

Hydraulic fault finding - Main lift - All models with Position & Draught Control - Engine mounted pump

Fault Finding basics

When a hydraulic system fails to work correctly there are a number of 'Things' to do;

1. Stand back and assess the situation, don't rush in and start taking things to pieces have a cup of coffee, think about the situation!
2. Is there enough oil in the transmission?
3. Is the pump operating?
4. Is the implement too heavy?
5. Are the adjustments correct?
6. Did the fault suddenly happen or was it progressive?
7. Is there an unusual noise?
8. Are the filters OK, have they been changed / cleaned regularly?
9. Are the operating levers OK, do they actually move the linkage?
10. Is the lift latch engaged?
11. Is the diverter valve OK?
12. Is the 3 point linkage positioned / adjusted correctly?
13. If you require 'Position' control is the lever in position control?
14. If you are using a plough is the lever in 'Draught' control?

Fault finding is largely a state of mind, if a pump is pumping oil then that oil has to go somewhere! Think of a garden hose, if you turn the tap on water should come out of the other end, but if there is a kink in the hose it won't, if there's a split in the hose the water will escape! If the tap is only half turned on only a small amount will come out of the other end.

The pump draws oil from the transmission, via the elbow under the differential housing (this elbow incorporates a shut-off valve) and the suction strainer. The shut-off valve allows the suction filter to be serviced, or the suction pipe to be disconnected, without draining the transmission, by unscrewing and pulling down the bolt under the elbow.

The pump operates continuously while the engine is running and is in two sections. The front pump supplies oil to the diverter valve, via the high pressure filter. The rear pump supplies oil direct to the external valve pack.

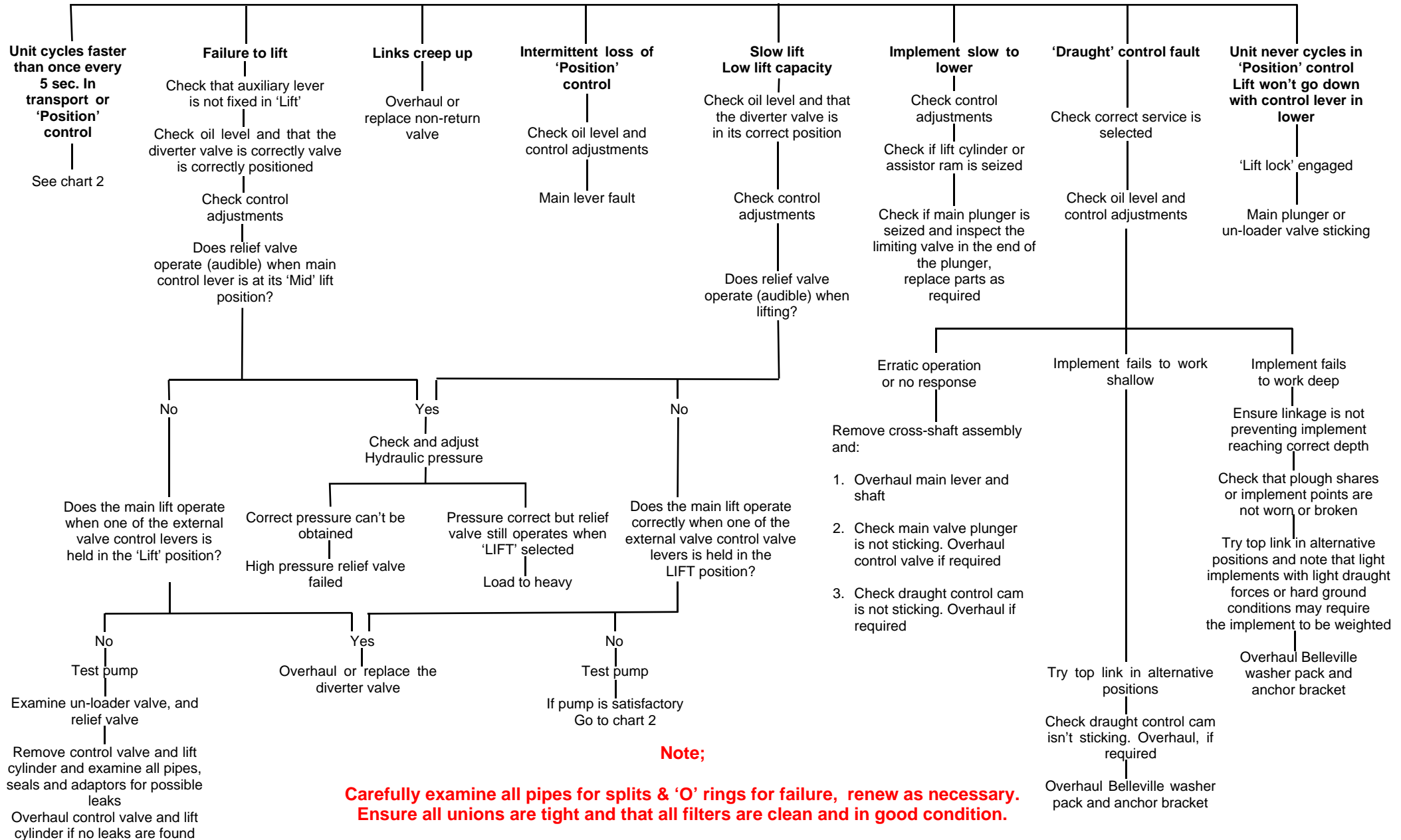
The diverter valve controls the oil flow from the front section of the pump. With the handle in one position oil is supplied, via a hose connected to the adaptor on the rear face of the hydraulic case and an internal pipe, to the main control valve block. With the handle in the second position, oil is supplied to the external valve pack to supplement the oil supplied direct from the rear section of the pump and allow implements which require a greater oil flow to be operated. The handle should be in the first position whenever the greater oil flow to the the external valve pack is not required.

Oil enters the external valve pack through the rear port of the inlet cover and passes through internal passages to each valve. Exhausting oil passes out of the front port of the inlet cover, via a pipe connected to the right-hand side of the hydraulic case, back to the transmission. A relief valve in the inlet cover allows oil to pass directly from the inlet port to the exhaust port when the maximum oil pressure is exceeded.

Use the charts on the following pages to help fault finding.

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Chart 1
Position / Draught Control Fault



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Chart 2

