DT 3000 SERIES
MAINTENANCE MANUAL



Order Number: 812591-006
Revision: A • Printed in Germany

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Hydraulic System Troubleshooting

Symptom	Probable Cause	Remedy
Noisy pump	- Oil level too low. - Incorrect oil viscosity (e.g. standard oil used in cold store environment). - Leak in suction pipe union (pump suctions air). - Filter in suction pipe partly clogged.	- Check oil level. - Use correct hydraulic oil (see page 21). - Check suction pipe connection to pump. - Replace suction filter.
Foaming hydraulic oil	- Air in system - Water in oil	- Check oil level. - Check suction pipe connection to pump. - Clean reservoir and replace hydraulic oil.
Pump or oil overheating	- Incorrect oil viscosity (e.g. cold store oil used at normal temperature). - Oil contaminated with water. - Relief valve permanently open	- Drain oil completely and add oil depending on the application conditions. - Drain oil completely, clean reservoir and fill with clean oil. - Check oil level. - Check suction pipe / pump connection (see "Foaming hydraulic oil" symptom). - Test relief valve (see page 53).
Low flow rate	- Air in system - Relief valve faulty - Oil too hot	- See "Foaming hydraulic oil" remedy. - See "Pump or oil overheating" remedy. - Test relief valve (see page 53).
No build up of pressure	- Faulty relief valve - Oil level low	- Test relief valve (see page 53), replace if faulty. - Add hydraulic oil.
Lifting delay	- Air in manifold	- Bleed the hydraulic system(see page 52).

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DT 3040 -MF (Sheet 2 of 3)			Factory Settings		
Display	**Description**	**Range**	**Performance setting P1**	**Performance setting P2**	**Performance setting P3**
PLT Down Speed FF	Maximum travel speed in comfort mode in direction of forks.	Settings from 1 - 9 in increments of 0.5 km/h. Setting 1 = 2 km/h, setting 3 = 3 km/h, setting 5 = 4 km/h, setting 7 = 5 km/h, setting 9 = 6 km/h	**9**	**7**	**5**
Walkie Acceleration	Time required[a] for the drive motor to accelerate in pedestrian and comfort modes from 0 rpm to a speed corresponding to 6 km/h of the unladen truck in performance setting P1.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum acceleration, setting 9 minimum acceleration. Setting 1 = 0.3 s, setting 4 = 0.9 s, setting 9 = 1.9 s	**4**	**5**	**7**
Walkie Plugging	Time required[b] for the drive motor to decelerate from a speed corresponding to 6 km/h of the unladen truck to 0 rpm by changing direction in pedestrian and comfort modes.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum deceleration, setting 9 minimum deceleration. Setting 1 = 0.6 s, setting 4 = 1.2 s, setting 9 = 2.2 s	**3**	**3**	**4**
Walkie Coasting	Time required[b] for the drive motor to decelerate from a speed corresponding to 6 km/h of the unladen truck to 0 rpm by coasting.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum deceleration, setting 9 minimum deceleration. Setting 1 = 0.6 s, setting 4 = 1.2 s, setting 9 = 2.2 s	**4**	**4**	**4**
Speed Reduction On Turns	Resulting maximum speed on turns for a 90° control handle lock	Settings from 1 - 3 in **rider mode**: Setting 1 = 8.8 km/h for 90° control handle lock. Setting 2 = 7.5 km/h for 90° control handle lock. Setting 3 = 6.3 km/h for 90° control handle lock. Settings from 1 - 3 in **pedestrian and comfort modes**: Settings 1 to 3 = 4.8 km/h for 90° control handle lock.	**2**	**2**	**3**
			All performance settings		
BDI Setting	BDI display settings for different application profiles.	Light Duty, Standard Duty, Heavy Duty, Maintenance Free (Heavy Duty Plus)	**Standard Duty**		
Max EVP	Limit for maximum current through the lowering valve PV. This determines the maximum lowering speed. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 20 in increments of 0.4% Setting 1 = 44.7 %, setting 19 = 51.8 %, setting 20 = 52.2 %	**19**		
Min EVP	Limit for minimum current through the lowering valve PV. This determines the minimum lowering speed. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 20 in increments of 0.4% Setting 1 = 11 %, setting 18 = 17.7 %, setting 20 = 18.5 %	**18**		
EVP Open Delay	PV lowering valve opening delay. Time taken to reach Min EVP. This setting determines how softly or abruptly lifting takes place. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 9 in increments of 0.05 s. Setting 1 = 0.0 s, setting 5 = 0.2 s, setting 9 = 0.4 s	**5**		
EVP Close Delay	PV lowering valve closing delay. This setting determines how softly or abruptly lifting stops when the lowering switch is released. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 9 in increments of 0.05 s. Setting 1 = 0.0 s, setting 4 = 0.15 s, setting 9 = 0.4 s	**3**		
Pump Acceleration	Time taken[b] for the pump motor to accelerate from 0 rpm to maximum speed.	Settings from 1 - 9 in increments of 0.1 s. Setting 1 = 0.1 s, setting 4 = 0.4 s, setting 9 = 0.9 s	**4**		
Pump Deceleration	Time taken[b] for the pump motor to decelerate from the maximum speed to 0 rpm.	Settings from 1 - 9 in increments of 0.1 s. Setting 1 = 0.1 s, setting 4 = 0.4 s, setting 9 = 0.9 s	**1**		
Adjust Batt	Option for comparing the battery voltage measured by the control module with the voltage actually measured on the battery. This parameter should only be changed after consultation with the Crown service department.	—	—		

