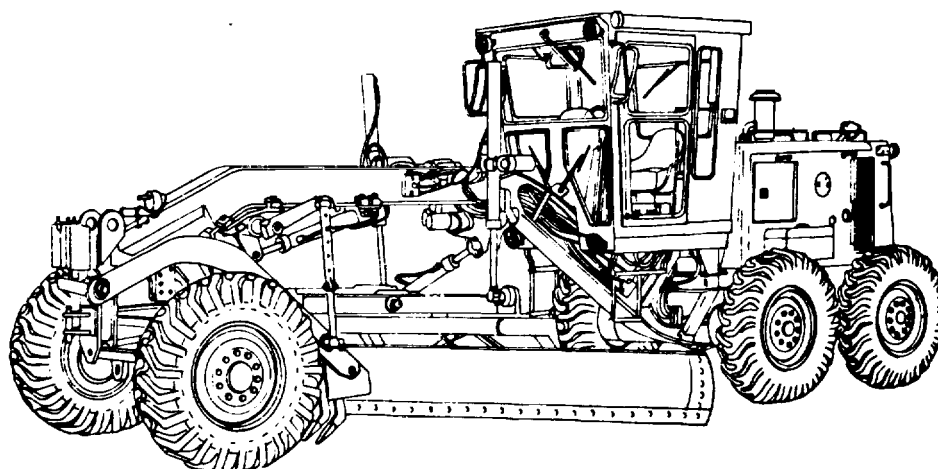


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DEPARTMENT OF THE ARMY TECHNICAL MANUAL

UNIT
MAINTENANCE

TECHNICAL
MANUAL



GRADER, HEAVY, ROAD,
MOTORIZED,
CATERPILLAR MODEL 130G
(NSN 3805-01-150-4795)

Approved for public release; Distribution is unlimited.

HEADQUARTERS, DEPARTMENT OF THE ARMY

APRIL 1992

*This manual, combined with TM 5-3805-261-34, 25 Apr 89, supersedes TM 5-3805-261-14&P-2, 29 Jul 85, and TM 5-3805-261-14&P-3, 29 Jul 85.

**UNIT MAINTENANCE MANUAL
FOR
GRADER, HEAVY, ROAD, MOTORIZED,
CATERPILLAR MODEL 130G GRADER
(NSN 3805-01-150-4795)**

Reporting Errors and Recommending Improvements

You can help improve this manual. If you find any mistakes, or if you know 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, directly 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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HOW TO USE THIS MANUAL

This manual is designed to help you maintain the 130G Grader. It's divided into chapters, sections and appendices. The chapters contain organizational maintenance procedures and are divided into sections which contain specific maintenance procedures for the various systems that comprise the 130G Grader.

The appendices contain supplemental information to help you maintain the 130G Grader. Included in the appendices is the Maintenance Allocation Chart.

You must familiarize yourself with the entire maintenance procedure before beginning the maintenance tasks.

The maintenance procedures contained in this manual tell you several things:

- what tools you need to do the job
- materials or parts required
- what condition the vehicle is to be in before work is started

In addition to the text, you'll have either an assembled or an exploded view illustration of the associated parts. Sometimes the illustration will be keyed by an arrow to an overall view of the vehicle to help you determine the approximate location of the parts. The illustration is keyed to the text by numbers and shows you how to take the part off and put it on. The following example will show some of the features of this manual.

EXAMPLE

An operator brings his CCE 130G Grader into the shop with an engine problem: the engine stalls frequently or doesn't develop full power. The best way to solve this problem is by using your manual. This is what you do:

1. How do you start?
Look at the cover of the manual.
On the cover you'll find a listing for TROUBLESHOOTING SYMPTOM INDEX. It tells you to go to page 5-1.
To find the page fast, open the manual by using the black tab that lines up with the listing on the cover.
2. What kind of problem do you have?
Find it in the symptom index.
The symptom index is a list of problems covered by a section. It tells you that your problem, "engine misfires or runs rough," is covered in paragraph 6-2h.

