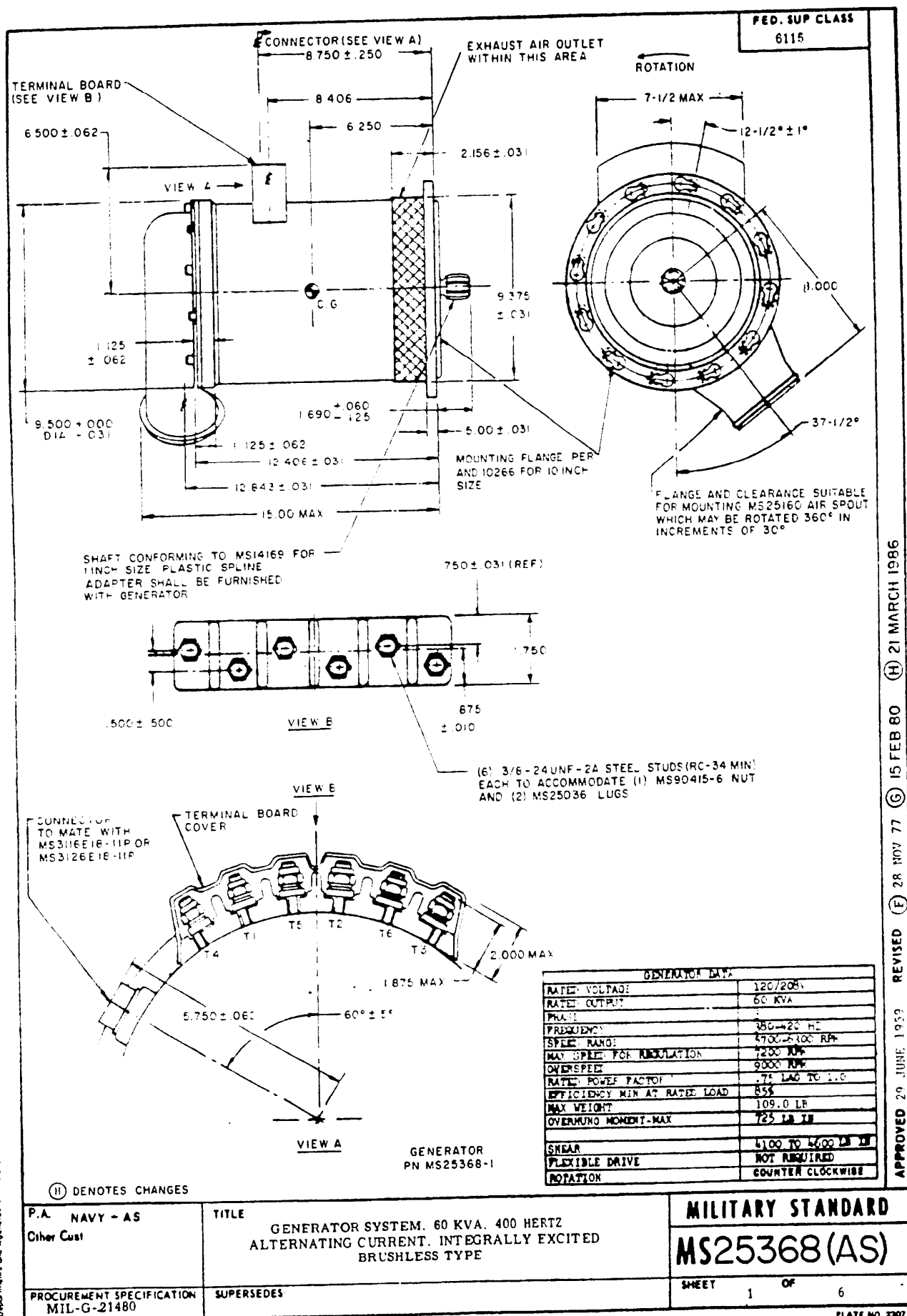
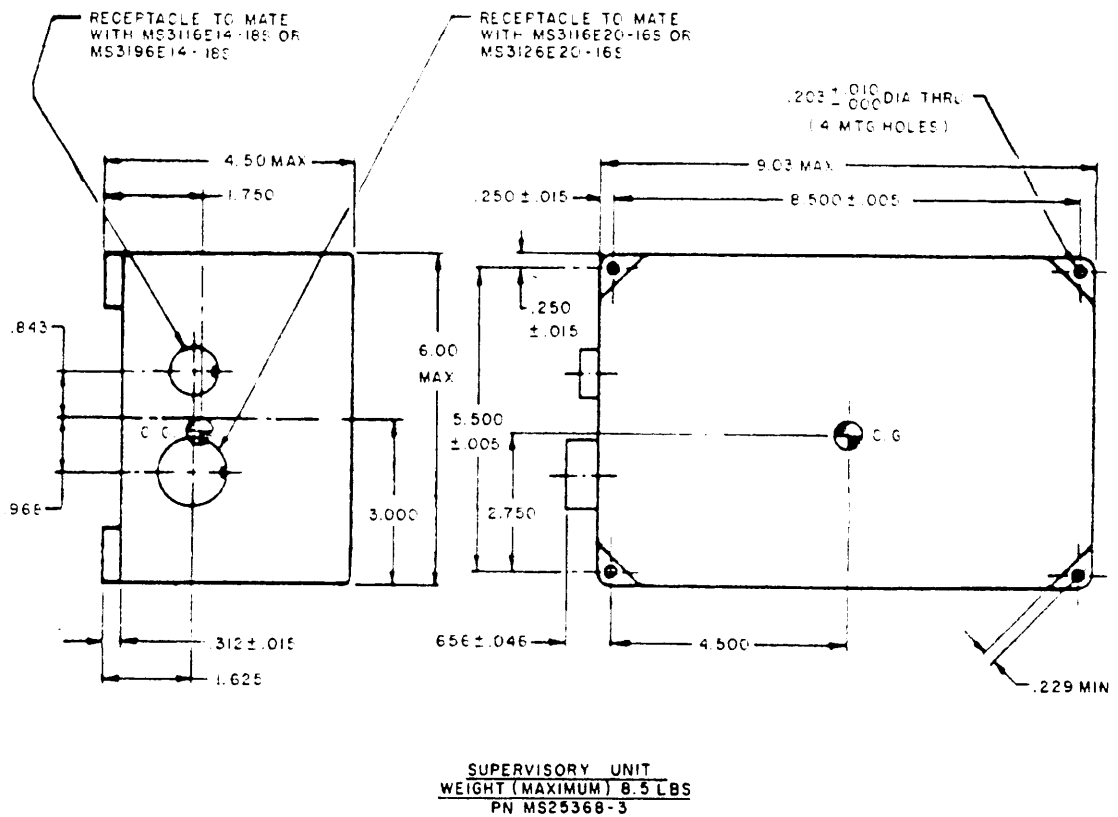
