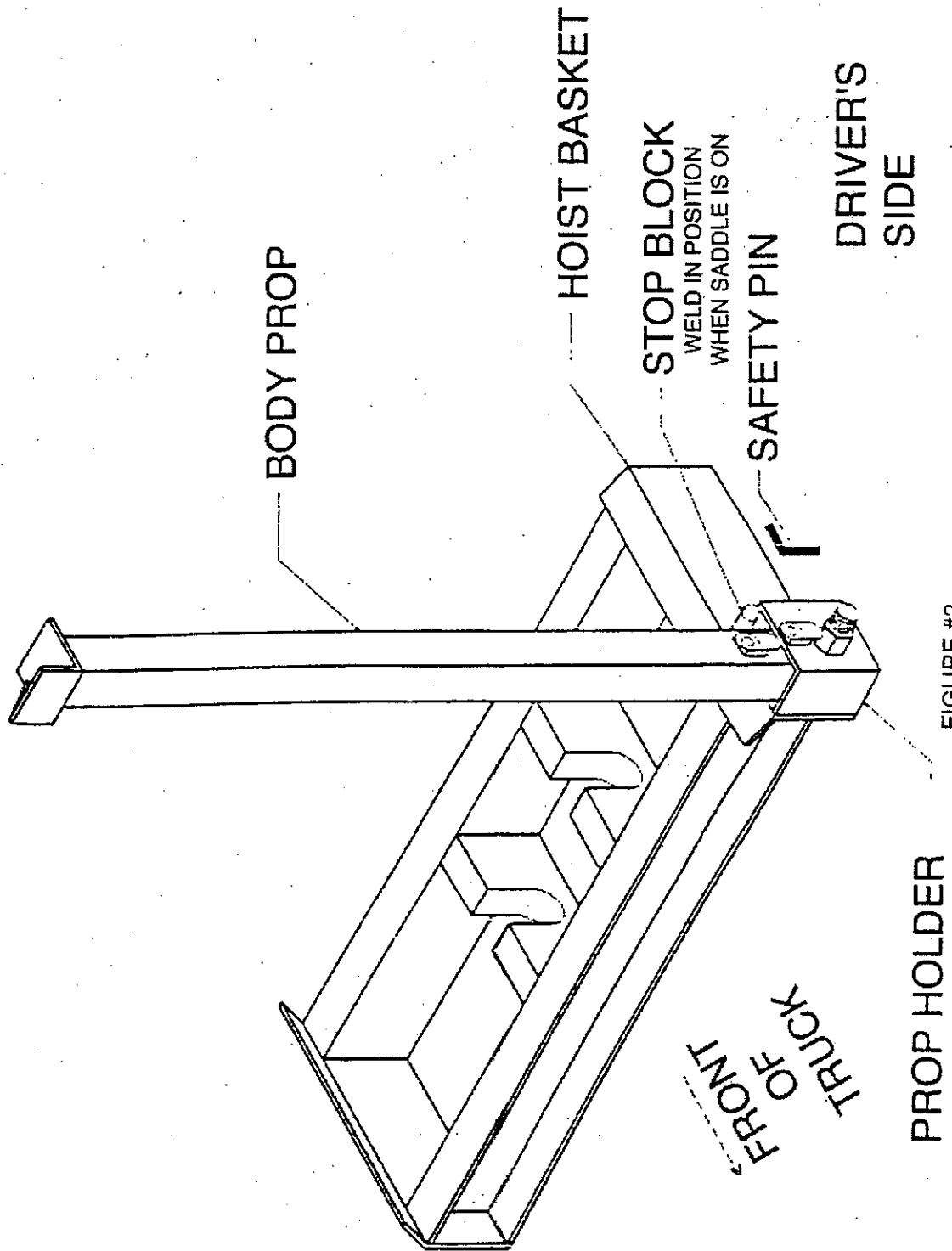


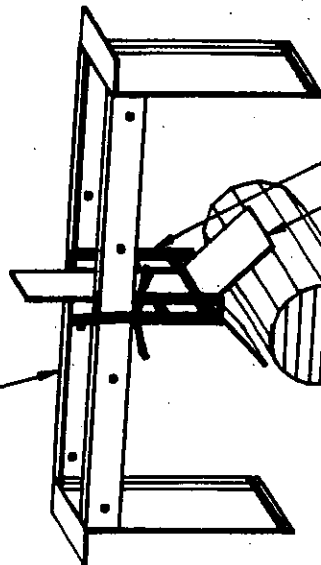
FIGURE #1

FLO 'N DUMP

BODY PROP AND HOIST BASKET
VERTICAL (STOWED) POSITION



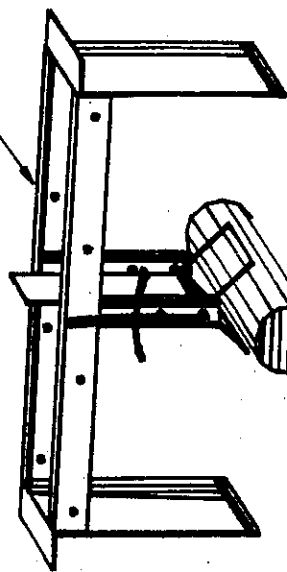
TRIM CROSSMEMBERS TO FIT
TO FIT FRAME RAILS



TRUCK DRIVE SHAFT

TRIM CENTER DEFLECTOR TO FIT—
ENDS OF DEFLECTOR SHOULD
EXTEND SLIGHTLY OVER DIA. OF
DRIVE SHAFT

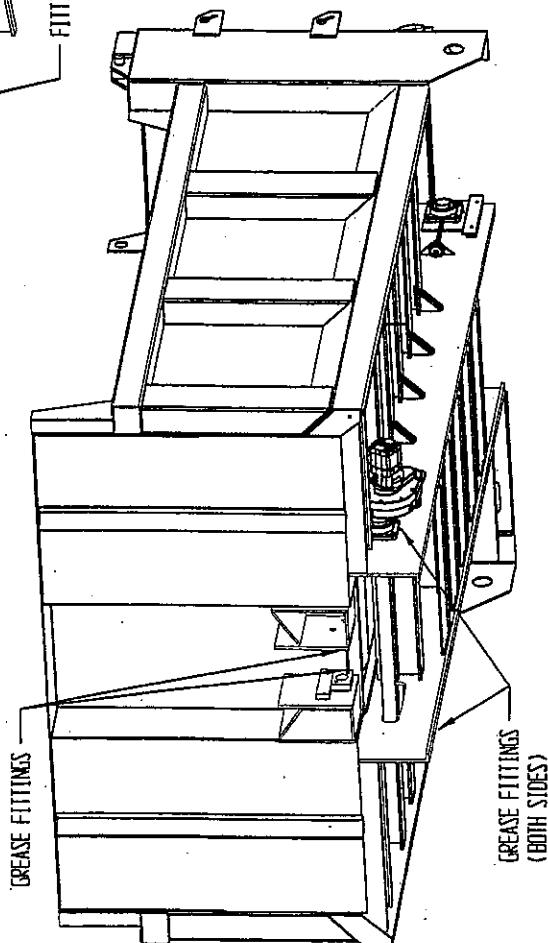
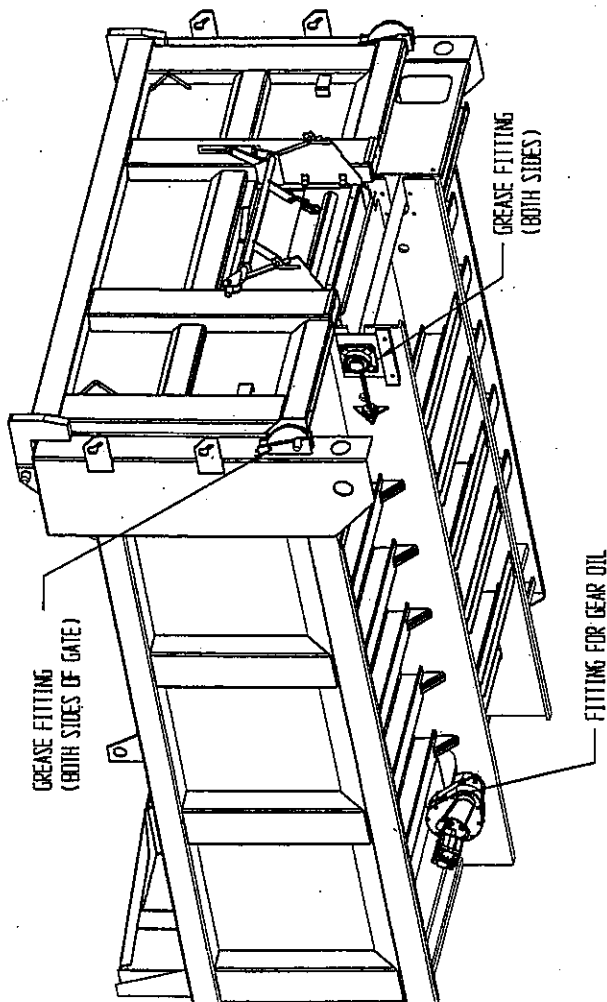
TRIM VERTICAL TUBING TO LENGTH—
CENTER DEFLECTOR SHOULD CLEAR
DRIVE SHAFT



Airflo

MANUFACTURER'S OF QUALITY
TRUCK BODIES

FLO N' DUMP LUBRICATION POINTS



MAINTENANCE SCHEDULE

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 200 hours or annually, whichever occurs first. Lubricate these gear cases with a non-corrosive type SAE 80/90 E.P. Gear Oil.

BALL BEARINGS

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

CONVEYOR CHAIN

After spreading any corrosive material, or at least once a week, apply kerosene or penetrating oil to each link with the conveyor running. **CAUTION** must be observed when lubricating a running conveyor chain. Run chain slowly and shut down the spinner.

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 multi-purpose gear lubricating oil requirements with ambient temperatures from 40 to 100 degrees Fahrenheit. Temperatures below 40 degrees F require an SAE 80 E.P. lubricant, above 100 degrees F. use an SAE 190 E.P. grade oil.

Ball Bearings

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

Conveyor Chain

After spreading any corrosive material, or at least once a week, apply kerosene or penetrating oil to each link with the conveyor running. **Caution** must be observed when lubricating a running conveyor chain-run chain slowly and shutdown the spinner.

FLO 'N DUMP OPERATION

DUMP BODY OPERATION:

The body is made to stand up to many years of heavy duty use. No special care is needed when loading material in the dump body. The chain is built into the floor in such a way as to be protected from material dropped on it.

Material as large as cobblestone can be dropped directly on to the chain with no overstressing of the barflights. If hauling asphalt with the body, an optional conveyor cover is available to keep the chain clean.

SPREADER OPERATION:

No special conversion is necessary to convert the body to a spreader. The conveyor is always ready to convey material rearward for spreading or stockpiling. If the spinner disc is swung under the truck chassis, the disc can remain mounted on the truck all year long. When the disc is under the chassis the dumping of material is not at all restricted.

When using the body for spreading, set the gate at the desired material flow. There is approximately 3" of rubber belt below the gate. This belt will seal the gate opening and prevent material from leaking out when the gate is raised for spreading. As long as the steel end of gate is opened no more than 3", this rubber will effectively seal the gate while it is open. Because of the extra wide conveyor, a 3" gate opening is adequate for most all spreading operations.

When spreading material, the body remains down on the truck chassis. More than 60% of the material is conveyed out before the driver needs to raise the body to redistribute the load over the conveyor. Usually two or three lifts of the body will get all but a yard or two of material out of the body.

WARNING: Do not raise the body while the truck is in motion. Stop the vehicle first and check above the body for obstruction clearance before raising the body. Failure to comply with these instructions could result in serious bodily injury or property damage.

CONVEYOR CHAIN ADJUSTMENT:

There is no need to raise the body to tighten the chain. Tighten the two nuts on the threaded rod that is attached to the bearing slide plate. This will push the bearing slide plate forward and consequently will tighten the conveyor chain.

Do not over tighten the conveyor chain. Tighten just enough to lift the chain off the bottom crossmembers. Over tightening will cause premature wear on the sprockets, chain and bearings.

FLO'N DUMP CONVEYOR CHAIN ADJUSTMENT

Unit with Underbody Plate

There is no need to raise the body to tighten the chain. Tighten the two nuts at equal intervals on the threaded rod that is attached to the bearing slide plate. This will push the bearing slide plate forward and consequently will tighten the conveyor chain.

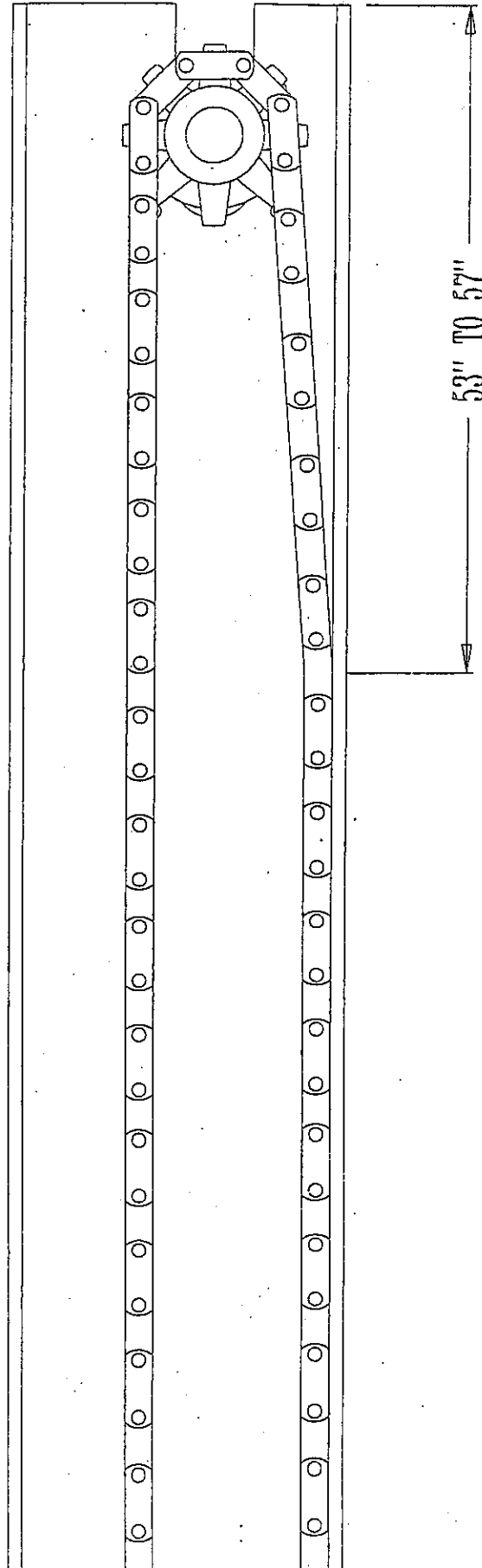
Do not over tighten the conveyor chain. Tighten just enough to allow the chain to raise off the underbody plate 53" to 57" (see drawing) on either side. Also, the take-ups must be adjusted evenly.

