

Equipment Name/ID:

Date: \_\_\_/\_\_\_/\_\_\_

Technician: \_\_\_\_\_

Ambient Temp: \_\_\_\_\_ °C

# Winter Bearing Installation & Startup Checklist

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## PHASE 1: PRE-INSTALLATION & SAFETY

- Safety Check:** Thermal gloves (PPE) available for handling heated parts.
- Acclimatization:** Bearing kept in original packaging at indoor temp for **24 hours** prior to opening.
- Humidity Control:** Desiccant packs used if storage was damp/cold to prevent condensation.
- Grease Compatibility:**
  - If changing grease type (e.g. to Synthetic), housing thoroughly cleaned/purged.
  - **Warning:** Old and new grease types verified as compatible.

## PHASE 2: INSTALLATION (Heater & Fit)

- Heater Setup:** Induction heater used (No open flames!).
- Temperature Target:** Bearing heated to **80-100°C** (Max 110°C).
- Mounting:**
  - Installed immediately after heating.
  - Force applied **only** to the ring being fitted (Inner ring).
  - **NO** striking of outer ring, seals, or cage.
- Clearance Check:** Shaft rotates freely by hand after cooling (checking for housing contraction).
- Sealing:** Seal lips coated with low-temp grease; vents/breathers clear of ice.

## **PHASE 3: LUBRICATION & PRE-START**

### **[ ] Grease Selection:**

- Standard Temp: NLGI Grade 1 or 2.
- Extreme Cold (< -20°C): Synthetic PAO/Ester used.
- Auto-Lube System: NLGI Grade 0 or 00.

**[ ] Fill Quantity:** Housing filled to **30-50%** (Do not overfill).

### **[ ] System Thaw:**

- Oil Bath: Heated to  $\geq 15^{\circ}\text{C}$ .
- Lines: Heat tracing on for 30 mins.

## **PHASE 4: STARTUP PROTOCOL**

**[ ] Step 1: Break Stiction:** Motor "Jogged" (pulsed) to break static friction.

### **[ ] Step 2: Warm-Up Run (Choose Method):**

- **Method A (VFD Available):** Run at **10-20% speed** for **15-20 mins**.
- **Method B (Fixed Speed):** "Jog-Wait-Jog" cycle (Jog 3s → Wait 2 mins → Repeat 3x).

### **[ ] Step 3: Monitoring:**

- **Sound:** No squealing/grinding (skidding).
- **Temp:** Housing temperature rising gradually (Not spiking  $>10^{\circ}\text{C}$  rapidly).
- **Vibration:** No abnormal high-frequency spikes.

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Technician Signature: \_\_\_\_\_

Supervisor Sign-off: \_\_\_\_\_

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