

TECHNICAL MANUAL

**OPERATOR'S, ORGANIZATIONAL, DIRECT SUPPORT
AND GENERAL SUPPORT
MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS INFORMATION
AND SUPPLEMENTAL OPERATING,
MAINTENANCE AND REPAIR PARTS INSTRUCTIONS)**

FOR

**AUGER, EARTH
SKID MOUNTED
TEXOMA MODEL 270-9
REEDRILL INC.
(NSN 3820-01-146-7204)**

HEADQUARTERS, DEPARTMENT OF THE ARMY

21 MAY 1985

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HEADQUARTERS
DEPARTMENT OF THE ARMY
Washington, DC,

**OPERATOR'S,
ORGANIZATIONAL, DIRECT SUPPORT,
AND GENERAL SUPPORT MAINTENANCE MANUAL
(INCLUDING REPAIR PARTS LIST AND
SPECIAL TOOLS LIST)
FOR**

**AUGER, EARTH, SKID MOUNTED
TEXOMA MODEL 270-9
REEDRILL INC.
(NSN 3820-01-146-7204)
Current as of 1 November 1988**

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

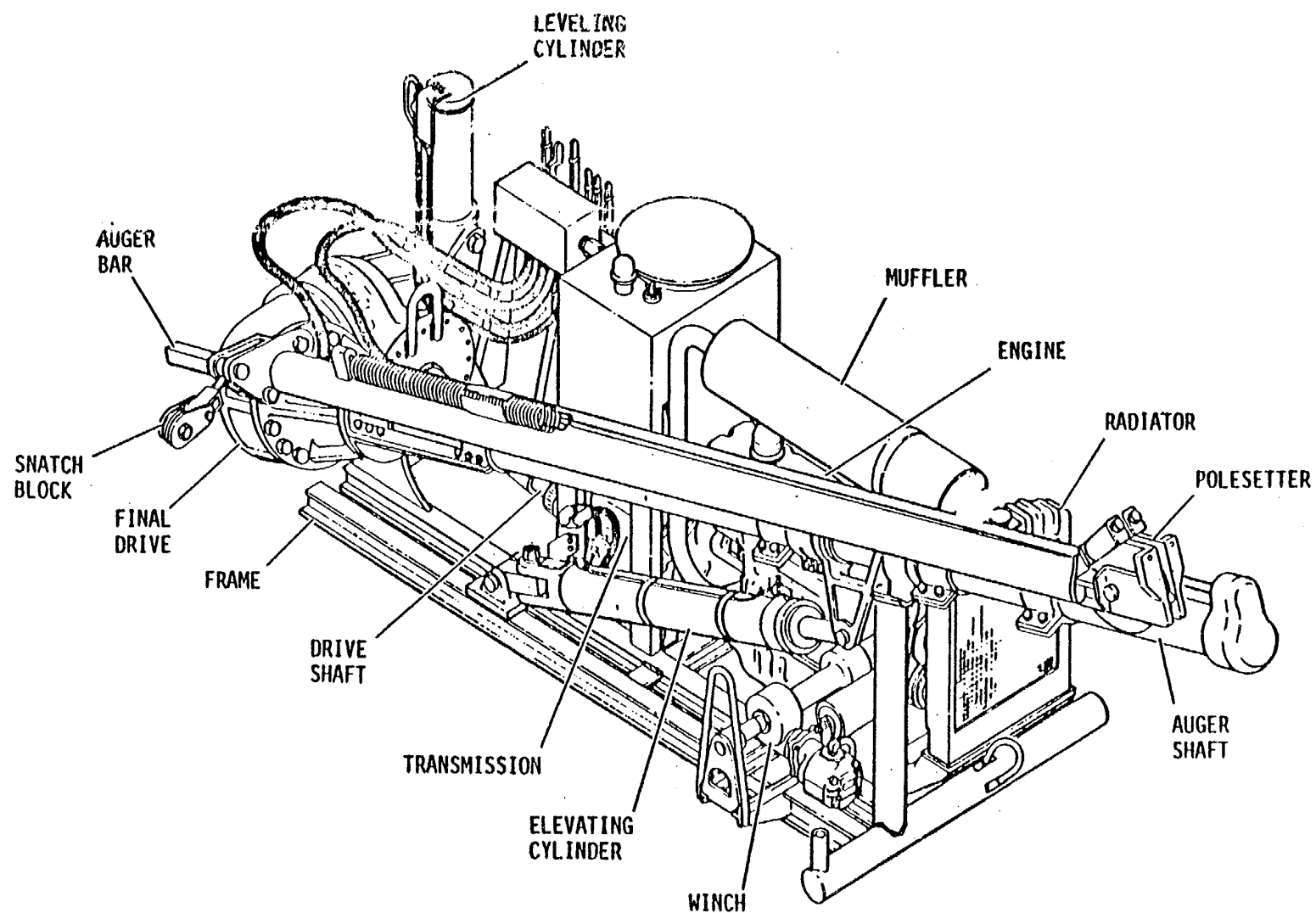
You can help improve this manual. If you find any mistakes or if you know of a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2, located in the back of this manual, direct to: Commander, U.S. Army Tank-Automotive Command, ATTN: AMSTA-MB, Warren, MI 48397-5000. A reply will be furnished to you.

