

"SJ" TAILGATE SPREADER

BOTTOM OPENING SPREADER FOR ONE TON TRUCKS



THE BEST SAFETY DEVICE IS A CAREFUL OPERATOR!

SAFETY ALERT SYMBOL



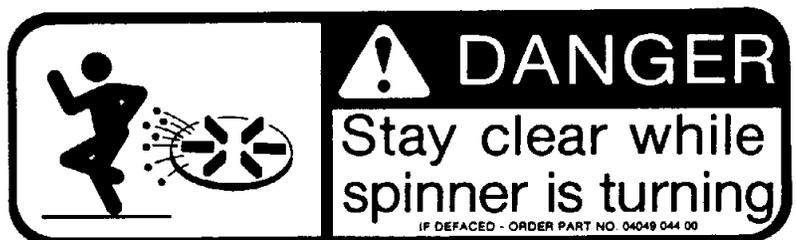
THIS SYMBOL MEANS ATTENTION!
BECOME ALERT!
YOUR SAFETY IS INVOLVED!
PLEASE READ AND UNDERSTAND COMPLETELY BEFORE DOING!

SAFE EQUIPMENT INSTALLERS AND OPERATORS:



TURN OFF ALL POWER BEFORE PERFORMING ANY SERVICE OPERATIONS

- FOLLOW RECOMMENDED OPERATING PROCEDURES.
- KEEP EQUIPMENT IN SAFE OPERATING CONDITION AT ALL TIMES.
- RECOGNIZE AND AVOID HAZARDS WHILE OPERATING, SERVICING AND MAINTAINING EQUIPMENT.



NOTICE: Instructional Material And Parts Lists Included In This Manual Are Subject To Change Without Notice.

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"SJ" TAILGATE SPREADER

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MOUNTING INSTRUCTIONS

FOR

"S" SERIES TAILGATE SPREADERS

General

This spreader is designed to mount rigidly on the rear of the truck dump body, below the tailgate, and supported by brackets bolted to the rub rails of the dump body. Instructional drawings are included in this manual to show the details on pages 6 & 7.

Caution!

Support spreader and other heavy components solidly when positioning for mounting on truck dump body.

Important!

On occasion, due to improper handling during shipment or storage, the vertical ends of the trough get bent in or out slightly. Be sure these are square and true before installation. Once installed, the mounting brackets should prevent further deformation.

1. Position the spreader under the dump body tailgate with the auger drive housing to the right side of the truck. The trough lip on the forward side of the spreader should be as close as possible to the cross member under the floor of the dump body.

The tailgate of the dump body should lay down horizontally over the spreader, yet the spreader must be mounted up under the tailgate as high as possible.

2. After the spreader has been positioned as desired, the spreader mounting brackets may be attached. See instructions with drawing on page 6, for mounting kit furnished with your spreader.
3. If there is a gap between the trough lip and the dump body rear cross member, a "spillboard" of about 3/16" x 2" steel may be welded or bolted to the forward lip of the spreader to form a seal under the dump body floor. It may have to be notched or cut to fit around tailgate latches or other obstructions on the rear of the dump body.
4. Tailgate shields (#06024 000 00), if required, are bolted or welded to the inside of the tailgate to prevent material spillage at the ends of the spreader.
5. The spinner assembly is next hung on its hinge pin and the parallel linkage installed. See instructional drawing included in this manual on page 7.

The frame bar (#00100 715 00) is welded to the outside of the truck's main frame side rail - left hand side - and positioned so that the center line of the hole is exactly 11.5" below the dump body hinge pin center line on a vertical line.

If this point cannot be made because of interference from a spring hanger or unusual dump body design, or other reasons, then the following steps must be taken.

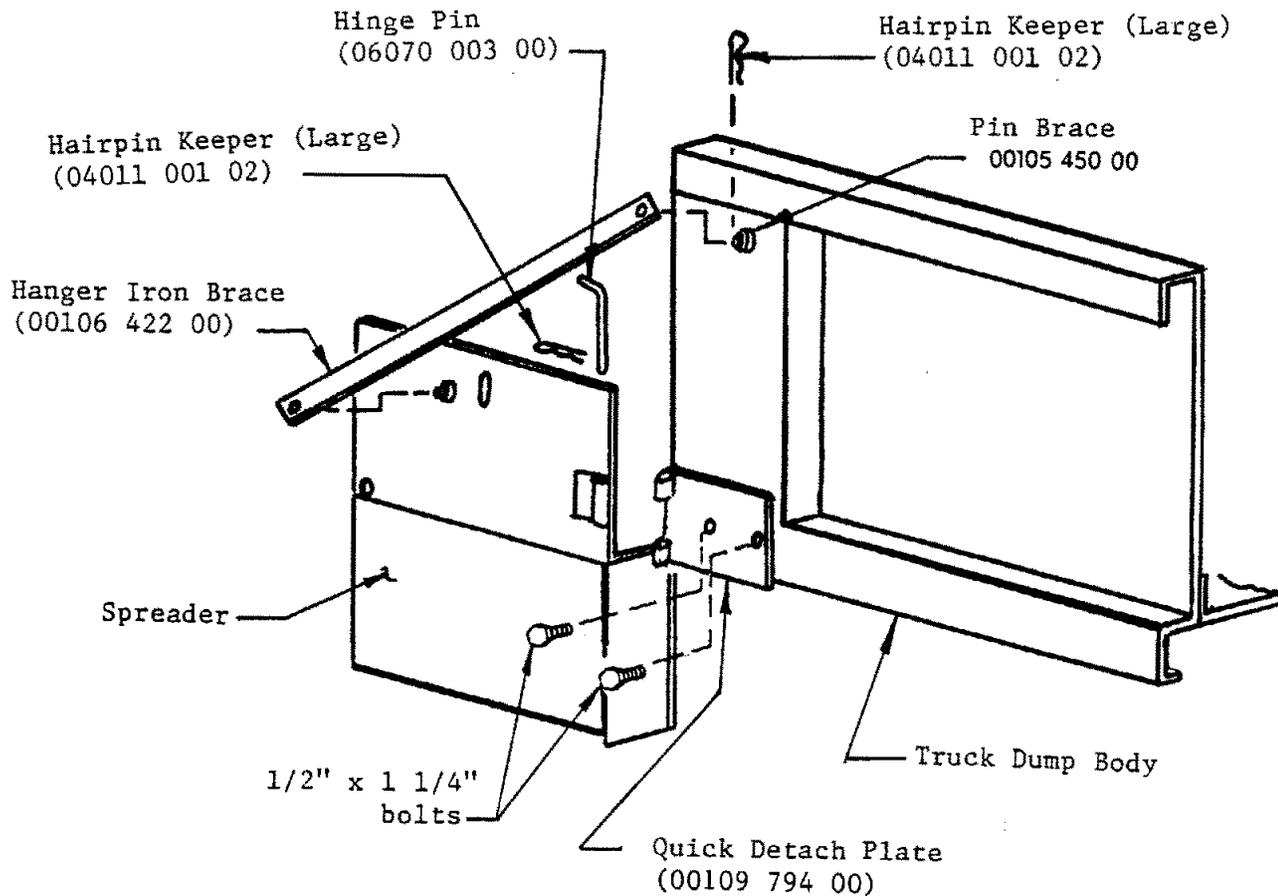
- a. Locate the hinge point in the frame bar ahead and/or below the point as described above but as close as possible to that point.
- b. Modify the spinner frame hinge point by cutting off the hinge lug on the bottom and moving it, or adding another ahead and/or below the same distance and direction as the hinge point in the frame bar was moved.
- c. Install the two linkage rods (#08036 001 00), one in the spinner lug and one in the frame bar.

Keeping the spinner assembly level and centered between extreme left and right positions, weld linkage rods solidly at lapped joint.

6. Hydraulic quick disconnects should be mounted under the rear end of truck frame. If this is not possible, locate quick disconnects as far back as possible and angle downward with 45° elbows.

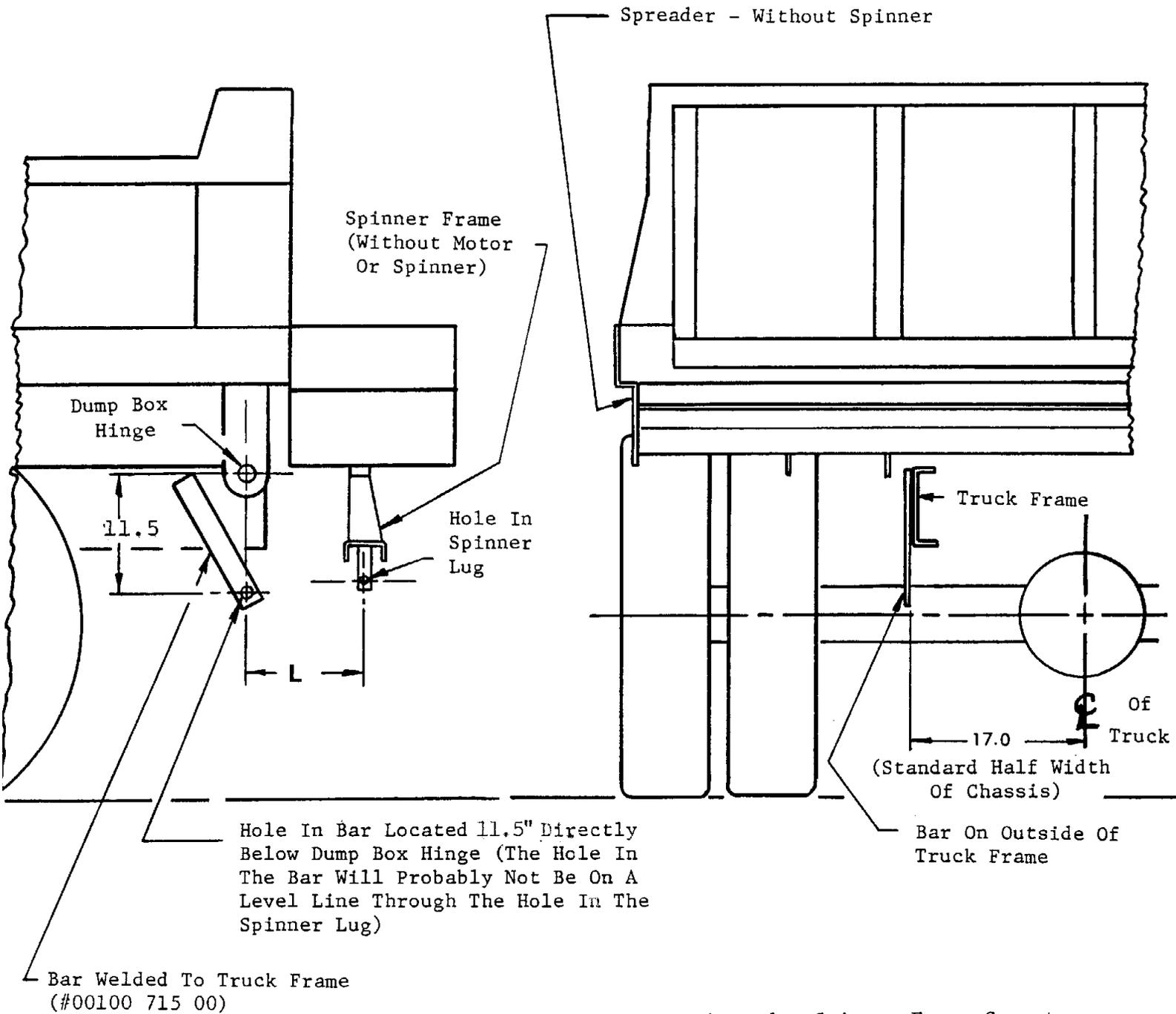
IMPORTANT!!

CHECK CLEARANCES BETWEEN QUICK DISCONNECTS AND BOTTOM DOOR. ALSO, BETWEEN SPINNER MOTOR AND GROUND DURING INITIAL RAISING OF DUMP BODY.

