

Boom Sense Pressure Switches

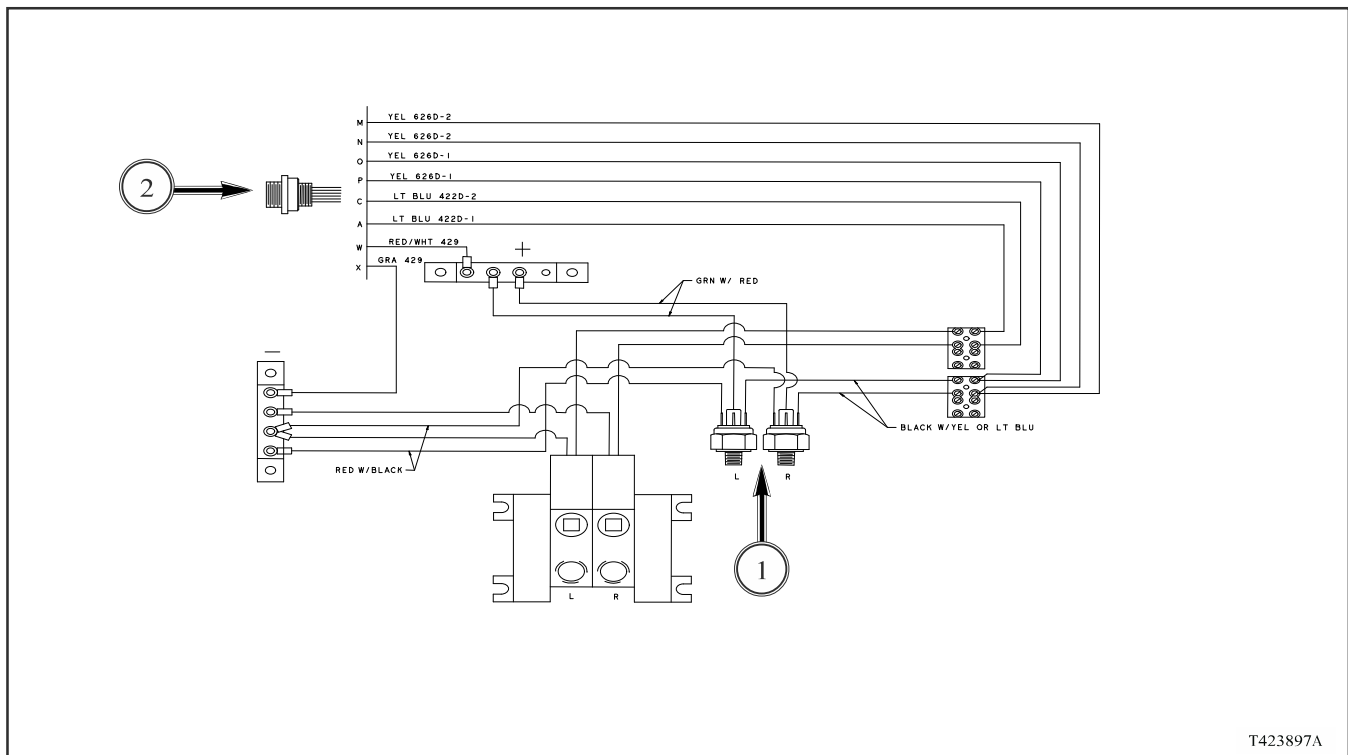
FIG. 16: A pressure switch (1) is used to tell the application rate controller when each boom section is turned on and to light the indicator lamp inside the left and right switch. The power to pin W of the round air box connector (2) comes on a blue 421A wire through a 2-pin connector from pin C of the round connector at the cab bulkhead. Inside the box, a red/white 429 wire from pin W of the round connector goes to the power junction strip. A green wire goes to each of the pressure switches from this junction strip. A red wire goes from each switch to a common ground strip. A black wire goes from each switch to the white junction strip and connects to a yellow wire for each boom.

When the left and right boom switches in the cab are turned on and the Mac valves are energized to cut off the air to the clutches, the power comes out of the pressure switch on a yellow wire to the cab bulkhead. When the Mac valve is not energized and sends air out to open the clutch, the pressure switch cuts power on the yellow wire to tell the application rate controller and indicator lamp when each boom is turned off. There is a small screw located under a cover screw on top of the pressure switch that can be used to adjust the switch if necessary.

The yellow 626D-1 wire on pin O of the air box connector goes to pin J of the round 23-pin cab bulkhead connector for the left boom switch indicator lamp. The yellow 626D-1 wire on pin P of the air box connector goes to pin 1 of the rectangular 40-pin cab bulkhead connector for the left boom sense signal to the rate controller.

