



Harsco Track Technologies

Harsco

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SERVICE BULLETIN MAINTENANCE OF WAY EQUIPMENT

DATE: 9-16-2002 **BULLETIN NO:** 02-022

TITLE: C0046XAA and C0046XAB LINEAR ACTUATORS CURRENT DRAW

RATING:

<input type="checkbox"/>	DIRECTIVE (Action Is Required)	<input type="checkbox"/>	ALERT (Potential Problem)
<input type="checkbox"/>	INFORMATION (Action Is Optional)	<input checked="" type="checkbox"/>	PRODUCT IMPROVEMENT (Enhance Product)

PRODUCT SERIES / MODEL: MK III - MK IV and MK VI Tampers

SERIAL NO: All Models

SUMMARY: The C0046XAA and C0046XAB linear actuators are used for controlling the amount that the track is being lifted or lined. When these actuators are sent to the customer they are initially adjusted to have a certain amount of current draw when operating. Once the actuators have been installed on the machine and have operated for a period of time, the current draw may change. When this occurs, you may experience some minor problems with the machine; such as liner actuators "hunting" when they should be normally stationary, or surfacing actuators displaying a "short circuit" on the smart I/O boards even though they appear to working properly.

OPERATIONAL IMPACT: To reduce or eliminate minor problems with linear actuators, such as hunting and/or improper displays, by adjusting their current draw.

ACTION: To adjust the current draw of the C0046XAA and C0046XAB linear actuators:

- An amp meter with a scale from 0 - 10 amps is required.
- Disconnecting and reconnecting wires on the machine is required.

CONTACT: If you have any questions or if we can be of any service, please contact the Service Department at the Columbia, SC. facility, (803) 345-9160.

SAFETY INFORMATION

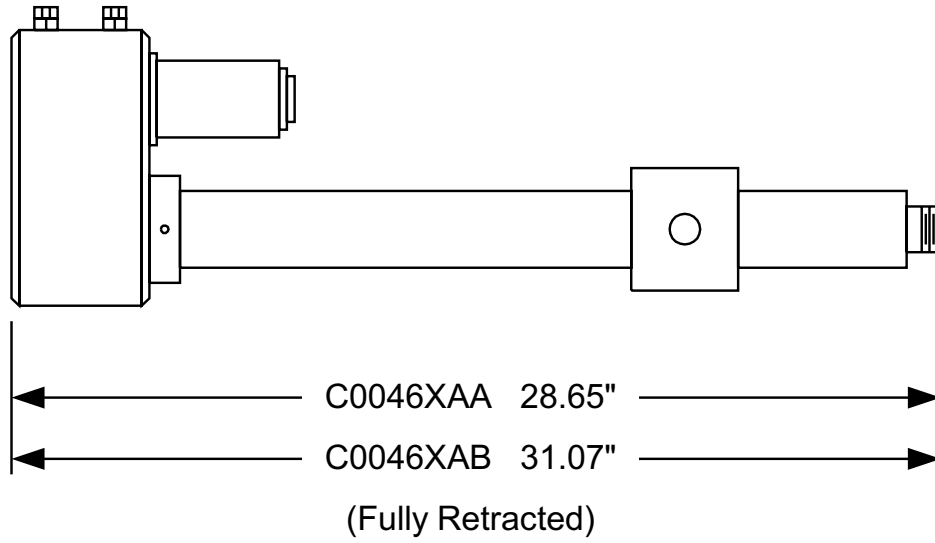
- **FOLLOW APPLICABLE RAILROAD LOCKOUT - TAGOUT PROCEDURE TO REMOVE ALL ENERGY SOURCES FROM MACHINE. FAILURE TO COMPLY COULD RESULT IN SEVERE BODILY INJURY.**

LINEAR ACTUATORS CURRENT DRAW

1. On some of the earlier MK IV tampers, two different types of actuators were used. A faster actuator (part # C0046XAB) was used for lining and a slower actuator (part # C0046XAA) was used for surfacing. Current MK IV's and MK VI's tampers use the faster actuator (C0046XAB) for both lining and surfacing. All MK III's tamper used the faster actuator (C0046XAB) for both lining and surfacing. Other than the speed, there is a small physical difference between the two actuators as shown in Figure 1.
2. When these actuators are sent to the customer they are initially adjusted so that when the actuator is operating, the slower actuator (part # C0046XAA) has approximately 0.75 amperes of current draw and the faster actuator (part # C0046XAB) has approximately 2 amperes of current draw.
3. Once the actuators have been installed on the machine and have run for a period of time, the current draw may change. When this occurs, you may experience some minor problems with the machine; such as liner actuators "hunting" when they normally should be stationary, or surfacing actuators displaying a "short circuit" on the smart I/O boards even though they appear to be working properly.
4. To adjust the current draw on the actuators, an amp meter with a scale from 0 - 10 amps is required.

