

Date: 2015-10-22
REVISED

Subject: E-Series 5000 Escalator -
Welds on Lower Track Sub-Assembly

E-Series 5000 Escalator - Welds on Lower Track Sub-Assembly

Product Affected

The lower track sub-assembly for E-Series 5000 Escalators.

Issue

There have been instances of broken welds on the lower track sub-assemblies in the areas shown between the arrows of Figure 1 & 2.

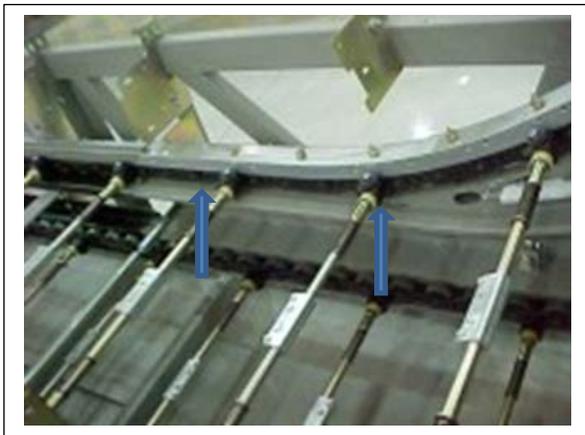


Figure 1. Identification of weld areas

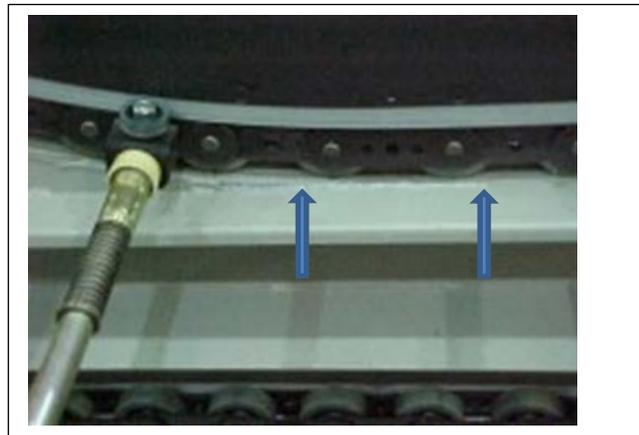


Figure 2 Identification of weld areas

The welds in the areas shown will be either on the top or on the bottom surface of the track and should meet the following criteria as a **minimum**:

- Welds should be 1/8 inch in width. Wider is acceptable as long as the step chain wheels do not roll against the weld.
- Welds should be 1/2 inch to 3/4 inches in length. Welds must **NOT** be shorter than 1/2 inch in length.
- Spacing from the center of one weld to the center of the next weld is to be no more than 8 inches. Closer spacing is good (although a continuous weld bead could cause distortion of the track sub-assembly).

Cause & Effect

NOTE: All applicable safety procedures must be followed when performing any work.

- If the existing welds are not between $\frac{1}{2}$ inch and $\frac{3}{4}$ inch in length and are spaced more than 8 inches center of weld to center of the next weld, a repair will be required within 30 days to strengthen the welds. Refer to the Repair Instructions below.
- If the inspection reveals broken welds and the trail wheel track has separated from the chain wheel track in this area, an immediate repair is required. Refer to the Repair Instructions below.
- If the inspection reveals that **all welds in the lower track sub-assembly are intact and meet the criteria above, no repairs are necessary.** The equipment can be returned to service.