The yellow 626D-2 wire on pin M of the air box connector goes to pin O of the round 23-pin cab bulkhead connector for the right boom switch indicator lamp. The yellow 626D-2 wire on pin N of the air box connector goes to pin 2 of the rectangular 40-pin cab bulkhead connector for the right boom sense signal to the rate controller.

If the indicator lamp does not light but the Mac valve is working, check for power on the yellow wire at the round connector. If power is not present, check for power at the correct white junction strip. If power is not present at the junction strip, check for power at the pressure switch with the booms turned on. If power is not present on the yellow wire on the pressure switch with the booms on, check for power on the power wire. If power is present on the power wire, adjust or replace the pressure switch. If no power is present on the power wire, check for power through the power junction strip to the air box connector.



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FIG. 16

PWM VALVE WIRING

FIG. 17: The Pulse Width Modulated (PWM) valve (1), located near the top of the hydraulic valve, controls the oil flow to the conveyor hydraulic motor. The coil on the valve has 12-volt power that comes from the rate controller through pin 40 of the rectangular 40-pin connector on a red/white 604 wire. The rate controller sends a pulsing ground signal to the coil to open the valve. The faster the ground signal is sent to the coil, the more it holds the valve open and allows more oil to go to the conveyor motor. The ground signal to the PWM coil comes on a blue 420P-1 from pin 10 of the 40-pin bulkhead connector.

IMPORTANT: On an Air Max 2000 there is a second PWM valve to control the oil to the second conveyor motor. The power and PWM signals to the coils on both valves come from the Falcon nodes instead of the cab bulkhead.

If the conveyors will not turn, troubleshoot the hydraulic system. Apply battery power and ground to the coil and check for magnetism on the coil. Verify the rate controller settings, check continuity of the wiring from the rate controller to the PWM valve and replace the PWM valve.

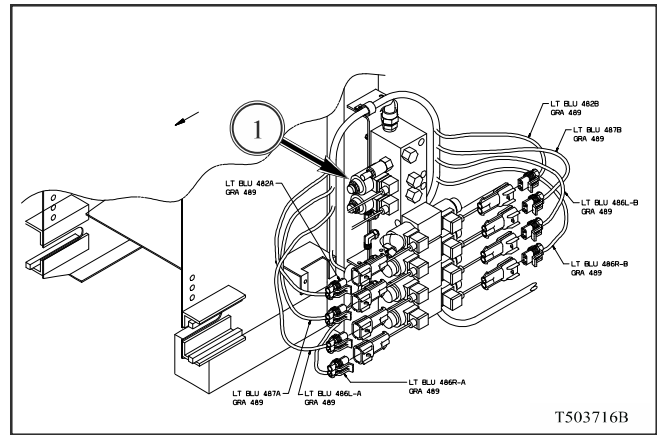


FIG. 17

PRODUCT RATE SENSOR WIRING

FIG. 18: A conveyor rate sensor (1) is mounted on the front conveyor shaft for each conveyor chain and sends a signal into the cab to tell the rate controller the speed of each conveyor chain. With proper programming, the controller converts the chain speed into the volume of product. During normal operation with both conveyors on, the rate controller uses the signal from the left rate sensor to control the system and only reads the right side rate sensor to be sure they are both operating at the same speed. When the left conveyor is turned off the rate controller uses the signal from the right side rate sensor to control the system.

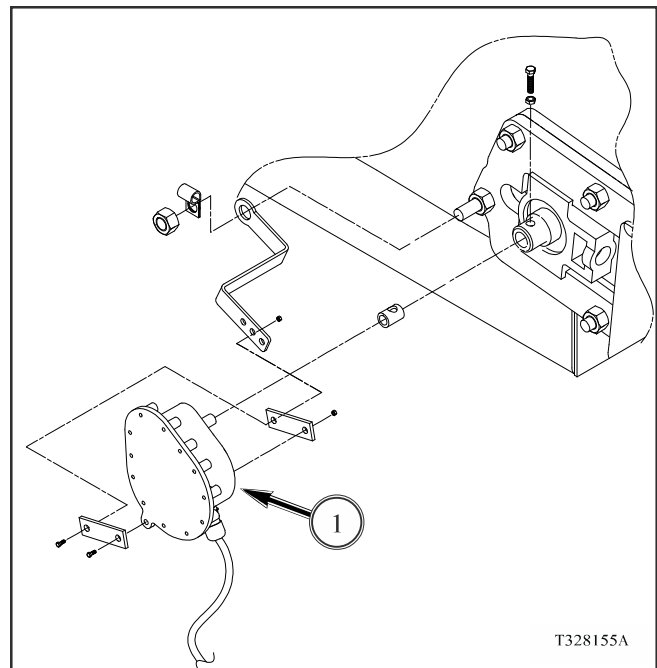


FIG. 18