

Equipment Name/ID:

Date: __/__/__

Technician: _____

Ambient Temp: _____ °C

Winter Bearing Installation & Startup Checklist

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.

Technician Signature: _____

Supervisor Sign-off: _____
