



AEROSPACE STANDARD	AS85352™	REV. A
	Issued 2002-02 Reaffirmed 2011-01 Stabilized 2018-04 Superseding AS85352	
Inflator Assembly and Gage Elements, Pneumatic Pressure, Remote Control, Direct Reading		
FSC 4920		

RATIONALE

Need a 28 day ballot to stabilize this document. The other documents in this series have already been stabilized.

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NOTICE

This document has been taken directly from U.S. Military Specification MIL-I-85352, Amendment 3 and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document is intended to replace MIL-I-85352, Amendment 3. Any part numbers established by the original specification remain unchanged.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, and (b) the use of the existing government specification or standard format.

Under Department of Defense policies and procedures, any qualification requirements and associated qualified products lists are mandatory for DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this SAE technical document.

1. SCOPE:

1.1 Scope:

This specification covers a direct reading, remote control, pneumatic pressure inflator assembly, for use on aircraft tires and struts having pneumatic pressure requirements up to 600 psi. It includes pressure relief provisions to provide for safe inflation. Also included are dual chuck stem gages for measuring tire pressure.

1.2 Classification:

Inflator assemblies and gage elements shall be as specified in the following table (see 6.2).

PART NUMBER	NOMENCLATURE	PRESSURE RANGE (PSI)
M85352/1	INFLATOR ASSEMBLY KIT	50-600 & 10-150
M85352/2	REMOTE CONTROLLER ASSEMBLY	-----
M85352/3-1	GAGE ELEMENT, SIZE 1	50-600
M85352/3-2	GAGE ELEMENT, SIZE 2	10-150
M85352/4-1	DUAL CHUCK STEM GAGE KIT SIZE 1	50-600
M85352/4-2	DUAL CHUCK STEM GAGE KIT SIZE 2	10-150

2. APPLICABLE DOCUMENTS:

2.1 Government documents:

- 2.1.1 Specifications, standards, and handbooks: The following specifications, standards, and handbooks form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

Federal

PPP-C-1120 Cushioning Material, Uncompressed Bound Fiber for Packaging

Military

MIL-P-116	Preservation, Packaging, Methods of
MIL-H-13531	Hose, Rubber and Hose Assembly, Rubber (Hydraulic, Flexible)
MIL-P-24074	Polytetrafluoroethylene Parts and Coatings and Polyanide Parts
MIL-T-27730	Tape, Antiseize, Tetrafluoroethylene, with Dispenser
MIL-I-85352/1	Inflator Assembly Kit
MIL-I-85352/2	Remote Controller Assembly
MIL-I-85352/3	Gage Elements
MIL-I-85352/4	Dual Chuck Stem Gage Kit

STANDARDS

Federal

FED-STD-595	Color
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Military

DOD-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 of U.S. Military Property
MIL-STD-143	Specifications and Standards, Order or Precedence for the Selection of
MIL-STD-794	Part and Equipment, Procedures for Packaging and Packing of
MIL-STD-808	Finish, Protective, and Codes for Finishing Schemes for Ground and Ground Support Equipment
MIL-STD-831	Test Reports, Preparation of
MIL-STD-889	Dissimilar Metals
MS28889	Valve, Air, High-Pressure Charging
AN912	Bushing, Pipe

(When requesting applicable documents, refer to both title and number. Copies of unclassified documents may be obtained from the Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, Pennsylvania 19120. Requests for copies of classified documents should be addressed to the Naval Publications and Forms Center, via the cognizant Government representative.)

2.2 Other publications:

The following documents form a part of this specification to the extent specified herein. Unless otherwise indicated, the issue in effect on date of invitation for bids or request for proposal shall apply.

American National Standard Institute

ANSI-B40.1 Gages, Pressure Indicating Dial Type, Elastic

(Copies of the above publication may be obtained from the American National Standards Institute, 1430 Broadway, New York, NY 10018.)

National Bureau of Standards

Handbook H28 Screw-Thread Standards for Federal Services

(Application for copies should be addressed to the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402.)

3. REQUIREMENTS:

3.1 Specification sheets:

The individual part requirements shall be as specified herein and in accordance with the applicable specification sheets. In the event of conflict between the requirements of this specification and the specification sheet, the requirements of the specification sheet shall govern.

3.2 First article:

The parts furnished under this specification shall be a product which has been inspected and passed the first article inspection specified herein (see 4.3).

3.3 Selection of specifications and standards:

Specifications and standards for necessary commodities and services not specified herein shall be selected in accordance with MIL-STD-143, except as provided in 3.2.1.

3.3.1 Commercial parts: Commercial parts having suitable properties may be used where, on the date of invitation for bids, there are no suitable standard parts. In any case, commercial utility parts such as screws, bolts, nuts, and cotter pins having suitable properties may be used provided:

- a. They can be replaced by the MS or AN standard parts without alteration.
- b. The corresponding standard part numbers are referenced in the parts list and, if practical, on the contractor's drawings.

