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ARMY REGULATIONS  
No. 700-

DEPARTMENT OF THE ARMY

RESEARCH AND DEVELOPMENT, CLASSIFICATION  
AND MODIFICATION OF MATERIEL

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## SECTION I

## GENERAL

	Paragraph
General . . . . .	1

1. General.--a. Research and development functions extend from the inception of ideas to their final embodiment in all types of materiel or techniques, methods, and processes. These functions also include --

1. Investigations and exploratory studies necessary to establish scientific and technical data during research and development and to determine necessity for and feasibility of further research and development.
2. Actions related to such subsequent modifications of materiel as would materially affect the technique of its employment.
3. The administrative functions which support research and development as their primary mission.

\*This pamphlet supersedes Sections I & II, AR 850-25, 30 June 1943; WD Circular No. 126, 17 May 1947, Memorandum No. 850-25-4, 3 September 1946; Memorandum No. 850-25-10, 30 September 1947; and Circular No. 77, 23 December

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b. Research is a continuous process of scientific investigation to discover new scientific facts, techniques, and physical laws. It is not usually related to specific types of materiel; however, impetus may be provided, or direction received from demonstrated or suspected possibilities for new types of materiel or techniques.

c. Development is the application of the known scientific facts, techniques, materials, and physical laws to the creation of new or improved materiel or methods for military use.

d. Owing to the specialized nature and scope of responsibilities and operating procedures of Department of the Army agencies concerned, and in the interest of providing the greatest possible latitude to research and development within the over-all Department of the Army program, and the plans of the Research and Development Board, only those references to responsibility and procedure are delineated which are necessary to insure progress, coordination, and efficient conduct of the approved program. Within these terms the agencies concerned will work out their detailed procedures as best fit their special situations except as may be specified, when necessary, by subsequent Department of the Army instructions.

e. When used in this regulation, the terms--

- (1) "Technical services" are the regularly known technical services, except the Finance Department,
- (2) "Services" include the technical services and the administrative services.
- (3) "Developing agencies" include the technical services and (any other Army agency) doing research and development work.
- (4) "Agencies" include the Army Field Forces, "services", the General Staff, U.S. Army, the U.S. Navy, the U.S. Air Force, and the Research and Development Board.

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- (5) "Using agencies" include any of the above elements having command or service functions, and requiring materiel for use in performance of its mission.

f. For the safeguarding of all information relative to the research, development, test, and technical data of items of materiel, see AR 380-5, and amendments thereto.

## SECTION II

RESPONSIBILITIES OF AGENCIES CONCERNED WITH RESEARCH,  
DEVELOPMENT, AND CLASSIFICATION OF MATERIEL

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2. General authority and responsibility.-- For general authority and responsibility of Department of the Army agencies, special task forces, and overseas commands, see appropriate Department of the Army publications on organization and functions.

3. Chief, Army Field Forces.--The Chief, Army Field Forces is responsible for the--

a. Preparation of recommended military characteristics for materiel used or intended for use by a field army.

b. Initiation of requests for the development of materiel, in conformity with approved military characteristics thereof, for units of a field army.

c. Recommendation for cancellation or amendment of military characteristics when appropriate for materiel intended for use by a field army.

d. Coordination with the chiefs of technical services, *or other developing agency,* of military characteristics for materiel used by units of those agencies assigned to a field army.

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e. Preparation of recommended basis of issue for items of materiel for units assigned to a field army.

f. Supervision of service tests of materiel used exclusively by a field army, and for joint or separate supervision of service tests of materiel used in common with other agencies.

g. Initiation of requests to the chiefs of the technical services <sup>or other developing agency</sup> and to the Chief of Staff, U.S. Air Force as appropriate for the classification as to type of materiel used by a field army.

4. Chiefs of technical services or other developing agencies-- The chief of each developing agency is responsible for--

a. The preparation and conduct, in accordance with the over-all plan furnished by the General Staff, U. S. Army, of a research and development program covering materiel, methods, and techniques for which he has research and development responsibility.

b. The preparation of recommended military characteristics for materiel used or to be used by units of his agency.

c. The coordination with the using agencies concerned of the military characteristics of materiel for units of his agency assigned to such using agencies.

d. The coordination with the using agencies concerned of all development projects for materiel to be used by those agencies.

e. The initiation of requests for research and development of those items which are the responsibility of other developing agencies, but which support his own development activities.

f. The conduct and supervision of service tests of materiel used exclusively by his agency, and for joint or separate supervision of service tests of materiel used jointly with other agencies.

