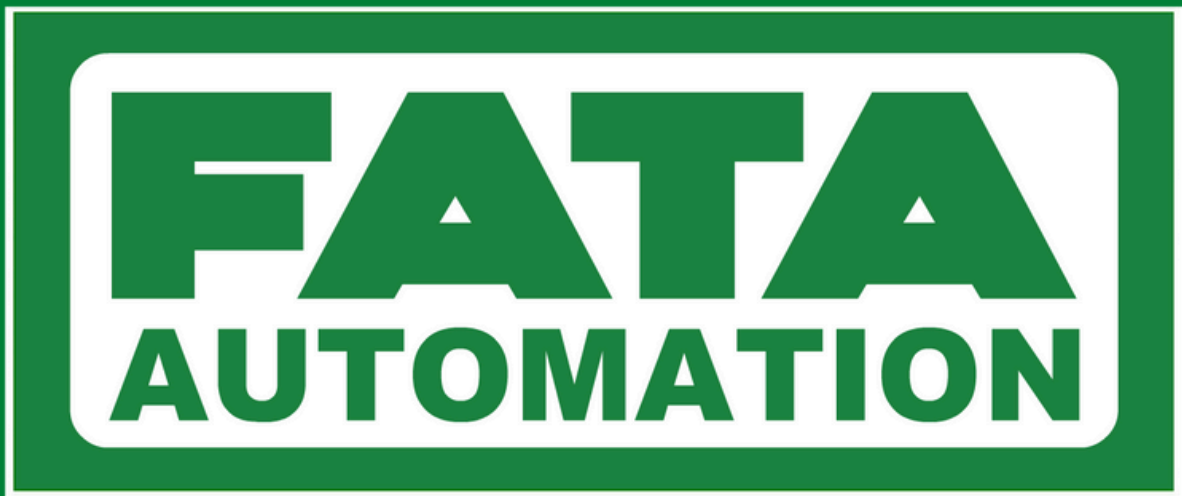




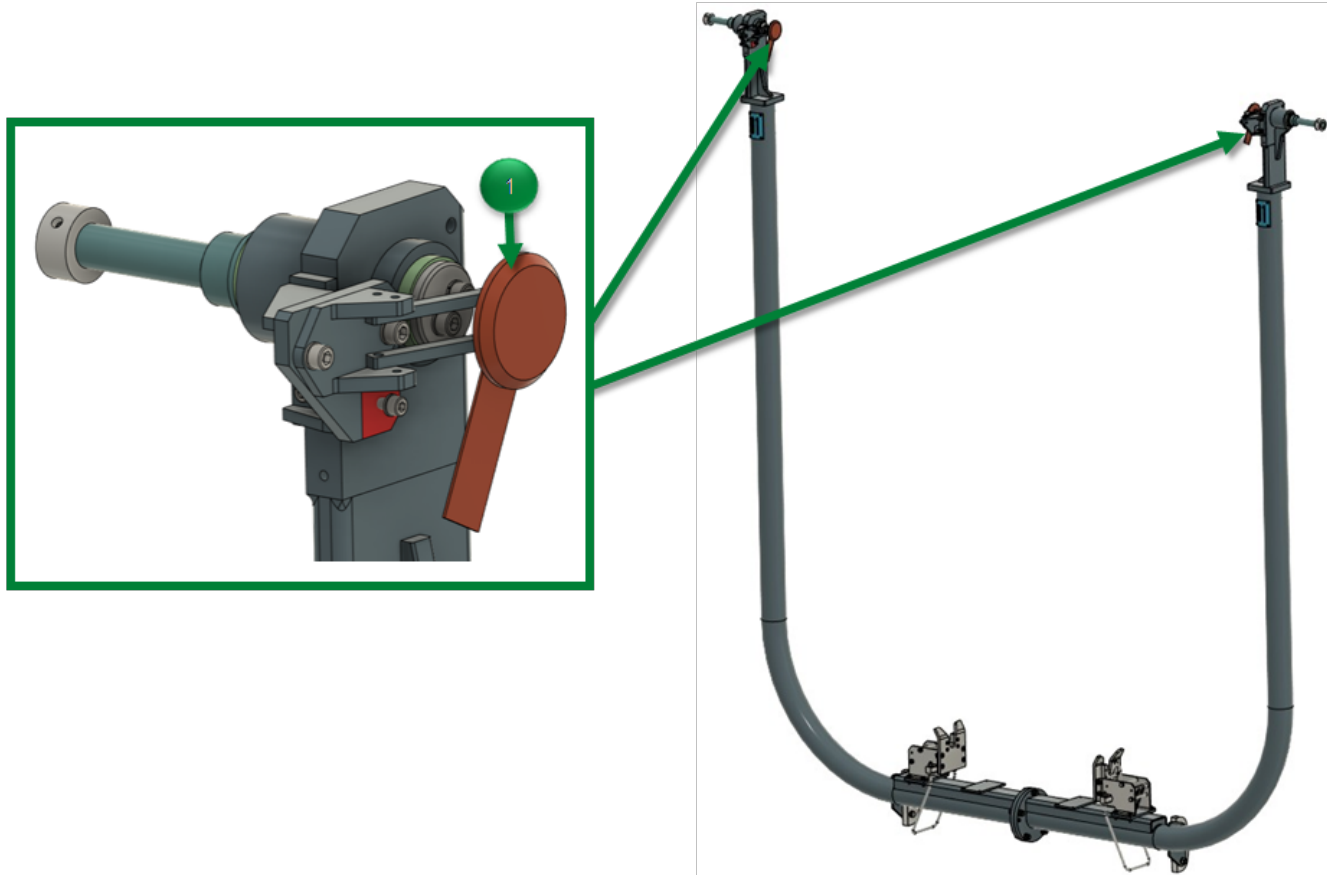
Pendulum System

Rougier Collector Shoes Service Bulletin & Preventive Maintenance Instructions

GM Factory Zero | SB25003



Rougier Collector Shoes Preventive Maintenance



Current collectors (or shoes) on Pendulum System are designed to maintain continuous electrical contact with a conductor rail or busbar, supplying power to the conveyor's driving mechanisms and control systems. They are located at the top of the penduls used in the electrocoating (E-coat/ELPO) system.

