

MIL-G-6162/2A(AS)

15 March 1985

SUPERSEDING

MIL-G-6162/2(AS)

2 MAY 1984

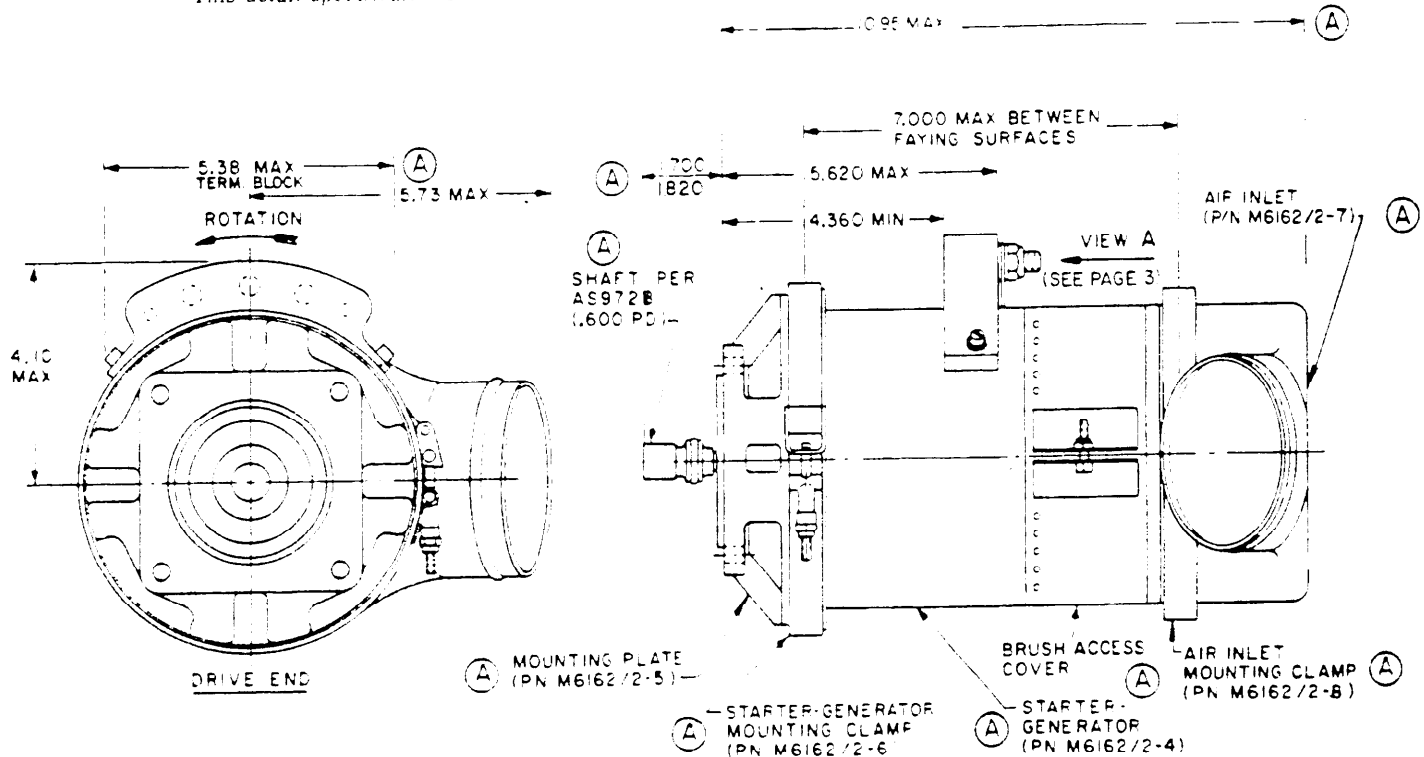
MILITARY SPECIFICATION SHEET

STARTER-GENERATOR, 30 VOLT, DIRECT CURRENT,
200 AMPERE, AIRCRAFT ENGINE DRIVEN

This specification is approved for use by Naval Air Systems Command, Department of the Navy, and is available for use by all Departments and Agencies of the Department of Defense.