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g. The preparation of classification actions on materiel for which he has research and development responsibility.

h. The initiation of requests on other developing agencies for the classification as to type of materiel developed by other agencies and used by his agency.

i. Preparation of recommended basis of issue for items of materiel for units assigned to his agency.

j. (The Chief of the Army Security Agency only) the establishment of a basis of issue for non-T/A and non-T/O&E crypto-equipment for all units of the Army.

k. The maintenance and publication of records (Book of Standards or similar list) in which are listed all adopted items, by type classification, of materiel for which his agency has classification responsibility.

5. Technical committees.— The chief of each developing agency will establish and maintain a technical committee to effect coordination among the developing and using agencies during research, development, engineering and service testing, classification and specification activities. Each technical committee will act in an advisory capacity to the chief of the parent agency and will consider and report upon such technical matters as he may refer to it. The technical committee system will be utilized as a means of obtaining expeditious consideration of the interest of all agencies of the Department of the Army, including General Staff, U. S. Army in accordance with their assigned authority and responsibilities, with the minimum channelizing of routine and detailed communications, and for establishing a unified system for recording research, development and classification activities.

a. Technical committee action will include approval of military characteristics and revisions thereof, establishment of projects, recording of nomenclature or name of item on adopted types, recording of project title and Army project number on projects, assignment of project priorities in accordance with current Department of the Army instructions, classification of materiel as to type, cancellation of established projects, indication of current security classification of materiel and development procurement anticipated.

b. The designation of the methods of operation, such as delegation by the technical committees of responsibilities to subcommittees thereof, or other administrative or procedural matters, is the responsibility of the chief of the parent agency. However, certain activities of the technical committees will be coordinated by the General Staff, U. S. Army, in order that the maximum degree of uniformity consistent with efficient operation may be achieved among the several committees. The Chief of the Army Security Agency will establish such procedures as will protect the special security requirements for crypto-equipment.

c. Each technical committee will consist of members from the parent agency and--

- (1) Representatives from other developing and using agencies as designated by the heads thereof, and representatives of the other Departments of the National Military Establishment as desired by those Department heads. The representatives of those other agencies will participate in technical committee meetings at which subjects of interest to their agencies are considered. The participation of representatives of the other Departments of the National Military Establishment may be as full

members on actions involving projects of joint interest or involving common use materiel.

(2) Representatives from the General Staff, U. S. Army.

The purposes of this participation are to reduce the necessity of channelizing individual and detailed actions through the General Staff and to provide guidance and unity of action at the operating level on Department of the Army policy and over-all programming of activities. Representatives speak for the Chief of Staff or the Secretary of the Army on matters of primary General Staff responsibility as outlined in appropriate Department of the Army publications on organization and functions. Approval of a committee recommendation by these representatives will constitute General Staff approval. A General Staff representative will withhold approval if any other agency submits a minority opinion. If a General Staff representative does not approve a committee recommendation, the recommendation is either withdrawn by the submitting agency or the report is forwarded in the normal manner, to the General Staff for decision. Disagreements on interdepartmental matters which cannot be resolved on the departmental level will be referred to the Research and Development Board for decision.

d. Information copies of actions proposed for inclusion in the agenda of a technical committee meeting will be delivered to the designated representatives at least ten working days in advance of the meeting. Only in cases of extreme urgency will items be presented at a technical committee

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meeting that have not been in circulation for coordination at least ten working days.

e. The minutes of meetings of the technical committee will show, in addition to the names of those present and participating in the actions taken, concurrences indicated outside the meeting by interested agencies, and any minority reports.

f. The signature or concurrence of any agency representative to a formal report of a technical committee on a matter of interest to his agency signifies concurrence of his agency in that proposed action. Non-participation by a committee member (after he has been given due notice and opportunity to participate) will indicate that his agency has no interest in the matters to be acted upon and that approval by the agency he represents will not be required. Non-concurrence shall be indicated only by the filing of a minority report.

g. In the event that there is disagreement in committee action on a matter before the committee, the chief of the agency for which the committee is named may withdraw the matter and attempt to resolve the difference by direct, expeditious, informal contact with the chief of the other agency or agencies concerned. In the event agreement is secured, the report will be referred back to the technical committee for record of agreement. In the event agreement cannot be secured, the chief of the parent agency will refer the complete report, with minority reports, together with his recommendations, to the Chief of Staff for decision. Technical Committee approval is not considered as final authority on an item requiring approval by higher authority until approval by the General Staff, U. S. Army has been granted.



