



PREVENTATIVE MAINTENANCE & BEST PRACTICE PROTOCOL

Applicable to All MDM Pump Models (Genesys®, Advance®, Sequence®, Colossus®, and all related product families). This protocol provides a standardized approach to daily inspection, seal maintenance, motor assessment, and operating best practices to ensure maximum pump reliability, service life, and performance.

1. DAILY PUMP-END & MECHANICAL SEAL INSPECTION CHECKLIST

A) Perform these steps once per day on every pump in service:

- Shut down pump safely following site lockout/tagout procedures.
- Locate the mechanical seal viewpoints: rear of the pump end and area where the motor shaft enters the pump cavity.
- Use a flashlight and standard 1" telescoping inspection mirror.
- Inspect the mechanical seal area for any sign of moisture, drip, or leakage.
- If any drip or leak is present, replace the mechanical seal immediately.

B) Seal Replacement Instructions:

- Navigate to www.mdminc.com
- Click Resources in main navigation menu --> Then click Operator Resources.
- Login using **LssOps#2026**
- Download the Sequence and Advance Seal Replacement Guide.

2. MOTOR NOISE, BEARING HEALTH & MECHANICAL CONDITION

A) Note and document any change in mechanical noise.

B) If noise increases, inspect the motor.

C) dB thresholds:

- 1800 RPM: 50-60 dB
- 3600 RPM: 80-90 dB

D) If above thresholds, break down pump and motor to inspect bearings.

3. TEMPERATURE MONITORING & OVERLOAD VALIDATION

A) Use a thermal laser gun or pyrometer.

B) Measure at front and rear bearing locations.

C) NEMA rating: 40°C above ambient.

D) Example: 75°F ambient, 147°F shell = upper allowable limit.

E) Validate overload by comparing RMS current to nameplate FLA.

4. BEARING LIFE & CONTRIBUTING FACTORS

A) NEMA bearings rated ~50,000 hours Meantime Between Failure (MTBF).

B) Premature failure may indicate hydraulic or electrical imbalance.

5. MOTOR FAN, SHROUD & AIRFLOW INSPECTION

A) Inspect fan, cooling fins, shroud for debris.

B) Clean and reinstall components.

6. BEST GENERAL PRACTICES

A) Install pumps per MDM instructions.

B) Ensure proper hydraulic balance.

C) Maintain clean suction lines.

D) Document all inspections and actions.

E) Train staff on seal failure indicators and overload symptoms.