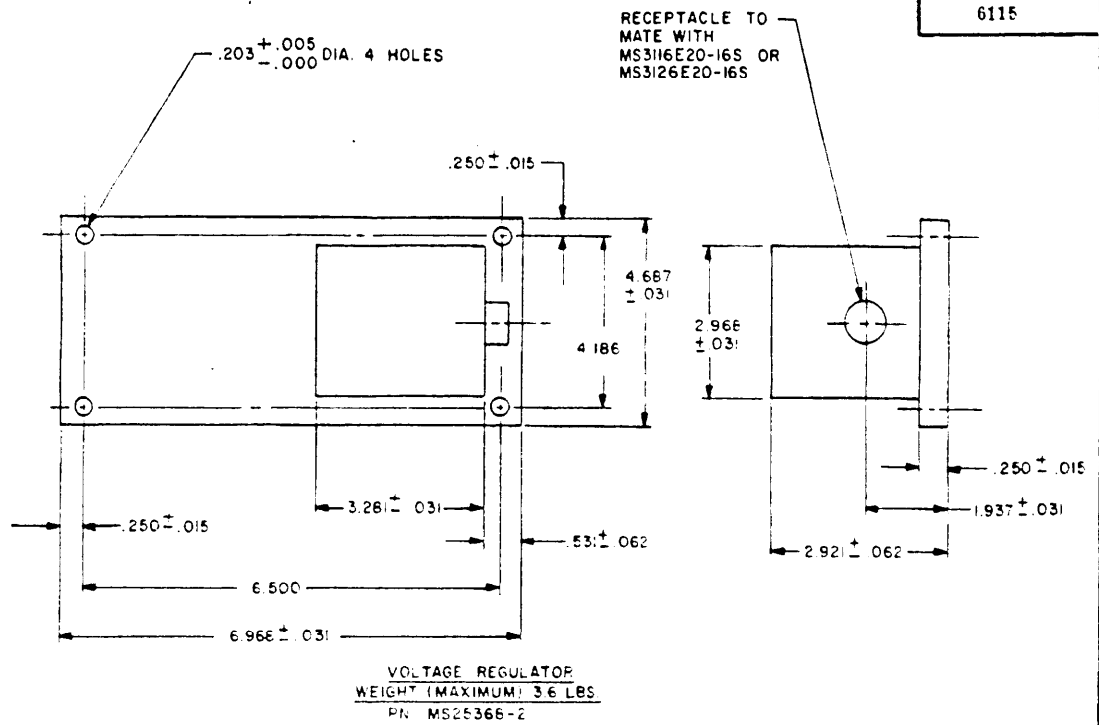


