

PED. SUP CLASS  
2620

THE TIRE SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SPECIFICATION MIL-T-5041 EXCEPT AS SPECIFIED HEREIN

SIZE	PLY RATING	STATIC LOAD RATING LBS.	VERT. LOAD LBS.	INFL. PRESS PSI RATED	BURST PRESS PSI MIN.	BEAD WIDTH IN. MAX.	WEIGHT LBS. MAX.	STATIC UNBALANCE OZ. MAX.	TREAD	MOLD SKID DEPTH INCH	DEFLC + 3% - 4%
18X5.7-8.00	14TL 1/	6,200	45,000	215	970 2/	1.50	15.5	2.5	RIB 3/	0.21	32

1/ TL TUBELESS

2/ NEW TIRE

3/ AT LEAST FOUR, BUT NOT MORE THAN SEVEN RIBS. THE TREAD GROOVES SHALL BE SHAPED, INSOFAR AS PRACTICABLE TO PREVENT FOREIGN OBJECTS FROM BEING TRAPPED BETWEEN THE RIBS. FABRIC REINFORCED TREAD.

TIRE AND RIM DATA: SEE FIGURE 1

THE TIRE COVERED BY THIS DRAWING SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE DURING ALL NORMAL OPERATIONS AT TAKEOFF AND LANDING SPEEDS INDICATED HEREIN ON ALL TYPES OF RUNWAYS AND ON AIRCRAFT CARRIERS.

A MINIMUM OF SEVEN TIRES SHALL BE USED FOR QUALIFICATION. ALL TIRES SHALL BE BUILT USING THE SAME COMPOUNDS AND PROCESSING TECHNIQUES. THE TIRES SHALL BE EXAMINED AS FOLLOWS:

**DIMENSIONS:** ALL TIRES SHALL BE INFLATED TO OPERATING PRESSURE AND ALLOWED TO STAND 4 HOURS MINIMUM AT ROOM TEMPERATURE AFTER WHICH THE PRESSURE LOSS DUE TO GROWTH SHALL BE REPLACED. THE TIRE DIMENSIONS AT 400 PSI SHALL BE WITHIN THE LIMITS OF FIGURE 1. IN ADDITION, DYNAMIC TEST TIRE NUMBER ONE SHALL BE MEASURED DURING THE ENVELOPE COMPLIANCE PORTION OF DYNAMIC TESTING TO DETERMINE GROWN AND THROWN COMPLIANCE (FIGURE 1).

**TIRES 1, 2 & 3:** TIRES SHALL BE INFLATED TO GIVE A RATED DEFLECTION AT RATED LOAD. ALL TIRES SHALL CONSECUTIVELY WITHSTAND 21 CYCLES OF TEST A, 2 CYCLES OF TEST B, 2 CYCLES OF TEST C, 25 CYCLES OF TEST D, 1 CYCLE OF TEST E AND 1 CYCLE OF TEST F IN THAT ORDER.

PHOTOGRAPHIC PROOF OR PHOTOS OF AN ACCURATE MEASURING DEVICE SHOWING ENVELOPE COMPLIANCE (FIGURE 1) SHALL BE OBTAINED FOR TIRE NUMBER 1 AS FOLLOWS:

- PRIOR TO START OF TEST, BUT AFTER TIRE HAS BEEN INFLATED AND MAINTAINED AT SPECIFIED INFLATION PRESSURE FOR 24 HOURS.
- AFTER 5 CYCLES OF TEST A.
- AFTER EVERY 16 CYCLES THEREAFTER.
- AFTER COMPLETION OF ENTIRE TEST SPECTRUM.

THE TIRE SHALL SHOW NO EVIDENCE OF SLIPPAGE THAT WOULD DAMAGE THE AIR SEAL BETWEEN THE TIRE AND RIM.