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## SECTION III

## PROCEDURES GOVERNING RESEARCH AND DEVELOPMENT

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6. Initiation and approval of military characteristics.—a. The term "military characteristics" is defined as those essential qualities of performance which a single item or an assemblage must possess in order to be suitable for its intended military use. A statement of military characteristics will normally be prepared for—

- (1) Materiel which will require a basis of issue in an approved Department of the Army TO&E, EML, Day of Supply, T/A, or other Department of the Army publication.
- (2) Materiel which will require spare parts, except components of assemblages.
- (3) Class V supplies, and class IV supplies, except commercial construction materials.

b. A statement of proposed military characteristics for a required item of materiel may be initiated by any unit or individual in the Army. All commands will encourage submission of such statements and of constructive criticisms of materiel and techniques, even if fragmentary in nature, for consideration by appropriate Department of the Army agencies.

c. A statement of military characteristics may be drawn up without a definite idea of how an item can be produced or formulated to comply with

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the stated characteristics, or a statement of characteristics may result from a realization that some specific device may be utilized to advantage by the Army. The basic purpose of a statement of military characteristics is to define the capabilities, in terms of performance, that the item should possess irrespective of whether or not an item is developed for the purpose or a suitable commercial item can be found. The statement, therefore, pertains also to general operating characteristics not uniquely "military." In stating military characteristics, and throughout the procedure of providing materiel in conformity therewith, every effort will be made to broaden the basis of the desired characteristics so that the maximum use may be made of commercially available items. The greatest latitude will be permitted the developing agency in meeting stated military characteristics. Military characteristics should state only the result desired and should not attempt to state how the result is to be obtained. Recommendations as to technical details may be exchanged through appropriate liaison channels between the developing and using agencies throughout development of the materiel.

d. When a category of items in common commercial use is considered by a using agency as essentially satisfactory for a particular need of that agency, the statement of military characteristics will be such as to require the least amount of modification of such items consistent with performance required.

e. In the preparation of military characteristics for a new or improved item, a statement will be included as to whether air transportability, in whole

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or in parts, is required or desired, and as to what phase of airborne operations the item is expected to be used. In no case will air transportability requirements be permitted to impair essential battlefield characteristics materially. For further details on this subject as well as related subjects affecting military characteristics such as temperature limitations and radio noise suppression, see appropriate Department of the Army publications on these subjects.

f. Any agency of the Department of the Army may submit to the appropriate using agency, recommended military characteristics for any type of Army materiel. The fact that a using agency is responsible for recommending military characteristics of materiel used by elements of his own command, is not to be interpreted as limiting the inherent right of any other agency of submitting to him, and receiving full consideration by him of the desired military characteristics of materiel which this other agency considers essential in support of the latter's assigned mission.

g. A statement of military characteristics for an item of materiel required by more than one using agency should be coordinated among those using agencies prior to submission by one of those agencies to a developing agency. When such coordination results in written concurrences by other using agencies, such written concurrences will be accepted by the technical committee, thus eliminating the need for additional concurrences from those same concurring agencies on the statement of military characteristics. In event such prior coordination does not resolve differences among those using agencies, the statement of military characteristics will be submitted by the initiating using agency to the developing agency, and the appropriate technical committee will act on the statement of military characteristics by the same procedure as it acts on other matters brought to its attention.

h. An agency formulating a statement of military characteristics

from the standpoint of development of a desired item of materiel should be sufficiently technically advised (usually by prior consultation with the developing agency) to determine with reasonable certainty that the item for which the statement is to be written will fully utilize the latest expected advances in science with due consideration of current industrial technique and potential capacity for production necessary to meet military requirements.

1. All statements of recommended military characteristics, and revisions thereof, for items of materiel will be formulated by the using agency and submitted through channels to the appropriate developing agency for coordination and technical committee action. Action by the General Staff will be taken on statements of military characteristics, such action at this stage of procedure being only to insure that such statements are coordinated with similar statements initiated by other agencies, and that they are referred to the developing agency having the appropriate research and development responsibility for the proposed item. This action by the General Staff does not necessarily constitute approval of the substance of the statement, nor a directive to establish a research and development project in accordance therewith. Where the using agency is also the developing agency, the statement may be referred directly to the technical committee.

J. Those military characteristics for communications and electronics systems and equipments, which have been coordinated by the technical committee and approved by the General Staff, will be referred by the developing agency concerned to the Joint Communications-Electronics Committee for review and, wherever practicable, consolidation of joint requirements, in accordance with procedures outlined by that committee.

