

**Mechanical - Inspection - Water/Booster Pump Station**

The objective is to manage the risk of environmental harm, safety and operational failure through appropriate equipment maintenance.

The tasks below indicate formal items that should be inspected for each site.

**Perform the tasks that are applicable to the site ONLY**

ALL tests are subject to it being SAFE to perform the test.

Notify the equipment operator before starting work.

The Condition Score incorporates the results of a visual inspection, function and proof testing.

**Record Results and Condition Score on an Equipment Schedule of Results form.**

**Site Inspection**

Conduct site inspection noting any issues in Comments field.

1. Driveway / land - Mowing, weed spray, driveway damage etc.
2. Check immediate work area is clean and tidy. Remove rubbish from site.
3. Fence - Holes / corrosion / damage etc.
4. Safety Signage - Missing / faded / damaged etc.
5. Pump Station Building - Doors / Windows broken / loose etc.  
- Roof / Gutter - Rusty / leaking etc.
6. Flow Meter Valve Pit - Cracked, aggregate exposed, etc.
7. Pump Well stairs, platforms, mounting brackets, fasteners, etc
8. Check safety barriers. ( pit covers / locks & hinges / grates / hand rails)
9. Check all pits for water ingress and pump out as required.

**Pipework and Valve Inspection**

Conduct pipe work and valve inspection noting any issues in Comments field.

1. Check all fittings in pits for leaks and/or defects.  
Flow meters, by-pass connections, non-return valves, etc.
2. Check Non-Return Valve/s for sealing, blockage, deterioration and slamming when pump turns off.
3. Check station inlet isolation valve (if fitted) for full range of operation and for defects.
4. Check pump isolation valve/s for full range of operation, leaks (internal & external) and deterioration.
5. Inspect all pipe work for corrosion / damage / leaks.
6. Inspect slip couplings / dismantling joints for corrosion, wear and leakage.
7. Inspect all fasteners for corrosion.

**Pump Inspection**

Conduct pump inspection noting any issues in Comments field.

1. Check pumps while running for noise, leaks and/or vibration.  
Check Amp meter reading, if fitted.
2. Check pump stand/base for vibration.
3. Inspect all fixed and flexible pipe work, fittings, fasteners, etc for movement / vibration.
4. Remove sump pump from sump and clean out sump. Replace, run and check pump operation.

**Operate each pump in manual mode when carrying out Pump Inspection**

**Water/Booster Pump Assessment**

Conduct pump inspection noting any issues in Comments field.

1. Check pump mechanical seals for leaks (ensure gland drain and water feed lines are clear).  
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2. Where applicable and able remove bearing covers and inspect the grease for water contamination and/or ingress
3. Grease all "greasable" bearings with 3 pumps of grease.

**At Karawatha Grease all "greasable" bearings with 6 pumps of grease**

4. Remove coupling guard and check coupling alignment, realign if required.

**At Karawatha check condition of grease - Falk Long Term Grease (LTG)**

5. Check condition of coupling rubbers and bolts, replace rubbers if required.
6. Check condition of couplings, arrange replacement if required.
7. Turn pump shaft by hand and check for tight spots. Replace coupling guard.
8. Check accuracy of pressure gauges and supply lines are clear

**Karawatha Auxillary Equipment Assessment**

Conduct auxillary equipment inspection noting any issues in Comments field.

1. Check operation of pneumatic valve and control.
2. Check condition of pneumatic control valve exhaust filters.
3. Check positioning of limit switches and rectify any minor air leaks if found (quick fix).  
Any major repairs/replacements to be under new work order.
4. Check air bleed system on pump and suction/delivery pipework.
5. Check and clean in-line filters, check internal condition of spirax air eliminators.
6. Clean or replace compressor air filter as necessary, change oil using SAE10W/20.
7. Check airline water traps at all points on airline.

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**Important** \* Refer to the work order for possible special job instructions.

\* Where part replacement is specified in the work order, the part shall be replaced.