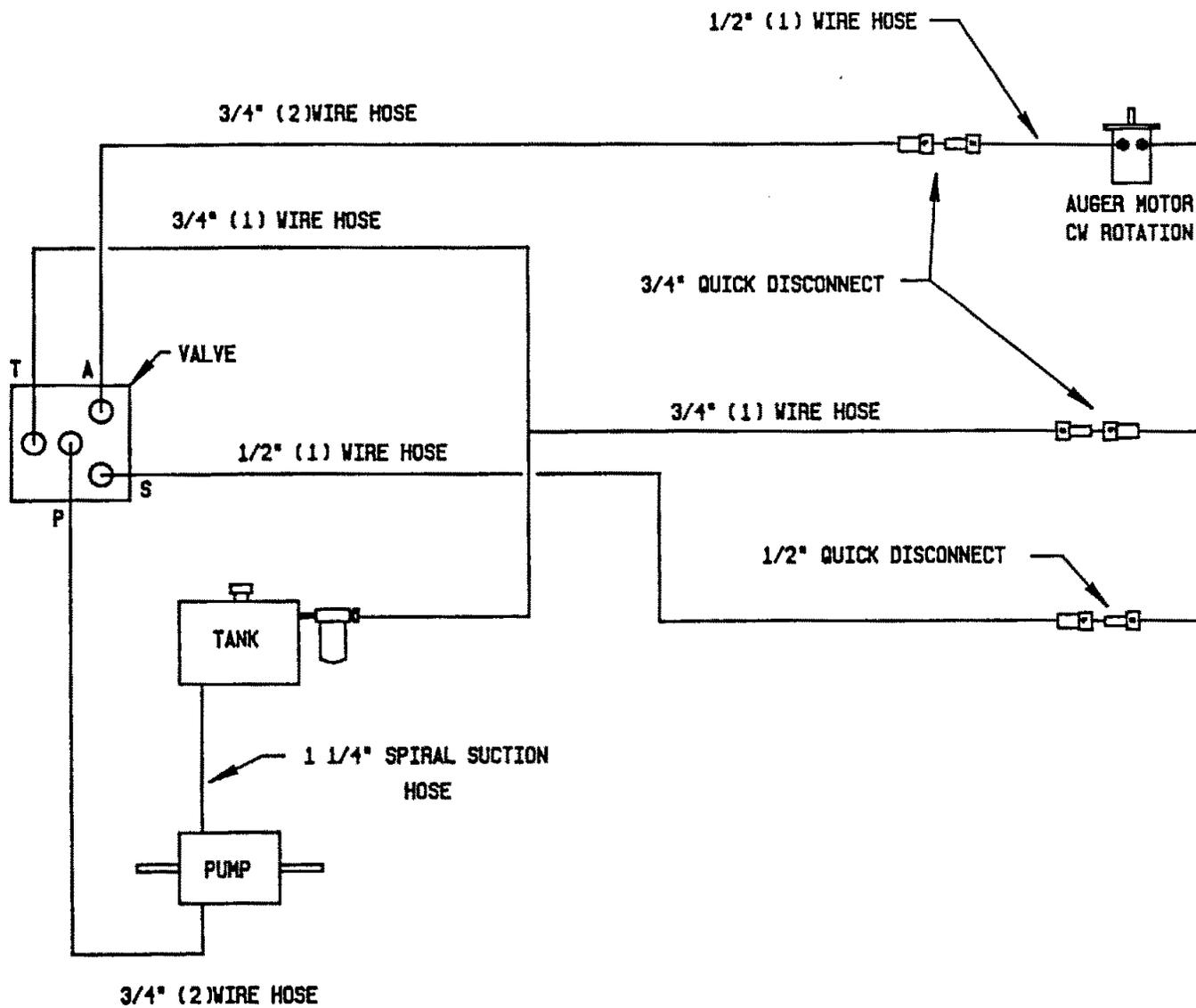


- 1) Position spreader against rear of truck to desired height.
- 2) Center dump body side plate bracket over dump body rub rail and flush with rear end of dump body.
- 3) Drill two (2) holes for 1/2" bolts through bracket and rub rail and bolt solidly.
- 4) Position hanger iron brace to best suit conditions.
- 5) Locate pin brace on dump body approximately as shown using brace for exact positioning. (Brace may require bending for proper fit).
- 6) Weld pin brace solidly to dump body and pin with hairpin keeper.

INSTRUCTIONAL DRAWING SHOWING "PARALLEL LINKAGE"
INSTALLATION FOR SPINNER FRAME



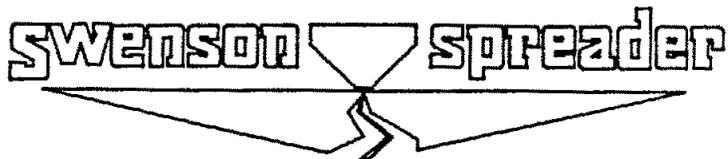
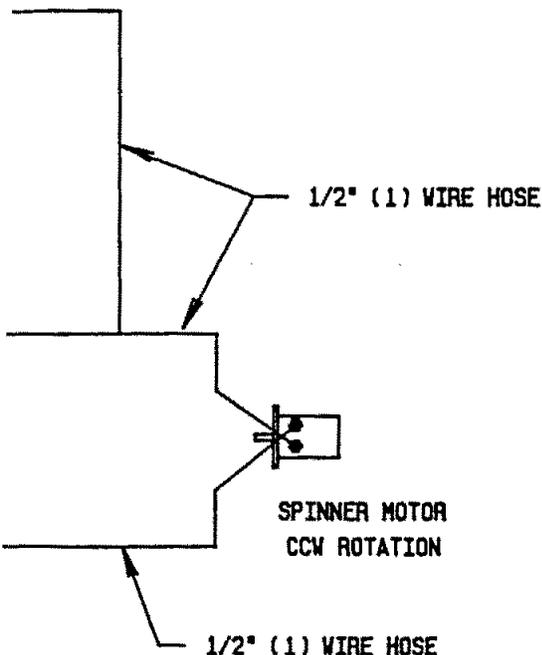
Note - If Hole Under Spinner Frame Cannot Be Located As Shown, Modifications Must Be Made To Spinner Frame - See Instructions!



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INSTALLATION NOTES

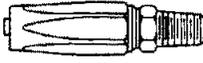
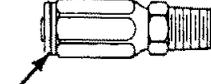
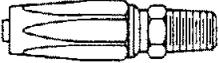
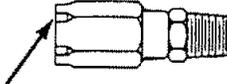
1. HYDRAULIC COMPONENTS SHOULD BE KEPT AS CLEAN AS POSSIBLE DURING ASSEMBLY OPERATIONS.
2. GALVANIZED PIPE AND FITTINGS MUST NOT BE USED. FLAKING OF GALVANIZED MATERIAL CAN DAMAGE HYDRAULIC COMPONENTS.
3. PIPE JOINT SEALANT, COMPATIBLE WITH HYDRAULIC OIL, MUST BE USED ON ALL SCREWED FITTINGS. (TEFLON TAPE IS NOT RECOMMENDED)
4. SUFFICIENT HOSE SHOULD BE ALLOWED FOR RAISING DUMP BODY WITHOUT KINKING OR STRETCHING HOSE.
5. HOSE SHOULD BE PROTECTED WHERE SEVERE WEAR MAY BE CAUSED BY VIBRATION OR SLIDING MOVEMENT.
6. LONG HOSE RUNS SHOULD BE SUPPORTED BY WIRE TIE OR CLAMPS
7. (AUGER, SPINNER)
PRESSURE AND RETURN HOSES MAY BE REVERSED FOR PROPER MOTOR ROTATION.
8. THREE HOSE LINES TO REAR OF TRUCK MAY BE INSTALLED INSIDE OF TRUCK FRAME, UNDER DUMP BODY FLOOR, AND SECURED IN PLACE.
9. USE HOSE MANUFACTURERS RECOMMENDED REUSEABLE HOSE END FITTINGS.
10. TO ELIMINATE HOSE TWISTING, ALLOW HOSE END CLAMP TO REMAIN LOOSE UNTIL FITTINGS ARE TIGHT



