



For your facility to produce quality ice it's important to have all your equipment in optimum running condition. Whether it's preventative maintenance, daily visuals, or overhauls, these all play a crucial part to the longevity of use and the avoidance of future problems. In this vein, Mycom Canada has put together a review for arena operators for daily checks and maintenance, with questions to ask your contractor in regards to the service of your Mycom Reciprocating Compressor.

Arena Operator Guidelines

Mycom Canada Service Dept.

Daily Compressor Oil Checks:

- 1) Check all oil levels. Insure the oil level is maintained no higher than $\frac{3}{4}$ of yellow circle and no lower than $\frac{1}{4}$ of yellow circle. Record amount of oil added.
- 2) Check oil for excessive foaming. This could be an indicator of liquid carry over to the compressor.
- 3) Check oil pressure. While operating, pressure should be 20 to 43 PSI over suction pressure.
- 4) Turn the Cuno filter clockwise two turns each day.
- 5) Check oil drip can from compressor seal. Check that the drip can is clean and free of water to ensure proper monitoring of possible leakage. Anything over 3 drips per minute should be brought to the attention of your refrigeration contractor for seal inspection. If ammonia can be sensed in the area of the compressor seal, immediately inform your contractor.
- 6) Physically feel crankcase. It should be warm to touch. If it feels cold, this could indicate liquid carry over while the compressor is running or possible liquid accumulation on compressor on off cycle. If compressor feels cool on the off cycle this could indicate constant water / glycol flow through compressor due to a failed cooling jacket solenoid. Call contractor.
- 7) If compressor is supplied with a crankcase heater, keep it is set to no higher than 110 F. Min oil temp is 85 F ~ Max oil temp is 120 F. If temperature exceeds 120 F, check water / glycol flow thru compressor. Call contractor if no flow is seen.
- 8) Ensure oil container used to top up compressors is properly sealed and free from contamination. Never introduce fluid into a compressor until its proven that it is oil and that it is free of contamination. Once this is done, connect charging hose and purge the hose of air.

Visual Compressor Checks:

- 1) Check belts for excessive "flopping". May require tightening.
- 2) Record all pressures daily. This will give your refrigeration contractor a means to troubleshoot your system if a failure occurs.
- 3) Be aware of unordinary noises inside the compressor room.
- 4) Check frost pattern on compressor. A proper pattern will have the frost stopping at the compressor suction flange. Frost should not creep onto the compressor body. If it does,

it could indicate a liquid carry over. Contact contractor.

- 5) Check refrigerant level within your chiller. You should be able to see the level within your bulls eyes. Call contractor if levels are abnormally high or low.
- 6) Ensure to regularly drain chiller of oil (ammonia use only). If not done regularly system efficiencies will be reduced. Use proper safety procedures and equipment when doing this procedure
- 7) Know your system pressures. Suction, discharge and oil pressures. If abnormal pressures are witnessed, call contractor to diagnose.
- 8) Do a weekly check of outdoor condenser to insure proper operation.
- 9) Maintain a proper cleaned compressor room.

Signs and symptoms of a damaged compressor

- 1) Check oil color. Oil should be a clear amber color. If oil looks grey or black then a contractor should be called in for inspection.
- 2) Unusual vibrations and noises, as mentioned earlier, is an indicator of something potentially wrong with the compressor or any mechanical device within the compressor room.

Questions to ask mechanic:

- 1) What was the color of the oil? If it was excessively black, this could mean over heating of the oil, a fouled oil cooler could be the cause. An inspection would be advised.
- 2) Were filings found in the crankcase? Mechanic would need to do a thorough inspection to insure which part(s) failed.
- 3) How are the conditions of the belts? If cracking is seen, replace. If loose, tighten.
- 4) Did you clean the Cuno filter? When an oil change is preformed the Cuno and internal oil strainer in the crankcase must be removed and cleaned.
- 5) Did you use OEM parts? All warranties are void by Mycom Canada Ltd. if after market parts are used.
- 6) Is the oil approved / recommended by Mycom Canada Ltd.
- 7) Are we eligible for the Mycom Xchange Program? If your compressor is 10 yrs old or greater you may be eligible.
- 8) Did you check all safety devises to insure proper operation? Contractor must check all mechanical controls to insure compressor shuts down when it needs to.
- 9) Are the relief valves still valid? All system relief valves require replacement every 5 yrs.
- 10) Have the discharge check valves been tested?
- 11) Has the oil return float been cleaned and tested?

Screw compressor applications:

- 1) All of the above mentioned, still applies to screw compressor applications.
- 2) Oil level should be maintained no higher than 1/2 of second sight glass and no lower than 1/4 of lower sight glass.

Questions to ask mechanic for screw inspection:

- 1) Did you check sensor calibrations?
- 2) Did you check alignment?
- 3) Did you check safeties?
- 4) Did you calibrate temp sensors?
- 5) Did you clean all strainers and replace all filters on package?