3.4 Materials:

Materials shall conform to applicable specifications or standards and shall be as specified herein. Materials which are not covered by applicable specifications or standards shall be of the best quality, and entirely suitable for the purpose intended.

- 3.4.1 Metals: Metals shall be of the corrosion-resistant type or treated to resist corrosion. All metal stock used in the fabrication of inflator assemblies shall have a properly refined structure with uniform elemental distribution, sound and free from nonmetallic inclusions, injurious porosity, excess segregation, soft spots, hard spots, and other injurious defects.
- 3.4.2 Metal parts: All metal parts shall be of corrosion-resistant material or treated in a manner to render them adequately resistant to corrosion.
- 3.4.3 Dissimilar metals: Unless suitably protected against electrolytic corrosion, dissimilar metals shall not be used in intimate contact with each other. Dissimilar metals are defined in MIL-STD-889.
- 3.4.4 Fungus proof materials: Materials that are nutrients of fungi shall not be used.

3.5 Design and construction:

The inflator assembly shall be designed to provide a safe, reliable and accurate means for remote controlled inflation, deflation, and gaging pneumatic pressure. The dual chuck stem gage shall be designed to provide a safe, reliable and accurate means for gaging pneumatic pressure. The inflator assembly and dual chuck stem gages shall be so constructed that parts will not work loose in service. It shall be built to withstand the strains, shocks, vibrations, and environmental conditions incident to shipping, storage, and service. The configurations shall be as shown in Figures 1 and 2. The gage elements Size 1 and 2, shall be complete self-contained units and interchangeable within the inflator assembly and dual chuck stem gage. The relief valve shall provide pressure relief to prevent overinflation.

- 3.5.1 Threads: All threaded components shall conform to the applicable requirements of the National Bureau of Standards Handbook H-28. All pipe thread connections shall be assembled with antiseize tape conforming to MIL-T-27730.
- 3.5.2 Fastening devices: All screws, pins, and similar parts shall be installed with adequate means for preventing loss of proper tightness and adjustment. Parts subject to removal or adjustment shall not be swaged, peened, staked, or otherwise deformed.
- 3.5.3 Welding, brazing, and soldering: Welding, brazing, and soldering shall be performed in accordance with the best commercial practice and shall be used only when such operations are required for assemblies in the original design. In no event shall such processes be used as a repair medium for faulty parts.

