

TECHNICAL MANUAL

**OPERATOR, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT MAINTENANCE MANUAL**

**MOBILE SEMITRAILER-MOUNTED,
PETROLEUM LABORATORY
(NSN 6640-00-538-2736)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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CHAPTER 1 INTRODUCTION

Section I. GENERAL

1-1. Scope. This manual contains the operations, operator organizational, and direct support and general support maintenance data for the mobile, semitrailer-mounted, petroleum laboratory (NSN 6640-00-538-2736). The instruction in this manual are limited to procedures for the use and maintenance of specific utility and laboratory equipment for the petroleum laboratory. Use and maintenance instructions for the XM822 semitrailer are given in TM 9-2330-271-14.

1-2. Maintenance Forms and Records. Equipment maintenance forms and procedures for their use

are contained in TM 38-750, The Army Maintenance Management Systems (TAMMS).

1-3. Reporting Equipment Improvement Recommendations (EIR). EIR's will be prepared on SF368. Maintenance Request *Instructions for* preparing EIR's are provided in TM 38-750, the Army Maintenance Management System. *EIR's* should be mailed directly to Commander, US Army Troop Support and Aviation Materiel Readiness Command, ATTN: DRSTS-ME, 4300 Goodfellow Boulevard, St. Louis, MO 63120. A reply will be furnished directly to you.

Section II. DESCRIPTION AND DATA

1-4. General. The petroleum testing laboratory is contained in the XM822 4-wheel, 10-ton semitrailer van (NSN 2330-00-122-4966) (fig. 1-1). The laboratory is used to perform tests on petroleum products in the field. Tests include qualitative and quantitative analyses of a wide range of military fuels and lubricant. The laboratory is a completely self-contained unit which requires only an external power source, a water supply and a waste water disposal facility when in operation.

a. Orientation to Laboratory and Van. Throughout this manual the terms right, left, front, and rear indicate directions from the viewpoint of the operator entering the rear door of the van (1, fig. 1-1).

b. Orientation to Laboratory Equipment. Throughout this manual the terms right, left, front and rear indicate directions from the viewpoint of the operator as he faces the item of equipment installed in the laboratory.

1-5. Laboratory Interior. The laboratory is composed of three compartment within the XM822 semitrailer.

a. Front Compartment. The front, or utility, compartment contains the air conditioner, heater unit, compressed air system, vacuum system, pressure water system, and related piping and ducting. The air conditioner (model No. 76E34-104, TM 5-4120-295-15) is rated at 60,000 BTU. The heater is made up of 12 heating elements located in the air conditioning duct. The utility compartment is completely separated from the laboratory compartment by the fume hood, gum bath area,

refrigerator, and cabinets forming the front wall of the laboratory. Access to the utility compartment is through the forward curbside door.

b. Central Compartment. The central, or laboratory compartment (fig. 1-2) has three stainless steel covered counter and cabinet areas. Special laboratory equipment is installed on countertops and adjacent walls and stowed in cabinets and drawers. The laboratories are windowless.

c. Rear Compartment. The rear compartment contains the carbon dioxide ice making machine and propane, oxygen and carbon dioxide cylinders which are located along the left, (roadside) wall. Access to the rear compartment is through a door in the partition which forms the laboratory rear wall, or the door in the van rear wall. Purging ducts run the length of the van ceiling from the utility compartment to the rear compartment. This equipment is covered in greater detail in Chapters 2 and 3 of this manual.

