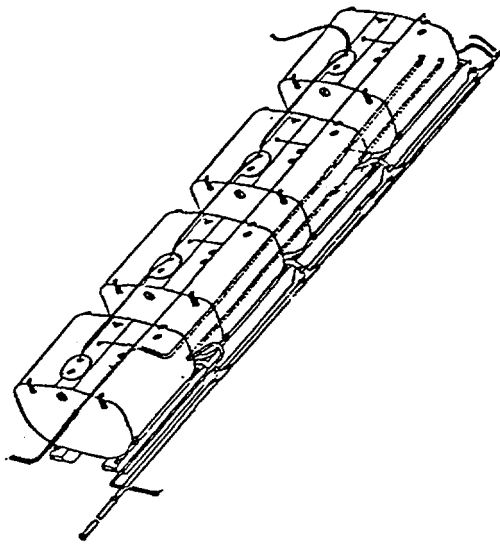


TECHNICAL MANUAL
OPERATOR, AVIATION UNIT, AND AVIATION
INTERMEDIATE MAINTENANCE MANUAL

WITH REPAIR PARTS AND SPECIAL TOOLS LIST

EXTENDED RANGE FUEL SYSTEM
ARMY MODEL CH-47 HELICOPTER



PART NUMBER
85SDSCC-D-0007-2

NATIONAL STOCK NUMBER
1560-01-221-7600

CHAPTER 1 INTRODUCTION

CHAPTER 2 INSTALLATION AND OPERATING INSTRUCTIONS

CHAPTER 3 MAINTENANCE INSTRUCTIONS

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No. 55-1560-307-13&P

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DEPARTMENT OF THE ARMY
WASHINGTON, D.C., 11 December 1990

OPERATOR, AVIATION UNIT, AND AVIATION
INTERMEDIATE MAINTENANCE MANUAL
WITH REPAIR PARTS AND SPECIAL TOOLS LIST

FOR

EXTENDED RANGE FUEL SYSTEM
600 GALLON TANKS
NSN 1560-01-221-7600

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistake or if you know of a way to improve the procedure, please let us know. Mail your letter or DA Form 2028 (Recommended Changes to Publications and Blank Forms) directly to: Commander, U.S. Army Aviation Systems Command, ATTN: AMSAV-MC, 4300 Goodfellow Blvd., St. Louis, MO 63120-1798. A reply will be furnished to you.

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CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION

1-1. SCOPE. This TM is to be used by operator and unit maintenance personnel in maintaining the extended range fuel system (ERFS), P/N 85SDSCC-D-0007-2, used on CH-47C/D aircraft. This system is used to supplement the aircraft standard fuel system for longer sustained flights and for refueling other aircraft.

1-2. PURPOSE. This ERFS manual provides instructions for installation, operation, maintenance, troubleshooting, and storage. It also includes a repair parts and special tools list.

1-3. FORMS, RECORDS, AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-751, The Functional User's Manual for the Army Maintenance Management System Aviation (TAMMS-A). In accordance with provisions of DA PAM 738-751, an entry should be made on DA Form 2408-13 when the ERFS is installed or removed. This entry will make personnel aware of prescribed operational limits and aircraft center of gravity *(CG) for weight and balance purposes.

1-4. REPORTING EQUIPMENT IMPROVEMENT AND RECOMMENDATIONS (EIRs). EIRs will be prepared using SF Form 368, Quality Deficiency Report. Instructions for preparing EIRs are provided in DA PAM 738-751, Functional User's Manual for the Army Maintenance System Aviation (TAMMS-A). EIRs should be mailed to Commander, U.S. Army Aviation Systems Command, ATTN: AMSAV-QF 4300 Goodfellow Blvd., St. Louis MO 63120-1978. A reply will be furnished directly to you.