If all travel is used at the front chain take-up the chain should be shortened.

To shorten the chain:

1. Run the chain so the master link pin (and the belt lacing) is at the extreme rear.
2. Relieve the tension on the chain by backing off the front take-up.
3. Disconnect the belt lacing (if applicable) and the chain master link.
4. Shorten the chain by removing links (each link removed will give 1 1/8" of adjustment to the front take-up.)
5. Cut rubber belt and replace belt lacing (for each link removed from chain cut 2 1/4" from rubber belt. Rubber belt over chain application only).
6. Re-assemble chain and rubber belt (if applicable) and tighten to specs.

AIR-FLO FLO N' DUMP



MAINTENANCE PROCEDURES

DISASSEMBLING INSTRUCTIONS

As mentioned earlier, the MH telescopic cylinder can easily be disassembled with standard tools, following these steps:

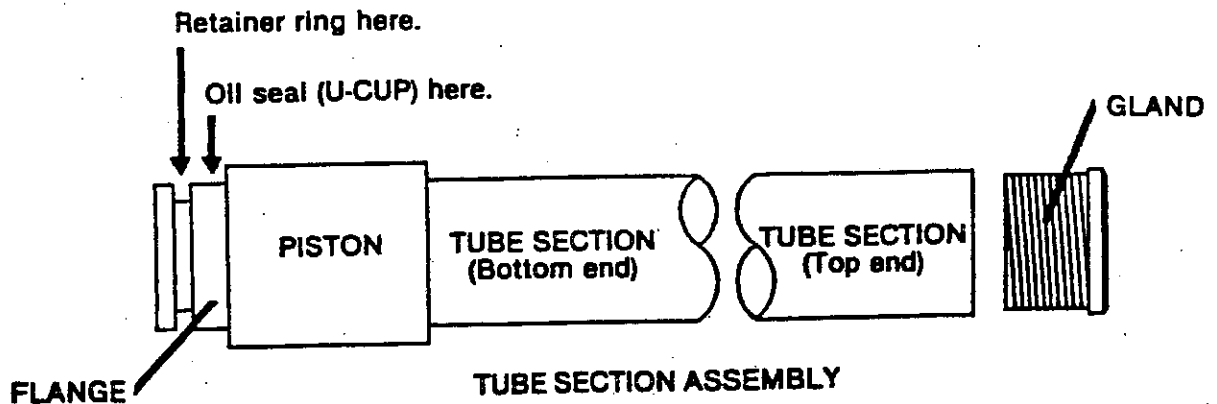
- STEP 1)** Take the cylinder off the truck by:
a) unscrewing the nut at the top of the cylinder cover.
NOTE: The cylinder cover can be left on the truck body.
b) relieving the base tube pins.
- STEP 2)** At the upper part of each section, you will find three or four punched holes, these holes are surrounding the bronze locking pin for each gland. Drill a 3/16 in. dia. hole through the locking pin to free the gland, clean the hole with air under pressure and unscrew it out. You may then remove the first section and do just the same for the other sections. (See p. 13 fig. 1)
- STEP 3)** Once the sections disassembled, inspect them carefully, look for any of the following causes:

Seal is damaged
(Scratched or broken) ————— Change part.

Piston is damaged
(Scratched or broken) ————— Change cylinder section.

Inside of tube section
is scratched or rusty ————— Tube section has to be honed.

Piston or gland have
expanded or even overlapped ————— Change parts affected.
due to severe collisions.



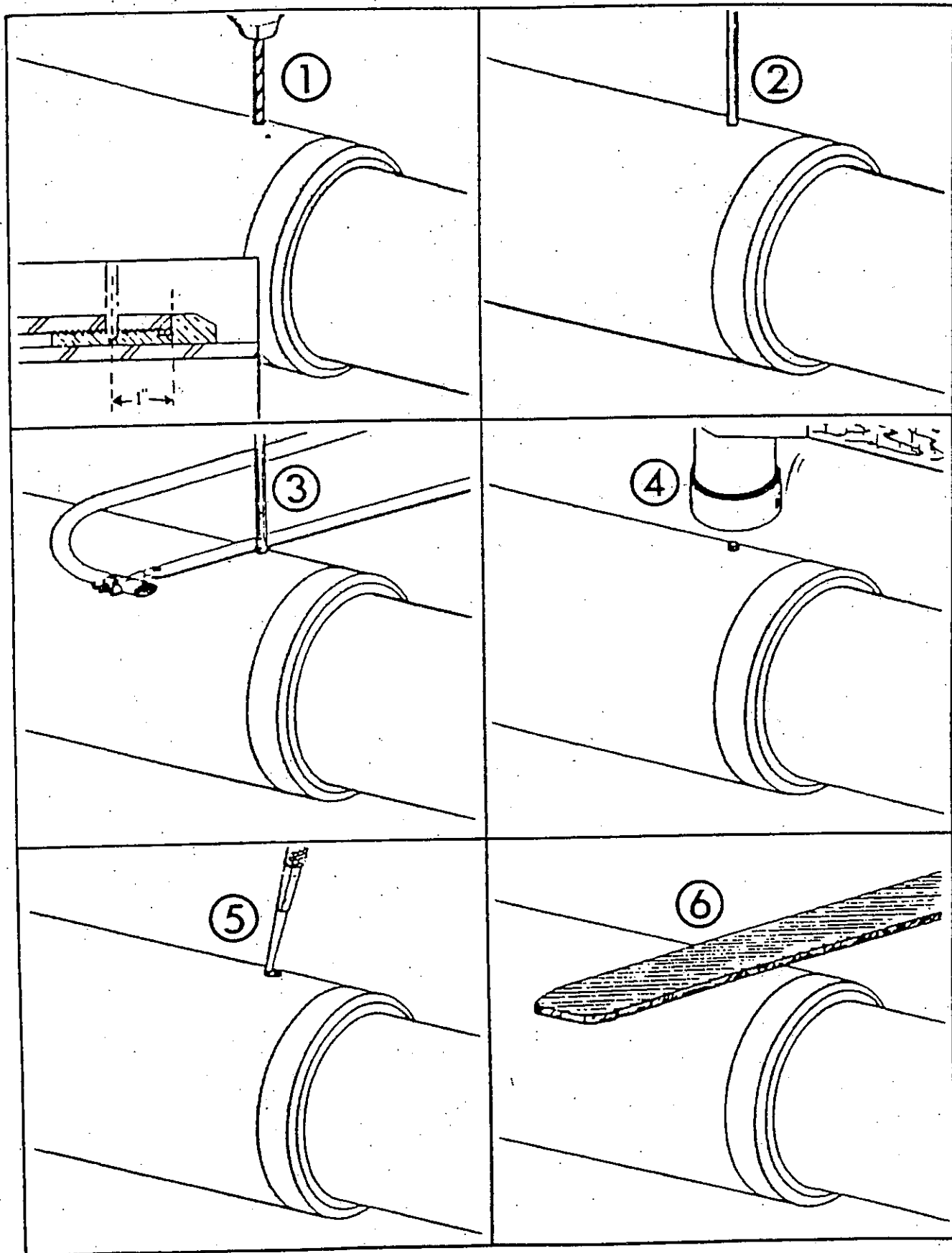
REASSEMBLING INSTRUCTIONS

Make sure, before executing any of the following steps, that all the tube sections are clean of any chips or any other non desirable materials. (See next page sketches for better understanding).

- STEP 1) Once all the parts replaced and ready to reassemble, grease all the pistons before re-inserting the sections.
CAUTION: Protect the gland threads with shims when inserting the sections.
- STEP 2) Screw in the gland back in its place and drill a new 3/16 in. dia. hole at about one inch from the tube end. When you get to the bronze gland, continue for 1/16 of an inch. (FIG. 1)
- STEP 3) Insert the bronze rod in the hole. (You may use bronze welding rod without flux, class RCuZn-C, 3/16 in. dia.) (FIG. 2)
- STEP 4) With a metal saw, cut the rod at 1/8 in. from the tube. (FIG. 3)
- STEP 5) Hammer the bronze pin in place. (FIG. 4)
- STEP 6) Lock the pin in place by indenting three or four marks near the pin with a punch. (FIG. 5)
- STEP 7) Smooth down the pin area using a file to avoid tearing off the external gland. (FIG. 6)
- STEP 8) Once reassembled, put the cylinder back in place. Tighten the nut with a percussion gun to assure a safe grip.

TOLERANCES TABLE

Distance between piston and tube.	From 0.006 to 0.008 inch.
Distance between keeper ring and U-CUP.	Without any consequences.
Distance between gland and tube.	From 0.008 to 0.015 inch.



DUMP BODY TROUBLE-SHOOTING CHART

NOTE: Before using the troubleshooting section, make sure that the following items have been verified:

- Oil level in the tank is normal.
- There are no leaks in the hydraulic circuit.
- You are using the recommended oil regarding the application (Climate).
- Oil filter is clean.

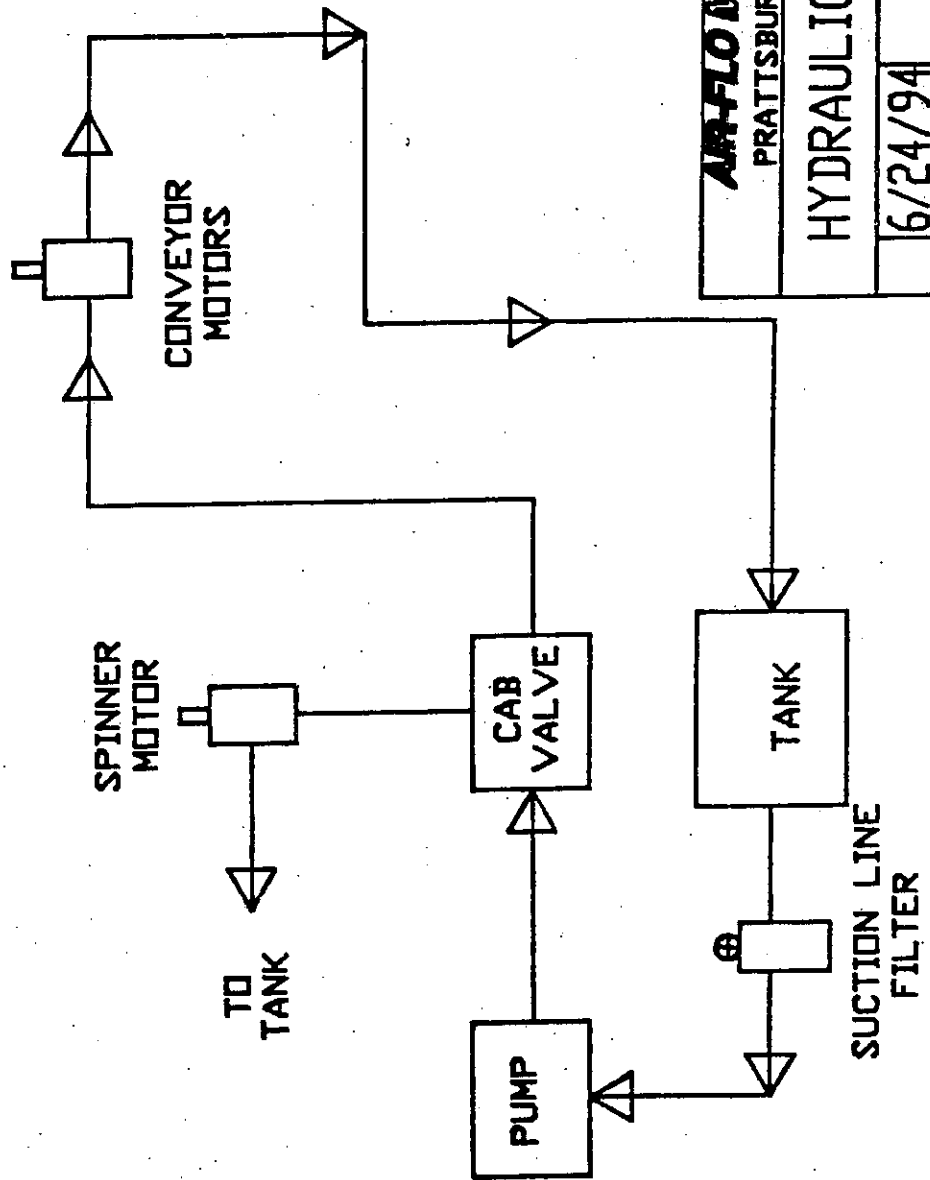
TROUBLE	PROBABLE CAUSES	SOLUTIONS
Loss of oil pressure.	<ul style="list-style-type: none"> - Relief valve is jammed open. - Pump malfunction. 	<ul style="list-style-type: none"> - Clean or replace relief valve. - Replace used parts or pump.
Pump is noisy	<ul style="list-style-type: none"> - Air is getting into the circuit. - Pump rotation (RPM) is too high. - Pump is not aligned with drive shaft. - Pump malfunction. 	<ul style="list-style-type: none"> - Look for air infiltrations. - Check the manufacturer's specifications. - Correct drive shaft alignment. - Replace used parts or pump.
Cylinder section(s) is(are) staying open.	<ul style="list-style-type: none"> - The pump flow (GPM) is too high, sections are knocking on each other when opening. - Pump rotation (RPM) is too high. 	<ul style="list-style-type: none"> - Check with THE CHART for recommended pump. - Lower the engine RPM when unloading. - Install a stroke limiter device.
Cylinder leaks.	<ul style="list-style-type: none"> - Wrong alignment of frame or hinge. 	<ul style="list-style-type: none"> - Realign as specified in the handbook. - Replace used parts.
Cylinder cover is scratching one or many sections.	<ul style="list-style-type: none"> - Wrong alignment of frame or hinge. 	<ul style="list-style-type: none"> - Realign as specified in the handbook.
One cylinder section refuses to come out	<ul style="list-style-type: none"> - Piston or gland have expanded - Pump pressure is too low. 	<ul style="list-style-type: none"> - Change parts affected. - Readjust pump pressure.
Cylinder has a jumpy opening or closing.	<ul style="list-style-type: none"> - Oil tank is too small for the cylinder content. (Air is filling the cylinder) - One of the section's piston or gland is damaged. 	<ul style="list-style-type: none"> - Check with THE CHART for recommended tank. - Replace damaged parts.

