

Technical information



STOLL front loaders

Internal leak single lever control unit

Scope: Stoll front loader hydraulic control units Base-Control and Pro-Control

Symptom: Front loader lowers, implement tips over

Possible cause: Leak in the hydraulic control unit

Modern hydraulic control units are predominantly equipped with spool valves; a separate seal is therefore not installed, but the control valves act as a seal to the outer wall owing to their precise dimensional accuracy. The hydraulic control units for the Stoll Base-Control and Pro-Control made by the manufacturer Hydac are also equipped with spool valves. Despite the high precision, a small leak is permissible and also necessary to ensure lubrication of the control valve.

Test conditions:

- Pressure: 100 bar; oil temperature: approx. 50 °C; oil viscosity: approx. 30 cSt
- Permissible leak in the valve 3 cm³/min at 100 bar

Procedure:

- Make sure that the correct oils with the corresponding purity class of ISO 4406 (ISO Code 17/15/12) are used
- Raise the hydraulic oil temperature to 50 °C
- Lift up the implement with a load to create an internal pressure of 100 bar.
- Mark or measure the piston rod and after a little while compare the change in length with the values in the table

Lifting arm type	Piston diameter Lifting cylinder in mm	Change in length Lifting cylinder max. in <u>mm/min</u>	Piston diameter Implement cylinder in mm	Change in length Implement cylinder max. in <u>mm/min</u>
FE 650 H	50/30	0.73	55/35	1.06
FE 650 P	50/30	0.73	55/30	0.90
FE 750 H	55/35	0.63	55/35	1.06
FE 750 P	55/35	0.63	60/30	0.71
FE 850 H	60/35	0.53	60/35	0.80
FE 850 P	60/35	0.53	60/30	0.71
FE 950 H	65/35	0.45	60/30	0.80
FE 950 P	65/35	0.45	65/35	0.64

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CL 655 H	50/30	0,73	55/35	1,06
CL 655 P	50/30	0,73	55/30	0,90
CL 755 H	55/35	0,63	55/35	1,06
CL 755 P	55/35	0,63	60/30	0,71
CL 855 H	60/35	0,53	60/35	0,80
CL 855 P	60/35	0,53	60/30	0,71
CL 955 H	65/35	0,45	60/30	0,80
CL 955 P	65/35	0,45	65/35	0,64
S 30-16 H	50/30	0,73	55/35	1,06
S 30-16 P	50/30	0,73	55/30	0,90
S 35-18 H	55/35	0,63	55/35	1,06
S 35-18 P	55/35	0,63	60/30	0,71
S 38-20 H	60/35	0,53	60/35	0,80
S 38/-20 P	60/35	0,53	60/30	0,71
FS 8	60/35	0,53	60/35	0,81
FZ 8; FZ 8.1	60/35	0,53	60/30	0,71
FS 10; FS 10.1	63/35	0,48	60/35	0,80
FZ 10; FZ 10.1	63/35	0,48	70/35	0,52
FS 20; FS 20.1	70/40	0,39	65/35	0,64
FZ 20; FZ 20.1	70/40	0,39	70/35	0,52
FS 30; FS 30.1	70/40	0,39	70/40	0,58
FZ 30; FZ 30.1	70/40	0,39	70/35	0,52
FS 40; FS 40.1	75/40	0,36	70/40	0,58
FZ 40; FZ 40.1	75/40	0,36	75/40	0,48
FZ 45; FZ 45.1	75/40	0,36	75/40	0,48
FZ 50; FZ 50.1	80/45	0,31	80/40	0,41
FZ 60; FZ 60.1	85/45	0,26	80/40	0,41
FZ 80.1	90/50	0,24	85/45	0,37
FZ 100	100/60	0,19	90/50	0,34

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