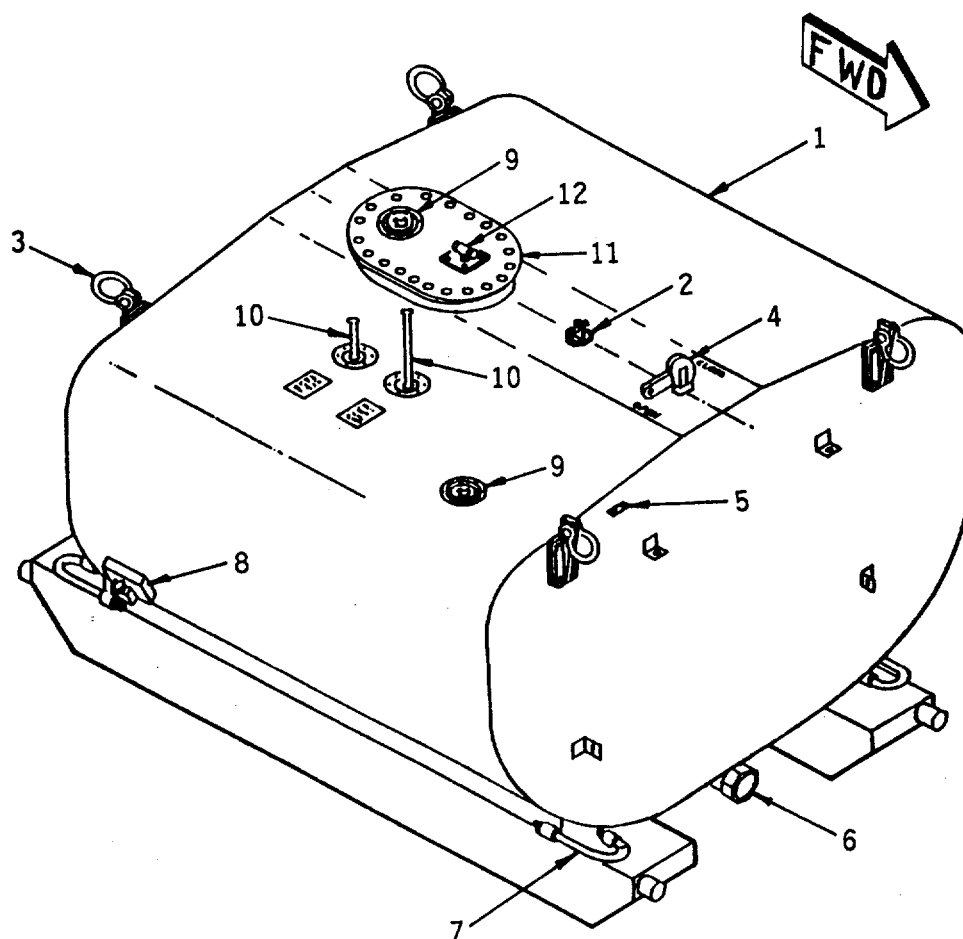
1-5. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE. For destruction of Army material to prevent enemy use, refer to TM 750-244-1-5, Procedures for the Destruction of Aircraft Associated Equipment to Prevent Enemy Use.

1-6. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC). Qualified personnel shall inspect completed work for full compliance with technical requirements of instructions. Inspection shall be in accordance with an approved prescribed inspection system to be determined at work site.

Section II. EQUIPMENT DESCRIPTION AND DATA

1-7. PHYSICAL DESCRIPTION. The ERFS provides aircraft mission flexibility by extending aircraft range and by providing forward area refueling source. The ERFS is mounted on the left-hand side of the aircraft between stations 190 and 450, depending on aircraft CG requirements. The ERFS is a modular, interconnectable system composed of up to four 600 gallon NON-CRASHWORTHY metal tanks, four electrically operated

fuel pumps, a vent system, associated wiring, plumbing, and mounting hardware, Figure 1-1. The tanks will be filled to 580 gallons when in use. The tanks are secured using 5K and 10K pound cargo strap assemblies. The fuel management control panel (FMCP) is housed in an aluminum constructed box, and is mounted on the most forward tank.