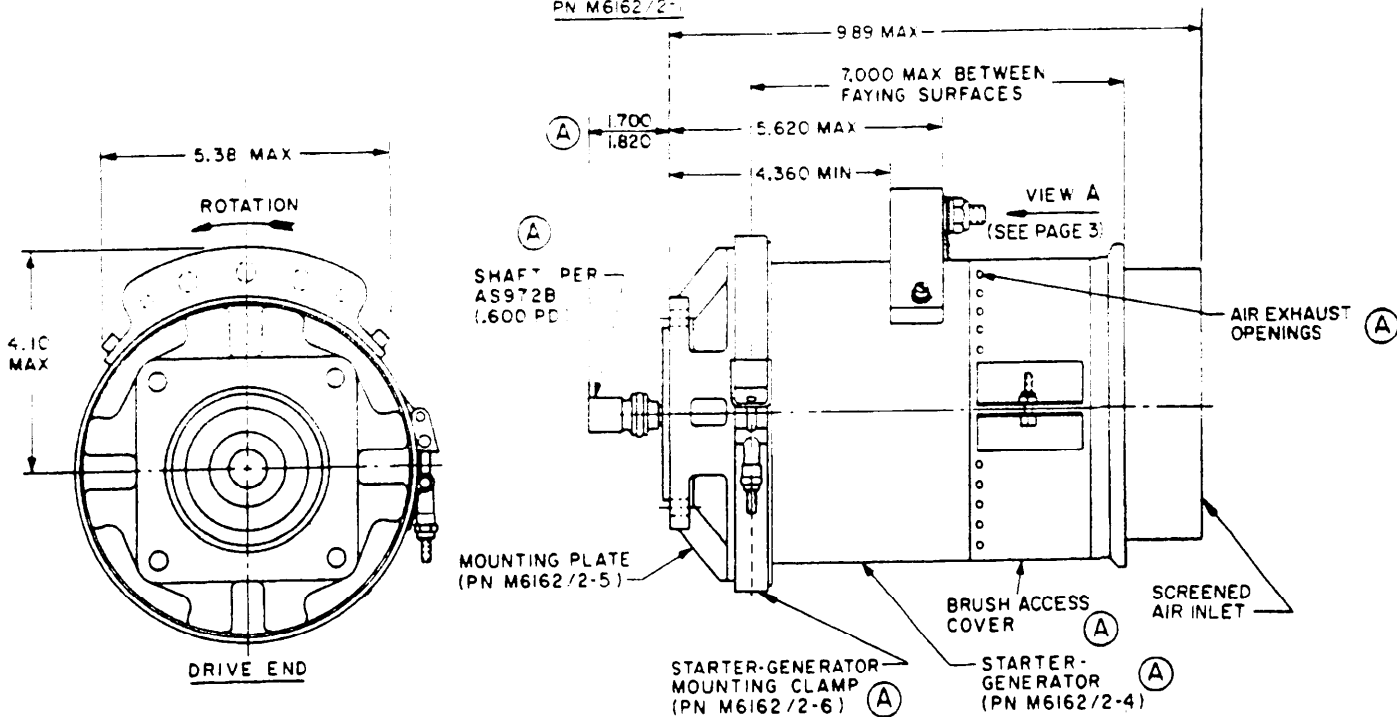
The complete requirements for procuring the starter-generator described herein shall consist of this document and the latest issue of MIL-G-6162.

This detail specification sheet covers a direct current starter-generator for aircraft use.