7. Initiation and approval of research and development projects.— a. A research and development project is a specifically defined task within a research and development field, which is established to meet a single military

requirement, either stated or anticipated, for research data, an end item of materiel, or a technique. Parallel tasks whose objectives are identical or the development of component parts of an end item of materiel may be grouped in a single project. However, tasks which are undertaken to meet separate military requirements will be considered as separate projects. Projects will usually require both research and development activity and also a certain amount of administrative activity, chargeable either directly to the project or to research and development overhead. All projects will be numbered in accordance with the Department of the Army Index and Classification System for Research and Development Projects.

b. A project may be established as a result of indicated need for a new or improved item of materiel for use by the Army, for which a statement of military characteristics has been submitted in accordance with procedures outlined in paragraph 6. The chief of a developing agency receiving statements of military characteristics for desired types of materiel will refer them to his technical committee for action.

c. A project may be established as a result of indicated need for background, exploratory, basic, or applied research necessary to the over-all research and development program of the developing agency. These include investigations into natural laws, ways of improving materiel, new applications of scientific principles to materiel, methods or techniques. Since these projects usually arise independently of the using agencies, the procedures for establishing military characteristics will generally not apply. However, in lieu of military characteristics, statements of desired characteristics, such as physical properties and limits of tolerances will be included to serve as a guide in attaining the research goal. Since such projects are of immediate collateral interest to the other developing agencies and are probably of broad importance to the future research and development program of the Army, they will be referred by the chief of the developing agency to his technical committee

for action.

d. Research and development activity may be initiated as a result of indicated need for developing methods, techniques, and apparatus for research, development, or testing; for development leading to desirable modifications of adopted materiel, or for development of improved components of end items when such modifications and improvements do not change established military characteristics of separate end items; for preliminary investigations to determine the desirability and feasibility of initiating a development project; and for administration incident to research and development which cannot be properly chargeable to any single established project. These activities to be known as service projects, will not normally be of interest to agencies other than the developing agency in which they originate, and, when such is the case, do not require technical committee action but will be read for record.

e. All research and development projects and activities, whether or not requiring technical committee action, will be recorded in technical committee records as expeditiously as possible. Service projects may be appropriately grouped for this purpose. Expenditure by developing agencies of research and development funds is limited to projects and activities so recorded.

f. In considering advisability and feasibility of establishing research and development projects, all agencies concerned will give full consideration to the need for concentrating available funds, facilities, and personnel on research and development of new and radically improved materiel and techniques rather than in dissipating effort on minor engineering changes to existing types except when such is obviously contributing substantially to scientific and technical knowledge of military value, when engineering changes are necessary as stated in paragraph 17, and when substantial savings can be anticipated from current appropriations by improvement of existing types.

g. The technical committee recommendation for the adoption of military characteristics, the initiation of a research and development project, and/or classification as one of the development types will contain such of the following information as is pertinent:

- (1) Agencies concerned.
- (2) Requirement and/or justification for the research or item to be developed.
- (3) Brief of project, objective and/or military characteristics.
- (4) Related projects and/or materiel.
- (5) Proposed development -
  - (a) Proposed priority.
  - (b) Anticipated dates of initiation and completion of work on project.
  - (c) Estimated cost of project.
  - (d) Plan of action in conducting the project.
  - (e) Quantity of service test models to be provided, date they are anticipated, and by whom to be service tested
- (6) Security classification.
- (7) Recommendations will include or be submitted as to --
  - (a) Project title and project number.
  - (b) Action desired on the project such as authority to initiate,
  - (c) Priority to be assigned the project.
  - (d) Nomenclature or name of the item on which action is desired.
  - (e) Action desired on the item, such as adoption of military characteristics, classification as one of the development types, or authorization for procurement of development type items.

8. Conduct of research and development projects.-- a. It is most essential in all stages of development work that adaptability of the item to quantity production and its effect on strategic materials be considered as among the most important requirements of the design. In addition, standard component parts will be used wherever possible to assure ease in replacement, stocking, issue, and maintenance of parts. For these reasons commercial items will be adopted, or adapted with the fewest practicable modifications, whenever such procedures will satisfy military requirements. The using agency which recommends the military characteristics will be afforded the earliest opportunity by the developing agency to analyze, from the point of view of technique of employment, the feasibility of such adoption of adapted commercial items.

b. During the period an item of materiel is under development, close liaison will be maintained by the using agency with the developing agency in order to insure that the completed item will meet desired military characteristics. Any tendency to insulate the ultimate user from knowledge of technical problems involved in research and development contributes to inflexibility of the entire system of attempting to meet his needs expressed in terms of desired military characteristics

