28 August 1974 Superseding MIL-G-58087(AV) 18 April 1968

MILITARY SPECIFICATION

GRIP ASSEMBLY, CYCLIC CONTROLLER, HELICOPTER

This specification is approved for use by all Department and Agencies of the Department of Defense

1. SCOPE

1.1 <u>Scope</u>. This specification covers a cyclic controller grip assembly for use in helicopters.

1.2 <u>Classification</u>. Grip assembly shall be of the following types, as specified:

- Type I Electrical wiring from switches brought out through the base to the length specified, as shown on Drawing 58087-1A (DL 58087).
- Type II Electrical wiring from switches connected to the electrical connector provided in the base, as shown on Drawing 58087-2A (DL 58087).

2. APPLICABLE DOCUMENTS

2.1 The following documents of the issue in effect on date of invitation for bids or request for proposal form a part of the specification to the extent specified herein:

SPECIFICATIONS

FEDERAL

PPP-B-601	Boxes, Wood, Cleated-Plywood
РРР-В-636	Box, Fiberboard

MILITARY

MIL-P-116 Preservation, Methods of

FSC 1680

MIL-S-7742	Screw Threads, Standard, Optimum Selected Series: General Specifi- cations for
MIL-I-81023	Inductor, 28V, D.C., Laboratory Test, General Specification for
STANDARDS	
FEDERAL	
Fed-STD-151	Metals, Test Methods
MILITARY	
MIL-STD-100	Engineering Drawing Practices
MIL-STD-105	Sampling Procedures and Tables for Inspection by Attributes
MIL-STD-129	Marking for Shipment and Storage
MIL-STD-130	Identification Marking for US Military Property
MIL-STD-143	Standards and Specifications, Order of Precedence for the se- lection of
MIL-STD-810	Environmental Test Methods
MIL-STD-831	Test Reports, Preparation of
MS87017 (AV)	Switches (Arrangement and Functions) Grip Assembly, Cyclic Controller, for Installation in Helicopters.
DD ATTNOC	

DRAWINGS

DL 58087	Grip Assembly, Cyclic Controller,
	Helicopter

(Copies of specifications, standards, and drawings required by suppliers in connection with specific procurement functions should be obtained from the procuring activity or as directed by the Contracting Officer.)

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3. REQUIREMENTS

3.1 <u>First article.</u>—Unless otherwise specified (see 6.2), this specification requires five complete aircraft controller grip assemblies for first article inspection and testing (see 4.3). First articles may be either preproduction samples or initial production models which conform to all the requirements of this specification. In either case first articles shall be identified with the production items in accordance with the terms of the contract. Approval of the first article shall not relieve the supplier of the responsibility to furnish grip assemblies in accordance with this specification.

3.2 <u>Material.--Material</u> shall be as specified herein and as shown on the applicable drawings. Materials not specified shall be selected by the supplier and shall be subject to all provisions of this specification.

3.3 Design and Construction.

3.3.1 <u>Design and construction.</u>--The grip assemblies consist of two main sections, a body and cap, molded of plastic material. Both body and cap have internal recesses mated for positioning and retention of the switches and associated wiring. The cap is easily removable for access to switches and wiring connections. Both type grip assemblies are constructed to withstand temperature extremes, strains, jars, and vibration incident to shipment, storage, handling, and service usage.

3.3.2 <u>Type I assembly.</u>--Type I assembly design shall be as shown on Drawing 58087-1A (DL 58087). A steel fitting shall be molded in the base of the body, as shown on drawing A 192-100071-1A (DL 58087). The fitting shall be suitable for insertion of an adaptor or control stick.

3.3.3 <u>Type II assembly.</u>--Type II assembly design shall be as shown on Drawing 58087-2A (DL 58087). A steel fitting shall be molded in the base of the body, as shown on Drawing A192-100070-1A (DL 58087). The fitting shall have external threads to accept a coupling ring on the connector half that is on the control stick.

