

*'Providing Tribological Solutions'*

## VSG 'THE GREEN GREASE' KEEPING GREASING SYSTEMS TROUBLE FREE

**Background:** Automatic greasing systems can be very helpful to ensure that enough grease is getting to wicket gate bearings and when required. This is necessary to prevent wear of the bearings, corrosion of the journals and to seal out dirt and water.

However, if the system has been running trouble free for years, sometimes the knowledge required to keep it going is no longer readily available. For the personnel this could be through promotions, retirements, or changing job functions. Fortunately, there are only a few things but they do have to be done correctly. For example, do not forget to change the metal screen in the line, clean the valves properly every few years plus keep track of how they are doing. Most systems have counters to help ensure that the systems are working but someone has to record and track them. Monitoring grease consumption through stores withdrawals can also help.

### Ten Steps

1. Use a suitable grease with good pumpability, good resistance to oil separation and with no solids that can separate out. It should be an extreme pressure rated grease.
2. Replace dinged, crimped or damaged lines.
3. Do not use too high an air pressure for the grease pump. More is not better. If a 50:1 pump use as a max the rupture disk rating (or any other rating if lower) divided by 60 or as recommended by the pump supplier. Air pressure should typically be about 50 psi.
4. Clean the grease pump air filter, water trap and regulator as required. Verify.
5. Change or inspect the grease screens annually. If cleaning only do this a maximum number of times, possibly five. For example, discard every year divisible by 5.
6. If changing grease types or brands, determine the grease compatibility including tests on the key characteristics for the mixtures.
7. Clean the distributor valves at least every ten years. It might have to more often with a soap based grease. Return each piston to the same segment in the same orientation.
8. Keep track of grease consumption to identify problems and do not let a pump operate dry. Too little is not good for the bearings or the equipment.
9. Track counts for all systems to ensure that grease is getting to the application points. Where possible check that some grease can be seen coming out and that it is clean. It should be a bit darker but should not be have metal pieces, have rust or be blackened.
10. Correct the root cause of any rupture disks replacements. Do not just put in a higher rated disk because this can lead to more oil separation or other problems.

It can also be helpful to talk to your grease and/or equipment supplier because new offerings might be available. For the greasing systems this could include better grease line performance indicators and alarms.