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HANDBOOK
OPERATION AND SERVICE INSTRUCTIONS

TYPE F-1
FUEL SERVICING TRUCK TRACTOR
REO MODEL 29XS

(REGISTRATION NOS. 529578 TO 531317 INCLUSIVE AND 5130000 TO 5130218 INCLUSIVE)

AND CHASSIS FOR
TYPE 0-1 (Class 150)
CRASH FIRE TRUCK

(REGISTRATION NOS. 508517 TO 508640 INCLUSIVE)

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TYPE F-1 MODEL 29XS REO FUEL SERVICING TRUCK

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SECTION I
INTRODUCTION

1. SCOPE.

This publication comprises the Service Instructions for the Type F-1 Model 29XS Fuel Servicing Truck, manufactured by Reo Motors, Inc., of Lansing, Michigan Authorization is given under contract No. W535AC27790.

2. DEFINITIONS.

In this publication the following definitions will be used:

a. Front, rear, left, and right sides of the vehicle, engine, and component subassemblies and parts are designated in accord with the driver's position behind the wheel.

b. ENGINE CRANKSHAFT ROTATION.—Engine crankshaft rotation is counterclockwise.

c. PROPELLER SHAFT ROTATION.—The transfer case to front axle propeller shaft rotates in a clockwise direction. All other propeller shafts rotate in a counterclockwise direction.

d. NUMBERING OF ENGINE CYLINDERS.—The six cylinders of the Hercules engine HXD are numbered from front to rear; the cylinder nearest to the fan, therefore, is cylinder number one, as indicated in figure 24.

NOTE

For in-line engines the British use the reverse of the U.S. system.

SECTION II
GENERAL DESCRIPTION

1. GENERAL.

(See figures 1 and 2.)

a. The Reo fuel servicing truck tractor, 7½ ton, 6-x-6, type F-1, will normally tow two F-1 or F-1A fuel servicing trailers, loaded, over concrete or hard surface roads, ramps, or smooth terrain for the transportation of gasoline from rail heads, bulk plants, or refineries, to storage facilities, or final point of issue at service activities.

b. This truck tractor is provided with a conventional fifth wheel which is mounted on the frame, above and

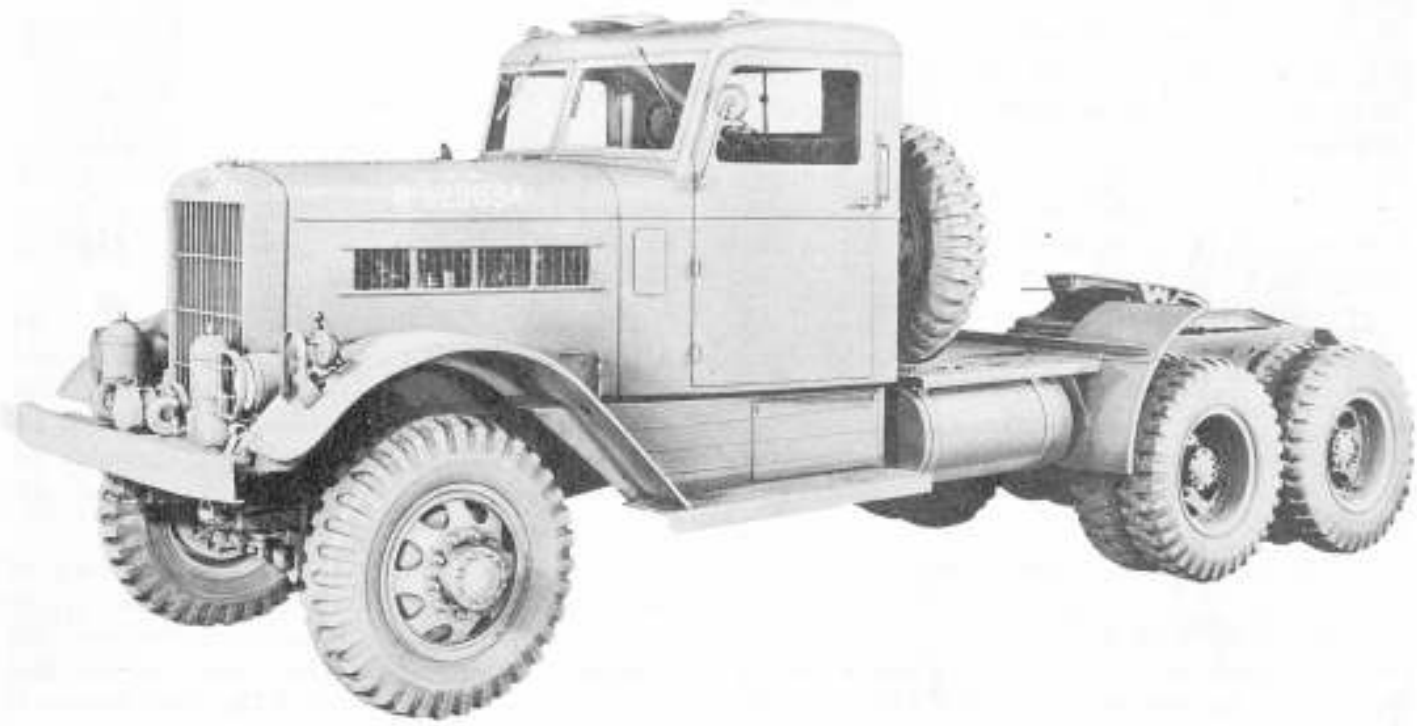

Figure 1—Left Three-Quarter Front View, Model 29XS, Type F-1, Fuel Servicing Truck (Reo)

