

# Sealing System Leakage Analysis Checklist

## Short Form

Intended for field or shop work where the more comprehensive 3-part checklist may not be practical.

**Seal Application:**

**Equipment Identification:**

**Miles/Hours of Operation:**

**Complaint:**

### Step 1: Inspect the Seal Application Before Removal

- |                   |   |  |  |
|-------------------|---|--|--|
| Amount of leakage | <input type="checkbox"/> Slight                 | <input type="checkbox"/> Seal area damp                | <input type="checkbox"/> Heavy leakage |
| Condition of area | <input type="checkbox"/> Clean                  | <input type="checkbox"/> Dusty                         | <input type="checkbox"/> Mud packed    |
| Leakage source    | <input type="checkbox"/> Between lip and shaft  | <input type="checkbox"/> Between O.D. and bore         |  |
|                   | <input type="checkbox"/> At retainer gasket     | <input type="checkbox"/> Between elements of seal      |  |
|                   | <input type="checkbox"/> At retainer bolt holes | <input type="checkbox"/> Between wear sleeve and shaft |  |

### Step 2: Wipe Area Clean and Inspect

- |                              |  |  |
|------------------------------|--|--|
| Check<br>Conditions<br>Found | <input type="checkbox"/> Nicks on bore chamfer         | <input type="checkbox"/> Seal loose in bore  |
|                              | <input type="checkbox"/> Seal cocked in bore           | <input type="checkbox"/> Seal case deformed  |
|                              | <input type="checkbox"/> Seal installed wrong          | <input type="checkbox"/> Paint spray on seal |
|                              | <input type="checkbox"/> Shaft to bore<br>misalignment | <input type="checkbox"/> Other               |

### Step 3: Rotate Shaft if Possible

- |                  |   |   |
|------------------|---|---|
| Check Conditions | <input type="checkbox"/> Excessive end play | <input type="checkbox"/> Excessive runout |
|------------------|---|---|

**Step 4: If the location of the leak cannot be confirmed at this point, either introduce ultra violet dye into the sump or spray area with white powder, operate for 15 minutes and check for leakage with ultraviolet or regular light.**

### Step 5: Mark the Seal at the 12 O'Clock Position and Remove it Carefully

- Retain an oil sample

### Step 6: Inspect the Application with Seal Removed

- |                              |  |   |
|------------------------------|--|---|
| Check<br>Conditions<br>Found | <input type="checkbox"/> Rough bore surface  | <input type="checkbox"/> Flaws or voids in bore |
|                              | <input type="checkbox"/> Shaft clean         | <input type="checkbox"/> Shaft corroded         |
|                              | <input type="checkbox"/> Coked lube on shaft | <input type="checkbox"/> Shaft discolored       |
|                              | <input type="checkbox"/> Shaft damaged       |   |

### Step 7: Inspect the Seal

- |                       |  |  |   |
|-----------------------|--|--|---|
| Primary Lip Wear      | <input type="checkbox"/> Normal          | <input type="checkbox"/> Excessive       | <input type="checkbox"/> Eccentric        |
| Primary Lip Condition | <input type="checkbox"/> None            |  |   |
| Seal O.D.             | <input type="checkbox"/> Normal          | <input type="checkbox"/> Damaged         | <input type="checkbox"/> Hardened (stiff) |
|                       | <input type="checkbox"/> Soft (flexible) |  |   |
| Spring                | <input type="checkbox"/> Normal          | <input type="checkbox"/> Axial scratches | <input type="checkbox"/> Damaged rubber   |
|                       | <input type="checkbox"/> In place        | <input type="checkbox"/> Missing         | <input type="checkbox"/> Separated        |
|                       | <input type="checkbox"/> Corroded        |  |   |

Comments:

Completed By: \_\_\_\_\_

Date: