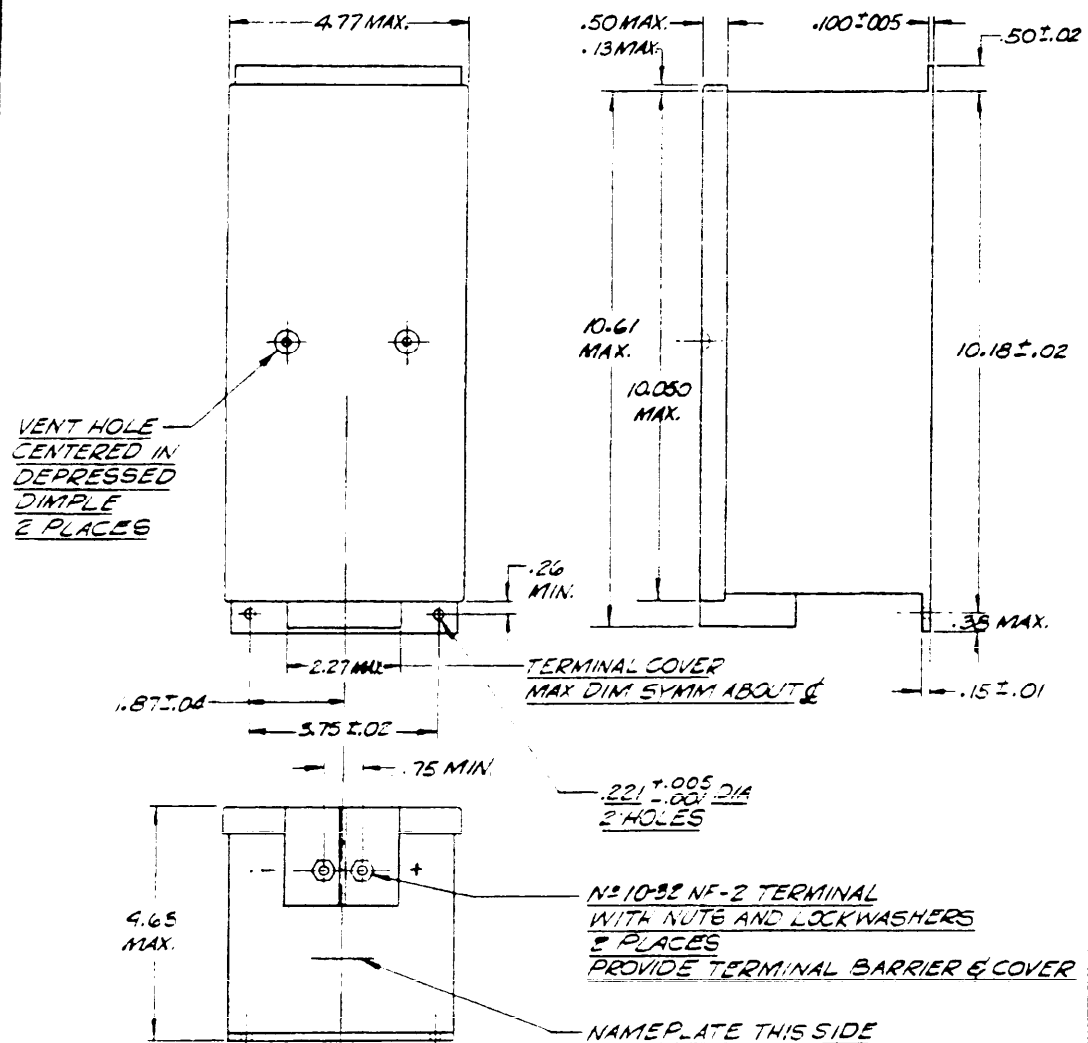


FED. SUP CLASS  
6140REVIEW ACTIVITIES  
AF-11, 82

SCREW HEADS ON TOP SURFACE OF BATTERY MAY EXTEND  
.070 ABOVE 4.65 MAX DIMENSION (4 PLACES)

FOR DESIGN PURPOSES THIS STANDARD TAKES PRECEDENCE OVER  
PROCUREMENT DOCUMENTS REFERENCED HEREIN.

