

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

MAINTENANCE EXPENDITURE LIMITS FOR

FSC GROUP 43

FSC CLASS 4310

Headquarters, Department of the Army, Washington, DC

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REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

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*This bulletin supersedes TB 43-0002-90, 11 August 1987.

Section I. GENERAL

1. Purpose. This bulletin contains guidelines for maintenance expenditure limits of ACALA materiel to be used when determining the economical reparability of that materiel. It specifies the technical inspection criteria and detailed data for computing repair cost estimates to prevent the evacuation of uneconomically repairable equipment unless specifically required and directed.

2. Scope.

a. This bulletin is applicable to all US Army organizations, installations, and activities, and the Reserve Components worldwide.

b. This bulletin is applicable to all US Army procured end items of materiel, selected repair parts, and assemblies-requiring repair or overhaul (either by contractor or in-house), except materiel provided to allied nations under the Military Assistance Program or International Logistics Agreements.

Section II. ONE TIME REPAIR EXPENDITURE LIMITS

3. Procedures. Maintenance expenditure limits will provide guidance for determining the economical repair of Army materiel in order to prevent evacuation of uneconomically repairable equipment, make uneconomically repairable equipment eligible for disposal, and preclude the loss of materiel to the Army solely on the basis of the age of the materiel (AR 750-1).

4. Expenditure Limits. Table 1 provides current replacement cost and maintenance expenditure limitation criteria in the form of one-time repair expenditure. The items are listed by Federal Supply Classification (FSC), and indicate life expectancy of the item and the expenditure limit (dependent on the current age of the item). The maintenance expenditure limit is expressed as a percentage of the total repair cost estimate (refer to para 7 and 8) relative to the total cost of the item. The maintenance expenditure limit, in conjunction with technical inspections, will be used as a guideline for the determination of the useful future of the item (i.e., whether the item is to be returned for maintenance or disposal). AR 750-1 cites the maximum expenditure limit at depot level for repair, transportation, and handling.

Section III. TECHNICAL INSPECTIONS

5. Procedure. Technical inspections will be conducted by qualified personnel who must be familiar with maintenance operations and standards to determine the work required and-thereby arrive at an equitable maintenance classification. All inspections will be performed in accordance with instructions contained in pertinent equipment publications listed in table 1. If required repairs are beyond general support maintenance category, the item will be returned to a specified depot as economically repairable. The item will be further evaluated by the depot to ensure repair or overhaul eligibility.

Table 1. Maintenance Expenditure Limits Applicable to ACALA
 (FSC Group 43)
 (Refer to the AMDF for current replacement cost)

NSN ----- Nomenclature	Life Expectancy (Years)	Expenditure Limit % Item Age (Years)			Equipment Publications
		1-5	6-10	10+	
4310-00-078-5431 Compressor Unit, Reciprocating: Power Driven, 3-1/2 CFM, AN- M4C	20	65%	50%	30%	TM 3-4310-100-10 TM 3-4310-100-20&P TM 3-1040-244-34 TM 3-1040-244-35P
4310-00-181-5054 Compressor Unit, Reciprocating: Power Driven, 3-1/2 CFM, AN- M4D	20	65	50	30	TM 3-4310-100-10 TM 3-4310-100-20&P TM 3-1040-263-34 TM 3-1040-263-34P
4310-00-592-8560 Compressor Unit, Reciprocating: Power Driven, 3-1/2 CFM, AN- M4	20	65	50	30	TM 3-4310-100-10 TM 3-4310-100-20&P TM 3-1040-210-35 TM 3-1040-210-34P
4310-00-848-6075 Compressor Unit, Reciprocating: Power Driven, 3-1/2 CFM, AN- M4B	20	65	50	30	TM 3-4310-100-10 TM 3-4310-100-20&P TM 3-1040-244-35P

NOTE

No maintenance is authorized when the equipment service life exceeds the life expectancy.

Field personnel preparing technical inspection reports will list materiel known or suspected to require restoration to a serviceable condition at depot level, and will provide other pertinent information available to assist higher authority in determining repair or overhaul eligibility. Final determination, relative to the level of repair or complete disposal of the item, will be made per provisions of paragraph 7c. (Items listed in table 2 as "No Depot Maintenance Equipment" will not be considered as candidates for potential depot level maintenance; general support maintenance will consequently be the highest maintenance level authorized to repair (or completely dispose) these items.)

6. Forms. DA Form 2404 (Equipment Inspection and Maintenance Worksheet) will be used to record results of technical inspections. Instructions on preparation and use of this form are found in DA PAM 738-750 (The Army Maintenance Management System (TAMMS)).