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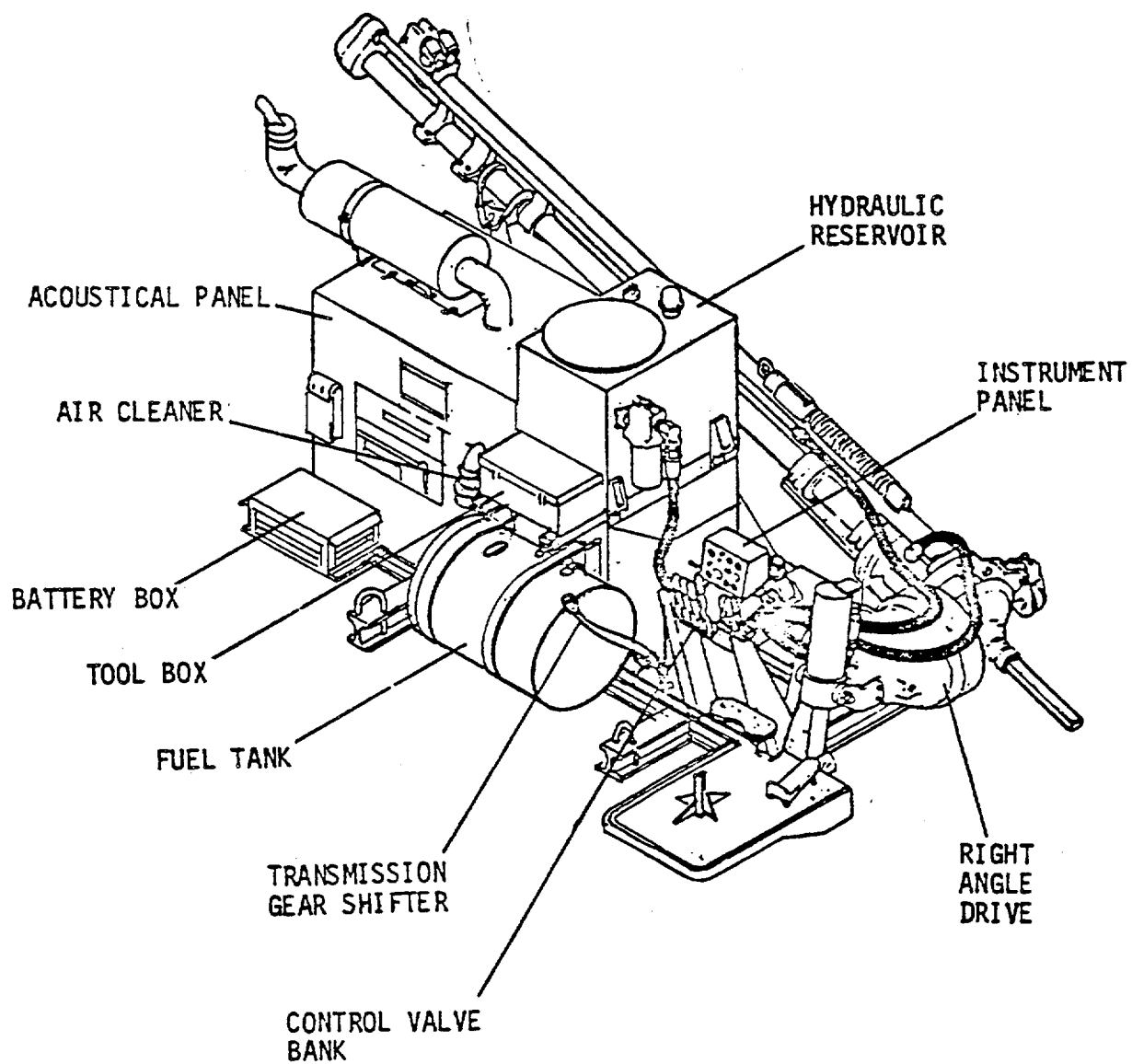
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This technical manual is an authentication of the manufacturer's commercial literature and does not conform with the format and content specified in AR 310-3, Military Publications. This technical manual does, however, contain available information that is essential to the operation and maintenance of the equipment.



