



SERVICE BULLETIN

Subject: Inappropriate Actuation of Platform Stow Switch
Applicable Products: F9T Mirage for Metra
Effectivity: All F9T-NP002 models installed in Metra Gallery rail cars

Ricon service bulletins are for use by professional service technicians, and are not intended for use by non-professionals (do-it-yourselfers). Service Bulletins alert technicians to issues that may occur with Ricon products, and are intended to assist the technician in the proper service of those products.

Professional service technicians have the background and knowledge to perform maintenance work properly and safely.

An issue described by a service bulletin does not necessarily apply to every unit in a product line. A Ricon authorized service technician will be able to determine which units can benefit from the information provided here.

Introduction

This bulletin provides a description of a situation that can allow the lift stow switch to incorrectly change states while the platform is stowed. Also provided is an adjustment procedure that will reduce or eliminate the problem.

Incorporation

Ricon strongly recommends the incorporation of this service bulletin.

Information

Under certain conditions the interlock stow switch can falsely signal the rail car that the platform is not fully stowed. If this happens, the rail car may react by applying the brakes on the car wheels. If the car is moved under this condition, flat spots will be worn onto the wheels.

The false signal occurs when the platform is properly held in its fully stowed position but is capable of very slight movement. The slight movement may be enough to allow the stow switch to change states.

Caution

- Portions of the procedure involve operating the lift or testing it while access covers are removed. Be alert to the possibility of electrical shock under these conditions.
- Portions of the procedure involve moving the carriage and platform assembly in and out of the enclosure, either under power or by hand. This assembly is heavy and precaution must be used to avoid crushed fingers or hands.



Corrective Action

Verify that the lift is not in the manual operation mode by attempting to pull the platform out of the enclosure by its handrails. If the platform does not pull out, it is in the normal operation mode, which is the default mode. If the lift pulls out of the enclosure, push the platform firmly and fully into the enclosure and then turn one of the platform release shafts 90° clockwise.

Initial Inspection:

Pull firmly on both handrails as if you were using them to assist you while boarding the rail car. The platform should not move out of the enclosure or even move noticeably. Observe whether the yellow "Fully Stowed" light on the vestibule control panel remains on, as it should. Perform the following adjustment if the light goes off.

A. Carriage Stop Screw Adjustment:

When the platform is fully stowed, the front rollstop should be behind the front edge of the vestibule step and it should be in contact with the step riser the enclosure is installed into. If the front rollstop is not in close contact with the step riser, perform the following steps:

1. Refer to **Figure 1**. Locate the two carriage stop adjustment screws on the rear face of the enclosure and loosen their locknuts.
2. Turn each adjustment screw counterclockwise to reduce any gap that is present between the front rollstop and the step riser. One full turn reduces the gap by approximately .060". Turn each screw an equal amount. Retighten both locknuts.
3. Press the Deploy button on a control panel to partially extend platform from enclosure. Press and hold the Stow button until the platform is fully stowed.
4. Verify that the front rollstop is in firm contact with the step riser. If a gap is still present, repeat the previous adjustment procedure.

NOTE: When stowing, it is important that the carriage is stopped by contact with the adjustment screws. The step riser (contacting the front rollstop) must not be the primary means for stopping carriage movement. Verify this.

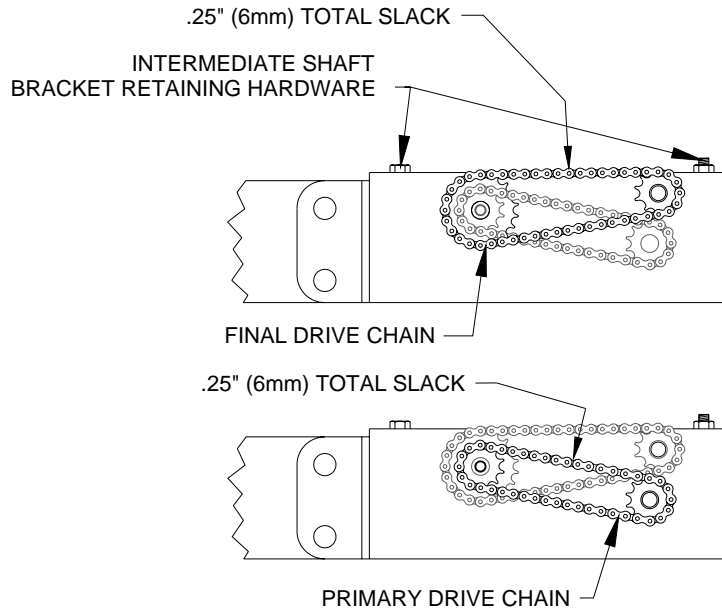
Inspection:

Repeat the initial inspection by pulling on the handrails and observing whether the yellow stow lock light in the vestibule remains on. Perform the following adjustment if the light goes off.

