

OPERATOR'S MANUAL

BLUMHARDT 750 & 1000 GALLON TRAIL MASTER SPRAYERS

P.O. Box 1030 Wahpeton, ND 58074
(701) 642-2621

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WARRANTY

The only warranty Wil-Rich gives and the only warranty the dealer is authorized to give is as follows:

We warrant products sold by us to be in accordance with our published specifications or those specifications agreed to by us in writing at time of sale. Our obligation and liability under this warranty is expressly limited to repairing, or replacing, at our option, within 12 months after date of retail delivery, any product not meeting the specifications. ***We make no other warranty, express or implied and make no warranty of merchantability or of fitness for any particular purpose.*** Our obligation under this warranty shall not include any transportation charges or costs or installation or any liability for direct, indirect or consequential damage or delay. If requested by us, products or parts for which a warranty claim is made are to be returned transportation prepaid to our factory. Any improper use, operation beyond rated capacity, substitution of parts not approved by us, or any alteration or repair by others in such manner as in our judgement affects the product materially and adversely shall void this warranty. ***No employee or representative is authorized to change this warranty in any way or grant any other warranty.***

Wil-Rich reserves the right to make improvement changes on any of our products without notice.

When warranty limited or not applicable: Warranty on hoses, cylinders, hubs, spindles, engines, valves, pumps or other trade accessories are limited to the warranties made by the respective manufacturers of these components. Rubber tires and tubes are warranted directly by the respective tire manufacturer only, and not by Wil-Rich.

Warranty does not apply to any machine or part which has been repaired or altered in any way so as in our judgement to affect its reliability, or which has been subject to misuse, negligence or accident.

A Warranty Validation and Delivery Report form must be filled out and received by Wil-Rich to initiate the warranty coverage.

WARRANTY CLAIMS PROCEDURE

1. The warranty form must be returned to Wil-Rich within fifteen (15) working days from the repair date.
2. Parts returned to Wil-Rich without authorization will be refused. The parts must be retained at the dealership for ninety (90) days after the claim has been filed. If the Service Department would like to inspect the parts, a packing slip will be mailed to the dealer. The packing slip must be returned with the parts. The parts must be returned prepaid within thirty (30) days of receiving authorization. After the parts are inspected and warranty is verified, credit for the return freight will be issued to the dealer.
3. Parts that will be scrapped at the dealership will be inspected by a Wil-Rich Sales Representative, District Sales Manager or Service Representative within the ninety (90) day retaining period.

TO THE OWNER

It is the responsibility of the user to read the Operator's Manual and comply with the safe and correct operating procedures as pertains to the operation of the product and to lubricate and maintain the product according to the information outlined in the Operator's Manual.

The user is responsible for inspecting his machine, and for having parts repaired or replaced when continued use of the product would cause damage or excessive wear to the other parts.

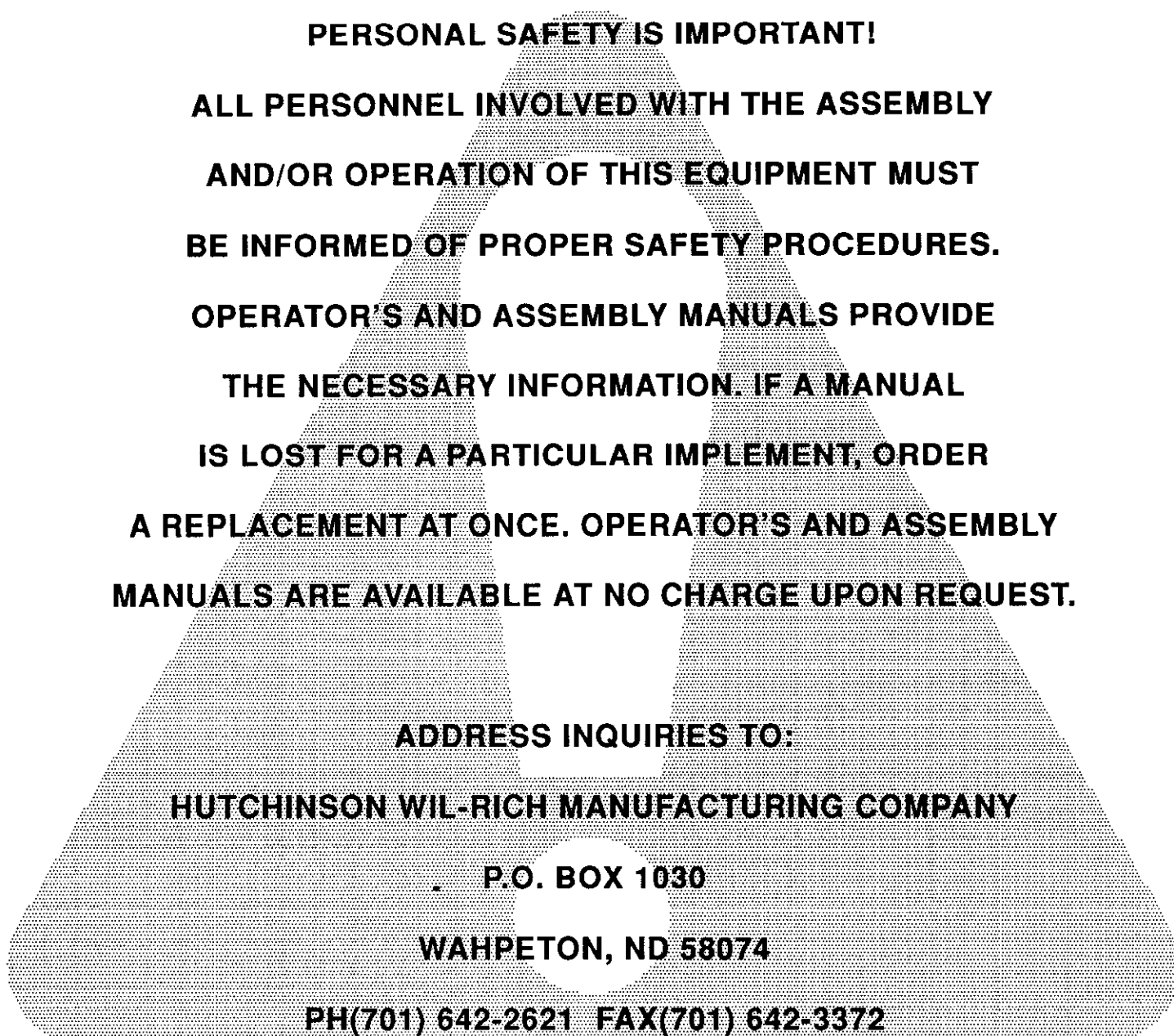
The word NOTE is used to convey information that is out of context with the manual; special information such as specifications, techniques, reference information, safety practices, and other information of supplementary nature.

BLUMHARDT EQUIPMENT	
Model No.	<input type="text"/>
Serial No.	<input type="text"/>
ASHLEY, N.D. 58413	
	49396

When in need of parts, always specify the model and the serial number. Write this number in the space provided. The serial number plate is located on each boom.

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PERSONAL SAFETY IS IMPORTANT!

**ALL PERSONNEL INVOLVED WITH THE ASSEMBLY
AND/OR OPERATION OF THIS EQUIPMENT MUST
BE INFORMED OF PROPER SAFETY PROCEDURES.
OPERATOR'S AND ASSEMBLY MANUALS PROVIDE
THE NECESSARY INFORMATION. IF A MANUAL
IS LOST FOR A PARTICULAR IMPLEMENT, ORDER
A REPLACEMENT AT ONCE. OPERATOR'S AND ASSEMBLY
MANUALS ARE AVAILABLE AT NO CHARGE UPON REQUEST.**

**ADDRESS INQUIRIES TO:
HUTCHINSON WIL-RICH MANUFACTURING COMPANY**

**P.O. BOX 1030
WAHPETON, ND 58074**

PH(701) 642-2621 FAX(701) 642-3372

SAFETY

Safety decals appear at various locations on your machine. These decals are provided for your safety and must be kept clean. Replace any decal that becomes worn, damaged, painted over or otherwise difficult to read. Replacement decals are available through your Blumhardt dealer.

Hydraulic fluid escaping under pressure can have enough force to penetrate the skin. Hydraulic fluid may also infect a minor cut or opening in the skin. If injured by escaping fluid, see a doctor at once. Serious infection or reaction can result if medical treatment is not given immediately. Make sure all connections are tight and that hoses and lines are in good condition before applying pressure to the system. Relieve pressure before disconnecting the lines or performing other work on the hydraulic system. To find a leak under pressure use a small piece of cardboard or wood. *Never use your hands.*

BEFORE OPERATING

Use extreme care when making adjustments.

When hitching the sprayer to the tractor, do not allow anyone to get between the tractor and the sprayer.

After servicing, make sure all tools, parts, and servicing equipment has been removed from the sprayer.

Make sure that there is no one near the machine just before operating and during operation.

Keep all shields and guards in place.



THIS SYMBOL IS USED TO CALL YOUR ATTENTION TO INSTRUCTIONS CONCERNING YOUR PERSONAL SAFETY. BE SURE TO OBSERVE AND FOLLOW THESE INSTRUCTIONS.

DURING OPERATION

Reduce speed when cornering on field ends and when operating on or across dead furrows.

Do not attempt to remove any obstruction while the sprayer is in motion.

Use extreme care when operating close to ditches, fences, or on hillsides.

No one other than the operator should ride on the tractor.

Before and during operation be sure no one is on or around the implement. Serious injury can result from improper use.

Always set the jack stand on a firm surface before unhitching the implement from the tractor.

Use safe operating practices at all times.

MODIFICATIONS

It is the policy of Blumhardt Equipment to improve its product whenever possible and practical to do so. We reserve the right to make changes, improvements, and modifications at any time without incurring the obligation to make such changes, improvements, and modifications on any equipment sold previously.

ON-HIGHWAY OPERATION

Be sure that all safety lights and/or reflectors are wiped clean before transporting.

The implement must always be placed in the transport position and the booms locked when traveling on public roads.

NOTE: Use extreme caution when working around overhead power transmission lines.

Always place the machine in the transport position.

Comply with your state and local laws governing highway safety when moving machinery on a highway.

Reduce road speed on corners.

Drive at a reasonable speed to maintain complete control of the machine at all times.

A S.M.V. emblem must be used at all times while traveling on public roads.

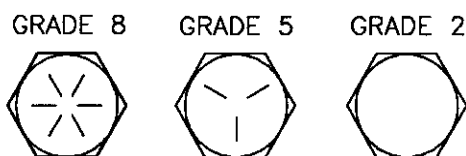
PREPARATION

Before using the Blumhardt sprayer, a careful inspection must become routine. A check must be made to insure that all hardware is securely tightened and moving parts are properly lubricated.

Tighten all loose nuts and bolts and replace any bent or broken parts.

When tightening bolts, they must be torqued to the proper number of foot-pounds as indicated in the table unless otherwise specified. It is important that all bolts be kept tight.

On new machines, all nuts and bolts must be re-checked after a few hours of operation.



TORQUE IN FOOT POUNDS

BOLT DIA	3/8	1/2	5/8	3/4	7/8	1
HEX HEAD	9/16	3/4	15/16	1-1/8	1-5/16	1-1/2
UNC GRADE	2	18	45	89	160	320
	5	30	68	140	240	544
	8	40	100	196	340	792
UNF GRADE	2	21	51	102	178	368
	5	32	70	168	264	572
	8	48	112	216	368	840

CI-75623

When replacing a bolt use only a bolt of the same grade or higher.

Bolts with no markings are grade 2.

Grade 5 bolts furnished with the machine are identified by three radial lines on the head.

Grade 8 bolts furnished with the machine are identified by six radial lines on the head.

All U-bolts are grade 5.

TIRE INFLATION

The use of the proper air pressure is the most important factor in satisfactory performance and maintenance of implement tires. Underinflation will damage the cord body of the tire and causes a series of diagonal breaks in the fabric in the sidewall area.

If the tire buckles or wrinkles, the air pressure must be increased to the point where the sidewalls remain smooth while operating.

Check the air pressure every two or three weeks and do not allow the pressure to drop to a point where buckling or wrinkling of the tire may be possible.

NOTE: Do not overinflate tires.

WHEEL BOLTS

It is recommended that all wheel bolts be checked for tightness before using and again after one day of use. Paint or rust can work out causing the wheel to become loose. Check periodically to be sure the wheel bolts are tight.

BEARING ASSEMBLIES

IMPORTANT - The spindle nut on all hub and spindle assemblies is preset at the factory. Road transport and field working will seat the bearing and may require additional adjustment. After 20 hours of machine operation remove the grease cap and check the bearing tightness of all hub and spindles. Remove the cotter pin and rotate the tire while tightening the spindle nut. Tighten until the drag on the tire assembly stops the tire rotation. Locate the cotter pin hole in the spindle and *loosen* the spindle nut enough to allow insertion of the cotter pin. Replace the cotter pin and the grease cap.

LUBRICATION

Make sure the sprayer is properly lubricated. (See maintenance, page 26.)

HYDRAULICS

If used, check cylinders for proper alignment and operation. On new machines check that the hydraulic system has been properly charged and purged.

TRACTOR PREPARATION

Refer to the operator's manual furnished with your tractor for recommended adjustments and weight distribution.

When using a sprayer, the tractor drawbar must always be pinned in the center to allow for more stability.

NOTE: Check your tractor's hydraulic fluid level after cycling hydraulics and filling new cylinders and lines. Refill if necessary.

HITCHING

After backing your tractor into position, attach the sprayer hitch to the tractor drawbar, using a hitch pin of adequate strength for the tractor - sprayer combination. Lock the pin in place to prevent loss (particularly when transporting). It is recommended that a safety chain be used for road transport. (Not included.)

Connect the sprayers hydraulic hoses to the proper couplers on your tractor.

TRANSPORTING

A. S.M.V. (Slow Moving Vehicle) emblem must be used at all times while traveling on public roads.

NOTE: Use extreme caution when working around over head power transmission lines.

Reduce speed when cornering and when traveling over rough and/or uneven ground. Drive at a reasonable speed to maintain complete control of the machine at all times.

Comply with your state and local laws governing highway safety when moving machinery on a highway.

BOOM LIFT CIRCUITRY

Boom equipped Blumhardt Sprayers have as an option, hydraulic cylinders to lift the boom tips for leveling or going over obstacles, and a rear bar lift for adjusting the sprayer height.

See page 20-22 for hydraulic plumbing options.

BOOMS

UNFOLDING

Move anti-swing clutch handle to the unlock position. (See Fig. 3.)

Walk the main boom back to where the boom is parallel with the tool bar and lock the anti-swing clutch handle. (See Fig. 2.)

After the main boom has been locked in place, lift the outrigger away from the main boom and walk the outrigger around until the outrigger locks in place. (See Fig. 3.)

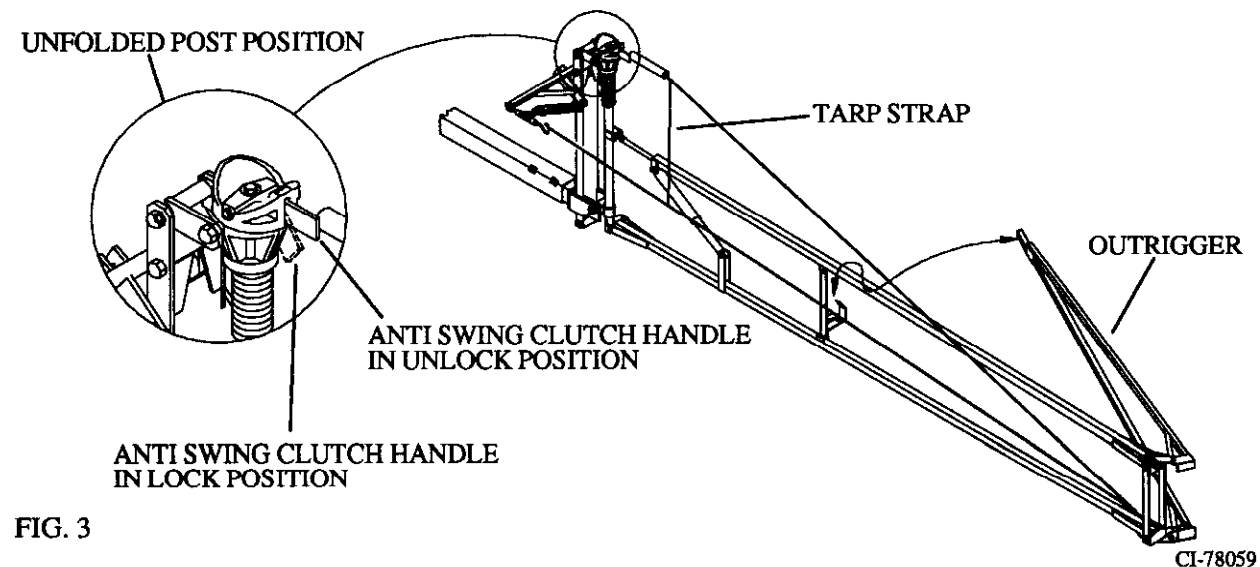
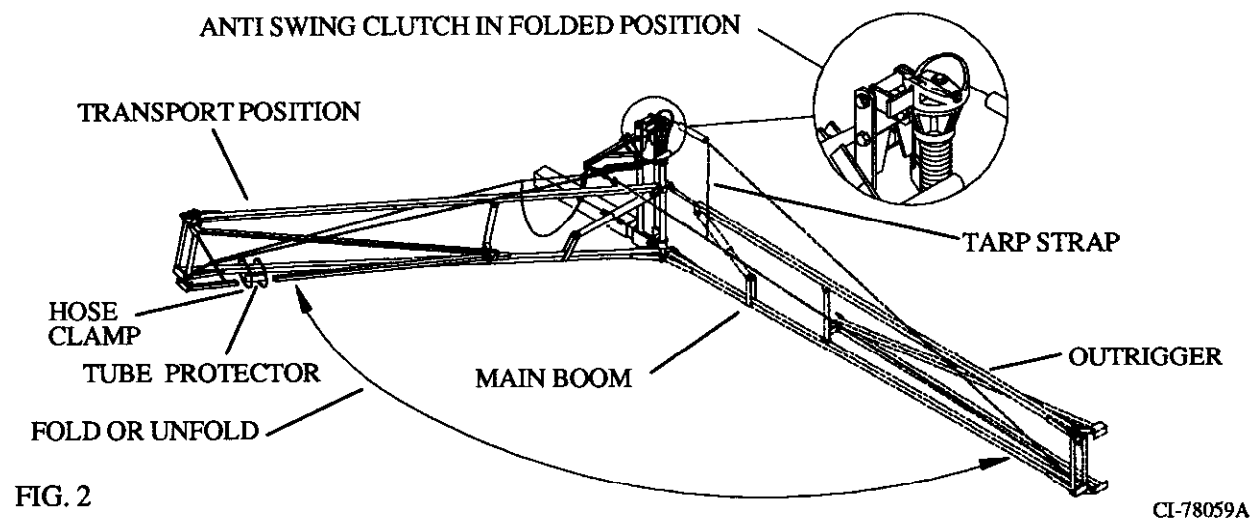
NOTE: Additional rear chain length is required to prevent the 16' boom from rising too high, as it is folded. A chain binder is installed on the rear chain to be "opened" when folding and "closed" when the boom is in operation.

FOLDING

Reverse unfolding procedure.

NOTE: When folding, make the sure feed lines do not kink and the sprayer nozzles don't hit the boom or other nozzles being folded into them.

NOTE: The tube protector must be mounted in the boom latch area to protect the lower boom tube in transport position. (See page 34-35.)



BOOM INSTALLATION

BOOM ARMS

Blumhardt has 2 sizes of boom arms available for the 1000 gallon Trail Master sprayers. They are 21' & 33' parallel flotation booms. The sizes stated are for the main boom and outrigger assemblies and do not include the boom extensions.

The center section is measured from the center of the left boom swivel post to the center of the right boom swivel post. (See Fig. 4.)

The booms are measured from the center of the boom swivel post to the end of the outrigger. (See Fig. 4.)

NOTE: All boom lengths are given in approximate lengths.

PRE-INSTALLATION SET-UP

Insert the 3-1/2" square tube stub of the boom post assembly into the 4" square tube of the center frame until it stops at the tab of the inserted tube. Tighten set screw bolt on center tube to hold boom assembly in place.

Install straight brace and lower lift bracket (or optional hydraulic cylinder or electric actuator) as seen on page 6.

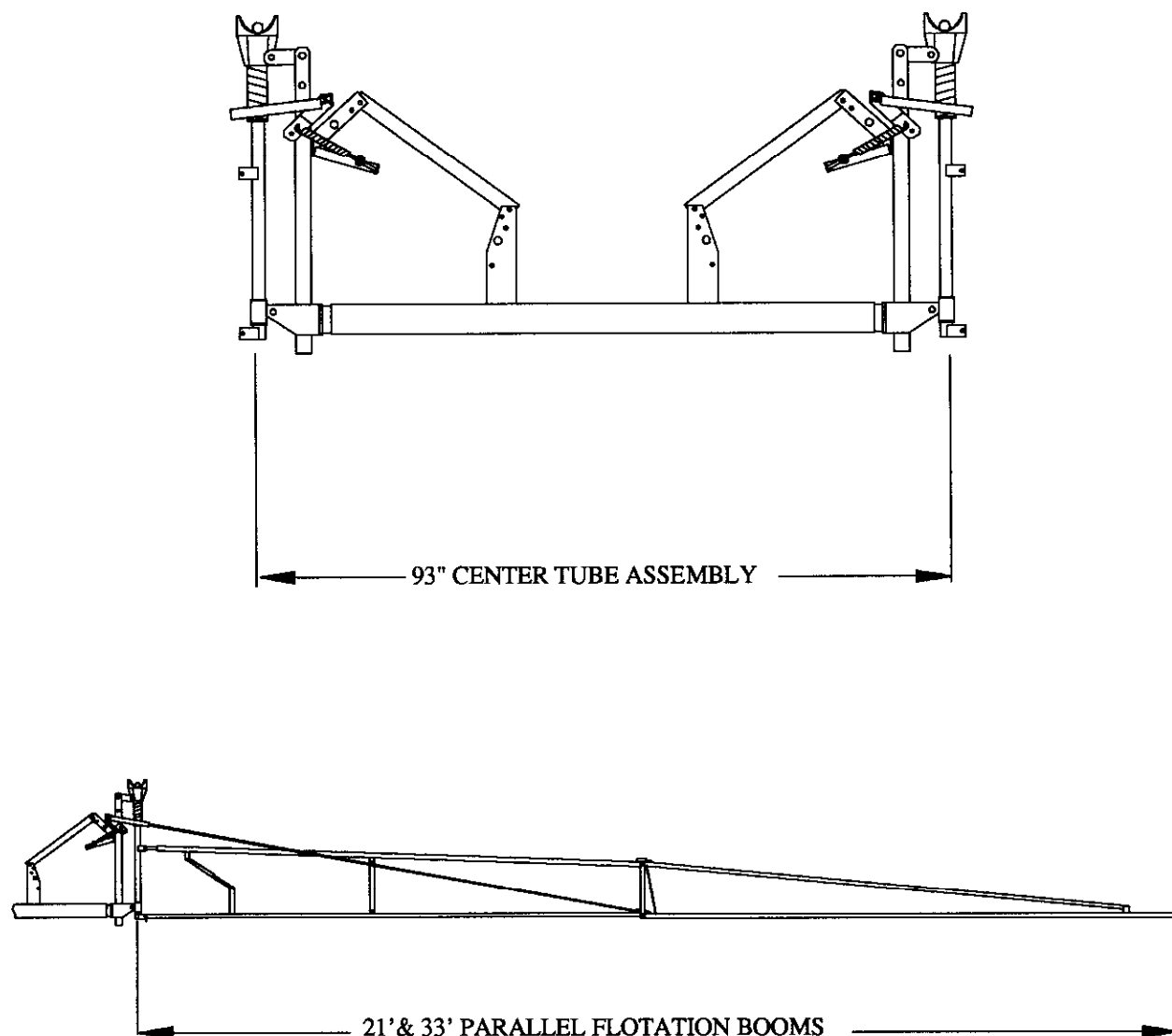


FIG. 4

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BOOM LIFT OPTIONS

Reference dimensions are being supplied for the different variations of lift brackets and size of sprayers. An angle finder is also supplied for an exact measurement. Always set the angle with the cylinder fully extended.

