LANCER WORLDWIDE
A HOSHIZAKI Company

PREPARING BEER SYSTEMS FOR LONG TERM STORAGE
Instruction Sheet

Introduction: When shutting down the Beer System for more than four weeks, carry out the following maintenance procedures to clean and drain the beer circuit and to keep the unit clean:

Process:

1. Trading Beer Out

The most cost-efficient way to empty your beer lines is to trade them out, if this is not possible then blow them out using CO_2

- Disengage keg couplers handles and remove couplers from kegs.
- Leave drop leads connected to keg coupler.
- Fit to keg connectors to washout cup and engage lever.
  - If washout cups are not available, plug the beer check valve into the washout manifold and pressurise the manifold with CO_2
- Turn FOB levers to Clean Position

2. Cleaning the System

Clean beer lines as per beerline cleaning chemicals recommendations. All beer lines must be emptied of beer prior to Washout. Please ensure correct PPE is worn whilst handling the specific beer line cleaner.

There are 3 systems used to clean lines.

- Automatic Dosing System
- Beer Pump Cleaning System
- Drum and Spear Cleaning System

a) Automatic Dosing System

1. Turn off the glycol chiller unit.
2. Lift Handles on all couplers, disengage from the kegs & connect to bypass cups.
   If washout cups are not available, plug the beer check valve into the washout manifold
3. Push FOB Lever to “Clean”
4. Remove the gas connection from the coupler and engage Coupler handles.
5. Connect the Washout Line Check Valve to Water Supply crosshead on washout board.
6. Turn Water ON to the washout board.
7. Fill the lines with water, ensuring all beer is flushed.
8. Disconnect the washout BLCV from the Water Supply crosshead on washout board and connect to outlet of the Automatic Dosing System.
9. Connect Dosing Pumps lead to the Water Supply.
10. Open Taps until Beer Line Cleaner comes through to the taps and shut taps off.

IMPORTANT **Ensure cleaning in progress safety sign is hung over tap handles.**

11. Turn Water OFF and leave Beer Line Cleaner in the lines for minimum of 2 hrs.
12. Disconnect the washout BLCV from the Automatic Dosing System and connect to the Water Supply crosshead on washout board.

13. Turn water back ON - Flush fresh water through each tap - purging all traces of Beer Line Cleaner. Check water with PH strips provided. Remove “cleaning in process” sign from taps and return to cleaning area.
14. Turn Water OFF. Remove Washout Line Check Valve from Water Supply.

b) Beer Pump Cleaning System – Used on under counter systems & icebanks – normally without FOB’s

1. Turn off the chiller unit.
2. Connect required beer lines to the manifold on the wash out system.
3. Make up solution as per directions on beer line cleaner and fill bucket. Place the pump supply line into the filled bucket.
4. Connect the gas to the pump. Pull the beer line cleaner through and leave to soak for a minimum of 2 hrs.

IMPORTANT	**Ensure cleaning in progress safety sign is hung over tap handles.**

5. Fill the Bucket with water and let lines rinse through the beer taps for at least 20 litres per Tap. Check water with PH strips provided. Remove “cleaning in process” sign from taps and return to cleaning area.

IMPORTANT	**It is recommended to flush water through the Flojet Pump after the line clean as beer line cleaner is corrosive and will affect the santoprene diaphrams.**

c) Drum and Spear Cleaning System - Using the Beer Pumps on the system to draw the chemicals through the lines.

1. Turn off the glycol chiller unit.
2. Connect required drop leads to the washout line on the tapping board.
3. Make up solution as per directions on beer line cleaner and fill the washout drum.
4. Connect the washout BLCV to water crosshead on washout board.
5. Adjust the lever on FOB to “Clean”
6. Turn Water ON at the washout board.
7. Fill the lines with water, ensuring all beer is flushed.
8. Connect the Washout BLCV to the spear in the Drum
9. Open Taps and the beer pumps will pull the beer line cleaner from the drum, through to the taps. Once lines are filled with beer line cleaner - shut taps off.

IMPORTANT	**Ensure cleaning in progress safety sign is hung over tap handles.**

10. Leave Beer Line Cleaner in the lines for minimum of 2 hrs.
11. Remove Washout BLCV from Spear & Drum and connect to water crosshead on washout board.
12. Flush 20 litres of fresh water through each tap - purging all traces of Beer Line Cleaner. Check water with PH strips provided.
13. Remove cleaning in process sign from taps and return to cleaning area.

3. Turn off Chemical dosing system

IMPORTANT	**Ensure the correct PPE is used when working with beer line cleaning chemicals.**

1. Remove chemical line from Beerline cleaning chemical and seal container
2. Place pick up hose in bucket of water, then connect and activate dosing pump to flush water though to waste.
3. Depressurise and disconnect the wash out system from the water supply and the beer system.

