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TECHNICAL TIP – ENSURE PROPER PHASING

WARNING

It is very important to properly phase the electrical connections upon start-up. All Power must be turned off before any electrical work is completed.

Only a trained/qualified electrician should be working with electrical connections.

Always do a visual inspection to ensure there are no loose strands visible at the wiring connection points before applying power.

CONTACTOR CONTROLLED EQUIPMENT – ensuring proper phasing

When running a hoist for the first time, **ALWAYS** press the up direction, providing there are upper limit switches, and ensure the up direction contactor energizes (A-K1 on the SpaceMaster® SX wire rope hoist or K21 on the LoadMate® electric chain hoist). The reason for this is to prevent the bottom block from running into the hoist. If you press up and it runs up, the limit switch should stop the bottom block from hitting the hoist. If you press down and it runs up, there is no protection and this could cause an accident.

If the equipment moves in the proper direction the phasing is correct. If the equipment moves in the incorrect direction the phasing is incorrect and must be switched immediately.

CONTACTOR CONTROLLED EQUIPMENT – correcting improper phasing

Always refer to the wiring diagram and have a clear understanding of the wires that need to be changed before attempting to correct the phasing. Moving the incorrect wires can cause a phase to phase short, phase to ground short; etc. that could damage components or cause electrical shock.

If the up direction of the hoist controller is pressed, the up direction contactor energizes, but the hoist runs down, the power leads need switched. To switch the power leads, turn off the main power supply, and change two of the three contactor input power wires (L1, L2, L3). **NEVER** change the control wires in this situation. Changing the control wires, such as in the pushbutton, can cause the limits to be by-passed and non-functional.

When a two speed contactor control motor has one speed moving in the correct direction and the other speed moving in the incorrect direction, the wiring of the incorrect direction should be changed at the power leads of the motor connections.

If the up direction of the hoist controller is pressed and the down direction contactor energizes (A-K2 or K22), the control wiring is not correct. Refer to the wiring diagram to trouble shoot the problem.

INVERTER CONTROLLED EQUIPMENT – correcting improper phasing

When trying to get the correct direction of inverter controlled motors, turn off the main power supply, and change two of the three output wires of the inverter (U, V, W). Changing the input wires (L1, L2, L3) will not change the direction of an inverter controlled motor. **NEVER** change the control wires in this situation.

Please contact the R&M Materials Handling, Inc. Technical Support Department if you need assistance.

WARNING

This warning indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury. Failures of this type could pose a grave danger to property and personnel located in, on, or around the subject crane.

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