21' & 33' BOOM POST ASSEMBLY STRAIGHT BRACE

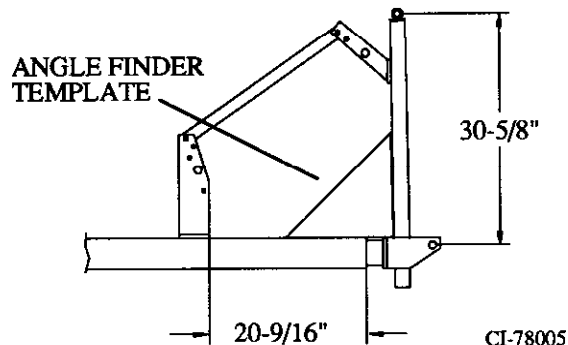


FIG. 5

33' BOOM POST ASSEMBLY ELECTRIC ACTUATOR

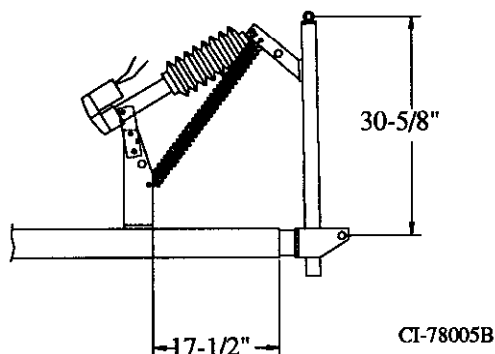


FIG. 6

21' BOOM POST ASSEMBLY ELECTRIC ACTUATOR

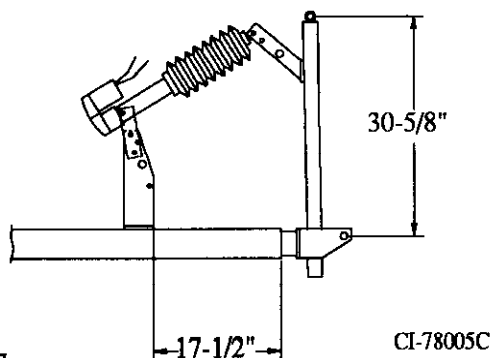


FIG. 7

The lower lift bracket should be positioned so the boom upright is angled slightly inward at the top. An angle finder template (provided) is used as a guide between the center tube and the boom upright. The boom upright should then be tilted inward until it matches the angle finder template. (See Fig. 5.)

When the correct angle is found, tighten the u-bolt on the lower lift bracket.

The following dimensions are for reference only and are only used to get all components in the general area before final measurements.

21' & 33' BOOM ASSEMBLY HYDRAULIC

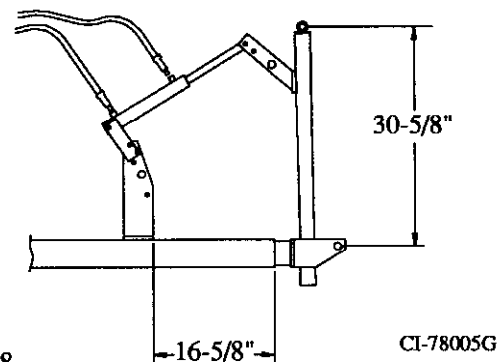


FIG. 8

NOTE: Booms with hydraulic lifts are shipped without oil. To prevent the cylinders from collapsing in shipment the standard straight brace is also installed.

Before charging these cylinders extend the booms to working position and then remove the straight brace.

BOOM EXTENSION

NOTE: Extension tubes may be added on all booms. This extension tube is adjustable out to 5 feet beyond the outrigger.

Mount nozzle assemblies onto the extension tube 2" in from the end of the tube with the hose barb facing toward center as shown.

Install extension tube into the boom far enough to obtain proper spacing of nozzles. Tighten the boom extension locking bolt securely.

NOTE: Boom extension tube must be inserted a minimum of 12 inches.

The manifold on the end of the outrigger has unused hose barbs for nozzles on the extension.

Remove 1" FSPT cap from tee on the manifold assembly and replace with hose barb adapter. Also, if necessary, remove 1/4" hose barb cap from the manifold head.

Install 1/4" tubing, from the manifold assembly to the nozzle assembly. Cut the tubing to lengths, so that there is no slack. Secure the tubing to the booms with nylon ties.

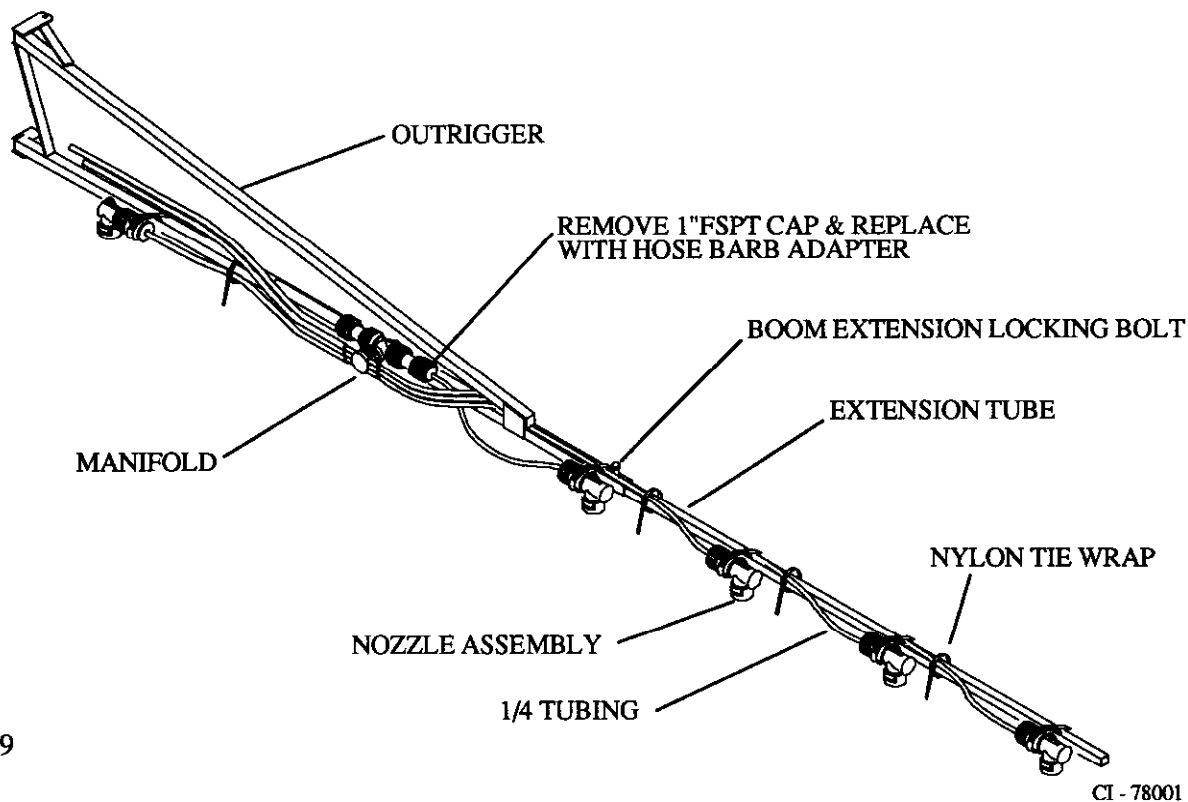


FIG. 9

NOTE: When using extensions, care must be taken when booms are in a folded position. The extension will stick out behind the sprayer, which can be dangerous when backing up.

RIGGING THE BOOMS

Before starting adjustments, be sure all joints are well lubricated and are moving freely.

With boom completely assembled and sprayer setting on level ground, adjust boom by first checking to see if the boom post is set properly. See page 6 for Lift Bracket Installation.

Install chain assemblies from the rocking chair mechanism to the boom outrigger. To get the initial chain length, rest the main boom on a stand, level or slightly down. Loosen chain turnbuckles so that no threads are showing in the turnbuckle body. Mount chain so it holds the boom in it's resting position. (See Fig. 10.)

Adjust the boom outrigger so it is parallel with the first section of the main boom by adjusting the nut on the upper main boom. (See Fig. 10.)

Next adjust the equalizer so there is approximately 1/8" gap between the rocking chair and the post. (Fig. 10.)

NOTE: Check the boom flotation by pushing down where the outrigger and the main boom arms join. The boom should float back up to the level position. If the boom does not float back up, the eye bolt on the rocking chair equalizer spring must be tightened until the boom floats up.

Adjust the front turnbuckle so that the main boom and outrigger are perpendicular to the main frame to 6" forward. (See Fig. 11.)

Use the back turnbuckle for adjusting levelness. The main boom and outrigger should be level to 3" above level of the main frame. (See Fig. 11.)

BOOM SIDE VIEW

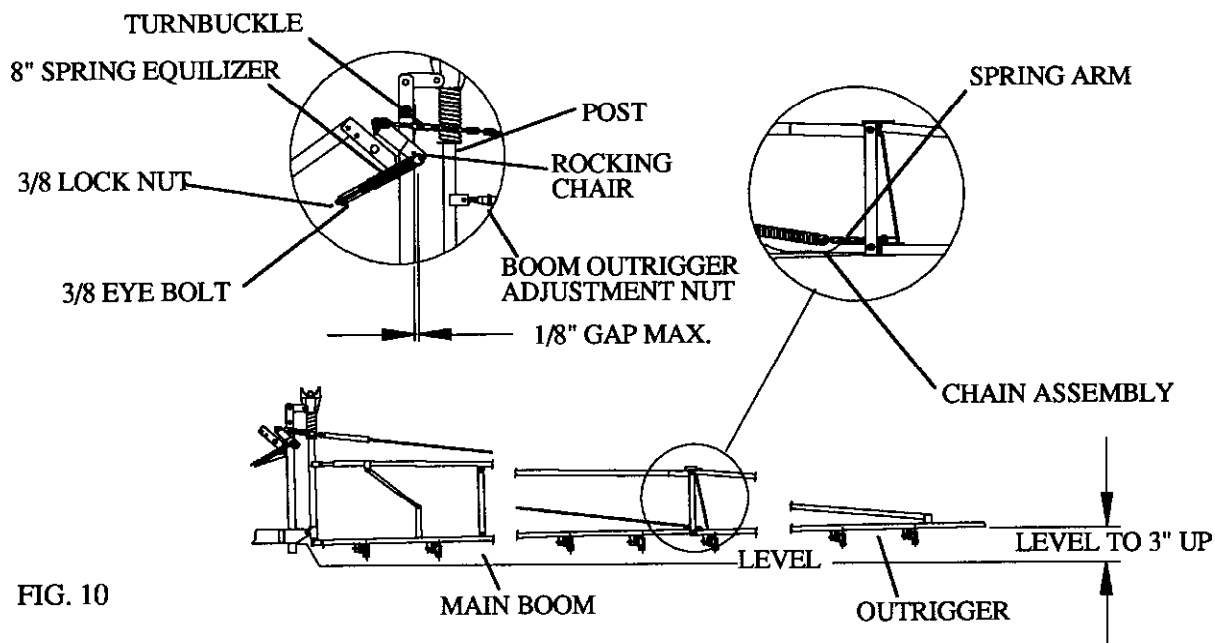


FIG. 10

BOOM TOP VIEW

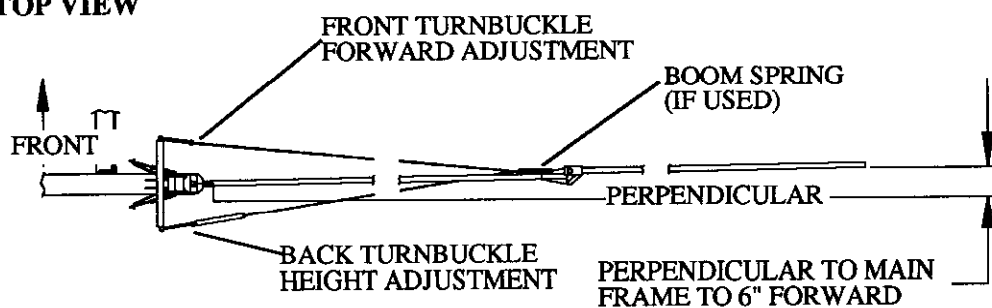


FIG. 11

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FEED-LINE HOOK UP

3 SOLENOID

Each solenoid feeds a specific area of the boom. The left solenoid feeds the outer section of the left boom. The center solenoid feeds the center section and inside section of the left and right booms. The right solenoid feeds the outer section of the right boom. (See Fig. 12.)

NOTE: There are many different layouts of manifolds, manifold feed-lines and nozzle feed-lines, all depending on the number of solenoids, nozzle spacing, and the size of the total boom assembly.

3 SOLENOIDS

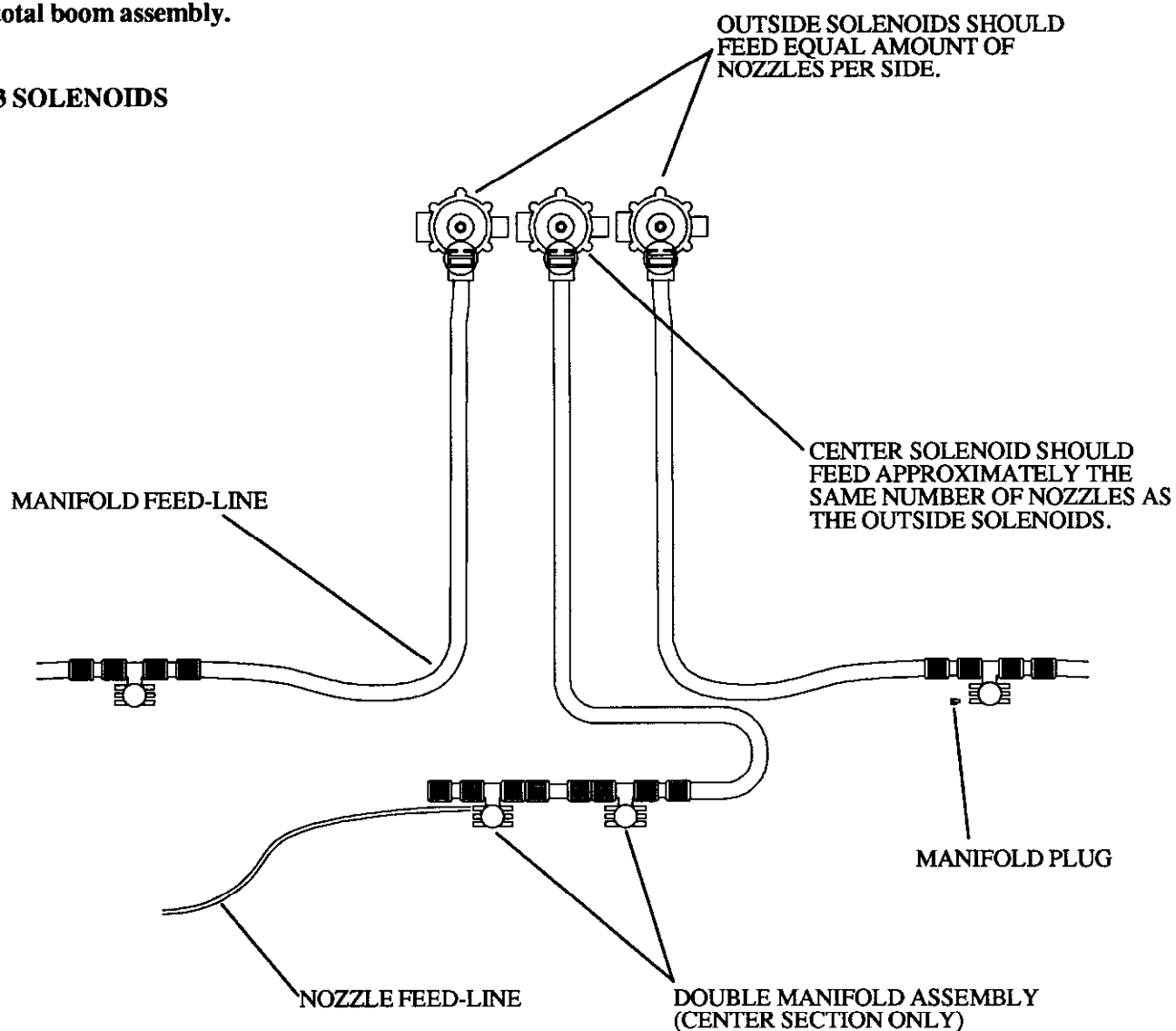


FIG. 12

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APPLICATION RATES

The Application Rate Chart on pages 13 & 14 are based on water at 8.3lbs per gallon and 20 and 30 inch nozzle spacings. When spraying solutions that are heavier or lighter than water, multiply the tabulated gallonage figure from the chart by the appropriate factor shown below.

Weight of Solution	Conversion Factors
7.0lbs. per gallon	1.09
8.0lbs per gallon	1.02
8.34lbs per gallon - water	1.00
9.0lbs per gallon	.96
10.0lbs per gallon	.91
11.0lbs per gallon	.87

NOTE: This table is based on theoretical solution densities only and may vary in actual practice because of differing solution characteristics.

Recommended Spray Heights	
20" Spacing	30" Spacing
20" to 40"	30" to 40"

CALIBRATION

Pre Calibration Check: Be sure that all sprayer parts are free of foreign material and are functioning properly. Inspect nozzle tips and internal parts for obvious wear, defects, proper size and type. Check the flow rate of each nozzle using water at the planned operating pressure for uniform output, and uniform appearance of spray pattern. Replace any nozzle tips having flow 5 percent more or less than the average of the other nozzles checked and/or having obviously different patterns. Check the flow rate of new nozzles.

This Engineering Practice provides information on the calibration of boom type field sprayers used for broadcast, band, or row applications.

This Engineering Practice sets forth guidelines for those who prepare field sprayer calibration procedure. The purpose is to encourage practices that will improve uniformity, accuracy and safety of pesticide application with field sprayers.



Never use chemical to calibrate the sprayer. Always use clean water.

Use water alone to calibrate the sprayer unless the flow rate of the actual spray mixture varies more than 5 percent from the flow rate of water.

Calibration with actual spray mixture.

Wear suitable, approved safety equipment and protective clothing. Avoid contact with the spray.

Avoid contamination of area. Calibrate only when wind speed is below 8km/h (5mph).

General Calibration Information

The volume of spray material applied to a given area depends on nozzle flow rate, ground speed of the sprayer and the sprayed width per nozzle. Each variable must be determined when developing a specific calibration procedure.

Nozzle flow rate. Nozzle flow rate varies with nozzle capacity, nature of the fluid and fluid pressure.

Nozzle capacity. Select the nozzle that will best fit the requirements of application volume, pressure and ground speed.

Nature of the fluid. If the spray mixture will be altered considerably by the addition of adjuvants, compare the flow rate of the spray mixture to the of water. If the rate difference is 5 percent or more, adjust the actual spray mixture in the calibration.

Fluid pressure. A constant pressure must be maintained to achieve uniform application. Flow rate is generally proportional to the square root of the pressure drop across the nozzle.

Ground speed of sprayer. Spray volume has an inverse relationship to the ground speed. Ground speed is the easiest factor to change for minor corrections in application rate. Ground speed must be constant for uniform application.

(Reference: ASAE Standards ASAE EP 367.1 Guide for Preparing Field Sprayer Calibration Procedures.)

NOTE: Calibration is not a one time occurrence! Sprayers should be periodically recalibrated during the season, particularly when changing chemicals. You can calibrate during application if field dimensions are accurately known.

SPRAYER CALIBRATION

The tip charts should be used to get an approximate application rate for choosing proper tip size. Once you have the desire tip installed in the sprayer, it will be necessary to calibrate the sprayer to get an exact rate. Use the calibration bottle, and spray application calculator, for this purpose. If not available use the method described below.

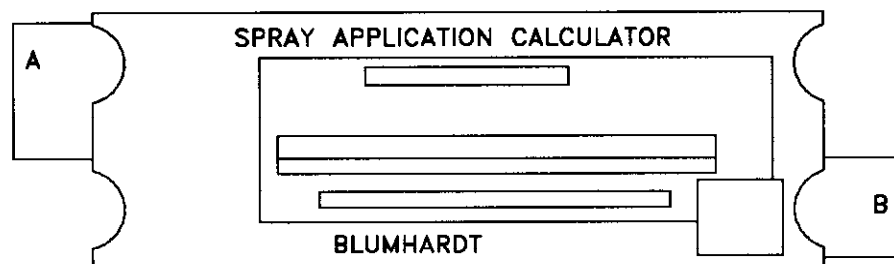
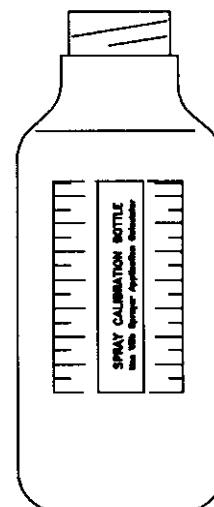


FIG. 13

CI-78013



CI-78013A

CALIBRATION INSTRUCTIONS WITHOUT BLUMHARDT BOTTLE AND CALCULATOR

EQUIPMENT: A bottle with 1 ounce graduations on it, a watch with a second hand, pencil and paper or calculator.

PROCEDURE: Determine desired gallons per acre and speed in miles per hour. Choose a level in graduated bottle, any level can be used however greater accuracy exists by using a higher level. Figure from the equation the amount of seconds it should take to fill the bottle to the desired number of ounces. Adjust the sprayer pressure accordingly to fill the bottle to the desired number of ounces. Adjust the sprayer pressure accordingly to fill the bottle to desired level in the proper amount of time.

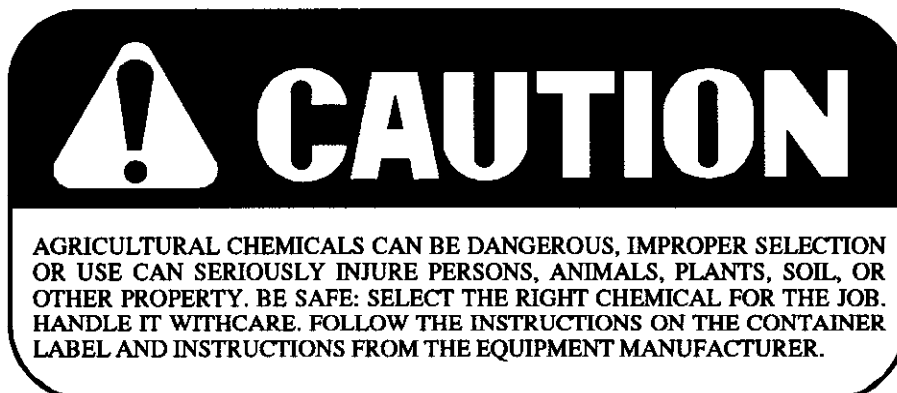
EQUATION:

$$\text{Seconds} = \frac{2589 \times \text{Level (liquid ounces)}}{\text{MPH} \times \text{Gallons Per Acre} \times \text{Nozzle Spacing}}$$

Example: Determine 10 gallons per acre, 5 miles per hour speed of travel, 30" nozzle spacing and 8 ounces to be collected.

$$\frac{2598 \times 8}{5 \times 10 \times 30} = 13.808 \text{ seconds}$$

It should take 13.8 seconds to fill the bottle to 8 ounces.



CI-77950

FLOOD TIP CALIBRATION

BROADCAST APPLICATION RATE

Although total sprayer capacity is determined by nozzle flow rate and the number of nozzles, the volume of liquid applied per acre is a function of flow rate, nozzle spacing, and sprayer speed as defined in the following formula:

$$\text{Gallons per acre (GPA)} = \frac{(5940) \times (\text{GPM per nozzle})}{(\text{Nozzle Spacing-inches}) \times (\text{MPH})}$$

OR

$$\text{GPM} = \frac{\text{GPA} \times \text{MPH}}{5940} \times \text{Nozzle Spacing-inches}$$

NOTE: The performance of any agricultural chemical depends upon the proper application of the correct amount . . . based on chemical manufacturer's recommendation. Be sure that your equipment has been properly calibrated before spraying.

This information on Flood Tips is taken from the Delavan Ag Spray Products 1990 Catalog #1609P.

BROADCAST NOZZLE SPACING CONVERSION FACTORS

To calculate GPA capacities for nozzle spacings other than those shown in capacity charts, note on what nozzle spacing the capacity chart is based and use the corresponding conversion table. Multiply capacities from chart by the proper factor indicated.

