



APPLICATION UPDATE

Number 6
Revision 1

ADAPTING THE ACE FMC-HYD PUMP TO THE NEW HYDRAULICS ON JOHN DEERE 6000 AND 7000 SERIES TRACTORS

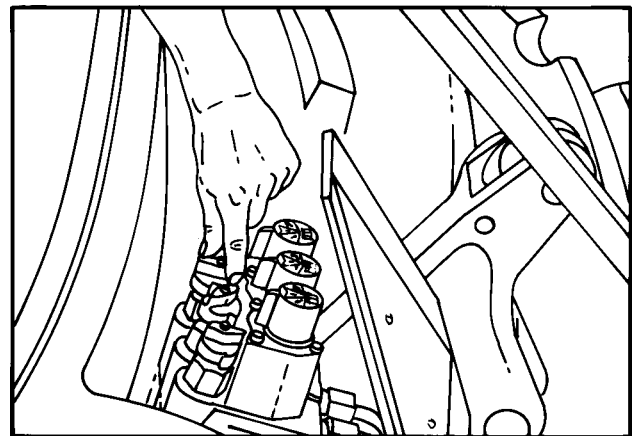
The John Deere tractor model numbers 6200, 6300, 6400, 7600, 7700, and 7800 have a different hydraulic system than previous John Deere tractors. The new system is a **LOAD SENSING CLOSED CENTER** hydraulic system also known as a **Pressure Flow Compensating (PFC)** system. Unlike previous John Deere tractors with a Pressure Compensating system, the new 6000 and 7000 series tractors **DO NOT** use the ACE restrictor orifice.

HYDRAULIC SELECTIVE CONTROL VALVES (SCV) AND ACE SPRAYER PUMP SELECTION. 7000 Series Tractors are equipped with Deluxe 300 SCV valves featuring a "Rabbit/Turtle" knob with 3 1/2 revolutions of MIN to MAX hydraulic flow control. Deluxe 300 SCV valves are identified by three symbols on the black detent knobs. Use ACE pumps with -204, -206, -210, or -304 motors. 6000 Series Tractors may be equipped with optional Deluxe 300 SCV valves which ACE recommends for sprayer pump applications. Use ACE pumps with -204, 206, -210, or -304 motors.

The 6000 Series Tractors may alternatively be equipped with Standard 200 SCV valves with only 1/2 revolution of MIN to MAX flow control. Adjustments cannot be made when the hydraulic lever is engaged in the "LOWER" position. Standard 200 SCV valves are identified by two symbols on the black detent knobs. The FMC-HYD-204 is not recommended for use with the Standard 200 SCV valves due to the limited adjustment range and the possibility of overspeeding the motor.

ACE highly recommends using an optional **HYDRAULIC MOTOR RETURN COUPLER** (John Deere dealer kit #RE51132 for the 7000 series tractor) which bypasses the remote ports and returns oil to the hydraulic sump. This feature minimizes the damaging effects of system pressure spikes.

The "Rabbit/Turtle" flow control and detent knob are located on top of the SCV which is accessible through the rear window of the tractor cab as shown in the illustration.



TO CONNECT THE PUMP:

- 1) Close the needle valve on the ACE motor by turning fully clockwise.
- 2) Do not install the restrictor orifice. A flow limiter may be installed (not required) in the inlet port of the motor to prevent damage from possible motor overspeeding.
- 3) Connect the hydraulic hoses so that the pump runs with the hydraulic lever in the "LOWER" position and the pump is off in the "FLOAT" position.
- 4) Turn the detent knob counter clockwise to the gear motor symbol for continuous hydraulic use.

TO SET THE FLOW CONTROL:

- 1) Turn "Rabbit/Turtle" flow control to the full "OFF" position.
- 2) Shut off boom and agitation valves on the sprayer.
- 3) Move hydraulic lever from "FLOAT" to "LOWER".
- 4) Set the "Rabbit/Turtle" flow control so the shut-off pressure shown on the sprayer pressure gauge does not exceed the maximum listed below.
- 5) Open the agitation valve to get the desired spraying pressure.

MAXIMUM SHUT-OFF PRESSURE:

100 PSI for FMC-HYD Series
120 PSI for FMC-150-HYD-206
80 PSI for FMC-200-HYD-210
120 PSI for FMC-200-HYD-304

CAUTION: DO NOT EXCEED THE MAXIMUM SHUT-OFF PRESSURE