Section IV. COMPUTATION OF REPAIR COST ESTIMATES

7. Cost Factors. Repair cost estimates will be based on the cost to return materiel to serviceable condition at the authorized maintenance category undertaking the repair, in accordance with appropriate publications. Required repairs will not be broken into separate job estimates for the purpose of circumventing prescribed repair expenditure limits.

a. If repairs are expected to be within the scope of direct or general support maintenance and the item is to be repaired at the level for return to user, serviceability standards and maximum wear limits applicable for the appropriate maintenance category will be used in computing the repair cost estimate.

b. If required repairs are beyond general support maintenance capability and must be accomplished as depot maintenance, the repair cost estimate will be based upon the return of the item to specified serviceability standards.

c. Repair eligibility will be determined by comparing the repair cost estimate with the product of the prescribed expenditure limit percentage times the current replacement cost (table 1) for the unserviceable item. For an item to be eligible for repair, the repair cost estimate must not exceed the prescribed percentage of cost of replacement (i.e., the product obtained from above arithmetic function). Waiver from this repair eligibility requirement may be granted by the major Army commander; Chief, National Guard Bureau; or CG, ACALA.

d. The repair (or overhaul) cost estimate will be based on all costs (except those specifically excluded herein) necessary to convert the given item to the required condition specified in applicable DA equipment publications (table 1).

e. Depot maintenance activities, upon request, also will provide guidance and assistance to field personnel to facilitate repair cost estimates and technical inspections on materiel to be evacuated to the depot.

8. Procedures. The following direct and indirect costs will apply to determine repair cost estimates when deficiencies are found during technical inspections.

a. Direct Costs.

(1) Direct labor. Direct labor is that labor (civilian or military) which can be specifically identified to the repair/overhaul job to be performed. Direct labor involves only personnel in direct productive contact with the item or service involved.

(a) To estimate direct labor costs, determine/estimate the direct labor hours to be applied and apply the appropriate computed direct labor hourly rate to these hours.

(b) The determination of the direct labor hours to be applied will be based on working hour requirements for maintenance tasks listed in applicable equipment publications; commercial flat rate manuals, when appropriate; similar work performed previously; or individual experience. The direct labor hours will be periodically reviewed and updated, if necessary.

(c) The cost of civilian labor will be based on a labor rate for the work center which will perform the work. Procedures described in AR 37-110 will be used to convert working years to average productive working hours when civilian labor pay scales are stated in terms of annual salaries. Labor rates, whether determined from annual salaries or hourly wage rates, will be computed (to include provisions for the cost of annual, sick, and other leave, and government contributed fringe benefits) in accordance with AR 37-110.

(d) Labor rates used for military personnel will be the average military wage rate for the work center performing the work, based on standard rates published in AR 37-108.

(e) Major Army commanders and heads of agencies may establish and use standard hourly rates for direct labor (including indirect or overhead) so long as such rates are consistent with AR 37-55 and AR 37-110. When such standard rates are established, separate rates will be established for each category of supportable items or weapons systems (e.g., aircraft, automotive equipment, combat vehicles, construction equipment, electronics and communications equipment, missile systems, ships, munitions armament, weapons armament, rail equipment, general equipment, and commodity groups of equipment; depot maintenance and direct/general support maintenance; and each major geographical area where wage levels vary significantly).

(f) When considered necessary for determining the proper depot maintenance labor rate, assistance may be requested as authorized by AR 700-4.

(2) Materials. The cost to repair will include all materials directly applied to and identifiable with the particular equipment undergoing repair.

(a) Consumable items received from the supply system may be costed as billed by the supply agency. If no billing is available, consumables will be costed at the standard inventory price as published in appropriate supply manuals. Items procured from local sources will be priced at the latest invoice cost. Cost of items fabricated will be based on actual cost for like items, where possible. When actual cost is not available, engineering estimates, including indirect expenses, will be used.

(b) Replacement components and assemblies used in the repair process will be costed at the standard inventory price. Credit will be taken for the return of the repairable component in an amount equal to the current standard inventory price, less the estimated cost to repair the component.

(3) Freight and packaging. Freight will not be included as an element of cost when the equipment to be repaired is located in CONUS. When the equipment to be repaired is located overseas and no local capability to repair exists, the cost of freight to CONUS will be included as an element of cost. The cost of freight includes all cost involved in preparing the item for shipment at point of use, and all transportation and handling cost from point of use to designated CONUS point of repair. When equipment cannot be repaired on site, and cost must be incurred to prepare the equipment for shipment regardless of destination, such cost (including materials) will be included in the estimate of cost to repair.

b. Indirect Costs. Indirect cost to be included will be determined by applying the indirect expense rates to the estimated direct labor hours. The cost to repair will include the following indirect expenses.

(1) Indirect maintenance expense rate. This will include manufacturing or production expenses (i.e., indirect costs incurred within or identifiable to the maintenance shop or organization performing the repair work, although not identifiable to particular jobs).

(2) General and administrative expense rate. This will include the costs incurred in the general management or supervision of the installation as a whole which are allocated among maintenance and other activities.

c. Miscellaneous Costs. The cost of repair will include all contractual services acquired incidental to and identifiable with the performance of all or a portion of the specific maintenance job. Any other charges required to accomplish the repair and directly identifiable to the equipment will be included (although not specifically mentioned herein), except those directly named in d below.

d. Exclusions. The following costs will not be included in the estimate of cost to repair.

