



- Lock out/ tag out procedures must be performed before any maintenance or repair to equipment begins.
- Lock out/tag out consists of physically locking out any electric component that is need of servicing (hydraulic power packs as an example as well as the component they are powering), removing the key, and taking the key with you so that no one can energize the component without your knowledge.
- In some instances, such as during equipment installation, you may have several locks locking out the same device as multiple trades may be working on the same item.
- In this case, no one would be able to start the equipment until all locks have been removed.

Lock out/ tag out is not a choice, it is mandatory before any repair begins and saves lives!!



Conveyor and Pre-wash Equipment Overview

1. Pre-Wash Equipment a. Prep Gun Stations



1) Description

a) Used to apply a variety of solutions (neutrals), or to remove debris, ice or snow prior to the vehicle being placed on the conveyor.

b) **Manually activated** by attendants to apply high-pressure water to vehicles.

2) Adjustments

a) Water pressure can be adjusted using the unloader/regulator valve attached to the pump housing.

b) Pressure is normally set to between 900PSI and 1,000 with both guns activated. **Once set, if the pressure starts to fall off, the first thing to do is replace the gun tips.** If that fails to correct the problem, the pump may need to be rebuilt.

c) To adjust the water pressure

(1) Loosen the jam nut on the unloader/regulator valve.

(2) Turn the adjustment nut to compress the spring to increase the water pressure.

(3) Turn the adjustment nut to expand the spring to decrease the water pressure.

(4) Tighten the jam nut against the adjustment nut.

3) Preventive Maintenance Requirements



Conveyor and Pre-wash Equipment Overview

a) **DAILY**

(1) Opening Checks

- (a) Check for leaks around hoses and fittings, repair any high pressure water leaks immediately.
- (b) Check for sufficient chemical supply for the day's use.

(2) Operational Checks

- (a) Perform general examination of operation, listening for any unusual noises.

b) **WEEKLY**

- (1) Check pump oil level, refill with 10W30 Weight Mobil 1 Synthetic.
- (2) Inspect wand spray nozzles for excessive wear.

c) **MONTHLY**

- (1) Check the drive belts for wear and abrasions, always replace as a set.
- (2) Clean sediment and dirt from the liquid storage tank.
- (3) Inspect all hardware and fittings for tightness.
- (4) Clean the entire assembly thoroughly.

d) **SEMI-ANNUALLY (Or every 500 operating hours)**

- (1) Drain and refill the pump with new 10W30 Weight Mobil 1 Synthetic.

e) **ANNUALLY**

- (1) Have a licensed electrician measure and record, full load current readings from each of the three legs of each of the three phase electric motors.
 - (a) If the differential of current load exceeds 10% between the legs, or the balanced load current of all three legs has increased over 10% since the most recent measurements, order a replacement motor.
 - (b) Record readings in the annual log.



Conveyor and Pre-wash Equipment Overview

b. Photo Electric Eye



- 1) Description
 - a) Commonly used to **measure vehicle length**.
 - b) Consists of a **transmitter, receiver, and amplifier**.
 - c) Is used to turn on equipment individually or send a signal to the tunnel controller so it can calculate the length of the vehicle and track it throughout the wash cycle.
 - d) Is positioned so the beam is broken by the front of the vehicle and remains broken until the end of the vehicle passes. This creates a signal for tunnel controller to calculate the length of the vehicle using pulses created by the travel of the conveyor.
- 2) Adjustments
 - (1) The signal strength can be adjusted by adjusting the angle of the transmitter beam and the angle of the receiver.
 - (2) The signal strength needs to be at least 5, and ideally between 7 and 9.
 - (3) To adjust, loosen the mounting nuts on the transmitter and receiver and adjust so that they are aimed at each other. Snug the nuts up and check the signal strength again. Make small changes until satisfied.
 - (4) Tighten nuts and recheck signal strength. Strength will vary with ambient light conditions.
 - (5) If sunlight is a problem, a directing cone may need to be added to the transmitter and receiver.



Conveyor and Pre-wash Equipment Overview

3) Preventive Maintenance Requirements

a) **DAILY**

(1) Operational Checks

- (a) Perform a general examination of operation. Check the transmitter and receiver of the photo eye and wipe clean.
- (b) Check the operation by breaking the beam and checking the indicator lights.

b) **WEEKLY**

Check the signal strength of the system. It should be at least five (5). The signal strength will vary with light conditions and below five will cause problems measuring vehicles.