DD421 BASIC SYSTEM TEST - Install a flow meter at the main pump outlet

Setting	Factory	MT Spec	RESULT B1	RESULT B2	Read from/comments
Measure Low percussion flow	na	<65L/min	45	78	flow meter - with oil at 60deg
Measure high percussion flow	na	<115L/min	100	132	flow meter - with oil at 60deg
Measure flow with 140bar forward feed pressure	na	<12L/min	8	6	Flow meter - rockdrill at front of rail
Increase min pressure of the main pump to 230 bar - at the min pressure compensator		<10L/min	22	7	Tests for relief faults or component bypass to tank

If any of above fail, investigate the failed circuit, or follow the below procedure to set the system reliefs

Resetting Main Pump and main reliefs

1 - Wind the max compensator (1 - Fig 2)out fully and min comp(2 - Fig 2) in fully. Wind max relief 211(fig 6) in fully.
Wind the boom relief (fig 4) and Max Boom LS (Fig 3) in fully. Wind boom pressure reducer 210 (Fig 5) in all the way.
2 - Start the pumps and slowly wind the max in to reach 270bar. Flow should be below 5L/min. wind 211 out untill flow starts to rise above 20L/min, lock the adjuster.
3 - Reset the pump max - wind the max pressure adjuster to 230 bar.
4 - Reset the pump Min - wind the min pressure out to 30 bar

# Main Relif valve (211 Fig 6) set to close at	270	260 bar			Use flow meter to confirm no flow @ 260 bar
# Boom pressure Red valve (210 Fig 5) Drill block	230	Max			Read pres from M10 Fig 6 - wind out to reduce
# Boom relief valve (Fig 4) Boom block underside	250	Max			listen for close point - confirm with flow meter
Pump max pressure (Valve 1 - Fig 2)	250	230 bar			Set at pump Fig 2 Read at M1 or flow meter
System standby pressure (Valve 2 Fig 2)	30	30 bar			Set at pump Fig 2 Read at M1 or flow meter
Max LS boom pressure - adjust at at Fig 3	250	230 bar			Stall hyd with Boom ext - Measure at M10

Fig 2
Pump MIN 2
Pump MAX 1

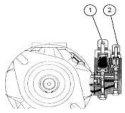


Fig 3
MAX
BOOM

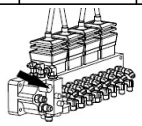
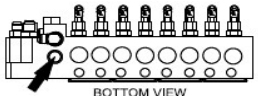
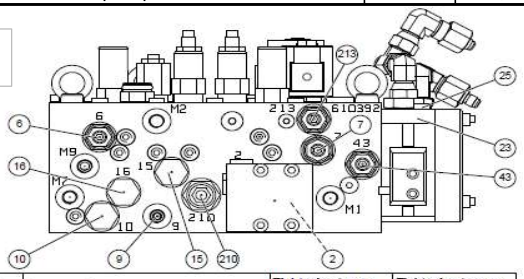


Fig 4
Max Boom
Reief



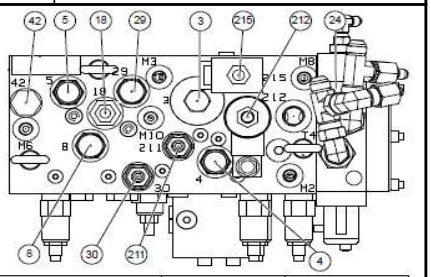
Set Min Perc (Valve 6)	130/140	140	140	140	Read at Percussion Gauge
Set Max Perc (valve 7)	220/240	230	230	230	Read at Percussion Gauge
Check/Adjust monitoring (valve 18)			OK	OK	As per OEM instructions
Stabiliser pressures		30/50/110	OK	RESET	Adjust as per OEM 30REF, 50MIN, 110MAX
Final Test - stall pumps with boom ext		<10L/min	6	5	Read from flow meter

Fig 5



No	Component	Tightening torque [Nm] (for the cap)	Tightening torque [Nm] (for the coil)
2	Percussion line pressure compensator	40	
6	Percussion half-power pressure relief valve	33,9	
7	Percussion max. pressure relief valve	33,9	
9	Orifice		
10	Shuttle valve	33,9	
15	Shuttle valve	33,9	
16	Shuttle valve	33,9	
23	Feed directional valve	22	
25	Max. pressure relief valve for feed line A	40	
43	Pilot pressure regulating valve	33,9	
210	Pressure reducing/relieving valve of the boom circuit	60	
213	Power extractor pressure relief valve (optional)	33,9	

Fig 6



No	Component	Tightening torque [Nm] (for the cap)	Tightening torque [Nm] (for the coil)
3	Percussion main valve	240	
4	Percussion selector valve	33,9	
5	Percussion pressure selector valve	33,9	
8	Rattling on/off valve	33,9	
18	Monitoring valve	33,9	
24	Max. pressure relief valve for feed line B	40	
29	Feed LS line selector valve	33,9	
30	Fast feed max. pressure relief valve	33,9	
42	Shuttle valve	33,9	
211	Main pressure relief valve	33,9	
212	Power extractor pressure selecting valve (optional)	33,9	6,8
215	Power extractor on/off valve (optional)	56	8