DUCTED-AIR-COOLED STARTER-GENERATOR ASSEMBLY

P/N M6162/2-1

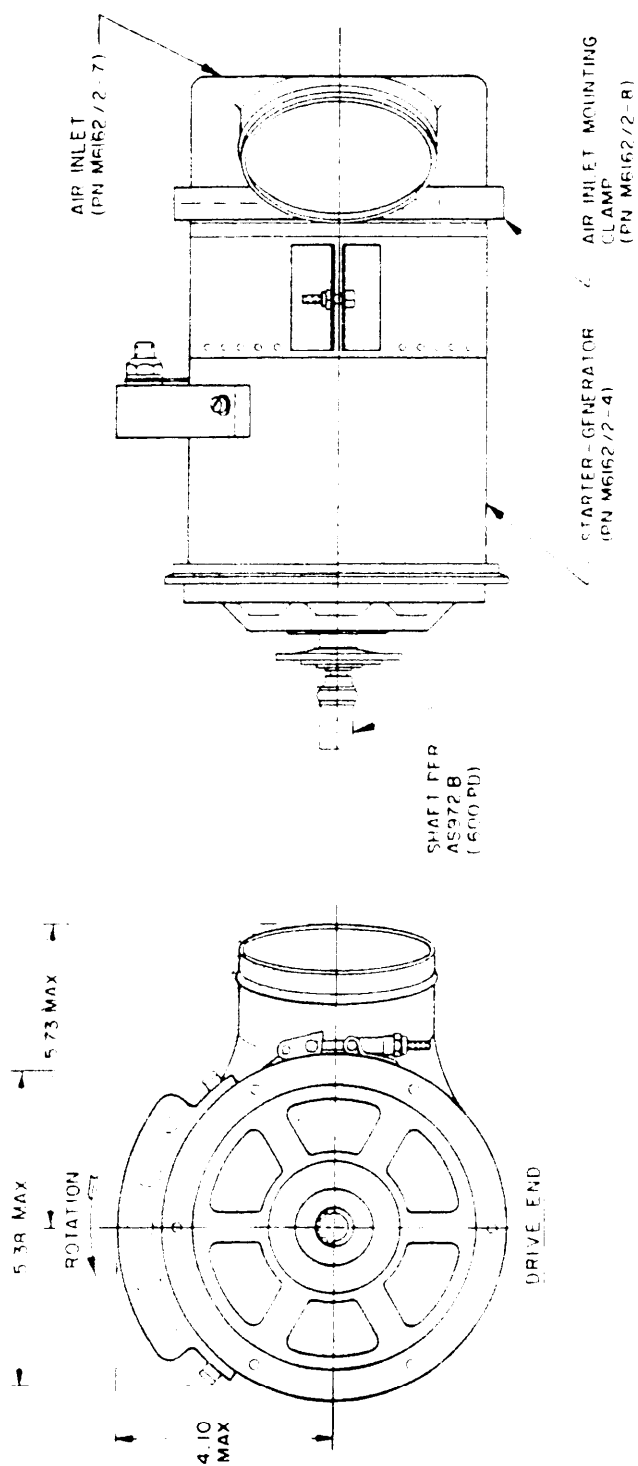


AMBIENT-AIR-COOLED STARTER-GENERATOR ASSEMBLY