This standard has been approved by the Department  
of the Air Force and is mandatory for use by that  
activity. All other military activities are required  
to employ this standard where applicable.

REVISION STATUS OF SHEETS	REV.	-	-
	SHT.	1	2

P.A. AIR FORCE-11  
Other Cost

TITLE  
BATTERY, AIRCRAFT, STORAGE, NICKEL-  
CADMIUM, 24V, 5AMP HOUR (1HR RATE) 25°C

MILITARY STANDARD  
MS 27546 (USAF)

PROCUREMENT SPECIFICATION  
MIL-B-26220

SUPERSEDES:

SHEET 1 OF 2

DD FORM 672-1 (Coordinated)  
1 SEP 63

EDITION OF 1 SEP 67 MAY BE USED.

APPROVED 2 MAY 1966 REVISED

FED. SUP CLASS  
6140

TABLE I

Part No.	Capacity Range				
	Time Rate Minutes	Cut off Volts	Temp. °C	Discharge Rate Ampe	Ampere-Hour Minimum
-1	60	23	+25	5	5
	3.5	18		50	2.9
	13	21		20	4.3
	6	18	-40	20	2
	15	21	+85	20	4.3

Battery shall contain 20 cells.

Weight of battery filled with electrolyte shall not exceed 16 pounds.

Battery shall be charged at 29.5 volts constant potential for all specification tests except during the temperature rise test which shall require 30.0 volts for 2 hours.

TABLE II  
Life Cycling Test

CYCLE NO.	CHARGING AND DISCHARGING PROCEDURE
Initial	In accordance with manufacturer's instruction
1 through 6	The battery shall be subjected to and shall pass all tests required to meet Table I requirements. (See notes 1 through 3)
6 through 100	Automatic cycling (See Note 4)
101 through 105	Repeat Table I tests. The battery shall be capable of 50 percent of Table I requirements.
106 through 200	Automatic cycling
201 through 205	Repeat Table I tests. The battery shall be capable of 80 percent of Table I requirements.
206 through 300	Automatic cycling
301 through 305	Repeat Table I tests. The battery shall be capable of 80 percent of Table I requirements.
306 through 399	Automatic cycling
399 through 400	Repeat Table I tests. The battery shall be capable of 80 percent of Table I requirements.

NOTE 1 The recharge period shall be of sufficient duration to charge the battery with 140 percent of the ampere-hours removed on the previous discharge. Prior to charging at low temperature, the battery shall be soaked at that temperature for a period of at least 24 hours. For cycles 101, 201, 301 and 399, the battery shall be fully charged by the constant current method in accordance with the manufacturer's instructions.

NOTE 2 Capacity tests shall be run at an initial electrolyte temperature specified in Table I.

NOTE 3 If the battery fails to meet the capacity requirements of Table I, as many as four repeat tests shall be permitted to demonstrate conformance to the capacity requirements specified in Table I. Repeat tests shall not be counted as life cycles. Charge conditions for repeat test shall be at the discretion of the manufacturer and shall be recorded in the test report.

NOTE 4 One automatic cycle will be 2 hours in duration. A minimum of eight cycles shall be run in a 24-hour period. A minimum of 24 cycles shall be run in a 7-day period. The following schedule shall be followed:

Discharge 2 amps for 5 minutes

Discharge 20 amps for 2 minutes

Trickle Charge at 29.5 volts at  
battery terminals - constant  
potential for 1 hour.

Rest for remainder of 2 hours, then repeat. The discharge shall be made into constant resistances of such value that the average current specified is maintained. The proper resistance values shall be determined during the first 24 cycles, then left constant for the remainder of the tests. If desired, the battery may be immersed in a water bath of 21° to 32° for the automatic cycling, or cooled by means of a fan. Distilled water may be added in accordance with manufacturer's instruction.

P.A. AIR FORCE - 11

Other Cost

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SUPERSEDES:

SHEET 2 OF

DD FORM 672-1 (Coordinated)

EDITION OF 1 SEP 67 MAY BE USED.

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REVIEW ACTIVITIES  
AF-11, 02

APPROVED 2 MAY 1966 REVISED