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Item number	Description	Connector	Component
826119	Horn cable	PC413, PC417, PC419	Control handle
826120	CAN analog PCB wiring	PC418, PC415, PC414	Module wiring within Access 8.1
827421	Wire harness BLS	JC207, PC207.1	BLS

(a). Option

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DT 3040 -EF (Sheet 2 of 3)			Factory Settings		
Display	**Description**	**Range**	**Performance setting P1**	**Performance setting P2**	**Performance setting P3**
PLT Down Speed FF	Maximum travel speed in comfort mode in direction of forks.	Settings from 1 - 9 in increments of 0.5 km/h. Setting 1 = 2 km/h, setting 3 = 3 km/h, setting 5 = 4 km/h, setting 7 = 5 km/h, setting 9 = 6 km/h	**9**	**7**	**5**
Walkie Acceleration	Time required[a] for the drive motor to accelerate in pedestrian and comfort modes from 0 rpm to a speed corresponding to 6 km/h of the unladen truck in performance setting P1.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum acceleration, setting 9 minimum acceleration. Setting 1 = 0.3 s, setting 4 = 0.9 s, setting 9 = 1.9 s	**4**	**5**	**7**
Walkie Plugging	Time required[b] for the drive motor to decelerate from a speed corresponding to 6 km/h of the unladen truck to 0 rpm by changing direction in pedestrian and comfort modes.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum deceleration, setting 9 minimum deceleration. Setting 1 = 0.6 s, setting 4 = 1.2 s, setting 9 = 2.2 s	**3**	**3**	**4**
Walkie Coasting	Time required[b] for the drive motor to decelerate from a speed corresponding to 6 km/h of the unladen truck to 0 rpm by coasting.	Settings from 1 - 9 in increments of 0.2 s. Setting 1 is maximum deceleration, setting 9 minimum deceleration. Setting 1 = 0.6 s, setting 4 = 1.2 s, setting 9 = 2.2 s	**4**	**4**	**4**
Speed Reduction On Turns	Resulting maximum speed on turns for a 90° control handle lock	Settings from 1 - 3 in **rider mode**: Setting 1 = 8.8 km/h for 90° control handle lock. Setting 2 = 7.5 km/h for 90° control handle lock. Setting 3 = 6.3 km/h for 90° control handle lock. Settings from 1 - 3 in **pedestrian and comfort modes**: Settings 1 to 3 = 4.8 km/h for 90° control handle lock.	**2**	**2**	**3**
Panic Steering	Setting to which the travel speed is reduced for a sudden steering angle. The travel speed reduction takes effect when the difference in angle between the control handle and drive wheel > 25°.	Level 1 - 9 Setting 1 = 4.0 km/h, setting 4 = 7 km/h, setting 6 = 9 km/h, setting 9 = no travel speed reduction	**9**	**9**	**9**
			All performance settings		
BDI Setting	BDI display settings for different application profiles.	Light Duty, Standard Duty, Heavy Duty, Maintenance Free (Heavy Duty Plus)	**Standard Duty**		
Max EVP	Limit for maximum current through the TFD module. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 20 in increments of 0.4% Setting 1 = 44.7 %, setting 19 = 51.8 %, setting 20 = 52.2 %	**19**		
Min EVP	Limit for minimum current through the TFD module. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 20 in increments of 0.4% Setting 1 = 11 %, setting 18 = 17.7 %, setting 20 = 18.5 %	**18**		
EVP Open Delay	Delay from Min EVP to Max EVP. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 9 in increments of 0.05 s. Setting 1 = 0.0 s, setting 5 = 0.2 s, setting 9 = 0.4 s	**5**		
EVP Close Delay	Delay from Max EVP to Min EVP. This parameter should only be changed after consultation with the Crown service department.	Settings from 1 - 9 in increments of 0.05 s. Setting 1 = 0.0 s, setting 4 = 0.15 s, setting 9 = 0.4 s	**3**		
Pump Acceleration	Time taken for pump motor to accelerate from 0 rpm to maximum speed.	Settings from 1 - 9 in increments of 0.1 s. Setting 1 = 0.1 s, setting 4 = 0.4 s, setting 9 = 0.9 s	**4**		
Pump Deceleration	Time taken for pump motor to decelerate from maximum speed to 0 rpm.	Settings from 1 - 9 in increments of 0.1 s. Setting 1 = 0.1 s, setting 4 = 0.4 s, setting 9 = 0.9 s	**1**		
Adjust Batt	Option for comparing the battery voltage measured by the control module with the voltage actually measured on the battery. This parameter should only be changed after consultation with the Crown service department.	—	—		

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