HOW TO USE THIS MANUAL

3. How do you determine what is causing the problem? Go to paragraph 6-2h., which refers you to Fuel System paragraph 6-12b. There you'll find the troubleshooting procedures you'll need. The procedure has columns with the headings: MALFUNCTION, TEST OR INSPECTION and CORRECTIVE ACTION. Starting at step 1, read the procedure. Check to see if the description is accurate for the troubleshooting section. Each step tells you what to do and what to look for. Follow the steps, in order, until you find your problem. The CORRECTIVE ACTION column will tell you what to do next.
4. procedure contains all information you'll need to replace the fuel injection nozzle. First check the introductory material. It tells you what you'll need before you start the job. Below the introductory material is an assembled view of the vehicle showing the approximate location of the fuel injection nozzle and an illustration which shows you how to do the job.
5. If on the other hand, you know the cause of the problem, refer to the alphabetical index located at the rear of this manual. Find the name of the part to be replaced and the paragraph number for the maintenance procedure. For example, the engine is overheating. On filling the radiator with water you see that coolant is pouring out of the hose, indicating that the hose needs replacement. Refer to the alphabetical index. Under the listing "Hoses, Lines and Fittings," page 6-137 is referenced. Turn to this paragraph for hose removal and installation procedures.

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CHAPTER 1

INTRODUCTION

CHAPTER OVERVIEW

The purpose of this chapter is to familiarize the technician with the 130G Grader capabilities, characteristics, major components and features. This familiarization is provided through a physical description and associated pictures. Covered are subjects that the Organizational Maintenance level technician is required to understand and service.

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Section I. GENERAL INFORMATION.**1-1. SCOPE.**

- a. **Type of Manual.** Organizational Maintenance Manual.
- b. **Model Number and Equipment Name.** Grader, Heavy, Road, Motorized, DED, Commercial Construction Equipment (CCE), Caterpillar Model 130G Grader (NSN 3805-01-150-4795).
- c. **Purpose.** The grader is designed for rough and finished grading, low and high bank sloping, flat and V-ditching, scarifying bituminous road mixes, and snow removal. Mission support role includes construction and maintenance of roads, airfields, hardstands, drainage, site preparation for pipelines and river crossings.

1-2. MAINTENANCE FORMS, RECORDS AND REPORTS. Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, The Army Maintenance Management System.

1-3. DESTRUCTION OF ARMY MATERIAL TO PREVENT ENEMY USE. TM 750-244-3, "Procedures for Destruction of Equipment to Prevent Enemy Use."

1-4. PREPARATION FOR STORAGE AND SHIPMENT. Refer to TM 740-90-1 "Administrative Storage of Equipment"; TB 740-97-2 "Preservation of USAMECOM Mechanical Equipment for Shipment and Storage"; TM 38-230-1&2 "Preservation and Packing of Military Supplies and Equipment"; MIL-V062038 "Shipment and Limited Storage"; and SB 740-98-1 "Storage and Serviceability Standard: Tracked Vehicles, Wheeled Vehicles and Component Parts".

1-5. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC).

- a. No particular quality assurance or quality control technical manuals pertain specifically to the 130G Grader. Use standard QA/QC procedures.
- b. Defective material received through the supply system should be reported on a Quality Deficiency Report (QDR), SF368. QDR's should be mailed directly to: Commander, U.S. Army Tank Automotive Command, ATTN: AMSTA-MVB, Warren, Michigan 48397-5000. A reply will be furnished directly to you.

GENERAL INFORMATION. (cont)**1-6. NOMENCLATURE CROSS REFERENCE.****Common Term**

Lube Order
 O Ring
 Dipstick
 Grader
 Technical Manual
 Sight Gage
 Servicemeter
 Blade
 Circle Drive
 Transmission
 Hydraulic Tank
 Dipstick

Military Term

LO
 Packing, Preformed
 Level Indicator
 Grader, Road
 TM
 Level Indicator
 Hourmeter
 Moldboard Assembly
 Circle Turn Assembly
 XMSN
 Hydraulic Reservoir
 Oil Level Gage

1-7. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR). EIR's will be prepared using a DA Form 2407, maintenance request. Instructions for preparing EIR's are provided in DA PAM 738-750, the Army Maintenance Management System. EIR's should be mailed direct to: Commander, U.S. Army Tank Automotive Command, ATTN: AMSTA-MB, Warren, Michigan 48090.