**NOTE:** FAILURE OF ANY TIRE AT ANY POINT OF THE ABOVE TEST SPECTRUM SHALL DISQUALIFY ALL PREVIOUSLY TESTED TIRES. THE TEST PROCEDURES SHALL BE FOLLOWED UNTIL 3 CONSECUTIVE TIRES PASS THE ABOVE TESTS.

**TIRE 4:** TIRE SHALL WITHSTAND TEST G, 10 CYCLES OF TEST H, 10 CYCLES OF TEST D AND THEN BE SUBJECTED TO THE HYDROSTATIC BURST TEST (TEST J).

**TIRES 5, 6 & 7:** TIRES SHALL CONSECUTIVELY WITHSTAND 5 CYCLES OF TEST H, 20 CYCLES OF TEST I, AND 25 CYCLES OF TEST D. TIRE NUMBER 7 SHALL BE SUBJECTED TO THE HYDROSTATIC BURST TEST (TEST J).

**NOTE:** FAILURE OF 5, 6 OR 7 TIRE AT ANY POINT DURING THE ABOVE TEST SPECTRUM SHALL DISQUALIFY THOSE TIRES. THIS PROCEDURE SHALL BE FOLLOWED UNTIL 3 CONSECUTIVE TIRES SUCCESSFULLY COMPLETE THE TESTING FOR TIRES 5, 6 AND 7.

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This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Department of the Navy and is mandatory for use by military activities. All other military activities are required to use this standard where suitable.

P.A. NAVY - AS Other Cost	TITLE TIRE, PNEUMATIC, AIRCRAFT, 18 X 5.7 - 8.00 (NAVY), FABRIC REINFORCED TREAD	MILITARY STANDARD
		MS14196(AS)
PROCUREMENT SPECIFICATION	SUPERSEDES	SHEET 1 OF 4

DD FORM 672-1 (limited circulation)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PROJECT NO. 2620-N208

PLATE NO. 14936

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- TEST G - CABLE BRUISE TEST - A NEW TIRE INFLATED TO 350 - 400 PSI (CARRIER LANDING PRESSURE) SHALL BE LOADED AGAINST A 1.375 INCH DIAMETER STEEL CABLE OR PLAIN ROUND BAR STOCK RESTING ON A FLAT PLATE DIRECTLY UNDER THE AXLE. A VERTICAL LOAD OF 45,000 POUNDS SHALL BE APPLIED, RELEASED AND RE-APPLIED AT A LOCATION 180° FROM THE INITIAL POINT OF LOADING.
- TEST H - CATAPULT CONDITION #1 - TIRE INFLATION PRESSURE SHALL BE 350 - 400 PSI, CORRECTED FOR FLYWHEEL DIAMETER. THE FLYWHEEL SHALL BE ACCELERATED AT AN AVERAGE RATE OF 14.0 FT/SEC/SEC FROM 0 TO 57 MPH. THE TIRE SHALL BE UNLANDED AFTER A ROLL DISTANCE OF 250 FEET HAS BEEN COVERED IN APPROXIMATELY 6 SECONDS. THE INITIAL LOAD OF 18,000 POUNDS SHALL BE INCREASED LINEARLY TO 36,400 POUNDS WITHIN 1.42 SECONDS, DECREASED LINEARLY TO 27,000 POUNDS AT 2.60 SECONDS, THEN DECREASED LINEARLY TO 18,000 POUNDS AFTER 6 SECONDS AT WHICH TIME THE TIRE IS UNLANDED.
- TEST I - CATAPULT CONDITION #2. TIRE INFLATION PRESSURE SHALL BE 350 - 400 PSI CORRECTED FOR FLYWHEEL DIAMETER. THE FLYWHEEL SHALL BE ACCELERATED AT AN AVERAGE RATE OF 14.0 FT/SEC/SEC FROM 0 TO 57 MPH. THE TIRE SHALL BE UNLANDED AFTER A ROLL DISTANCE OF 250 FEET HAS BEEN COVERED IN APPROXIMATELY 6 SECONDS. THE INITIAL LOAD OF 22,800 POUNDS SHALL BE INCREASED LINEARLY TO 31,800 POUNDS, WITHIN 1.42 SECONDS, DECREASED LINEARLY TO 23,600 POUND AT 2.60 SECONDS, THEN DECREASED TO 15,800 POUNDS AT 6 SECONDS AT WHICH TIME THE TIRE IS UNLANDED.
- TEST J - BURST TEST - THE TIRE SHALL BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS. THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.