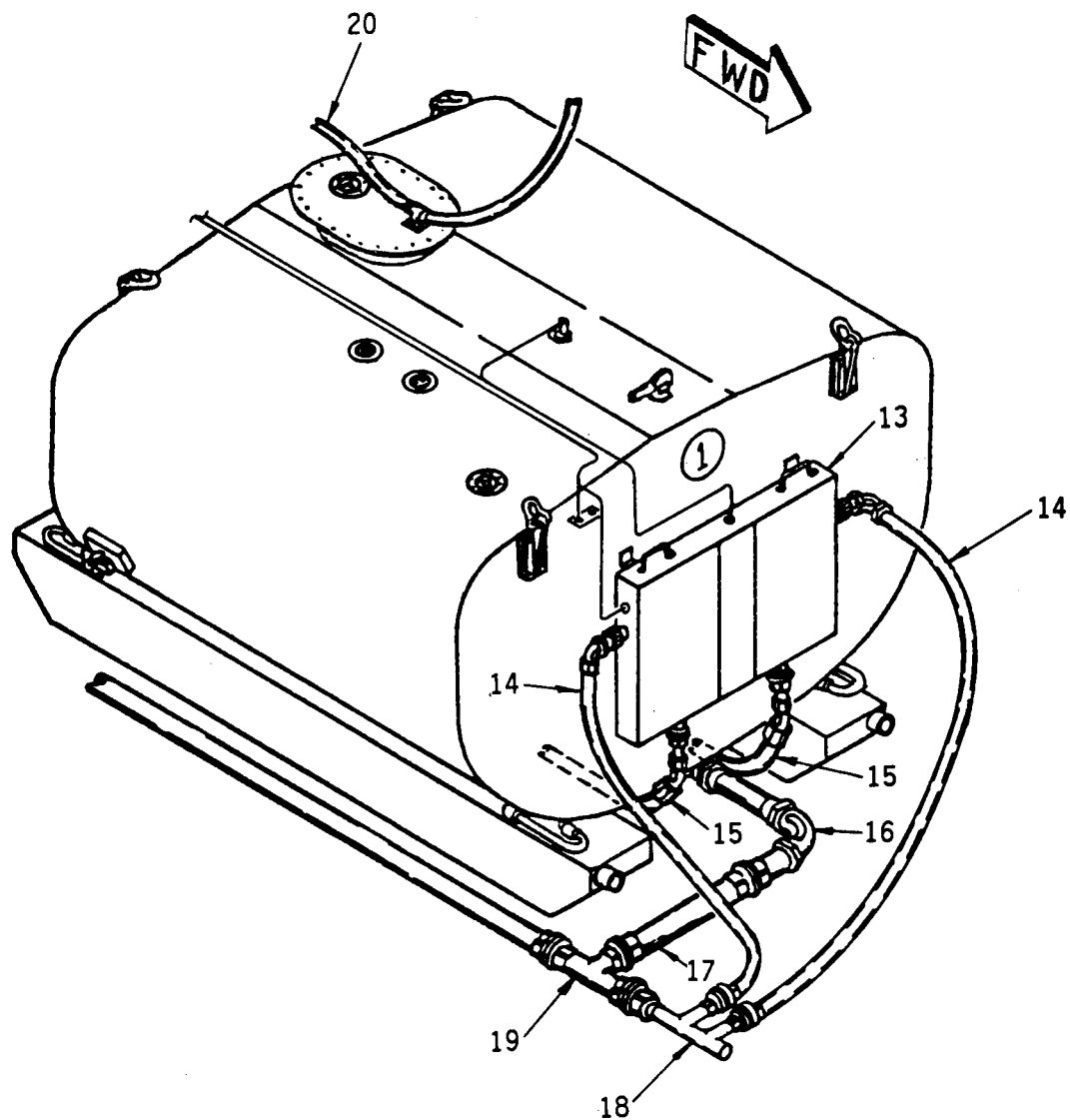


NOTE

TIEDOWN STRAPS OMITTED FOR CLARITY.

