

MOD 8 Operator maintenance

| Block # | Title             | Text/Narration  |
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| 8.3     | Exterior Cleaning | <p><b>CAUTION</b></p> <p>Most areas on the MIRCS exterior can be cleaned with a pressure washer. Prior to spraying the MIRCS from a pressurized or non-pressurized source, verify that all openings on fuel tanks and the hydraulic reservoir are capped or closed. Contaminating the fuel or hydraulic systems with water can lead to failures of the RU engine, generator engine, and hydraulic system.</p> <p>Never aim high-pressure water spray directly at controls, electrical connections, conduit penetrations, or the edges of electrical enclosure doors and junction boxes. Water can cause damage to electrical components and cause short circuits in wiring. Also, never aim high-pressure water at the fins on the RU radiator, condenser, and evaporator or ECU condenser or evaporators. The fins can bend, blocking airflow, or be torn off, causing leaks in the heat exchanger tubing.</p> <p><b>NOTE</b></p> <p>The MIRCS should be positioned in a wash rack or parking area where water utilities or a pressure washer are available.</p> |

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| 8.3.1 | <b>Exterior Cleaning</b> | <ol style="list-style-type: none"><li>1. Start with the MIRCS in the ready for transport (storage) configuration.</li><li>2. Clean the roof and outsides of the AA and PA platforms.</li><li>3. Level the MIRCS, then deploy the generator, platforms, ramps, and soft walls.</li><li>4. Ensure the RU control enclosure is closed and the door latches are secure.</li><li>5. Ensure the cover is installed on the battery box.</li><li>6. Ensure the door is secured on the RU control box.</li><li>7. Ensure the cap is installed on the fuel tank.</li><li>8. Ensure there are no open or disconnected fuel or hydraulic lines.</li><li>9. Ensure the ECU control enclosure is closed and the door latches are all tight.</li><li>10. Ensure the cover is installed on the main power junction box.</li><li>11. Ensure the cover is installed on the ECU air inlet port.</li><li>12. Ensure cap is installed on the fuel port.</li><li>13. Clean the exterior of the AA soft wall and PA soft wall.</li><li>14. Clean the MEP-804A generator as specified in TM 9-6115-643-10.</li><li>15. Clean the front mechanical area and rear mechanical area</li><li>16. Clean the ramp.</li><li>17. Return the MIRCS to ready for transport configuration (WP 0012).</li></ol> |
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| 8.3.2 | <b>Interior Cleaning</b> | <p><b>WARNING</b></p> <p>During sanitizing operations, personnel may be exposed to chemical and/or bio-hazardous materials. In addition, wastewater generated during MA sanitizing operations may also contain chemical and/or bio-hazardous materials. When performing this procedure, personnel must wear impermeable gloves and goggles for protection. Failure to follow this warning may result in serious illness or death.</p> <p>The waste containers should be checked frequently during sanitizing operations to prevent overfilling. When containers are emptied, the shutoff valve at inlet to waste containers must be closed prior to disconnecting the drain hose. Failure to close the valve may result in spilling of chemical or bio-hazardous wastewater causing exposure to improperly-protected or unsuspecting personnel working nearby.</p> |
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| 8.3.3 | <b>Interior Cleaning</b> | <p><b>CAUTION</b></p> <p>The MIRCS interior must not be cleaned with a pressurized cleaning device. High-pressure water spray can get into seams and cause panels to delaminate and insulation to get wet. Never spray water directly at controls, electrical connections, conduit penetrations, or the edges of electrical enclosure doors and junction boxes. Water can cause damage to electrical components and cause short circuits in wiring.</p> <p><b>NOTE</b></p> <p>The MIRCS interior surface should be sanitized with a cleaning solution made up of 2 percent bleach and water.</p> <ol style="list-style-type: none"><li>1. Start with the MIRCS in the ground operation configuration (WP 0008), except do not install vestibule door, supply area doors, lights, or any accessories in the inside work areas. Remove items if installed (WP 0012).</li></ol> |
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| 8.3.3a | <b>Interior Cleaning</b> | <ol style="list-style-type: none"><li>2. Remove all supply items from the supply area shelving.</li><li>3. Open the doors. Leave the windows closed.</li><li>4. Apply power from the generator or external power supply and turn on the ECU ventilation fans (WP 0009).</li><li>5. Remove all trays and then all tracks from the RSU as follows:<ol style="list-style-type: none"><li>a. Open the door.</li><li>b. Pull the QC pin, then slide the trays out of the tracks.</li><li>c. Pull the QC pins, then remove the tracks.</li><li>d. Repeat the steps for the other three RSU sections.</li><li>e. Remove the knobs and spreader bar</li><li>f. Remove the knobs securing the duct to the evaporator.</li><li>g. With two persons on each side, slide the duct rearward until it clears the evaporator, then squeeze the duct until edges are clear of the clips and lower duct.</li></ol></li></ol> |
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| 8.3.4 | <b>Interior Cleaning</b> | <p>6. Clean the trays, tracks, and duct with cleaning solution, then rinse with fresh water. Allow cleaned items to air dry.</p> <p>7. Clean the inside of RSU as follows:</p> <ul style="list-style-type: none"> <li>a. Clean and rinse the inside and outside of the evaporator.</li> <li>b. Clean and rinse the interior surfaces, ceiling and walls.</li> <li>c. Clean both sides of the door including the underside of the seals.</li> <li>d. Clean and rinse the floor.</li> <li>e. Allow the inside of the RSU to air dry.</li> </ul> <p>8. With two persons on each side, reinstall duct, and all tracks and trays into the RSU.</p>  |
| 8.3.5 | <b>Interior Cleaning</b> | <p>9. Clean the AA work area as follows:</p> <ul style="list-style-type: none"> <li>a. Clean and rinse the interior surfaces of soft wall.</li> <li>b. Clean and rinse the inside wall.</li> <li>c. Clean and rinse both sides of the partition wall.</li> <li>d. Clean and rinse the floor.</li> <li>e. Allow all surfaces to air-dry.</li> </ul> <p>10. Clean the vestibule area as follows:</p> <ul style="list-style-type: none"> <li>a. Clean and rinse the interior surfaces of soft wall.</li> <li>b. Clean and rinse the inside wall.</li> <li>c. Clean and rinse the floor.</li> <li>d. Allow all surfaces to air the dry.</li> </ul> |