FACTORS FOR 20" SPACING CAPACITIES

Nozzle Spacing	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"
Factor	2.0	1.67	1.43	1.25	1.11	1.00	.91	.86	.77	.71	.67

FACTORS FOR 30" SPACING CAPACITIES

Nozzle Spacing	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"
Factor	1.88	1.67	1.50	1.36	1.25	1.15	1.07	1.00	.94	.88

D-TYPE FLOOD TIP CHART: WATER

Flood Tip	P S I	G P M	20" SPACING					30" SPACING				
			4 MPH	5 MPH	6 MPH	10 MPH	15 MPH	4 MPH	5 MPH	6 MPH	10 MPH	15 MPH
D 2.5 45767 DARK BLUE	10	.25	18.6	14.85	12.45	7.5	4.95	12.4	9.9	8.3	5.0	3.3
	20	.35	26.3	21.0	17.5	10.5	7.0	17.5	14.0	11.7	7.0	4.7
	30	.43	32.1	25.7	21.4	12.8	8.6	21.4	17.1	14.3	8.6	5.7
	40	.50	37.1	29.7	24.8	14.9	9.9	24.8	19.8	16.5	9.9	6.6
D 3 45768 DARK GREEN	10	.30	22.35	17.85	14.85	8.85	6.0	14.9	11.9	9.9	5.9	4.0
	20	.42	31.5	25.2	21.0	12.6	8.4	21.0	16.8	14.0	8.4	5.6
	30	.52	39.0	31.2	26.0	15.6	10.4	26.0	20.8	17.3	10.4	6.9
	40	.60	45.0	36.0	30.0	18.0	12.0	30.0	24.0	20.0	12.0	8.0
D 5 45769 TAN	10	.50	37.5	29.7	24.75	14.85	9.9	25.0	19.8	16.5	9.9	6.6
	20	.71	52.5	42.0	35.0	21.0	14.0	35.0	28.0	23.3	14.0	9.3
	30	.87	64.5	51.6	43.0	25.8	17.2	43.0	34.4	28.7	17.2	11.5
	40	1.00	75.0	60.0	50.0	30.0	20.0	50.0	40.0	33.3	20.0	13.3
D 7 45770 LIGHT BLUE	10	.75	55.5	45.0	37.5	22.35	14.85	37.0	30.0	25.0	14.9	9.9
	20	1.10	78.8	63.0	52.5	31.5	21.0	52.5	42.0	35.0	21.0	14.0
	30	1.30	96.2	76.9	64.1	38.5	25.6	64.1	51.3	42.7	25.6	17.7
	40	1.50	111.0	88.8	74.0	44.4	29.6	74.0	59.2	49.3	29.6	19.7
D 10 45766 LIGHT GREEN	10	1.00	75.0	60.0	49.5	29.7	19.8	50.0	40.0	33.0	19.8	13.2
	20	1.40	105.0	84.0	70.0	42.0	28.0	70.0	56.0	46.7	28.0	18.7
	30	1.74	129.3	103.5	86.2	51.7	34.5	86.2	69.0	57.5	34.5	23.0
	40	2.00	148.5	118.8	99.0	59.4	39.6	99.0	79.2	66.0	39.6	26.4

D-TYPE FLOOD TIP CHART: FERTILIZER

BASED ON 28% N (10.5 LB/GAL) FERTILIZER.

Flood Tip	P S I	G P M	20" Spacing						30" Spacing					
			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	14 MPH	4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	14 MPH
D 2.5 45767	20	.311	23.1	18.5	15.4	11.5	9.24	6.60	15.4	12.3	10.3	7.69	6.15	4.39
	25	.348	25.8	20.7	17.3	12.9	10.3	7.38	17.2	13.8	11.5	8.61	6.89	4.92
	30	.381	28.3	22.6	18.9	14.1	11.3	8.08	28.3	15.1	12.6	9.42	7.54	5.38
	35	.412	30.6	24.5	20.4	15.3	12.2	8.74	20.4	16.3	13.6	10.2	8.16	5.83
D 3 45768	20	.374	27.8	22.2	18.5	13.9	11.1	7.93	18.5	14.8	12.3	9.26	7.41	5.29
	25	.418	31.0	24.8	20.7	15.5	12.4	8.87	20.7	16.5	13.8	10.3	8.28	5.91
	30	.458	34.0	27.2	22.7	17.0	13.6	9.72	22.7	18.1	15.1	11.3	9.07	6.48
	35	.495	36.8	29.4	24.5	18.4	14.7	10.5	24.5	19.6	16.3	12.3	9.80	7.00
D 5 45769	20	.632	46.9	37.5	31.3	23.5	18.8	13.4	31.3	25.0	20.9	15.6	12.5	8.94
	25	.706	52.4	41.9	34.9	26.2	20.9	14.9	34.9	27.9	23.3	17.5	13.9	9.98
	30	.773	57.4	45.9	38.3	28.7	22.9	16.4	38.3	30.6	25.5	19.1	15.3	10.9
	35	.835	61.9	49.6	41.3	30.9	24.8	17.7	41.3	33.1	27.6	20.7	16.5	11.8
D 7.5 45770	20	.979	72.7	58.2	48.5	36.3	29.1	20.8	48.5	38.8	32.3	24.2	19.4	13.8
	25	1.09	80.9	64.7	54.0	40.5	32.4	23.1	53.9	43.2	36.0	27.0	21.6	15.4
	30	1.19	88.4	70.7	58.9	44.2	35.3	25.2	58.9	47.1	39.3	29.5	23.6	16.8
	35	1.28	95.0	76.0	63.4	47.5	38.0	27.2	63.4	50.7	42.2	31.7	25.3	18.1
D 10 45766	20	1.25	92.8	74.3	61.9	46.4	37.1	26.5	61.9	49.5	41.3	30.9	24.8	17.7
	25	1.40	104	83.2	69.3	51.9	41.6	29.7	69.3	55.4	46.2	34.7	27.7	19.8
	30	1.53	114	90.1	75.7	56.8	45.4	32.5	75.7	60.6	50.5	37.9	30.3	21.6
	35	1.65	123	98.0	81.7	61.3	49.0	35.0	81.7	65.3	54.5	40.8	32.7	23.3

Cone Spray Tip Metering Chart (GALLONS PER ACRE)

Cone Tip	P S I	G P M	20" Spacing						30" Spacing					
			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	14 MPH	4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	14 MPH
45680 Red	40	.044	3.3	2.6	2.2	1.6	1.3	.9	2.2	1.8	1.5	1.1	.9	.6
	60	.052	3.9	3.1	2.6	1.9	1.6	1.1	2.6	2.1	1.7	1.3	1.0	.7
	80	.061	4.6	3.7	3.0	2.3	1.8	1.3	3.0	2.4	2.0	1.5	1.2	.9
	100	.073	5.4	4.3	3.6	2.7	2.2	1.5	3.6	2.9	2.4	1.8	1.4	1.0
45681 White	40	.059	4.4	3.5	2.9	2.2	1.7	1.2	2.9	2.3	1.9	1.5	1.2	.8
	60	.071	5.3	4.2	3.5	2.7	2.1	1.5	3.5	2.8	2.4	1.8	1.4	1.0
	80	.084	6.3	5.0	4.2	3.1	2.5	1.8	4.2	3.4	2.8	2.1	1.7	1.2
	100	.098	7.3	5.9	4.9	3.7	2.9	2.1	4.9	3.9	3.3	2.4	2.0	1.4
45682 Blue	40	.082	6.1	4.9	4.1	3.1	2.5	1.8	4.1	3.3	2.7	2.0	1.6	1.2
	60	.108	8.0	6.4	5.3	4.0	3.2	2.3	5.4	4.3	3.6	2.7	2.1	1.5
	80	.124	9.2	7.4	6.2	4.6	3.7	2.6	6.2	4.9	4.1	3.1	2.5	1.8
	100	.140	10.4	8.3	7.0	5.2	4.2	3.0	7.0	5.6	4.6	3.5	2.8	2.0
45683 Green	40	.120	8.9	7.2	6.0	4.5	3.6	2.6	6.0	4.8	4.0	3.0	2.4	1.7
	60	.154	11.5	9.2	7.7	5.7	4.6	3.3	7.7	6.1	5.1	3.8	3.1	2.2
	80	.180	13.5	10.8	9.0	6.7	5.4	3.8	9.0	7.2	6.0	4.5	3.6	2.6
	100	.203	15.2	12.1	10.1	7.6	6.1	4.3	10.1	8.1	6.7	5.1	4.0	2.9
45684 Yellow	40	.148	11.0	8.8	7.4	5.5	4.4	3.2	7.4	5.9	4.9	3.7	2.9	2.1
	60	.179	13.3	10.7	8.9	6.7	5.3	3.8	8.9	7.1	5.9	4.4	3.6	2.5
	80	.217	16.2	12.9	10.8	8.1	6.5	4.6	10.8	8.6	7.2	5.4	4.3	3.1
	100	.271	20.2	16.2	13.5	10.1	8.1	5.8	13.5	10.8	9.0	6.7	5.4	3.8
45685 Purple	40	.205	15.3	12.2	10.2	7.6	6.1	4.4	10.2	8.2	6.8	5.1	4.1	2.9
	60	.252	18.8	15.0	12.5	9.4	7.5	5.4	12.5	10.0	8.4	6.3	5.0	3.6
	80	.306	22.8	18.3	15.2	11.4	9.1	6.5	15.2	12.2	10.1	7.6	6.1	4.3
	100	.372	27.7	22.2	18.5	13.9	11.1	7.9	18.5	14.8	12.3	9.2	7.4	5.3
45686 Black	40	.286	21.3	17.1	14.2	10.7	8.5	6.1	14.2	11.4	9.5	7.1	5.7	4.1
	60	.372	27.7	22.2	18.5	13.9	11.1	7.9	18.5	14.8	12.3	9.2	7.4	5.3
	80	.443	33.0	26.4	22.0	16.5	13.2	9.4	22.0	17.6	14.7	11.0	8.8	6.3
	100	.504	37.6	30.1	25.1	18.8	15.0	10.7	25.1	20.0	16.7	12.5	10.0	7.2
45687 Pink	40	.396	29.5	23.6	19.7	14.8	11.8	8.4	19.7	15.8	13.1	9.8	7.9	5.6
	60	.497	37.1	29.6	24.7	18.5	14.8	10.6	24.7	19.8	16.5	12.4	9.9	7.1
	80	.600	44.8	35.8	29.8	22.4	17.9	12.8	29.8	23.9	19.9	14.9	11.9	8.5
	100	.706	52.7	42.1	35.1	26.3	21.1	15.1	35.1	28.1	23.4	17.6	14.0	10.0
45688 Brown	40	.488	36.4	29.1	24.3	18.2	14.6	10.4	24.3	19.4	16.2	12.1	9.7	6.9
	60	.630	47.0	37.6	31.3	23.5	18.8	13.4	31.3	25.1	20.9	15.7	12.5	9.0
	80	.763	56.9	45.5	37.9	28.4	22.8	16.3	37.9	30.3	25.3	19.0	15.2	10.8
	100	.844	62.9	50.4	42.0	31.5	25.2	18.0	42.0	33.6	28.0	21.0	16.8	12.0
45689 Orange	40	.635	47.4	37.9	31.6	23.7	19.0	13.5	31.6	25.3	21.1	15.8	12.6	9.0
	60	.828	61.8	49.4	41.2	30.9	24.7	17.7	41.2	32.9	27.5	20.6	16.5	11.8
	80	.969	72.3	57.8	48.2	36.1	28.9	20.6	48.2	38.5	32.1	24.1	19.3	13.8
	100	1.18	88.0	70.4	58.7	44.0	35.2	25.1	58.7	46.9	39.1	29.3	23.5	16.8
45690 Olive	40	.797	59.4	47.6	39.6	29.7	23.8	17.0	39.6	31.7	26.4	19.8	15.9	11.3
	60	1.02	75.8	60.6	50.5	37.9	30.3	21.6	50.5	40.4	33.7	25.3	20.2	14.4
	80	1.21	90.3	72.3	60.2	45.2	36.1	25.8	60.2	48.2	40.1	30.1	24.1	17.2
	100	1.34	100.2	80.2	66.8	50.1	40.1	28.6	66.8	53.5	44.6	33.4	26.7	19.1

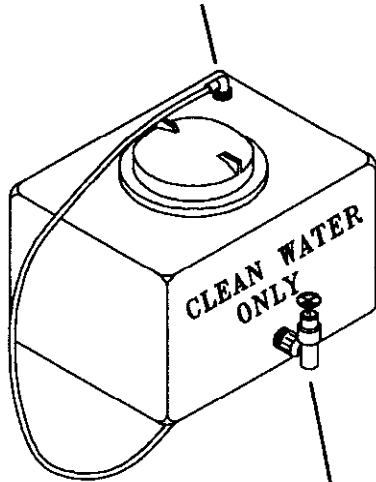
45716

NOTE: The performance of any agricultural chemical depends up on the proper application of the correct amount . . . based on chemical manufacture's recommendation. Be sure that your equipment has been properly calibrated before spraying.

OPERATION

All 1000 Gallon Trail Master sprayers are supplied with an 8 gallon clean water tank that is mounted onto the center frame tube. This tank is to be used for rinsing your hands and face in the event of contact with the chemical. Do not use as drinking water. (See Fig. 14.)

For quick access, pull tube out of fitting and hold below water level.



CI - 78043

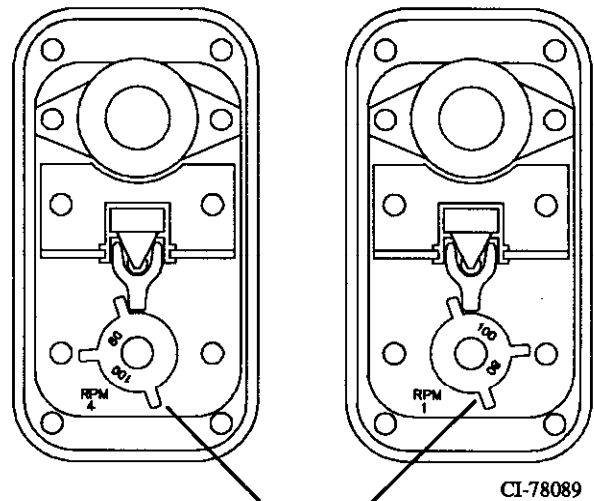
For larger quantity of water, use tee valve.

FIG. 14

HYDRAULIC PUMP REGULATOR

For models built prior to 1992

The oil regulator is used with the hydraulic driven centrifugal pump and is set at the factory for your specific control, RC-1B (1RPM) or Target Master (4RPM) and will not require adjustment. If the control system is changed the operator should contact the factory for correct adjustment. (See Fig. 15) for reference setting of switching collar when making adjustments.



CI-78089

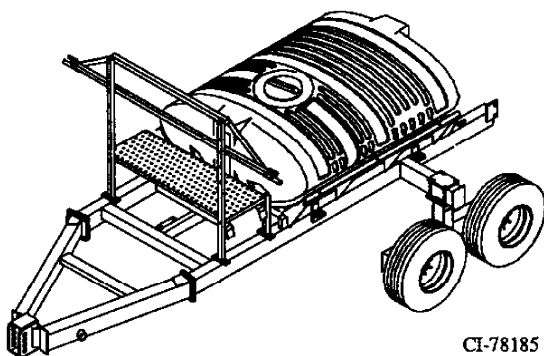
SWITCHING COLLAR

Fig. 15

PUMP OPERATING PRESSURE - MODLES 9303C AND 9203C-R																		
SPEED	10PSI		20PSI		40PSI		60PSI		80PSI		100PSI		120PSI		140PSI		160PSI	
RPM	GPM	HR	GPM	HR	GPM	HR	GPM	HR	GPM	HR	GPM	HR	GPM	HR	GPM	HR	GPM	HR
2400	73	1.4	54	1.2														
3600	107	4.3	105	4.2	90	3.9	34	2.5										
4200	124	6.7	122	6.7	115	6.5	93	5.9	46	4.2								
5000					134	10.7	130	10.6	112	10.1	88	9.0	41	6.6				
6000					136	15.1	134	15.4	131	15.8	125	16.2	120	16.2	109	15.7	86	14.0

TANK

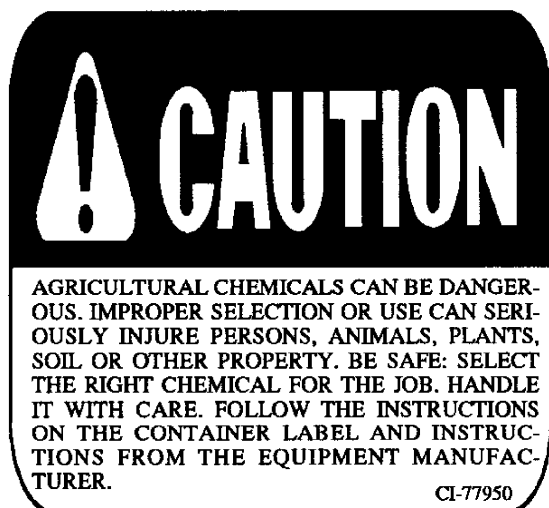
Before filling the chemical tank, check to be sure the tank straps to the tank frame are secure. This should be done after filling the tank for the first time, at the end of the first day of field use and weekly after that.



CI-78185

FIG. 16

Check your sprayer equipment to be sure that all components are clean and in good working condition. Even if the sprayer is new or used and has been properly stored, it should be checked and tested.



We suggest before any use, new or used, to wash out the tank to remove dust and/or oil. For the initial use of the sprayer, use water only, to check hoses for holes, weathering, and places that are worn. Check the pump to be certain that it turns freely. Check strainer screens. Clean and replace or repair any defective parts. Doing all of these steps with water will prevent loss of chemical and enable you to test the mechanical functions of the sprayer in a safe manner.

PUMPS

Centrifugal pumps need the liquid level to be above the top of the pump to create a prime. The amount to create a prime will vary depending upon the location of the pump relative to the tank.

CONTROL PANEL

The following instructions refer to the RC-1B control panel. For directions or usage for the optional Target Master Control refer to the MT-3000 Sprayer Control Manual for instructions.

With pump running, check to see that the pump has obtained its prime. This will be indicated when agitation begins in the tank. Turn master switch on control panel to ON position. Turn each of the boom valves ON (2 or 3 section) and adjust the pressure to approximately 40psi.

This pressure setting will allow you to check each of the nozzles on the boom to ensure they are developing a proper spray pattern. At this time, recheck all of the connections on the sprayer for leaks and each of the nozzles for proper pattern. Replace all worn tips and those with streaked, uneven patterns.

Warning: Do not use a metal probe when cleaning a nozzle orifice. Wash the tips thoroughly with water or a cleaning solution. If the orifice remains clogged or plugged, clean it with a fine bristled brush or toothpick, being careful not to damage the orifice. Rinse with water and dry. Do not attempt to clean tips by blowing through them.

Turn each boom OFF and ON to check for proper function of each of the solenoid valves.

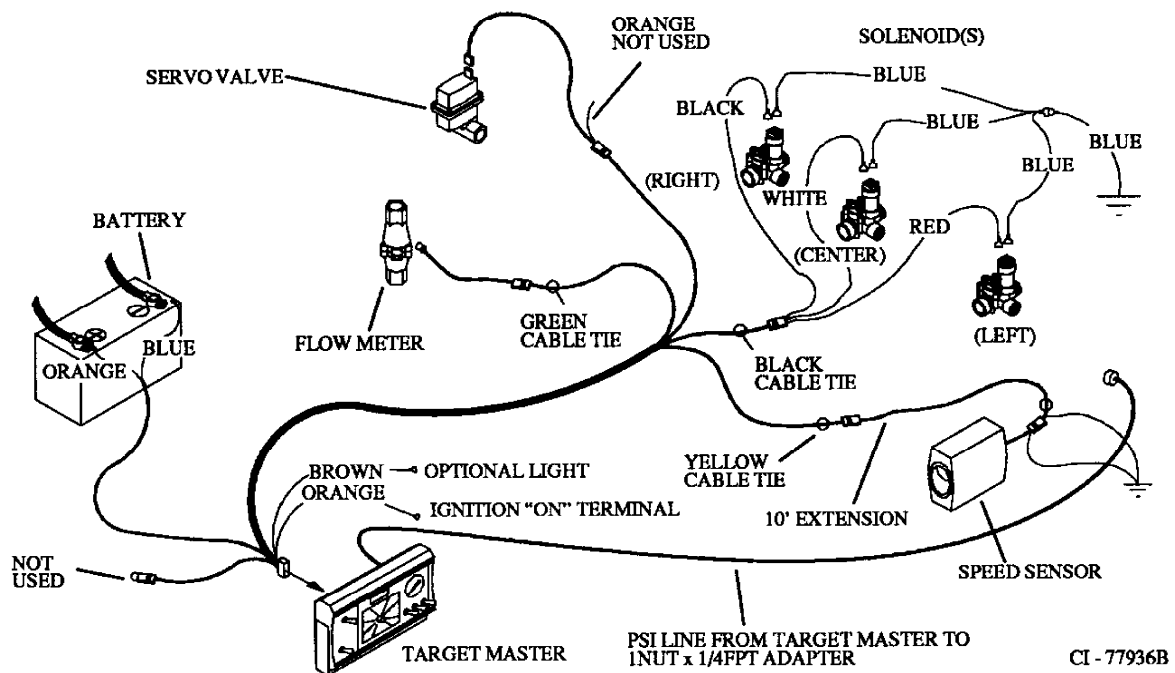
Set the pressure to the setting that you will be using for the application rate you chose. (Refer to the rate charts on pages 13-14.)

The nozzles should now be checked for proper application rate. This can be accomplished by the use of the calibration bottle and chart (or the calculation method). (Refer to pages 10-14 for proper procedures.)

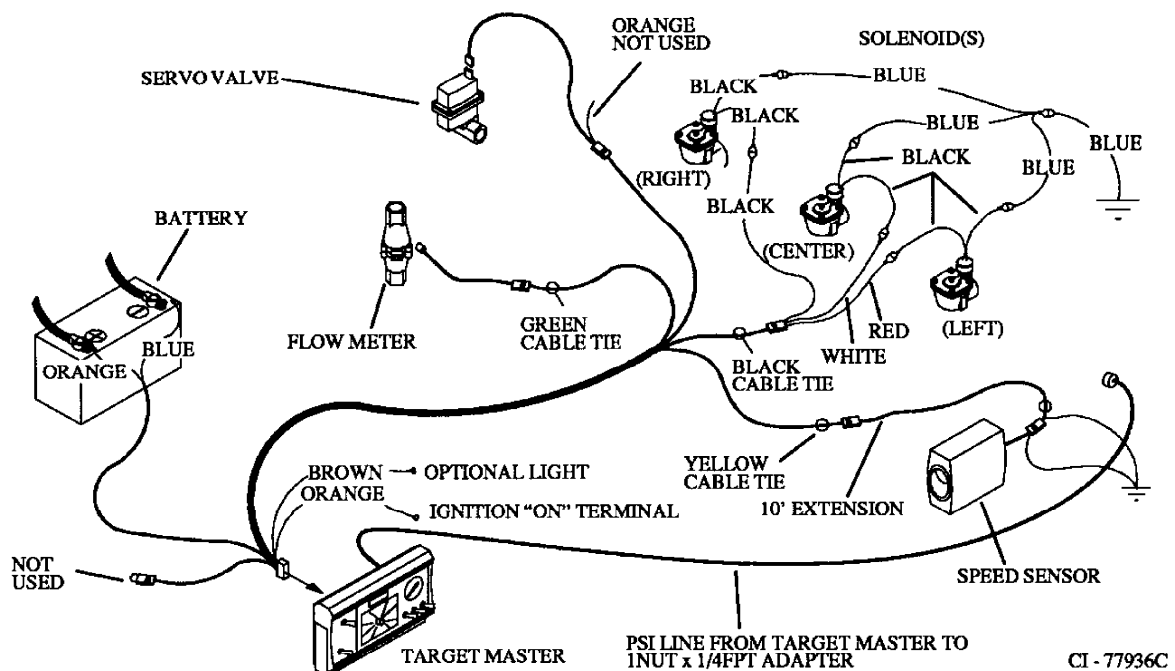
If nozzle flow rate (GPM) is higher than specified replace the tip. Repeat this test for each nozzle.

TARGET MASTER 3 SOLENOID WIRING

Remcor Solenoid



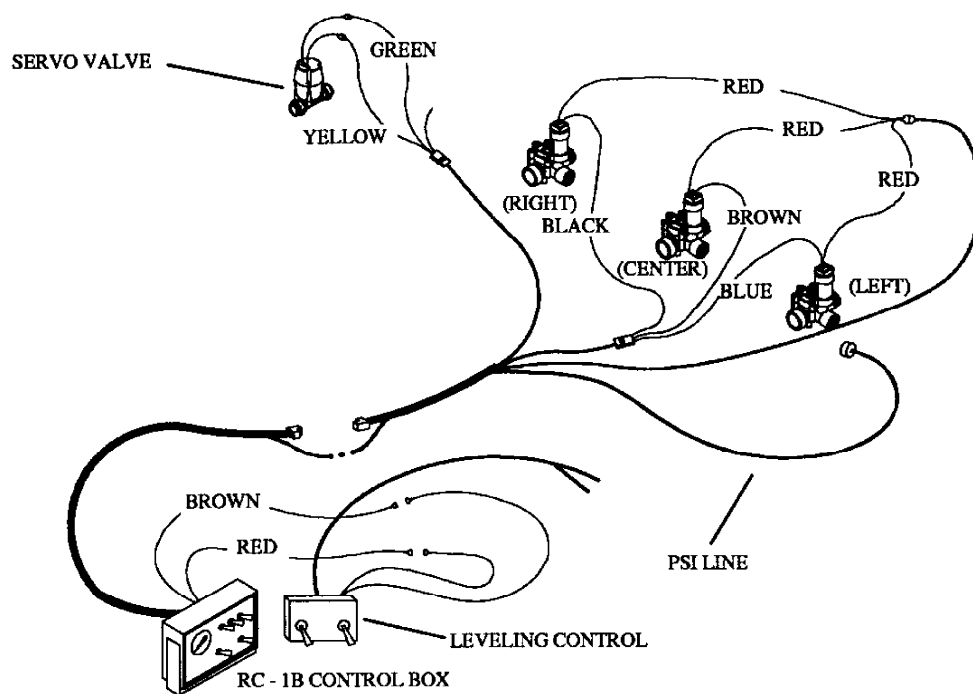
PRIOR TO 1993 (Green Lawn Solenoid)



NOTE: Refer to Target Master installation/operators manual for information regarding the Target Master sprayer control system.