RECOMMENDED HYDRAULIC PUMPING
DIAGRAM
FOR "S" SERIES TAILGATE SPREADERS

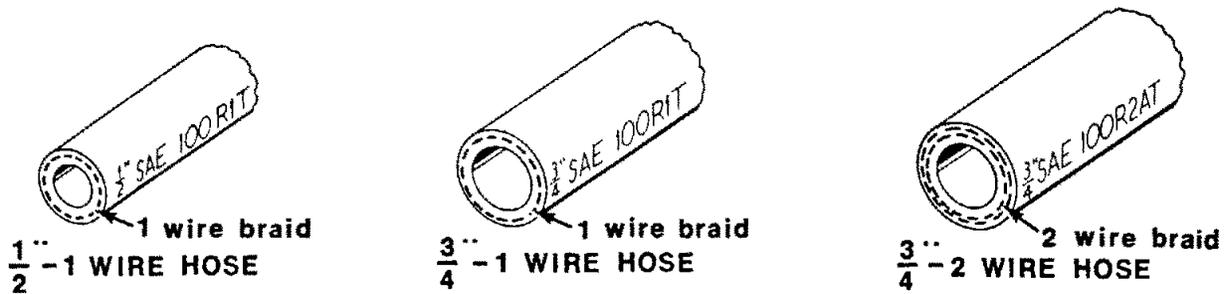
HOSE END ASSEMBLY INSTRUCTIONS

FITTING IDENTIFICATION

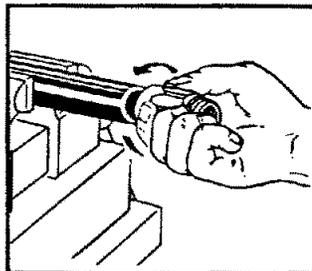
	GATES	AEROQUIP	PARKER
1 1/2" 1 WIRE	 Single Groove	 Plain Machining	 Plain Shoulder
3/4" 1 WIRE	 Single Groove	 Plain Machining	 Plain Shoulder
3/4" 2 WIRE	 Double Groove	 Large Groove	 Machined Notches

HOSE IDENTIFICATION

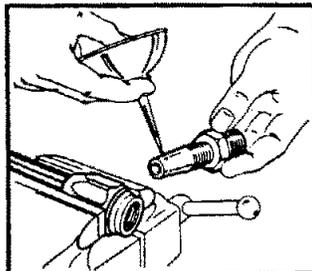
(Locate SAE number printed on hose as shown below)



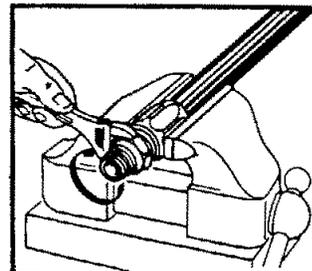
ASSEMBLY INSTRUCTIONS



Step 1
Liberally oil hose cover with lube oil, place hose in vise just tight enough to prevent it from turning. Screw socket onto hose counter-clockwise until it bottoms. Back off 1/2 turn.



Step 2
Oil nipple threads and inside of hose liberally.

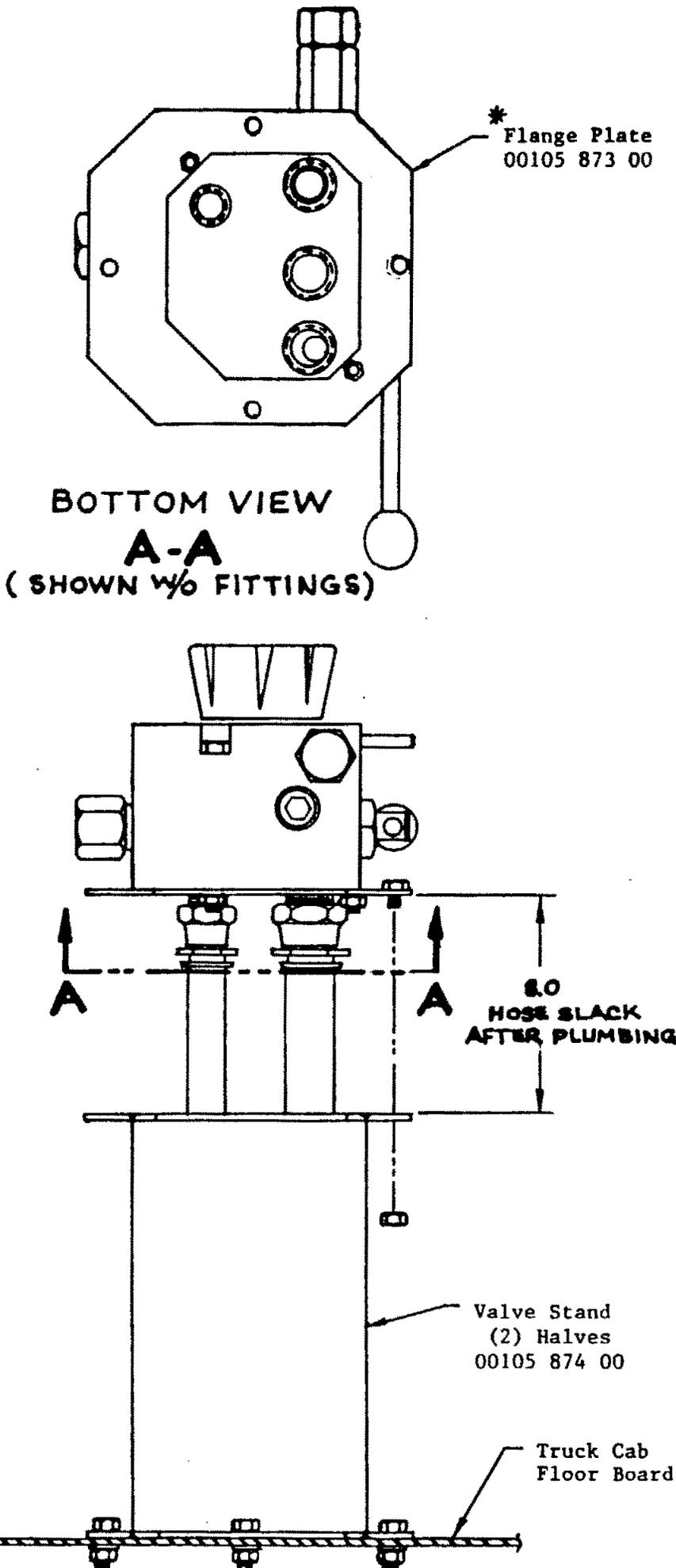


Step 3
Screw nipple clockwise into socket and hose. Leave 1/2" to 3/16" clearance between nipple hex and socket. Clean and inspect all assemblies. Disassemble in reverse order.

NOTES

**DUAL FLOW VALVE/STAND
INSTALLATION INSTRUCTIONS**

1. **IMPORTANT:** A pipe joint sealant compatible with hydraulic oil must be applied to all screw fittings. (Teflon Tape Sealant Is Not Recommended)
2. Hose ends connected to flow valve must be of the "swivel" type.
3. **CAUTION:** Over tightening of the fittings in flow valve may cause damage to valve body.
4. Approximately 8" of hose slack must be realized between the flow valve and valve stand after the flow valve has been completely plumbed. If this condition does not exist after the plumbing has been completed, removal of valve will require hoses to be removed at opposite end of valve.
5. Assembly of valve on stand:
 - A. Cut a 5" x 5" square opening in floor board of truck where the valve stand is to be located.
 - B. Bolt valve stand halves together forming a "box" over the 5" x 5" square opening. **NOTE:** When bolting valve stand halves in place, make sure holes in flanges align with holes in flange plate.*
 - C. Bolt flange plate to VALVE (Use (2) 1/4" x 3" bolts, lockwashers, etc.)
 - D. Insert hoses through floor opening and valve stand and connect appropriate hoses (see instruction #1 thru #4) to flow valve.
 - E. Bolt flange plate to valve stand flanges.
6. Valve may be operated in any position.
7. Valve on-off lever should be in off position when not in use or when spreader is removed from truck.