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| 8.3.6 | <b>Interior Cleaning</b> | <p>11. Remove the access panel.</p> <p>12. Clean and rinse both sides of the access panel and set it aside to air-dry.</p> <p>13. Clean the supply area as follows:</p> <ul style="list-style-type: none"> <li>a. Clean and rinse the ceiling and wall.</li> <li>b. Clean and rinse the supply area shelving and water plumbing area.</li> <li>c. Clean and rinse the floor.</li> <li>d. Allow the inside of the supply area to dry.</li> <li>e. Clean and rinse the supply area curtain door.</li> </ul> <p>14. Reinstall the access panel.</p>   |
| 8.3.7 | <b>Interior Cleaning</b> | <p>15. Clean and rinse the following accessories in the PA work area.</p> <ul style="list-style-type: none"> <li>a. Mobile processing platforms.</li> <li>b. MPP extensions.</li> </ul> <p>16. Clean the PA work area as follows:</p> <ul style="list-style-type: none"> <li>a. Add 2 oz of bleach to 2 gal of water and pour down the supply area sink drain.</li> <li>b. Clean and rinse the interior surfaces of the soft wall.</li> <li>c. Clean and rinse the inside wall.</li> <li>d. Clean and rinse the utility hose storage area.</li> <li>e. Clean and rinse the floor.</li> <li>f. Clean and rinse the floor grate and the drain trough</li> <li>g. Allow all surfaces to air-dry.</li> </ul> <p>17. Set up the MIRCS for operation (WP 0008) or return the MIRCS to the ready-for-transport configuration (WP 0012).</p> |