The pendulum movement introduces unique mechanical stresses, including vibration, oscillation, and intermittent contact, all of which can accelerate wear.

Neglecting current collector maintenance can result in:

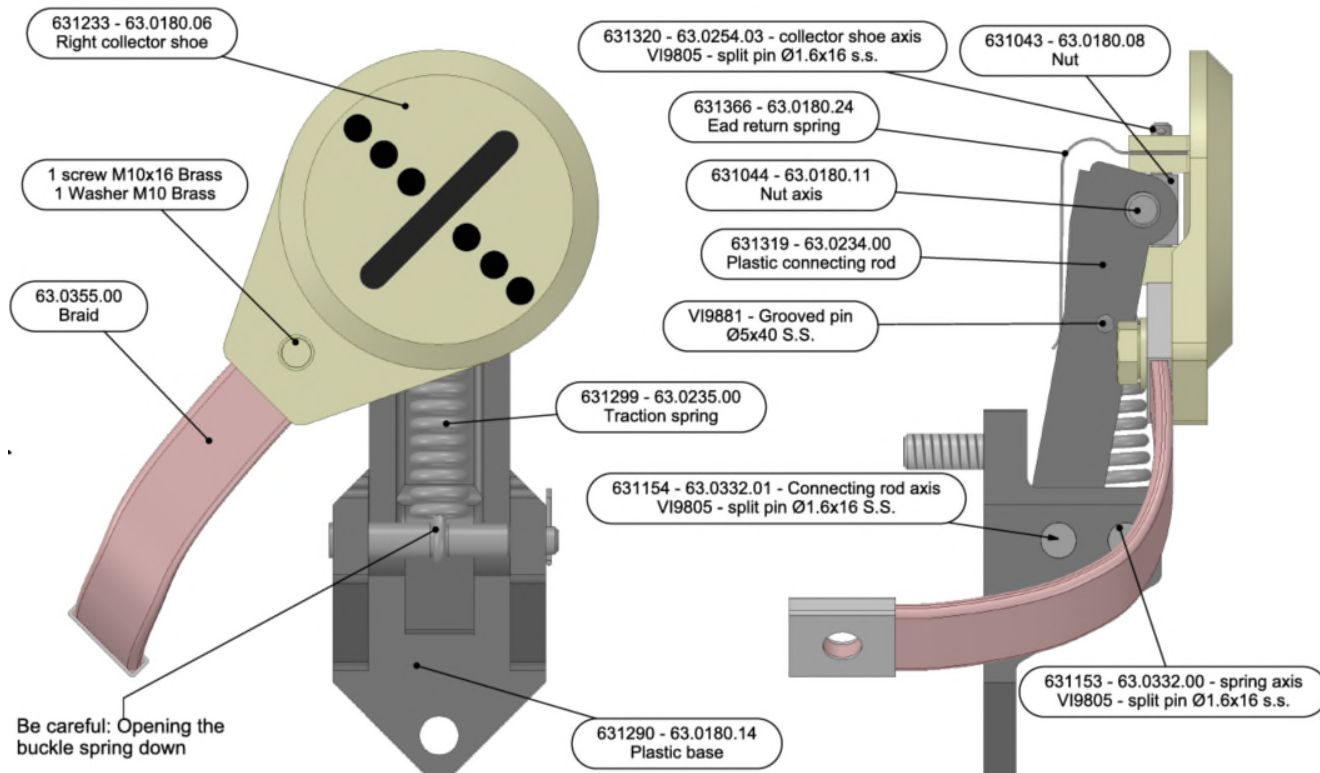
- Increased electrical resistance, leading to overheating and inefficiency
- Pitting and arcing damage to both the collector and the conductor rail
- Unexpected conveyor stoppage
- Premature failure of electrical components
- Safety hazards, including fire risk and electric shock