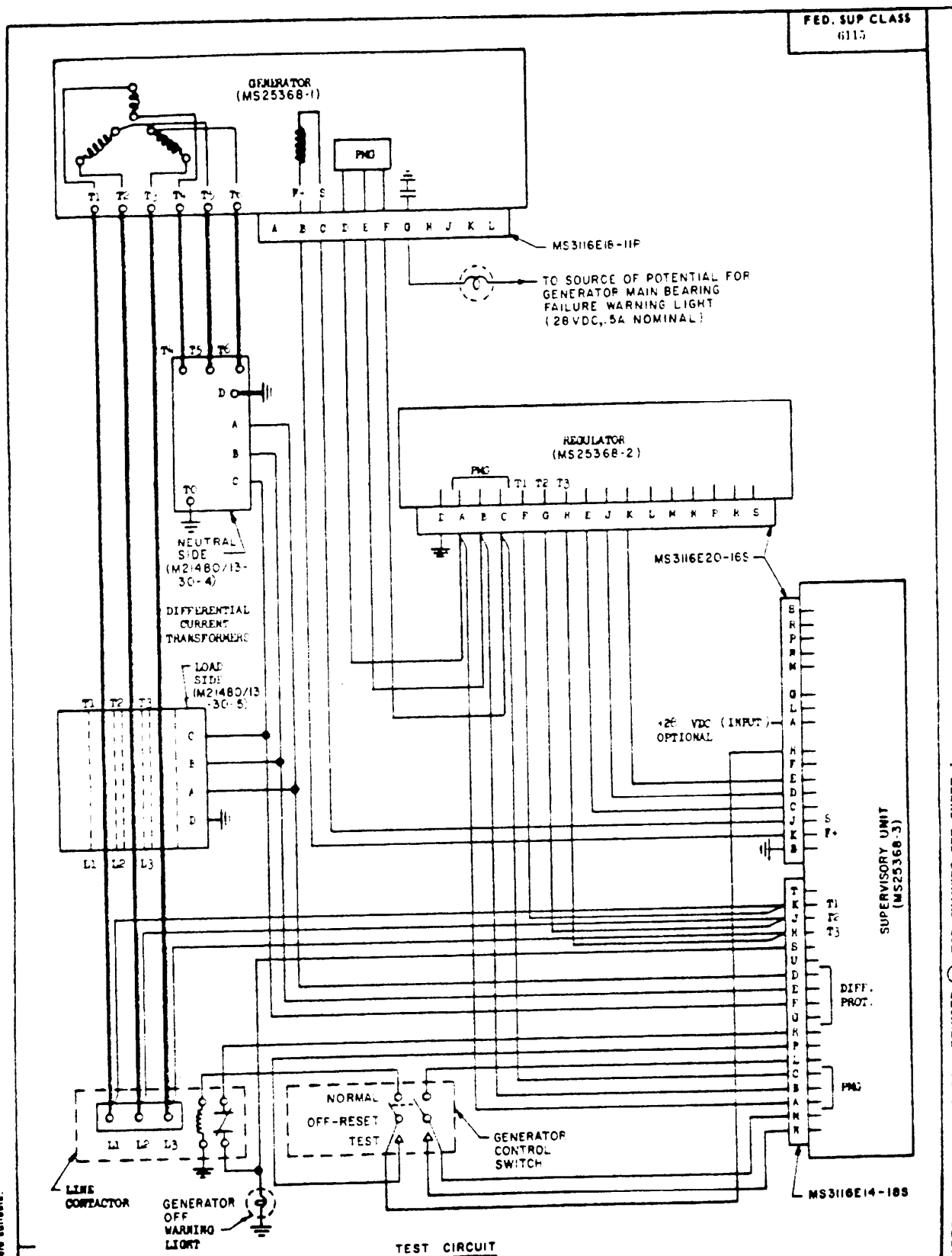
ANSC 2/A  
 DISTRIBUTION STATEMENT A: Approved for public release; distribution is unlimited.  
 This military standard is approved for use by NAVAL AIR SYSTEMS COMMAND,  
 Department of the Navy, and is available for use by all  
 Departments and Agencies of the Department of Defense.



