

Operating recommendation to improve seal life expectancy

Maintaining a clean interface between the inflatable seal and the flange is essential for ensuring that you achieve the full potential in terms of seal life, the following are simple but important steps in this process:

1. **Cleaning the flange / seal interface at the loading point**, if your tankers are fitted with the air knife function and it is operating correctly this should remove a significant portion of the dry product deposited on the flange during the loading process – it is important to check that these are working properly.
2. **The Purge procedure** should be carried out at least once a day particularly if there has been a material spill around the hatch to ensure any build up and or powder is blown away from the man lip.
3. The drivers should also follow the **Purge procedure** if they detect that the tanker hatch is not properly sealed (they will hear air leaking out between the seal & flange maybe some dust being expelled) when they pressurise the tanker.



PURGE PROCEDURE:

Purge Tank

- When the **pressure in the vessel reaches about 0.7 to 1 Bar, turn off the valve and stop pressurising the vessel**
- **Deflate seal by pulling the knob out on the control box**, this will cause the seal to start deflating wait a few seconds or until you hear the air in the tank expel quickly between the flange and the Seal – this will expel powder build up which may be causing the leak.
- As **soon as they hear the air expel push the knob on the control box in**, this will re inflate the seal and seal the tanker.
- Then **inflate seal by pushing the knob back in**.
- If this does not work they should **repeat the procedure until it seals**.

This process can be carried out multiple times for larger spills to clean material off the man hole lip..

4. **Operating at the correct seal pressure is imperative**, for a 2 Bar operating pressure the seal pressure should be 50 PSI (3.44bar), increasing this pressure will only serve to significantly shorten the life of the seals – we recommend that you have the pressure checked that seals are being inflated to and if this is not correct it can be adjusted on or in the control boxes, however once set it is important that it is not changed.
5. **The auto hatch should be maintained and cleaned** as per the maintenance recommendations in the installation and operating guide – in particular ensure build-up of hydrated product is cleared around the flange area.

Preventative maintenance recommendations if you are experiencing abnormal seal usage

1. **Clean and Inspect** hatches in the fleet.
2. Ensure the **seals are correctly seated** into the groove - there should be no overhang.
3. **Check flange:**
 - Remove any product build up; this can be done with a scraper or needle gun.
 - To see if any grooves have formed (Worn out by cement born by the compressed air in the vessel) across the seal interface when the seal was leaking; these will need to be repaired using an aluminium filler or epoxy to fill the groove and then sanding the surplus back to level.

If these are not repaired as soon as the tanker is pressurised with the new seal, the compressed air with the cement powder will act as a grinding aid simply leak out and cut into the new seal.

If not already the case this should form part of the service procedure for the trucks