SPREADER TROUBLESHOOTING CHART

<u>CONDITION</u>	<u>CAUSE</u>	<u>CORRECTION</u>
1. Pump cavitation recognized by excessive noise	<ul style="list-style-type: none"> a. Air entering system through suction lines. b. Suction line kinked, twisted, or too long. c. Inadequate size suction line. d. Oil too heavy. e. Excessive pump speed. Normal pump speed 800 to 1500 RPM. 	<ul style="list-style-type: none"> a. Check line from reservoir for possible leaks. b. Install suction line as short and straight as possible. c. Increase suction line size. d. Drain and replace with low viscosity non-detergent oil. e. Decrease PTO speed accordingly.
2. Slow operation of the auger and/or spinner	<ul style="list-style-type: none"> a. Worn or defective pump. b. Worn or defective motor. c. Pump cavitation. d. Insufficient pump speed. 	<ul style="list-style-type: none"> a. Repair or replace pump.* b. Repair or replace motor. c. Refer to pump section. d. Increase PTO accordingly.
3. Erratic operation of the auger and/or spinner	<ul style="list-style-type: none"> a. Low oil. b. Worn or defective motor. c. Dirty, worn, or defective flow control valve. d. Plugged filter. e. Relief valve setting too low. f. Pump cavitation. g. Air vent on reservoir tank is blocked. 	<ul style="list-style-type: none"> a. Fill reservoir to a nine inch level. b. Repair or replace motor.* c. Clean, repair, or replace flow control.* d. Replace filter element and clean filter. e. Adjust relief valve for 1500 PSI. f. Refer to pump section. g. Clean or replace vent cap to admit atmospheric pressure to inside the tank.
4. Auger and/or spinner will not operate.	<ul style="list-style-type: none"> a. Quick disconnects are dirty, damaged or improperly connected. b. Hose connections wrong. 	<ul style="list-style-type: none"> a. Clean or replace and properly connect. b. Refer to illustration.

* Air-Flo Spreader warranty does not cover unauthorized disassembly of Hydraulic or Electric components.

HYDRAULIC SCHEMATIC FRONT OR REAR DRIVE 9' & 10' FLO N' DUMP



AM-FLO MFG. CO., INC.

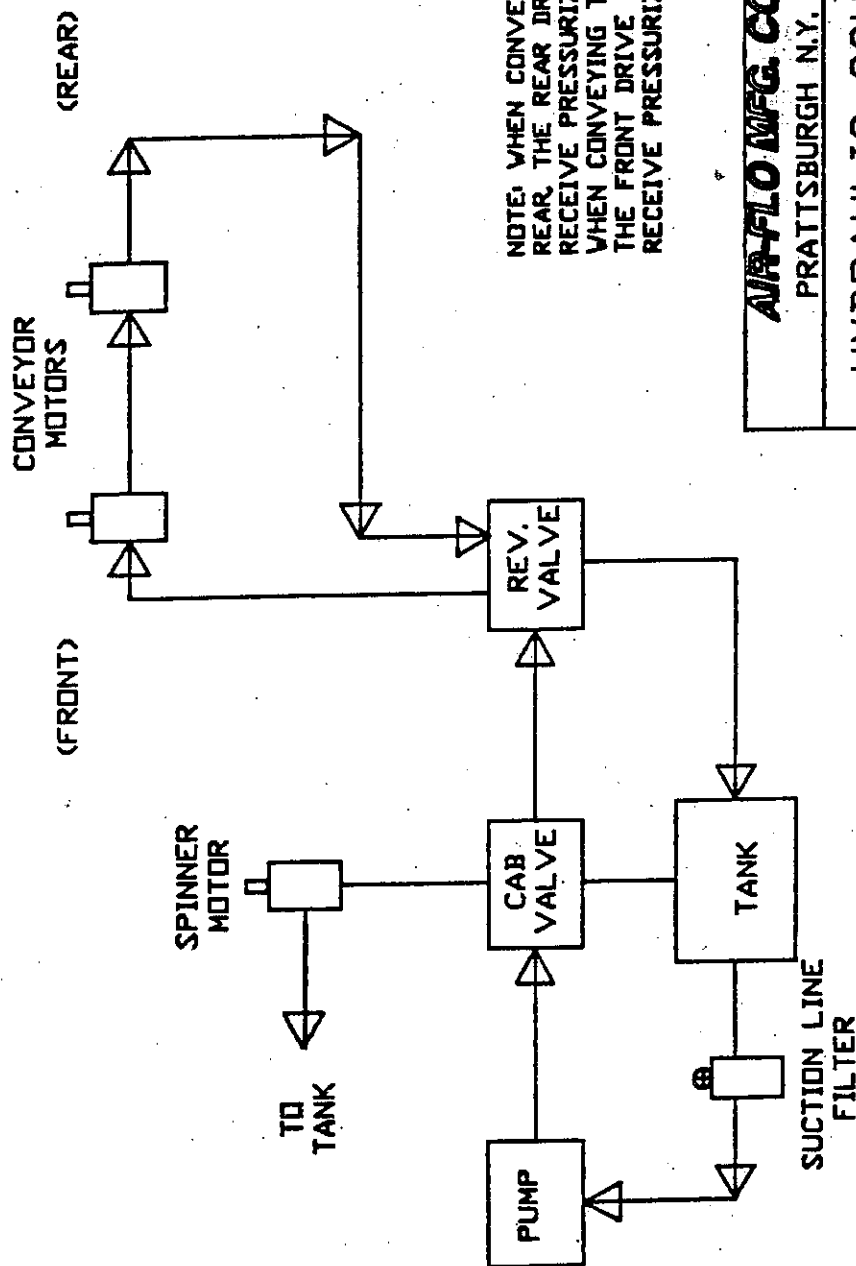
PRATTSBURGH N.Y. 14873

HYDRAULIC SCHEMATIC

6/24/94 FNDHS-4

2 AUG93

HYDRAULIC SCHEMATIC FOR COMBINATION FRONT AND REAR DRIVE 9' & 10' FLO N' DUMP



NOTE: WHEN CONVEYING TO THE REAR, THE REAR DRIVE MOTOR(S) RECEIVE PRESSURIZED OIL FIRST. WHEN CONVEYING TO THE FRONT, THE FRONT DRIVE MOTOR(S) RECEIVE PRESSURIZED OIL FIRST.

AIR-FLO MFG. CO., INC.

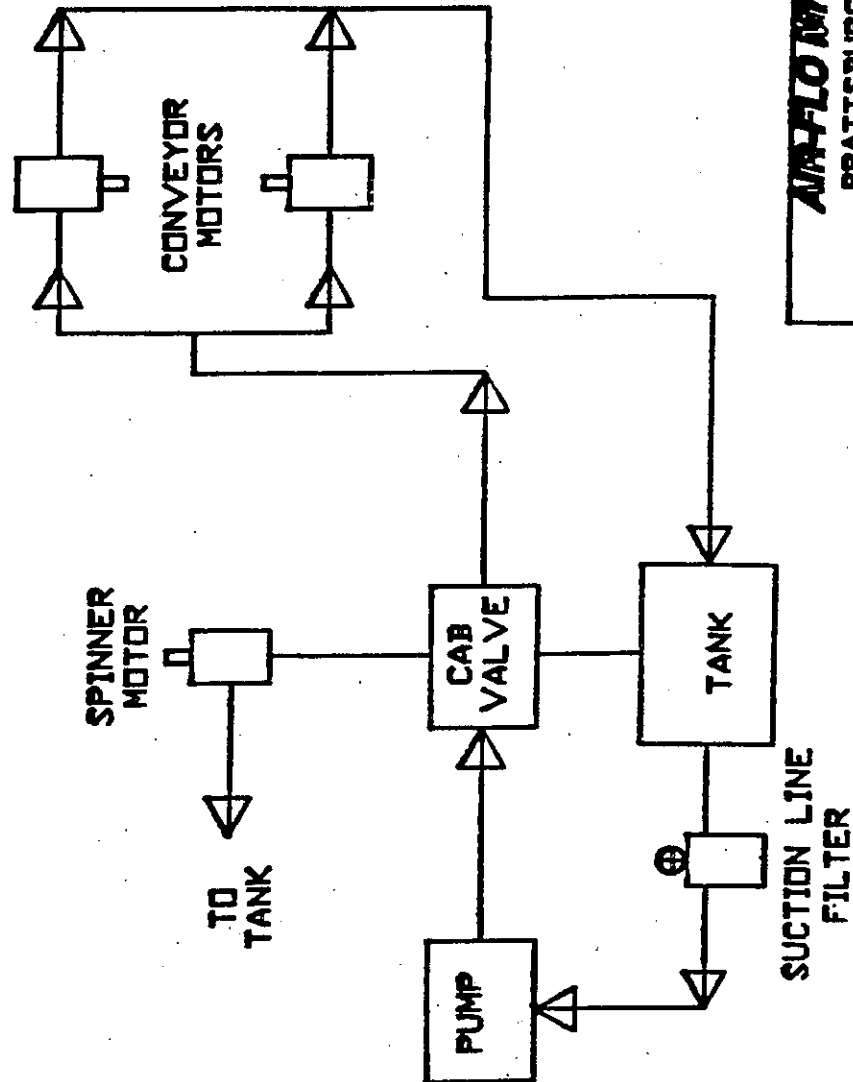
PRATTSBURGH N.Y. 14873

HYDRAULIC SCHEMATIC

6/24/94 FNDHS-3

R. J. JONES

HYDRAULIC SCHEMATIC FRONT OR REAR DRIVE 13' & 14' FLO N' DUMP



AMFLO MFG. CO., INC.

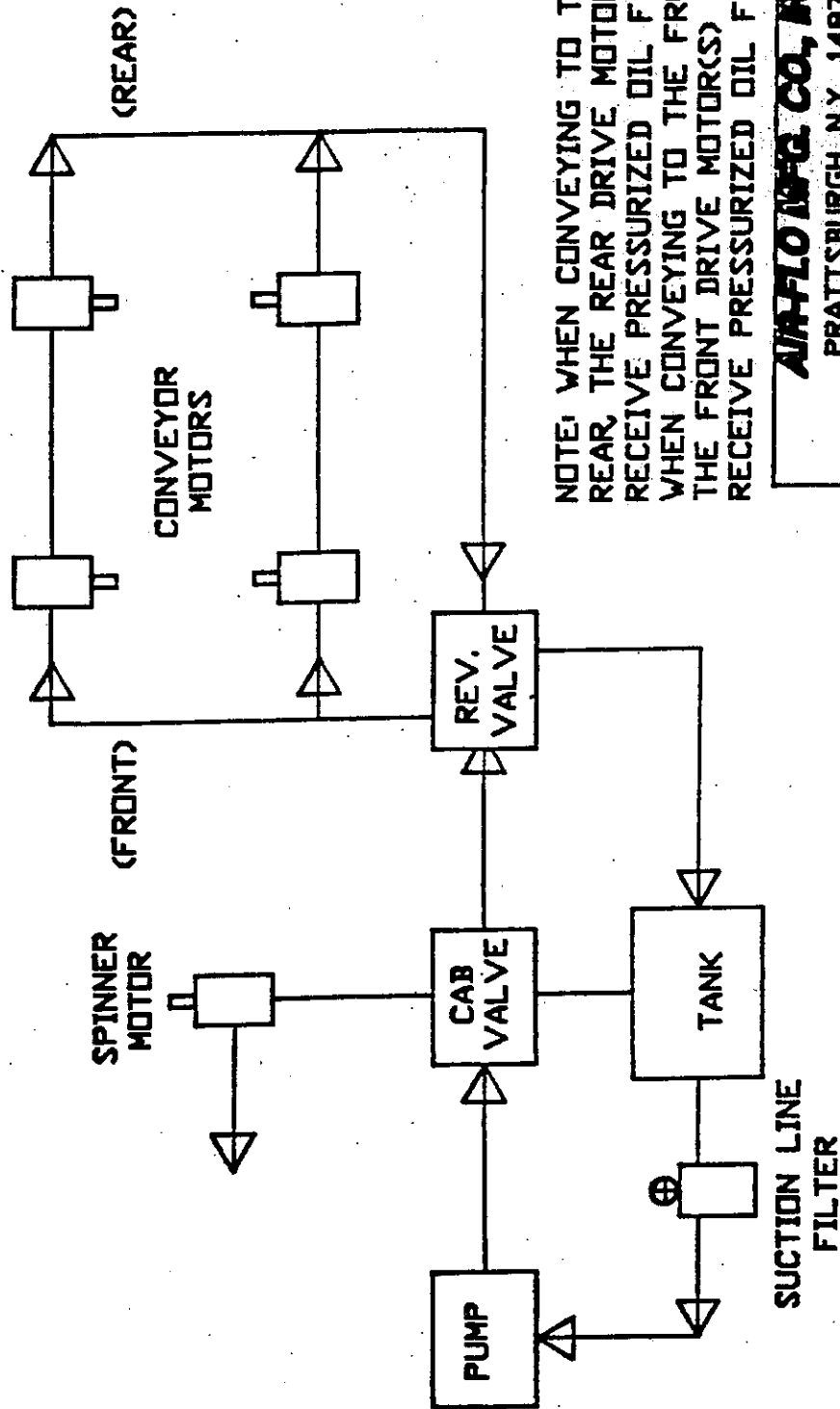
PRATTSBURGH N.Y. 14873

HYDRAULIC SCHEMATIC

6/24/94 FNDHS-1

R. MURPHY

HYDRAULIC SCHEMATIC FOR COMBINATION FRONT & REAR DRIVE 13' & 14' FLO N' DUMP



NOTE: WHEN CONVEYING TO THE REAR, THE REAR DRIVE MOTOR(S) RECEIVE PRESSURIZED OIL FIRST. WHEN CONVEYING TO THE FRONT, THE FRONT DRIVE MOTOR(S) RECEIVE PRESSURIZED OIL FIRST.

