A13.4. Prepare Vehicles as follows: The following general requirements apply:

A13.4.1. Compliance With Technical Orders. Use the vehicle service or technical manual to prepare item for shipment.

A13.4.2. Fuel Limitations. Comply with paragraph A3.3.3.4. when determining actual fuel level requirements to meet operational needs. Each liquid vehicle fuel tank may be no more than one-half full with the following **exceptions**:

A13.4.2.1. When the technical manual requires draining and purging.

A13.4.2.2. Drain and cap when unit is susceptible to fuel spills or leakage (see paragraph A3.3.3.6.).

A13.4.2.3. When loaded on the aircraft cargo ramp, drain vehicle fuel tank if the fuel tank openings cannot be located on the high side of the ramp.

A13.4.2.4. When palletized or loaded on a trailer, drain fuel tanks. Units palletized due to the aircraft's subfloor requirements may contain fuel in tank.

A13.4.2.5. When transported under the authority of Chapter 3 of this manual, the following fuel limitations apply:

A13.4.2.5.1. Each liquid vehicle fuel tank may not exceed three-fourths full.

A13.4.2.5.2. Units on the aircraft cargo ramp or when loaded on the aircraft with a steep angle of ascent (e.g., KC-10, KC-135) may not exceed one-half full per tank.

A13.4.2.5.3. Series M998 High Mobility Multi-Wheeled Vehicles (HMMWV) may face aft on the cargo ramp with the fuel tank opening on the low side of the ramp. Fuel (JP-8 or diesel only) may not exceed one-half tank. Ensure vehicles are equipped with a fuel injection delivery system, and an open vent line to allow pressure equalization during decompression.

A13.4.2.6. Drain fuel from boats and other watercraft loaded on trailers or palletized to the greatest extent possible. When transported or airdropped under the authority of Chapter 3 of this manual, each integral fuel tank may be three-fourths full. During exercises/training (insertion, rescue, etc.), ensure fuel levels are the minimum amount necessary to meet mission objective, not to exceed three-fourths full. Only approved portable non-bulk fuel tanks may contain fuel.

A13.4.2.7. Transport fueled helicopters and aircraft with fuel in each tank not to exceed 150 gallons or three-fourths full, whichever amount is least. Do not exceed one-half tank full for units loaded on the aircraft cargo ramp. Ensure fuel leakage does not occur during shipment. No special venting is required other than to maintain normal aircraft ventilation during flight. Seal vents according to the pertinent service technical directive. Load tanks to prevent fuel leakage when the loading configuration requires removal of external fuel tanks. When removed in this manner, the tanks are still considered a component of the aircraft or helicopter.

A13.4.2.8. When aircraft wings are removed from aircraft body, completely drain fuel tanks within wings. Purging is not required. When transported with the original aircraft body, consider all pieces as a single unit for identification on the Shipper's Declaration form.

A13.4.2.9. Unmanned aerial vehicles (UAV) prepared according to technical publications/manuals may be shipped drained but not purged. Remaining fuel levels will be as specified in the appropriate technical publication/manual. **(T-0)**.

A13.4.2.10. When loaded in a freight container, drain vehicle fuel tank. Purge the fuel tank and system if required by the item's technical directive, or if the flash point of the fuel is less than 38 degrees C (100 degrees F). In the absence of specific draining and purging procedures:

A13.4.2.10.1. Completely drain all fuel

A13.4.2.10.2. Run engine until it stalls

A13.4.2.10.3. Allow fuel tanks and lines to remain open for 24 hours.

A13.4.2.10.4. Ensure installed batteries are non-spillable or non-regulated. If battery is non-regulated and no other hazards are present (e.g., fire extinguisher), a Shipper's Declaration is not required. Comply with A3.1.16.

A13.4.2.11. Ensure fuel servicing vehicles have refueling system bulk tank and lines purged (for liquids with a flash point less than 38 degrees C (100 degrees F)) or drained to the maximum extent possible (for liquids with a flash point at or above 38 degrees C (100 degrees F)) according to technical directives (technical orders, field manuals, etc.) so that no more than 5 gallons of fuel remains in the tank/lines.

