

1.1 CART VALVE SETTING QUICK REFERENCE

-1: QUICK REFERENCE FOR VALVE SETTING

VALVE NUMBER	1	2	3	4	5	6	7	8	9	10	13	16	18	19	15
FUNCTION															
SPRAYING	O	OX	X	X	X	X	X	OX	O	O	X	X	X	X	X
SELF LOAD, EDUCTING	O	OX	O	OX	X	O	X	OX	X	X	X	X	X	X	X
TOP FILL WITH WATER	O	OX	X	X	X	X	X	OX	O	X	X	X	X	X	X
BOTTOM FILL WATER	O	OX	O	X	X	X	X	OX	O	X	O	X	X	X	X
SELF LOAD WATER	O	OX	O	X	X	X	X	OX	X	X	O	X	X	X	X
EDUCTING CHEMICAL	O	OX	X	OX	X	X	X	OX	O	X	X	X	X	X	X
FILLING FLUSH TANK	O	X	X	X	X	X	X	OX	X	X	O	O	X	X	X
DRAW FROM FLUSH TANK	O	OX	X	X	X	X	X	OX	X	X	X	X	X	O	X
RINSING CHEM CONTAINER	O	OX	X	X	X	O	X	OX	O	X	X	X	X	X	X
RINSING TANK	O	OX	X	X	O	X	X	OX	O	X	X	X	X	X	X
WASHING SHEETS	O	OX	X	X	X	X	O	OX	O	X	X	X	X	X	X
FLUSHING STRAINER	X	X	X	X	X	X	X	X	O	X	X	X	X	X	O