3.3.4 <u>Drawings.</u>--Drawings forming a part of this specification are engineering design drawings. Each supplier is responsible for preparing his own shop drawings as necessary. Where tolerances prescribed could cumulatively result in incorrect fits, the supplier shall provide tolerances within those prescribed on the drawings to insure correct fit, assembly, and operation of the grip. No deviation from the prescribed dimensions or tolerances is permissible without prior approval of the contracting officer.

3.3.5 <u>Electrical wiring</u>.--The electrical wiring circuit shall be in accordance with the applicable drawings. Special wiring may be used if required for size and flexibility, provided it is suitable for the intended use and meets the environmental conditions specified herein. All connections shall be soldered and shall be insulated to prevent short circuits (see applicable drawings). Wire stripping shall be accomplished by automatic stripping machine or commercial type hand tool of adequate size. Knife stripping is prohibited.

3.3.6 <u>Soldering</u>.--When soldering is employed, only non-corrosive fluxes shall be used, and all excess flux shall be removed. Solder shall not be used primarily for mechanical strength. Electrical connections shall be secure and electrically continuous before and after soldering.

3.3.7 <u>Screw threads</u>.--Unless otherwise specified, screw threads shall conform with MIL-S-7742.

3.4 Reliability

3.4.1 <u>Service Life</u>.--The service life with repair shall be unlimited.

3.4.2 <u>Mean-Time-Between-Failure.</u>--The grip assembly shall have a mean-time-between-failure (MTBF) of no less than 4500 flight hours. A failure is defined as any occurance requiring corrective action.

3.5 <u>Maintainability.</u>--The grip assembly is designed to permit ease of maintenance at field level, including replacement of switches, wiring, and associated parts without damage, and without the use of special tools and techniques.

3.6 <u>Performance</u>.--The grip assembly shall perform satisfactorily when subjected to all tests specified in section 4, and when subjected to the following environmental conditions:

a. Temperatures ranging from minus $54^{\circ}C$ (minus $65^{\circ}F$) to plus $71^{\circ}C$ ($160^{\circ}F$).

b. Relative humidity of 95 percent.

c. Altitude pressures ranging from 30 inches Hg to 13.75 inches Hg (approximately 20,000-foot altitude).

d. Salt spray exposure, for 96 hours as specified in FED-STD-151.

e. Vibration incidental to service use.

f. Fungus growth as encountered in tropical climates.

g. Dust particles as encountered in desert areas.

h. Shock forces as anticipated during normal usage.

i. Temperature shock tests ranging from a low temperature of -54° C (minus 65° F) to a high temperature of $+88^{\circ}$ C (190° F).

3.7 <u>Details of components.</u>--Other than the molded plastic body and cap, the grip assembly components shall be as follows:

3.7.1 <u>Electric switches</u>.--The arrangement and function of electrical switches shall be in accordance with this document and MS-87017(AV). The switches shall withstand the environmental conditions specified for components of the grip assembly (see 4.6.6).

3.7.1.1 <u>Trim switch.</u>--The trim switch (four position ON, center OFF) shall be in accordance with this document and drawing A218-101088 (DL58087).

3.7.1.2 <u>Pushbutton switches.</u>--Pushbutton switches shall be in accordance with this document and applicable drawing. The configuration of switch contacts, normally open (NO) or normally closed (NC), shall be as specified by the drawing for each switch type.

3.7.1.3 <u>Trigger switch.</u>--The trigger switch shall be in accordance with this document and applicable drawings per DL58087 and shall be in accordance with 3.7.1.3.1 through 3.7.1.3.4 (see 4.6.4).

3.7.1.3.1 <u>Configuration.</u>--All contacts and the switching detent mechanism are contained within a housing with coverplates to prevent any wiring or foreign objects such as screws, washers, springs, etc., getting into the mechanism. The switch shall be a snap acting type providing rapid making and free breaking of the contacts. The trigger shall be self-returning to the "OFF" or "FULL OUT" position when the actuating force is removed.