FED. SUP CLASS  
6115

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

P.A. NAVY - AS Other Cust	TITLE GENERATOR SYSTEM, 60 KVA, 400 HERTZ ALTERNATING CURRENT, INTEGRALLY EXCITED BRUSHLESS TYPE	MILITARY STANDARD <b>MS25368(AS)</b>
PROCUREMENT SPECIFICATION MIL-C-21480	SUPERSEDES	SHEET 2 OF 6

FED. SUP CLASS  
6115

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

P.A. NAVY - AS Other Cust	TITLE GENERATOR SYSTEM, 60 KVA, 400 HERTZ ALTERNATING CURRENT, INTEGALLY EXCITED BRUSHLESS TYPE	MILITARY STANDARD <b>MS25368(AS)</b>
PROCUREMENT SPECIFICATION MIL-G-21480	SUPERSEDES:	SHEET 3 OF 6

DD FORM 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 23071

APPROVED 29 JUNE 1959 REVISED ① FOR CHANGES SEE SHEET 1

FED. SUP CLASS  
6115

## REQUIREMENTS:

1. THE AIRCRAFT MANUFACTURER SHALL ALLOW CONNECTING LEAD LENGTH AND BLAST TUBE LENGTH FOR THE LIMITING GENERATOR DIMENSIONS SHOWN ON THIS DRAWING.
2. THE AIRCRAFT MANUFACTURER SHALL PROVIDE CONNECTING LEADS SHOWN.
3. THE AIRCRAFT MANUFACTURER SHALL ALLOW ADEQUATE CLEARANCE FOR INSTALLING AND REMOVING THE GENERATOR SHOWN ON THIS STANDARD FROM THE AIRCRAFT.
4. THE EQUIPMENT MANUFACTURER SHALL USE ONLY THOSE TERMINALS AND INTERCONNECTING WIRES SHOWN FOR SYSTEM DESIGN.
5. THREAD DIMENSIONS AND DESIGNATIONS SHALL BE INTERPRETED IN ACCORDANCE WITH HANDBOOK H 28 AND MIL-STD-9, RESPECTIVELY.
6. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS. THE REQUIREMENTS OF SPECIFICATION MIL-G-21480 PERTAIN WITH THE FOLLOWING EXCEPTIONS.