VALVE STAND KIT
(00001 692 00)

<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
00105 874 00	2	Valve Stand (Upright)
00105 873 00	1	Flange Plate Valve Stand
04003 001 10	2	1/4" x 3" H.H. Bolt
04003 001 05	8	1/4" x 1.0" H.H. Bolt
04003 801 07	10	1/4" H.H. Nut
04004 001 05	10	1/4" Lockwasher

HYDRAULIC KIT
(8-11' Dump Body)
(00001 206 00)

<u>PART NO.</u>	<u>QTY.</u>	<u>DESCRIPTION</u>
04120 003 01	2	Hose, 1/2" x 48" x (1) Wire
04120 003 12	2	Hose, 1/2" x 60" x (1) Wire
04120 026 04	1	Hose, 1/2" x 15' x (1) Wire
04120 014 04	1	Hose, 3/4" x 15' x (1) Wire
04120 033 01	1	Hose, 3/4" x 25' x (2) Wire
04119 003 00	2	Quick Disconnect, 1/2"
04119 027 00	2	Quick Disconnect, 3/4"
04121 002 01	2	Reuseable Hose End, 1/2"
04121 002 03	6	Reuseable Hose End, 3/4"
04121 002 04	4	Reuseable Hose End, 3/4"
04121 003 04	1	Swivel Adapter, 1/2" (F) x 1/2" (M)
04121 003 05	4	Swivel Adapter, 3/4"
04110 016 05	1	Bushing, 1" x 3/4" Reducing
04110 016 04	1	Bushing, 3/4" x 1/2" Reducing
04110 028 01	1	Nipple, 3/4" Close
04110 010 04	1	Tee, 3/4"
04110 011 01	1	Tee, 3/4" x 1/2" x 1/2" Reducing
04110 027 05	1	Nipple, 1/2" x 3"
04110 004 04	1	Elbow, 1/2" 90 Degree
04110 006 04	1	Elbow, 1/2" 90 Degree Street

OPERATING INSTRUCTIONS FOR
ALL TAILGATE SPREADERS HAVING
SEPARATE MOTORS FOR AUGER AND SPINNER

CAUTION!

1. When starting up new equipment, be sure every one is standing clear, watch for anything that may require shutting system down.
2. Be sure lever on valve is moved completely to "off" position before working in or around spreading equipment.

Initial Start Up

1. Fill reservoir about three-fourths full with high grade nonfoaming hydraulic oil. KEEP OIL CLEAN.
2. Move valve on-off lever to "off" position.
3. Open auger and spinner knobs on valve.
4. Engage PTO and allow hydraulic oil to circulate several minutes to warm up.
5. Move valve on-off lever to "on" position.
6. Check entire hydraulic system for leaks
7. Examine auger and spinner to see if they are functioning properly.
8. Refill reservoir to three-fourths full.
9. Hydraulic system is ready for use.

Preparing Spreader For Use

1. Start truck engine and allow hydraulic system to warm up by shutting off spinner and auger knobs and moving on-off lever to "on" position.
2. Position cover plate vertically and secure with locking brackets.
3. Open dump body tailgate from bottom as wide as possible but not bearing against cover plate, set the stop chains.
4. Loosen spinner clamp and slide spinner assembly to far left, and tighten clamp. (Position for spreading three or four lane highway from right lane)
5. Spread small amount of material to determine placement of material at various spinner and auger speeds in this far left position.
6. Loosen spinner clamp and slide spinner assembly to far right and tighten clamp. (Position for spreading behind truck and to extreme right covering up to four lanes from left lane)
7. Spread small amount of material to determine placement of material at various spinner and auger speeds in this far right position.
8. Various spread patterns may be aquired by placing spinner at various positions from left to right, and changing auger and spinner speeds on valve.

Spreader Features:

1. Any valve setting changes may be made while truck is in motion.
2. Spinner and auger may be stopped at the same time, without changing their valve settings, by moving on-off lever to "off" position.
3. For normal use of dump truck, cover plate may be laid flat over spreader trough and locked in place. Tailgate may be opened from top or bottom.

4. Spinner should be removed when truck is used for extensive hauling.
5. If auger clogs, it may be "shocked" loose by shutting off spinner, completely opening auger knob on valve, increasing engine speed and then rapidly moving valve lever to "on" and "off" positions. If this is not effective, manually unclogging machine is necessary.



CAUTION! Before working in auger area, valve lever must be in "off" position, PTO must be disengaged and engine must be shut off. Bottom gate may then be opened for unclogging auger

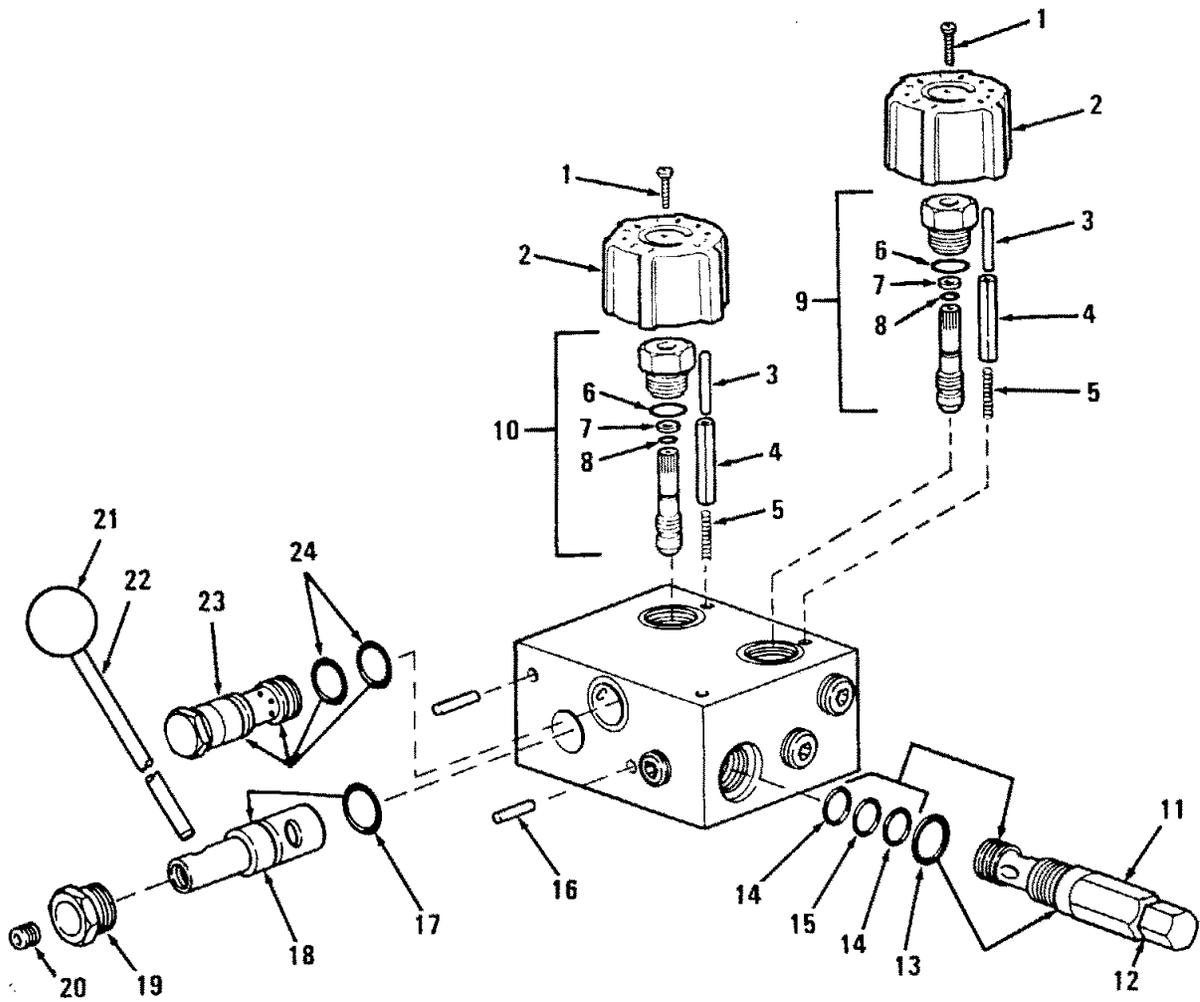
NOTE:

DISCONNECT SPINNER PARALLEL LINKAGE BEFORE
OPENING BOTTOM GATE.



CAUTION! WHEN SPREADER IS REMOVED OR NOT IN USE THE VALVE ON-OFF LEVER SHOULD BE IN THE OFF POSITION. IF LEFT IN ON POSITION A HEAT PROBLEM MAY OCCUR IF PUMP CONTINUES TO PUMP OIL TO THE HYDRAULIC VALVE. THIS COULD CAUSE A HOSE TO BURST SPRAYING HOT OIL.

Swenson spreader



DUAL FLOW CONTROL VALVE
04105 285 00

RECOMMENDED MAINTENANCE FOR MATERIAL SPREADERS

Caution!

1. Always replace shields and covers when maintenance is complete.

Maintenance For All Material Spreaders:

1. Allow hydraulic system to warm up before using.
2. Maintain a three-fourths full reservoir using high grade nonfoaming hydraulic oil.
3. Avoid getting contaminants in reservoir when filling.
4. Replace filter cartridge (#04104 005 00) with new cartridge at least twice a year and more often if necessary. (Optional gauge has red zone indicating when cartridge needs changing.
5. Clean quick disconnects before taking apart or connecting.
6. Protect quick disconnects while in use and after taking apart with oily rag or other suitable protection.
7. All bearings require periodic greasing, and more frequent greasing during periods of greater use.
8. Greasing pump shaft U-joints and slip-end of slip U-joints is recommended with each truck lubricating.
9. Drive chains should be checked frequently, cleaned, greased, and taken up if slack is excessive.
10. Oiling or greasing spinner hinge rod (if on spreader) is suggested.
11. Gear boxes should be checked for proper lubrication level, and SAE 90 gear type lubricant added if necessary.
12. Drive chains and drag chains of all types should be checked for slack shortly after initial start up, and if necessary, slack should be taken up.
13. Hosing down and cleaning spreader after each use, and repainting or oiling after each season will greatly prolong spreader life.
14. Spreader trough or hopper should be kept empty to prevent material from freezing around conveyor (or roll) in severe cold weather.

HYDRAULIC TROUBLE-SHOOTING CHART

CONDITION 1

Pump cavitation recognized by excessive noise.

CAUSE

- 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 1200 to 1500 RPM.

CORRECTION

- 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 a low viscosity non-detergent oil.
- e. Pump capacity is 16 GPM at 1000 RPM. Decrease PTO speed accordingly.

CONDITION 2

Slow operation of auger and/or spinner.

CAUSE

- a. Worn or defective pump.
- b. Worn or defective motor.
- c. Pump cavitation.
- d. Insufficient pump speed.

CORRECTION

- *a. Repair or replace pump.
- *b. Repair or replace motor.
- c. Refer to pump section.
- d. Pump capacity is 16 GPM at 1000 RPM. Increase PTO accordingly.

CONDITION 3

Erratic operation of auger and/or spinner.

CAUSE

- 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.

CORRECTION

- a. Fill reservoir to a 3/4 full 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.

CONDITION 4

Auger and/or spinner will not operate.