ALIFLO MFG. CO., INC.

PRATTSBURGH N.Y. 14873

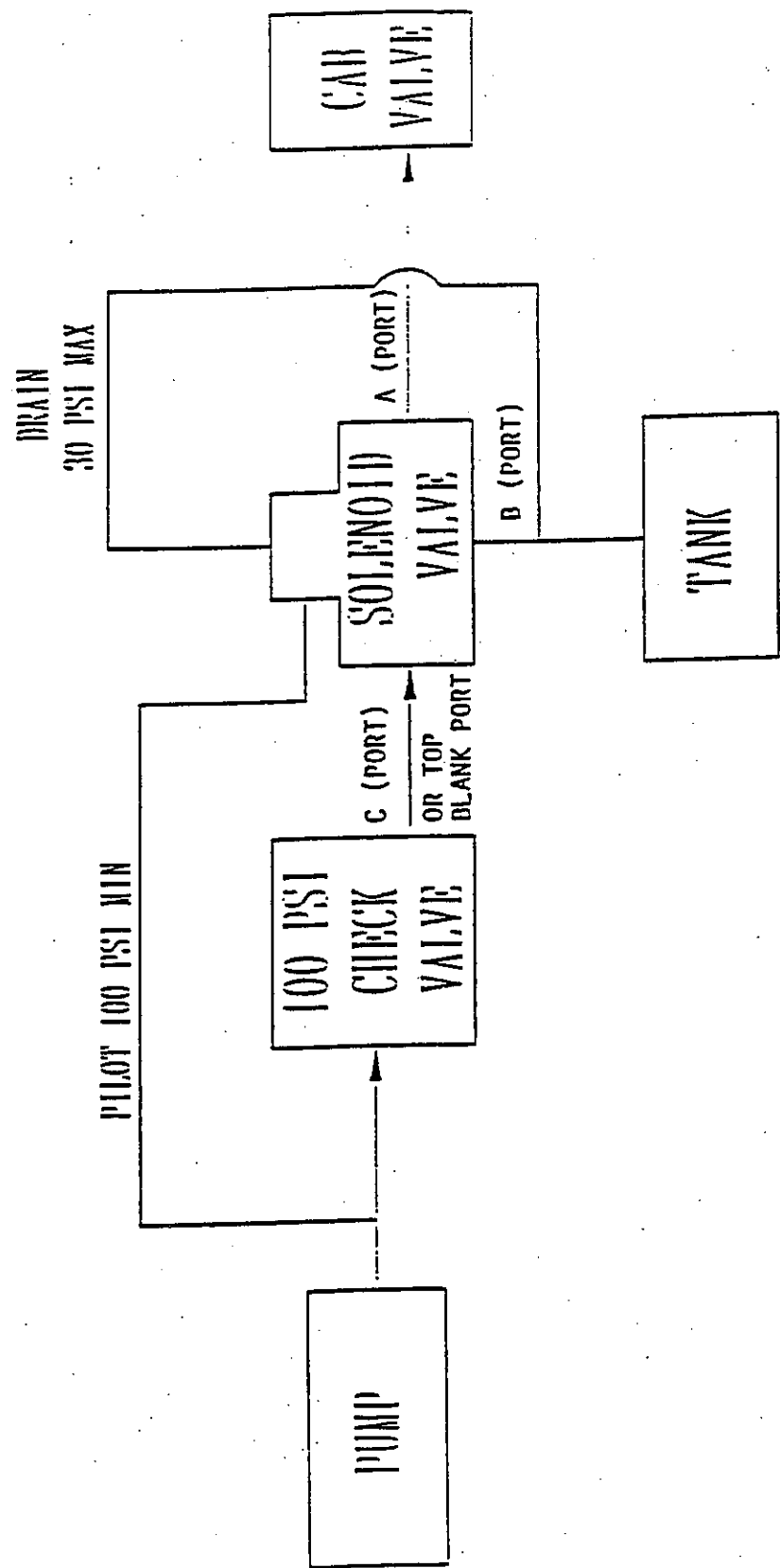
HYDRAULIC SCHEMATIC

6/24/94 FNDHMS-2

2. 11/2/94

AIR-FLOW 4.0' N DUMP

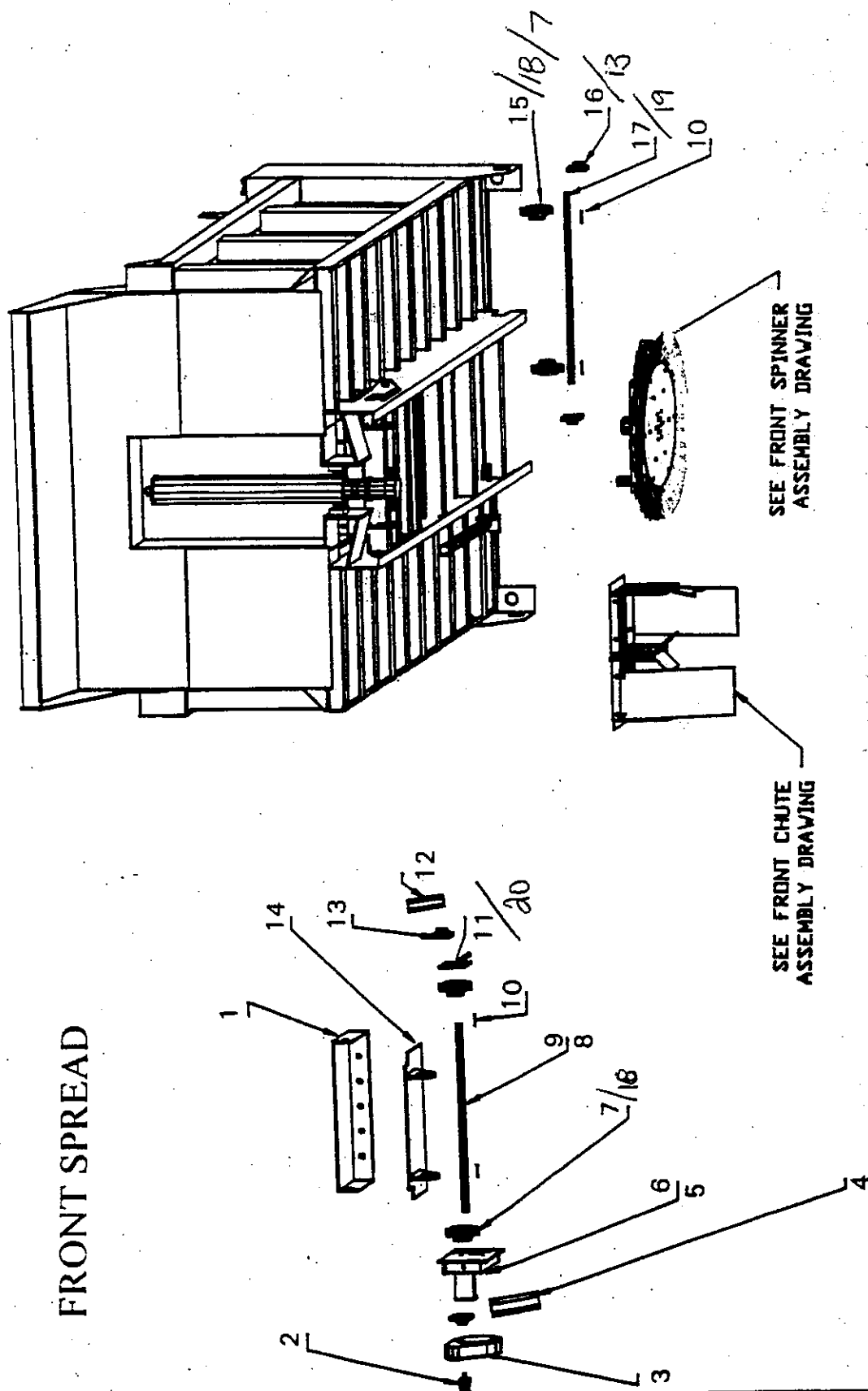
HYDRAULIC SCHEMATIC FOR REAR CONVEYOR CONTROL VALVE OPTION



AIR-FLOW MFG. CO. INC.		HYDRAULIC SCHEMATIC	
PLATTSBURGH, N.Y. 10734			
DATE	07/31/1996	DOC NO.	HYD-001
SIZE	A	SCALE	N/A
REV		FILE	130-210

FLO. "N DUMP

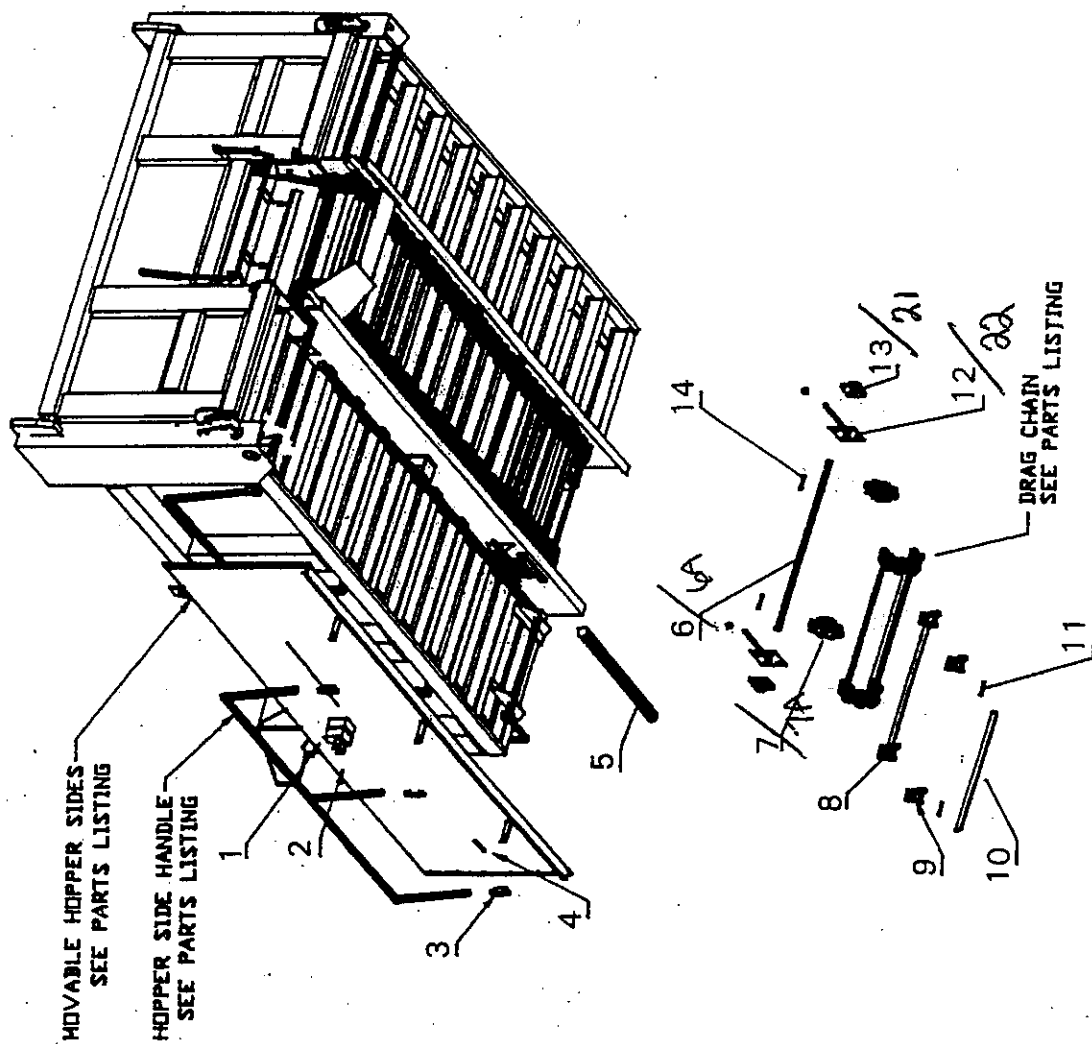
FRONT SPREAD



FRONT SPREAD ILLUSTRATION

- | | | |
|-----|-------|-----------------------------------|
| 1. | 70130 | TAKE-UP ENCLOSURE |
| 2. | 12005 | HYDRAULIC MOTOR |
| 3. | 03052 | GEARBOX |
| 4. | 70021 | GEARBOX ADJ. PLATE SLIDE |
| 5. | 70005 | GEARBOX R.H. SIDE |
| 6. | 70025 | GEARBOX L.H. SIDE |
| 7. | 06026 | 8T DRIVE SPROCKET - 2" CAST |
| 8. | 70030 | DUAL GEARBOX |
| 9. | 70034 | SINGLE GEARBOX |
| 10. | 19014 | KEYSTOCK |
| 11. | 70022 | TAKE-UP ADJUSTMENT PLATE - 1 1/4" |
| 12. | 70019 | ADJ. PLATE SLIDE |
| 13. | 05009 | FLANGE BEARING - 2" |
| 14. | 70131 | BEDPLATE TAKE-UP SLIDE |
| 15. | 06027 | IDLER SPROCKET- 1 1/4" |
| 16. | 05026 | FLANGE BEARING - 1 1/4" |
| 17. | 70023 | IDLER SHAFT - 1 1/4" |
| 18. | 06024 | 8 TOOTH STEEL SPROCKET |
| 19. | 70221 | IDLER SHAFT - 1 1/4" |
| 20. | 70220 | TAKE-UP PLATE - 2" |

