TM 9-796
WAR DEPARTMENT TECHNICAL MANUAL

HEAVY WRECKING TRUCK M1A1

(KENWORTH MODEL 573, WARD LaFRANCE SERIES 5)

© PAPERPRINT.BE 2009

© PAPERPRINT.BE 2009

WAR DEPARTMENT TECHNICAL MANUAL

TM 9-796

HEAVY WRECKING TRUCK M1A1

(KENWORTH MODEL 573, WARD LaFRANCE SERIES 5)



WAR DEPARTMENT
3 March 1944

WAR DEPARTMENT Washington, 25, D. C., 3 March 1944

TM 9-796, Heavy Wrecking Truck M1A1 (Kenworth Model 573, Ward LaFrance Series 5), is published for the information and guidance of all concerned.

[A. G. 300.7 (19 Jan. 44)]

By Order of the Secretary of War:

G. C. MARSHALL, Chief of Staff.

OFFICIAL:

J. A. ULIO,

Major General,

The Adjutant General.

DISTRIBUTION: R 9 (4); IR 17 (2); Bn 9 (2); IBn 5 and 17 (2); C 9 (5); IC 2 and 5 (2), 17 (1)

(For explanation of symbols, see FM 21-6)

CONTENTS

PART ONE—VEHICLE OPERATING INSTRUCTIONS

			Paragraphs	Pages
SECTION	I	Introduction	1	5
	II	Description and tabulated data	2–5	6–13
	III	Driving controls and operation	6–8	14–28
	IV	Auxiliary equipment and controls	9–13	29–46
	V	Operation under unusual conditions	14–19	47–54
	VI	First echelon preventive maintenance service	20–24	55–66
	VII	Lubrication	25–26	67-82
	VIII	Tools and equipment stowage on vehicle	27–28	83–98
PA	RT TW	O-VEHICLE MAINTENANCE IN	STRUCTION	45
SECTION	IX	New vehicle run-in test and record of modifications	29–32	99–10 4
	X	Second echelon preventive maintenance	33	105–129
	XI	Organization tools and equipment	34	130
	XII	Trouble shooting	35–50	131–146
	XIII	Engine	51–61	147–161
	XIV	Engine removal and installation	62–63	162–166
	ΧV	Clutch	64–66	167-172
	XVI	Fuel, air intake, and exhaust systems	67–78	173–180
	XVII	Cooling system	79–87	181–191
3	(VIII	Ignition system	88-97	192–198
	XIX	Starting and generating system	98–103	199–203
	XX	Battery and lighting	104_130	204_222

TM 9-796

HEAVY WRECKING TRUCK M1A1 (KENWORTH MODEL 573, WARD LaFRANCE SERIES 5)

			Paragraph\$	Pages
SECTION	XXI	Transmission	140-143	223-225
	IIXX	Transfer case	144-147	226–228
2	IIIXX	Propeller shafts	148–151	229–231
	XXIV	Front axle	152-160	232–237
	XXV	Rear axle	161–165	238–243
	XXVI	Brake system	166–189	244–267
X	XVII	Wheels, wheel bearings, hubs, and tires	190–198	268–274
X	XVIII	Springs and shock absorbers	199–204	275–281
2	XXIX	Steering gear	205-210	282-287
	XXX	Body and frame	211-229	288–296
2	IXXX	Instruments	230–239	297-300
Х	IIXX	Power take-off	240-243	301–302
X	IIIXX	Winches	244–259	303-314
X	XXIV	Crane	260-275	315–326
3	XXXV	Shipment and temporary storage	276–278	327–331
R	EFEREN(CES		332–334
In	DEX			335

PART ONE—VEHICLE OPERATING INSTRUCTIONS

Section I

INTRODUCTION

				F	'aragrapi
Scope	 	 	 		1

1. SCOPE.

- a. This technical manual is published for the information and guidance of the using arm personnel charged with the operation, maintenance, and minor repair of this material.
- b. In addition to a description of the Heavy Wrecking Truck M1A1, this manual contains technical information required for the identification, use, and care of the materiel. The manual is divided in two parts. Part One, section I through section VIII, gives vehicle operating instructions. Part Two, section IX through section XXXV, gives vehicle maintenance instructions to using arm personnel charged with the responsibility of doing maintenance work within their jurisdiction.
- c. In all cases where the nature of the repair, modifications, or adjustment is beyond the scope of facilities of the unit, the responsible ordnance service should be informed so that trained personnel with suitable tools and equipment may be provided, or proper instructions issued.

TM 9-796 2-4

HEAVY WRECKING TRUCK M1A1 (KENWORTH MODEL 573, WARD LaFRANCE SERIES 5)

Section II

DESCRIPTION AND TABULATED DATA

Paragrap					
Description					
Serial number plate 3					
Tabulated data 4					
Adjustment specifications 5					
2. DESCRIPTION.					
a. The following models of vehicles are covered by this manual Kenworth Model 573					
Ward LaFrance Model 1000, Series 5					
b. The Heavy Wrecking Truck M1A1 is used for towing, salvaging, and recovering heavy equipment as well as for numerous repair operations away from a base shop, where heavy hoist and winch equipment is needed. It is a wheeled vehicle powered by a 6-cylinder, water-cooled, gasoline engine. Power is delivered through a five-speed transmission and two-speed transfer case to one front and two rear axles, thus providing driving traction on all wheels. Single pneumatic tires are used on the front axle, and dual pneumatic on the rear. However, provision is made for mounting dual wheels and tires on the front axle. The vehicle is equipped with a full-power driven crane, and front and rear mounted winches.					
3. SERIAL NUMBER PLATE.					

a. This plate gives pertinent information, such as model, serial number, weight, fuel and oil recommendations, and publications covering the truck, and is attached to the instrument panel (fig. 6).

4. TABULATED DATA.

и.	CN	gın	e.
----	----	-----	----

Engine, type
Number of cylinders 6
Bore $4^{\text{I}}/2$ in.
Stroke $5\frac{1}{4}$ in.
Piston displacement 501 cu in.
Governed speed 2,400 rpm

b. Chassis.

Wheelbase	 . 181 in.
Weight	 31,200 lb
Length, over-all	 2803/4 in.
Width, over-all	 $99\frac{1}{2}$ in.

Figure 1—Truck, Wrecking, Heavy MIAI—Right Front View

DESCRIPTION AND TABULATED DATA