9. Development tests.-- Materiel is normally subjected to two types of tests and under certain circumstances, to three types of tests, before classification as to type. These tests are defined as follows:

a. Engineering tests.-- Engineering tests will comprise those examinations, investigations, or other observations necessary to determine the technical adequacy of the materiel undergoing test. Engineering tests will be conducted by the developing agency charged with the development of the item of materiel.



b. Service tests.-- Service tests are tests of development materiel normally conducted by a using agency to determine the suitability of the materiel for service use. In event that there are two or more using agencies of the materiel, the responsibility for conducting and supervising the test for a particular item or group of items may be jointly assumed or may be delegated to one agency, as agreed by the using agencies, or as directed by the General Staff, U. S. Army.

c. Extended service tests.-- In most cases it will be practicable to classify an item of materiel as an adopted item as a result of the preceding tests. However, for some of the more important and more complicated items of materiel, it may be highly desirable or even necessary to conduct an extended service test to determine its suitability for service use, by issuing the item to equip designated units, or by extending a controlled test over a specified period of time.

10. Conduct of tests.-- a. Engineering tests.-- Engineering tests should be sufficiently extensive to determine essential engineering characteristics and data in order to avoid the necessity of determining such data in service tests. Using agencies will be invited to send representatives to witness engineering tests in which they are believed to have an interest. To be sufficiently definitive with regard to maintenance and technical suitability for operation in various climates, engineering tests may be conducted at such proving grounds or field stations within the continental limits of the United States or in such overseas commands as are approved by the General Staff, U.S. Army.

b. Service tests.-- In order that there may be the minimum of delay in development and final adoption, service tests will begin as early as practicable and will be carried on intensively over a sufficient period to determine

the suitability of the item for service use. Close contact will be maintained by the agency conducting the service test with the developing agency concerned, in order to minimize the duplication of tests. The developing agency may send representatives, including technical assistants, to observe the service tests with a view to gaining first-hand knowledge of the results of the tests and to render assistance when needed in the conduct of the tests.

- (1) The developing agency will furnish such information as will enable comprehensive tests to be conducted without unnecessary delay.
- (2) Each agency conducting a service test in which other agencies are interested will afford such agencies opportunity to participate in the preparation of the program and to send representatives to witness the test and to examine the report thereof.
- (3) For service tests, sufficient components or spare parts will be provided by the developing agency to maintain materiel in serviceable condition during the service test period.
- (4) If the expenditure of ammunition or any other expendable supplies is involved in service tests, the chief of the appropriate supply agency will insure that sufficient supplies are allotted to the agency conducting the test to enable the test to be made without interruption.
- (5) Service tests of essentially unmodified commercial type items may be in the nature of "acceptance tests," which will insure that the quality and performance of such items meet the approved military characteristics of the items and satisfy the using agencies.

(6) In the case of a need for experimental modification of service test materiel, the agency supervising the test is authorized, with the concurrence and if necessary the technical assistance of the developing agency, to make such modifications, but only when the modification will enable the agency supervising the tests to conduct a more effective service test, thereby arriving at sounder conclusions.

(7) For the greater part of materiel, service tests within the continental limits of the United States will be adequate to establish the suitability of the materiel. In some cases, service test in overseas commands is desirable especially in regard to items intended for use in specific areas.

(8) With the concurrence of the developing agency and approval of the using agency, service tests may be waived when no useful purpose is served by such tests.

c. Other tests.-- Tests conducted primarily for the purpose of establishing tactical doctrine, subject matter for inclusion in training publications, or production data prior to adoption will be conducted by the developing or using agencies as necessary. As far as practicable, tests of this nature will be combined with engineering and service tests. If ammunition or any other expendable supplies, in excess of that available to the developing agency for use in engineering and service tests, is required for such tests, it will be procured through request to the appropriate supply agency.

11. Review of research and development projects.--Chiefs of developing agencies will direct timely and periodic reviews of research and development projects by their technical committees to assure conformity with the Department of the Army research and development program and to eliminate unproductive and duplicating activities.

SECTION IV

## PROCEDURES GOVERNING CLASSIFICATION OF MATERIEL

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12. Classification as to type of materiel.—For the purpose of recording the status of items of materiel from the standpoint of development and suitability for service use, items are classified by appropriate technical committee action as follows:

"Development type" is used to designate an item being developed to meet a military requirement. For administrative purposes, such an item may be further classified as follows:

- (1) "Experimental type" is used to distinguish an item being developed which has not progressed to the stage where engineering tests indicate that the item is sufficiently satisfactory to warrant service test.
- (2) "Service test type" is used to distinguish an item being developed which has progressed beyond the experimental stage, which appears to meet desired military characteristics, which has operated satisfactorily in engineering tests, which is not ready for classification as an adopted type, and which before such classification should be subjected to service test and subsequently, in some cases, to extended service test. The change of classification from experimental to service test type signifies that the item is approved, by direct agreement between the developing and using agencies, for issue in limited