FLO N' DUMP REAR SPREAD

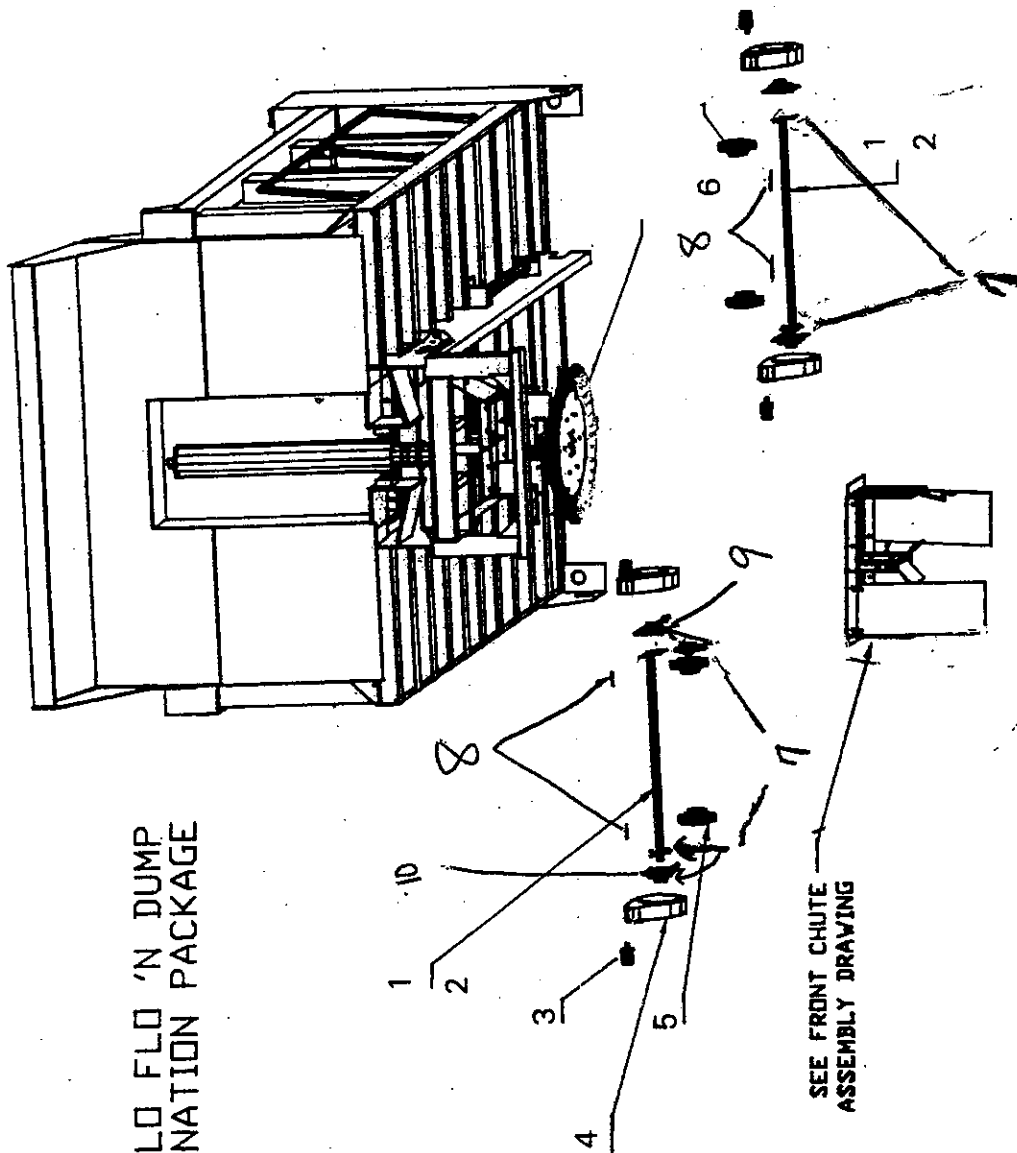


*NOTE:
UNIT SHOWN WITH MOVABLE
HOPPER SIDE OPTION
* NOT AVAILABLE FOR RETROFIT

REAR SPREAD ILLUSTRATION

- | | | |
|-----|-------|----------------------------------|
| 1. | 21001 | COTTER KEY |
| 2. | 70020 | HANDLE RETAINING PIN |
| 3. | 01095 | YOLK |
| 4. | 01097 | YOLK PIN |
| 5. | 70018 | BODY PROP |
| 6. | 70023 | 1 ¼" IDLER SHAFT |
| 6A. | 70221 | 2" IDLER SHAFT |
| 7. | 06027 | 1 ¼" IDLER SPROCKET |
| 7A. | 06026 | 2" IDLER SPROCKET |
| 8. | 70110 | DRAG CHAIN BAR FLIGHT WITH LINKS |
| 9. | 04022 | DRAG CHAIN LINK |
| 10. | 70112 | BAR FLIGHT |
| 11. | 04020 | DRAG CHAIN PIN |
| 12. | 70022 | TAKE UP ADJUSTMENT PLATE |
| 13. | 05026 | 1 ¼" FLANGE BEARING |
| 14. | 19014 | KEYSTOCK |
| 15. | 06026 | 2" DRIVE SPROCKET |
| 16. | 70034 | DRIVE SHAFT SINGLE GEAR BOX |
| 17. | 70030 | DRIVE SHAFT DUAL GEAR BOX |
| 18. | 12005 | HYDRAULIC MOTOR |
| 19. | 03052 | GEAR BOX |
| 20. | 06024 | 2" 8 TOOTH STEEL SPROCKET |
| 21. | 05009 | 2" FLANGE BEARING |
| 22. | 70220 | 2" TAKE UP PLATE |

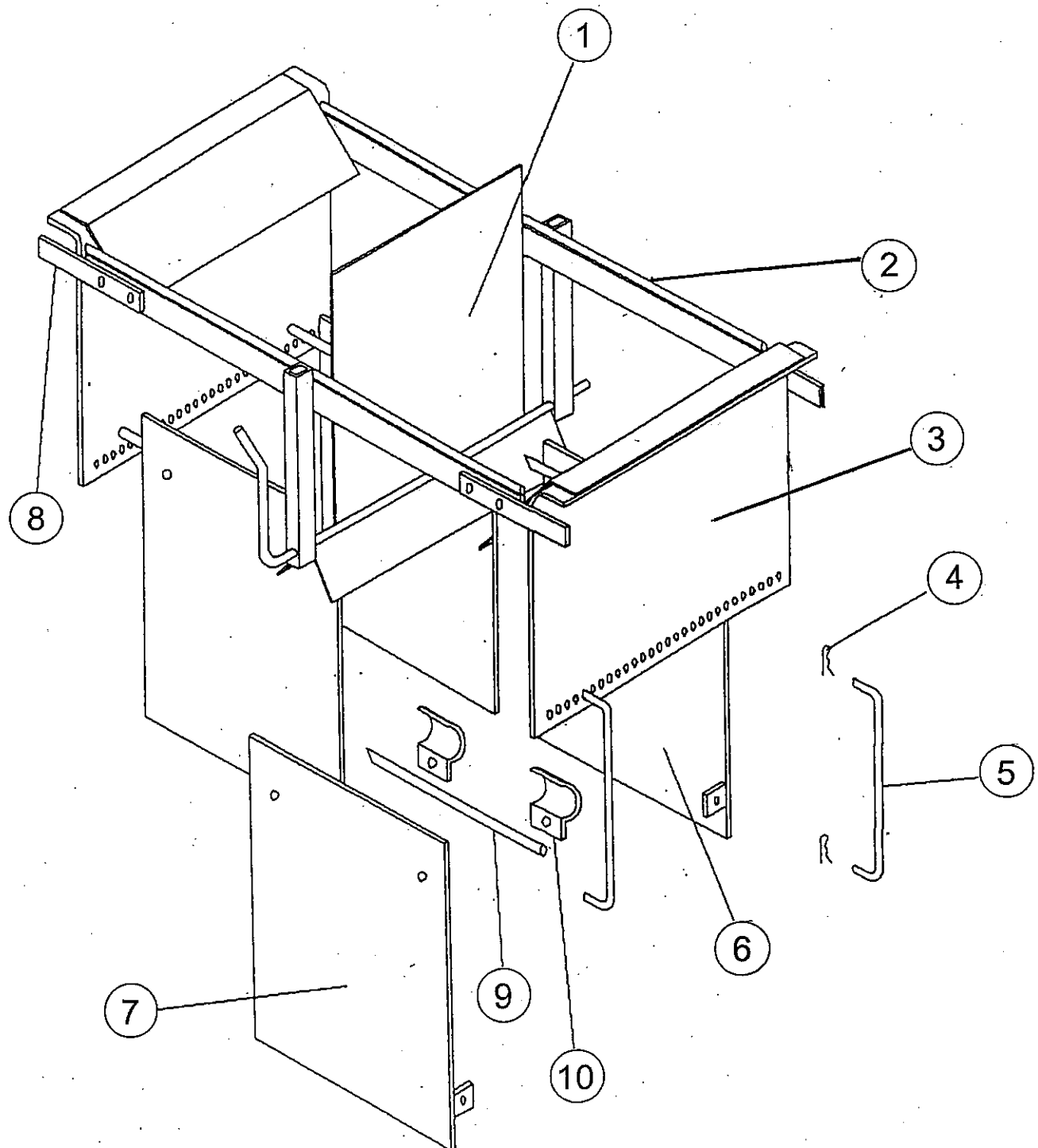
AIR-FLO FLD 'N DUMP COMBINATION PACKAGE



COMBINATION PACKAGE ILLUSTRATION

- | | | |
|-----|-------|----------------------------|
| 1. | 70034 | SINGLE GEAR BOX SHAFT |
| 2. | 70030 | DUAL GEAR BOX SHAFT |
| 3. | 12005 | HYDRAULIC MOTOR |
| 4. | 03052 | GEAR BOX |
| 5. | 06026 | DRIVE SPROCKET |
| 6. | 06024 | DRIVE SPROCKET (STEEL) |
| 7. | 05009 | 2" FLANGE BEARING |
| 8. | 19014 | KEYSTOCK |
| 9. | 70220 | 2" TAKE-UP PLATE |
| 10. | 70005 | TAKE UP PLATE GEARBOX SIDE |

FLO' N DUMP FRONT CHUTE ASSEMBLY

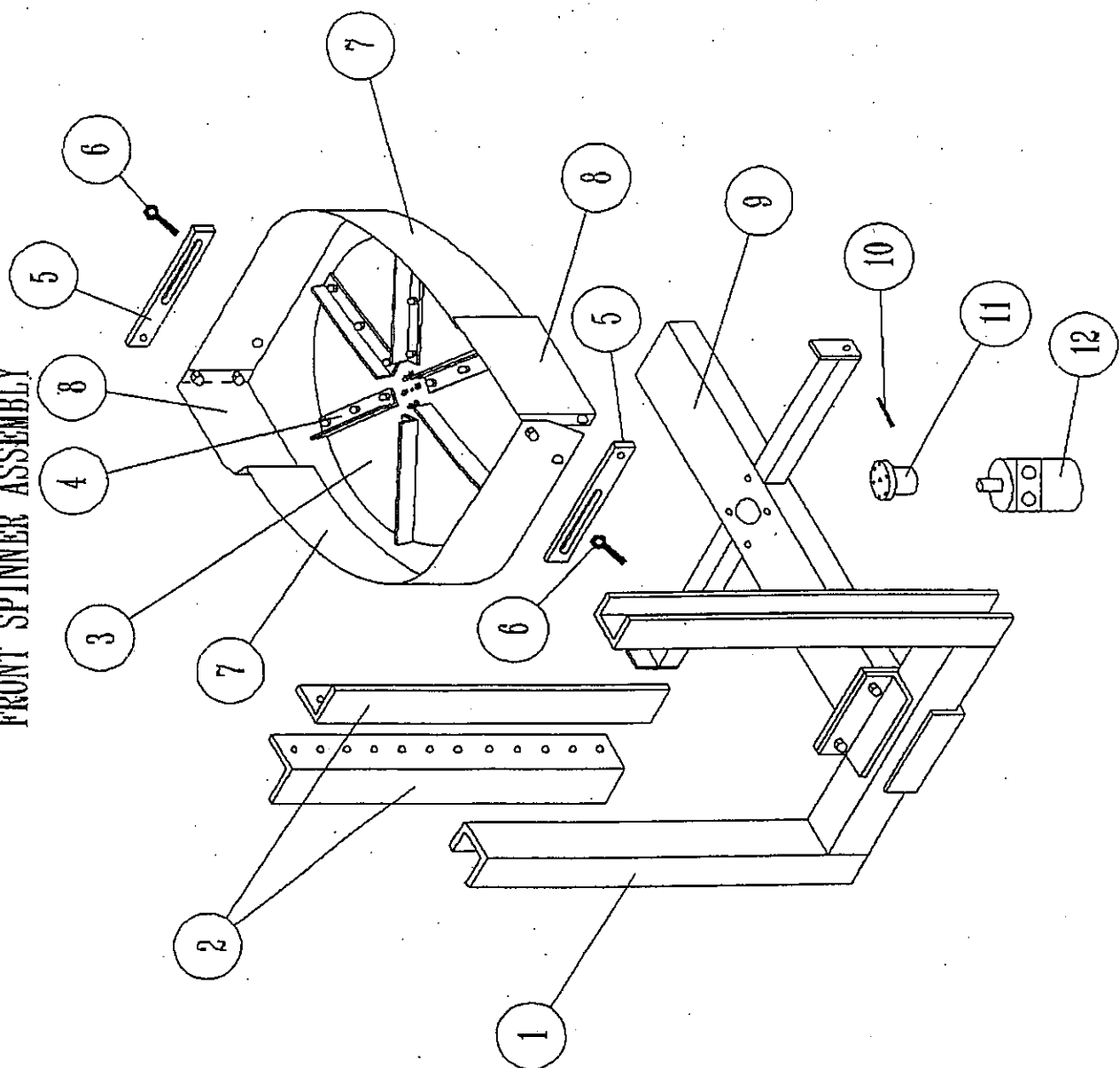


DISK # 751 - A:FRONTCHUTE

FRONT CHUTE ASSEMBLY ILLUSTRATION (NEW DESIGN)