The following table identifies additional recommendations supplied by Rougier, the manufacturer of the collector sets, to address these potential risks proactively, extending the service life of both the current collector and the conveyor system.

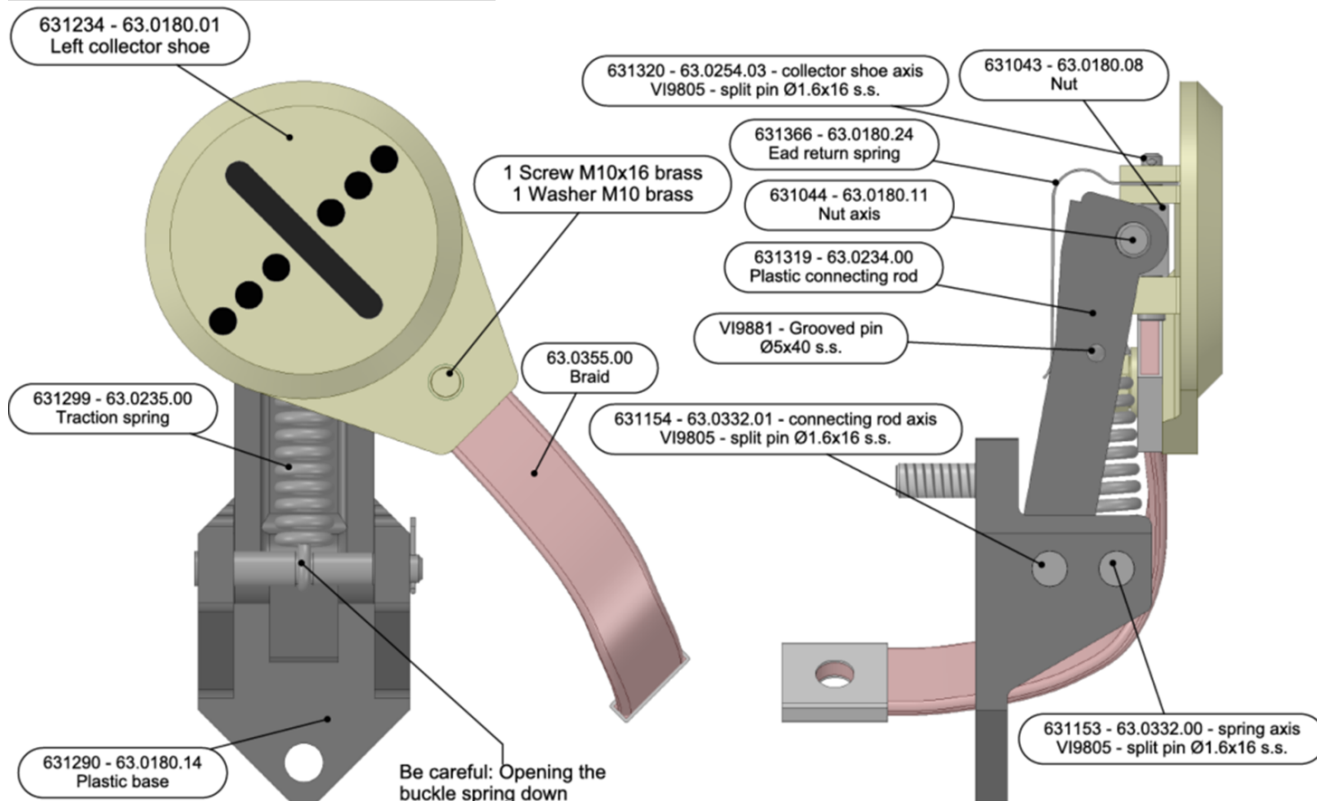
Please note: The information and maintenance periods suggested are indicative only. It is necessary to adapt them to suit each specific installation according to its own constraints.