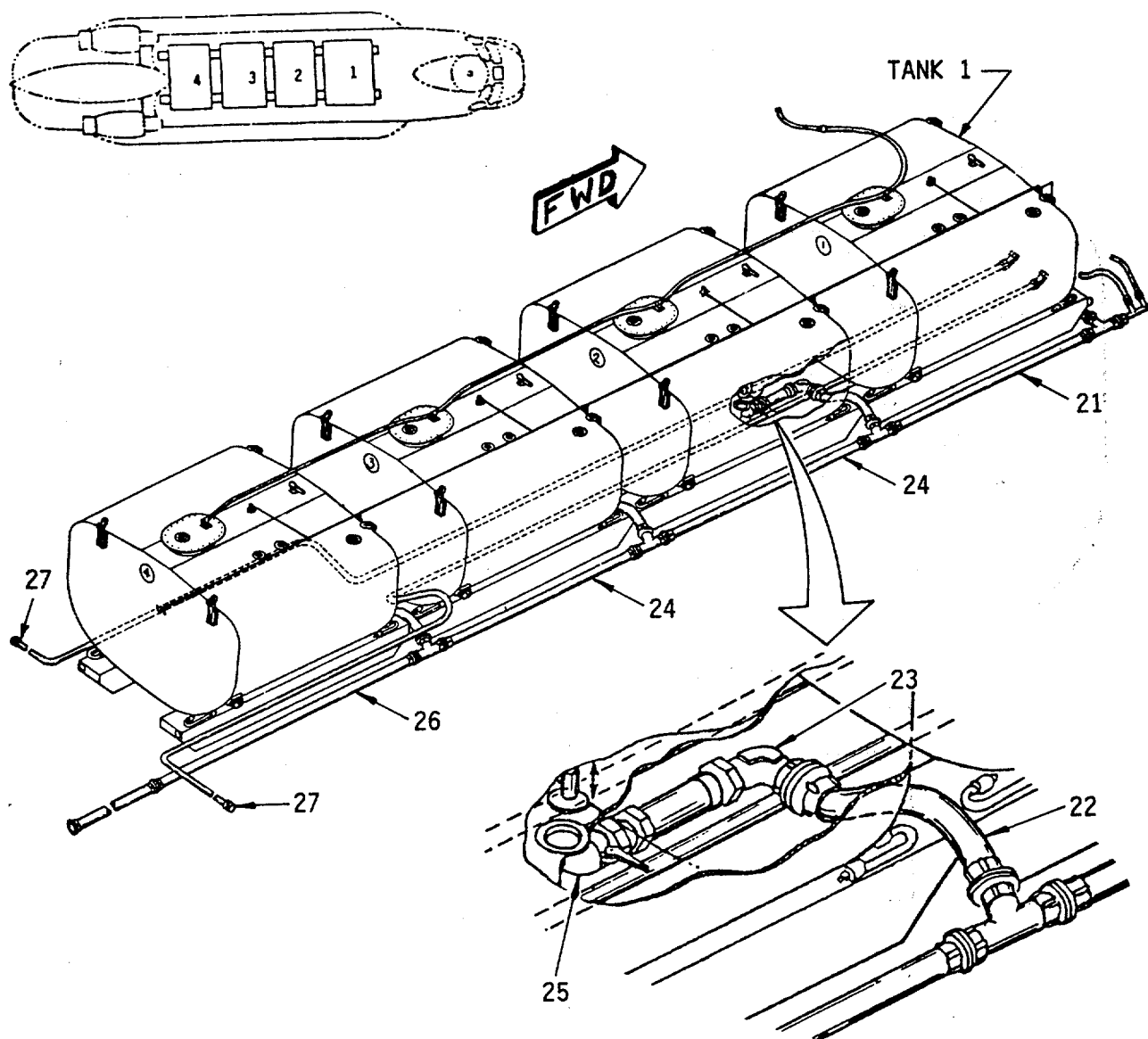
- | | |
|-----------------------|----------------------------|
| 1. Tank, 600 Gallon | 7. Tiedown Assy |
| 2. Float Assy | 8. Poppet Drain Cock |
| 3. Hoisting Eyes | 9. Fuel Filler Assy |
| 4. Cam Lever | 10. Liquid Level Indicator |
| 5. Receptacle, Ground | 11. Cover, Access |
| 6. Dump Valve Fitting | 12. Fitting, Vent |

Figure 1-1. Extended Range Fuel System (Sheet 1 of 5)



