

Operator's Manual

for

85' AERIAL LADDER

FIRE FIGHTING TRUCK

NSN 4210-00-965-1254

HEADQUARTERS DEPARTMENT OF THE ARMY
3 NOVEMBER 1986

COMPLETE MANUAL TABLE OF CONTENTS

Publication	Section	Section Title
TM 5-4210-227-24&P-1	1	Introduction/Tabulated Data
	2	Chassis Assembly
	3	Pump Assembly
	4	Ladder Assembly
	5	Hydraulic System
	6	Electrical System
	7	Pneumatic System
	8	Ladder Calibration and Adjustments
	9	Illustrations
TM 5-4210-227-24&P-2		General Information
	1	Engine (less major assemblies)
	2	Fuel System and Governors
	3	Air Intake Systems
	4	Lubrication System
	5	Cooling System
	6	Exhaust System
	7	Electrical Equipment, Instruments and Protective Systems (Sections 8 through not included)
	11	Special Equipment
	12	Operation
	13	Tune-up
	14	Preventive Maintenance, Troubleshooting and Storage
	15	
TM 5-4210-227-24&P-3	1	General Information
	2	Description and Operation
	3	Preventive Maintenance
	4	General Overhaul Information
	5	Disassembly of Transmission
	6	Rebuild of Subassemblies
	7	Assembly of Transmission
	8	Wear Limits and Spring Data
TM 5-4210-227-24&P-4	1	Allison Automatic Transmission HT 700 Series Parts Catalog
	2	Supplemental Parts Information
TM 5-4210-227-24&P-5	1	Drive Line
	2	Front Axle
	3	Rear Axle
	4	Steering System
	5	Fuel System
	6	Brake System
	7	Electrical System
	8	Miscellaneous

COMPLETE MANUAL TABLE OF CONTENTS (Continued)

Publication	Section	Section Title
TM 5-4210-227-24&P-5 (continued)	9	General Information
	10	Installation Instructions
	11	Troubleshooting and Service
TM 5-4210-227-24&P-7		General Information
	1	Engine (less major assemblies)
	2	Fuel System and Governors
	3	Air Intake System
	4	Lubricator System
	5	Cooling System
	6	Exhaust System
	7	Electrical Equipment, Instruments and Protective Systems
	8	Power Take-off and Torque Converter
	9	Transmissions (Sections 10 and 11 not included)
	12	Special Equipment
	13	Operation
	14	Tune-up
	15	Preventive Maintenance, Troubleshooting and Storage
TM 5-4210-227-24&P-8		Parts List and Foldouts
		Tools and Equipment
TM 5-4210-227-10	1	Introduction/Tabulated Data
	2	Operator's Instructions
	3	Operator Maintenance
	4	Illustrations
	5	Operator's Manual, Series 92 Engines
	6	Operator's Manual, Series V-71 Engines
	7	Built-in Parts Book for Detroit Diesel Engines
	8	Operator's Manual, Fire Apparatus Chassis

FORWORD

Descriptions, instructions and parts listing pertaining to the Model QWT 85 are discussed throughout this manual under general headings. Foldout illustrations and schematics are located at the rear of this volume. The foldout format is provided in order that illustrations may be continuously referred to while the supporting text is being examined and studied.

A detailed description is given in the Introduction of each Part of the manual to assist the user in finding the information required to operate or maintain the equipment.

Operator's Manual (TM 5-4210-227-10)

This manual is designed to provide the information necessary for a fire fighter or mechanic to properly operate the truck, the pump and the ladder.

Maintenance Manual (TM 5-4210-227-24&P)

This manual contains the information necessary for an experienced mechanic to maintain and repair all facets of the apparatus. Each volume is individually indexed for ease of reference. This manual contains all the information necessary to obtain assemblies and subassemblies or individual parts, required to repair and maintain the fire truck.

SECTION 1

1. INTRODUCTION/TABULATED DATA

1.1 INTRODUCTION

1.1.1. This manual contains all the information necessary for the safe and efficient operation of the Truck Fire Fighting Ladder 85'. Descriptions, operating instructions, safety precautions and operator maintenance are discussed under the main headings: Chassis Assembly, Pump Assembly and Ladder Assembly. Throughout the manual the complete truck assembly is referred to as the QWT 85.

1.1.2. TM 5-4210-227-24&P, Organizational, Direct Support, and General Support Maintenance Manual for 85' Aerial Ladder Fire Fighting Truck is divided into eight volumes which are further subdivided into specific sections. This manual (TM 5-4210-227-10) consists of eight separate sections. The manual is designed for use by experienced fire fighters and fire fighting techniques have been included. Although the operator may be familiar with similar fire fighting equipment, all the operating and safety instructions contained in this manual must be read and understood before attempting to operate this unit. Particular attention must be given to the "WARNINGS" and "CAUTIONS" distributed throughout the text.

1.1.3. The Operator's Manual consists of eight sections arranged as follows:

1. Introduction/Tabulated Data
2. Operating Instructions
3. Operator Maintenance
4. Illustrations
5. Operator's Manual, Series 92 Engines
6. Operator's Manual, Series V-71 Engines
7. Built-in Parts Book for Detroit Diesel Engines
8. Operator's Manual, Fire Apparatus Chassis

1.2 TABULATED DATA

- a) Fire Truck
Federal Stock Number: 4210-00-965-1254
Manufacturer's Serial No.:
Registration Nos.: CM3653 through CM3664
Manufacturer: Pierre Thibault Inc.
Model: QWT 85
Contract Number: DAAJ10-84-A218
Truck Length: 459"
Truck Width: 108"
Truck Height: 138"
Capacity or Payload: 51,000 GVWR
Shipping Weight: 43,880
Ground Clearance: 10.25"
Weight Loaded: 45,940
 Front Axle 19,740
 Rear Axle 26,200
- b) Chassis
Manufacturer: Duplex
I.D. Number: I.C. 1D91 D31
D6F 1008468
Model: D350
Wheel Base 230"
- c) Engine
Manufacturer: Detroit Diesel
Model: 8V-71 Turbo
Serial Number: 8VA437868
Fuel: Diesel
- d) Transmission
Manufacturer: Allison
Model: HT-740
Serial No.: 2510087501
Capacity: 7 1/2 Gals