1. 70247 CENTER DEFLECTOR FOR FRONT CHUTE
2. 70239 FRONT CHUTE CROSS MEMBER
3. 70240 FRONT CHUTE SIDE PLATES
4. 21005 HAIR PIN COTTER
5. 70137 DEFLECTOR ADJUSTMENT ARM
6. 70241 12" WIDE DEFLECTOR FLAPS
7. 70242 10" WIDE DEFLECTOR FLAPS
8. 70243 CHUTE MOUNT TABS
9. 70244 DEFLECTOR MOUNT ROD
10. 70245 DEFLECTOR MOUNT HOOKS
11. 70246 COMPLETE FRONT CHUTE ASSEMBLY

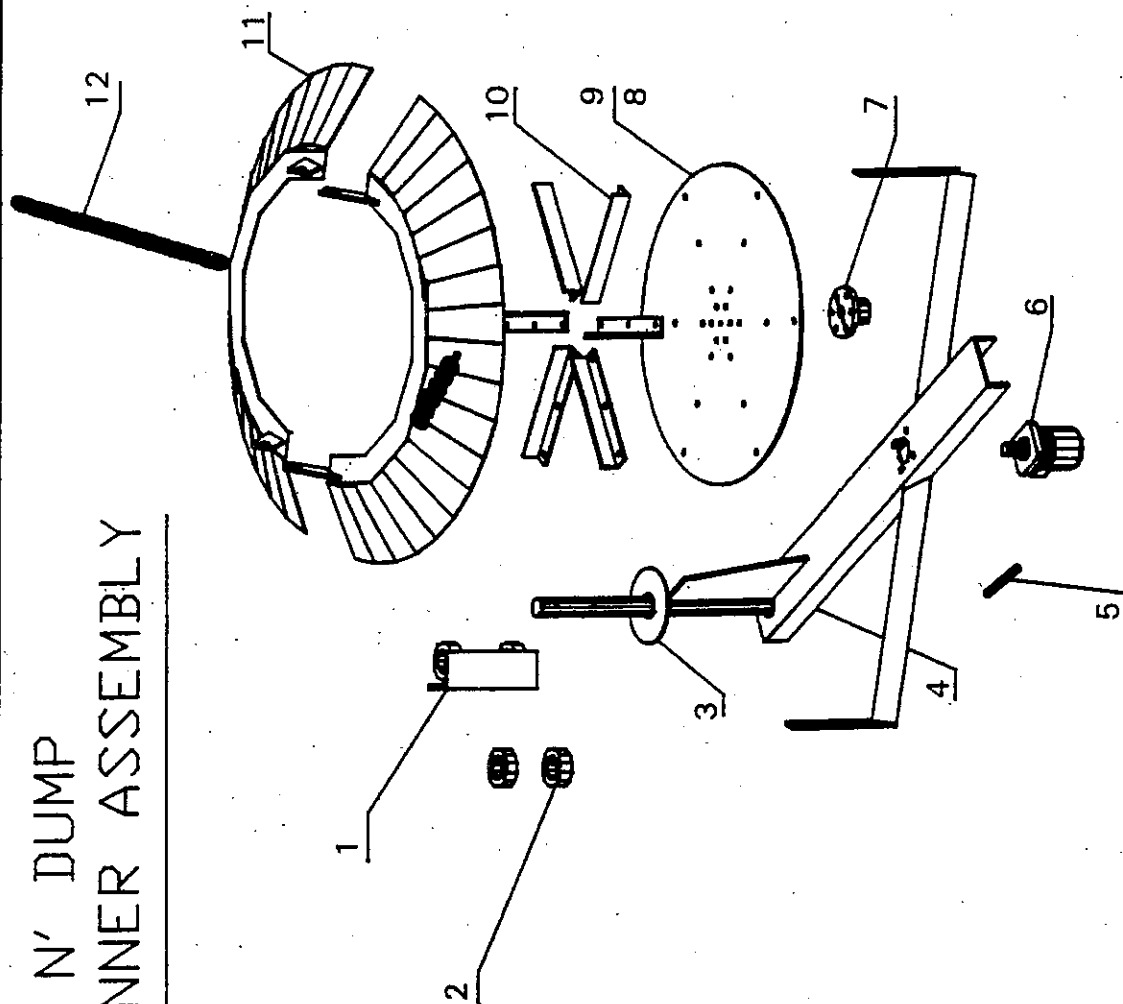
FLO'N DUMP FRONT SPINNER ASSEMBLY



FRONT SPINNER ILLUSTRATION

- | | | |
|-----|-------|---|
| 1. | 70035 | FRONT SPINNER MOUNT WITHOUT HOLES |
| 2. | 70248 | FRONT SPINNER MOUNT ANGLE WITH HOLES |
| 3. | 70129 | 24" DISK LESS VANES |
| 4. | 70003 | SPINNER VANES |
| 5. | 70009 | DOOR LINKAGE |
| 6. | 01081 | LEVER NUT |
| 7. | 70249 | PERMANENT DEFLECTOR (24" SPINNER ASSY) |
| 8. | 70250 | ADJUSTABLE DEFLECTOR (24" SPINNER ASSY) |
| 9. | 70251 | FRONT SPINNER ARM |
| 10. | 19011 | SPINNER HUB PIN |
| 11. | 06005 | SPINNER HUB |
| 12. | 12002 | HYDRAULIC MOTOR |
| 13. | 70002 | SPINNER DISC COMPLETE |
| 14. | 70141 | COMPLETE FRONT SPINNER LESS MOUNT |

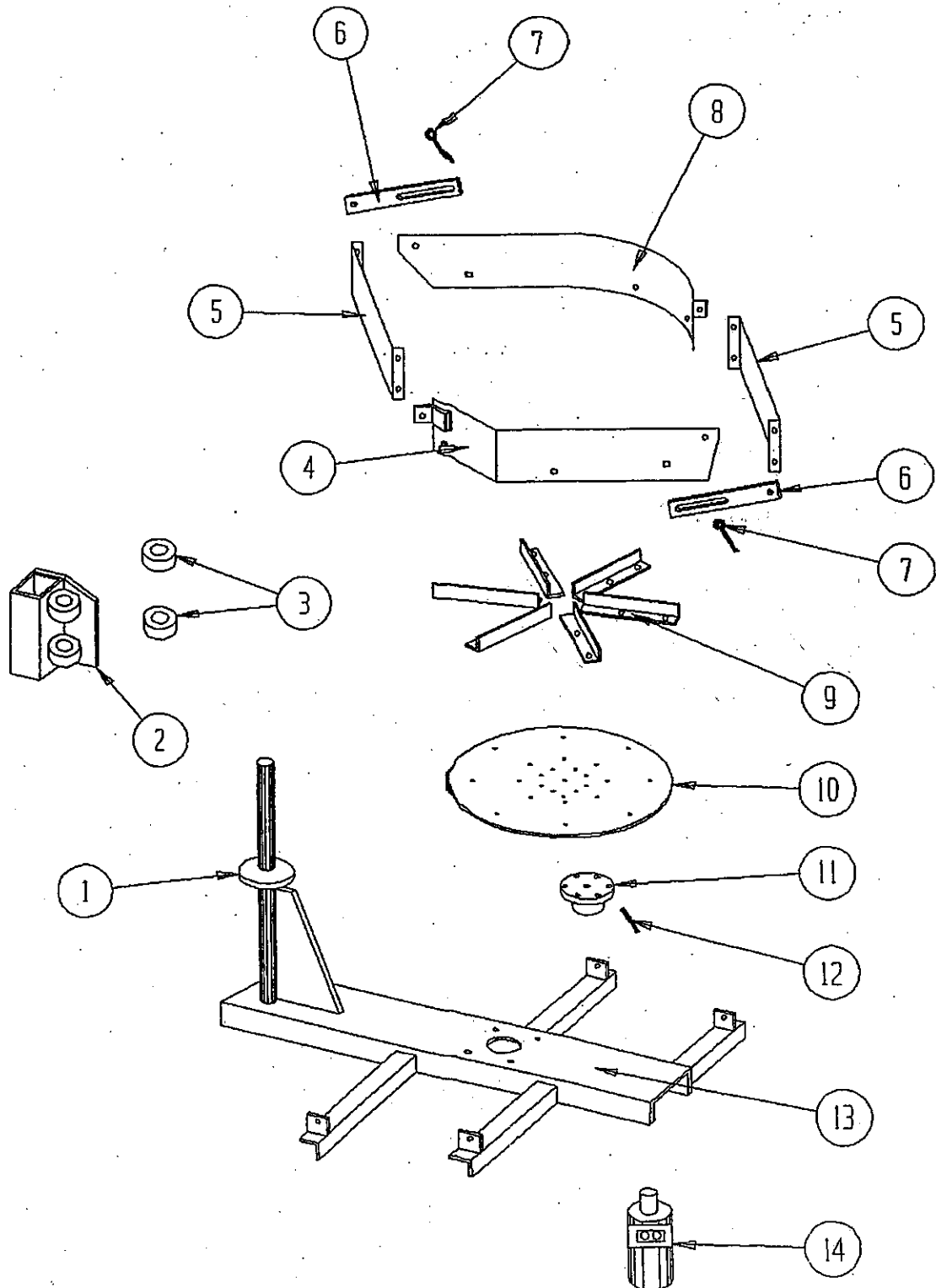
FLO N' DUMP REAR SPINNER ASSEMBLY



REAR SPINNER ASSEMBLY ILLUSTRATION

- | | | |
|-----|-------|------------------------|
| 1. | 70007 | MOUNTING BRACKET |
| 2. | 70006 | LOCK COLLARS |
| 3. | 70140 | LOCKING DISC |
| 4. | 70008 | SPINNER ARM |
| 5. | 19011 | SPINNER HUB PIN |
| 6. | 12002 | HYDRAULIC MOTOR |
| 7. | 06005 | SPINNER HUB |
| 8. | 70002 | SPINNER DISC COMPLETE |
| 9. | 70129 | SPINNER DISC ONLY |
| 10. | 70003 | SPINNER VANES |
| 11. | 70001 | DEFLECTORS |
| 12. | 04035 | DEFLECTOR CHAIN |
| 13. | 70024 | 24" REAR SPINNER ASSY. |