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quantity for service test preparatory to its being classified as adopted type. General Staff approval is required for any additional procurement needed for extended service tests.

b. "Adopted type" is the category of materiel which is suitable for its intended military usage. For purpose of recording this category is classified as follows:

- (1) "Standard type" is used to designate the most advanced and satisfactory that has been adopted and is preferred for procurement. There will normally be only one "standard" type for each requirement.
- (2) "Substitute standard type" is used to designate an item which is not as satisfactory as a standard type, but is a usable substitute therefor, and may be procured to supplement the supply of the standard type.
- (3) "Limited standard type" is used to designate an item which is not as satisfactory as a standard type, but is a usable substitute therefor, and is either in use or available for issue to meet supply demands. It may be peculiarly suitable for training purposes in lieu of standard or substitute standard types; and when so used exclusively it will not be listed as an asset in the Army Supply Program. Unless otherwise specifically indicated, a limited standard item is used in lieu of a standard item until the supply of the limited standard item is exhausted; however, at the discretion of the agency charged with its procurement, stocks of limited standard items may be disposed of through other means when advisable,

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based on availability of a more suitable type. Additional complete major units will not be procured, but component parts and accessories may be procured if necessary to maintain the complete major units in serviceable condition throughout a reasonable life expectancy.

c. "Obsolete type." An obsolete type of materiel is one which has been declared unsuitable for its original military purposes or for training purposes. Obsolete items will not be issued to troops, and will be disposed of at the earliest practicable date by the chief of the developing agency concerned, in accordance with existing instructions, except in those special cases where they are to be retained for special requirements outside of the established Army Supply Program. Where the development and procurement status of new types make such action desirable, the chief of the developing agency concerned will declare items obsolete. This action will be subject to the concurrence of the using agencies concerned, and to approval by the General Staff and will be processed through technical committee channels. Constant alertness on the part of all concerned is enjoined to insure that timely action is taken leading to classification of materiel as obsolete, and to disposal of such items, in order that valuable storage space and maintenance funds are not wasted on useless materiel.

13. Material to be classified. --All end items of supply included under paragraph 6a will be classified as to type in accordance with the provisions of this regulation. Whenever the characteristics of an improved or modified item are sufficiently different from those of the item being superseded or supplanted so as to necessitate maintenance of separate stocks, the item concerned will be processed for appropriate classification. The stock position of adopted items of materiel will not in itself delay or limit research and development activities

necessary to the prosecution of research and development programs. An item of materiel classified as to type by a developing agency will not upon transfer of responsibility to another developing agency be processed through the technical committee of the recipient agency as an action item unless concurrent reclassification action is indicated with the transfer. The transfer of responsibility will be read for record by the technical committee of the recipient developing agency and any supply action required will not be delayed pending such recording.

14. Approval of classification as to type.—a. When it becomes evident that classification or reclassification of an item of materiel is desirable, appropriate recommendations will be formulated by the using or developing agency and submitted for action through technical committee channels. When, as a result of this coordination, the recommendations for classification are not concurred in because of a minority report in technical committee action, or because of non-concurrence by the chief of the developing agency, the recommendations, together with any reports pertaining thereto, will be forwarded to the General Staff for decision.

b. The classification or reclassification as to type of assemblages of materiel also includes the classification or reclassification of the component parts, except that the reclassification action will not lower the type classification of components that also are included in other assemblages of materiel bearing a higher type classification, or those items that are also separate items of issue. Separate formal type classification of a component part of an adopted assemblage is not necessary for the purpose of including the component part as a separate item in tables of organization and equipment, equipment modification lists, or tables of allowances. Obsolescence of an assemblage containing an item or items separately issued, or the deletion of such items from the parent assemblage, will necessitate individual classification action for the items affected.

c. The classification action of a new item replacing an existing item will include consideration of the reclassification of the item to be replaced. A standard item being replaced will be concurrently reclassified.

d. Classification as a development type is automatically approved when the research and development project pertaining thereto is approved according to the provisions of this regulation.

e. Action for classification of an item as one of the adopted types as an obsolete type will be through technical committee channels in accordance with committee procedure established above.

f. Technical committees will furnish such of the following information as is pertinent with each request for classification of materiel for use by the Army.

(1) Discussion concerning—

(a) Agencies concerned.

(b) Purpose of item.

(c) Description (including description and status of special ancillary materiel).