LINEAR ACTUATORS CURRENT DRAW

FIGURE 1
LINEAR ACTUATORS DIFFERENCES



LINEAR ACTUATORS CURRENT DRAW**MK III Tampers**

5. Disconnect the following wire from the terminal strip in the Right Hand Operator's Console to check the applicable actuator:
 - 5.1 Left hand actuator: Disconnect wire #764 or #765.
 - 5.2 Right hand actuator: Disconnect wire #766 or #767.
6. With the wire disconnected, hook one lead of the amp meter to the wire that was disconnected. Attach the other lead of the amp meter to the terminal strip where the wire was disconnected from.
7. With the liner turned on and the liner override switch in the override position, manually extend and retract the appropriate liner shadow board and observe the current draw on the amp meter. The current draw should be as stated in Step 2 for the applicable actuator being checked. If not, adjust as follows:
 - 7.1 To increase the current setting, turn the motor housing clockwise in reference to the barrel as shown in Figure 2.
 - 7.2 To decrease the current setting, turn the motor housing counter-clockwise in reference to the barrel of the actuator as shown in Figure 3.

Note: Loctite is used between the threads of the motor housing and the barrel which may make it difficult to turn.
8. Once the current draw has been set, disconnect the amp meter and reconnect the wire to the terminal strip.

LINEAR ACTUATORS CURRENT DRAW**MK IV and MK VI Tampers**

9. Disconnect the following wire from the terminal strip in the Master Control Box to check the applicable actuator:
 - 9.1 Left hand lining actuator: Disconnect wire #177 or #178.
 - 9.2 Right hand lining actuator: Disconnect wire #175 or #176.

 - 9.3 Left hand surfacing actuator: Disconnect wire #171 or #172.
 - 9.4 Right hand surfacing actuator: Disconnect wire #173 or #174.

10. With the wire disconnected, hook one lead of the amp meter to the wire that was disconnected. Attach the other lead of the amp meter to the terminal strip where the wire was disconnected from.

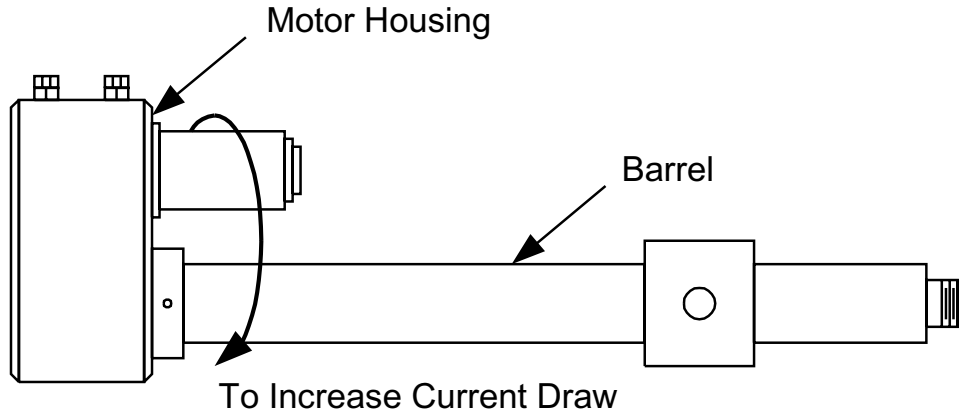
11. Switch the actuators to the override position and either extend or retract the actuator in question and observe the current draw on the amp meter. The current draw should be as stated in Step 2 for the applicable actuator being checked. If not, adjust as follows:
 - 11.1 To increase the current setting, turn the motor housing clockwise in reference to the barrel as shown in Figure 2.
 - 11.2 To decrease the current setting, turn the motor housing counter-clockwise in reference to the barrel of the actuator as shown in Figure 3.

Note: Loctite is used between the threads of the motor housing and the barrel which may make it difficult to turn.

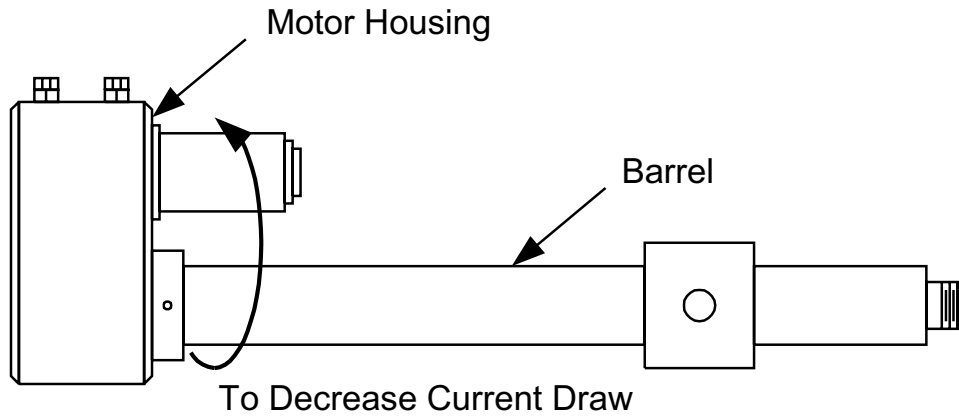
12. Once the current draw has been set, disconnect the amp meter and reconnect the wire to the terminal strip.

LINEAR ACTUATORS CURRENT DRAW

**FIGURE 2
INCREASING LINEAR ACTUATOR CURRENT DRAW**



**FIGURE 3
DECREASING LINEAR ACTUATOR CURRENT DRAW**



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