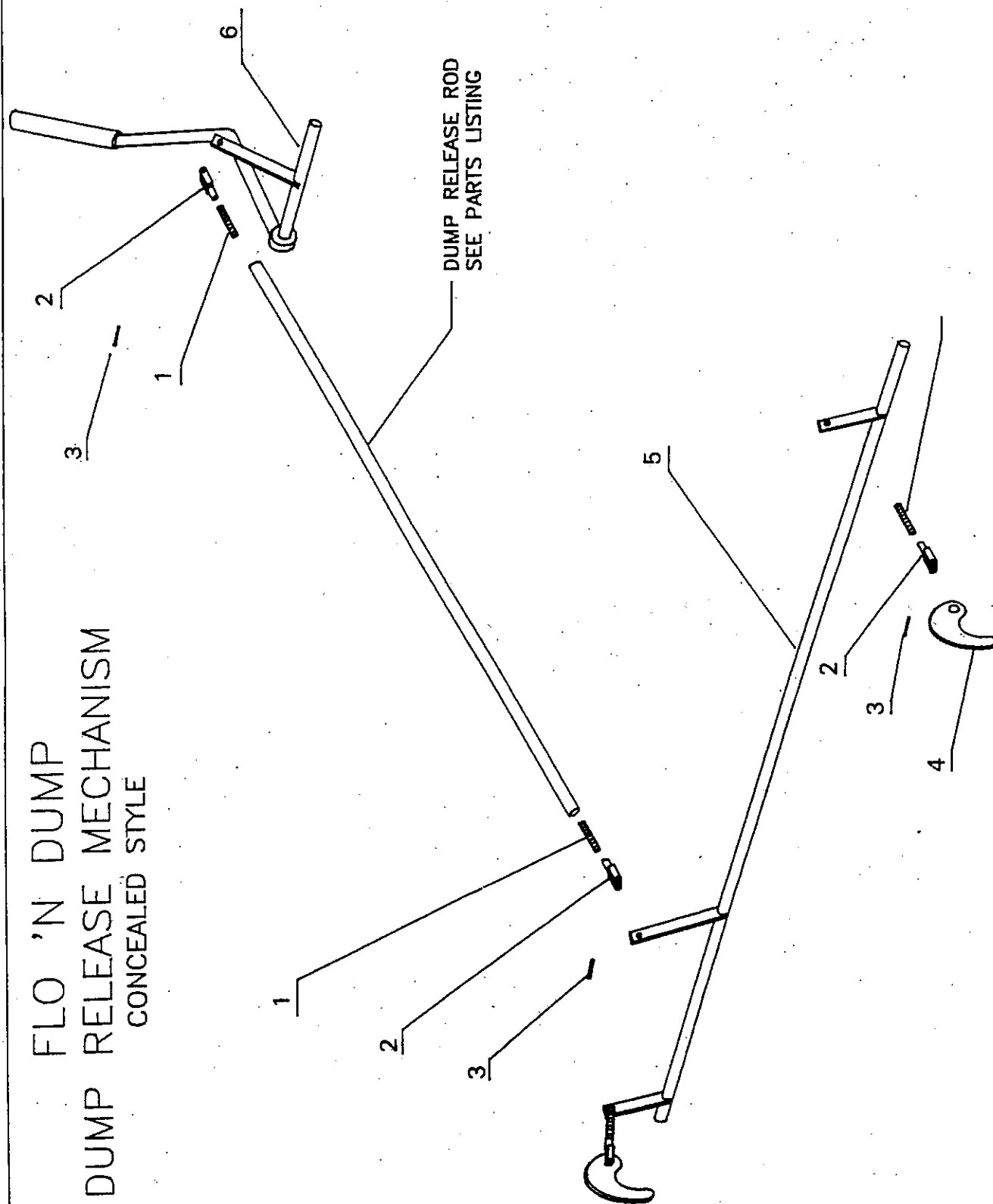
FLO'N DUMP REAR SPINNER ASSEMBLY (20" DISC)



FLO 'N DUMP **REAR SPINNER ILLUSTRATION**

DRAWING #	PART #	DESCRIPTION
1	70140	LOCKING DISC PLATE
2	70254	REAR SPINNER MOUNT BRACKET FOR 20" REAR SPINNER ARM.
3	70006	LOCK COLLARS
4	70255	FIXED DEFLECTOR WITH BREAK FOR 20" REAR SPINNER ASSY.
5	70237	ADJUSTABLE DEFLECTOR FOR 20" REAR SPINNER ASSY.
6	70009	DOOR LINKAGE
7	01081	LEVER NUT
8	70236	FIXED DEFLECTOR, ROLLED FOR 20" REAR SPINNER ASSY.
9	60009	SPINNER VANE
10	14018	SPINNER DISC LESS VANES (STEEL)
11	06005	SPINNER HUB (6 HOLE)
12	19011	SPINNER HUB PIN
13	70235	REAR SPINNER ARM ONLY. FOR 20" SPINNER ASSY.
14	12002	SPINNER MOTOR
NOT ILLUSTRATED ON DRAWING.		
15	70234	COMPLETE REAR 20" SPINNER ASSY. WITH MOUNTING HARDWARE
16	14006	20" POLY SPINNER DISC
17	14017	SPINNER DISC W/ VANES, (STEEL)

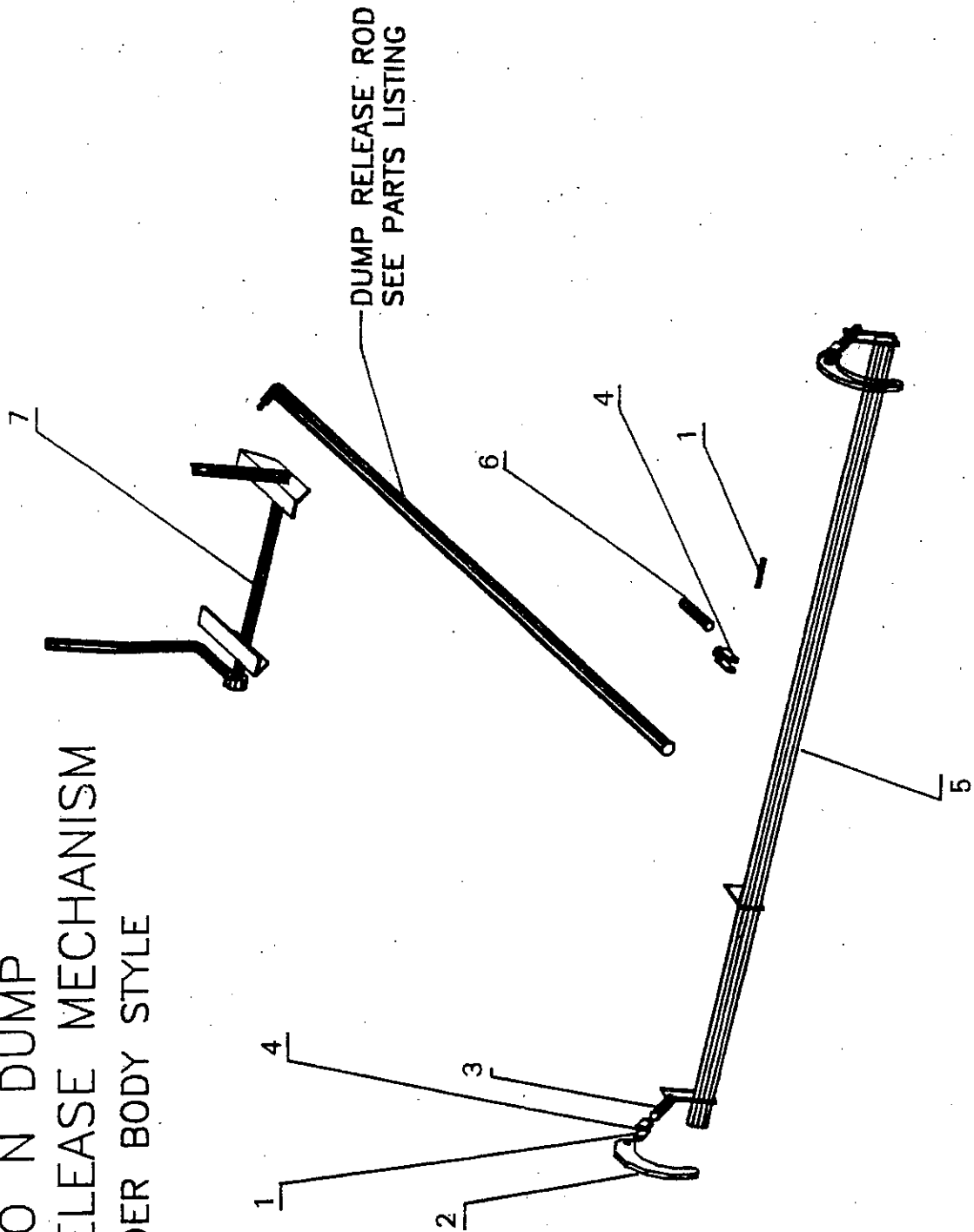
FLO 'N DUMP DUMP RELEASE MECHANISM CONCEALED STYLE



**TAILGATE RELEASE MECHANISM CONCEALED STYLE
ILLUSTRATION (CURRENT DESIGN)**

1. 5/8-18 THREADED ROD (PART OF DUMP RELEASE SHAFT)
2. 01095 YOLK
3. 01097 YOLK PIN
4. 70004 LOCKING DOGS
5. 70160 DUMP RELEASE SHAFT
6. 70040 DUMP RELEASE HANDLE ASSEMBLY
7. 01361 LOCKING DOG RELEASE ROD

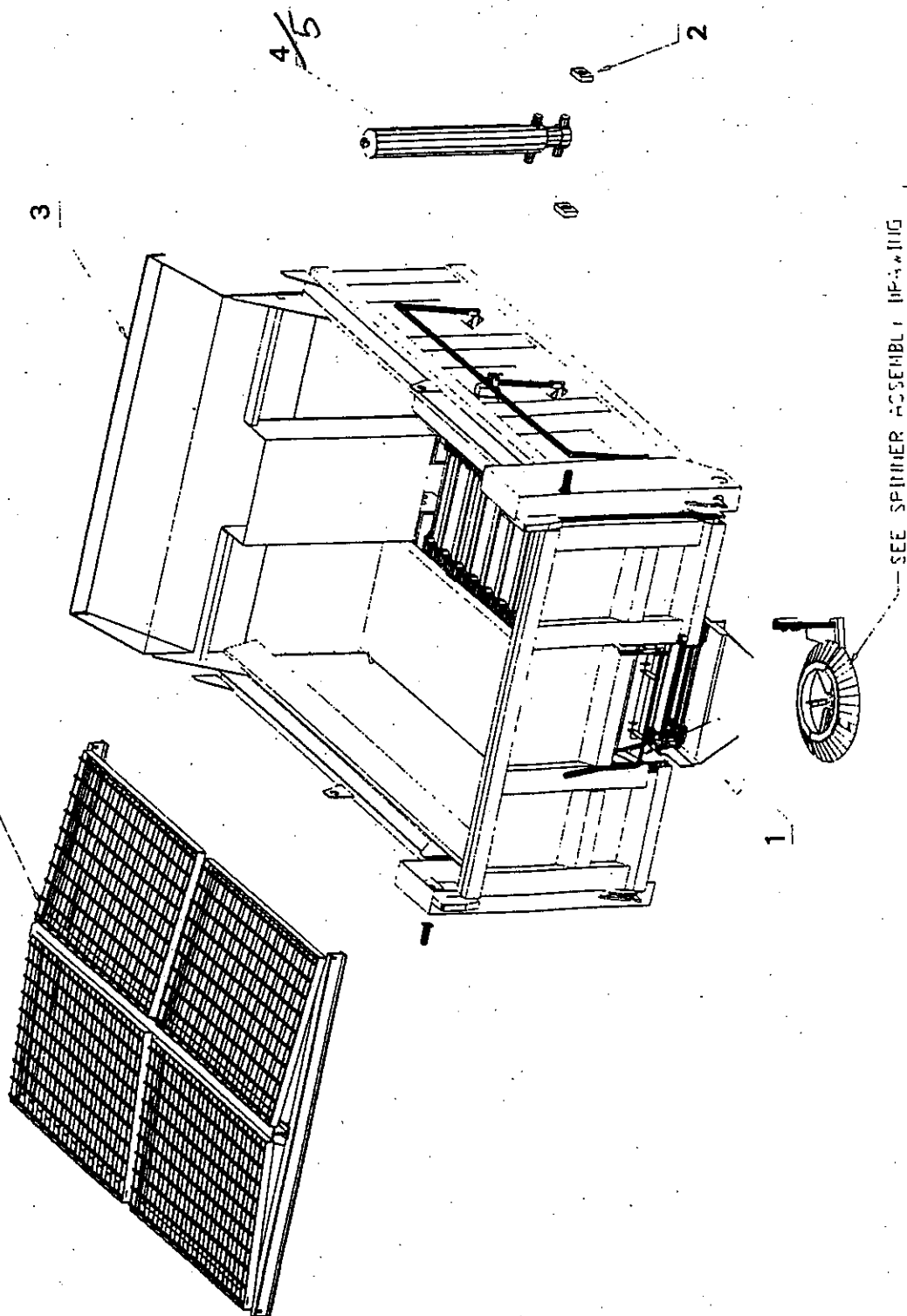
FLO N DUMP DUMP RELEASE MECHANISM UNDER BODY STYLE



**TAILGATE RELEASE MECHANISM (UNDER BODY STYLE)
ILLUSTRATION (PREVIOUS DESIGN)**

1. 01097 YOLK PIN
2. 70004 LOCKING DOGS
3. 01361 YOLK ROD
4. 01095 YOLK
5. 70157 DUMP RELEASE SHAFT
6. 5/8-18 THREADED ROD (PART OF RELEASE SHAFT)
7. 70143 DUMP RELEASE HANDLE ASSEMBLY