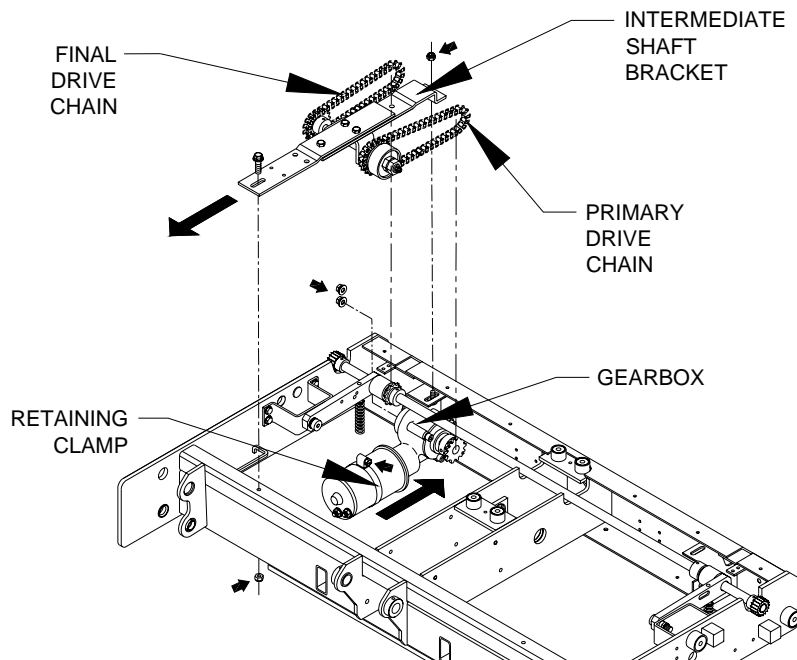
B. Slack Adjustment for Drive Chains:

If there is excessive slack in the carriage drive chains the carriage will be able to move a small distance back-and-forth along the gear racks. This small movement can be enough to allow the stow switch to change state.

1. Refer to **Figure 2**. Check the slack of both drive chains; neither chain should exceed .25" deflection when pushed firmly where shown. Proceed to next step if slack is excessive.

**FIGURE 2**

2. Refer to **Figure 3**. Loosen the two nuts at each end of the intermediate shaft bracket (this bracket consists of two pieces bolted together). Loosen the two nuts securing the gearbox assembly to the bracket on the carriage. Loosen the retaining clamp that secures the body of the gearmotor to the intermediate shaft bracket. Loosening points are shown in figure with small arrows.

**FIGURE 3**

3. Slide the intermediate shaft bracket assembly towards the front of the carriage (as shown by upper large arrow in figure) to remove slack in the final drive chain and then retighten the two nuts at each end of the intermediate shaft bracket. Verify that slack in final drive chain is acceptable.
4. Slide the gearbox assembly towards the rear of the carriage (as shown by lower large arrow in figure) to remove slack in the primary chain and then retighten the two nuts securing the gearbox assembly to the bracket. Retighten the retaining clamp around the gearmotor. Verify that slack in primary drive chain is acceptable.

Inspection:

Repeat the initial inspection by pulling on the handrails and observing whether the yellow stow lock light in the vestibule remains on. Perform the following adjustment if the light goes off.

C. Adjustment of Platform Release Shaft Mountings:

Refer to **Figure 4**. In the normal operation mode the pinion gears at each end of the final driveshaft are held engaged with the two gear racks by compression springs located near each pinion. The pinions are disengaged by rotating either of the cam-shaped platform release shafts counter-clockwise. When a release shaft is rotated it bears against a roller on the final driveshaft and deflects the driveshaft downward.

NOTE: The rotating motion of one release shaft is transferred to the other shaft through the tie bars. If either of the platform release shafts is binding in its support clamps it could prevent the springs from pushing the pinions into engagement with the gear racks.

