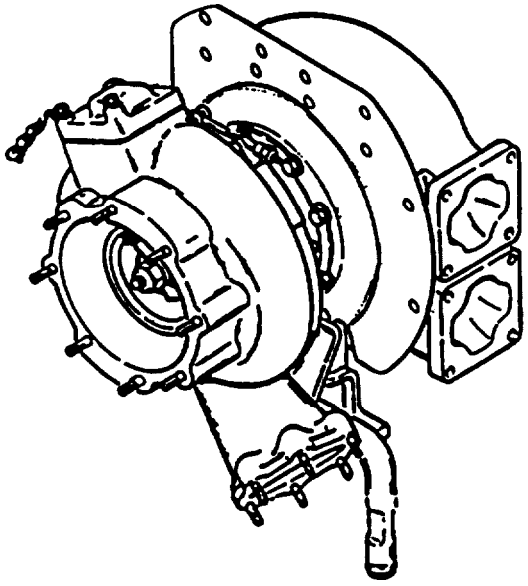
TECHNICAL MANUAL
DIRECT SUPPORT AND GENERAL SUPPORT
MAINTENANCE MANUAL

(INCLUDING REPAIR PARTS AND SPECIAL TOOLS LIST)



TURBOSUPERCHARGER

SCHWITZER MODEL 5HDR

NSN 2950-01-432-0369 [12366708-1]
NSN 2950-01-434-3229 [12366708-2]
NSN 2950-00-397-3384 [11668377-1]
AND 2950-01-167-1700 [187727]

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Distribution Statement A: Approved for public release; distribution Is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

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Washington D.C., 21 June 1984

Direct Support and General Support Maintenance Manual (Including Repair Parts and Special Tools List) for TURBOSUPERCHARGER SCHWITZER MODEL 5HDR NSN 2950-00-397-3384 (11668377-1), 2950-01-167-1700 (187727), 2950-01-432-0369 (12366708-1), AND 2950-01-434-3229 (12366708-2)

REPORTING OF ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 located in the back of this manual direct to: Commander, U.S. Army Tank-automotive and Armaments Command, ATTN: AMSTA-AC-NML, Rock Island, IL 61299-7630.

You may also provide DA Form 2028-2 information to TACOM via datafax or e-mail:

- TACOM's fax number is DSN 793-0726 or Commercial (309) 782-0726
- TACOM's e-mail address is amsta-ac-nml@ria-emh2.army.mil
- Soldier Support Network: http://www-ssn.ria.army.mil/ssn/larn.html

Marine Corps users submit NAVMC Form 10772 directly to: Commanding General, Marine Corps Logistics Base (Code 850), Albany GA 31704-5000.

A reply will be furnished directly to you.

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*Supersedes copy dated 10 October 1975.

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HOW TO USE THIS MANUAL

This technical manual describes the Direct Support (DS) and General Support (GS) maintenance and repair requirements for the Schwitzer Model 5HDR Turbosupercharger. To use the maintenance procedures in this manual properly, you must familiarize yourself with the entire procedure before beginning the maintenance task. Information in this manual is divided into three chapters, three appendixes, and an index. Sections, paragraphs and tables are numbered sequentially within each chapter. Use the front cover locators to quickly find the parts of the manual used most often.

Chapter 1 contains general introductory information and a description of the characteristics, capabilities, and major components of the turbosuperchargers. A nomenclature cross-reference list is provided in Chapter 1 which compares common nomenclature used in the manual with official nomenclature when a difference exists. This should help you locate repair parts in the Repair Parts and Special Tools List by official nomenclature.

Chapter 2 lists and illustrates common and special tools required to repair the turbosupercharger. This chapter also contains instructions for inspecting and troubleshooting the turbosupercharger.