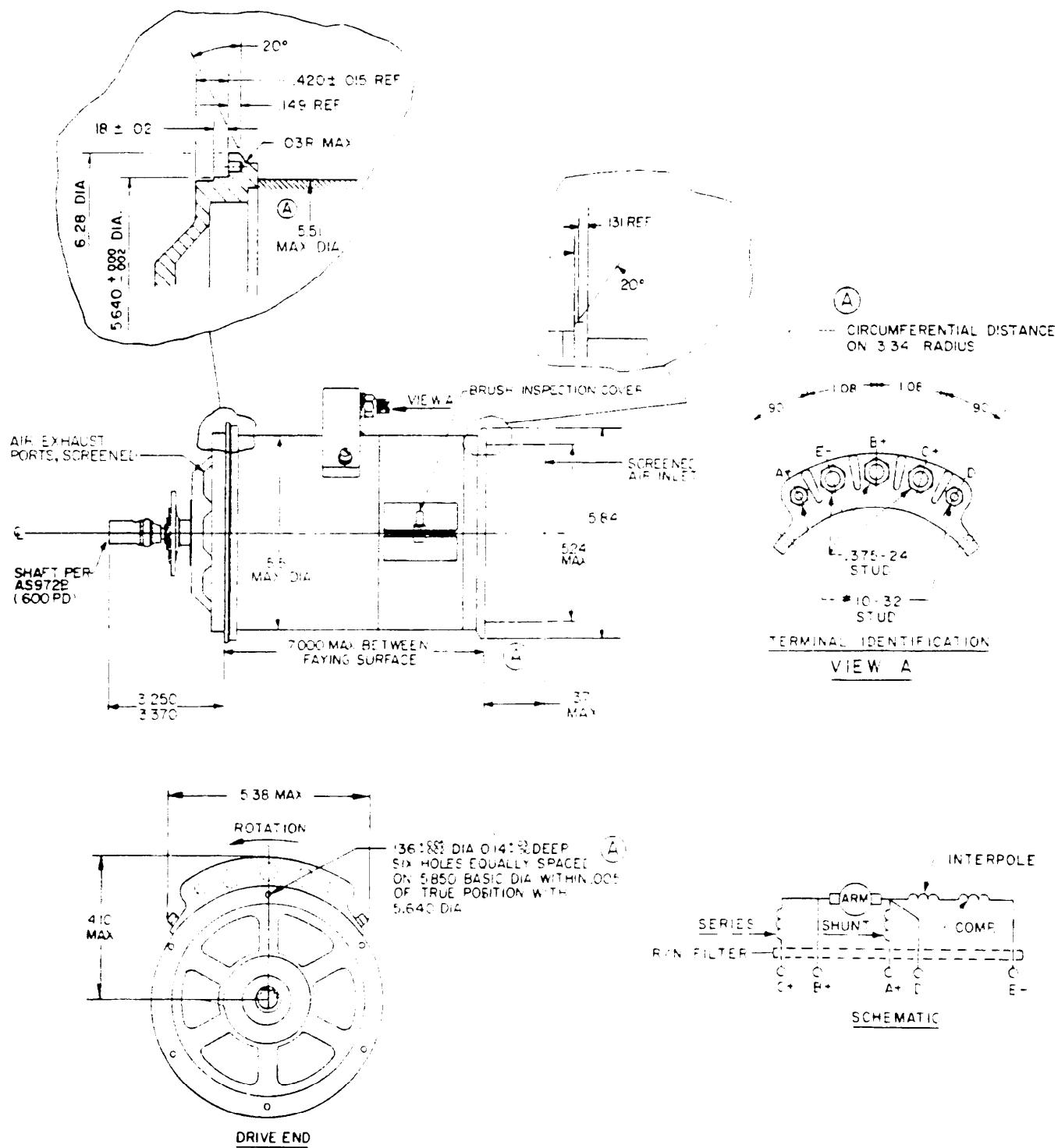
P/N M6162/2-2

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(A) DUCTED-AIR-COOLED STARTER-GENERATOR
PN M6162/2-3