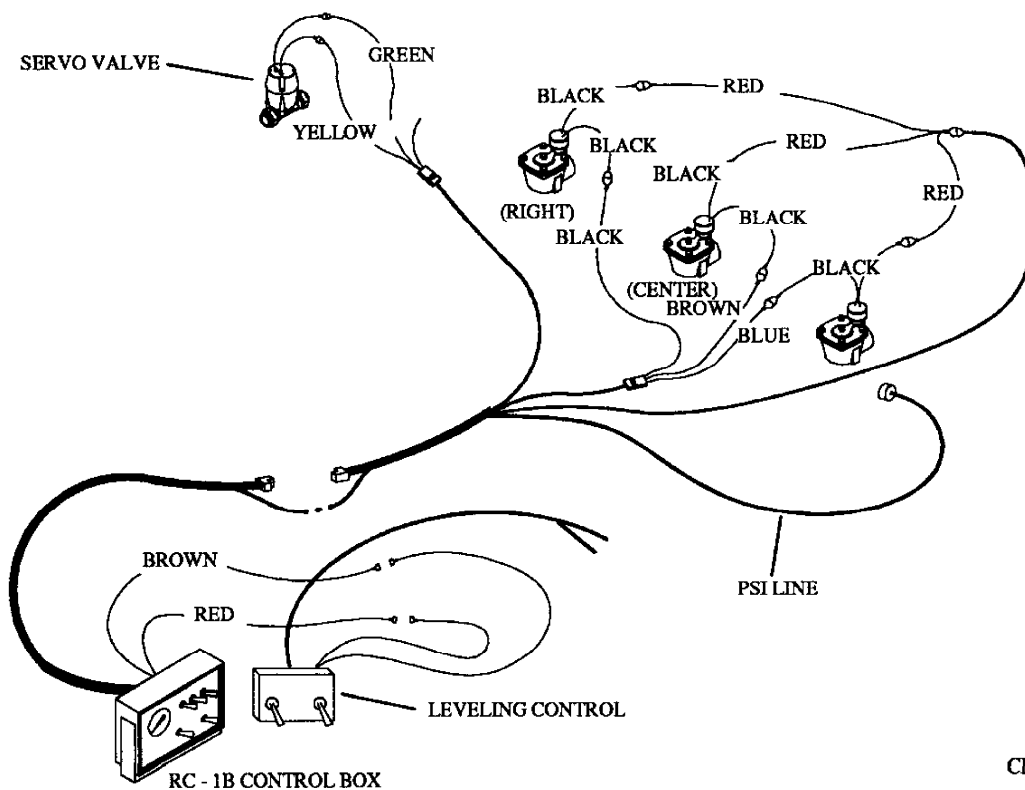
RC-1B 3 SOLENOID WIRING

Remcor Solenoid



CI - 78190B

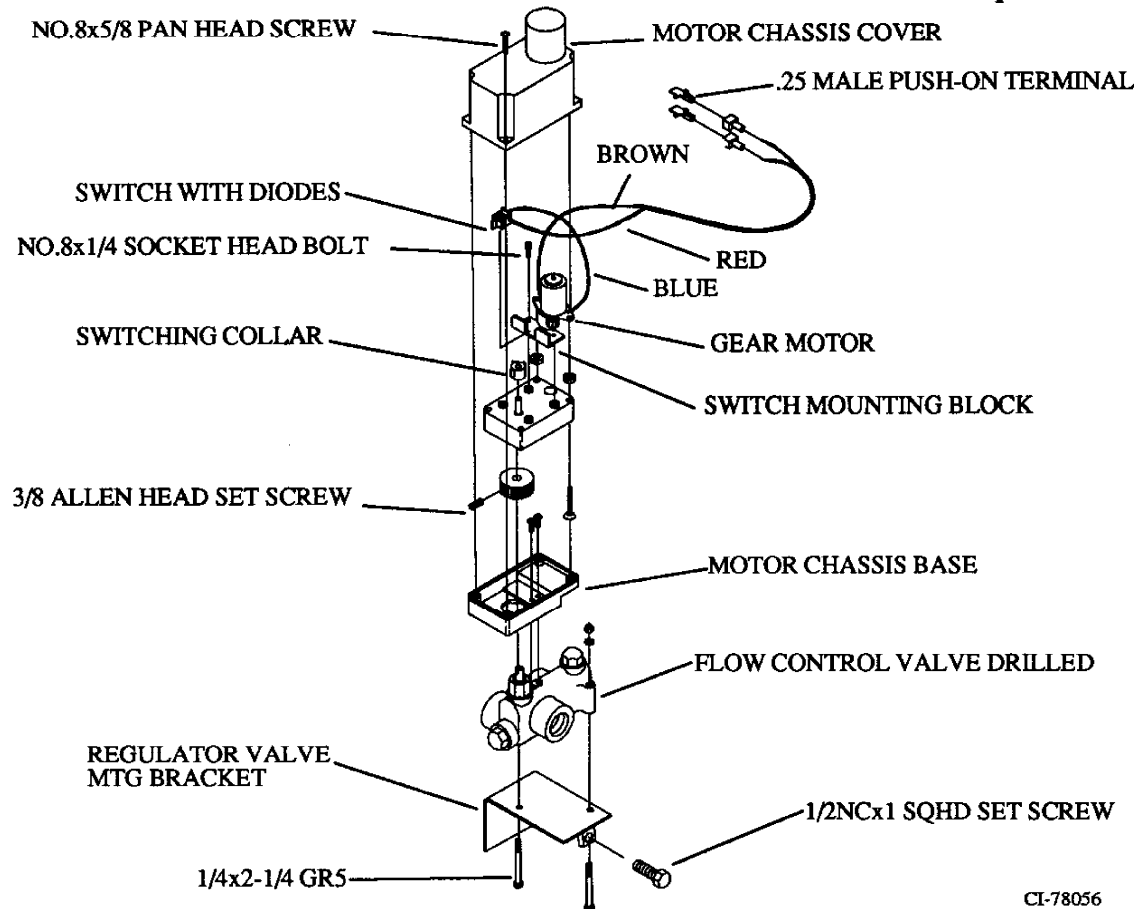
PRIOR TO 1993 (Green Lawn Solenoid)



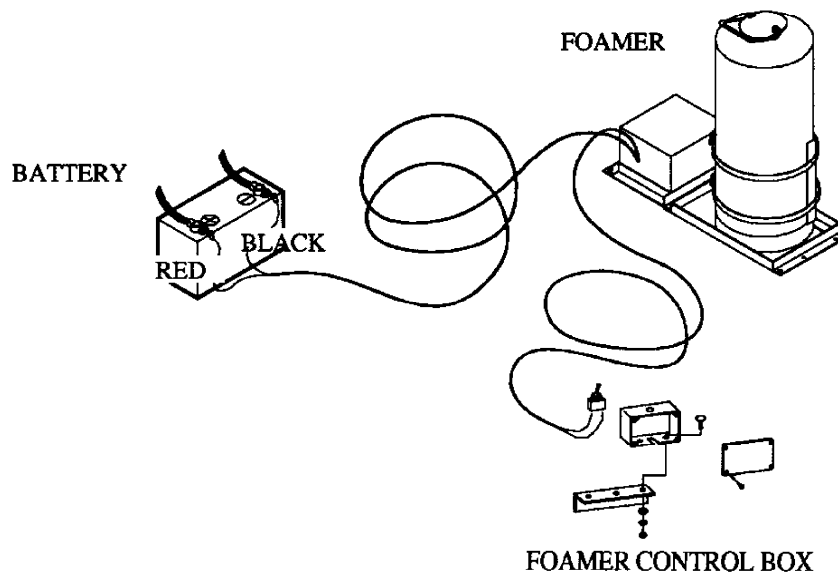
CI - 78190C

HYDRAULIC REGULATOR

For models released prior to 1992

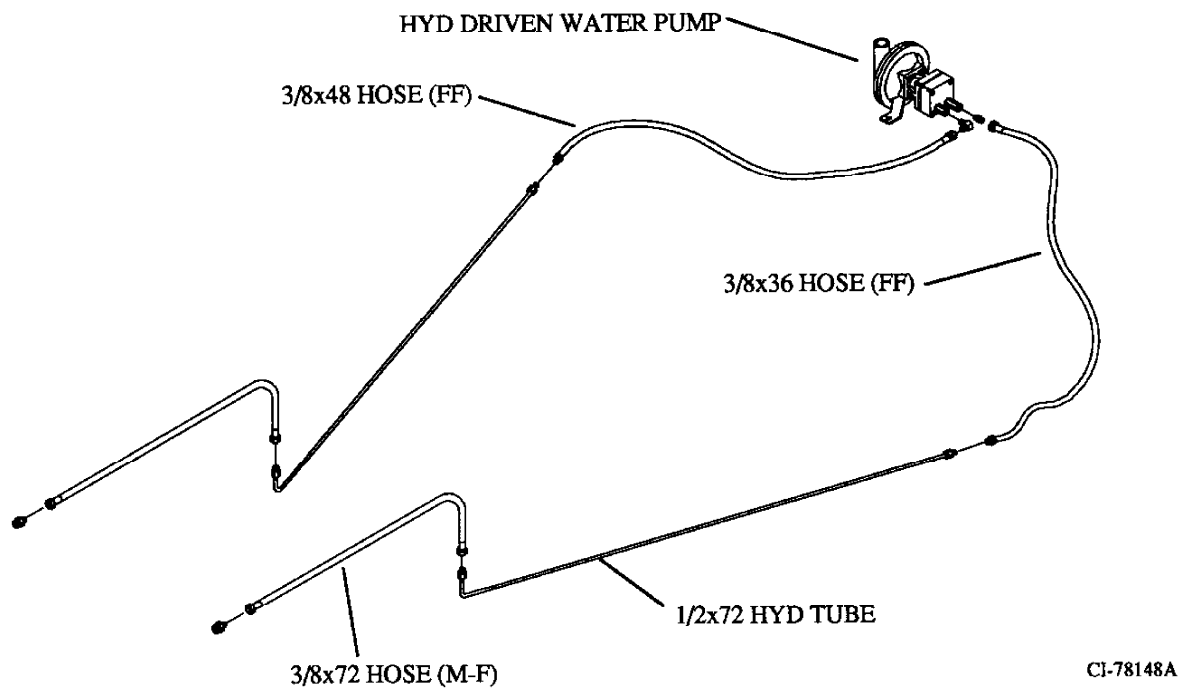


FOAMER WIRING

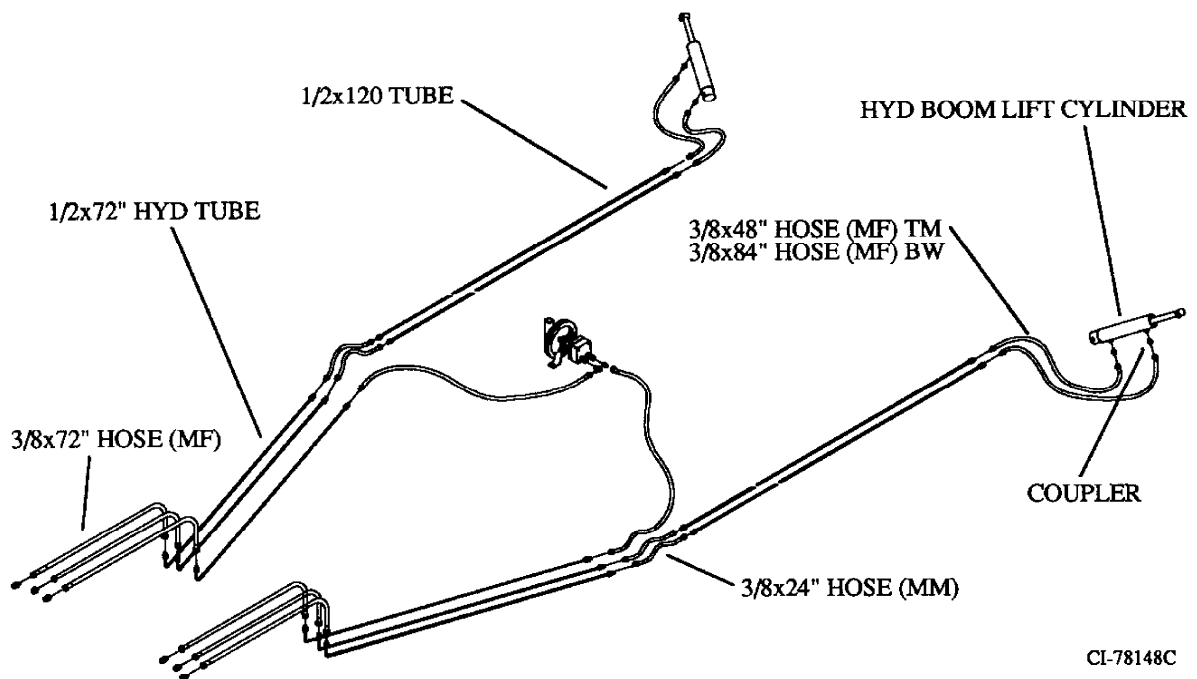


CI - 77945

HYDRAULIC PUMP DRIVE



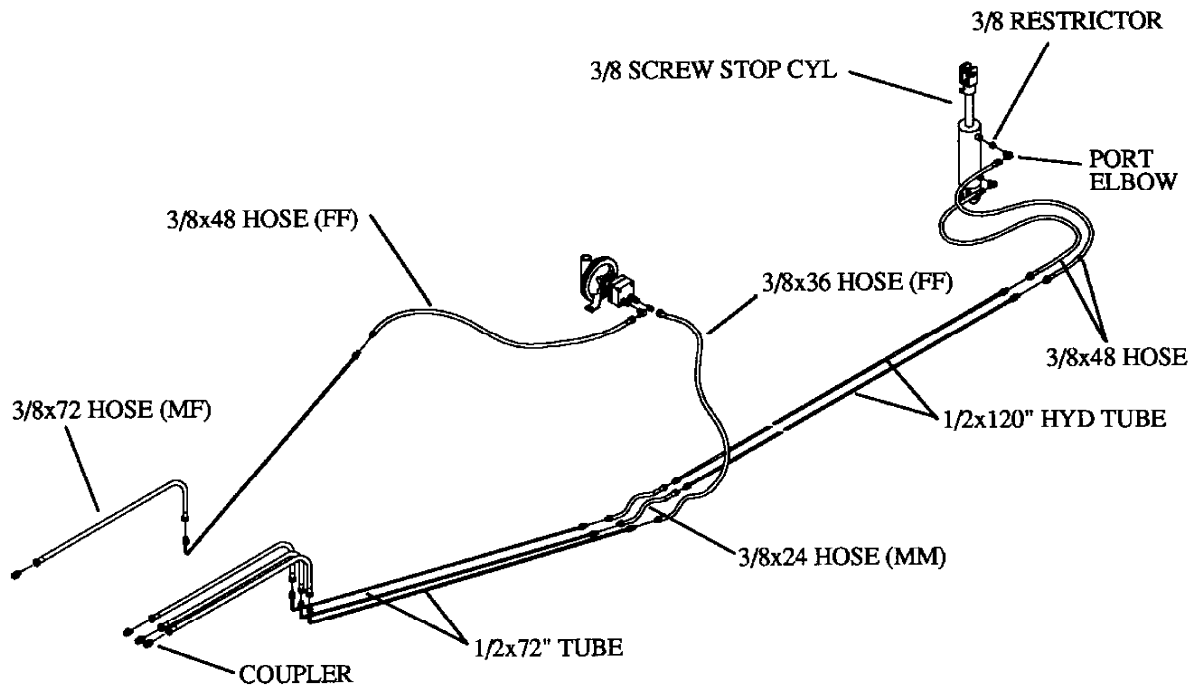
HYDRAULIC BOOM TILT W/HYD PUMP DRIVE



TM - TRAIL MASTER

BW - BIG WHEEL TRAIL MASTER

CENTER LIFT & HYDRAULIC PUMP PLUMBING

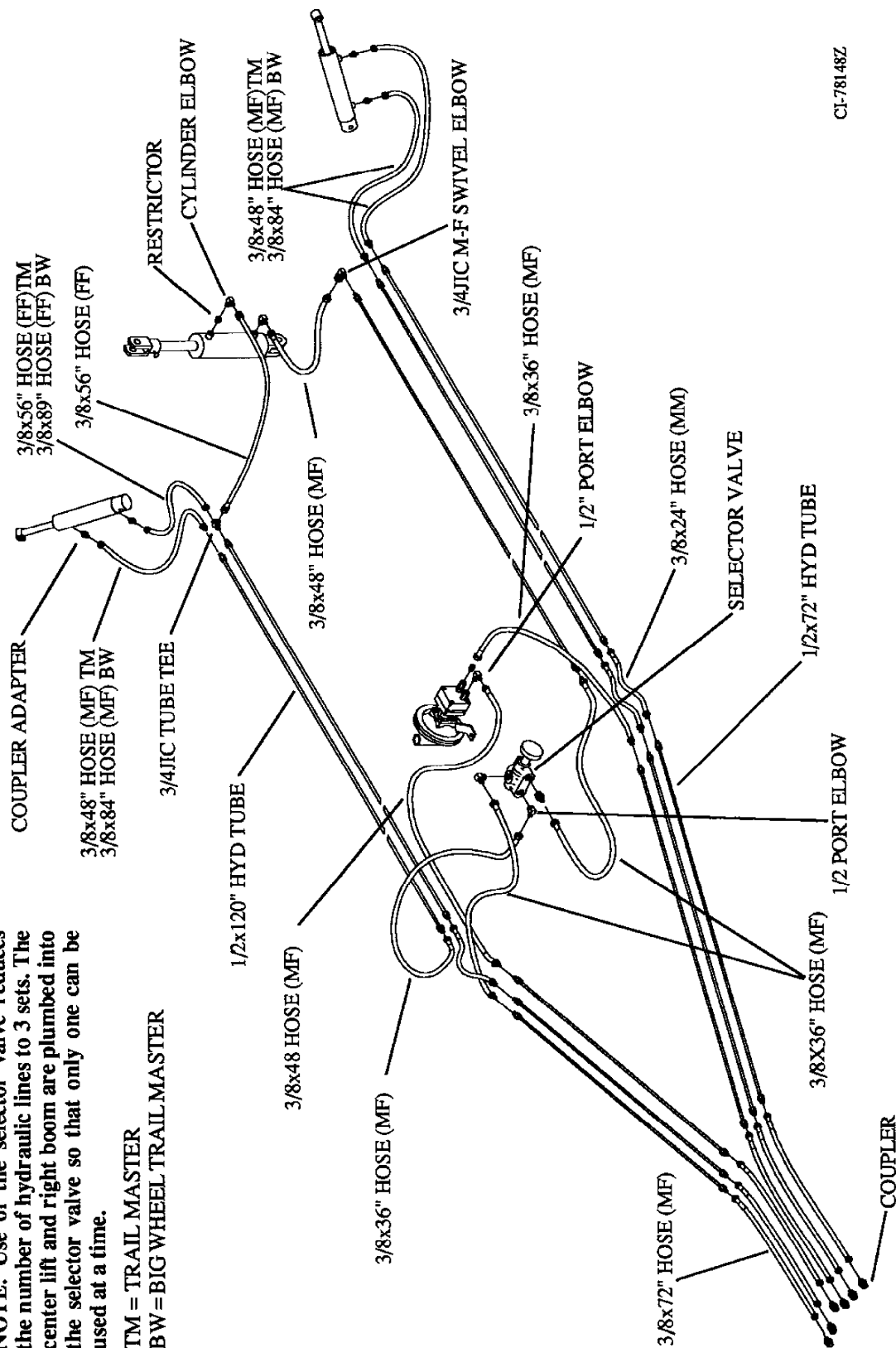


CL-78148B

HYDRAULICS

NOTE: Use of the selector valve reduces the number of hydraulic lines to 3 sets. The center lift and right boom are plumbed into the selector valve so that only one can be used at a time.

TM = TRAIL MASTER
BW = BIG WHEEL TRAIL MASTER



CI-78148Z

PUMP PLACEMENT

RECOMMENDED PUMP PLACEMENT

Location of PTO driven pumps and pump drive units can have a significant effect on pump life.

NOTE: When installing the PTO shaft, caution must be exercised to insure:

1. The drive shaft is level.
2. The hitch pin is the center-point.
3. Avoid turn angles greater than 45°.

Failure to follow these 3 rules can cause "power surges" within the pump and drive units, increasing wear on seals and gears.

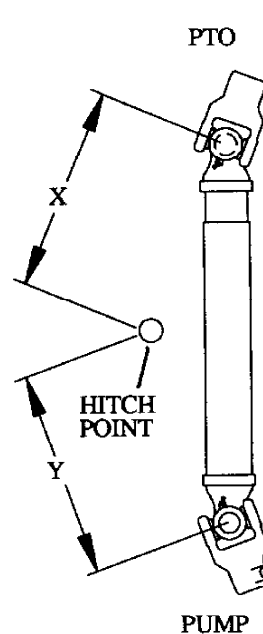
CORRECT INSTALLATION

Figure 17 shows X & Y are equal, which maintains equal U-joint angles and prevents fluctuations.

The power surge occurs when the PTO shaft knuckle and the universal joint at the pump end of the drive shaft turn faster on the inside of the turning angle than on the outside. To prevent these vibrations, the angle of the drive shaft to the tractor PTO shaft and the angle of the drive shaft at the pump shaft must be as close to equal as possible. This will cancel out the fluctuations.

Therefore, the best PTO shaft installation is to make the distance from the PTO U-joint to the hitch point **equal** to the distance from the hitch point to the pump U-joint.

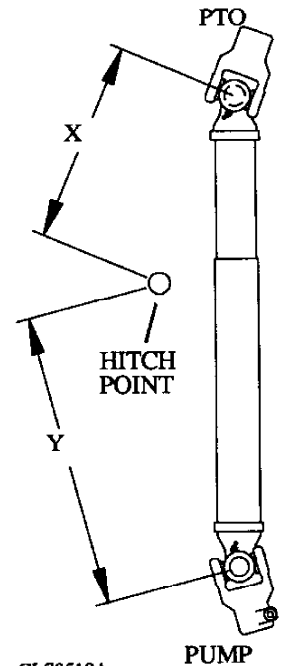
CORRECT



CI-78510

Figure 17

INCORRECT



CI-78510A

Figure 17A

INCORRECT INSTALLATION

Figure 17A shows X & Y are not equal, creating unequal U-joint angle which can result in RPM fluctuations and increase wear on U-joint and pump.

NOTE: PTO shields are removed on these views for illustrating reasons only. Never operate the PTO with any shield or other safety device removed.

PTO SHAFT RPM	HITCH PIN TO U-JOINT DISTANCES
540 RPM	X = 14 INCHES, Y = 14 INCHES
1000 RPM (1-3/8 DIA)	X = 16 INCHES, Y = 16 INCHES

PTO'S

PTO DRIVE MODELS

The tractor drawbar should be locked into the forward position and the PTO shaft hooked into the 540 or 1000RPM shaft from the tractor.

PTO LENGTH ADJUSTMENT

It is important that any length adjustments required be made to your PTO shaft before it is used. (See figure 18.) This cannot be over emphasized. When checking operating length, be sure to allow approximately 3/4" for the possibility of the tractor being slightly canted when in a tight turn.

1. Hold mounted half shafts side by side and mark off exact length plus 3/4".
2. Cut off guard tube.
3. Shorten telescopic section to same extent as guard tube. Example: take 1" off guard tube, take 1" off telescopic tube.
4. Deburr, cut and remove chips.

REMEMBER: Over-compression will result in immediate PTO failure. This length adjustment must be done while hooked up to the tractor to be used when spraying. If very tight turns are made, extreme care must be exercised.

