680
Loader Backhoe
PRIOR TO SN 9101501

Service Manual

9-77442

CASE CONSTRUCTION

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680 LOADER BACKHOE, PRIOR TO SN 9101501

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RETURN TO DIG-HOW IT WORKS-ELECTRICALLY
(Refer to Figure A-7)

The return to dig feature - electrically - is a combination of the following:

Tilt Lever Actuator Switch - Controlled by the tilt lever.

Limit Switch - Operated by the sight level rod.

Hydraulic valve with a solenoid - connected to tilt spool cam holder.

Diode used across the solenoid coil leads to extend life of switches.

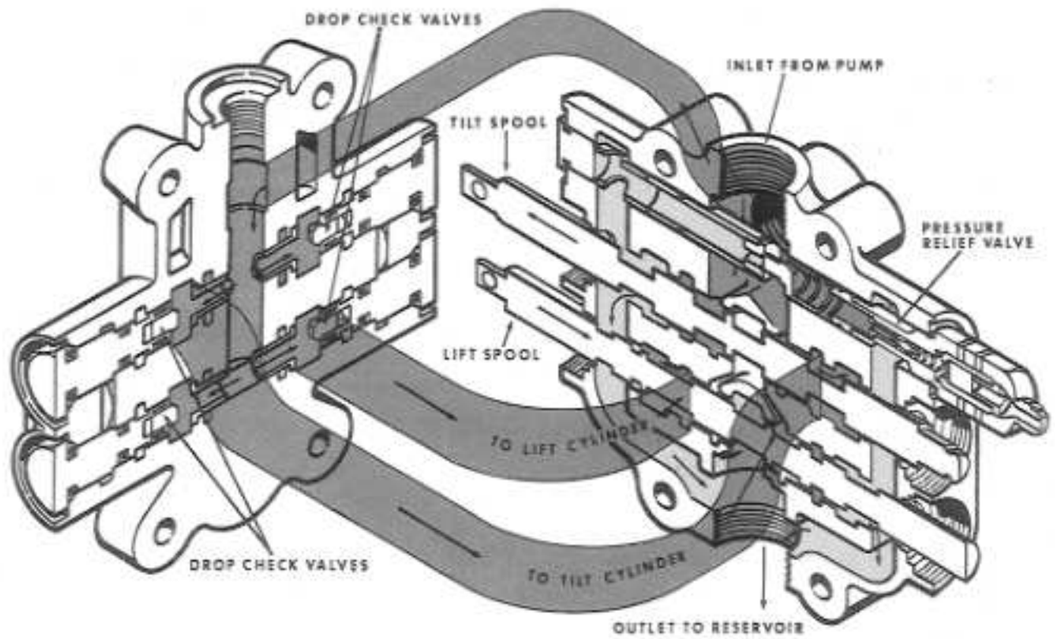
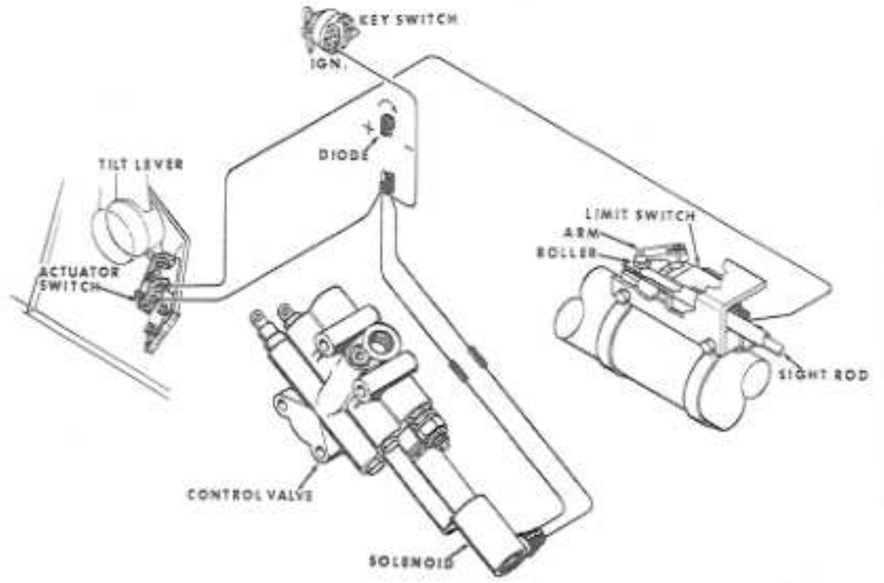


Figure A-6

When the bucket is in the dumped position - the actuator switch can be closed by pulling the tilt control lever fully rearward (into the retained position - the tilt spool is retained in this position by the detent balls and cam holder). Closing the actuator switch completes the circuit from the battery and key switch to the limit switch.

As the bucket reaches the Return to Dig position the bucket sight rod moves forward to a point where the limit switch closes (arm on limit switch moves forward). This completes the circuit from the limit switch to ground and energizes the solenoid. The solenoid pulls the cam holder detent forward releasing the detent balls and allowing the return spring on the tilt spool to move the tilt spool to the neutral position - Once the spool is in the neutral position, it blocks the flow of oil to the tilt cylinder and stops the bucket at the digging position.



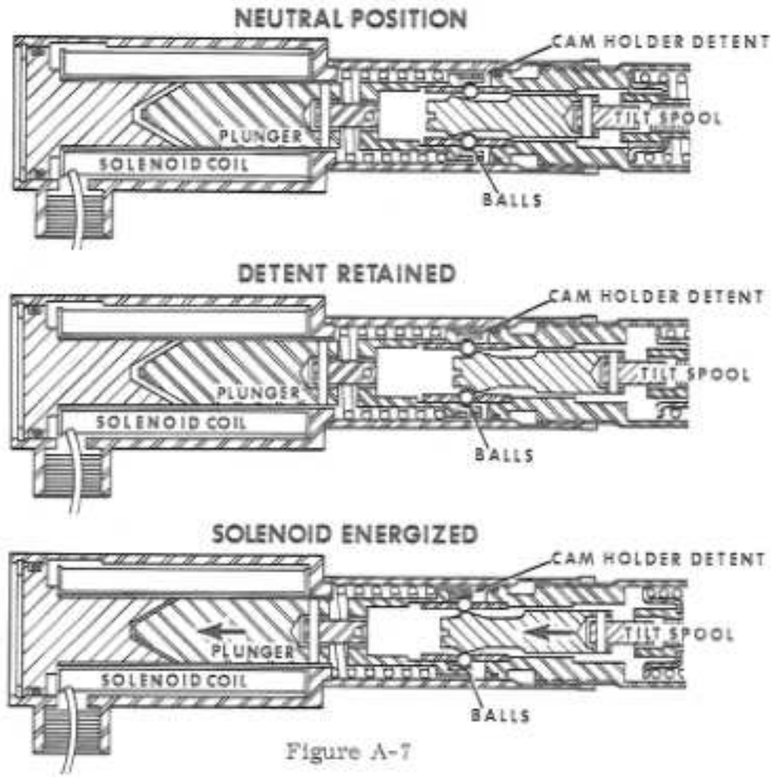


Figure A-7

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