SP 3400 SERIES

Four-Point

MAINTENANCE MANUAL



Bestell Nummer: 812569-006

Revision: A • Printed in Germany

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Hydraulic Troubleshooting

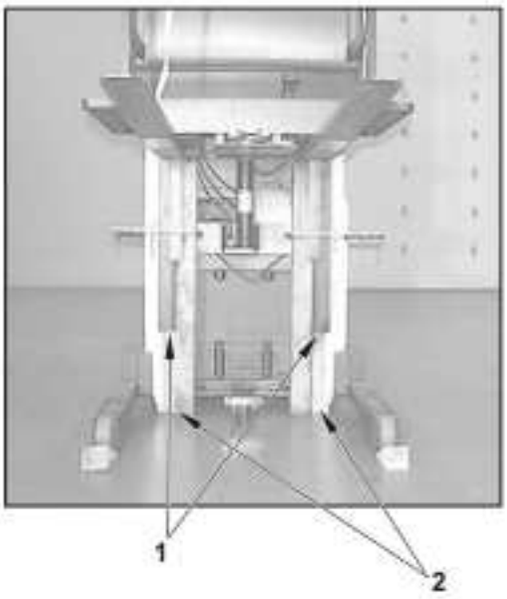
The following Troubleshooting Chart contains general information necessary to effectively solve the more common hydraulic problems. Know the system to the best of your ability. Understand the components and their function within the system. Develop a systematic pattern to locate and solve the various hydraulic problems that occur. The ability to identify problems and proceed in solving the problem grows with experience. The following chart contains symptom, probable cause and remedy. The information is general in nature and a remedy may simply refer you to a maintenance section that has more complete troubleshooting. Use the chart(s) carefully and completely. Do not make the system more complicated than necessary. Do not overlook the simplest reason(s) for a hydraulic problem.

Hydraulic Troubleshooting Chart

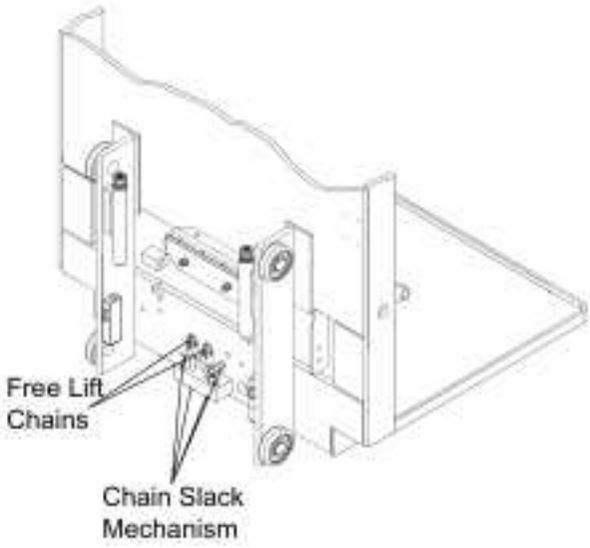
Symptom	Probable Cause	Remedy
Hydraulic oil foaming	Introduction of air into pump	Check reservoir oil level.
		Check for proper oil viscosity.
		Check plumbing.
	Water in oil	Check reservoir.
Hydraulic oil overheating *	Oil too thin *	Change to proper viscosity oil.
	Oil contaminated	Change filters and fill with clean oil.
	Introduction of air into pump	Check plumbing.
	Oil level low	Fill reservoir to proper level.
Platform will not raise	Mast assembly binding	Inspect mast for damage or misalignment.
	Lift motor or pump not operating	Refer to pump troubleshooting.
	Manual lowering valve open	Refer to valve assembly troubleshooting M2.4.
	Relief valve setting incorrect	Reset relief valve.
Platform will not lower	Velocity fuse actuated	Check for severe oil leak.
		Check for more than capacity load.
		Flow control valve reset.
		Raise slightly to reset velocity fuse.
	Chain slack switch actuated	Platform/Forks resting on obstruction.
		Raise slightly to eliminate chain slack.
	Solenoid valve malfunction	Refer to valve assembly troubleshooting M2.4.
	Binding in mast assembly	Inspect mast & platform for damage, misalignment, etc.

*Be sure the truck has been performing its normal duty cycle at this time. Trucks equipped to operate in freezer require a thinner weight oil.