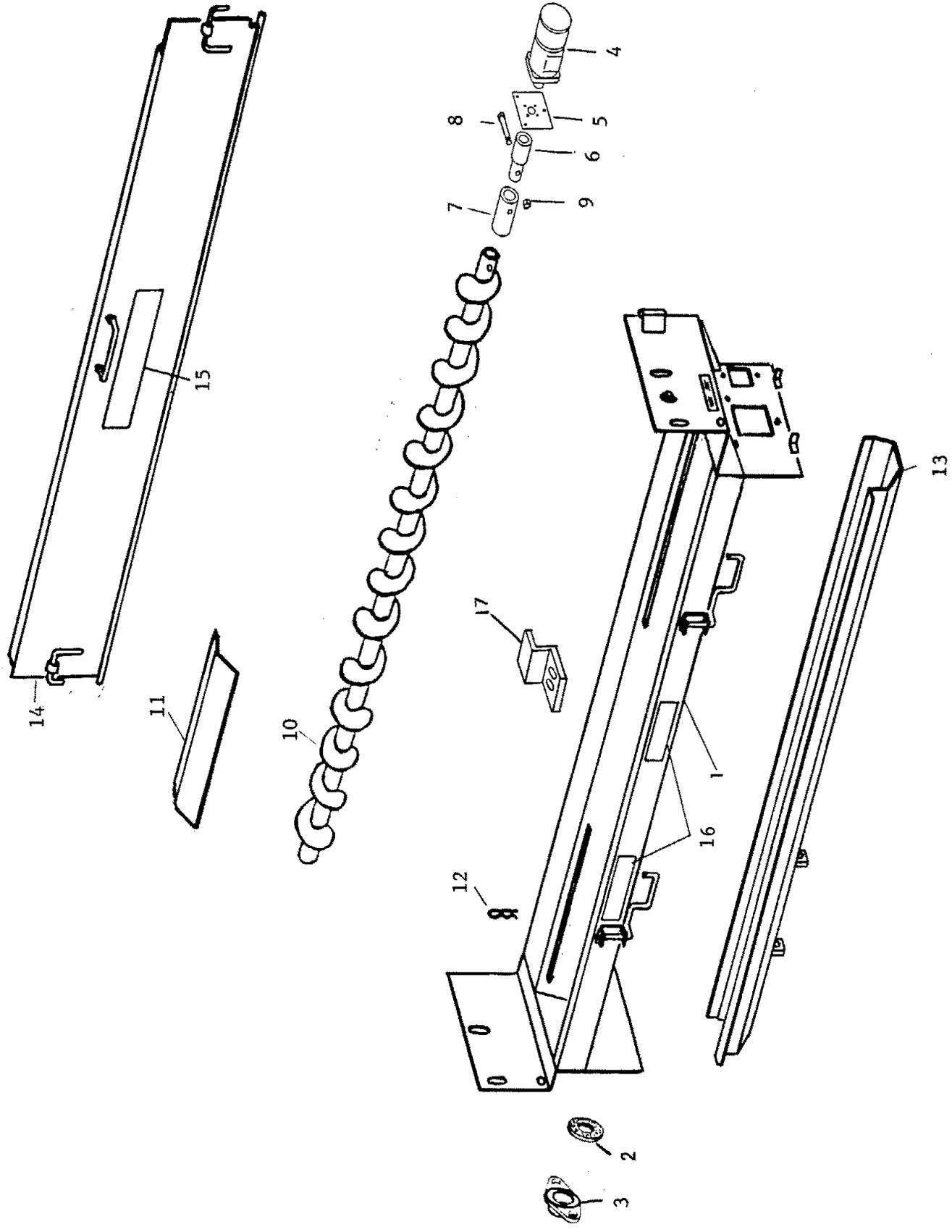
CAUSE

- a. Quick disconnects are dirty, damaged or improperly connected.
- b. Hose connections wrong.
- c. Foreign material in valve compensator

CORRECTION

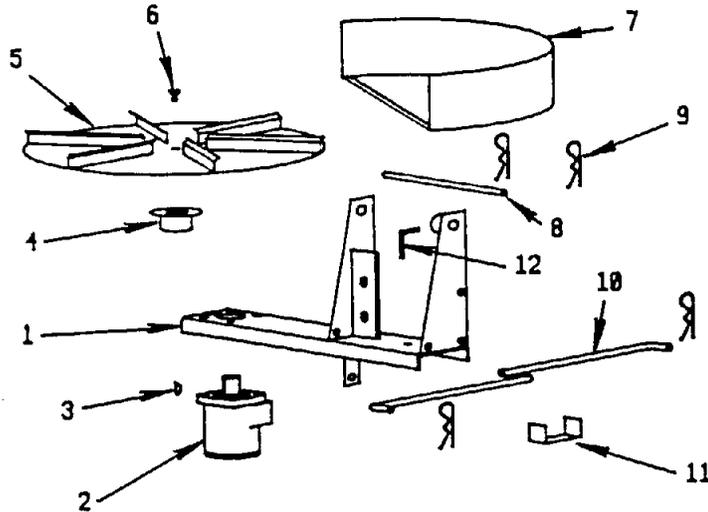
- a. Clean or replace and properly connect.
- b. Refer to illustration.
- c. Remove compensator and clean

* Swenson Spreader warranty does not cover unauthorized disassembly of Hydraulic or Electric components.



PARTS LIST
FOR
"SJ" SPREADER

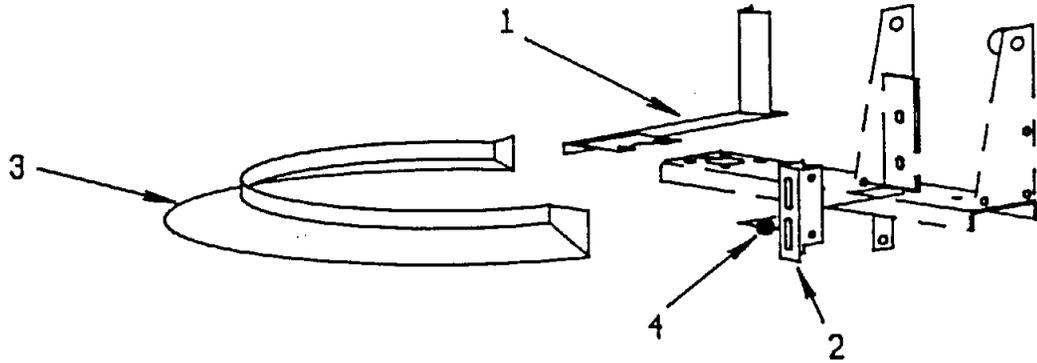
<u>Item</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	00108 680 00	1	Weldment, Trough
2	04005 002 00	1	Washer, 1 1/4" Felt
3	04080 005 00	1	Bearing, 1 1/4"
4	04101 036 00	1	Motor, AM Hydraulic
5	00108 487 00	1	Motor Mounting Plate
6	00108 482 00	1	Adapter
7	00106 321 00	1	Insert, Auger (2")
8	04003 005 10	1	Bolt, 1/2" x 3" H.H. Gr. 5
9	04003 807 11	1	Locknut, 1/2" Hex
10	00108 689 00	1	Weldment, "SJ" Auger
11	00107 692 00	1	Cover, Flow
12	04011 001 02	1	Keeper, Hairpin
13	00108 685 00	1	Weldment, Bottom Door
14	00108 687 00	1	Weldment, Cover
15	04049 002 00	1	Decal, Swenson
16	00001 775 00	1	Safety Decal Package
17	00111 187 00	1	Clip, Cover Holddown



PARTS LIST
FOR
"SJ" SPINNER KIT (L.H. CCW ROTATION)
(00001 972 09)(Includes Spreader Mounting Hardware)