(d) Related materiel.

1. Materiel used in conjunction with the item.

2. Nature of improvement of item over existing materiel for same or similar purposes.

3. Similarity to materiel of other departments of the armed forces of the United States.

4. Existing items which must be modified and new items which must be classified before issue of the item can be accomplished.



5. The stock status of item being replaced or superseded, the advisability of complete replacement by the new item, and the recommended objective date.

(e) Development history and status.

(f) Whether item is—

1. New type.

2. Improvement, replacement, or supplement to an existing classified type.

(2) Pertinent data will be indicated as follows:

(a) Expendability.

(b) For commercial items only

1. Expected life of the item (in years).

2. The price expected to be paid for initial procurement.

(c) Estimated unit cost in quantity procurement, and comparison with cost of the item being replaced.

(d) Whether the item meets all approved military characteristics, and if not, in what respects it is lacking.

(e) In the case of commercial items, a statement that the item is satisfactory for those special conditions where tactical or "battlefield" requirements or other unique military requirements are not major criteria for decision.

(f) Number of units procured, on hand, and on outstanding contracts.

(g) Whether the item is intended for immediate procurement, future procurement, or as funds become available.

(h) Availability of funds (if intended for immediate procurement).

- (i) Whether sufficient facilities exist for peacetime and wartime production. This will include whether the characteristics of the item are such as to restrict its procurement to one source of supply, whether production by Government facilities only is contemplated, and whether procurement of the item will complicate or interfere with the procurement of other items already classified.
- (j) Whether the design insures maximum interchangeability of parts and is suitable for mass production. Whether this information is based on a specific procurement planning study or a specific study of productability.
- (k) What strategic materials are required based on current lists published by Strategic Materials Committee, Munitions Board, and whether maximum practicable use of non-strategic domestic materials has been accomplished.
- (l) Any special steps necessary to train specialists in use of the item or to implement training of using troops.
- (m) Whether training and maintenance literature for the item is available, in preparation, or will be required.
- (n) Security classification.
- (o) Whether or not the item is air transportable, either intact or is dismantled units; in what phase of operations it will be transported by air; statement that the item complies with current directives on air transportability; and a description of the tie-down points

- (3) Recommendations will include or be submitted as to—
- (a) Nomenclature or name of item.
  - (b) Particular classification desired (with present classification).
  - (c) If replacing or supplementing an adopted item, recommendation as to classification of that item.
  - (d) Agency or agencies to be charged with the preparation of specifications, the determination of requirements, the provision of funds, purchase, inspection, storage, issue, and maintenance of the item.
  - (e) Initial consumption rate or replacement factor as derived, in accordance with Department of the Army instructions.
  - (f) Supply class for issue (i.e., I, II, III, IV, or V).
  - (g) Initial basis of issue for class II items (for procurement planning purposes).
  - (h) Initial quantities for class IV items. A basis for these quantities is the distribution to appropriate units or theaters of operations, or units or commands operating under the direct command of the chief of the using agency.

g. Technical committees will furnish such of the following information as is pertinent, with each request for classification of an item as an obsolete type:

- (1) Nomenclature or name of item (it is important that correct nomenclature be used).

- (2) Discussion concerning--
  - (a) Agencies concerned.
  - (b) Reason for classification.
  - (c) Related and replacement items including:
    - 1. Nomenclature or name of item.
    - 2. Development status or classification.
- (3) Pertinent data will be indicated as follows:
  - (a) Unit cost of replacement items.
  - (b) Stock status and availability of replacement items.
  - (c) Availability of funds for procurement of replacement items.
  - (d) Quantity and condition of items on hand (if exact figures are not readily available, an estimate will be submitted and indicated as such):
    - 1. In depots.
    - 2. In hands of troops.
  - (e) Unit cost of item or complete set.
  - (f) Estimated cost of maintenance per year if retained, including cost of rehabilitation of items returned to the zone of the interior from theaters.
  - (g) What components and accessories will be considered obsolete or otherwise classified as a result of this action.
  - (h) What disposition is contemplated if classification is approved.
  - (i) Estimate of funds required for action, if significant.
  - (j) Security classification.
- (4) Recommendations will be submitted as to--

- (a) Recommended classification.
- (b) Classification of components peculiar to this item which have no separate classification but are required as separate end items.
- (c) The proposed disposition as indicated above be approved.

