Monthly Portable Cooling Unit Inspection

Tank Farm Maintenance Procedure

MAINTENANCE

USQ #Routine Maintenance

CHANGE HISTORY (≤ LAST 5 REV-MODS )

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<td>05/08/2017</td>
<td>Mitigate deficiency in portable cooling unit maintenance. Address PER, WRPS-PER-2016-1444.</td>
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This is a new revision. The First Time Use process as defined in TFC-OPS-OPER-C-13 can be used during the initial performance of this revision.

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Figure 1 – Movin’ Cool Nameplate Information

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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides instructions for monthly inspection of Portable Air Condition (AC) and Evaporative Cooling units. This procedure is not used for units installed within the Tank Farms.

1.2 Scope

This procedure involves monthly inspection and maintenance of Portable Air Condition (AC) and Evaporative Cooling units.

2.0 INFORMATION
3.0 PRECAUTIONS AND LIMITATIONS

3.1 Radiation and Contamination Control

Work in radiological areas will be performed using a Radiological Work Permit following review by Radiological Control per the ALARA Work Planning procedure TFC-ESHQ-RP_RWP-C-03.

3.2 Environmental Compliance

Immediately report any spills and/or releases to the appropriate WRPS Shift Office.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following equipment and/or materials (or equivalent) may be needed to perform this procedure:

- Filters applicable to the unit being serviced
  - Element filter
  - Condenser filter
  - Air filter.
- Vacuum Cleaner
- Non-regulated neutral detergent (dishwashing soap or equivalent)
5.0 PROCEDURE

5.1 Portable Cooling Unit Inspection

NOTE - Figure 1 through Figure 11 may be referred to any time during the performance of this procedure.

Spring Inspection

5.1.1 IF this is the initial spring inspection REMOVE the bags (as applicable) from all the units AND

PERFORM Section 5.2 or 5.3.

Monthly Inspection

5.1.2 VISUALLY INSPECT all units are bagged.

5.1.3 IF all the units are bagged APPLY a check mark (✓) in the “Maintenance Complete” column of the Data Sheet AND

EXIT this procedure.

5.1.4 IF a unit is not bagged PERFORM Section 5.2 or 5.3.
5.2 Portable AC Unit Inspection

**Special Instruction**

Depending on the number of units being maintained Section 5.2 may be performed as many times as necessary to accommodate the completion of maintenance.

5.2.1 **INSPECT** entire exterior of filter housing assembly for bent/rusted/deformation of the:
- housing
- fasteners
- gaskets
- etc.

5.2.2 **REMOVE** air conditioning unit filter housing covers. (See Figure 2)

NOTE - Cleaning of the filters and/or elements can be accomplished with a vacuum cleaner or cold or lukewarm water.

5.2.3 **INSPECT** the filters and/or elements.

5.2.3.1 **IF** the filters and/or elements need cleaning and/or replacing **CLEAN AND/OR REPLACE** the filters and/or elements.

5.2.4 **IF** the filters and/or elements were removed **REINSTALL** filters and/or elements.

5.2.5 **REPLACE** air conditioning unit filter housing covers.

5.2.6 **INSPECT** drain tank level.

5.2.6.1 **IF** tank level is visible, **EMPTY** drain tank.

5.2.7 **APPLY** a check mark (✓) in the “Maintenance Complete” column of the Data Sheet.

5.2.8 **IF** a filter was replaced **APPLY** a check mark (✓) in the “Filter Replaced” column of the Data Sheet.

5.2.9 **PLACE** the unit inspected in a bag.

5.2.10 **RECORD** any damage found in the Work Control record.
5.3 Portable Evaporative Cooling Unit Inspection

Special Instruction

Depending on the number of units being maintained Section 5.3 may be performed as many times as necessary to accommodate the completion of maintenance.

5.3.1 INSPECT entire exterior of filter housing assembly for bent/rusted/deformation of the:
- housing
- fasteners
- gaskets
- etc.