4. Empty the beer lines of all water

To ensure that inadvertent freeze-up doesn't occur and damage the Beer System it is important to empty beer lines of all water. Blow them out using CO_2

- With keg couplers connected to bypass cups and gas leads fitted engage lever.
- If washout cups are not available, plug the beer check valve into the washout
- Manifold and pressurise manifold with CO2
- Turn FOB levers to Clean Position
- Shut off air supply to beer pumps
- Activate beer taps until water is flushed out.
- Store all clean tapping equipment in a sanitary manner (keg couplers, transfer leads etc).
- **Leave kegs disconnected.**

5. Turn off CO_2 / Gas.

Turn off any CO2 cylinders or Bulk gas supply valves and disconnect CO2 supply drop leads from the keg connectors.

6. Ensure CO_2 monitor is operational

Even though any CO_2 supply should be shut off it is important to ensure the CO_2 monitoring system is operational in case of leak or unintentional reconnection.

7. Drain air compressor & turn off

For air compressors used only to supply beer pumps, drain the air receiver until free from moisture and turn off the air compressor and depressurise. For further detail on the specific air compressor in use refer to the Air Compressors owner's manual.

8. Turn off glycol chiller (or icebank chiller)

Turn off the Glycol chiller pumps and refrigeration switches, disconnect unit from power in accordance with owner's manual. Please coordinate with the venues refrigeration contractor for condenser unit shut down best practice.

9. Ensure pumps are off while refrigeration is turned off.

In order to prevent overheating of the glycol system and possible damage to the tank ensure the glycol circulation pumps are off if refrigeration is turned off. It is recommended to disconnect the pump leads at the connection on the pump power lead and secure the leads with a cable tie or similar, to prevent accidental start-up of pumps.

10. Before Restarting the System

	**WARNING**	**Chiller must be isolated from electrical supply before commencing any service or maintenance work.**

a) Check Pump

Before connecting the glycol tank to power, ensure the pump seal has not seized during storage it is essential to check the pump can be manually rotated and moves freely otherwise motor and seal damage can occur. For units with an agitator blade fitted and access this can be done by rotating the agitator on

the end of the impeller shaft by hand or for other SPK pump units the motor to impeller shaft coupling cover can be removed and the shaft rotated by hand there.

b) Check Glycol for Contaminants

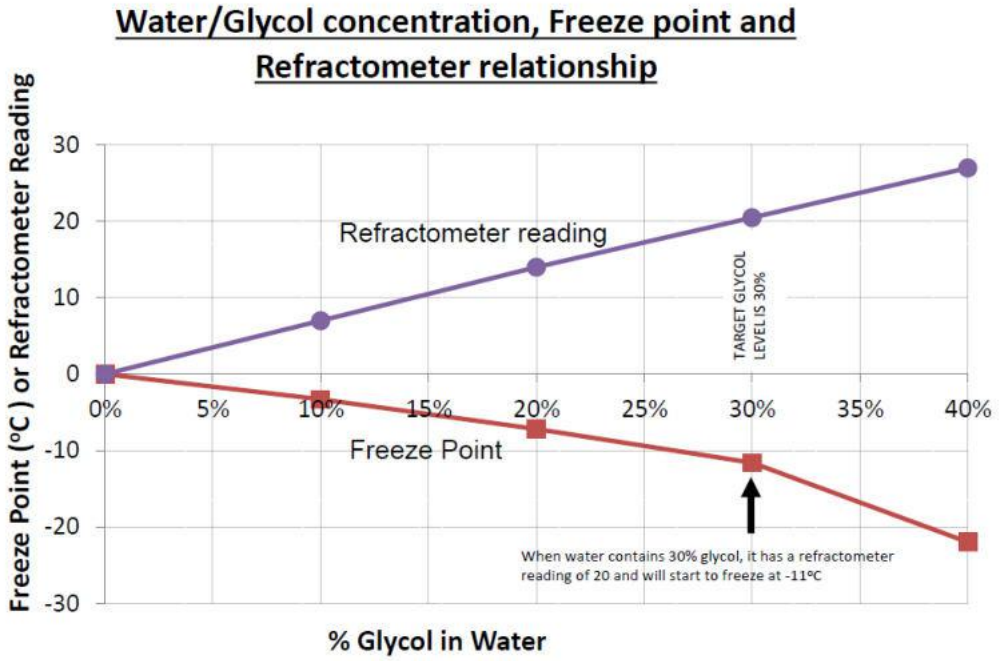
Examine the Glycol tank and propylene glycol water mixture for contaminants, if any foreign matter is present or any irregularities are observed, drain, clean and refill the glycol system as per the Installation Manual.

c) Checking Glycol Level

The heat exchanger should be covered by the glycol solution. Check the fill level indicator or lift the lid of the Glycol Tank to check.

d) Checking Glycol %

Using a refractometer take a sample of glycol from the tank and place on the glass pane. The refractometer will give a reading and the appropriate amount of glycol will be added until the correct percentage is achieved. The correct percentage of glycol to operate the System should be 30%.



NOTE **Propylene Glycol (PG USP) is the ONLY glycol to be used in the Beer Reticulation System**

11. Restarting the System

After the Pump and glycol checks in section 10. Check with the venues refrigeration contractor to ensure the refrigeration unit is operational before restarting the chiller in accordance with the installation instructions in the owner's manual.