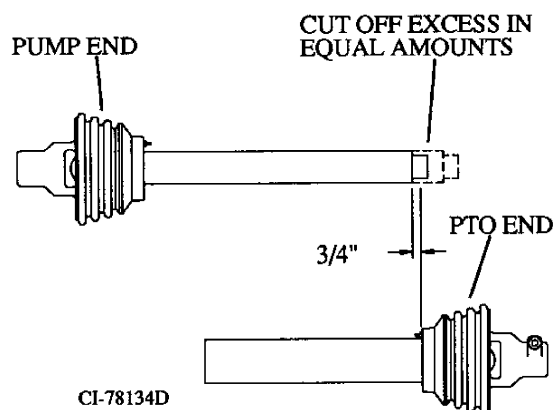


Figure 18

NOTE: Telescopic tube extends beyond end of the guard tube.

PTO HOOK-UP

Clean PTO and sprayer pump shafts. Push slide pin on tractor end and make sure key is in pump shaft.

Adjust push-pull lock; pull or push depending on lock model. (See figure 19.)

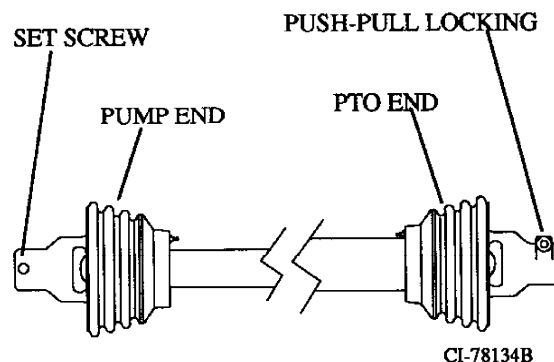


Figure 19

Make sure set screw is tight on pump end. Any type of thread lock is recommended. Check all connections daily.



CI-78132

PTO JOINT ARTICULATION

For sharp turns and steep ditches, stop PTO shaft. For maximum working angle, see figure 20 and 20A.

SIDE VIEW 540RPM

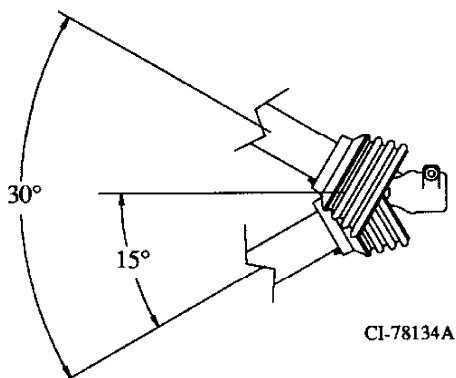


Figure 20

SIDE VIEW 1000RPM

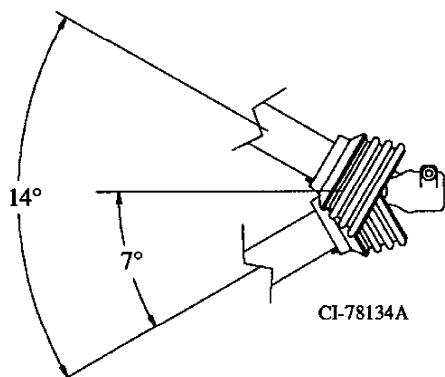
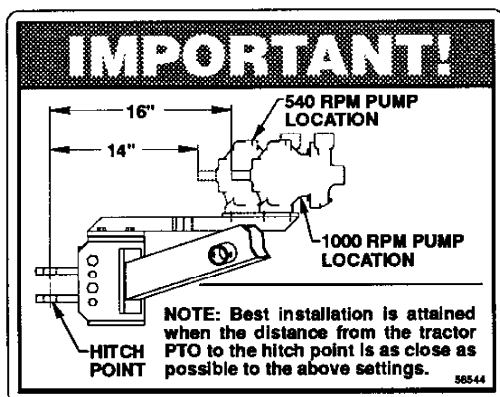


Figure 20A



PTO GUARDS

Attach safety chain loosely. Mind swivel range. (See figure 21.)

Provide for sufficient protection of PTO shaft.

NOTE: Work with guarded shafts only!

NOTE: Make sure safety chain on guards is secured to prevent guards from turning with the PTO.

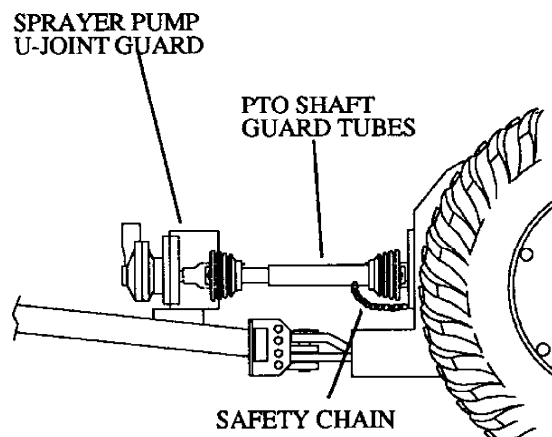


Figure 21



Drive decals are taken from Walterschild Inc. brochures.

MAINTENANCE

Grease booms daily or every 10 hours. (See figures 22 and 23)

Grease PTO shaft as required. (See figure 24.)

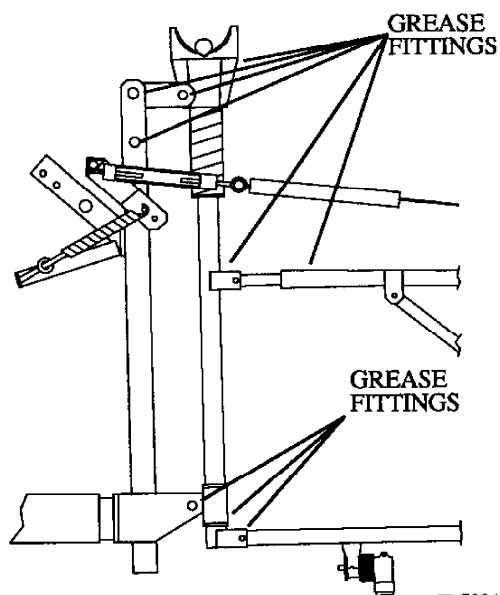


Figure 22

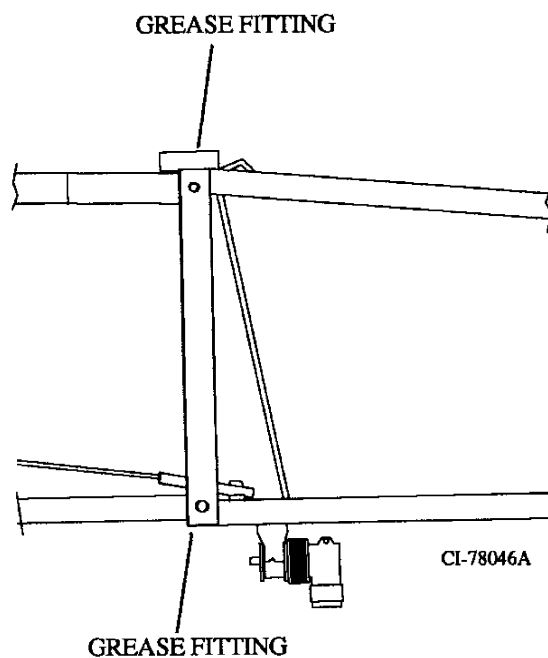


Figure 23

* Swing joint sideways for greasing.

** Pull shafts apart and apply grease to inside of outer telescopic tube.

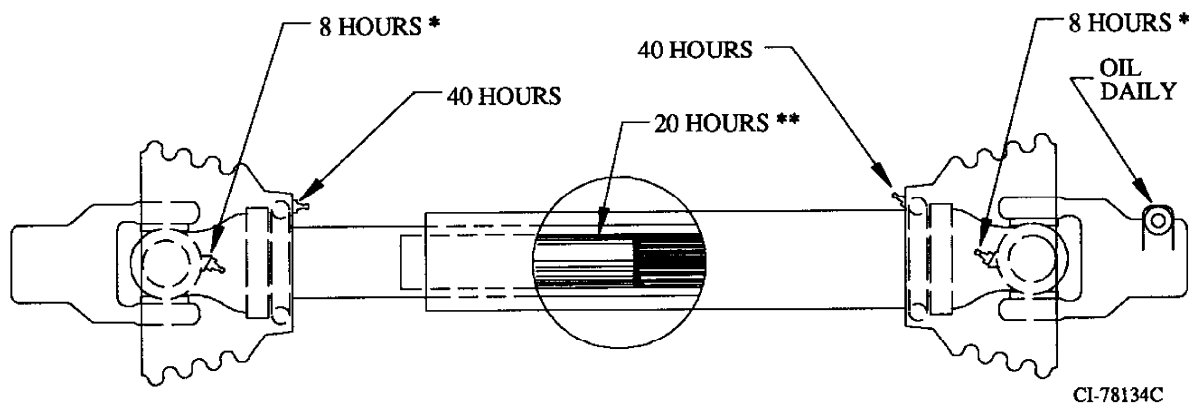


Figure 24

CLEANING AND NIGHTLY STORAGE

Wash the entire sprayer as often as possible to help reduce the chemical build up on the sprayer.

Inspect plumbing daily for cracked or pinched hoses and examine each nozzle assembly for proper working order.

At the end of each days spraying, the entire sprayer system should be flushed with clean water.

As an added precaution when changing chemicals and before storing, the sprayer should be cleaned with household ammonia. This is added to the water used for flushing (1 quart per 25 gallons of water) and will neutralize most chemical used in spraying.

If the sprayer system is to be stored overnight during freezing temperatures, the entire system should be thoroughly flushed with permanent-type RV anti-freeze (using a 50% solution).

During periods of use with freezing temperatures or when the sprayer is to be stored, the swivel nut on all nozzles should be loosened or removed to prevent freezing and damage to the nozzles.

NOTE: The above steps should be performed nightly if the sprayer is to be used during periods with freezing temperatures (early spring or late fall).

SEASONAL STORAGE

NOTE: If possible store your sprayer inside.

At the end of a season, rinse with ammonia, drain, flush with anti freeze and remove caps and tips. Clean the sprayer thoroughly to remove any trash, soil or dirty grease which could hold moisture and cause premature rusting. Repaint any chipped, bare or rusted areas to prevent any further deterioration. Inspect the machine for any worn or broken parts and adjust or replace as required.

SEE YOUR BLUMHARDT DEALER FOR ANY PARTS AND/OR SERVICE WHICH MAY BE NEEDED.

Thoroughly lubricate all grease fittings at the end of the seasons use and again before the first operation of the next season.

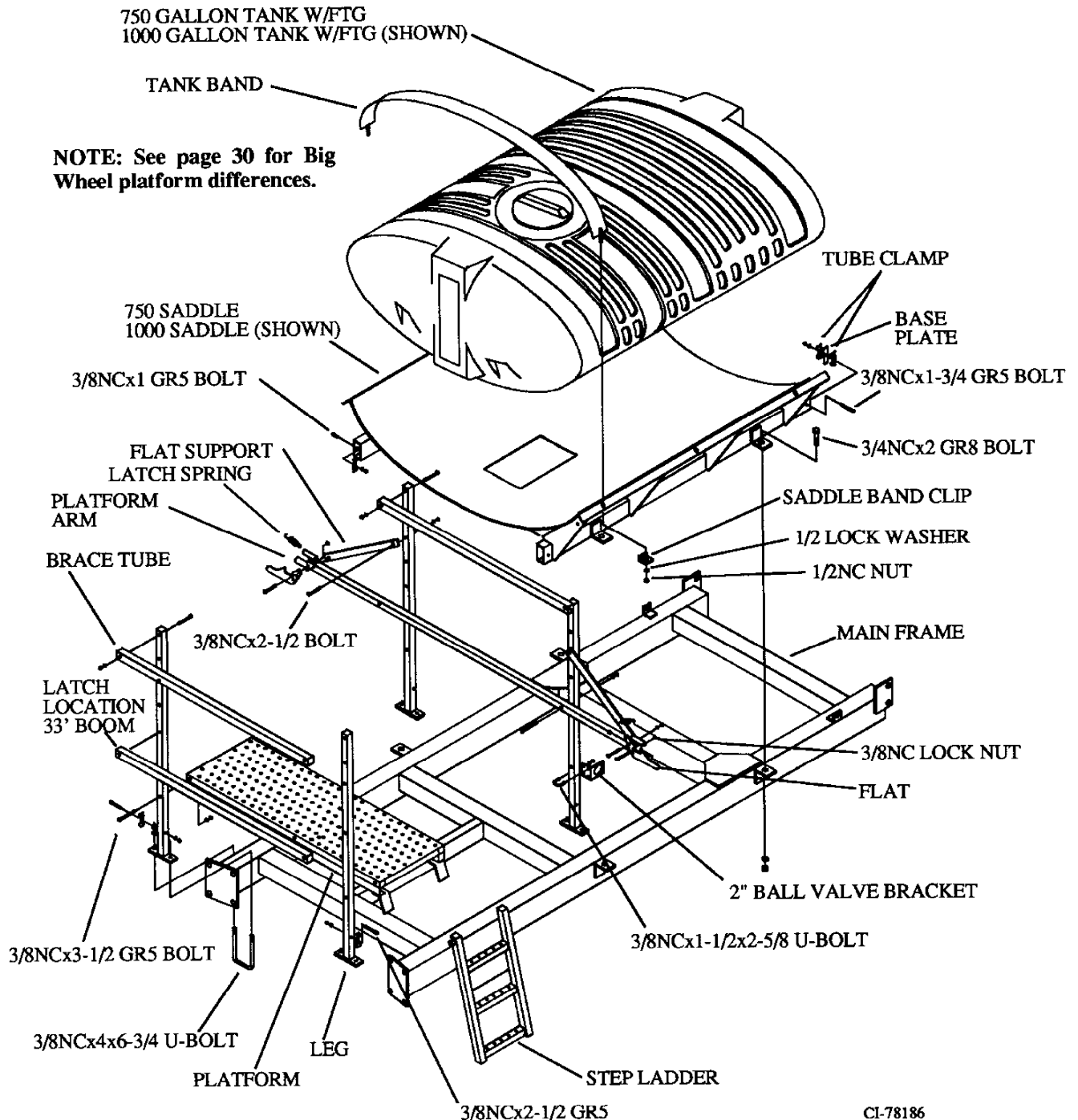
NOTE: Check with your local or county extension office, state chemical association, or chemical dealer for local laws pertaining to washing and flushing the sprayer. Run off can contaminate ground water supplies.

TROUBLE SHOOTING

SYMPTOMS	PROBABLE CAUSE	CORRECTIVE ACTION
No Pressure	Pump is not primed.	Open valve in suction line. Fill tank to level higher than pump.
	Pump is not engaged.	Check hydraulic hose connections to pump. Check hydraulic flow control valve. Make sure oil is running through the pump in the proper direction.
	Pressure gauge not functioning.	Check connection on 1/8" pressure tube to gauge. Check for faulty gauge.
Low Pressure	Air leak in suction line.	Check for tightness and seal on all fittings in suction line. Be sure to check line strainer bowl.
	Restriction in suction line.	Check that ball valve in suction line is completely open. Clean line strainer and screen.
	Pump is not at full RPM.	Check set screw bypass adjustment on side of orbit motor. Check hydraulic flow control valve.
	Too much by-pass from pump.	Check for proper installation of agitation fittings and orifices.
Pressure will not adjust.	Pressure control and hydraulic flow control valve is not functioning.	Check electrical connections to flow control valve. Check connections at motor assembly on flow control valve. Check fuse, master switch and pressure switch on control panel.
One or both booms will not spray.	No pressure from pump.	Follow corrective actions listed above for a sprayer with no pressure.
	No electrical power to solenoids.	Check electrical connections to control panel and solenoid valves. Check fuse, master switch and boom switches on control panel.
	Coil assembly on solenoid not functioning.	Clean plunger, spring and inside of coil. Replace faulty coil.
	Solenoid valve not functioning.	Disassemble and clean valve and diaphragm. Replace swollen diaphragm or replace complete solenoid valve.
	Valve to manifold is off.	Turn on ball valve at pump discharge.

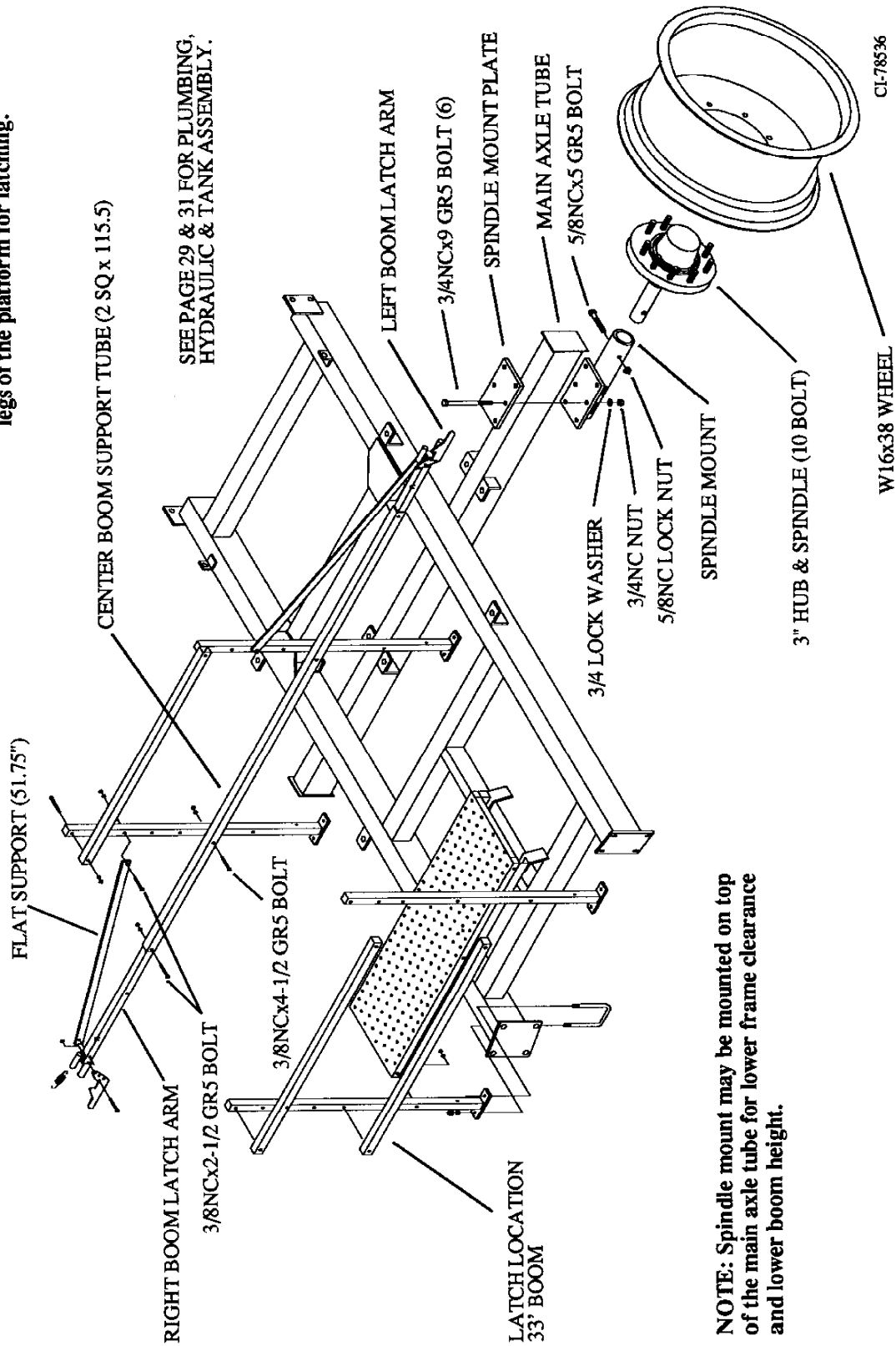
750 & 1000 GALLON MAIN FRAME ASSEMBLY

NOTE: 33' boom assemblies require the platform arm be moved to the front legs of the platform for latching.



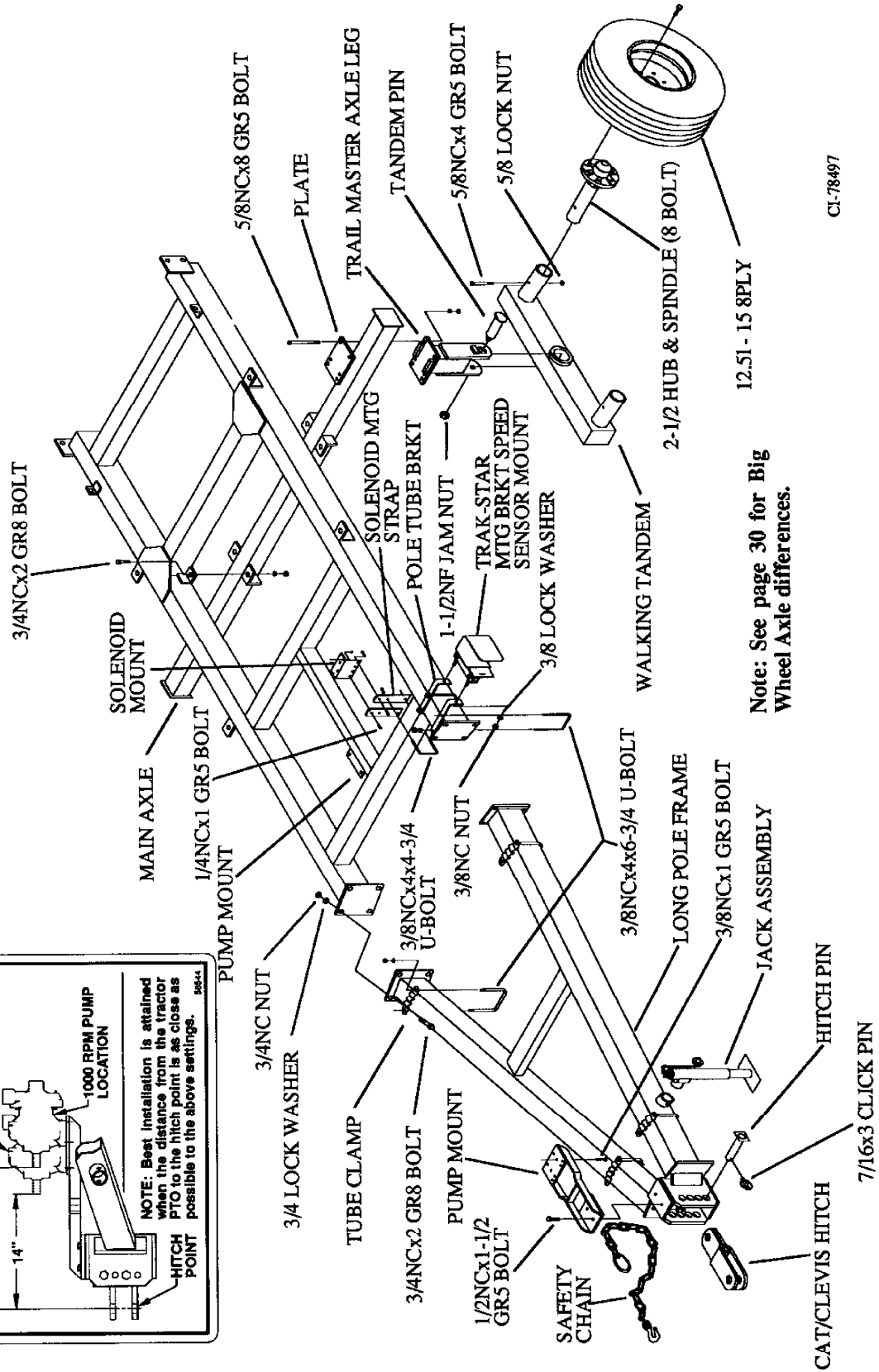
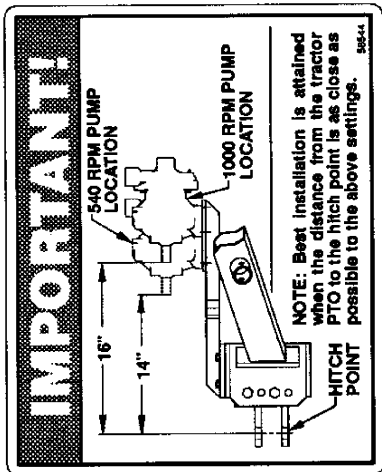
BIG WHEEL AXLE & PLATFORM DIFFERENCES

NOTE: The 33' boom assemblies requires the platform arm be mounted to the front legs of the platform for latching.