3.7.1.3.2 <u>Travel and actuating force.</u>—Trigger switch travel and actuating force shall be as specified on drawing A218-158698-02.

3.7.1.3.3 <u>Switch life.</u>-Switch life, with a load of 5 amperes inductive at 28 volts direct current (DC), shall be a minimum of 150,000 operating cycles (see 4.6.4.2).

3.7.1.3.4 <u>Trigger guard life.</u>--Trigger guard life shall be a minimum of 150,000 operating cycles (see 4.6.4.2).

3.7.1.4 <u>Rocker switch.</u>--In addition to requirements shown on application drawings per DL58087, the rocker switch assembly shall also be as specified in 3.7.1.4.1 (see 4.6.4).

3.7.1.4.1 <u>Travel and actuating force.</u>--Rocker switch travel and actuating force shall be as specified on drawing A218-101070-00.

3.8 <u>Electromagnetic-interference</u>.--The grip assembly is not required to be tested to determine electronic interference signals. Consideration will be given to avoid construction that could result in generating electronic interference.

3.9 <u>Weight</u>.--Weight of either Type I or Type II grip assembly shall not exceed 1.75 pounds.

3.10 Identification Marking.

3.10.1 <u>Identification of product.</u>--Equipment assemblies shall be marked for identification in accordance with MIL-STD-130.

3.10.2 Part numbering of interchangeable parts.--All items having the same part number shall be functionally and dimensionally interchangeable. The item identification and part number requirements of MIL-STD-100 shall govern. Part numbers utilized shall conform to DL58087.

3.11 <u>Workmanship.</u>--The grip assembly shall be constructed and finished in a thoroughly workmanlike manner. The grip shall be free from burrs, sharp corners, and overlapping edges on mating surfaces. Particular attention shall be given to neatness and thoroughness of soldering, wiring, marking of parts and assemblies, plating, painting, riveting, machine screw assembly, welding, and brazing. Fastening devices such as screws and pins shall not interfere with handling the unit in operational service.

4. QUALITY ASSURANCE PROVISIONS

4.1 <u>Responsibility for inspection.</u>--Unless otherwise specified in the contract or purchase order, the supplier is responsible for the performance of all inspection requirements as specified herein. Except as otherwise specified in the contract or order, the supplier may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

4.1.1 <u>Component and material inspection.</u>--The supplier is responsible for insuring that components and materials used are manufactured, inspected, and tested in accordance with reference ed specifications and standards.

4.1.2 <u>Disassembly inspection.</u>--The first article grips failing a performance test shall be disassembled in the presence of a Government representative. Each disassembled part shall be inspected in detail for compliance with this specification and referenced drawings in regard to materials, dimensions, and tolerances. Parts not complying with such requirements shall be rejected.

4.2 <u>Classification of inspection.</u>--Inspections shall be classified as follows:

- a. First article.
- b. Quality conformance.
- c. Inspection of preparation for delivery.

4.3 First Article Inspection.

4.3.1 <u>First article.</u>-The first five articles or the initial production items of the grip assembly specified in 3.1 shall be individually inspected as specified in 4.5, and then subjected to the tests as described in 4.6.2 thru 4.6.6.2 in the sequence specified in Table I.

4.3.2 <u>Test report.</u>--The contractor shall prepare three copies of a test report in accordance with MIL-STD-831 (see 6.3). The test reports shall be submitted to the procuring activity for approval.

4.4 Quality Conformance Inspection.

4.4.1 Each grip assembly shall be subjected to the following conformance inspection.

4.4.1.1 <u>Examination</u>.--Each grip assembly shall be examined for defects as specified in 4.5. Presence of a defect shall be cause for rejection.

4.4.1.2 Each grip assembly shall be tested as specified in 4.6.2 and 4.6.3. Failure of a test shall be cause for rejection.

4.4.2 <u>Samples.--Grips shall be selected per MIL-STD-105</u>, Table I, Special Inspection Level S-1, and Acceptable Quality Level 4.0. The samples shall be subjected to the following conformance inspections: 4.4.1 and tests 4.6.2, 4.6.3 and 4.6.4.1.