15. Policy for classification of materiel.-- a. The importance of avoiding delay in the processes of classification of items of materiel should be realized by all concerned. The classification of an item as a standard type enables the basis of issue to be determined and procurement planning for necessary production to be inaugurated.

b. When an item of materiel shows a favorable performance during service test and is a marked improvement over an existing adopted item, recommendations for classification may be initiated by the chief of the developing agency concerned after consultation with the using agency.

c. The classification as to type of materiel will be dictated solely by the military effectiveness and the availability of the subject materiel. When surplus stocks of items of modern effective materiel exist, the items will not be declared obsolete solely as grounds for their disposal, or solely as grounds for procuring more effective materiel. Conversely, the stock position of old, ineffective, or inefficient materiel must not affect the decision as to classification of modern and more effective materiel, nor the decision to reclassify obsolete type if otherwise warranted.

d. All assemblages of materiel will be classified as to type in accordance with prescribed procedure. These assemblages will be carefully screened by the developing agency concerned to insure that there is not a like assemblage already in existence within the National Military Establishment or under development. Some individual components of an assemblage may be identical with articles procured by other governmental agencies.

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*or other development in progress*

e. The chief of a technical service may make changes in component parts of adopted items and assemblages, with the concurrence of the using agency, provided the approved military characteristics of the complete item or assemblage are not changed thereby. If the military characteristics or the type or model description is to be changed, action for initiating and approving the change will be in accordance with provisions of this regulation.

f. No alterations will be made in the working parts of items of materiel without approval of the chief of the developing agency concerned. Whenever a recommendation to make a major modification in an existing item of materiel is received by a developing or using agency, it will be coordinated with the other interested developing or using agencies before appropriate action under Department of the Army policies is initiated. (See Section V)

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## SECTION V

## PROCEDURES GOVERNING MODIFICATION OF MATERIEL

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16. Definition.---A modification is a major or a minor change in the design or assembly of an adopted type item of materiel.

17. Purpose.---Materiel may be modified for any one of a variety of reasons. Outstanding reasons would be to increase the safety of personnel, reduce excessive maintenance, increase combat or operating effectiveness, or to facilitate production in manufacture.

18. Initiation and approval of modification projects.---a. Any individual or agency may submit suggestions for modifications through proper command channels. The chief of the developing agency having primary responsibility for an item of materiel will evaluate the need for a modification from a technical viewpoint and will initiate technical committee action necessary for the accomplishment of modifications which he deems to be desirable, within the limitations of available funds and personnel. Modifications which change military characteristics or require changes in specifications will be coordinated with interested agencies before action leading to accomplishment is initiated.

b. Approval of modification projects.---Research and development projects for modifications resulting in changes to established

military characteristics of materiel require technical committee action and approval by the General Staff, United States Army. Service projects leading to desirable modifications of materiel when such modifications do not change established military characteristics of separate end items may be initiated by the developing agency and will be read for record by the appropriate technical committee.

19. Preparation of and changes to modification work orders.--a. Instructions for accomplishment of modifications of items already in the Army supply system will be prepared by the chief of the developing agency concerned and issued to the field by The Adjutant General as a Department of the Army modification work order.

b. Changes to modification work orders.--Whenever it becomes necessary to issue additional instructions pertaining to the modification of materiel already covered by a modification work order, a change will be issued containing such instructions. The change will be given the same designation as the original modification work order, except that it will have the word "Change" and the number of the change suffixed.

20. Responsibility for modification of materiel.--a. The chief of the developing agency having responsibility for the maintenance planning of the item to be modified shall designate in the modification work order itself, the establishments and categories of maintenance which are authorized or required to perform the modification.

b. No modification which will affect the working parts of materiel will be made without the prior approval of the responsible developing agency, except that modifications which are vital to safety or essential to operations may be made within oversea departments, or theatres of operations, with the approval of the commander of the department, theatre of operations or separate task force. A complete report covering such modifications will be made immediately to the responsible developing agency.



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21. System of classification.--Modification work orders will be classified as either urgent or normal.

a. The urgent classification requires that the modification be accomplished immediately on all items both in the depot and in the field, except that the chief of the responsible developing agency is authorized to exclude material which may be in depot stock or in the supply channel from the urgent classification. Those exceptions shall be clearly described in the MWO. He may also require periodic reports of progress by organizations performing urgent modifications, if deemed desirable.

b. The normal classification requires that the modification be accomplished as soon as practicable within current resources. Items in storage which are already processed and packaged are not affected. A report of the accomplishment of the modification may or may not be required.

22. Procedure for modifying captured enemy material.--In order fully to exploit enemy material captured in large quantities, it is frequently necessary to modify such material. The same procedure as described above for modification of United States Army material applies to the modification of captured enemy material, except that the modification work order for such material will bear the identifying letter (E) in parentheses suffixed to the number.