## DELETE THE FOLLOWING PARAGRAPHS:

3.4.2.2 through 3.4.2.6, 3.4.6, 3.5.7.5, 3.5.9, 4.5.20, 4.5.22.1 through 4.5.22.3, 4.5.22.3.1 through 4.5.22.3.4, 4.5.23.1 through 4.5.23.1.2, 4.5.24.1 through 4.5.24.3.4, 4.5.25.1 through 4.5.25.2.1, 4.5.26, 4.5.32

3.4.2 DELETE AND ADD: ENVIRONMENTAL REQUIREMENTS - ALL COMPONENTS SHALL OPERATE IN ACCORDANCE WITH THIS SPECIFICATION WHEN SUBJECTED TO THE CONDITIONS OF MIL-E-81910.

3.4.6 CHANGE "FIGURE 3" TO "FIGURE 1" OF THIS SPECIFICATION.

3.4.6.2 ADD: THE SYSTEM SHALL BE CAPABLE OF DELIVERING 150% RATED OUTPUT AT RATED POWER FACTORS UNDER THE MAXIMUM AIR TEMPERATURE/ALTITUDE CONDITIONS OF -10°C/30,000 FT WHILE BLAST COOLED, 125% RATED OUTPUT AT 45°C (MAXIMUM)/5000 FT AND 55°C (MAXIMUM)/SEA LEVEL WHILE SELF COOLED.

3.4.9.2 DELETE FIRST SENTENCE.

3.4.9.2.1 ADD: MAIN BEARING FAILURE WARNING - A SYSTEM TO SENSE DRIVE END BEARING FAILURE AND AN AUXILIARY BEARING TO TAKE OVER SUPPORT OF THE GENERATOR ROTOR UPON FAILURE OF THE PRIMARY BEARING SHALL BE INCORPORATED IN THE GENERATOR.

3.4.9.3 ADD: THE GENERATOR SYSTEM SHALL BE SO DESIGNED THAT UPON REMOVAL OF ANY CONNECTOR PLUG, EXCEPT CURRENT TRANSFORMER CONNECTOR, THE SYSTEM SHALL BE DEENERGIZED.

3.4.9.6.1 ADD: SELF COOLING REQUIRED TO 5000 FEET.

3.4.17 ADD: THE SYSTEM SHALL HAVE A MINIMUM ELAPSED TIME OF 2000 HOURS PRIOR TO THE FIRST MAINTENANCE ACTION.

3.5.1 DELETE AND ADD: VOLTAGE LIMITS THE TRANSIENT AND STEADY STATE VOLTAGE SHALL REMAIN WITHIN THE LIMITS OF FIGURE 1 OF THIS SPECIFICATION FOR ALL BALANCED LOAD CONDITIONS WHILE THE SYSTEM IS OPERATING UNDER ALL ENVIRONMENTAL AND LOAD CONDITIONS DEFINED HEREIN. THE REGULATOR SHALL BE ADJUSTED AT ROOM AMBIENT SO THAT THE GENERATOR DELIVERS  $117 \pm 0.5$  VOLTS AT THE POINT OF REGULATION WHEN THE GENERATOR IS OPERATING AT NO LOAD AND 6000 RPM.

3.5.4 DELETE AND ADD: WAVEFORM. THE CREST FACTOR FOR EACH PHASE VOLTAGE WAVEFORM SHALL BE  $1.41 \pm 10\%$ . NO SINGLE HARMONIC SHALL EXCEED 3% OF THE FUNDAMENTAL. THE TOTAL HARMONIC CONTENT SHALL NOT EXCEED 5% FOR ALL NORMAL OPERATING CONDITIONS.

3.5.5 ADD: THE DC CONTROL POWER SHALL BE AT LEAST 50 WATTS. THE PERMANENT MAGNET GENERATOR USED FOR INTEGRAL CONTROL POWER SHALL RECOVER TO NORMAL VOLTAGE AFTER A SHORT CIRCUIT.

CHANGE "5 AMPS MINIMUM CONTINUOUS CAPACITY" TO "1 AMP'S MINIMUM CONTINUOUS CAPACITY".