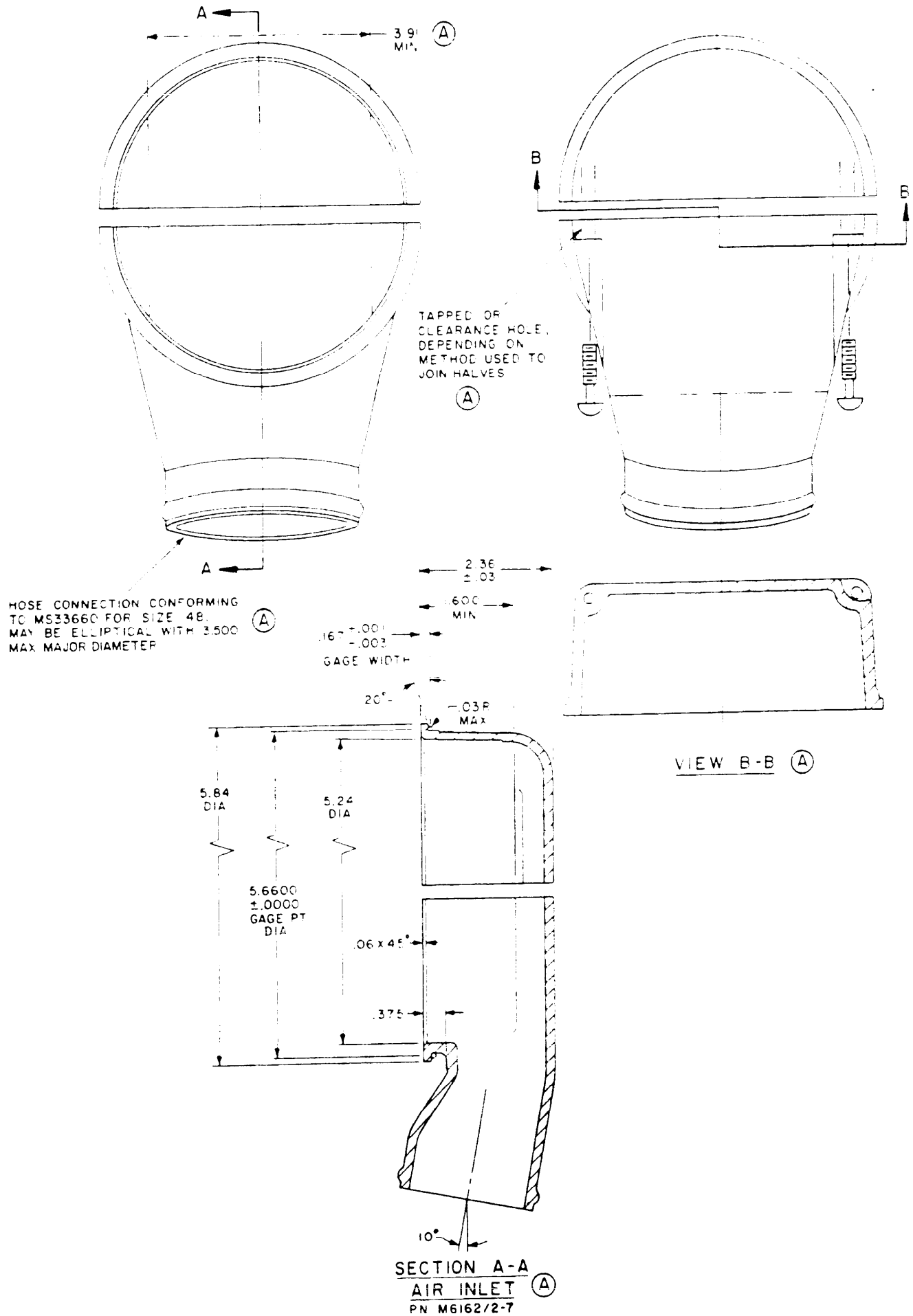


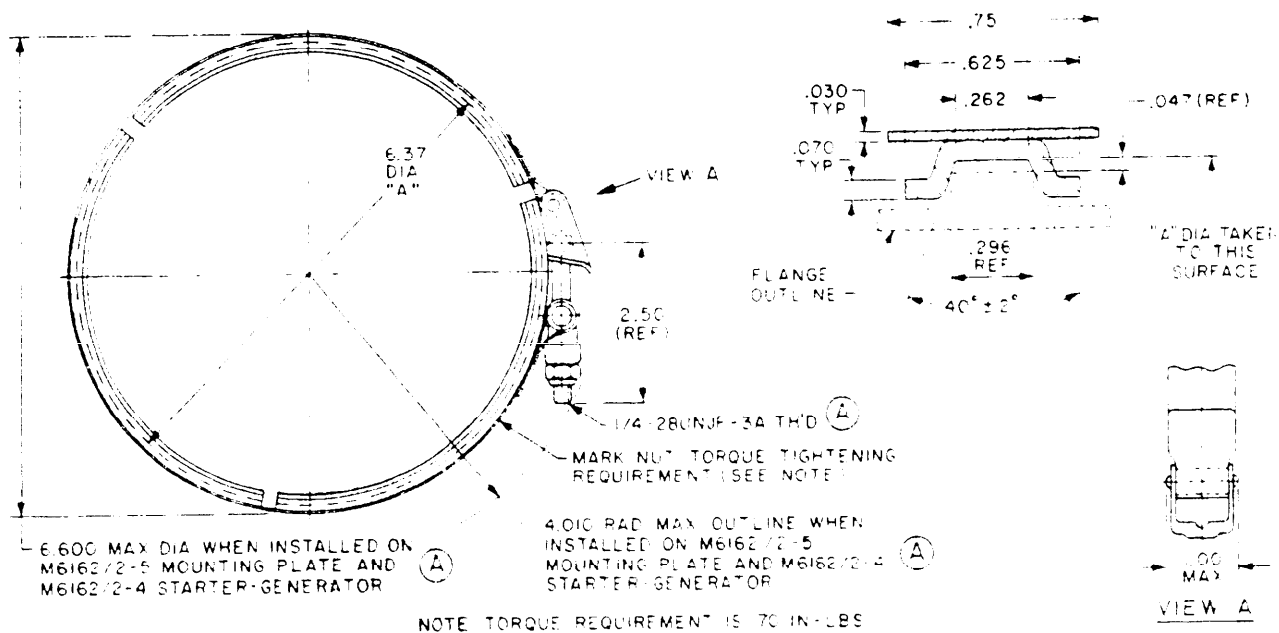
(A)