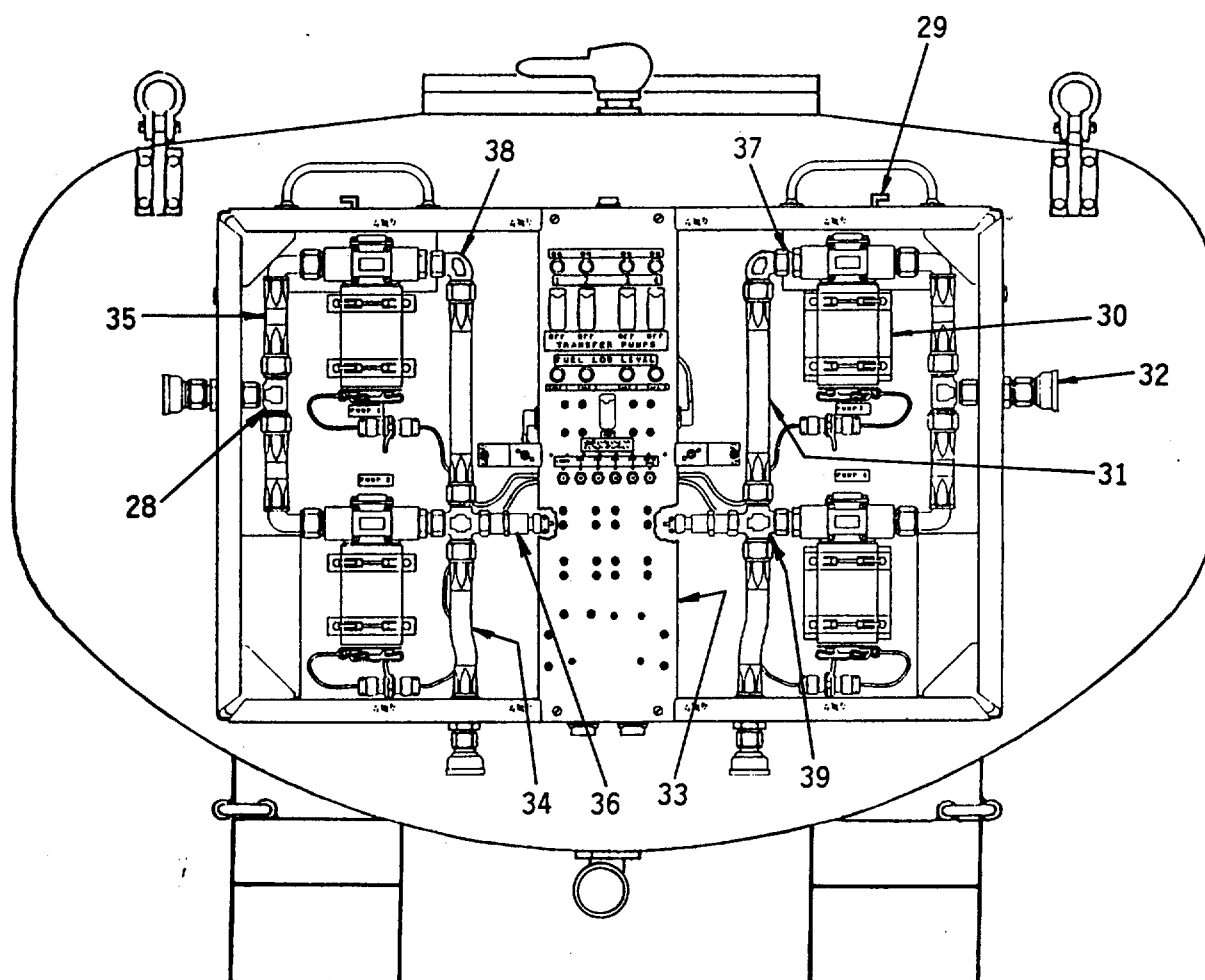
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|---------------------------|----------------------------------|
| 13. Panel Assy | 17. Hose Assy |
| 14. Hose Assy (Suction) | 18. Coupling, Half Identical Tee |
| 15. Hose Assy (Discharge) | 19. Tee Assy (4 required) |
| 16. Coupling Half, Quick | 20. Hose Assy Vent |

Figure 1-1. Extended Range Fuel System (Sheet 2 of 5)



- | | |
|-----------------------------|--------------------------|
| 21. Hose Assy | 25. Adapter |
| 22. Hose Assy (3 required) | 26. Hose Assy |
| 23. Elbow Assy (3 required) | 27. Coupling Half, Quick |
| 24. Hose Assy (2 required) | (2 required) |

Figure 1-1. Extended Range Fuel System (Sheet 3-of 5)



- | | |
|--|--|
| 28. Tee, Tube (2 required) | 34. Hose (2 required) |
| 29. Pin, Quick Release
(4 required) | 35. Hose (4 required) |
| 30. Pump (4 required) | 36. Sensor Level Electro
Optical (2 required) |
| 31. Hose (2 required) | 37. Nipple (4 required) |
| 32. Coupling, Half
(4 required) | 38. Elbow Tube (2 required) |
| 33. Electrical Control Panel | 39. Cross (2 required) |

Figure 1-1. Extended Range Fuel System (Sheet 4 of 5)