Item No.	Item Name	Required Operation	Description	Interval
1	Current Collector (or Shoe)	Inspection	- Check the condition of current collector shunts. Change all the shunts which have cuts in the copper wire or which has lost its pliability. This often occurs at the exit of bath, where there are paint projections. (Always remember to rub down the contact faces). - All the rubbing surfaces (rails and current collectors) are maintenance free, the film on the contact faces is a good conductor for the transit of current. Only accidental paint projections or electric flashes, occurring during operation, shall be eliminated by scraping. - Check the condition of current collectors' contact faces, and their thickness (not to be less than 6mm). - Check the presence of graphite in the collector shoes, it must be at the same level as the contact face. It is eliminated as shoes wear away. - Regularly verify the spring pressure and the mobility of the shoes.	Monthly
		Replacement	- Replace below as necessary: - Shunts of the collector sets - Current collector shoes - Springs	As Necessary
		Inspection and Cleaning	- Recharge the current collector shoes with graphite paste if necessary. - Rub down the current collector shoes. - Clean and rub down the rails. - If sanding to remove oxidization/corrosion is necessary, then the rail must be re-greased. - Rougier recommends Thermo-Lube with a maximal 100-150 gr per application.	2 Years

How to Assess Condition of Rougier Collector Shoes



Right Collector Shoe Detail



Left Collector Shoe Detail

Inspection Items:

1

Examine the current collector for visible signs of wear, damage, contamination, or misalignment. Inspection intervals may vary based on operational intensity, but a monthly check is a common standard.



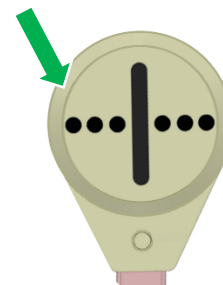
2

The contact surface should have a shiny and uniform appearance without signs of electrical impacts, which would indicate a malfunction of the installation.



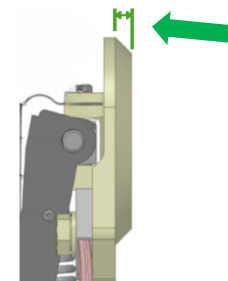
3

The graphite pad of the grooves should be present at the level of the contact surface, as its disappearance likely indicates that the collectors are overheating, which would be a sign of distress in the installation.



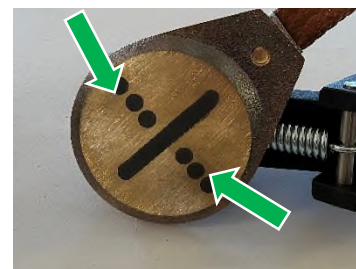
4

The collectors should maintain sufficient thickness (6mm), on one hand to avoid losing too much pressure effort, and to retain enough material to maintain their self-regeneration capacity in case of an electrical incident.



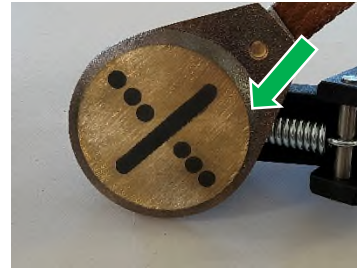
5

It may happen that the collectors do not wear evenly flat, but more on one side than the other. This is not a problem as long as, on average, they maintain the 6mm of wear (for example, 5mm on one side and 7mm on the other).



6

A simple way to visually assess wear is to refer to the large chamfer present on the collectors; generally, when wear causes the chamfer to disappear, it indicates that we are approaching maximum wear.


7

When changing the collectors, it is essential to ensure that the rail remains in good clean condition, as it can become coated with insulating paint, which will also cause issues for the collectors.

Generally, when the rail turns a greenish-gray color, it indicates that an insulating layer is forming, and it is advisable to lightly sand it to restore its full capacity for conducting electrical current.

Please Note: If sanding to remove oxidization/corrosion is necessary, then the rail must be re-greased. Rougier recommends Therma-Lube with a maximal 100-150 gr per application.



⚠ WARNING ⚠

- In any case, signs of overheating should trigger an alert in an installation of this type.
- If you see shunts turning black, electrical flashes on the rail or on the collectors, drops of molten metal, or generally any signs of a "hot spot," it indicates that the installation is drifting, and action must be taken quickly to correct the issue.

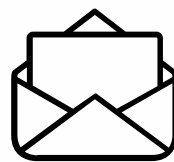
FATA

AUTOMATION

***Do You Have Service Questions
or Need Spare Parts?***



(248) 724-7660



**service@fatainc.com
spareparts@fatainc.com**

**2333 E Walton Blvd. Auburn Hills, MI 48326
www.fataautomation.com**