3.5.7.2 CHANGE "FIGURE 6" TO "FIGURE 1" OF THIS SPECIFICATION.

3.5.7.3 DELETE AND ADD: UNDERVOLTAGE - UNDERVOLTAGE PROTECTION SHALL BE PROVIDED BY A STATIC ELEMENT WHICH FUNCTIONS TO DISCONNECT THE SYSTEM FROM THE LOAD BUS AND DEENERGIZE THE GENERATOR WHEN ANY ONE PHASE VOLTAGE, LINE TO NEUTRAL, DROPS BELOW 90 VOLTS AND REMAINS FOR AT LEAST 1 SECOND. MINIMUM PICK-UP SHALL BE 105 VOLTS.

(H) 3.5.7.4 CHANGE "FROM 1 TO 3 SECONDS" TO "950  $\pm$  50 MILLISECONDS." CHANGE "375 HZ" TO "373  $\pm$  1 HZ."

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where applicable.

P.A. NAVY - AS Other Cust	TITLE GENERATOR SYSTEM, 60 KVA, 400 HERTZ ALTERNATING CURRENT, INTEGRALLY EXCITED BRUSHLESS TYPE	MILITARY STANDARD <b>MS25368(AS)</b>
PROCUREMENT SPECIFICATION MIL-G-21480	SUPERSEDES:	SHEET 4 OF 6

FED. SUP CLASS  
6115

3.5.7.7 DELETE FIRST SENTENCE AND ADD: THE SYSTEM SHALL PROVIDE A MEANS TO PREVENT CYCLING THE SYSTEM WHEN A FAULT OTHER THAN UNDERFREQUENCY EXISTS.

3.5.8 DELETE AND ADD: THE SYSTEM SHALL MEET THE REQUIREMENTS OF MIL-E-81910, CLASS NO. III B FOR THE GENERATORS AND CONTROL EQUIPMENT, EXCEPT THE TEN MICROFARAD FEEDTHROUGH CAPACITOR SHALL BE REMOVED.

4.2.1.1 ADD: QUALIFICATION TESTS SHALL BE SUPPLEMENTED WITH A MINIMUM 100 HOUR FAILURE FREE FLIGHT TEST BEFORE CONSIDERATION IS GIVEN TO INCORPORATING THE ITEM ON THE QUALIFIED PRODUCTS LIST.

4.5.3.1 CHANGE "FIGURE 3" TO "FIGURE 1" OF THIS SPECIFICATION.

4.5.3.2 CHANGE "FIGURE 3" TO "FIGURE 1" OF THIS SPECIFICATION.

4.5.12 DELETE AND ADD: THE SYSTEM SHALL BE SUBJECTED TO A ELECTROMAGNETIC INTERFERENCE TEST IN ACCORDANCE WITH MIL-E-81910, FOR CLASS III B EQUIPMENT.

4.5.13 DELETE PARAGRAPH (C) AND ADD: CONDITIONS (A) AND (B) SHALL BE REPEATED AT RATED SPEED. THE LINE-TO-NEUTRAL CREST FACTOR OBTAINED BY THE ABOVE TEST SHALL BE  $1.41 \pm 10$  PERCENT. THE VALUE OF ANY HARMONIC DURING THE ABOVE TEST SHALL NOT EXCEED 3 PERCENT OF THE FUNDAMENTAL. THE TOTAL HARMONIC CONTENT SHALL NOT EXCEED 5 PERCENT.

4.5.20.1 DELETE AND ADD: THE REGULATOR, SUPERVISORY UNIT, AND CT SHALL BE SUBJECTED TO A SALT FOG TEST IN ACCORDANCE WITH MIL-E-81910. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD, AND PROTECTIVE FUNCTIONS.

4.5.20.2 DELETE AND ADD: THE GENERATOR SHALL BE SUBJECTED TO AN OIL SALT WATER INGESTION TEST IN ACCORDANCE WITH MIL-E-81910. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS AND THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD.