4.4.3 <u>Rejection and retest.</u>--When an item selected for test fails to meet the specification, no items still on hand or later produced shall be accepted until the extent and cause of failure are determined. After corrections have been made, all necessary tests shall be repeated.

4.4.4 <u>Individual tests (4.4.1) may continue.</u>--For operational and production reasons, individual tests may be continued pending the investigation of a sampling test failure. However, final acceptance of items on hand or later produced shall not be made until it is determined that items meet all requirements of the specification.

4.5 Inspection Procedure.

4.5.1 Examination.--The grips shall be examined for the following defects:

Critical

- 1. Holes in castings.
- 2. Improper functioning of switches.

<u>Major</u>

- 101. Dimensions and/or weight not as specified. (3.3 and 3.9).
- 102. Surfaces not specified. (3.3.4 and 3.11).
- 103. Interface fits of component parts not as specified. (3.3.4).
- 104. Component parts missing or not as specified.
- 105. Identification and other marking illegible, missing, or not as specified. (3.10).
- 106. Treatment not as specified. (3.3.4 and 3.11).
- 107. Workmanship not as specified. (3.11).
- 4.6 Tests.

4.6.1 Test conditions.

4.6.1.1 <u>Standard atmosphere conditions</u>.--Wherever pressure and temperature are not specified for a test condition, it is understood that the test is to be made at standard atmospheric pressure (approximately 29.92 inches Hg) and at normal room temperature (approximately 25° C or 77° F).

		TEST	SEQUENCE	·		·
TESTS	SAMPLE NUMBERS					
	PAR.	1	2	3	4	5
Examination of Product	4.5	1	1	1	1	1
Operational Check	4.6.2	2(7)(9)	2(5)(7)	2(6)	2(5)(8)	2(6)(9)
Dielectric	4.6.3	3(10)	3(8)(11)	3	3	3(10)
Trigger & Rocker Switch, Travel & Actuating Force	4.6.4.1	4	9			
Trigger & Rocker Switch Endurance	4.6.4.2	5				
Strength	4.6.5	6			7	5(8)
Vibration	4.6.6.1.1		6			
Shock	4.6.6.1.2		4			
Salt Spray	4.6.6.2			5		
Altitude	4.6.6.1.3			4		
Humidity	4.6.6.1.4		10			
Dust	4.6.6.1.5				4	
High Temperature	4.6.6.1.6					4
Low Temperature	4.6.6.1.7					7
Temperature Shock	4.6.6.1.8				6	
Fungus	4.6.6.1.9	8				
NOTE: NUMBERS IN	PARENTHESIS	INDICATE	REPFAT	TEST TO	BE CONDI	ICTED IN

TABLE 1. ORDER OF TESTING

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4.6.1.2 <u>Test fixture</u>.--The test fixture shall be constructed so that mounting and use of the grip assembly during testing specified herein will simulate the installation of the grip in a helicopter.

4.6.2 <u>Operational check.</u>--The grip assembly shall be placed on the test fixture (see 4.6.1.2) with each switch electrically connected to its rated voltage and current per basic switch rating. Each switch shall be operated at least 5 times to insure correct operation and secure connections.

4.6.3 <u>Dielectric test</u>.--Each switch, when installed in the grip assembly, shall be subjected to a 60-cycle frequency having a potential of twice the maximum rated voltage plus 1,050-volt rootmean-square (rms). For first article testing, the length of time shall be 1 minute and for conformance testing, the length of time shall be 1 second. Test as follows:

- a. Between all terminals and exposed or grounded metal parts.
- b. Between all adjacent terminals of different poles.
- c. Between all open terminals and corresponding pole.

These tests shall be performed with the switch in the normal position, and shall then be repeated for all switch positions. Any evidence of arcing, flashover, breakdown of insulation, or current flow in excess of the amount shown below shall be an indication of failure. Creepage distance between current carrying parts and portions of the switch other than insulating materials, as checked by measurement, shall be not less than 1/16 inch.