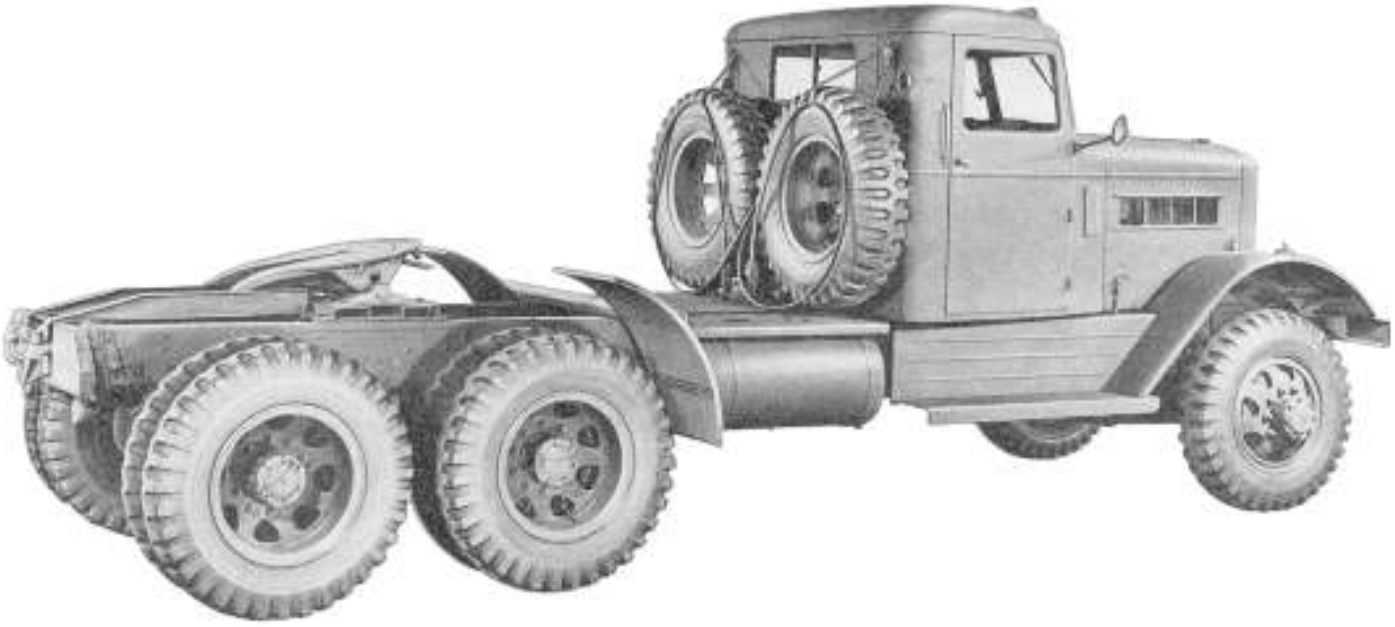

Figure 2—Right Three-Quarter Rear View, Model 29XS, Type F-1, Fuel Servicing Truck (Reo)

between the tandem rear axles. (See figure 202.) The fifth wheel is used as a combination towing attachment and pivot support for the tank trailer.

c. This vehicle is equipped with a Hercules HXD, six-cylinder gasoline engine, mounted at the front of the vehicle. Power is transmitted from the engine to front axle or rear axles by means of the transmission, transfer case, and propeller shafts.

d. The Type F-1 Model 29XS Fuel Servicing Truck tractor is equipped with a tandem rear axle drive unit, sometimes known as "six-wheeler" construction. (See figure 148.) The driving unit is the "through drive" type, which assures direct transmission of engine torque from the forward driving axle to the rear driving axle through an intermediate propeller shaft.

e. A front drive axle is provided. (See figure 134.) It is the "live axle" type with full-floating housing construction. Power is transmitted to the front axle by means of a transmission, transfer case, and propeller shafts. Front axle drive can be engaged or disengaged at driver's discretion by means of the front axle control lever.

f. Eight wheels and tires are mounted in four dual assemblies on the tandem rear axle. Two single wheels and tires are mounted on the front axle. To give dual wheel equipment on front axle, if conditions or terrain warrant such an installation, provision has been made for installation of two more wheels on the front axle. (See figure 183.) Two spare wheels and tires are mounted on back of the cab. All wheels and tires are interchangeable.

2. ENGINE.

(See figures 3 and 4.)

a. The Reo fuel servicing truck is equipped with a Hercules HXD gasoline engine of six-cylinder, four-cycle, "L"-head design. The bore is 5½ inches, stroke six inches, and piston displacement 855 cubic inches.

b. The cylinders are iron, cast in two blocks of three cylinders each. Two detachable cast-iron cylinder heads are installed on the blocks. The cylinder heads are drilled and tapped for dual ignition and for priming cups. The crankcase is cast of aluminum.

c. The crankcase, cylinders, and cylinder heads are held rigidly together, not only by the conventional studs and nuts, but also by special through bolts. The lower ends of these special through bolts form the main bearing studs. They extend upward through the cylinder blocks and heads. Their upper ends are machined for installation of cylinder head nuts.

d. A three-point suspension principle is used in mounting the engine in the vehicle. Two rear support arms rest on brackets that are riveted to the frame side members. Cushions are provided between the rear support arms and support bracket. The front support is a trunnion bracket bolted to the engine support cross member.