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SERVICE BULLETIN : HCI Compressor Storage Guidelines

Medium Screw Compressor (MSC)

Steps for extended storage:

(Extended (Prolonged) Storage is defined as: Non-operation of the compressor either on a non-operating system or sitting in storage as a stand-by for a period of Three months or longer.)

- During storage the compressor must be maintained under a positive pressure.
- A pressure gauge (HCI part # GAG2) installed at the C1 connection to verify internal pressure and a monthly inspection log are required. The log must be verifiable for warranty purposes.
- The compressor should be triple evacuated and a nominal charge of nitrogen to 35 psig (242 kPa) is recommended. Charge must be added to maintain a minimum of at least 25 psig (172 kPa).
- Dry air is not allowed in the compressor under any circumstances.
- The compressor must be stored in a dry location where the temperature does not drop below 32°F or get above 120°F.
- Items should not lean against or be stacked upon the compressor.

For prolonged storage, place a plastic cover over the entire compressor to protect the electrical terminal box from dust and other atmospheric contaminants. Also, the torque values should be checked every 6 months (see table below).

MSC Torque Values

DESCRIPTION	NOMINAL BOLT SIZE	TORQUE (LB-FT)	MODELS
Sight glass to sight glass boss	1/4-20 Hex	8	ALL
Vapor injection transfer tube	3/8-16 Hex	30	ALL
Four post feed through	#10-32 Soc	5	ALL
Suction shipping cover	5/8-11 Hex	80	1111/1113/1117/1210/1212
Suction shipping cover	3/4-10 Hex	100	1215/1218
Discharge shipping cover	5/8-11 Hex	80	ALL
Terminal box to terminal plate	3/8-16 Hex	15	1111/1113/1117
Terminal plate to lower enclosure	3/8-16 Hex	30	1111/1113/1117

Steps to put compressor into service from **Extended (Prolonged) Storage** or after being delivered less oil from factory:

- Bleed off nitrogen.
- Charge with the proper oil to middle of sightglass and then add approximately 10 extra gallons for (1210/1212/1215/1218 Models) or 6 extra gallons for (1111/1113/1117 Models).
- Drain oil down to center of sightglass.
- Remove suction cover plate. Manually open the suction check valve flapper and drain oil that may be trapped in rotors. (A bucket may be necessary to catch this oil. Do not reuse this oil.)
- Proceed with normal start-up procedure as detailed in the MSC installation, operation and maintenance manual.

Large Screw Compressor (LSC)**Steps for extended storage**

- During storage an LSC must be maintained under a positive pressure. The compressor must be sealed and all ports plugged.
- A gauge and monthly inspection log are required and must be verifiable for warranty purposes.
- A pressure gauge (HCI part #GAG2) installed at the C14 connection to verify internal pressure and a monthly inspection log are required. The log must be verifiable for warranty purposes.
- The compressor should be triple evacuated and a nominal charge of nitrogen to 25 psig (172 kPa) is recommended. Charge must be added to maintain a minimum pressure of at least 5 psig (34.5 kPa).
- Dry air is not allowed in the compressor under any circumstances.
- During any prolonged storage the shaft of the compressor must be rotated a few turns once every 3 months while spraying the shaft and seal area with mineral oil. Also oil should be sprayed into the oil drain while the shaft is rotated. This shaft rotation ensures that the internal moving parts of the compressor will not settle into one position and possibly become inoperable.

For prolonged storage, place a plastic cover over the entire compressor to protect the compressor from dust and other atmospheric contaminants. Also, the torque on the shipping flanges should be checked (see table below).

LSC Torque values as assembled in factory

MODEL	163MM		204MM		255MM		321MM	
<u>Description</u>	<u>Fastener size</u>	<u>Torque (LB-FT)</u>	<u>Fastener size</u>	<u>Torque (LB-FT)</u>	<u>Fastener size</u>	<u>Torque (LB-FT)</u>	<u>Fastener size</u>	<u>Torque (LB-FT)</u>
Inlet flange cover screws	5/8-11 Hex	30	3/4-10 Hex	35	3/4-10 Hex	35	7/8-9 Hex	40
Outlet flange cover screws	3/4-10 Hex	35	3/4-10 Hex	35	3/4-10 Hex	35	7/8-9 Hex	40
Main oil flange screws	N/A	N/A	5/8-11 Hex	30	5/8-11 Hex	30	3/4-10 Hex	35
Vapor inj. Flange screws	N/A	N/A	5/8-11 Hex	30	5/8-11 Hex	30	3/4-10 Hex	35

Steps to put compressor into service from Extended (Prolonged) Storage or after being delivered less oil from factory:

- Bleed off nitrogen.
- Remove all shipping flanges and connect pipes.
- Run an adequate oil pre-lube cycle in order to properly lubricate all bearings inside the compressor. (Please consult the HCI Application Engineering department for further details.)
- Proceed with normal start-up procedure as detailed in the LSC installation, operation and maintenance manual.