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14491



14501

- **Raise the mast until the third stage is a minimum of 760 mm (30.0 in) above the floor, the second stage (1, Fig 14491) should be approximately 380 mm (15.0 in) from the floor. Use hardwood blocks (2, Fig 14491) that are 100 x 100 mm (4.0 x 4.0 in) to block the second stage mast. Refer to Control Of Hazardous Energy Lockout/Tagout for lifting and blocking procedures.**

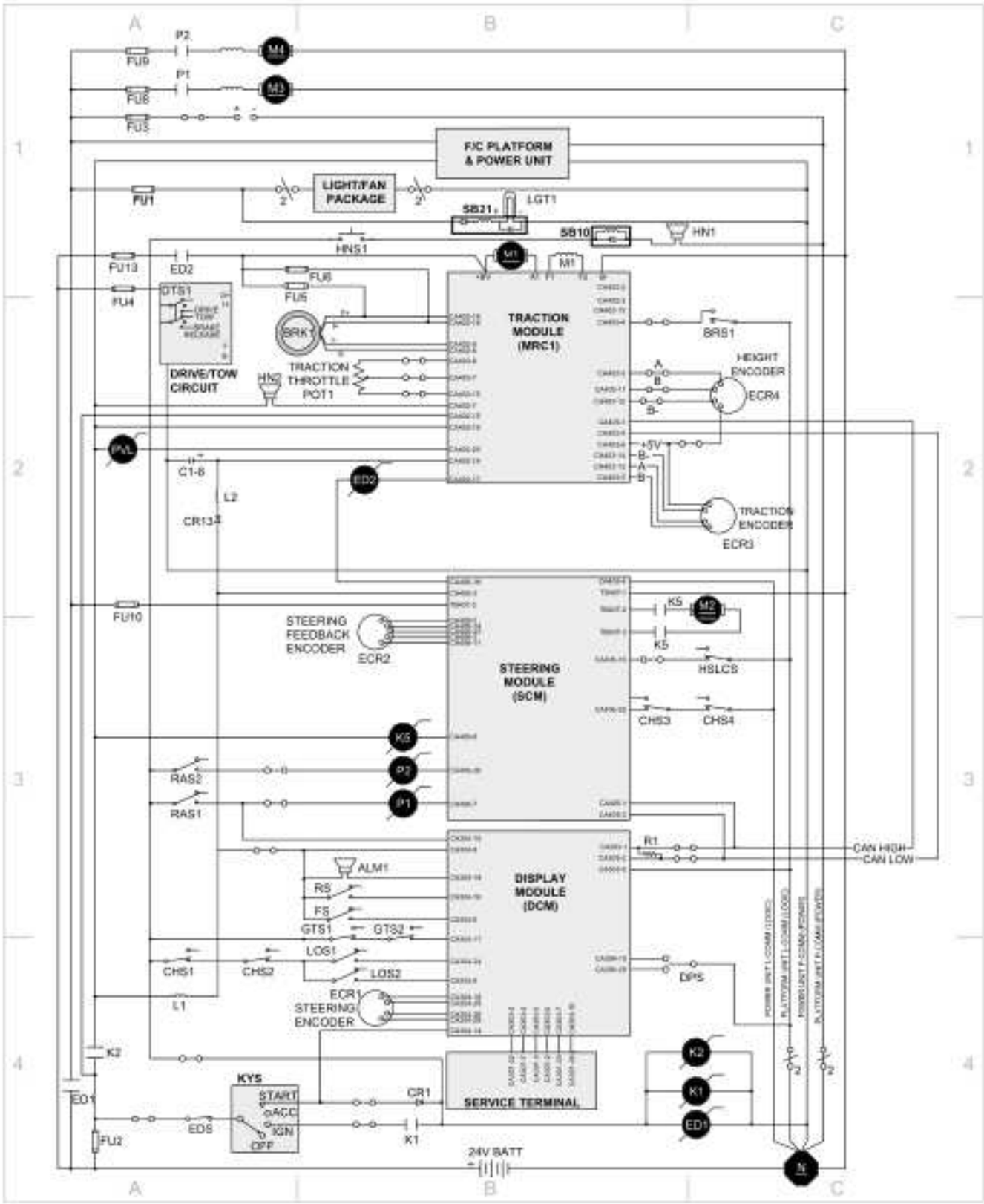
4. Disconnect battery and chock wheels.
5. Remove platform height sensor if present on truck.
6. Using a hoist, raise the platform approximately 75 mm (3.0 in) to allow the mast chains to become slack. Note that the combined weight of the platform and forks are approximately 485 to 620 kg (1 070 to 1 360 lbs).

WARNING

Make sure lifting device is sufficiently rated to lift various parts of the mast sections and platform either individually or as a group. Make sure that blocking material is strong enough to withstand the weight. Never work under or around a truck that is not properly blocked. Refer to Control Of Hazardous Energy Lockout/Tagout chapter in this manual

7. Disconnect mast lift chains from the platform by removing the chain pins and secure with tie straps.
8. Using hoist, lower platform to floor making sure that cables, hoses and lift chains do not become tangled with platform to prevent any damage to them.
9. Place platform away from mast approximately 125 mm (5.0 in) to gain access to platform column rollers.
10. Remove column rollers and note number of shims on each roller mounting stud. Remove the column rollers carefully, many times the shims will stick to the back of the column roller and fall off after removal.
11. Shim platform column rollers as needed. Please note that it is best to shim the platform column rollers evenly. That is an equal number of shim(s) on each column roller. However if this is not possible follow the shim procedures as described in chapter *Lifting Mechanism*. Example: Two shims on both left side platform column rollers (A, Fig. 14502) and one shim on both right side column rollers (B, Fig. 14502).

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