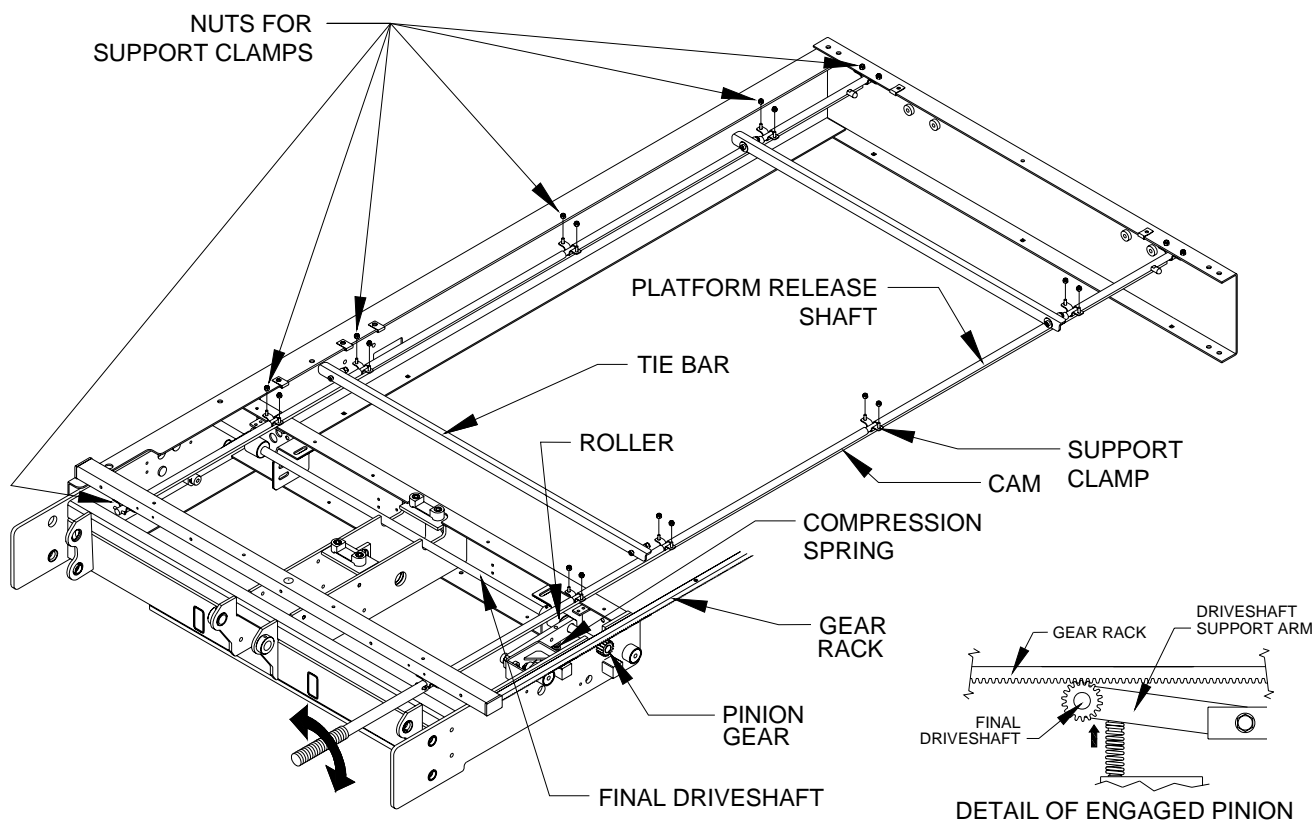


FIGURE 4



1. Rotate each platform release shaft counterclockwise and then clockwise. Note whether the pinions fully engage the gear racks (when shafts are rotated CW) and examine the cam portion of the release shafts to see that they are not bearing against the rollers on the final driveshaft.
2. If the cam portion of either release shaft is applying pressure against its roller on the driveshaft then loosen the six pairs of support clamp nuts on the topside of the enclosure covers; these nuts secure the six clamps that support the platform release shaft.

NOTE: The four center clamps have integral threaded studs and loose nuts. The clamps at the ends use screws and nuts.

3. Slowly retighten the nuts while rotating the release shaft. This will result in the clamps aligning themselves around the release shaft. Verify that the cam portion of the release shaft is not bearing against the roller on the final driveshaft.
4. Repeat for other release shaft, if necessary.

NOTE: If both release shafts show indication of binding in their supports then loosen all twelve pairs of nuts before proceeding with the procedure above.



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