Repair Instructions

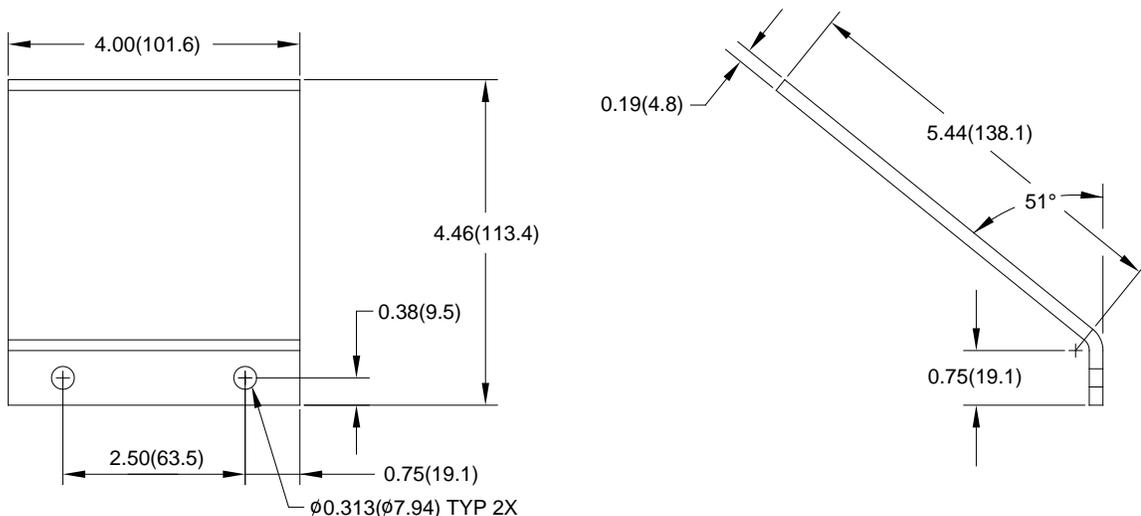
The prescribed method to strengthen/repair the track sub-assembly is to move the displaced track back into position and secure it in this position by adding a series of welds that are $\frac{3}{16}$ in. [4.76mm] wide and $\frac{3}{4}$ in. [19.05mm] long, with a center-to-center spacing of not greater than 4.00in.[101.6mm]. The repair welds can be added to the top surface of the track.

Protect the step chain from weld spatter & heat.

If the placement of the welds results in interference between the weld material and the step chain wheels, grind the welds flush with the track surface.

Add the stiffening gusset shown in Figure 3 in the location shown in Figure 4. The gusset will provide additional support to the track assembly and reduce the stresses experienced by the repair welds.