EARTH AUGER RIGHT FRONT VIEW



EARTH AUGER LEFT REAR VIEW

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CHAPTER 1**OPERATORS AND INSTRUCTION MANUAL****AUGER, EARTH, SKID MOUNTED****TEXOMA MODEL 270-9****1-1 GENERAL INFORMATION AND DESCRIPTION****A. SCOPE/DESCRIPTION**

This manual contains instructions for use by personnel to whom the Earth Auger, model 270-9 is issued. It provides instructions on the operation and maintenance of the equipment. Also included are descriptions of major components and their functions in relationship to other components.

B. GENERAL

The Earth Auger, Model 270-9 is a self-contained, skid mounted, earth boring assembly driven by a diesel engine, Detroit Diesel 3-53 Engine. All operations of the boring assembly are controlled by a hydraulic system. The Auger is capable of boring holes 9 to 24 inches in diameter and to a depth of 9 feet. The boring assembly can be operated from vertical downward to 600 away from the truck, from vertical to 23° to the right and from vertical to 30° to left of truck, or 100 toward the truck.

C. ENGINE

The engine is a Detroit Diesel, 2 cycle in-line 3 cylinder engine.

D. TRANSMISSION

The transmission is a Funk Manufacturing Company, Model 12B704NO, with four speeds forward and reverse.

E. AUGER ASSEMBLY

The Auger Assembly consists of the auger, kelly bar, final drive, and right angle assembly. Operation of the auger assembly is controlled by the shuttle control and the hand or foot operated throttle control. The shuttle is used to engage and disengage the drive assembly.

F. WARNING/SAFETY DEVICES

The hydraulic system incorporates load lock valves on both the elevating and leveling cylinders. These prevent the cylinders from retracting in event of hydraulic system pressure loss.

1-2 INTRODUCTION

The operators and maintenance section contains detailed instructions, service information and technical data which the operator will need in order to properly operate the 270-9 Auger and to perform the various maintenance services that are required for keeping the equipment in good working condition at all times. Included herein are complete descriptions of each operating control and step-by-step instructions on how to start, operate and stop the equipment, and recommended operator's maintenance procedures.

The maintenance procedures and service instructions in this manual are included as recommendations only and are based on normal equipment working conditions. Changes should be initiated by the user in order to compensate for other than normal conditions and to meet the working requirements of any specific job application.

1-3 ENGINE AND POWER TRAIN

Power from the engine is transmitted to a torque converter and shuttle transmission, and a 4-speed transmission is used. The power is transferred through a heavy duty universal drive line into a right angle drive, final drive and kelly bar.

1-4 HYDRAULIC SYSTEM (FIGURE 1-1)

Oil is furnished by a 54 gallon tank through a suction strainer, to a gear-type pump. The oil flow is controlled by self-centering valves. Oil pressure is 1450 P.S.I. hot, adjustable at the valve bank. A regeneration system is used on the feed ram only. The oil is filtered through a micronic-type filter in the return line at the tank. This system is highly effective and will give long life with minimum maintenance, provided the system is kept clean.

1-5 FUNK MODEL 1213704N0 TRANSMISSION

A. Description

The Revers-O-Matic Drive, Model 1213704N0 is a shuttle-type transmission consisting basically of two (2) hydraulically actuated multiple disc clutches. When the front clutch is engaged, the output shaft rotates engine-wise and auger clockwise rotation is obtained. The rear clutch is driven by an idler/countershaft gear train and its rotation is opposite to that of the front clutch. Therefore, when the rear clutch is engaged, the output shaft rotates anti-engine-wise and auger counterclockwise rotation is obtained.