Switch	Maximum Current Flow
Rocker	2 milliamperes
Trigger	l milliampere
Toggle	10 microamperes
Push	1 milliampere
Four position	l milliampere

4.6.4 Trigger and Rocker Switch Tests.

4.6.4.1 Trigger and rocker switch operation.--The trigger and rocker switches of the grip assembly shall be tested respectively to determine travel and actuating force in accordance with applicable drawings (see 3.7.1.3 and 3.7.1.4).

4.6.4.2 Trigger switch, trigger guard, and rocker switch endurance tests (see 3.7.1.3.3 and 3.7.1.3.4)--Test loads and circuits shall be so arranged than an independent load of specified current shall be provided for each pole. For purpose of electrical testing, standard DC Voltage shall be 28 volts. The following conditions shall apply:

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a. <u>Power supply.--</u>One side of the power supply, one side of the test load, switch mounting plate, metal case (if applicable), and metal actuating member, shall be connected to a common ground.

b. Loads. -- Switches shall be subjected to minimum operating cycles specified in 3.7.1.3.3 making and breaking the specified rated inductive current at 28 volts DC. The inductive circuit shall be in accordance with MIL-I-81023. During this test. switches shall be in at room temperature and in an atmospheric pressure of 13.75 inches Hg (approximately 20,000 foot altitude).

4.6.4.2.1 Procedure. -- Switches shall be continuously monitored and recorded to determine whether any contact fails to open or close its individual circuit in proper sequence. The duty cycle shall be approximately 50 percent on and 50 percent off at a rate of 10 to 12 cycles per minute. Associated with each load shall be a monitoring circuit that will detect operational failure. The monitoring circuit shall not shunt inductive components of inductive loads or switch contacts. Temperature rise shall be monitored for switches making and breaking currents in excess of 10 amperes.

4.6.5 Strength test.--The grip assembly shall be mounted on a test fixture by the base mounting applicable to the assembly type specified. The following loads shall be applied over a small area centered about the reference point, as shown on the applicable grip assembly drawings.

- (a) 300 pounds forward.
- (b) 300 pounds aft.
- (c) 150 pounds to the right.(d) 150 pounds to the left.
- (e) 100 pounds upward
- (f) 100 pounds downward
- (g) 80-inch-pounds torque.

There shall be no cracking, breaking, or distortion resulting in malfunction of the grip assembly.

4.6.6 Environmental Tests.

4.6.6.1 The following environmental tests shall be in accordance with MIL-STD-810. Procedures shall be as specified and as described in the following subparagraphs:

TEST	METHOD	PROCEDURE
Vibration	514.1	I, category a, Fig 514-1, curve M (4.6.6.1.1)
Shock	516.1	I, Fig 516.1-1, (a) & (c) (4.6.6.1.2)
Altitude Humidity Dust High Temperature Low Temperature Temperature Shock Fungus	500 507 510 501 502 503 508	<pre>II (4.6.6.1.3) I (4.6.6.1.4) I (4.6.6.1.5) II (4.6.6.1.6) I (4.6.6.1.7) I (4.6.6.1.8) I (4.6.6.1.9)</pre>

4.6.6.1.1 <u>Vibration.</u>--During vibration tests, there shall be no closing of switch contacts, as determined by a monitoring device such as a thyratron circuit or an oscillograph which would indicate any closure, of a duration in excess of ten microseconds. The major resonance dwell test will be conducted at $+71^{\circ}C$ ($160^{\circ}F$) and $-54^{\circ}C$ (minus $65^{\circ}F$) for 15 minutes per axis at each temperature. Vibration cycling shall be conducted at $+71^{\circ}C$ ($160^{\circ}F$) and $-54^{\circ}C$ (minus $65^{\circ}F$) as well as atmospheric conditions (4.6.1.1). At the conclusion of the vibration tests, the grip assembly shall be tested as described in 4.5, 4.6.2, 4.6.3, and 4.6.4.1.