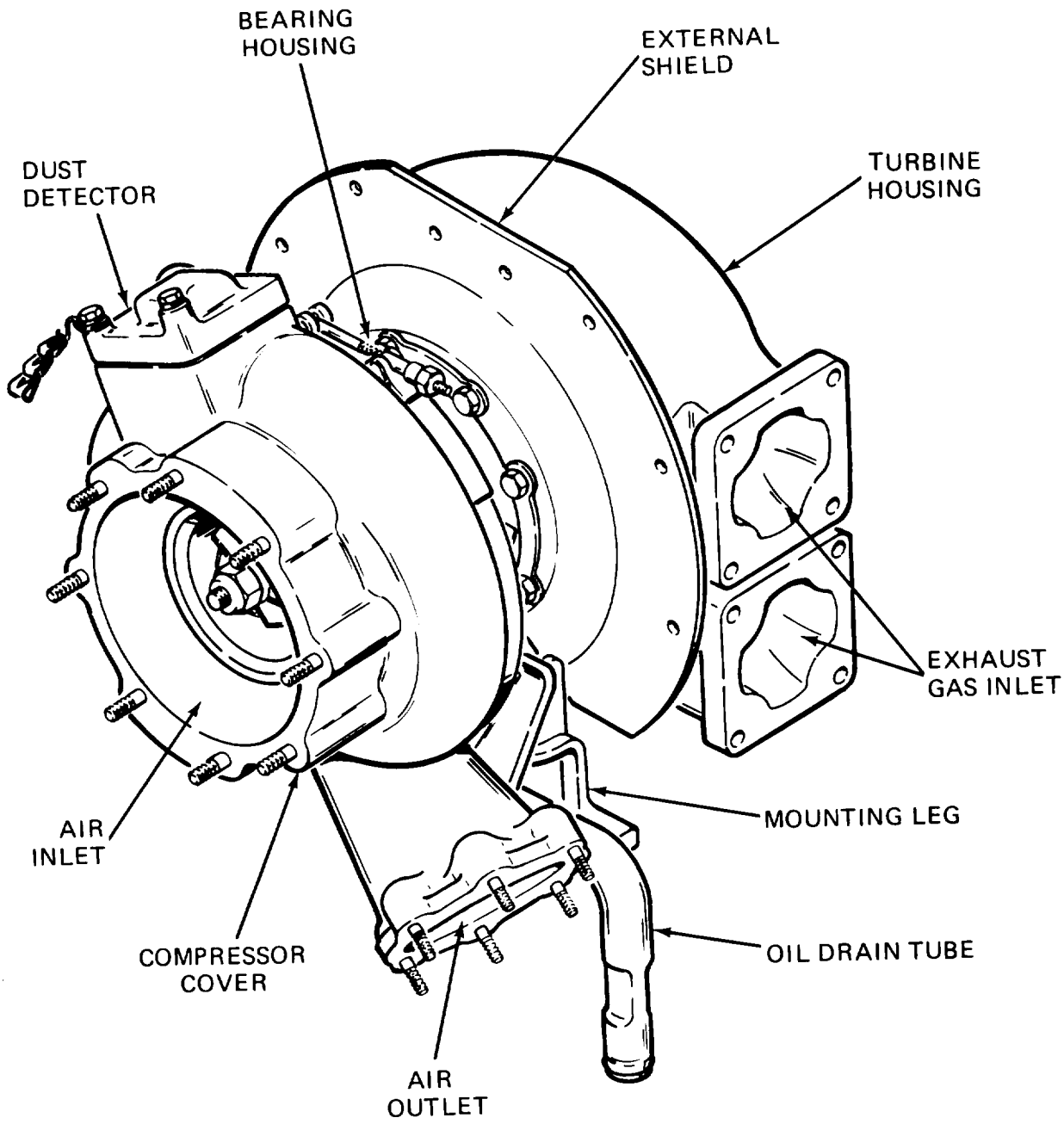
Chapter 3 contains procedures for disassembly, cleaning, inspection, repair and assembly of the turbosupercharger. Lubrication instructions and testing, as well as packaging and preservation procedures, are also contained in Chapter 4. Throughout the disassembly portion of the chapter, you are instructed to remove and discard certain items such as gaskets, seals, and bearings. These disposable parts are furnished in a turbosupercharger parts kit (refer to the Repair Parts and Special Tools List in Appendix B). All kit parts listed must be used during assembly.

Appendix A, References, provides a listing of U.S. Army publications which apply to this manual.

Appendix B is the Repair Parts and Special Tools List.

Appendix C, Expendable Supplies and Materials, is a list of consumable material required to maintain the turbosupercharger at DS/GS level.

An alphabetical index is also provided at the end of this manual, and a metric conversion table is included on the inside back cover.



Turbosupercharger - typical left hand mounting.

CHAPTER 1

INTRODUCTION

Section I. GENERAL INFORMATION.

1-1. SCOPE.

a. Type of Manual. This technical manual contains instructions for the maintenance and repair of the Schwitzer Model 5HDR Turbosupercharger at the Direct and General Support level.

b.. Equipment Identification. There are four configurations of Model 5HDR turbosupercharger covered In this manual. Part numbers 11668377-1 (standard, no longer available) and 187727 (clean air) can be mounted on either the right or left bank of various AVDS-1790 series engines. Part numbers 12366708-1 (right bank) and 12366708-2 (left bank) are used on AVDS-1790-8CR engines.

c. Purpose of the Equipment. Turbosuperchargers are basically centrifugal blowers driven by engine exhaust gases which deliver high volumes of compressed air to the engine intake manifold. Engines with turbosuperchargers are able to develop more power per unit of fuel consumed.

1-2. MAINTENANCE FORMS AND RECORDS.

Department of the Army forms and records used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System (TAMMS).

1-3. PREPARATION FOR STORAGE OF EQUIPMENT.

Instructions for preservation administrative storage of your Schwitzer turbosupercharger are contained in paragraph 3-13.

1-4. NOMENCLATURE CROSS REFERENCE LIST.

This list includes nomenclature cross-references used in this manual.

COMMON NAME	OFFICIAL NOMENCLATURE
Turbo, Turbocharger	Turbosupercharger, Schwitzer Model 5HDR
Cap screws	Screws, Cap, Hexagon Head
Oil drain tube	Tube Assembly, Metal
Nut	Nut, Self-locking, Hexagon
Compressor wheel	Impeller, Fan, Axial
Compressor wheel shims	Shim, Endplay Adjusting
Thrust ring	Ring, Turbosupercharger
Locking plate	Locking Plate, Nut and Bolt
Shield	Shield, Turbosupercharger
Backplate	Backplate, Turbine
Cap screws	Screws, Externally Relieved Body
Filter	Filter, Air, Electrostatic
Compressor cover adapter	Adapter, Straight, Tube to Boss
Turbine wheel and shaft assembly	Turbine Wheel Assembly