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| 8.3.8 | <b>RU Battery Inspection</b> | <b>WARNING</b><br>Do not allow metallic objects such as watches, rings or other jewelry to touch battery terminals. Contact with energized connections can result in serious personal injury or death. Seek immediate medical attention if injury occurs.<br><ol style="list-style-type: none"><li>1. Loosen the strap and remove the cover from the battery box.</li><li>2. Inspect the battery cable terminal connections to ensure they are secured to the battery posts. If the cable connections are loose, notify maintenance.</li><li>3. Check the terminal connections and battery posts for evidence of corrosion. If corrosion is found, notify maintenance.</li><li>4. Check the battery for any signs of damage or leakage. If damage is found, notify maintenance.</li><li>5. Replace the cover and tighten the strap on the battery box.</li></ol> |
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| 8.3.9 | <b>Coolant Service</b> | <p><b>WARNING</b></p> <p>RU engine surfaces can reach temperatures near 300°F. Avoid contact with hot surfaces. Wear impermeable gloves and goggles for protection. Failure to follow this precaution could result in severe burn injuries. Seek immediate medical attention if injury occurs.</p> <ol style="list-style-type: none"><li>1. Observe the fill marks on the coolant reservoir.</li><li>2. If coolant is visible at or between the marks, the level is correct. If needed, add coolant as follows.</li></ol> <p><b>CAUTION</b></p> <p>Use on the specified extended-life coolant. Using tap water or non-specified coolant will degrade the cooling system and lead to premature system failure.</p> <ol style="list-style-type: none"><li>3. Unthread the fill cap from reservoir.</li><li>4. Add 50/50 extended-life coolant mixture to the coolant reservoir until the level is visible at the lower mark.</li><li>5. Thread the fill cap onto the reservoir.</li></ol> |
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| 8.3.10 | <b>Oil Service</b> | <p><b>WARNING</b></p> <p>RU engine surfaces can reach temperatures near 300°F. Avoid contact with hot surfaces. Wear impermeable gloves and goggles for protection. Failure to follow this precaution could result in severe burn injuries. Seek immediate medical attention if injury occurs</p> <ol style="list-style-type: none"><li>1. Disengage the two latches, then open the access door.</li><li>2. Pull the dipstick out of the engine and wipe the oil off of the dipstick with a clean rag.</li><li>3. Reinsert the dipstick fully into the engine then remove the dipstick.</li><li>4. Observe the fill marks, wipe the oil off of the dipstick with a clean rag, then reinsert the dipstick.</li><li>5. If oil was visible at or between the marks level is correct and oil does not need to be added. If the oil level is below the lower mark, add oil as follows.<ol style="list-style-type: none"><li>a. Unthread the fill cap from the engine.</li><li>b. Add about 1/2 quart of oil. Recheck the level and add until the level is between the dipstick fill marks.</li><li>c. Thread the fill cap onto the engine.</li><li>d. Wipe up any residual oil in the area around the fill port.</li><li>e. Close the access door and secure by engaging the two latches.</li></ol></li></ol> |
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| 8.3.11 | RSU | <p><b>RSU Door Seal Removal</b></p> <ol style="list-style-type: none"><li>1. Remove the screws securing the door seal to the RSU door.</li><li>2. Slide the door seal out from between the retaining plate and door.</li></ol> <p><b>RU Door Seal Installation</b></p> <ol style="list-style-type: none"><li>1. Place the new door seal between the retaining plate and door.</li><li>2. While holding the door seal tight against the door, install screws to secure the seal to the door.</li><li>3. Open and close the door several times and make sure the door seal does not hit the door frame or prevent the door from closing.</li></ol> |
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| 8.3.13 | ECU | <p><b>ECU Recirculating Air Filter Removal</b></p> <ol style="list-style-type: none"><li>1. Loosen the four 1/4-turn fasteners that secure the inlet screen to the ECU.</li><li>2. Lift up on the inlet screen to the access filter.</li><li>3. Slide the filter out of the inlet screen.</li></ol> <p><b>ECU Recirculating Air Filter Installation</b></p> <ol style="list-style-type: none"><li>1. Orient the filter so that the airflow arrow will be pointing towards the ECU when installed.</li><li>2. Slide the new filter into the inlet screen.</li><li>3. Mate the inlet screen to the ECU then secure it with the four 1/4-turn fasteners.</li></ol> |
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| 8.3.14 | ECU | <p><b>ECU Inlet Air Roughing Filter Removal</b></p> <ol style="list-style-type: none"><li>1. Remove the two retainers as follows:<ol style="list-style-type: none"><li>a. Slide the ends of retainers out of the tabs.</li><li>b. Pull the retainers out from under the front cover.</li></ol></li><li>2. Remove the filter and discard it in accordance with local regulations.</li></ol> <p><b>ECU Inlet Air Roughing Filter Installation</b></p> <ol style="list-style-type: none"><li>1. Install the new filter by tucking the filter edges under the front cover.</li><li>2. Insert the two retainers as follows:<ol style="list-style-type: none"><li>a. Insert the tip of the retainers under the front cover.</li><li>b. Slides the ends of each retainer into the tabs.</li></ol></li></ol> |
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| 8.3.14a | ECU  | <p><b>ECU Inlet Air Fine Filter Removal</b></p> <ol style="list-style-type: none"> <li>1. Disengage the six latches then separate the front cover from the housing.</li> <li>2. Remove the filter from the housing.</li> </ol> <p><b>ECU Inlet Air Fine Filter Installation</b></p> <p><b>NOTE</b><br/>Extending and separating the pleats on backside of the air filter increases airflow and extends the useful life of the filter.</p> <ol style="list-style-type: none"> <li>1. Pull out and separate the pleats.</li> <li>2. Install the new filter into the housing.</li> <li>3. Mate the front cover to the housing then secure by engaging the six latches.</li> </ol> |
| 8.3.15  | <b>LED Lamp Removal, Installation and Checkout</b> | <p><b>ECU Assembly or MA Enclosure LED Lamp Removal</b></p> <ol style="list-style-type: none"> <li>1. Unthread the lens from the socket.</li> <li>2. Pull the lamp out of the lens.</li> </ol> <p><b>LED Lamp Installation</b></p> <ol style="list-style-type: none"> <li>1. Insert the new lamp into the lens.</li> <li>2. Thread the lens onto the socket.</li> </ol> <p><b>LED Lamp Checkout</b></p> <ol style="list-style-type: none"> <li>1. Perform SYSTEM START-UP (WP 0009).</li> <li>2. Press to test the lens and verify the lamp comes on.</li> </ol>   |