(1) Replacement of basic issue list items.

(2) Items of operating expense, such as the replacement of tires, batteries, petroleum products, and tools, except where replacement is the result of accidental damage.

(3) The labor cost of applying modification work orders.

(4) The cost to overhaul or replace accessory items used to adapt equipment for special uses; this would include such items as winterization kits, flashing lights, two-way radios, tool kits, and similar items. Individual estimates to overhaul such items will be made as appropriate and required.

Section V. DISPOSITION INSTRUCTIONS

9. Eligibility of Materiel for Evacuation to Depot Maintenance. All equipment covered by this bulletin is eligible for evacuation to depot maintenance, if the below criteria are met:

a. Depot maintenance authorized in the Maintenance Allocation Chart or by the ACALA National Inventory Control Point (NICP).

b. The technical inspection performed at the general support maintenance level indicates that required repairs are not authorized for performance at the general support maintenance level, and the estimated cost of repair does not exceed the one-time repair expenditure limit (table 1).

c. The item is not listed in table 2 as a "No-Depot-Maintenance Equipment."

10. Disposition Instructions. Disposition instructions will be provided by ACALA for all items when repairs are required beyond those repairs authorized for performance at the general support maintenance level regardless of the repair expenditure limit, and with exception to those items listed in table 2. The reporting of materiel to the National Inventory Control Point (NICP) for disposition instructions will be in accordance with AR 725-50 or appropriate DA letters.

Table 2. Listing of No Depot Maintenance Equipment

NSN	Nomenclature	
4310-00-078-5431	Compressor Unit, Reciprocating: 3-1/2 CFM, AN-M4C	Power-Driven,
4310-00-181-5054	Compressor Unit, Reciprocating: 3-1/2 CFM, AN-M4D	Power-Driven,
4310-00-592-8560	Compressor Unit, Reciprocating: 3-1/2 CFM, AN-M4	Power-Driven,
4310-00-848-6075	Compressor Unit, Reciprocating: 3-1/2 CFM, AN-M4B	Power-Driven,

APPENDIX
REFERENCES

This appendix lists all Army Regulations, forms, and technical manuals referenced in this bulletin.

AR 37-55	Uniform Depot Maintenance Cost Accounting and Production Reporting System
AR 37-108	General Accounting and Reporting for Finance and Accounting Offices (Reprinted w/Basic Incl C1-3)
AR 37-110	Budgeting, Accounting, Reporting, and Responsibilities for Industrial Funded Installations and Activities
AR 700-4	The Logistics Assistance
AR 725-50	Requisition and Issue of Supplies and Equipment; Requisitioning, Receipt, and Issue System
AR 750-1	Army Materiel Maintenance Policy and Retail Maintenance Operations
DA Form 2028	Recommended Changes to Publications and Blank Forms
DA Form 2404	Equipment Inspection and Maintenance Worksheet
DA PAM 738-750	Functional Users Manual for the Army Maintenance Management System (TAMMS)
TM 3-1040-210-34P	Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) : Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4 (NSN 4310-00-592-8560) (Reprinted w/Basic Incl C1)
TM 3-1040-210-35	Direct Support, General Support and Depot Maintenance Manual: Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4 (NSN 4310-00-592-8560) (Reprinted w/Basic Incl C2)
TM 3-1040-244-34	Direct Support and General Support Maintenance Manual: Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4C (NSN 4310-00-078-5431) (Reprinted w/Basic Incl C2)

- TM 3-1040-244-35P Direct Support, General Support and Depot Maintenance Repair Parts and Special Tools List: Compressor, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4B (Stewart-Warner Model 3260101-4) (NSN 4310-00-848-6075) and Compressor, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4C (Stewart-Warner Model 3260101-6) (4310-00-078-5431)
- TM 3-1040-263-34 Direct Support and General Support Maintenance Manual: Compressor, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4D (NSN 4310-00-181-5054)
- TM 3-1040-263-34P Direct Support and General Support Maintenance Repair Parts and Special Tools List (Including Depot Maintenance Repair Parts and Special Tools) : Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4D (NSN 4310-00-181-5054) (Reprinted w/Basic Incl C1-2)
- TM 3-4310-100-10 Operator's Manual: Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4 (Walter Kidde Model) (NSN 4310-00-592-8560) ; AN-M4B (Stewart-Warner Model) (4310-00-848-6075) ; AN-M4C (Stewart-Warner Model) (4310-00-078-5431) ; and AN-M4D (Walter Kidde) (4310-00-181-5054)
- TM 3-4310-100-20&P Organizational Maintenance Manual (Including Repair Parts and Special Tools List) for Compressor Unit, Reciprocating: Power-Driven, Flamethrower, 3-1/2 CFM, AN-M4 (Walter Kidde) (NSN 4310-00-592-8560) ; AN-M4B (Stewart-Warner) (4310-00-848-6075) ; AN-M4C (Stewart-Warner) (4310-00-078-5431) ; and AN-M4D (Walter Kidde) (4310-00-181-5054)

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