STARTER GENERATORPN M6162/2-4

PN M6162/2-5

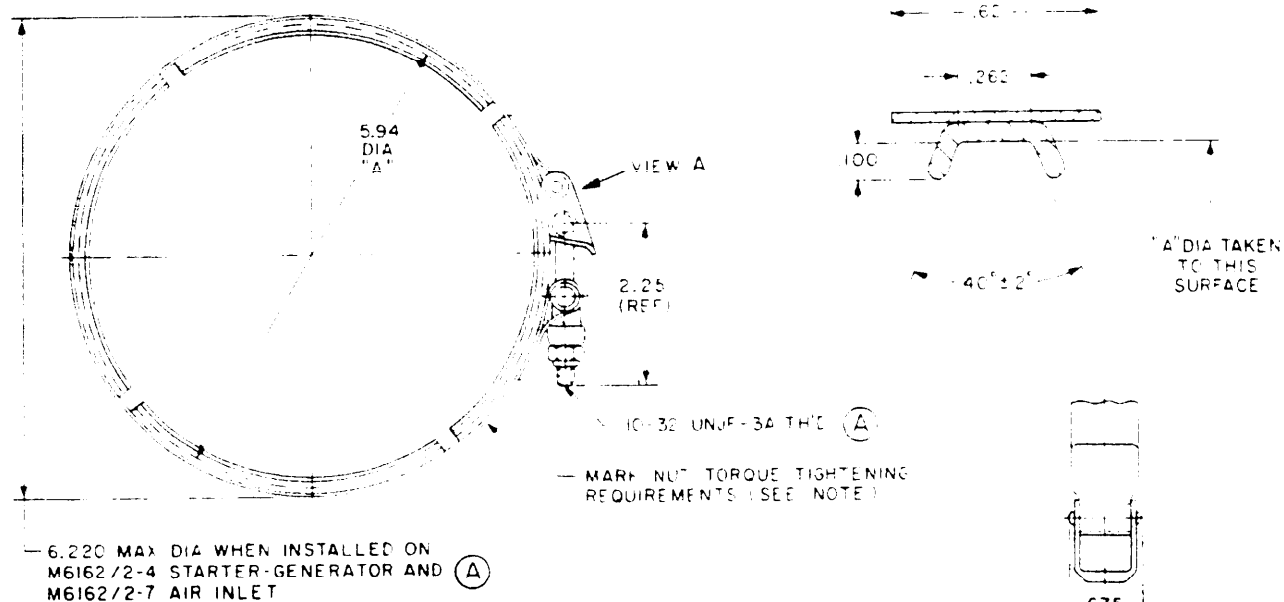
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STARTER-GENERATOR MOUNTING CLAMP

PN M6162/2-6 (A)



AIR INLET MOUNTING CLAMP

PN M6162/2-8 (A)

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REQUIREMENTS:

1. The starter-generator shall have the following characteristics:

Rated Voltage	30 Volts
Rated Current	200 Amperes
Minimum Rated Speed	6,700 RPM & 25 Volts Output
Continuous Operating Speed	12,000 RPM
Maximum Speed for Regulation	12,000 RPM
Minimum Speed for Regulation	7,600 RPM
Overspeed	14,000 RPM
Regulated Field Current (max)	8 Amperes
Generator Efficiency at Rated Load and Voltage	70% Min
Minimum Starter Torque Load	15 lb-ft
Starter No Load Speed-Minimum	4,300 RPM with 28 volts applied
Overhung Moment-Maximum	132 in-lb (see Note 4)
Minimum Light-Off Speed	1,000 RPM
Direction of Rotation (Facing Free End)	Clockwise
Shear Section - Shaft	1500 \pm 100 in-lb
2. The starter-generator shall provide 30 volts, 200 amperes at 7,600 RPM when regulated by MIL-R-23761 regulators with external voltage adjustment.
3. Cooling: The starter-generator shall be self-cooled by means of an internal fan.
4. The starter-generator shall be equipped with screened air inlet/outlet ports to prevent entry of a 1/4 inch diameter ball or rod.
5. External Color: White, conforming to FED-STD-595 color number 17895.
6. Bearings shall be lubricated with Krytox (registered trademark of E.I. du Pont de Nemours & Company) 283AC grease.
7. The EMI limits shall be 20 dB greater than those cited in MIL-E-81910.
8. Each mounting clamp shall be made so that it can be installed with the operating nut facing in either direction in any location.
9. The starter-generator shall be made so that it can be installed on an M6162/2-5 mounting plate by means of an M6162/2-6 starter-generator mounting clamp in six uniformly spaced orientations including that in which it is shown, and an M6162/2-7 air inlet can be installed on the starter-generator by means of an M6162/2-8 air inlet mounting clamp; and shall be made so that the starter-generator mounting clamp, brush holes cover, air inlet mounting clamp can be installed on the starter-generator in any orientation.

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10. The air inlet shall be made in two pieces, split at the center of the mounting flange as shown, and assembled by two captive screws as shown.

① 11. Drive seal. The starter-generator shall incorporate a wet spline seal to prevent seepage of oil from the engine accessory drive spline.

12. The starter-generator assemblies M6162/2-1 and -2 shall meet the environmental test requirements of MIL-E-81910.

13. The starter-generator current and voltage output with respect to altitude and temperature shall be in accordance with Table I.

① 14. The equalizing voltage, measured between points D and E with the generator operating at continuous speed and load and upon temperature stabilization, shall be $1.3 \pm .14$ volts.

15. The starter-generator while operating as a starter shall be capable of delivering a cranking torque at the indicated speed and input power shown in the starter torque grid, Figure 1.

① 16. The starter-generator shall include a standard size type A, B, or E metal nameplate in accordance with MIL-P-6906, securely attached to the machine. The nameplate shall contain the following information: (Abbreviations are permissible)

DC Starter-Generator
 Rated Voltage - 30 Volts
 Rated Speed - 7600 - 12,000 RPM
 Rated Current - 200 Amperes
 Military Part No. - M6162/2-4
 Manufacturer's Part No. or Model No.
 Manufacturer's Name or Trade Mark
 Serial No.
 Federal Stock No.
 Date of Manufacture
 Acceptance Stamp

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TABLE 1. Operating conditions.

Kun. No.	Operating Time	Speed (rpm)	Terminal Volts (DC)	Current (amps)	Air-in Temp (°F)	Altitude (feet)	Ambient Temp (°F)
1	5 minutes	6,700	25.0	200	+130	S.L.	+190
2	Continuous	7,600	30.0	200	+130	S.L.	+190
3	Continuous	12,000	30.0	200	+160	S.L.	+220
4	Continuous	12,000	30.0	225	+130	S.L.	+190
5	5 minutes.	14,000	0	0	+130	S.L.	+190
6	Continuous	12,000	30.0	200	+95	10,000	+155
7	Continuous	12,000	30.0	175	+40	25,000	+100
8	1 minute	12,000	30.0	250	+130 +95 +40	S.L. 10,000 25,000	+190 +155 +100
9	1 second	12,000	15.0	625	+130	S.L.	+190

Preparing activity
Navy - AS
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