4.5.21 DELETE AND ADD: THE GENERATOR, REGULATOR, SUPERVISORY UNIT AND CT SHALL BE SUBJECTED TO A FUNGUS TEST IN ACCORDANCE WITH MIL-E-81910, WITH THE INSTALLATION INSTRUCTIONS AND MOUNTING NUTS ATTACHED. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD, AND PROTECTIVE FUNCTIONS. MOUNTING NUTS ARE TO BE UNAFFECTED AND THE PACKAGE HOLDING THE NUTS SUITABLE FOR SHIPMENT. INSTRUCTIONS ARE TO BE LEGIBLE.

4.5.22 DELETE AND ADD: THE GENERATOR SHALL BE SUBJECTED TO A DUST TEST IN ACCORDANCE WITH MIL-E-81910. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS AND THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD.

4.5.23 ADD: THE GENERATOR, REGULATOR, SUPERVISORY UNIT, AND CT SHALL BE SUBJECTED TO A VIBRATION TEST IN ACCORDANCE WITH MIL-E-81910, EXCEPT THAT THE AMPLITUDE OF VIBRATION MONITORED AT THE ANTI-DRIVE END OF THE GENERATOR DURING THE MAIN BENDING MODE SHALL BE LIMITED TO 20 G'S BUT THE VIBRATION INPUT SHALL NOT BE LOWERED BELOW 5 G'S. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD, AND PROTECTIVE FUNCTIONS.

4.5.24 DELETE AND ADD: THE GENERATOR, REGULATOR, SUPERVISORY UNIT AND CT SHALL BE SUBJECTED TO A SHOCK TEST IN ACCORDANCE WITH MIL-E-81910. AT THE COMPLETION OF PROCEDURE 1, THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD, AND PROTECTIVE FUNCTIONS. THERE SHALL BE NO FAILURE OF THE MOUNTING ATTACHMENTS, AND THE TEST ITEM SHALL REMAIN IN PLACE AND NOT CREATE HAZARD DURING PROCEDURE III.

4.5.25 DELETE AND ADD: THE GENERATOR, REGULATOR, SUPERVISORY UNIT AND CT SHALL BE SUBJECTED TO A HUMIDITY TEST IN ACCORDANCE WITH MIL-E-81910. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF RATED AND 200% LOAD, AND PROTECTIVE FUNCTIONS.

4.5.30 DELETE FIRST SENTENCE AND ADD: ALL SYSTEM COMPONENTS EXCEPT THE GENERATOR SHALL BE SUBJECTED TO THE ACCELERATION TESTS OF MIL-E-81910. AT THE COMPLETION OF THIS TEST THE UNIT SHALL SUCCESSFULLY DEMONSTRATE ITS BUILDUP CHARACTERISTICS, THE EFFECT OF APPLICATION AND REMOVAL OF FULL AND 200% RATED LOADS, AND PROTECTIVE FUNCTIONS.

## NOTES:

1. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED TOLERANCES: DECIMALS  $\pm .001$ , ANGLES  $\pm 1^\circ$ . DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH MIL-STD-8.
2. ALL OUTLINE DIMENSIONS ARE LIMITING DIMENSIONS ONLY.
3. COMPONENTS SHOWN ENCLOSED IN DOTTED LINES NOT FURNISHED UNDER THIS DRAWING.

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

P.A. NAVY - AS Other Cust	TITLE GENERATOR SYSTEM, 60 KVA, 400 HERTZ ALTERNATING CURRENT, INTEGRALLY EXCITED BRUSHLESS TYPE	MILITARY STANDARD <b>MS25368(AS)</b>
PROCUREMENT SPECIFICATION MIL-G-21480	SUPERSEDES:	SHEET 5 OF 6

FED. SUP CLASS

6115

ITEM	PART NUMBER
COMPLETE SYSTEM (CONSIST OF ONE GENERATOR, ONE REGULATOR, ONE SUPERVISORY UNIT, AND TWO CURRENT TRANSFORMERS)	MS25368
GENERATOR	MS25368 - 1
VOLTAGE REGULATOR	MS25368 - 2
SUPERVISORY UNIT	MS25368 - 3
CURRENT TRANSFORMER (LOAD SIDE)	M21480/13-30-1
CURRENT TRANSFORMER (GROUND SIDE)	M21480/13-30-4

