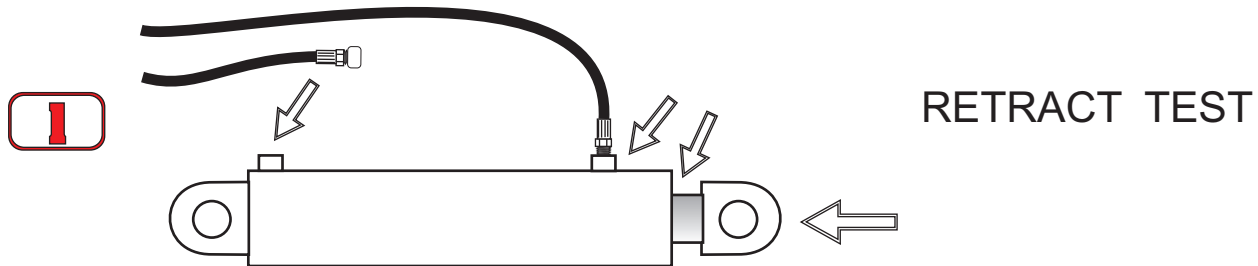


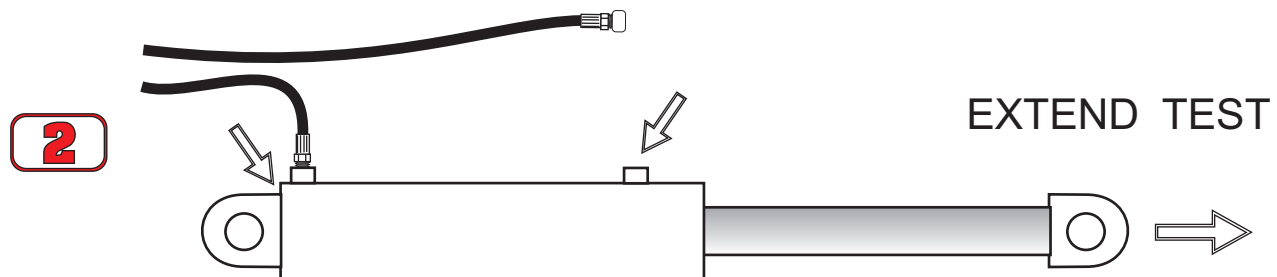
TESTING A DOUBLE ACTING HYDRAULIC CYLINDER

IF THERE IS A SUSPECTED CYLINDER PROBLEM, THE FOLLOWING TESTS CAN CAN BE DONE WHILE A CYLINDER IS STILL ON THE MACHINE TO DETERMINE THE CONDITION OF CYLINDER PACKING AND / OR PROBLEMS SUCH AS THE CYLINDER TUBE BEING SWELLED. IF ANY OF THESE TESTS RESULT IN A BYPASS CONDITION, THE CYLINDER SHOULD BE DISASSEMBLED TO DETERMINE THE CAUSE OF THE BYPASS.



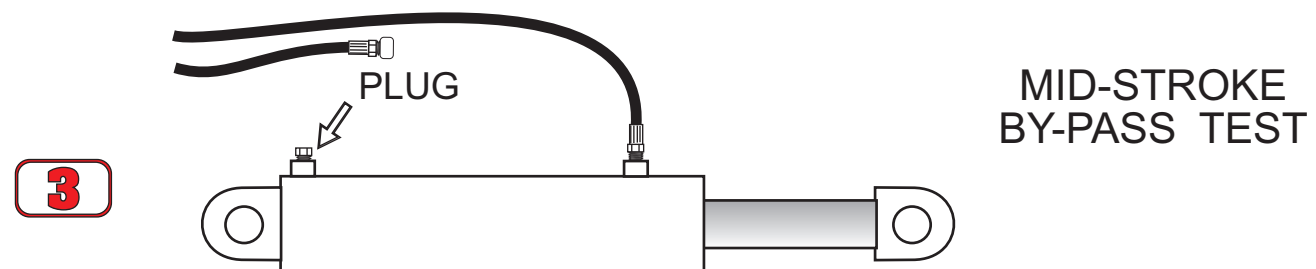
FIRST, COMPLETELY RETRACT THE CYLINDER. REMOVE THE EXTEND HOSE AND CAP. APPLY FULL PRESSURE TO THE RETRACT PORT. CHECK FOR PISTON BY-PASS OIL COMING OUT THE EXTEND PORT. CHECK FOR LEAKS AROUND THE PACKING GLAND, ROD SEAL AND PORT WELD.

RECONNECT THE EXTEND HOSE AND EXTEND THE CYLINDER COMPLETELY.



REMOVE THE RETRACT HOSE AND CAP. APPLY FULL PRESSURE TO THE EXTEND PORT. CHECK FOR PISTON BY-PASS OIL COMING FROM THE RETRACT PORT. EXAMINE THE PORT AND END CAP WELDS FOR LEAKS.

CONNECT THE RETRACT HOSE AND RETRACT THE CYLINDER TO MID-STROKE.



REMOVE THE EXTEND HOSE AND PLUG THE EXTEND PORT. APPLY FULL PRESSURE TO THE RETRACT PORT. THERE SHOULD BE NO MOVEMENT OF THE CYLINDER ROD. IF THE ROD SLOWLY EXTENDS, THE PISTON HAS OIL BY-PASS.