**AIR RETENTION** - THE TIRE SHALL BE INFLATED TO A PRESSURE OF 350 PSI AND ALLOWED TO STAND FOR A PERIOD OF 24 HOURS AT WHICH TIME THE PRESSURE DROP DUE TO GROWTH SHALL BE REPLACED. THE TIRE SHALL THEN STAND AN ADDITIONAL 24 HOURS AT WHICH TIME THE PRESSURE SHALL BE MEASURED AND THE TIRE INSPECTED. THE AIR PRESSURE LOSS SHALL NOT EXCEED 5 PERCENT. THERE SHALL BE NO SIDEWALL BLISTERS, TREAD SEPARATION OR OTHER APPEARANCE OR PERFORMANCE DEFECTS.

**INFLATED PROFILE** - A SKETCH OF THE TIRE PROFILE AT THE RATED INFLATION PRESSURE AND 400 PSI SHALL BE PREPARED AND INCLUDED AS PART OF THE QUALIFICATION TEST REPORT.

**QUALIFICATION TEST REPORT** - THE QUALIFICATION TEST REPORT SHALL LIST THE RESULTS OF ALL QUALIFICATION TESTS AND CONSTRUCTION DETAILS OF THE QUALIFICATION TEST SAMPLE IN THE GENERAL FORM SHOWN IN FIGURE 6 OF MIL-T-5041 WITH DIMENSIONS LISTED AT RATED INFLATION AND 350 PSI. THE REPORT SHALL LIST THE MANUFACTURER'S TEST NUMBER. TWO COPIES OF THE QUALIFICATION TEST REPORT, TOGETHER WITH THE DATA AND MATERIAL SPECIFIED ABOVE AND IN MIL-T-5041 SHALL BE FORWARDED TO THE NAVAL AIR SYSTEMS COMMAND, WASHINGTON, DC 20361, ATTENTION: AIR-53032.