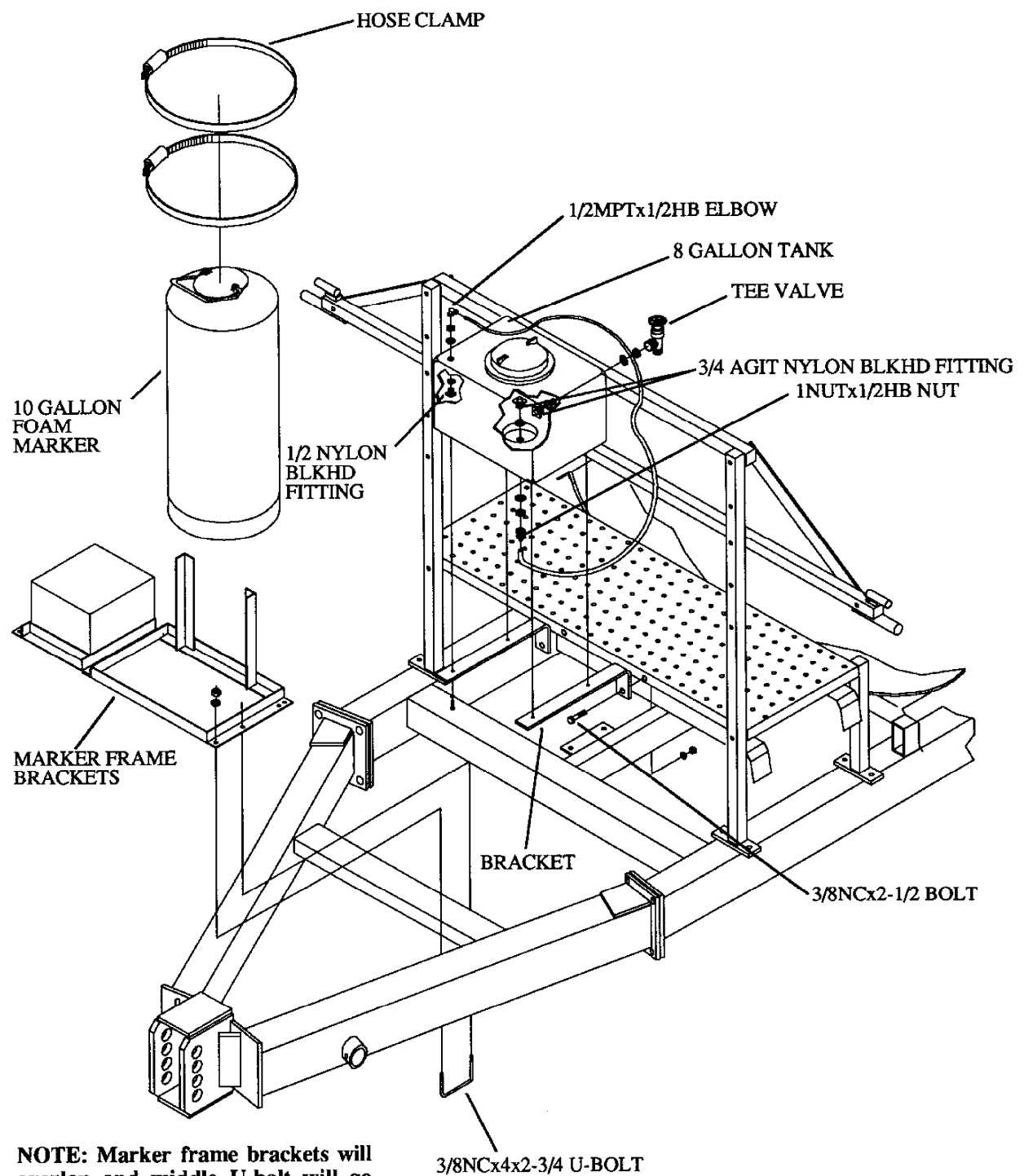
NOTE: Spindle mount may be mounted on top of the main axle tube for lower frame clearance and lower boom height.

WALKING TANDEM & HITCH ASSEMBLY



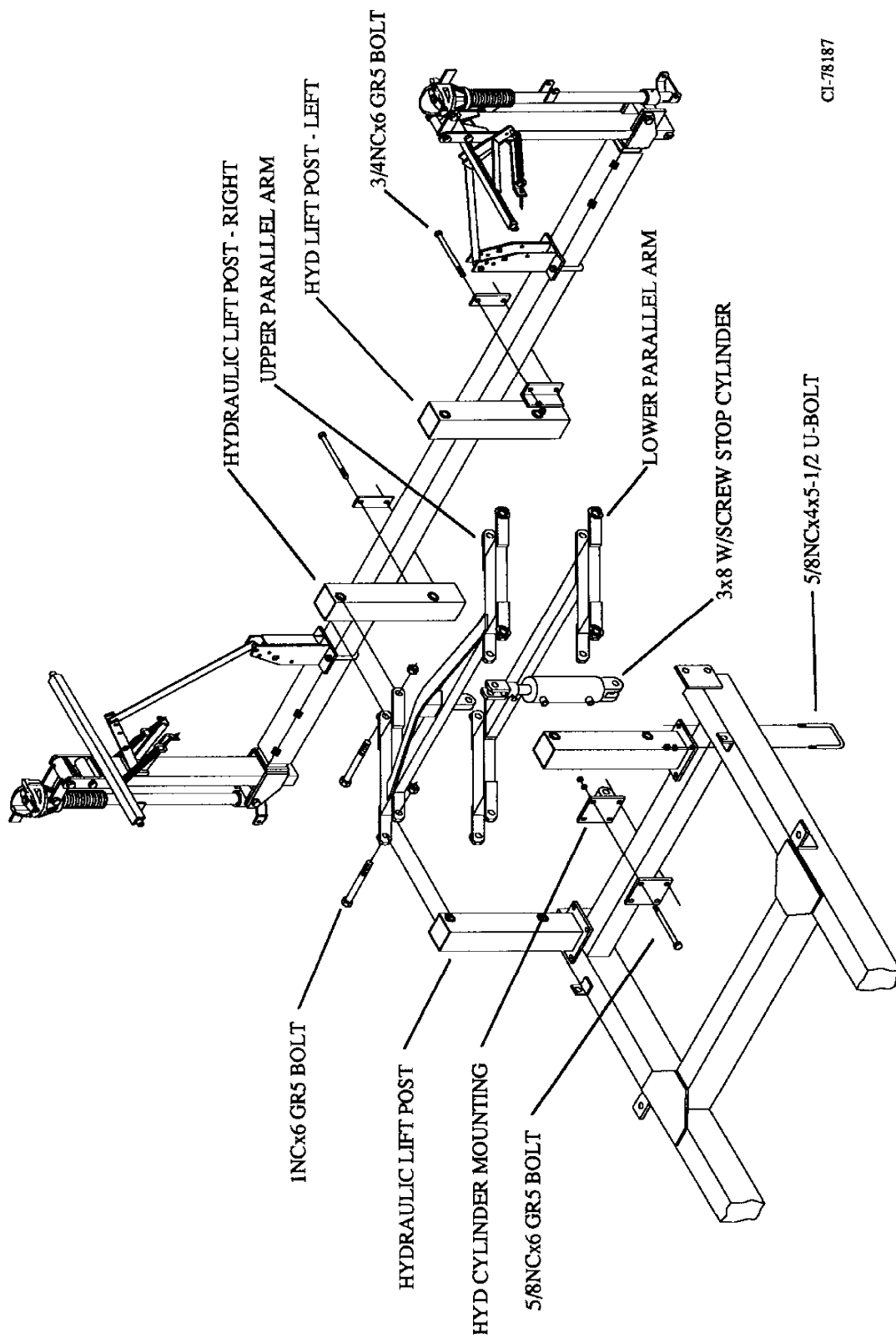
Note: See page 30 for Big Wheel Axle differences.

CLEAN WATER & FOAMER ASSEMBLY



CI-78188

SPRAYER HEIGHT ADJUSTMENT

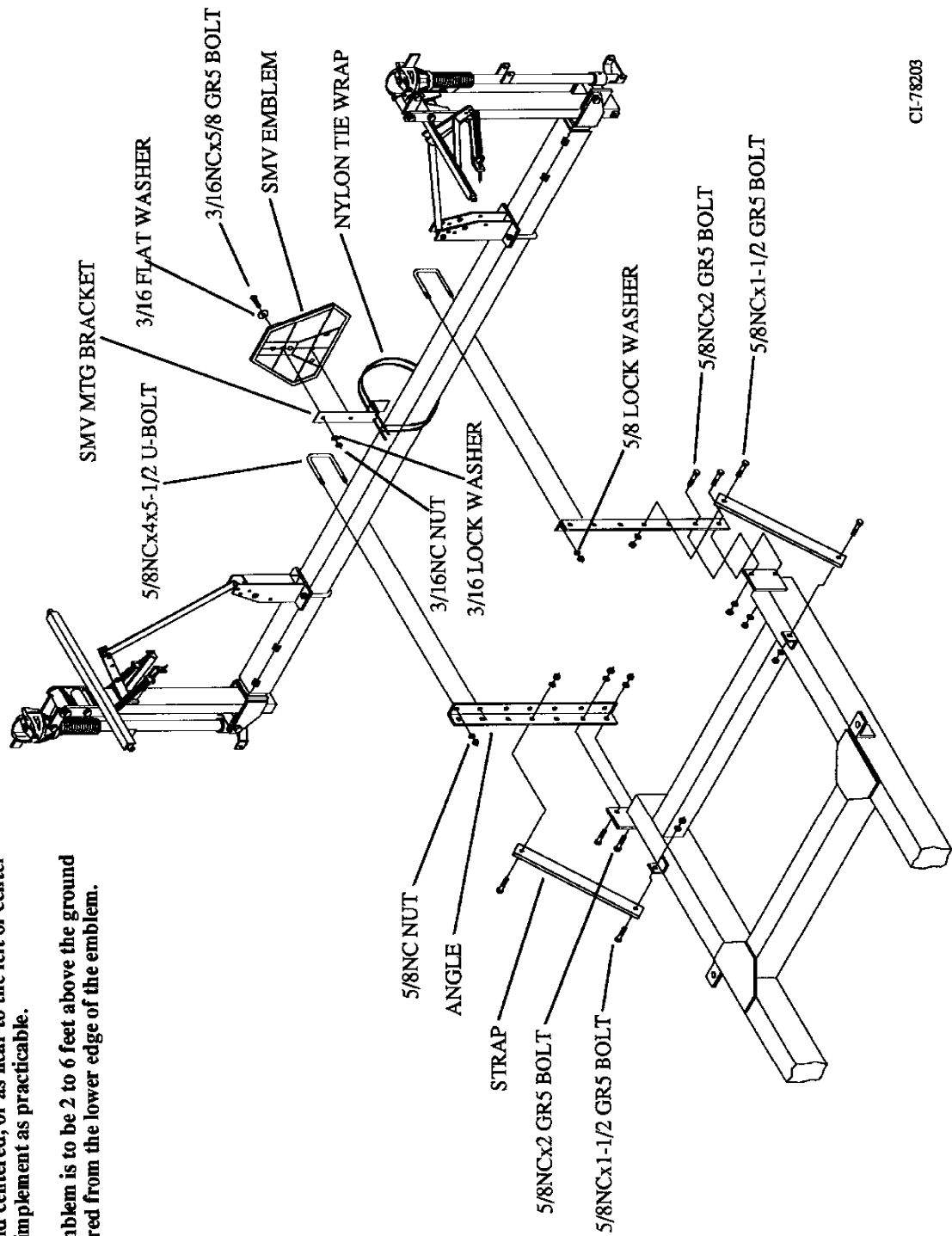


CI-78187

RIGID REAR BAR MOUNT

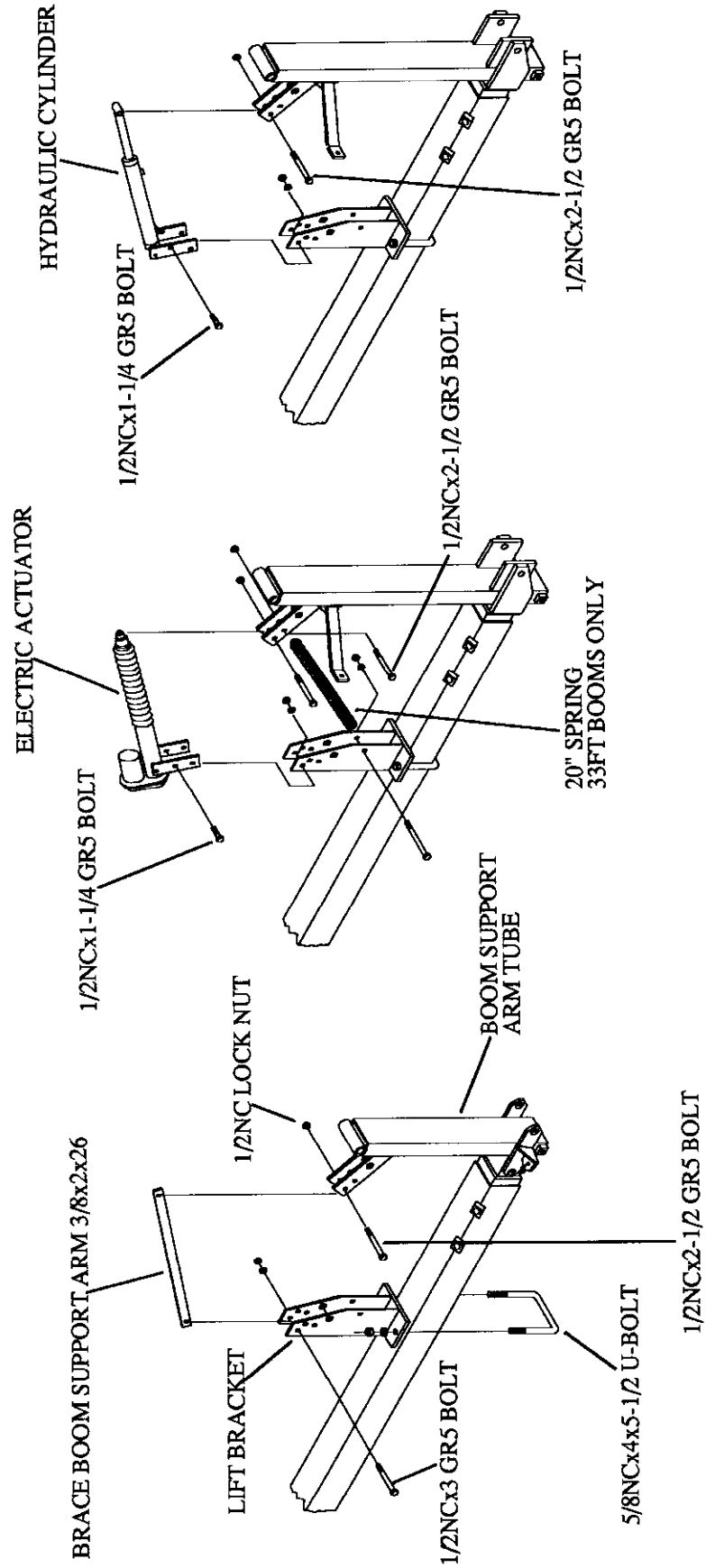
NOTE: The SMV emblem should be used on all implements. It should be secured as near to the rear and centered, or as near to the left of center of the implement as practicable.

The emblem is to be 2 to 6 feet above the ground measured from the lower edge of the emblem.