5.3.2 REMOVE filter housing flap. (See Figure 3)

NOTE - Cleaning of the filters can be accomplished with a vacuum cleaner or cold or lukewarm water.

5.3.3 INSPECT the filters.

5.3.3.1 IF the filters need cleaning and/or replacing CLEAN AND/OR REPLACE the filters.

5.3.4 INSPECT the Evaporative Cooling Units Pad(s)

5.3.4.1 IF the Pads need to be replaced REPLACE the Pads. (See Figure 3)

5.3.5 INSPECT entire exterior of filter housing assembly for bent/rusted/deformation of the:
- housing
- fasteners
- gaskets
- etc.

5.3.6 INSPECT the following for excessive buildup of dirt/dust
- Sump tank
- Pads
- Inlet strainer.

5.3.6.1 IF excessive buildup of dirt/dust if found CLEAN the unit.
5.3 Portable Evaporative Cooling Unit Inspection (Cont.)

5.3.7 REPLACE the filter housing covers.

5.3.8 INSPECT the sump tank for water build up.

5.3.8.1 IF the sump tank requires emptying, EMPTY the sump tank.

5.3.9 APPLY a check mark (✓) in the “Maintenance Complete” column of the Data Sheet.

5.3.10 IF a filter was replaced APPLY a check mark (✓) in the “Filter Replaced” column of the Data Sheet.

5.3.11 PLACE the unit inspected in a bag.

5.3.12 RECORD any damage found in the Work Control record.
5.4 Restoration

5.4.1 IF any problems were encountered during maintenance, NOTIFY the FWS.

5.5 Acceptance Criteria

Acceptance Criteria has been met when Steps in this procedure have been satisfactorily performed and the Data Sheet has been completed.

5.6 Review

5.6.1 INFORM FWS maintenance is complete.

5.6.2 FWS REVIEW AND ENSURE the following:

- Data Sheets are complete
- Determine if damage was identified
- Work requests needed as a result of this procedure are identified and generated.
- Work request number(s) of any work documents generated as a result of this procedure, are recorded in the Comments/Remarks section of the Data Sheet (if applicable).

5.7 Records

This procedure is performed within a work package, as such, the procedure in its entirety will be maintained as a record per the Work Control process.

The record custodian identified in the Company Level Record Inventory and Disposition Schedule (RIDS), is responsible for record retention in accordance with TFC-BSM-IRM_DC-C-02.
Figure 1 – Movin’ Cool Nameplate Information

![Nameplate Label Diagram]

- COOLING AMPS. WITH PUMP
- COMPR. OUTPUT
- REFRIGERANT/TOTAL CHARGE
- DESIGN PRESSURE LO/Hi
- PART NO./WEIGHT
- SERIAL NO.

Month Year

Model Sequential Number

Nameplate Label Position
Figure 2 – Portable Air Conditioner Condensate Bottle and Filter Locations
Figure 3 – Portable Evaporative Cooling Units Pad Replacement

Locate the set screw in the rear of the unit on the upper right side.

Remove set screw and allow front flap to swivel vertically and hang.

Once the front flap is moved, grasp the right pad and tilt out at a 90 degree angle.

Pull the pad up to remove from unit. Repeat for other pads.
Figure 4 – Portable Air Conditioners Control Panel

Movin’Cool Control Panel

Air Rover Control Panel
Figure 5 - Portable Air Conditioner Room Refrigerant System
Figure 6 - Portable Air Conditioner Filter Locations

Air Filter (for Evaporator)

Air Filter (for Condenser)
Figure 7 - Portable Air Conditioner Plate Fins
Figure 8 - Portable Air Conditioner Drain Tank
Figure 9 - Portable Air Conditioner Drain Location
Figure 10 - Portable Air Conditioner LCDI (Leakage Current Detection Interrupter) Power Cord
Figure 11 – Portable Evaporative Cooler Control Panel and Connections