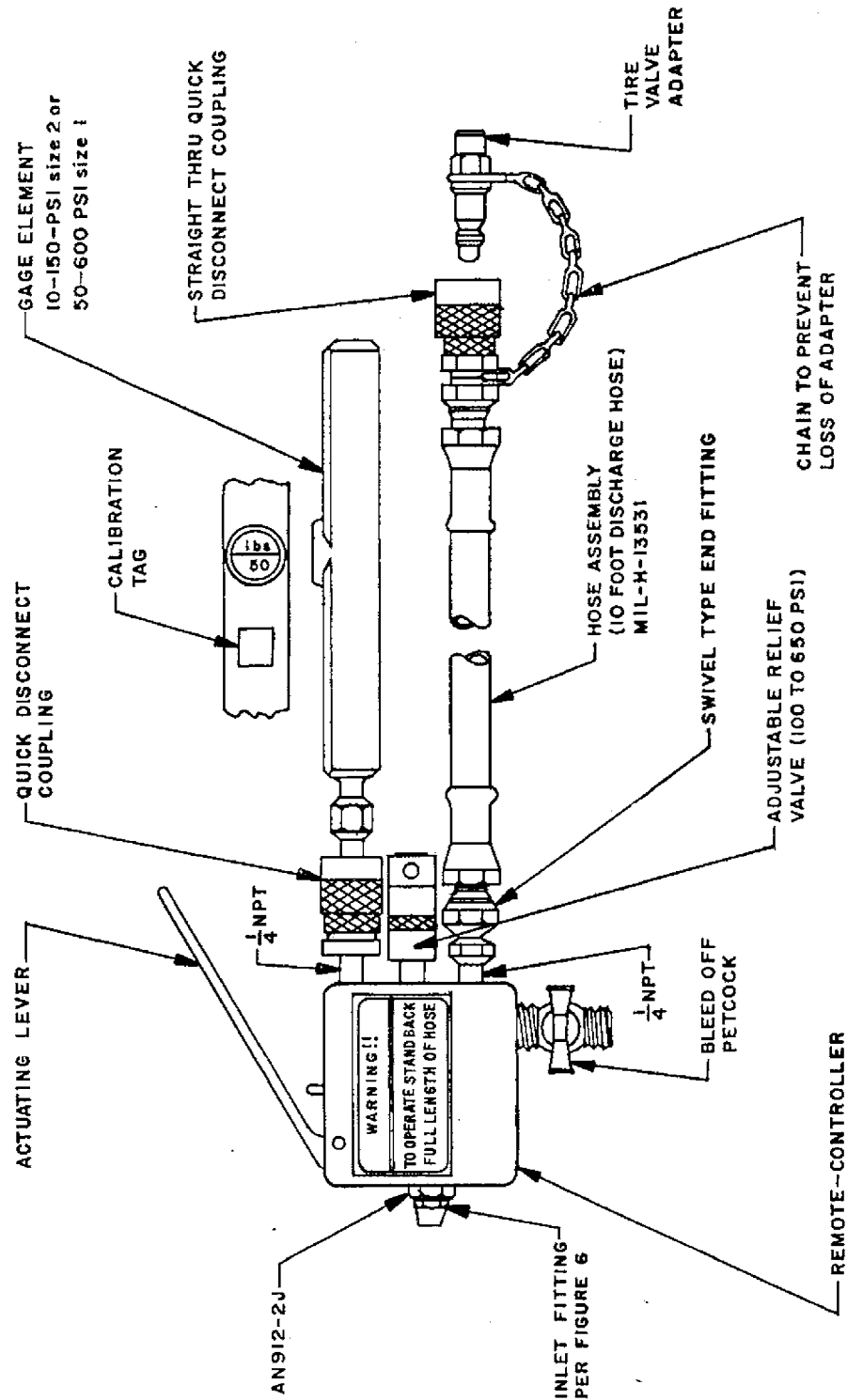


FIGURE 1. Inflator assembly

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- 2108-36 NS THD.
P.D. 1925-1965
3/16" TAP DRILL
30° MIN CHAMF FOR TAP LEAD
11/32" MIN. FULL THREAD
- LETTER "I" DRILL (.272)
.305-32 2B THREAD
P.D. .2847-.2886
1/64" X 30° CHAMF.
MAX. THREAD DEPTH
- 1/2" HEX
.125 DIA. DRILL THRU
- .020 MIN. FLAT FACE
- PASSIVATE & SILVER HARDEN
TO MAXIMUM ROCKWELL
WITHOUT DISTORTION
- .015R MIN. EDGE MUST BE
FREE OF BURRS & NICKS
IMPORTANT!
- Dimensions (inches):
Overall length: .672 ± .010
Section A: .370, .380
Section B: .305, .309, .460, .464
Section C: .425, .429, .315, .319
Section D: .485, .495, .399, .407, .340, .346, .402, .408, .110, .115, .083, .093, .233, .233
Other dimensions: .364, .374, .206, .216, .932, .942, 1.692, 1.702, 1/32" X 45° CHAMFER, 45°, 30°, 45°, 5/32" DR.

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3.6 Maintainability:

The inflator assembly and dual chuck stem gages shall have a minimum number of parts consistent with reliability. All parts subject to disassembly for maintenance purposes shall be readily accessible for adjustments, repairs, and cleaning without the use of special tools.

3.7 Performance characteristics:

The inflator assembly shall meet the performance tests in Section 4 in the order listed below:

- a. Scale error at room temperature (4.6.2)
- b. Overpressure (4.6.3)
- c. Endurance (4.6.4)
- d. Drop test (4.6.5)
- e. Cold test (4.6.6)
- f. Heat test (4.6.7)
- g. Friction test (4.6.8)
- h. Calibration test (4.6.9)
- i. Valve adapter test (4.6.10)

The dual chuck stem gage shall be subjected to the endurance and drop test only. The gage element used in the dual chuck stem gage shall be tested as part of the inflator assembly for the remaining test listed.

3.8 Inflator assembly kit:

The inflator assembly kit shall conform to MIL-I-85352/1 and consist of a gage element, remote-controller, hose/tire valve adapter assembly, relief valve, carrying case, and inlet fitting.

- 3.8.1 Gage element: The gage element shall conform to MIL-I-85352/3. The gage element shall consist of an indicator (pressure lbs) and actuating mechanism enclosed in a housing fitted with the male portion of a straight thru quick-disconnect coupling and lens. The gage element shall be capable of measuring pneumatic pressure from 50 to 600 psi for Size 1, from 10 to 150 psi for Size 2. The accuracy of the gage element shall be ± 6 psi for Size 1, and ± 2 psi from 10 to 80 psi and ± 4 psi from 81 to 150 psi for Size 2, through their entire range at temperatures from -20° to $+140^{\circ}\text{F}$. The gage element shall be instantly removable and replaceable as a unit to the remote-controller body by use of a straight thru quick-disconnect coupling. Both gage elements, Size 1 and Size 2, are to be interchangeable for use within the inflator assembly.