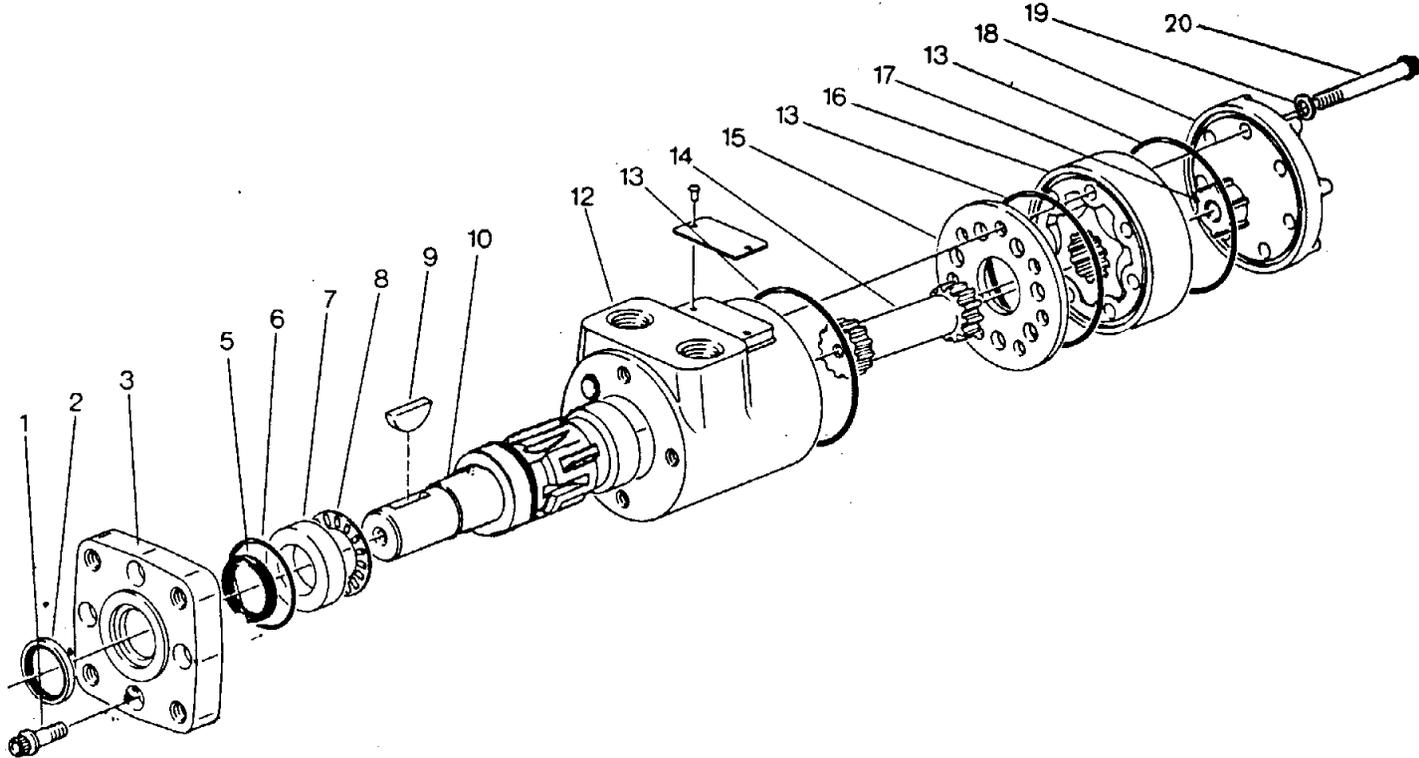
<u>Item</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	00108 708 00	1	Weldment, Spinner Frame
2	04101 035 00	1	Motor, Hydraulic
3	04009 003 01	1	Key, 1/4" x 1" Woodruff
4	06012 003 00	1	Hub, Spinner
5	04622 002 00	1	Disc, Spinner (Polyurethane)
6	04003 001 16	1	Bolt, 1/4" x 1" H.H. S.S. (Poly Disc)
7	06043 001 00	1	Weldment, Spinner Shield
8	00106 401 00	1	Rod, Hinge
9	04011 001 02	4	Keeper, Hairpin
10	08036 001 00	2	Bar, Parallel Linkage
11	06010 000 00	1	Clamp, Hose
12	00106 314 00	1	Lock, Spinner

NOTE: 6 04003 001 11 1 Bolt, 1/4" x 3/4" H.H. S.S. (Steel Disc)



PARTS LIST
FOR
DEFLECTOR KIT (L.H.) (OPTION)
(00001 876 00)

<u>Item</u>	<u>Part No.</u>	<u>Qty.</u>	<u>Description</u>
1	08835 001 00	1	Weldment, L.H. Support Bar
2	06097 000 00	1	Angle, Vertical
3	06094 000 00	1	Shield, Deflector
4	04008 001 00	1	Spacer



PARTS LIST
FOR
HYDRAULIC MOTOR
(04101 035 00)
(04101 036 00)
(04101 040 00)

Item	Part No.	Qty.	Description
1	04101 035 01	4	Screw, 5/16" -24 x 7/8" Cap
2		1	Seal
3	04101 035 03	1	Flange, Mounting (4 Bolt)
4			
5			Seal, O'Ring
6			Seal, O'Ring
7	04101 035 05	1	Race, Bearing
8	04101 035 07	1	Bearing, Thrust Needle
9	04009 002 02	1	Key, 1/4" x 1" Woodruff
10	04101 035 09	1	Shaft, Output
11			
12	04101 035 10	1	Housing
13			Seal, O'Ring
14	04101 035 12	1	Drive (For 04101 035 00)
	04101 037 12	1	Drive (For 04101 036 00)
	04101 037 12	1	Drive (For 04101 040 00)
15	04101 035 13	1	Plate, Spacer
16	04101 035 15	1	Gerotor Set (For 04101 035 00)
	04101 036 15	1	Gerotor Set (For 04101 036 00)
	04101 040 15	1	Gerotor Set (For 04101 040 00)
17	04101 036 16	1	Spacer (For 04101 036 00)
	04101 040 16	1	Spacer (For 04101 040 00)
18	04101 035 17	1	Cap, End
19	04101 035 18	7	Washer, Seal
20	04101 035 14	4	Screw, 5/16"-24 x 1 1/2" Cap
	04101 036 14	4	Screw, 5/16"-24 x 2 3/4" Cap
	04101 040 14	1	Screw, 5/16"-24 x 2 1/8" Cap
21	04101 035 21	1	Repaired Motor (04101 035 00)
	04101 035 25	1	Seal Kit

NAME PLATE INFORMATION

*When ordering parts or requesting information or assistance, always include the information listed below.

*The Model Number and Serial Number for the Spreader is shown on the Name Plate.

*The space below is provided as a convenient place to record these numbers; just fill in the blanks.

Model No. _____

Serial No. _____

Date Purchased _____

Purchased From _____

Phone No. For Service _____

CONTROL AND HYDRAULIC SYSTEM SPECIFICATIONS

*Hydraulic Oil.....Good Grade of MS10W Hydraulic Oil
which has wear, oxidation and foam
inhibitors

*Oil Filter.....10 Micron Element Return Line Filter

*Relief Valve Setting.....1500 PSI

*Oil Flow.....Conveyor (A-Port) 0-15 GPM
Spinner (S-Port) 0-7 GPM



Effective 5/1/99

Dealers have the responsibility of calling to the attention of their customers the following warranty prior to acceptance of an order from that customer for any SWENSON® product.

WARRANTY

SWENSON warrants to the original purchaser for use that, if any part of the product proves to be defective in material or workmanship within one year from the date of original installation, and is returned to SWENSON within 30 days after such defect is discovered, SWENSON will (at our option) either replace or repair said part. This warranty does not apply to damage resulting from misuse, neglect, accident or improper installation or maintenance. Said part will not be considered defective if it substantially fulfills the performance specifications. **THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OF MERCHANTABILITY, FITNESS FOR PURPOSE AND OF ANY OTHER TYPE, WHETHER EXPRESS OR IMPLIED. SWENSON® neither assumes nor authorizes anyone to assume for it any other obligation or liability in connection with said part and will not be liable for consequential damages.**

All gasoline engines and hydraulic pumps are warranted by their manufacturer and not by Swenson Spreader Company. Electrical or hydraulic components are not to be disassembled without the express written permission of Swenson Spreader Company. Defective parts returned to Swenson Spreader Company must be accompanied by the following information: spreader model, serial number, date installed and dealer from whom purchased.

Purchaser accepts these terms and warranty limitations unless the product is returned within fifteen days for full refund of purchase price.

✂ _____

In order to validate this warranty, please complete this card and mail it.

Name: _____

Address: _____

Spreader Model: _____ Serial No.: _____

Installation Date: _____ Purchase From: _____