CI-78203

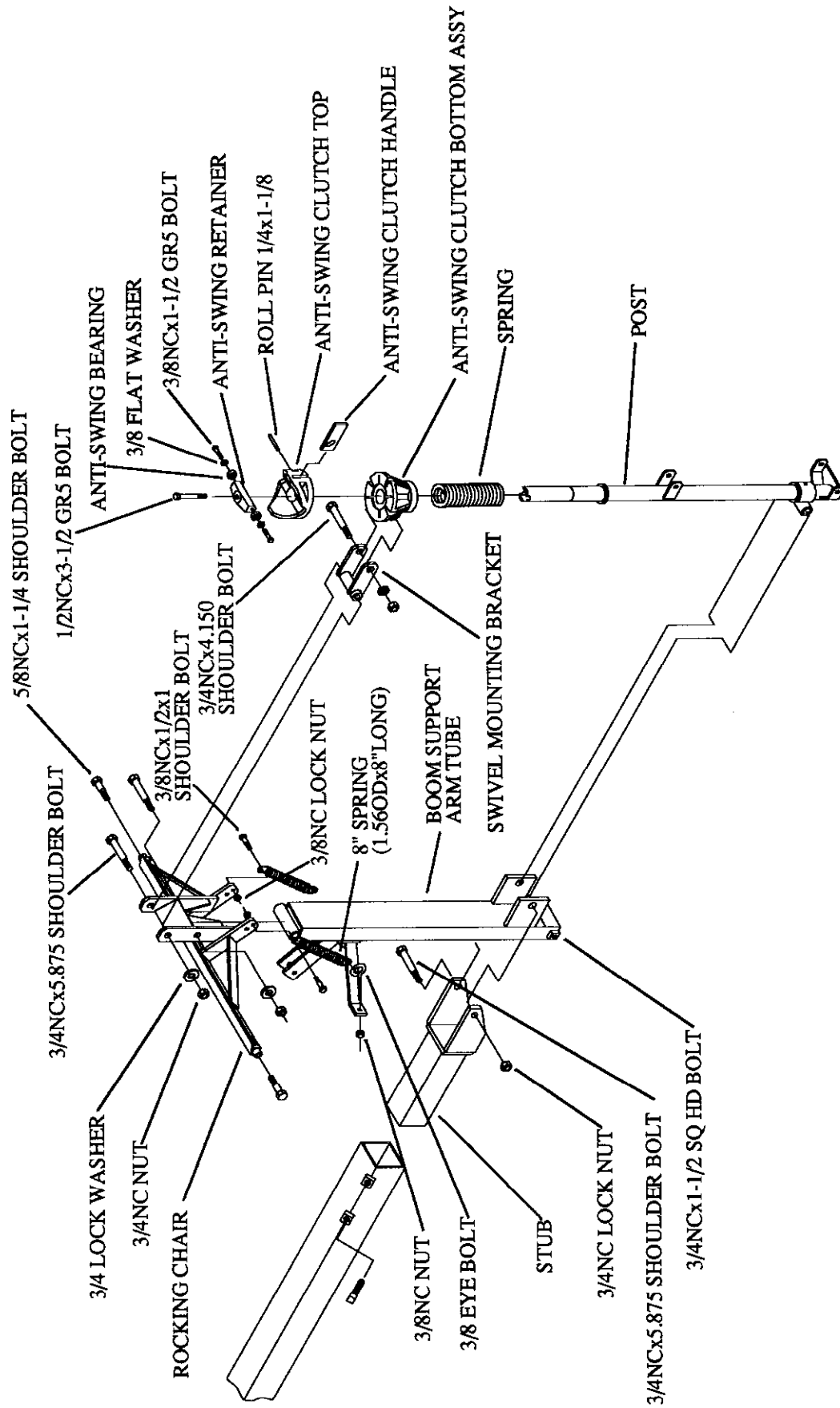
BOOM TILT



CI-77786

BOOMPOST ASSEMBLY

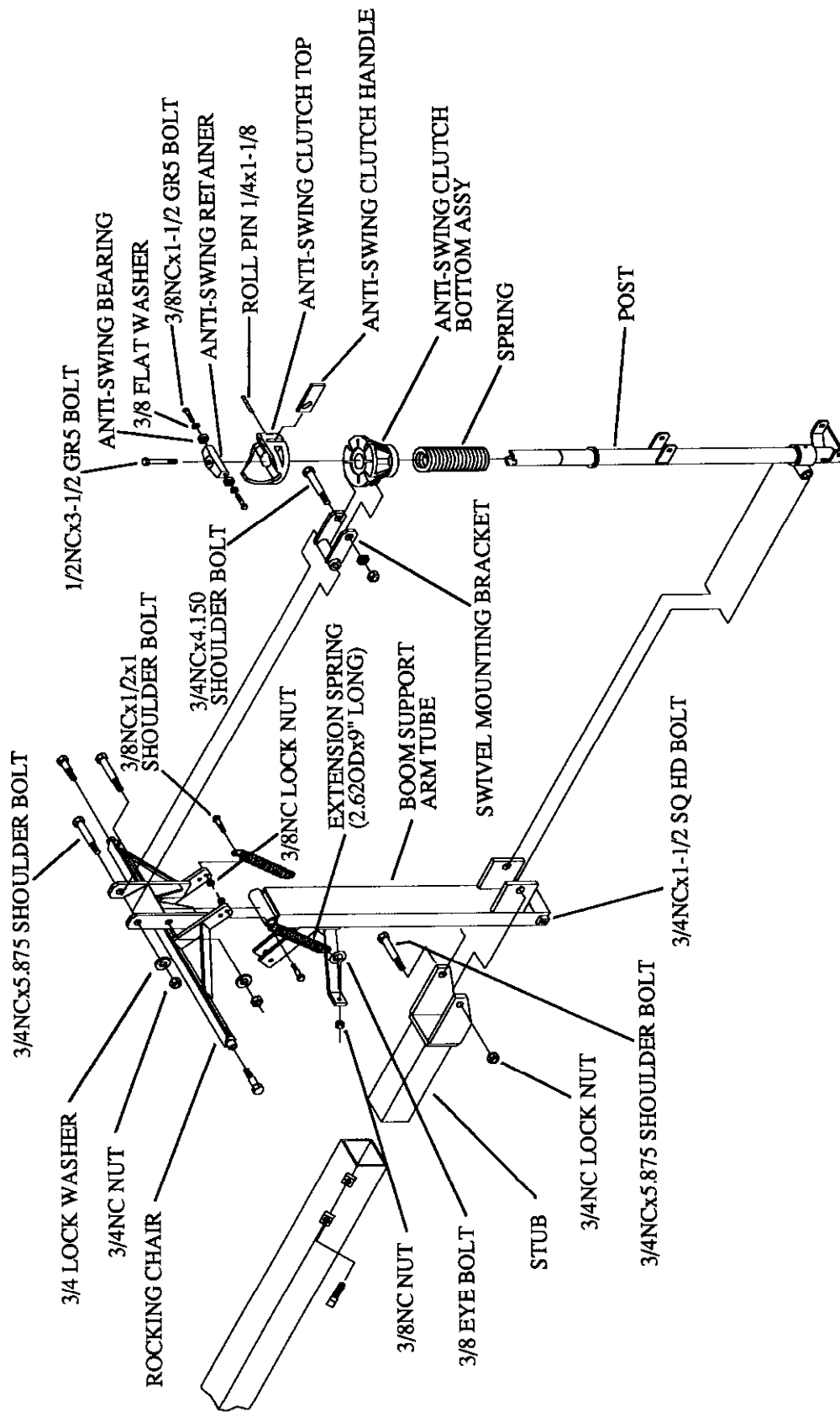
21' BOOM POST



CL-7774

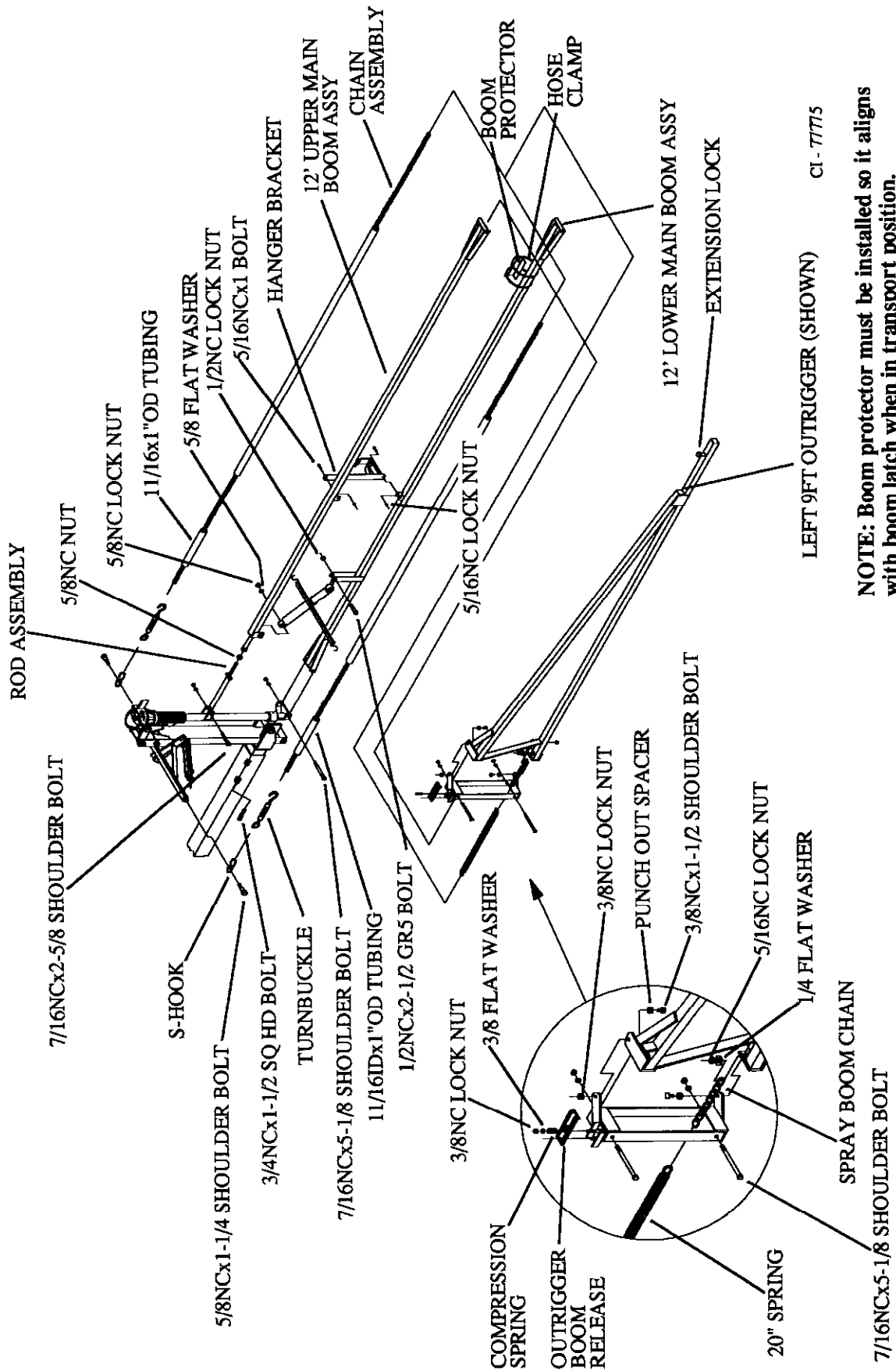
BOOMPOST ASSEMBLY

33' BOOM POST



CI - 7774

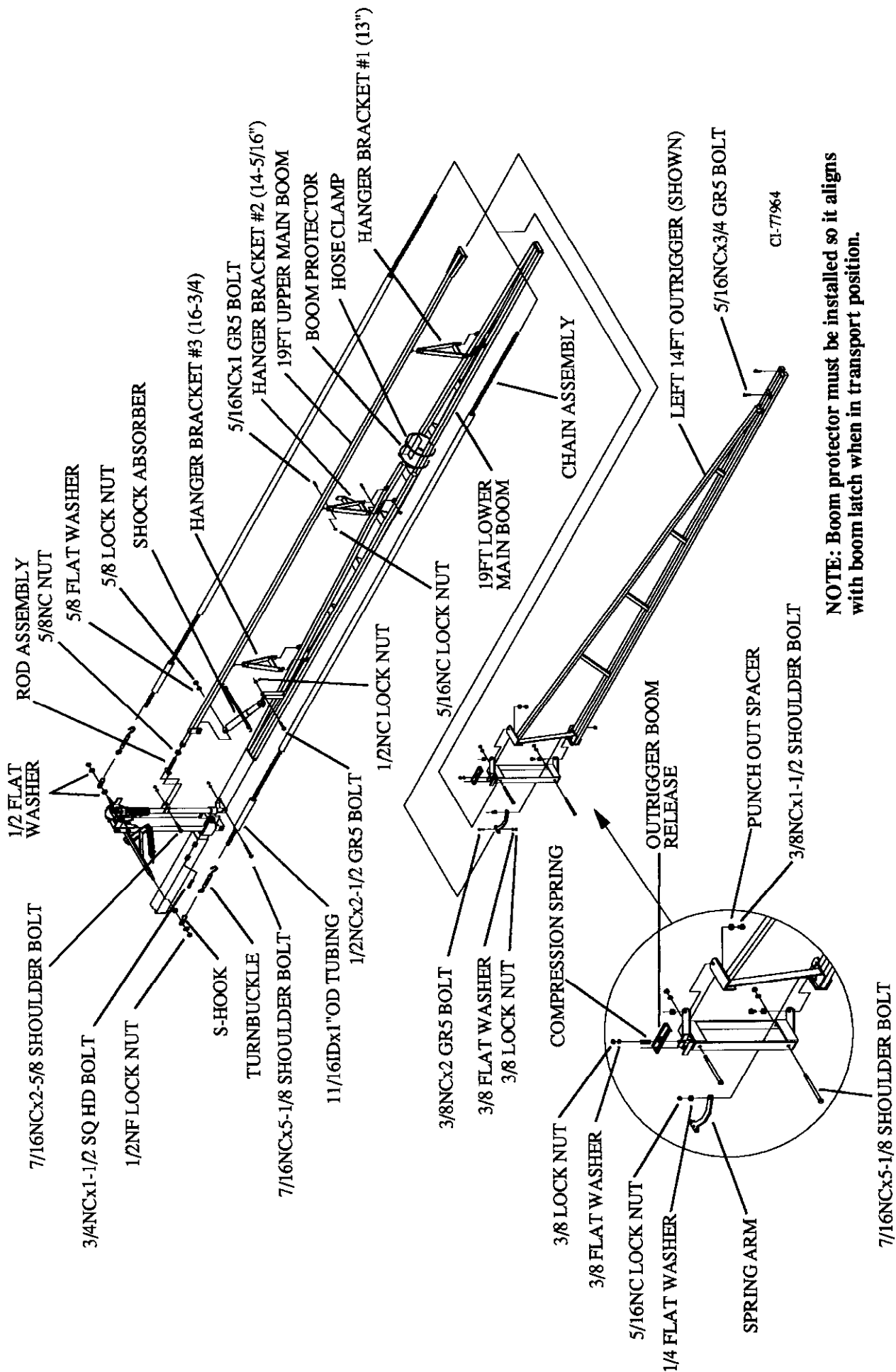
21' BOOM ASSEMBLY



CI - 7775

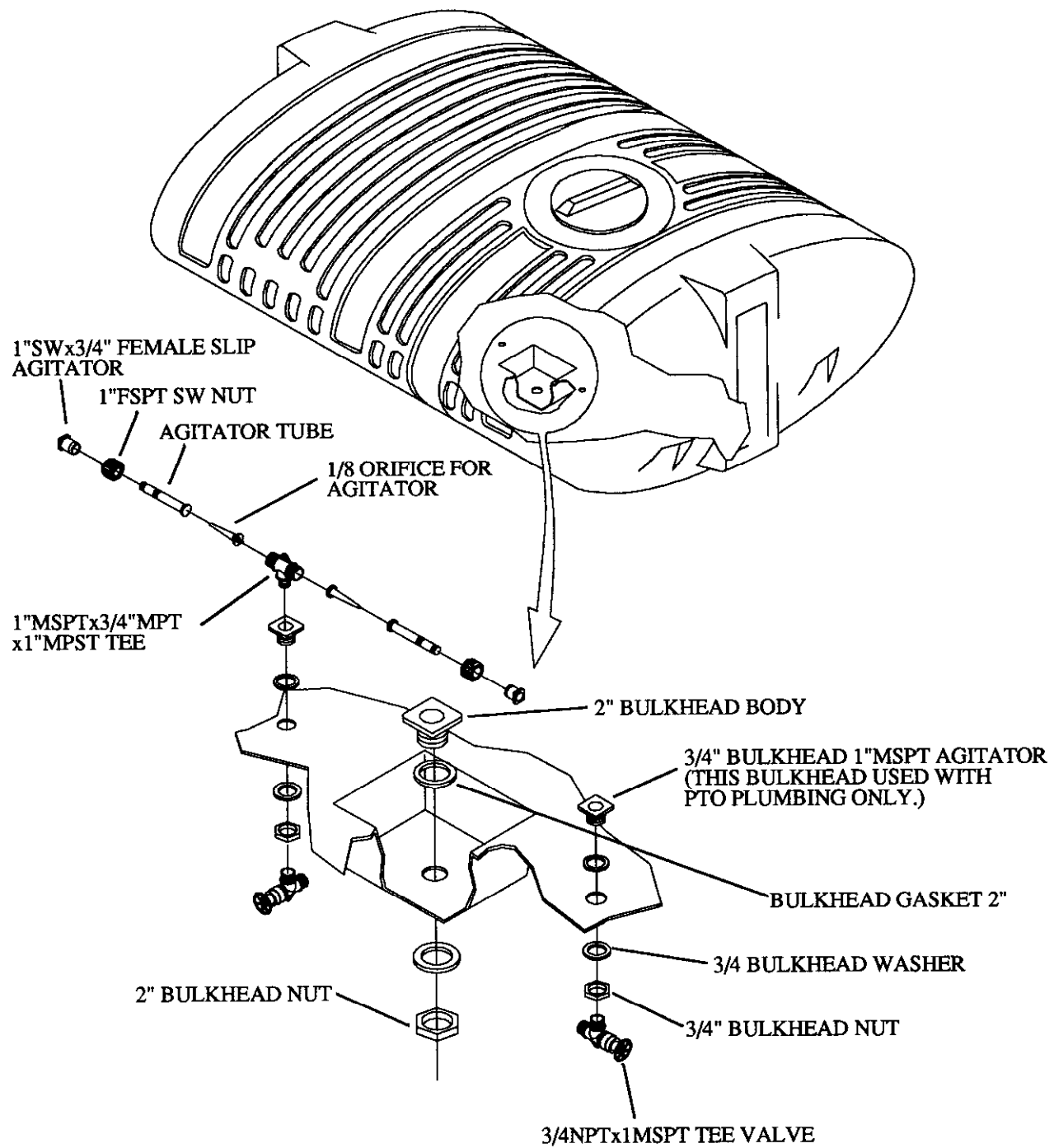
NOTE: Boom protector must be installed so it aligns with boom latch when in transport position.

33' BOOM ASSEMBLY



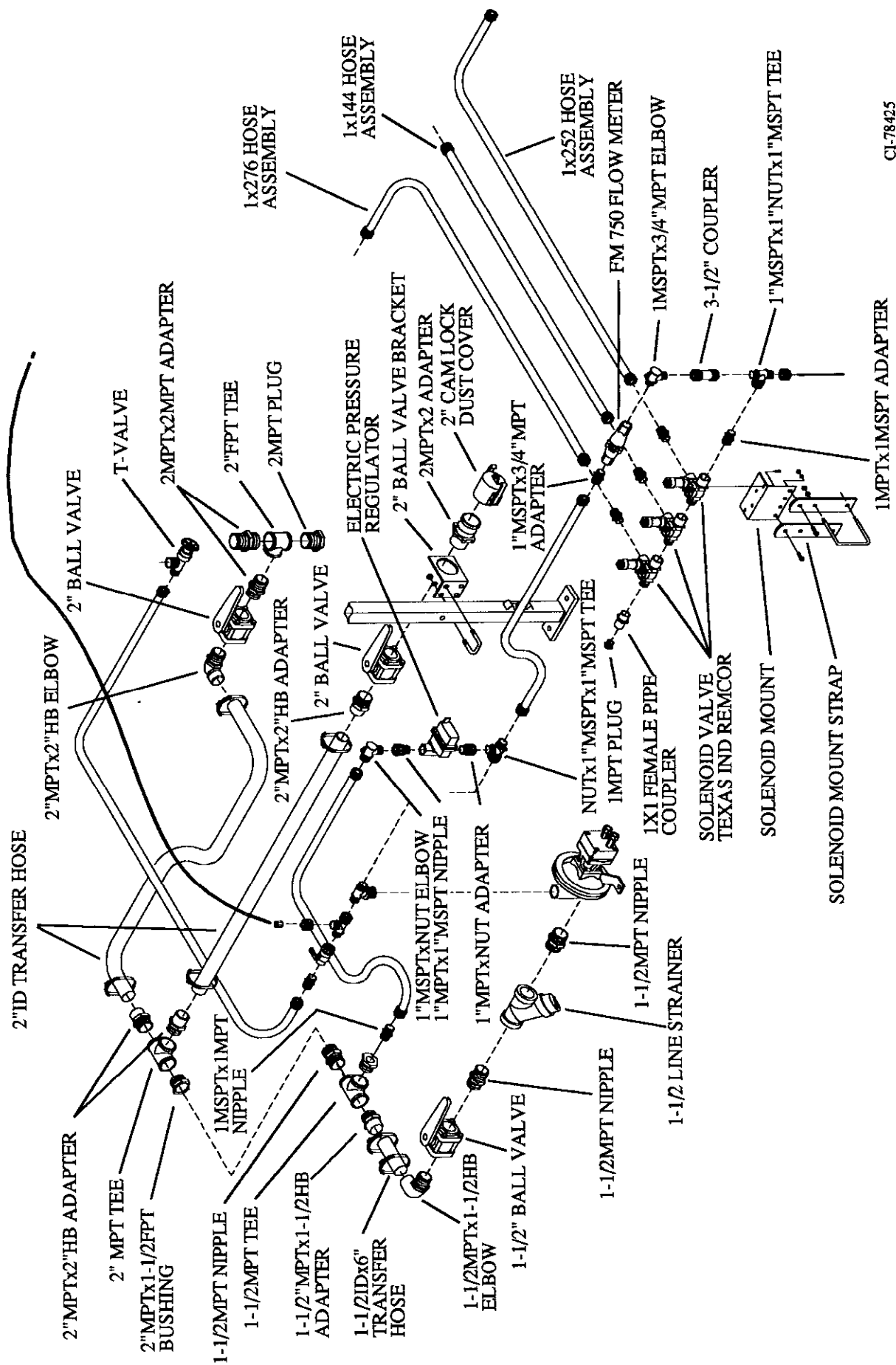
TANK ASSEMBLY

(1000 GALLON SHOWN)



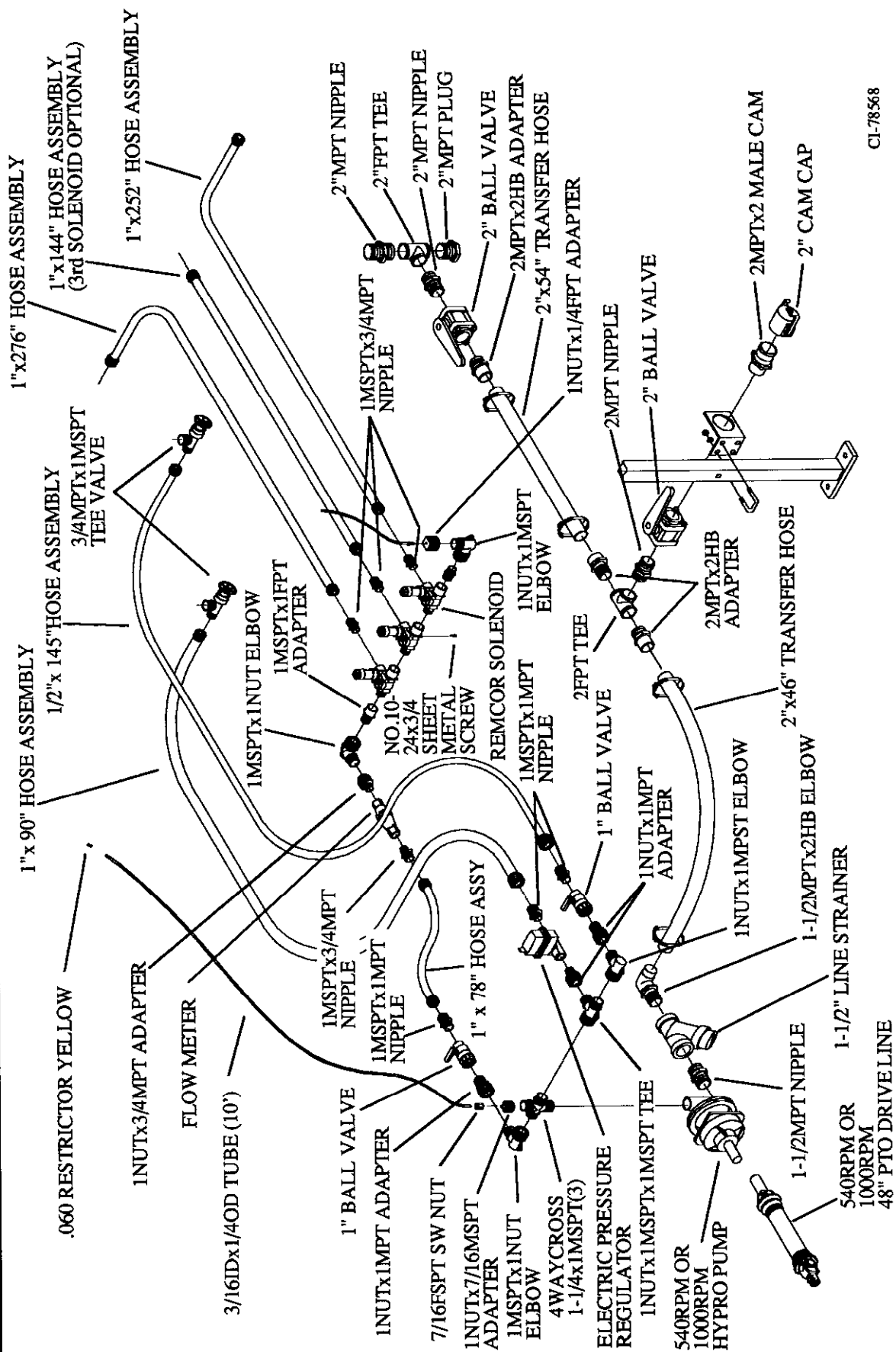
CI-78147

REMCOR PLUMBING TARGET MASTER

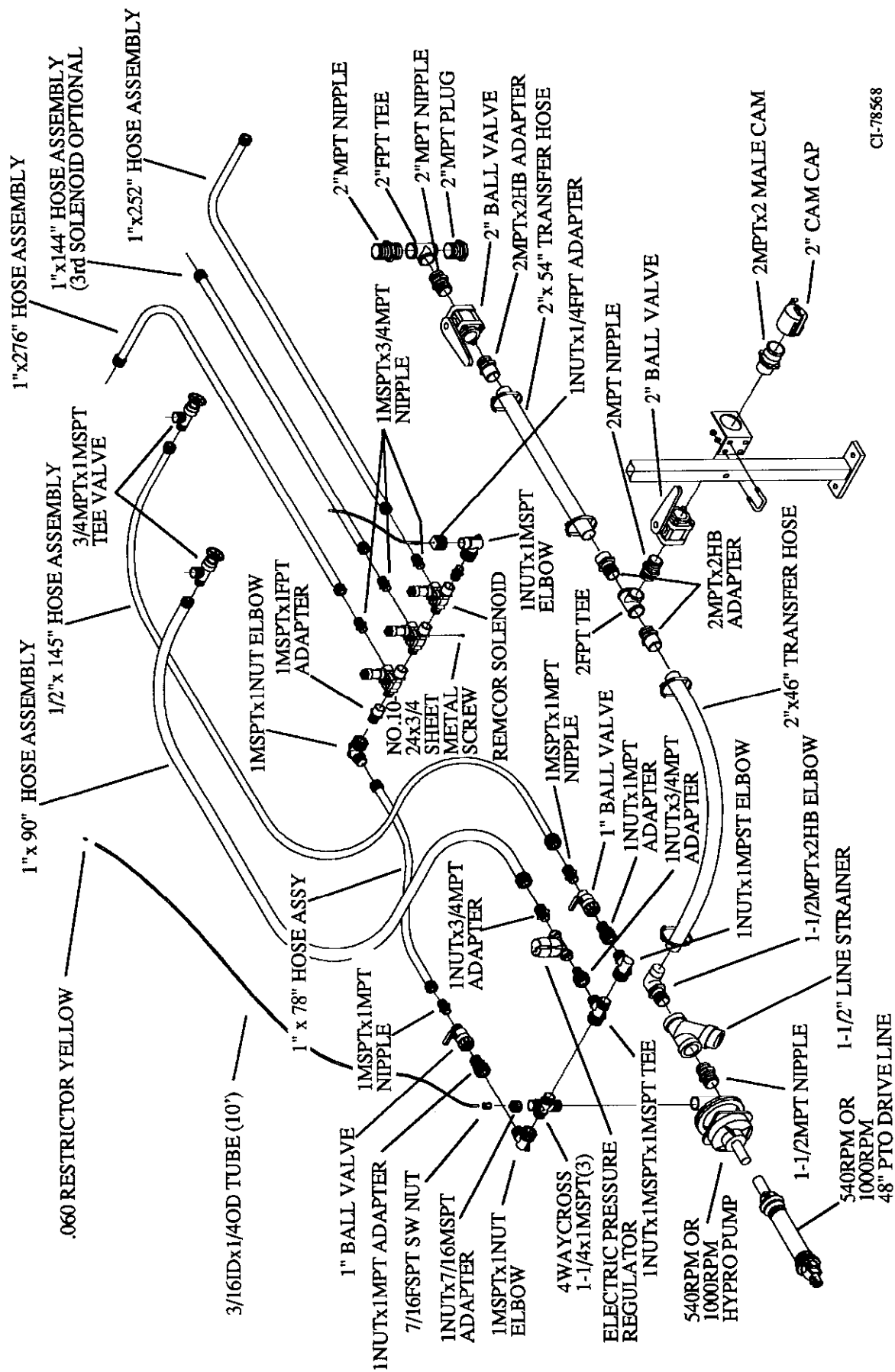


CI-78425

TARGET MASTER PLUMBING - PTO DRIVE

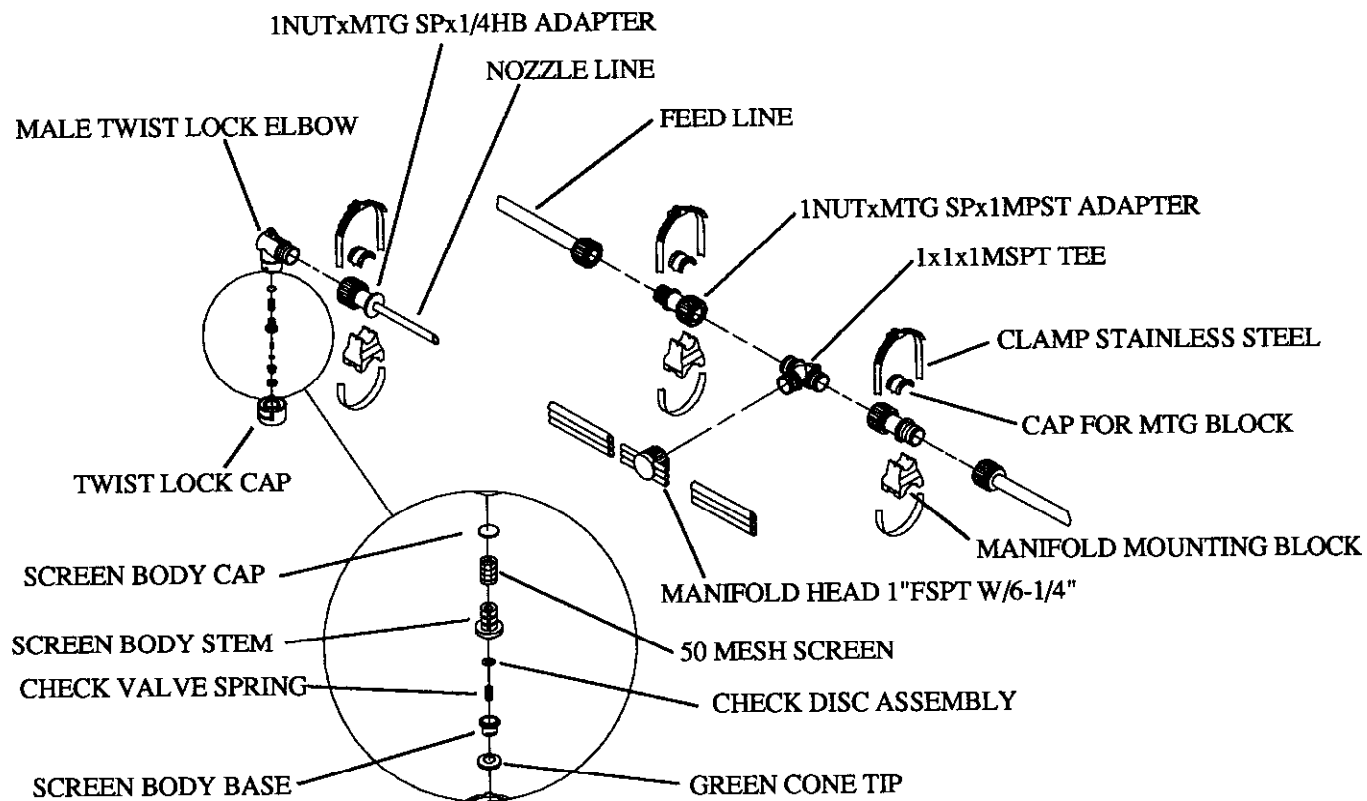


RC-1B PLUMBING - PTO DRIVE



CI-78568

BOOM MANIFOLDS



CI - 77787

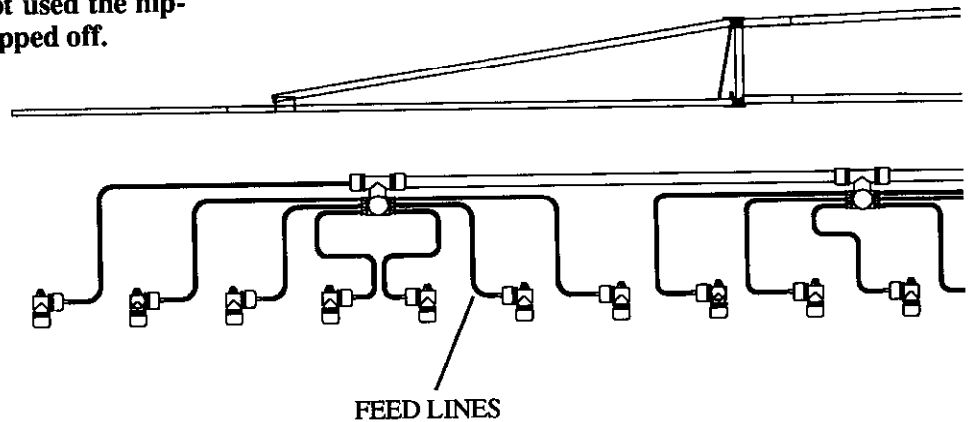
NOZZLE & MANIFOLD PLACEMENT

TRAIL MASTER SPRAYERS ARE 3 SECTION SPRAYERS ONLY.

