4.3 Step Chain Maintenance, Adjustment, Removal and Replacement

The following instructions will guide the worker through maintenance, adjustment, removal and replacement of the step chain assembly.

4.3.1 Maintenance and Adjustment Procedures

The following steps for the maintenance and adjustment of the step chain.

- 1. Remove the landing plates from the lower truss area. (See paragraph 4.1.2.3.)
- 2. Attach the maintenance pendant to the lower service box.
- 3. Look for dirt, corrosion, and damage on the outside surface of the roller, contact marks, etc. Also check the inside and edge surface of the link plate and edge surface of the pin.
- 4. Check the bending of the chain and rotation of the rollers.
- 5. Insure proper lubrication is being applied to the chain and adjust if needed. See paragraph 4.11.)
- 6. While the chain is driving, check the following:
 - If the lubricating oil moves toward the link plates.
 - If the chain or rotating disc is immersed in the lubricating oil when the lubrication pump is running.
- 7. Check for any damage or a red or reddish brown color (which indicates lubrication is improper or insufficient).
- 8. Check the step chain wheels for damage or debris build up. Clean if needed.
- 9. Once finished, remove maintenance pendant and replace landing plates.

4.3.2 Step Chain Removal and Replacement

The following instructions will guide the worker through the removal and replacement of the step chain. See Figure 4-7 for illustration.

CAUTION!



The Step Chain is VERY HEAVY.

The maximum number of units that can be removed at one time is six (6).

This task should only be performed by a CERTIFIED TECHNICIAN

- 1. Remove all the steps. (See paragraph 4.2.2.1.)
- 2. Remove the chain guards at the lower end by removing four M12 bolts.
 - Two are located towards the top of the cord angle, and the other two are located on the support angle about mid-way on the chain guard.
- 3. Position the master link as shown in Figure 4-7.
- 4. Loosen the tension carriage springs and disconnect the step chain.
- 5. Using the maintenance pendent that has been connected to the service box, run the escalator in the down direction until the maximum number of axles comes past the tension carriage.
- 6. Remove that section of chain and continue to the next.
 - The chain is extremely heavy and no attempt should be made to remove all of it at once. (See Figure 4-7, 4-8, for chain numbering sequence.)
- 7. A block and tackle or come-a-long winch will be required to remove the rest of the step chain before it clears the drive sprocket.
- 8. To reinstall the step chain, follow the directions in reverse.

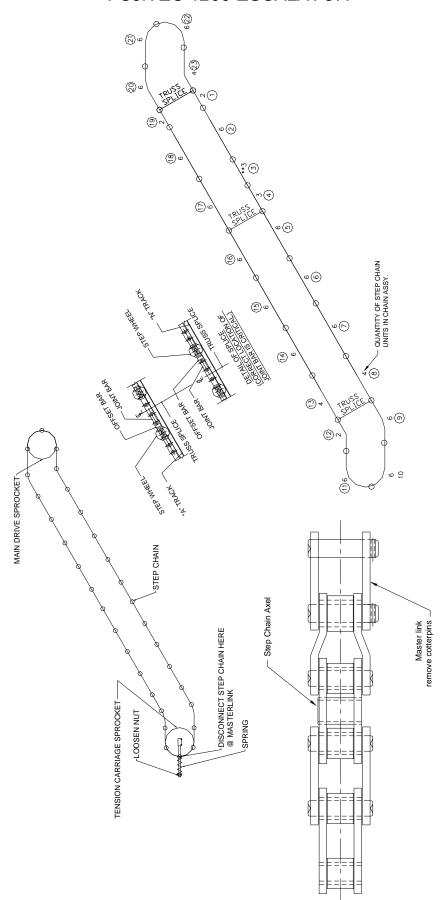


Figure 4-7 Step Chain removal and replacement for San Bruno Station

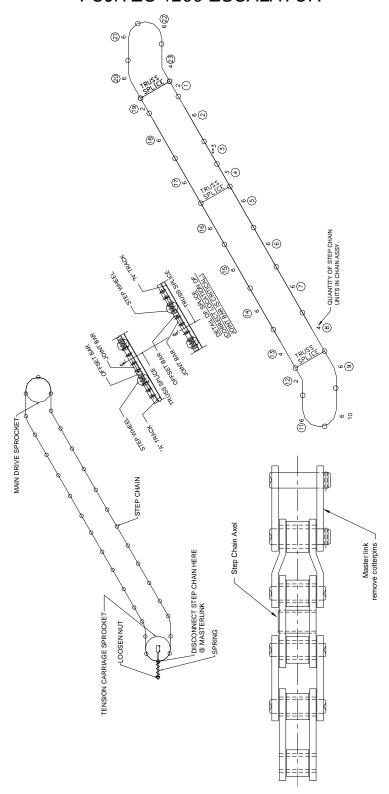


Figure 4-8 Step Chain removal and replacement for Millbrae