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| <p>8.3.15a</p> | <p><b>LED Lamp Removal and Installation</b></p> | <p><b>Enclosure Assembly, RU Control LED Lamp Removal</b></p> <ol style="list-style-type: none"> <li>1. Unfasten the two latches on the enclosure and open the door.</li> <li>2. Unthread the lens from the socket.</li> <li>3. Pull the lamp out of the lens.</li> </ol> <p><b>LED Lamp Installation</b></p> <ol style="list-style-type: none"> <li>1. Insert the new lamp into the lens.</li> <li>2. Thread the lens onto the socket.</li> </ol>  |
| <p>8.3.16</p>  | <p><b>LED Lamp Checkout</b></p>                 | <p><b>LED Lamp Checkout</b></p> <ol style="list-style-type: none"> <li>1. Turn on the MIRCS main power (WP 0009).</li> <li>2. Position the FUEL LEVEL switch to ON.</li> <li>3. Press to test the lens on low fuel level light and verify the lamp comes on.</li> <li>4. Position the FUEL LEVEL switch to OFF.</li> <li>5. Position the RU controller I/O switch to I.</li> <li>6. Press to test the lens on the RU STARTING light and verify the lamp comes on.</li> <li>7. Position the RU controller I/O switch to O.</li> <li>8. Close the door then secure the enclosure by fastening two latches.</li> </ol> |

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| 8.3.17 | <b>Fluorescent Work Light Lamp Removal</b> | <b>Warning</b><br>Fluorescent bulbs contain low levels of mercury. Broken bulbs present an additional hazard. When handling broken bulbs wear eye and hand protection. Do not use a vacuum or broom to clean-up shards of glass or chemical powder material. Dispose of bulbs or bulb materials IAW local regulations. Failure to follow this precaution can cause serious injury or illness. Seek medical attention if injury occurs.<br><ol style="list-style-type: none"><li>1. Loosen and remove the clamp from the end cap at the receptacle end.</li><li>2. Slowly wiggle and pull the end cap off of the sleeve.</li><li>3. Disconnect the power cable wires from the wire connector then completely remove end cap.</li><li>4. Loosen and remove the clamp from the end cap at the plug end.</li><li>5. Slowly wiggle and pull the end cap off of the sleeve.</li><li>6. Carefully pull the lamp with the attached wire connectors from the sleeve.</li><li>7. Detach the wire connectors from the lamp.</li><li>8. Slide the spacer off of the lamp.</li><li>9. Dispose of the lamp in accordance with local regulations.</li></ol> |
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| 8.3.18 | <b>Fluorescent Work Light Lamp Installation</b> | <ol style="list-style-type: none"> <li>1. Slide the spacer onto the new lamp and position it in the center of the lamp.</li> <li>2. Attach the wire connectors to the lamp.</li> </ol> <p><b>NOTE</b><br/>When sliding the lamp back into the sleeve, make sure the wires do not twist up. <b>Do not</b> force the lamp. If insertion becomes difficult, withdraw lamp from sleeve, straighten the wires, and reinsert.</p> <ol style="list-style-type: none"> <li>3. Carefully slide lamp with attached wire connectors into sleeve. Ensure wiring is on shaded side of sleeve.</li> <li>4. Fit end cap at plug end over sleeve and wiggle until end cap is fully seated.</li> <li>5. Install clamp to secure end cap.</li> </ol> <p><b>NOTE</b><br/>The power cable wires are color-coded. The red stripe wire attaches to the black wire, the green stripe wire attaches to the green wire, and the yellow/black wire attaches to the white wire.</p> <ol style="list-style-type: none"> <li>6. Connect the power cable wires to the wire connector.</li> <li>7. Fit the end cap of the receptacle over the sleeve and wiggle until the end cap is fully seated.</li> <li>8. Install the clamp to secure the end cap.</li> </ol> |
| 8.3.19 | <b>Fluorescent Work Light Lamp Checkout</b>     | <ol style="list-style-type: none"> <li>1. Perform SYSTEM START-UP (WP 0009).</li> <li>2. Plug the work light into any unused 110-volt electrical outlet and verify the light comes on.</li> <li>3. Reinstall the work light in the location desired.</li> </ol>   |