21' BOOM WITH 72" CENTER TUBE

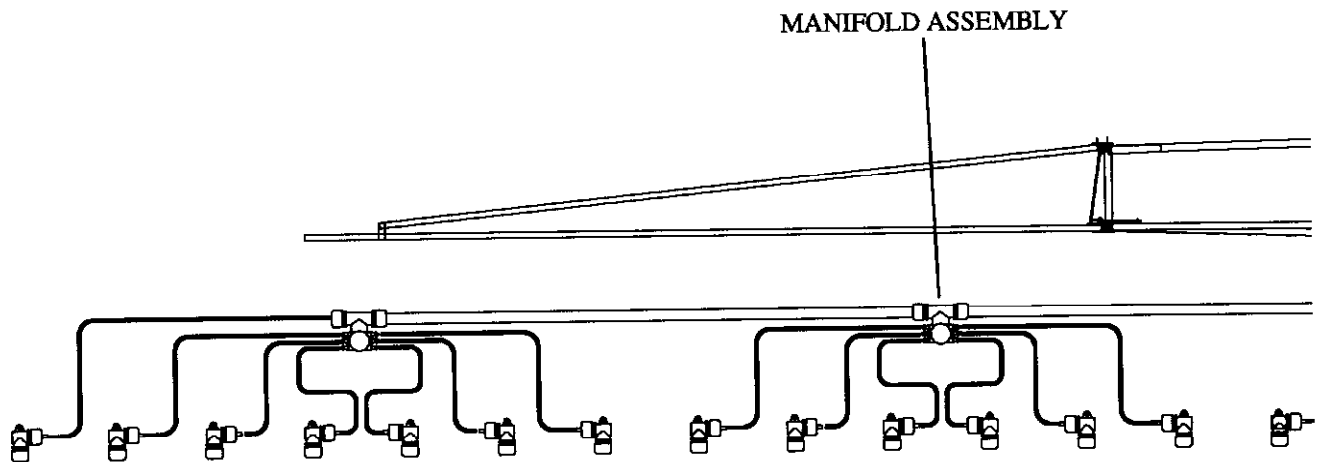
20" NOZZLE SPACING

NOTE: The 3 nozzles on the ends of the 21' & 33' booms are mounted onto the extension tube. If the extension tube is not used the nipples on the manifold must be capped off.



33' BOOM WITH 72" CENTER TUBE

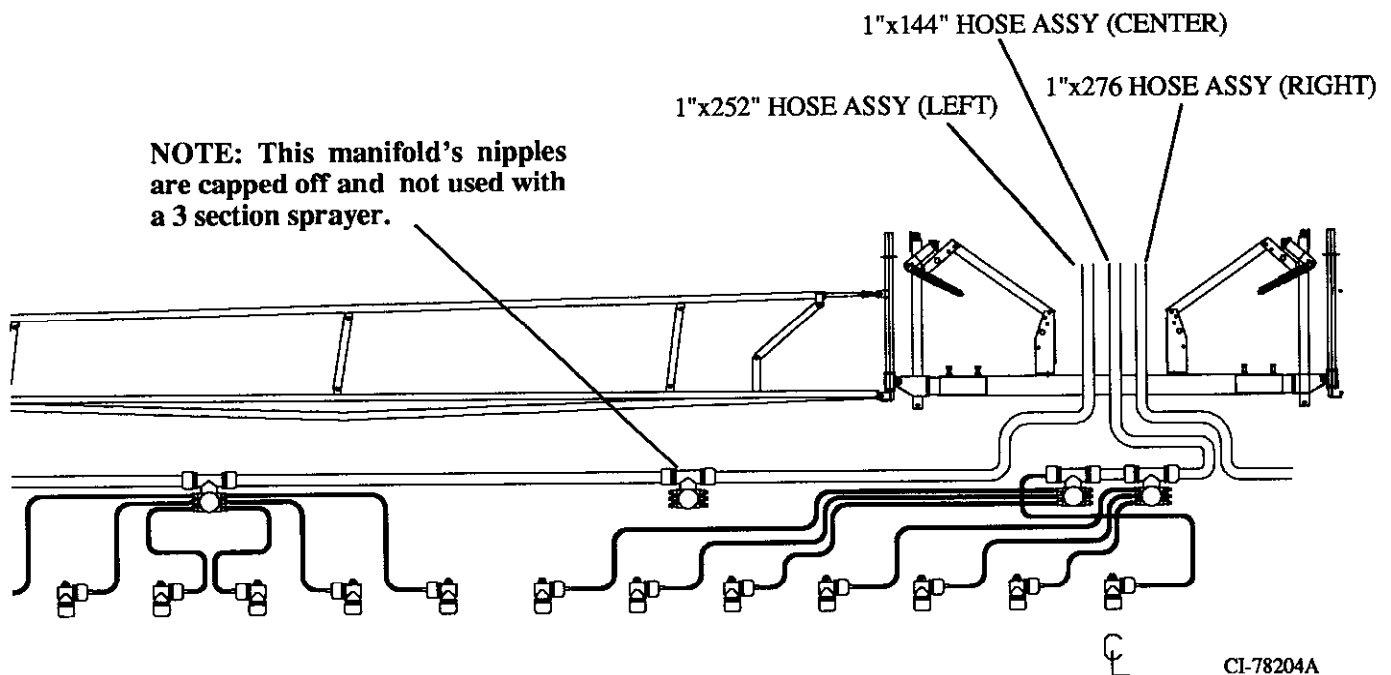
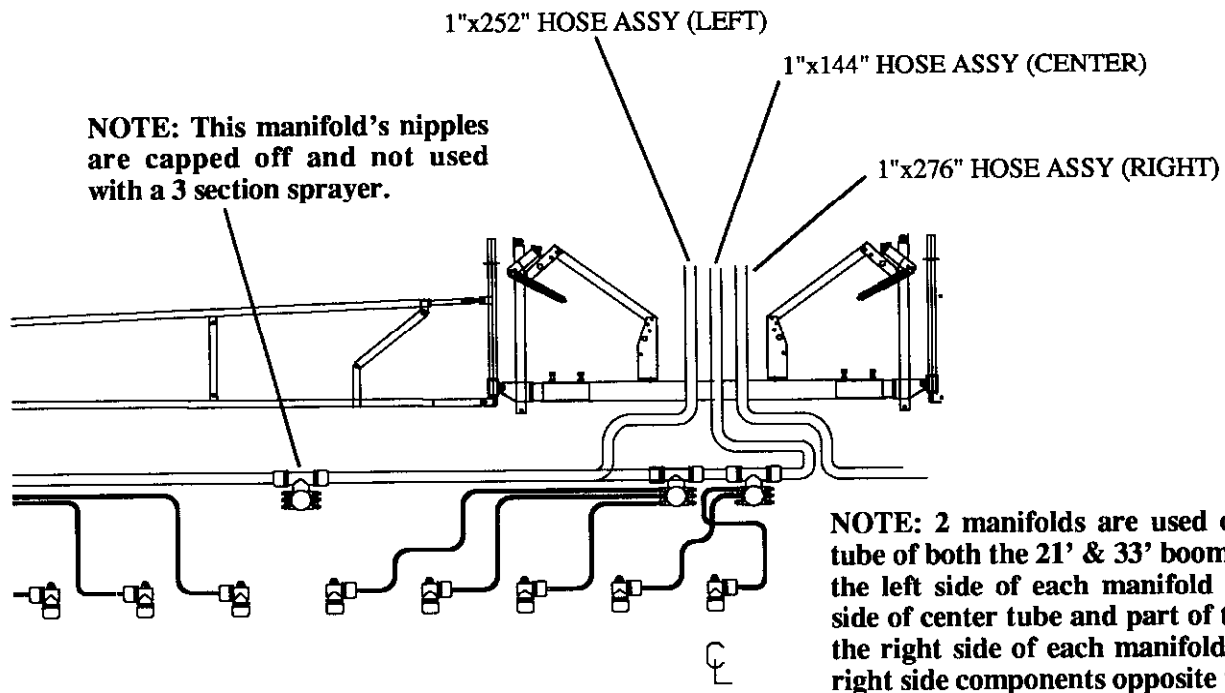
20" NOZZLE SPACING



CI-78204

NOTE: 20" nozzle spacing on the 21' & 33' trail master booms starts with the center nozzle on the center of the rear bar. The trail master sprayer comes with a 93" center tube assembly (rear bar). The actual tube length is 72".

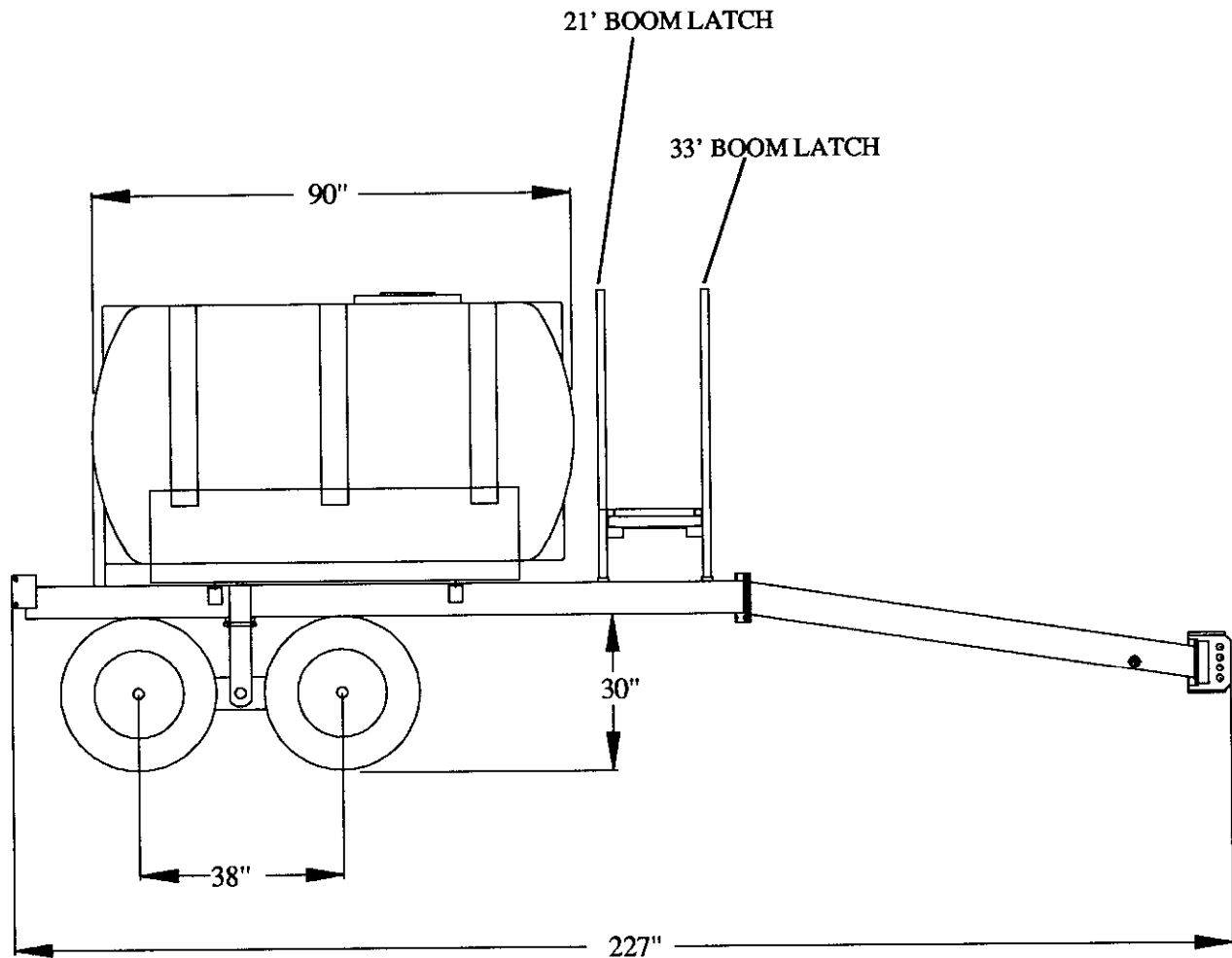
Some nozzles and feed lines may need to be turned around or moved slightly to clear obstructions.



NOTE: Both booms are shown from the back. The nozzles and manifolds have been enlarged for ease of viewing.

LONG POLE DIMENSIONS

NOTE: There are different platform assemblies for the 21' & 33' boom assemblies. 21' boom latches to back of platform and 33' boom latches to the front of the platform.



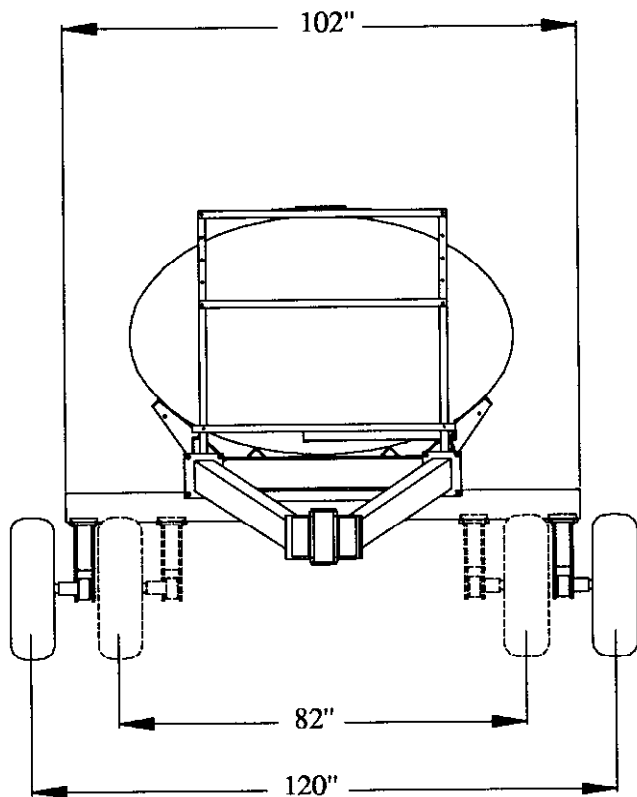
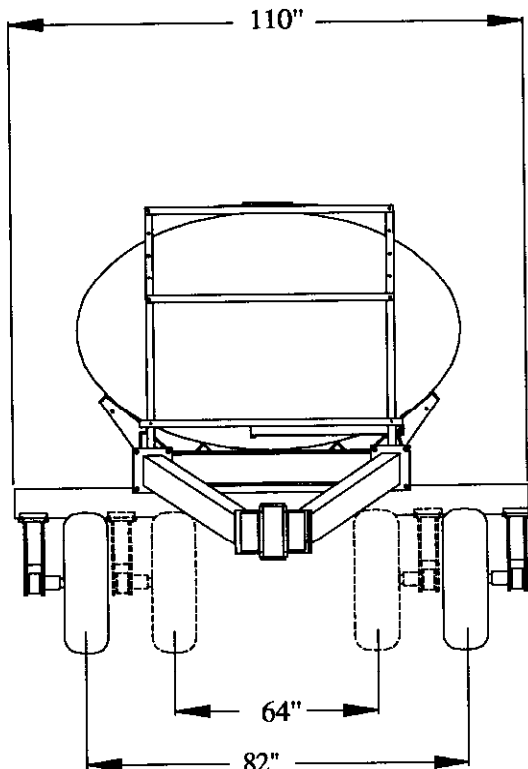
CI-78189

OPTIONAL WHEEL SPACINGS

NOTE: The positions to mount the walking tandems to the 750 & 1000 gallon Trail Master sprayers are 64" - 120".

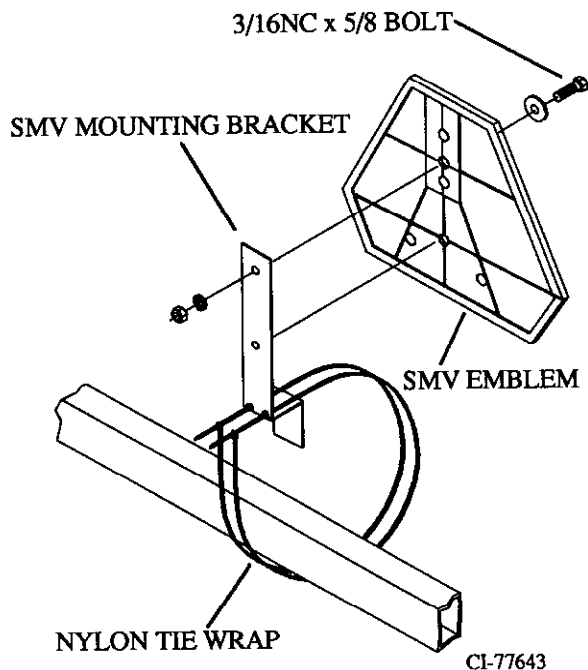
The 64" spacing is obtained by turning the axles inward on the main frame and by reversing the rims on the hubs.

The 82"-120" spacing is obtained by sliding the walker mount inward or outward on the main frame. Make sure the mount is spaced the same distance from the main frame on each side to prevent overloading of one side.



CI-78189A

SAFETY



The bracket provided is designed to mount to numerous frame sizes and can be oriented in numerous positions to avoid interference with implement components.

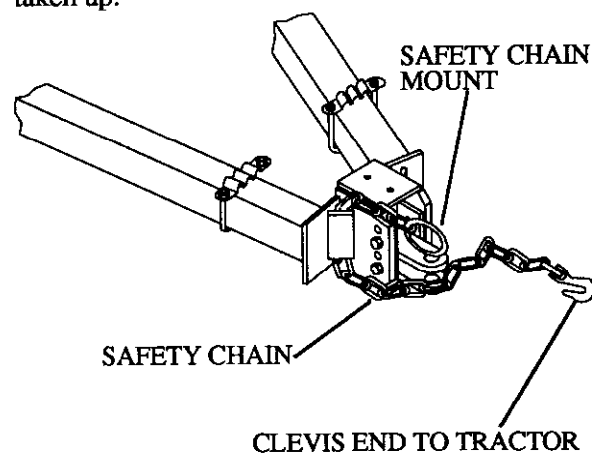
The SMV emblem is to be secured as near to the rear and centered, or as near to the left corner of the implement as practicable.

The emblem is to be 2 to 6 feet above the ground measured from the lower edge of the emblem.

Keep safety decals clean. Replace any safety decals that are damaged, destroyed, missing, painted over or can no longer be read. Replacement safety decals are available through your dealer.

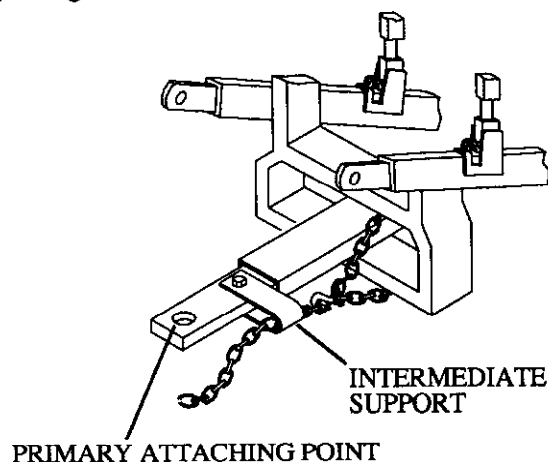
The purpose of the safety chain is to provide an auxiliary attaching system to retain the connection between towing and towed machine in the event of separation of the primary attaching system.

The safety chain should be hooked long enough to permit full turns. Unnecessary slack should be taken up.



An intermediate support should be used if there is more than 6" of unsupported chain on either side of the primary attaching point.

The intermediate support should not be mounted more than 6" from the primary attaching point. (See figure below.)



CI-77825

SPECIFICATIONS

	750 GALLON		1000 GALLON	
	52' TO 62' COVERAGE	75' TO 85' COVERAGE	52' TO 62' COVERAGE	75' TO 85' COVERAGE
SHIPPING WEIGHT	3300lbs.	3660lbs.	3400lbs.	3760lbs.
OPERATING WEIGHT	9550lbs.	9860lbs.	11,740lbs.	12060lbs.
MAXIMUM SPEED	20MPH	20MPH	20MPH	20MPH
TIRES	4 - 12.5Lx15	4 - 12.5Lx15	4 - 12.5Lx15	4 - 12.5Lx15
RIMS	4 - 10 x 15	4 - 10 x 15	4 - 10 x 15	4 - 10 x 15
WHEEL SPACING	64" - 120"	64" - 120"	64" - 120"	64" - 120"
AGITATION	Dual-Jet	Dual-Jet	Dual-Jet	Dual-Jet
PUMP	Hypro HM4 9303C	Hypro HM4 9303C	Hypro HM4 9303C	Hypro HM4 9303C
MANIFOLD LINES	1"IDx1-1/4"OD EVA (p.r. 152psi)	1"IDx1-1/4"OD EVA (p.r. 152psi)	1"IDx1-1/4"OD EVA (p.r. 152psi)	1"IDx1-1/4"OD EVA (p.r. 152psi)
PLUMBING	1-1/2" Bottom Fill	1-1/2" Bottom Fill	1-1/2" Bottom Fill	1-1/2" Bottom Fill
SPRAY CONTROL	3-Section Electric Remote	3-Section Electric Remote	3-Section Electric Remote	3-Section Electric Remote
FILTRATION	50 Mesh Line 50 Mesh Tip	50 Mesh Line 50 Mesh Tip	50 Mesh Line 50 Mesh Tip	50 Mesh Line 50 Mesh Tip
TANK	750 gallon Elliptical	750 gallon Elliptical	1000 gallon Elliptical	1000 gallon Elliptical
BOOMS				
BOOM WING TILT	Hydraulic or Electric	Hydraulic or Electric	Hydraulic or Electric	Hydraulic or Electric
BOOM HEIGHT (HYDRAULIC)	Low 24" High 52"	Low 24" High 52"	Low 24" High 52"	Low 24" High 52"
BOOM WIDTH	52' - 62'	75' - 85'	52' - 62'	75' - 85'
NOZZLE SPACING	20" Standard 30" Optional	20" Standard 30" Optional	20" Standard 30" Optional	20" Standard 30" Optional

METRIC CONVERSION FACTORS

	Multiply	By	To Obtain
LENGTH	inches	25.40	millimeters (mm)
	inches	2.540	centimeters (cm)
	feet	.03048	meters (m)
	miles	1.609	kilometers (km)
AREA	acres	4046.7	square meters (m ²)
	acres	0.4047	hectares (ha)
VOLUME	gallons	3.785	cubic decimeters (dm ³)
	gallons	3.785	liters (L)
	Imperial gallons	4.546	liters (L)
FLOW RATE	gallons/hour (gph)	3.785	liters/hour (L/h)
	gallons/minute (gpm)	3.785	liters/minute (L/min)
APPL. RATE	gallons/acre (gpa)	9.353	liters/hectare (L/ha)
PRESSURE	pounds/square inch (psi)	6.895	kilopascals (kPa)
SPEED	miles/hour (mph)	1.609	kilometers/hour (km/h)
IMPERIAL GALLON CONVERSION FACTORS			
	Multiply	By	To Obtain
Volume	Imperial gallons	1.201	U.S. gallons
	U.S. gallons	.833	Imperial gallons

43,560 Square Feet = 1 Acre

VOLUME and LIQUID MEASURES

8 fluid ounces = 16 tablespoons = 1 cup = 236.6 mL

2 cups = 32 tablespoons = 1 pint = 473.1 mL

2 pints = 64 tablespoons = 1 quart = 964.2 mL

4 quarts = 256 tablespoons = 1 gallon = 3785 mL

128 fluid ounces = 1 gallon = 3785 mL

Personal safety is important!

All personnel involved with the assembly and/or operation of this equipment must be informed of proper safety procedures. Operator's and assembly manuals provide the necessary information. If a manual is lost for a particular implement, order a replacement at once. Operator's and assembly manuals are available at no charge upon request.

Address inquires to:

Wil-Rich

P.O. Box 1030

Wahpeton, ND 58074

PH (701) 642-2621 FAX (701) 642-3372