

**MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION****0031 00****THE ARMY MAINTENANCE SYSTEM**

1. This introduction provides a general explanation of all maintenance and repair functions authorized under the Two-Level Maintenance System.
2. The MAC for The Crew Protection Kit (Table 1, WP 0032 00) designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component shall be consistent with the capacities and capabilities of the designated maintenance levels, which are shown in column (4) as:

Field - includes subcolumns:

C - Operator/Crew

O - Unit

F - Direct Support

Sustainment - includes subcolumns:

H - General Support

D - Depot

3. Table 2 lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from the MAC.
4. Table 3 contains supplemental instructions and explanatory notes for particular maintenance functions.

**MAINTENANCE FUNCTIONS**

Maintenance functions are limited to and defined as follows:

1. **Inspect.** To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).
2. **Test.** To verify serviceability by measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards on a scheduled basis, e.g., load testing of lift devices and hydrostatic testing of pressure hoses.
3. **Service.** Operations required periodically to keep an item in proper operating condition; e.g., to clean (includes decontaminate, when required), preserve, drain, paint, or replenish fuel, lubricants, chemical fluids, or gases.
4. **Adjust.** To maintain or regulate, within prescribed limits, by bringing into proper position, or by setting the operating characteristics to specified parameters.
5. **Align.** To adjust specified variable elements of an item to bring about optimum or desired performance.
6. **Calibrate.** To check and adjust instruments of Test, Measurement, and Diagnostic Equipment (TMDE) used in precision measurement. Calibration consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.
7. **Remove/Install.** To remove and install the same item when required to perform service or other maintenance functions. Installation may be the act of emplacing or seating a spare, repair part, or module (component or assembly) into position in a manner to allow the proper functioning of equipment or a system.
8. **Replace.** To remove an unserviceable item and install a serviceable counterpart in its place. Replacement is authorized by the MAC, and the assigned maintenance level is shown as the third position code of the Source, Maintenance and Recoverability (SMR) code.
9. **Repair.** Repair is the application of maintenance services, including fault location/troubleshooting, removal/installation, disassembly/assembly procedures, and maintenance actions to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (component or assembly), end item, or system.

## MAINTENANCE ALLOCATION CHART (MAC) INTRODUCTION - CONTINUED

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## MAINTENANCE FUNCTIONS - CONTINUED

## NOTE

The following definitions are applicable to the "repair" maintenance function:

- Services - Inspecting, testing, servicing, adjustment, alignment, calibration, and/or replacement.
  - Fault location/troubleshooting - The process of investigating and detecting the cause of equipment malfunctioning; the act of isolating a fault within a system or Unit Under Test (UUT).
  - Disassembly/assembly - The step-by-step breakdown (taking apart) of a spare/functional group coded item to the level of its least component, assigned an SMR code for the level of maintenance under consideration (i.e., identified as maintenance significant).
  - Actions - Welding, grinding, riveting, straightening, facing, machining, and/or resurfacing.
10. **Overhaul.** The maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications. Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.
11. **Rebuild.** Consists of services/actions necessary to restore unserviceable equipment to a like-new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero the age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

## EXPLANATION OF COLUMNS IN THE MAC, TABLE 1

1. **Column (1) - Group Number.** Column (1) lists Group numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the Next Higher Assembly (NHA).
2. **Column (2) - Component/Assembly.** Column (2) contains the item names of components, assemblies, subassemblies, and modules for which maintenance is authorized.
3. **Column (3) - Maintenance Function.** Column (3) lists the functions to be performed on the item listed in Column (2). (For a detailed explanation of these functions, refer to *Maintenance Functions*, above.)
4. **Column (4) - Maintenance Level.** Column (4) specifies each level of maintenance authorized to perform each function listed in column (3), by indicating work time required (expressed as manhours in whole hours or decimals) in the appropriate subcolumn. This work time figure represents the active time required to perform a maintenance function at the indicated level of maintenance. If the number or complexity of the tasks within the listed maintenance function varies at different maintenance levels, appropriate work time figures are to be shown for each level. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the MAC. The symbol designations for the various maintenance levels are as follows:

Field:

C - Operator/Crew Maintenance  
O - Unit Maintenance  
F - Direct Support Maintenance

Sustainment:

H - General Support Maintenance  
D - Depot Maintenance

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**EXPLANATION OF COLUMNS IN THE MAC, TABLE 1 - CONTINUED****NOTE**

The "L" maintenance level is not included in column (4) of the MAC. Functions at this level of maintenance are identified by a work time figure in the "H" column of column (4), and an associated reference code is used in the Remarks Code, column (6). This code is keyed to Table 3, and the SRA complete repair application is explained there.

5. **Column (5) - Tools and Equipment Reference Code.** Column (5) specifies, by code, common tool sets (not individual tools), common Test, Measurement, and Diagnostic Equipment (TMDE), special tools, special TMDE, and special support equipment required to perform the designated function. Codes are keyed to Table 2, the tools and test equipment table.
6. **Column (6) - Remarks Code.** When applicable, this column contains a letter code, in alphabetical order, which is keyed to the remarks in Table 3.

**EXPLANATION OF COLUMNS IN THE TOOLS AND TEST EQUIPMENT REQUIREMENTS, TABLE 2**

1. **Column (1) - Tool or Test Equipment Reference Code.** The tool and test equipment reference code correlates with a code used in column (5) of the MAC.
2. **Column (2) - Maintenance Level.** The lowest level of maintenance authorized to use the tool or test equipment.
3. **Column (3) - Nomenclature.** Name or identification of the tool or test equipment.
4. **Column (4) - National Stock Number (NSN).** The NSN of the tool or test equipment.
5. **Column (5) - Tool Number (CAGEC).** The manufacturer's part number, model number, or type number and Commercial and Governmental Entity Code (CAGEC).

**EXPLANATION OF COLUMNS IN THE REMARKS, TABLE 3**

1. **Column (1) - Remarks Code.** The code recorded in column (6) of the MAC.
2. **Column (2) - Remarks.** Information pertinent to the maintenance function being performed as indicated in the MAC.

**END OF WORK PACKAGE**