A13.4.2.12. Completely empty gaseous fuel from any non-DOT specification pressurized vessel (fuel tank), lines, and regulator on liquefied petroleum gas or compressed gas powered vehicles. Ensure tanks are securely closed. Purging is not required.

A13.4.2.13. Liquefied petroleum gas or compressed gas powered vehicles containing a DOT specification cylinder as the gaseous fuel tank do not require draining. Comply with all requirements of Attachment 6 for the material and cylinder specification. Tightly close and secure cylinder shut off valve. Completely empty lines and regulator of flammable gas and vapors.

A13.4.2.14. Fuel cell powered vehicles. Secure and protect the fuel cell in a manner to prevent damage to the fuel cell. Describe equipment (other than vehicles, engines or mechanical equipment) such as consumer electronic devices containing fuel cells (fuel cell cartridges) as ‘‘Fuel cell cartridges contained in equipment.’’

A13.4.2.15. added: Liquid fueled vehicles rigged for airdrop or vehicles being transported as cargo to a staging area for a subsequent airdrop may be no more than three-fourths full. Do not load platforms containing vehicles rigged for airdrop with fuel tanks three-fourths full on the aircraft ramp.

A13.4.3. Accessorial hazards. Ensure installed components, equipment, and vehicle accessorial hazards (e.g., fire extinguishers, jerricans, etc.) are in properly configured and approved holders designed for use with the vehicle. The following applies:

A13.4.3.1. Do not remove other hazardous materials from their packaging and store in the racks or containers of vehicles or equipment unless authorized by paragraph A5.2. Special

Operations Forces and Joint Service Explosive Ordnance Disposal (EOD) units have an operational requirement and are authorized to load Hazardous Materials (HAZMAT) within unit vehicles for air shipment in accordance with the requirements established in DTR part III, Appendix H. Ensure these hazardous materials remain packaged unless authorized by paragraph A5.2.

A13.4.3.2. Secure batteries upright in designed holders except non-spillable batteries meeting Table A4.2., Special Provision A67 as nonhazardous. Orient non-spillable batteries in a manner to fit designed holder. Protect the terminals of installed batteries to prevent short circuit by use of battery boxes, protective covers, taping, etc. If battery cables are disconnected, they must be secured away from terminals, and the terminals protected.

A13.4.3.3. When loaded in a freight container, remove acid or alkali batteries and package according to A12.4. Do not ship packaged wet-cell batteries inside a freight container unless accessible during flight. Non-spillable and non-hazardous gel-type batteries may remain in the vehicle holder provided they remain upright and the cables are disconnected. Tape the ends of the cables/terminals to prevent short circuit.

A13.4.3.4. Drain engines, generators, and other equipment that are by design an approved part of an M-Series vehicle to the greatest extent possible (not to exceed 17 ounces) except the tanks may be one-half full when the vehicle is transported under the authority of Chapter 3 of this manual. Always drain engines and generators mounted to a vehicle, SE or trailer for convenience of movement or handling to the greatest possible extent. Purging is not necessary unless required by the item's technical instructions. Use UN Specification packaging (e.g., jerricans) for transport of spare fuel whenever possible.

A13.4.3.5. Prepare aircraft and helicopters for transportation according to the requirements of the respective aircraft's shipping manual.

A13.4.3.5.1. Remove all munitions and explosives, other than those installed as permanent-type aircraft equipment, according to the pertinent aircraft technical order and A3.3.1.9.

A13.4.3.5.2. Emergency equipment (e.g., life vests, signal kits, etc.) required for safe operation of the aircraft, helicopter, or boat when transported according to DTR, Part III, do not require removal if secured in approved holders/racks.

A13.4.3.5.3. Fasten batteries securely in the holder provided, with the terminals protected in such a manner as to prevent damage or short circuits. When batteries are removed and shipped with the aircraft, accomplish packaging and certification according to A12.4.

A13.4.3.6. Air-bag modules installed as a vehicle component are not subject to any other requirements of this manual.

A13.4.3.7. Lithium batteries. Secure lithium batteries contained in vehicles, engines, or mechanical equipment in the battery holder of the vehicle, engine, or mechanical equipment, and protect in such a manner as to prevent damage and short circuits (e.g., by the use of non-conductive caps that cover the terminals entirely). Prototype or low production lithium batteries securely installed, each lithium battery must be of a type that