CLIPS
SEE PARTS LISTING

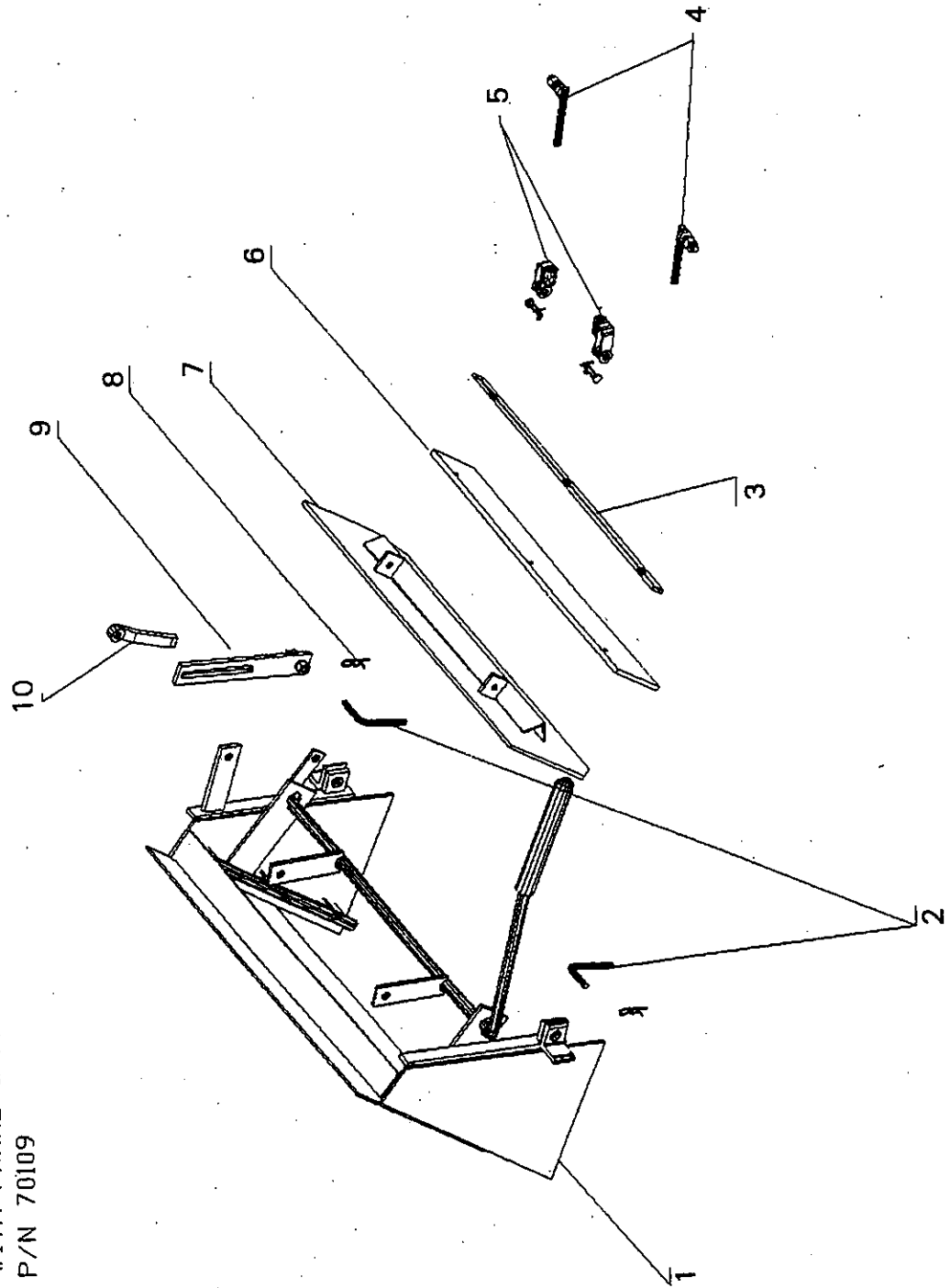


MISC. ILLUSTRATIONS

1. 70083 MATERIAL CHUTE (REAR)
2. 37006 CYLINDER BLOCKS
3. 70046 CAB SHIELD OPTION
4. 37002 HYDRAULIC CYLINDER 9 & 10 FT UNIT
5. 37003 HYDRAULIC CYLINDER 13 & 14 FT UNIT

FLO 'N DUMP DOOR ASSEMBLY

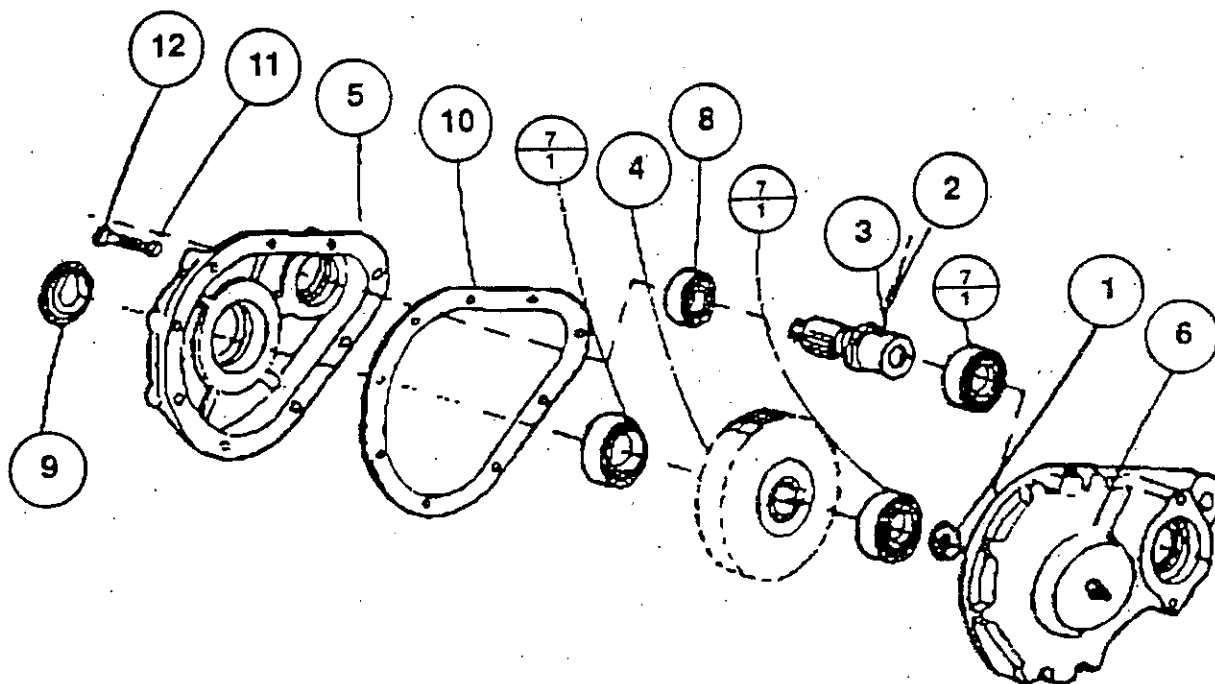
**COMPLETE DOOR ASSEMBLY
WITH FRAME & HARDWARE
P/N 70109



DOOR ASSEMBLY ILLUSTRATION

- | | | |
|-----|-------|---------------------------------|
| 1. | 70010 | DOOR HOUSING (WELDED ASSEMBLY) |
| 2. | 70014 | DOOR HOUSING LOCK PINS |
| 3. | 70012 | FRONT RUBBER MOUNT |
| 4. | 70013 | DOOR YOKE THREADED ROD ASSEMBLY |
| 5. | 01094 | DOOR YOKE |
| 6. | 02005 | FRONT RUBBER |
| 7. | 70011 | DOOR ASSEMBLY |
| 8. | 21006 | COTTER PINS |
| 9. | 70009 | DOOR LINKAGE |
| 10. | 01081 | LEVER NUT |

FND GEARBOX 6:1



ITEM	PART NO.	DESCRIPTION
1.	03037	WASHER
2.	03038	PLUG-DELRIN
3.	03039	GEAR-PINION
4.	03040	GEAR-DRIVEN
5.	03041	HOUSING-INBOARD
6.	03042	HOUSING-OUTBOARD
7.	03043	BEARING
8.	03044	BEARING
9.	03045	SEAL-OIL
10.	03046	GASKET
11.	03047	WASHER-LOCK
12.	03048	SCREW-CAP

PARTS NOT ILLUSTRATED ON DIAGRAMS

<u>PART NO.</u>	<u>DESCRIPTION</u>
03030	GEAR BOX 6 TO 1 WITH RATE SENSOR
09006	POLY SPINNER DISC (24")
13010	CAB CONTROL VALVE-HYDRAULIC-10/30
13011	CAB CONTROL VALVE-HYDRAULIC-10/15
13012	REVERSING VALVE
37005	HYDRAULIC CYLINDER CRADLE FOR M130
37007	HYDRAULIC CYLINDER CRADLE M82
39003	AIR-CYLINDER WITH CLEVIS
39004	AIR-CYLINDER SEAL KIT
39005	AIR-CYLINDER PISTON KIT
70017	TAILGATE HINGE PIN
70024	COMPLETE SPINNER ASSEMBLY DISC WITH VANES DEFLECTORS, MOTOR & MOUNTING BRACKET REAR SPREAD (LESS MATERIAL CHUTE)
70026	BODY PROP (R.H.) WITH POCKET 11'-18' MODELS
70042	FRONT TAKE UP CONVERSION KIT (OLD STYLE)
70047	FLO'N DUMP TAILGATE (FITS 9' & 10')
70048	FLO'N DUMP TAILGATE (FITS 11'-18')
70049	HINGE ASSY. - ALL FND
70056	STONE SPREADER APRON
70058	CONVEYOR COVER PLATE 9'
70059	CONVEYOR COVER PLATE 10'
70060	CONVEYOR COVER PLATE 11'
70061	CONVEYOR COVER PLATE 12'
70062	CONVEYOR COVER PLATE 13'
70063	CONVEYOR COVER PLATE 14'
70064	CONVEYOR COVER PLATE 15'
70065	CONVEYOR COVER PLATE 16'
70066	CONVEYOR COVER PLATE 17'
70067	CONVEYOR COVER PLATE 18'
70073	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 9'
70074	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 10'
70075	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 11'
70076	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 12'
70077	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 13'
70078	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 14'
70079	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 15'
70080	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 16'
70081	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 17'
70082	FLO'N DUMP DOUBLE BAR FLIGHT CHAIN 18'
70090	FLO'N DUMP SINGLE BAR FLIGHT CHAIN 9'
70091	FLO'N DUMP SINGLE BAR FLIGHT CHAIN 10'
70092	FLO'N DUMP SINGLE BAR FLIGHT CHAIN 11'

PARTS NOT ILLUSTRATED ON DIAGRAMS

<u>PART NO.</u>	<u>DESCRIPTION</u>
70093	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 12'
70094	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 13'
70095	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 14'
70096	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 15'
70097	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 16'
70098	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 17'
70099	FLO 'N DUMP SINGLE BAR FLIGHT CHAIN 18'
70109	COMPLETE DOOR ASSEMBLY W/ FRAME & HARDWARE
70117	UNDER BODY PLATE 9'
70118	UNDER BODY PLATE 10'
70119	UNDER BODY PLATE 11'
70120	UNDER BODY PLATE 12'
70121	UNDER BODY PLATE 13'
70122	UNDER BODY PLATE 14'
70123	UNDER BODY PLATE 15'
70124	UNDER BODY PLATE 16'
70125	UNDER BODY PLATE 17'
70126	UNDER BODY PLATE 18'
70141	COMPLETE SPINNER ASSEMBLY DISC W/ VANES, DEFLECTORS & MOTOR-FRONT SPREAD (DOES NOT INCLUDE FRONT SPINNER MOUNT NOR MATERIAL CHUTE)
70144	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 9'
70145	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 10'
70146	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 11'
70147	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 12'
70148	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 13'
70149	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 14'
70150	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 15'
70151	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 16'
70152	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 17'
70153	SIDE HANDLE FOR MOVEABLE HOPPER SIDES 18'
70158	FLO 'N DUMP DRAG CHAIN SINGLE BAR-PER FT.
70159	FLO 'N DUMP DRAG CHAIN DOUBLE BAR-PER FT.
70161	DUMP RELEASE ROD 9' (CONCEALED STYLE)
70162	DUMP RELEASE ROD 10' (CONCEALED STYLE)
70163	DUMP RELEASE ROD 11' (CONCEALED STYLE)
70164	DUMP RELEASE ROD 12' (CONCEALED STYLE)
70165	DUMP RELEASE ROD 13' (CONCEALED STYLE)
70166	DUMP RELEASE ROD 14' (CONCEALED STYLE)
70167	DUMP RELEASE ROD 15' (CONCEALED STYLE)
70168	DUMP RELEASE ROD 16' (CONCEALED STYLE)
70169	DUMP RELEASE ROD 17' (CONCEALED STYLE)
70170	DUMP RELEASE ROD 18' (CONCEALED STYLE)
70189	DUMP RELEASE ROD 9' (UNDER BODY STYLE)
70190	DUMP RELEASE ROD 10' (UNDER BODY STYLE)
70191	DUMP RELEASE ROD 11' (UNDER BODY STYLE)
70192	DUMP RELEASE ROD 12' (UNDER BODY STYLE)
70193	DUMP RELEASE ROD 13' (UNDER BODY STYLE)
70194	DUMP RELEASE ROD 14' (UNDER BODY STYLE)
70195	DUMP RELEASE ROD 15' (UNDER BODY STYLE)

PARTS NOT ILLUSTRATED ON DIAGRAMS

<u>PART NO.</u>	<u>DESCRIPTION</u>
70196	DUMP RELEASE ROD 16' (UNDER BODY STYLE)
70197	DUMP RELEASE ROD 17' (UNDER BODY STYLE)
70198	DUMP RELEASE ROD 18' (UNDER BODY STYLE)
70199	MVBL. HOPPER SIDE ONLY EA. 9'-SPECIFY R OR L
70200	MVBL. HOPPER SIDE ONLY EA. 10'-SPECIFY R OR L
70201	MVBL. HOPPER SIDE ONLY EA. 11'-SPECIFY R OR L
70202	MVBL. HOPPER SIDE ONLY EA. 12'-SPECIFY R OR L
70203	MVBL. HOPPER SIDE ONLY EA. 13'-SPECIFY R OR L
70204	MVBL. HOPPER SIDE ONLY EA. 14'-SPECIFY R OR L
70205	MVBL. HOPPER SIDE ONLY EA. 15'-SPECIFY R OR L
70206	MVBL. HOPPER SIDE ONLY EA. 16'-SPECIFY R OR L
70207	MVBL. HOPPER SIDE ONLY EA. 17'-SPECIFY R OR L
70208	MVBL. HOPPER SIDE ONLY EA. 18'-SPECIFY R OR L
91131	TOP SCREENS FLO'N DUMP 9'
91132	TOP SCREENS FLO'N DUMP 10'
91133	TOP SCREENS FLO'N DUMP 11'
91134	TOP SCREENS FLO'N DUMP 12'
91135	TOP SCREENS FLO'N DUMP 13'
91136	TOP SCREENS FLO'N DUMP 14'
91137	TOP SCREENS FLO'N DUMP 14'
91138	TOP SCREENS FLO'N DUMP 15'
91139	TOP SCREENS FLO'N DUMP 16'
91140	TOP SCREENS FLO'N DUMP 17'
91141	TOP SCREENS FLO'N DUMP 18'

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