4.6.6.1.2 <u>Shock.</u>—The peak shock value (A) shall be 20g's. Three shocks shall be applied to the test item (see 3.6) in each direction, along each of the three mutually perpendicular axes (18 shocks). At the conclusion of shock tests, the grip assembly shall be tested as described in 4.5, 4.6.2, 4.6.3, and 4.6.4.1 to determine that no failure has occured. Shocks shall be applied at standard atmospheric conditions (4.6.1.1) as follows:

a. Vertically - three shocks in each direction.

b. Parallel to the major horizontal axis - three shocks in each direction.

c. Parallel to the major horizontal axis - three shocks in each direction.

4.6.6.1.3 <u>Altitude.</u>--While the grip assembly is at the lowest pressure condition of 13.75 inches Hg, it shall be tested as specified in 4.6.3 at a reduced potential of 500 volts. The rate of pressure change during decompression shall be 1.5 inches of mercury per minute. (see 3.6)

4.6.6.1.4 <u>Humidity</u>.--At the conclusion of the humidity test, and prior to drying operations, the grip assembly shall be tested as specified in 4.5 and 4.6.2. After drying operations, the grip assembly shall be tested as described in 4.6.3. (see 3.6)

4.6.6.1.5 <u>Dust.</u>--At the conclusion of the dust test, the grip assembly shall be tested as described in 4.6.2.

4.6.6.1.6 <u>High temperature.</u>--While the grip assembly is at the operating temperature of 71° C (160° F), it shall be tested as described in 4.6.2. The grip assembly shall be immediately subjected to the strength test (4.6.5) after removal from the 71° C (160° F) test chamber. The strength test shall be completed within 10 minutes after removal from the test chamber.

4.6.6.1.7 Low temperature.--While the grip assembly is at the operating temperature on minus $54^{\circ}C$ (minus $65^{\circ}F$), it shall be tested as described in 4.6.2. The grip assembly shall be immediately subjected to the strength test (4.6.5) after removal from the minus $54^{\circ}C$ (minus $65^{\circ}F$) test chamber. The strength test shall be completed within 10 minutes after removal from the test chamber.

4.6.6.1.8 <u>Temperature shock.</u>--The grip assembly shall be subjected to a temperature of -54° C (minus 65° F) for 8 hours, immediately subjected to a temperature of $+88^{\circ}$ C (190° F) for 8 hours, and immediately returned to the -54° C (minus 65° F) temperature for 8 hours. High temperature during temperature shock test shall be limited to $+88^{\circ}$ C (190° F). At the conclusion of the temperature shock test, the grip assembly shall meet the strength test described in 4.6.5 and tests described in 4.5 and 4.6.2.

4.6.6.1.9 <u>Fungus</u>.--At the conclusion of the fungus test, the grip assembly shall meet the tests described in 4.5 and 4.6.2.

4.6.6.2 <u>Salt spray test corrosion.</u>--Duration of the salt spray test as specified in Fed Std 151, shall be a 96-hour period. At the conclusion of the salt spray test, the grip assembly shall be inspected for corrosion or damage, and then tested as described in 4.5 and 4.6.2.

4.7 Inspection of preparation for delivery.--Preservation and packaging, packing and marking of the grip assembly shall be inspected to determine conformance with section 5 of this specification.

5. PREPARATION FOR DELIVERY

5.1 Preservation and packaging.--Preservation and packaging shall be level A or C, as specified. (see 6.2)

5.1.1 <u>Level A.</u>--Each grip assembly shall be preserved and packaged in accordance with MIL-P-116, method IIB, (without the use of a contact preservative) overboxed in a unit container conforming to W5s or W5c of PPP-B-636.

5.1.2 <u>Level C.--</u>Preservation and packaging shall be such as to afford adequate protection against corrosion, deterioration, and physical damage during shipment from the supply source to the first receiving activity for immediate use.

