RIBLET
TRAMWAY COMPANY, INC.
P.O. Box 3523 • Spokane, Washington 99220-3523 USA • Phone (509) 483-8555 • Telefax (509) 483-1996

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SERVICE BULLETIN #1993-128

APPLICABILITY: All Riblet and other chairlifts using Riblet hydraulic or friction-drum chair dampers.

SUBJECT: Inspection, adjustment, and replacement of chair damper stator attaching fasteners (roll pins or bolts). Supersedes S.B. #1986-111.

COMPLIANCE: Immediate action required.

Gentlemen:

We are seeing some breakage of the roll pin or bolt holding both types of damper stators to the chair clip. The two types of dampers, friction-drum and hydraulic, impose different loads on the fasteners, and will be dealt with separately here. Failure of this fastener could cause the chair to become detached from the chair clip.

Later Model Friction-Drum Dampers

The #5550 stator is held to the chair clip with a 3/8" dia. spiral roll pin (RTCo. Part #6564). This pin replaced the previous split cylindrical pin. Refer to S.B. 1988-116. While the spiral pins produce a tight connection, they do seem to work-harden and fatigue, sometimes cracking or breaking into small pieces. These pieces are trapped by the damper band, but a failure mode allowing the stator, and thus the chair, to slip off the clip is possible.

Some lifts do not suffer from broken spiral pins at all, while others do. At this time, we have been unable to establish why this difference exists.

Please follow the following interim adjustment and inspection procedure until an improved design is available (expected late spring):

Immediately:

(1). Check the adjustment of the #5577 spring which tensions the damper band. Specified adjustment procedure is to tighten the bolt until the spring is coil-bound (collapsed), then back off 1/2 turn. There must be a small clearance between coils.

(2). Swing each chair fore-and-aft and check for any relative

rotational motion between the stator drum and the chair clip. If motion is seen, remove the band, then remove and inspect the spiral pin. Replace if damaged.

(3). Remove the damper bands and inspect the spiral pins on 10% or 10 each, whichever is more, of the chairs on each lift. If any pins are found to be broken or cracked, inspect all pins on that lift and replace as necessary. Report results to RTCo.

Every two weeks until the end of this season:

Add procedure #2 above to your normal 2-week chair inspection (refer to your operator's manual and/or S.B. 1984-106).

Daily:

Your Riblet operator's manual specifies that each chair be examined for loose bolts or other damage during the daily pre-operational inspection. Emphasize to the personnel conducting this inspection that they should pay special attention to the chair head and damper attachment to the extent that it is visible.

Earlier model hydraulic ("shock absorber") dampers

The standard attachment of the stator collar to the chair clip, for the hydraulic damper, is by means of a cylindrical split roll pin with a machine screw through the center. Bolts are also sometimes used, and have been approved by Riblet. These fasteners are readily visible.

Work-hardening and fatigue are not the problem with the fasteners used on these hydraulic dampers. Rather, unusual operating circumstances, or even strong winds at night, can swing chairs beyond their design operating limits, causing the damper to "bottom" and putting a shearing force on the fastener. This force can be enough to shear the fastener.

We recommend the following periodic inspection program for the hydraulic damper stator fasteners:

Every two weeks:

Be sure to examine the roll pin or bolt through the damper stator during the 2-week inspection as specified in your Riblet operator's manual and/or S.B. 1984-106.

Daily:

Your Riblet operator's manual specifies that each chair be examined for loose bolts or other damage during the daily pre-operational inspection. Emphasize to the personnel conducting this inspection that they should pay special attention to the chair head and damper attachment.

As Required:

(1). Any time that an unusual loading or unloading incident occurs, which may swing a chair back or forward enough to exceed the limits of the hydraulic damper, the damper, the stator, and the fastener (roll pin or bolt) must be inspected for damage.

(2). Following any very strong wind or night-time storm, during which chairs may have been blown severely forward and back, the daily pre-operation inspection should include a thorough inspection of each damper, stator, and fastener.

Thank You,

Riblet Tramway Company

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