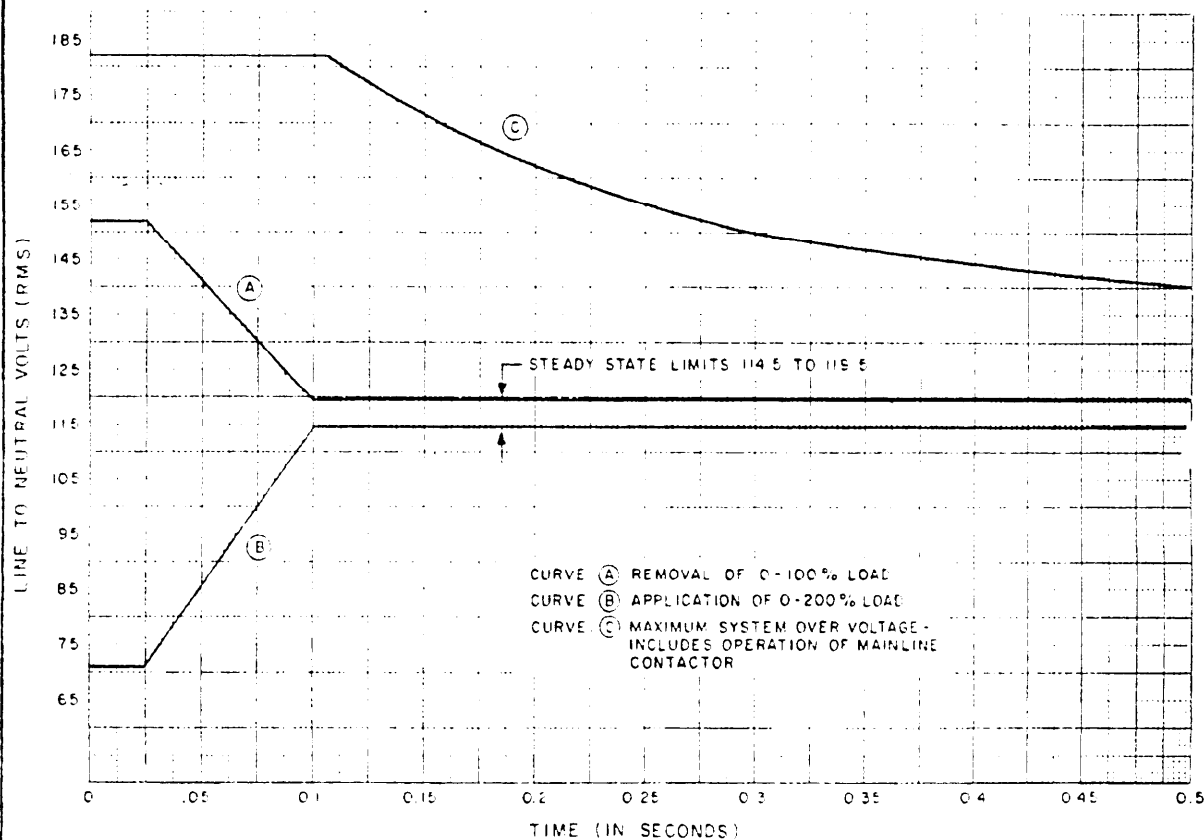


FIGURE 1 SYSTEM VOLTAGE LIMITS

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

P.A. NAVY - AS Other Cust	TITLE GENERATOR SYSTEM, 60 KVA, 400 HERTZ ALTERNATING CURRENT, INTEGRALLY EXCITED BRUSHLESS TYPE	MILITARY STANDARD MS25368(AS)
PROCUREMENT SPECIFICATION MIL-G-21480	SUPERSEDES:	SHEET 6 OF 6

DD FORM 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 22071