5.2 <u>Packing.</u>--Packing shall be level A, B, or C, as specified. (see 6.2)

5.2.1 Level A.--Grip assemblies preserved and packaged as specified in 5.1 shall be packed in overseas-type shipping containers conforming to PPP-B-601, surface-treated in accordance with the requirements of the specification. Insofar as practicable, exterior shipping containers shall be of uniform shape and size, of minimum cube and tare consistent with the protection required, and shall contain identical quantities. The gross weight or each container shall not exceed 200 pounds.

5.2.2 Level B.--Grip assemblies preserved and packaged as specified in 5.1 shall be packed in containers conforming to V3c or V3c of PPP-B-636. Containers shall be of minimum cube and tare consistent with the protection required. Insofar as practicable, exterior containers shall be of uniform shape and size and shall contain identical quantities. The gross weight of each container shall not exceed the limitation of the container specification.

5.2.3 <u>Level C.</u>-Grip assemblies, preserved and packaged as specified in 5.1 shall be packed in a manner to afford adequate protection at the lowest rate against damage during shipment from the supply source to the first receiving activity for immediate use. This level shall conform to applicable carrier rules and regulations and may be the supplier's commercial practice, provided the latter meets the requirements of this level.

5.3 <u>Marking of shipments</u>.--Interior packages and exterior shipping containers shall be marked in accordance with MIL-STD-129 and as specified in the contract or order. (see 6.2).

6. NOTES

6.1 <u>Intended use.</u>--The controller grip assembly covered by this specification is intended for mounting on the cyclic control stick of a helicopter to provide a handgrip for the pilot and contains the switches necessary to operate certain control functions and weapons systems.

6.2 Ordering data. -- Procurement documents should specify the following:

- a. Title, number, and date of this specification.
- b. Type of grip assembly required (see 1.2).
- c. Level of packaging and packing required (see 5.1 and 5.2).
- d. Whether special marking for shipment is required (see 5.3).
- e. Whether first Articles are required. (see 3.1 and 4.3.1)

6.3 <u>Test reports.</u>—The test report (see 4.3.2) will contain quantitative results of all tests as well as a record of the first article tests. If the grip assemblies are supplied by a subcontractor, a copy of the test report will be supplied to the prime contractor with each group of grip assemblies.

6.4 <u>Selection of specifications and standards</u>.--Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143.

6.5 <u>International standardization</u>.--Certain provisions of this specification are the subject of international standardization agreements ASCC AIR STD 10/12, Operation of All Controls and Switches at Aircrew Stations in Fixed Wing and Rotary Wing Aircraft; ASCC AIR STD 10/15, Location, Actuation and Shape of All Airframe Controls Other Than Primary Flying Controls; and ASCC AIR STD 10/22, Services Operable from Stick Grip in Both Fixed Wing and Rotary Wing Aircraft. When amendment, revision, or cancellation of this specification is proposed, which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required.

CUSTODIANS:

Army--AV

PREPARING ACTIVITY:

Army--AV

Project No. 1680-A313

SPECIFICATION ANALYSIS SHEET	Form Approved Budget Bureau No. 22-R2
INSTRUCTIONS: This sheet is to be filled out by personnel, either Governmen use of the specification in procurement of products for ultimate use by the Dep- is provided for obtaining information on the use of this specification which wi can be procured with a minimum amount of delay and at the least cost. Comme will be appreciated. Fold on lines on reverse side, staple in corner, and send t and suggestions submitted on this form do not constitute or imply authorization referenced document(s) or serve to amend contractual requirements.	artment of Defense. This sh Il insure that suitable produc ents and the return of this fo to preparing activity. Comme
SPECIFICATION	
ORGANIZATION	
CITY AND STATE CONTRACT NUMBER	
MATERIAL PROCURED UNDER A DIRECT GOVERNMENT CONTRACT SUBCONTRACT	
 HAS ANY PART OF THE SPECIFICATION CREATED PROBLEMS OR REQUIRED I MENT USE? a. Give paragraph number and wording. 	NTERPRETATION IN PROCUP
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