1-6. Laboratory Exterior. The van exterior (fig. 1-1) incorporates various items for laboratory. Special vent ports are on the right (curbside) rear exterior wall and are used with the exhaust fan located in the rear compartment. Two small vents on the left (roadside) rear wall (1) relieve the propane gas tank located in the rear compartment. A water inlet, located on the left (roadside) forward exterior wall, is used to supply water to the laboratory. The power entry receptacle and the purging timer panel (fig. 1-3) are located on the left (roadside) rear wall. Roadside and curbside compartments on the van undercarriage provide

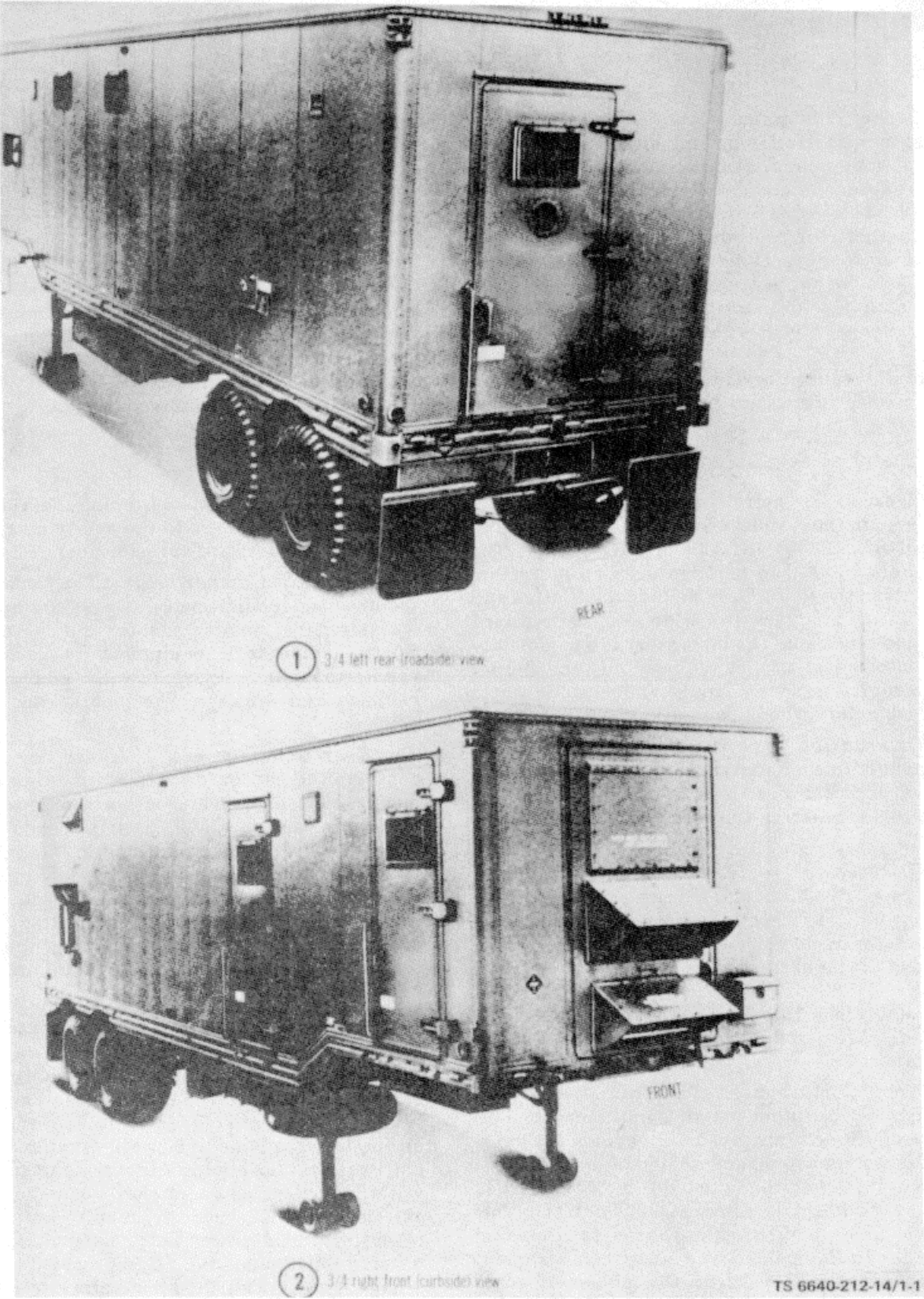


Figure 1-1. Exterior of Mobile Petroleum Laboratory Trailer