## NOTES:

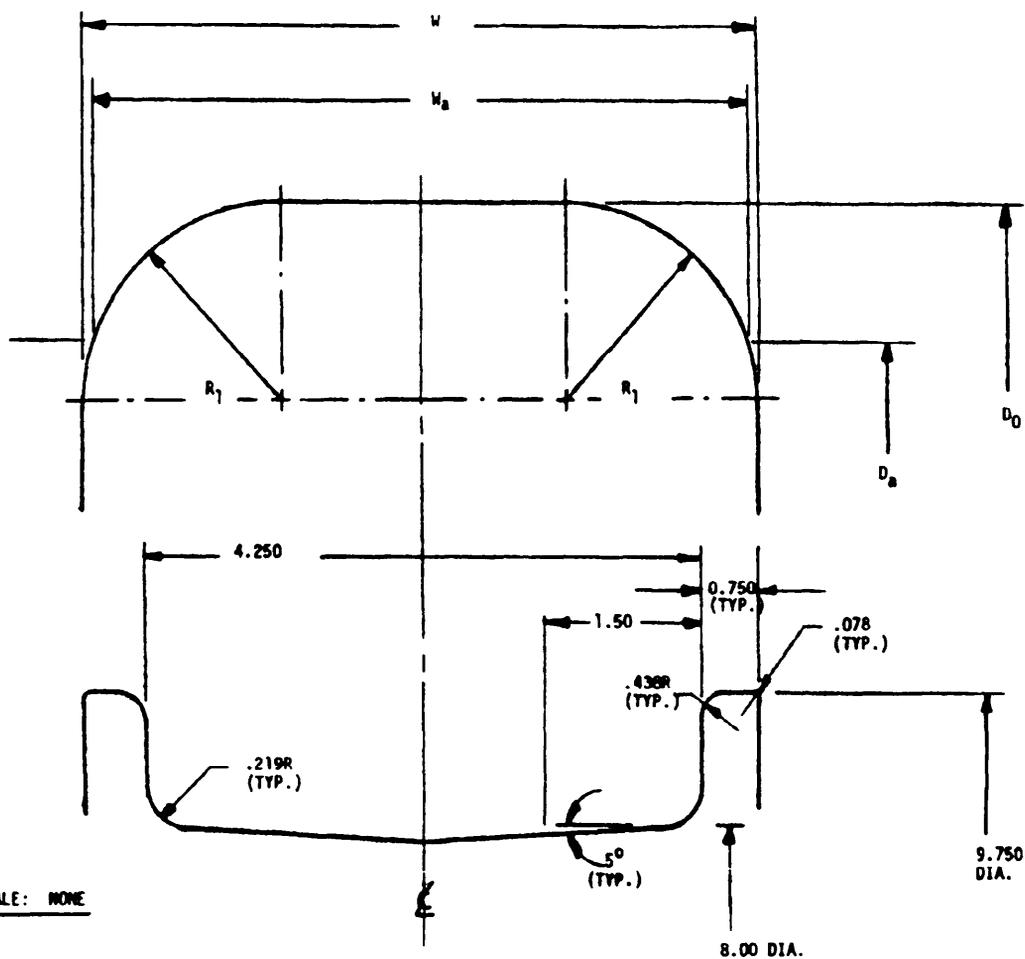
1. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCE ADOPTED INDUSTRY STANDARDS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
2. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

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	TIRE, PNEUMATIC, AIRCRAFT, 18 X 5.7 - 8.00 (NAVY), FABRIC REINFORCED TREAD	MS14196 (AS)
REPLACES PREVIOUS SPECIFICATION	SUPersedes:	SHEET 3 OF 4

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SCALE: NONE

TIRE DIMENSIONS (INCH)	RATED INFLATION PRESSURE		350 PSI INFLATION PRESSURE		GROWN @ 350 PSI	GROWN & THROWN @ 350 PSI, 230 MPH
	MIN.	MAX.	MIN.	MAX.	MAX.	MAX.
OUTSIDE DIA. ( $D_0$ )	17.3	17.90	17.45	18.00	18.50	18.90
SECTION WIDTH ( $W$ )	5.35	5.70	5.45	5.80	6.10	6.10
SHOULDER DIA. ( $D_s$ )	--	16.20	--	--	--	--
SHOULDER WIDTH ( $W_s$ )	--	5.00	--	--	--	--
RADIUS ( $R_1$ )	1.50	--	--	--	--	--

THE CONTOUR OF THE AIRCRAFT TIRE SHALL NOT EXCEED THE ENVELOPE SHOWN ABOVE. THIS CONDITION MUST BE MET BEFORE, DURING, AND AFTER THE DYNAMIC TESTING PORTION OF QUALIFICATION TESTING AND WHILE THE TIRE IS ROTATING EQUIVALENT TO GROUND SPEEDS RANGING FROM 0 TO 230 MPH WITH THE TIRE INFLATED TO THE REQUIRED RATED PRESSURES. THE TIRE SHALL FIT A WHEEL OF SUITABLE MATERIAL WITH A CONTOUR PER THE DIMENSIONS AND OUTLINE SHOWN ABOVE WITHOUT CHAFING OF THE SIDEMALL WHEN TESTED TO THE DYNAMIC PORTION OF THIS DRAWING.

FIGURE 1

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