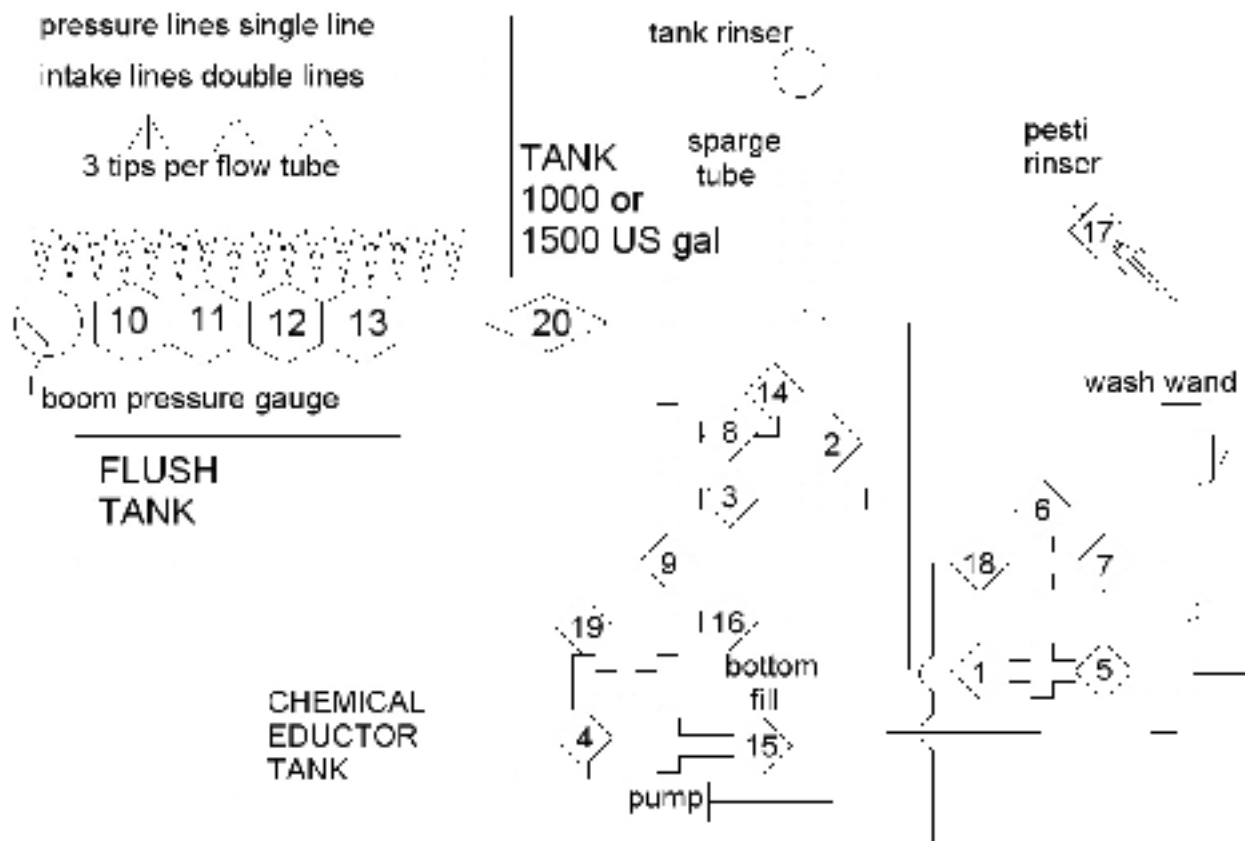


FIGURE 1 SPRAYER CIRCUIT VALVES

1. THROTTLE	10-13. BOOM SOLENOIDS OR END NOZZLES
2. AGITATION	14. PRESSURE REGULATOR
3. SELF LOAD - RANGE	15. STRAINER FLUSH (OPT)
4. CHEMICAL EDUCTOR	16. BOTTOM FILL VALVE
5. TANK RINSE	17. PESTI-RINSER HANDLE VALVE
6. PESTI RINSER	18. FILL FLUSH TANK
7. SHEET WASH WAND	19. SUCTION FROM FLUSH TANK
8. RETURN FROM BOOMS	20. FLOW SENSOR
9. TANK SHUT OFF	

1.2 MICROTRAK SPRAYER RATE CONTROLLER

An optional sprayer rate controller is available to provide the operator with a constant rate of chemical application on all areas of a field. As the tractor speed varies, the controller changes tip pressure to compensate for speed changes. Review the Installation and Operation Manual supplied with the your particular controller for detailed instructions.

1.3 THROTTLE VALVE SETTING GUIDE ON MICROTRAK RATE CONTROLLERS

Throttle valves are recommended by Microtrak and installed on all Ag Shield sprayers because a **properly adjusted** throttle valve will **decrease** the time required by the Microtrak control head to make a pressure adjustment when a speed change has occurred. A system without a properly adjusted throttle valve is slower to respond, particularly if the pump capacity is large compared to the capacity of the servo valve. Imagine a situation where the sprayer slows down. The computer senses that excess gallons per acre are being applied. The Microtrak head will open the bypass servo valve in an effort to decrease the flow to the tips. In a system without a throttle valve, as the servo is opened, the system pressure at all locations is decreased. The centrifugal pump will immediately and automatically increase the number of gallons per minute it produces effectively negating part of the change the servo valve has made. In a system with a properly adjusted throttle valve, the pump is operating on the higher pressure side of the throttle valve, and the pump will not be aware that change has been made in the system pressure downstream from throttle valve. the throttle valve has effectively protected the servo from increases in pump volume. The same applies when speed increases, but even more pronounced because the Microtrak control head is programmed to increase system flows and pressure slowly to avoid overshooting the target rate and damaging crop in the present or future years.

Oil flow and Throttle valve setting-Ag Shield Caddy with HM1 pump

1. The oil flow to the hydraulic motor should be 11.5 USGPM. This can be determined with an oil flow meter **or** by closing valve numbers 3, 4, 5, 6, 7, 8, 10-13, and changing oil flow until there is 65 psi of water pressure against the open agitator. The oil should be up to normal operating temperature for this adjustment, if set with cold oil, the pump will under perform on hotter oil later.

NOTE: On some tractors, attempting to set oil flow too high causes the tractor hydraulic system to go into

high standby, thereby reducing the flow to the hydraulic motor on the water pump.

2. Close the agitation valve number 2 until the pressure increases to 75 psi for tips 8002 and smaller, or 90 psi for 8003 and larger. The valve will appear well closed, but a visual inspection of the tank will show more than adequate agitation.
3. Open valve number 8 boom return
4. Place the control head into manual position, turn on any one boom switch, and hold +/- switch up to + for 30 seconds, or until pressure maximizes.
5. Turn on all boom valves (10-13) and observe that there is 60-65 psi system pressure remaining.
6. Close the throttle valve number 1 until pressure observed in step above goes down 1-2 psi. The throttle valve is now protecting the servo from over capacity of the pump. The throttle valve setting needs to be changed with each significant change in the tip size.

1.4 SPARGE TUBE AGITATOR

The sparge tube agitator is a more thorough agitator than even four jet agitators. The entire bottom of the tank is kept constantly moving, there are two streams angled into the bottom of the deep vee sump, 6 holes point to the left and 6 holes to the right in tank. Sparge tubes create less foam than jet agitators, especially with low liquid levels in the tank.

The tube must be checked occasionally to see that it is on the correct rotation. The manufacturers lettering is at the top of the tube , the 6 holes of agitator tube are pointed directly left and right, and two jets are angled down the sump when the agitator is correctly rotated.

The tube is **threaded into** a bulkhead installed in the front of tank, correct rotation by turning tube with a pipe wrench from inside the tank.

IMPORTANT
NEVER ENTER A TANK WITHOUT A BUDDY ON THE OUTSIDE, ALWAYS CONSIDER AIR QUALITY BEFORE ENTERING A TANK.

1.5 MICROTRAK GROUND SPEED SENSOR

The ground speed sensor is located on the right axle as shown in **Error! Reference source not found..** The sensor has a magnet on each wheel stud on the 8