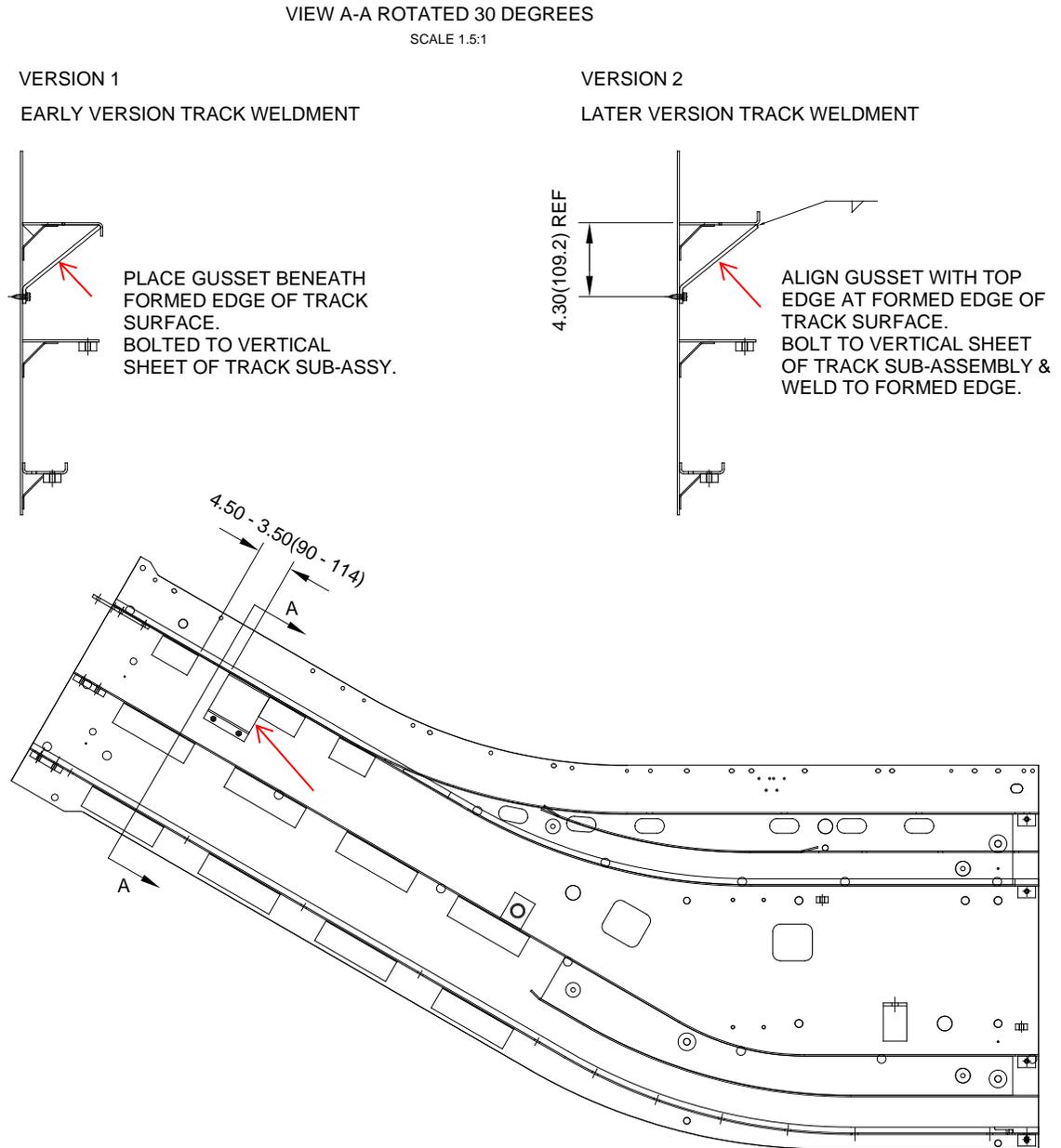
Figure 3 Additional Gusset to be added



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Repair Instructions (Continued)

Figure 4 Mounting of the support gusset in lower track sub-assembly



Repair Instructions (Continued)

There are two possible lower end track sub-assembly configurations for the E Series 5000 escalator. Dependent upon the vintage of the equipment, the repair required is different.

Version 1 With the vertical surface of the track in question orientated downwards. (Reference Figure 4 page 3)

(If the components being repaired are as described, the following procedure applies.)

- A. Align the gusset in approximate location as defined in Figure 4 above. Place the edge of the gusset (opposite the through holes) behind the track vertical leg.
- B. Hold the formed edge (containing the mounting holes) flat against the track subassembly side sheet and tight in the inner corner of the track profile
- C. Mark positions of holes provided in gusset on the track sub-assembly side sheet.
- D. Remove gusset.
- E. Using a letter "F" drill bit [Decimal = 17/64 inch], drill holes through track sub side sheet in the locations previously defined.
- F. Attach the gusset as shown using two (2) 5/16-18 (inch) self-tapping screws.

Version 2 With this configuration, the vertical surface of the track in question is orientated upwards. (Reference Figure 4 page 3)

(If the components being repaired are as described the following procedure applies.)

- A. Align the gusset in approximate location as defined in figure 4 above. Holding the formed edge flat against track sub-assembly side sheet, position the opposite edge on the formed edge of track. Mark positions of holes provided in gusset on the track sub-assembly side sheet.
- B. Remove gusset.
- C. Using a letter "F" drill bit [Decimal = 17/64 inch], drill holes through track sub side sheet in the locations previously defined.
- D. Attach the gusset as shown using two (2) 5/16-18 (inch) self-tapping screws.
- E. Weld the opposite (top) edge of the support gusset to the track profile. Add three welds 1/8 in. [3.3 mm] wide and 3/8 in.[9.7mm] long, with a center-to-center spacing of approximately 1.00 in. [25.4mm].
- F. Repeat steps A-E for the opposite Lower End Track Sub-assembly

Avoid overheating the track profiles as this can result in distortion of the profile.



Materials Required for Repair:

- 1 KM51179845R01 Kit, Gusset Track Support
- 2 Letter "F" Tap Drill (Decimal 17/64 inch)

If a repair is required, please contact Meagan Bailey, Maintenance Operations Associate, at 309-743-5020 to obtain material.