

FED. SUP CLASS

2620

THE TIRE SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF SPECIFICATION MIL-R-7726 EXCEPT AS SPECIFIED HEREIN

SIZE	FLY RATING	STATIC LOAD RATING LBS.	INFL. PRESS. PSI RATED	BEAD WIDTH IN. MAX.	<sup>B</sup> WEIGHT LBS. MAX.	STATIC UNBAL. ±1/2 OZ.	TREAD	MOLD SKID DEPTH MIN.	DEFLC. +3% -4%
30 x 8.00-16.00	1/ 26TL	24,100	360	2.32	71	10	2/ RIB	.30	32%

1/ TL TUBELESS

2/ 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 FIVE TIRES SHALL BE REQUIRED 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 525 PSI SHALL BE WITHIN THE LIMITS OF FIGURE 1. IN ADDITION, EACH OF THE TIRES USED FOR DYNAMIC TESTING SHALL BE MEASURED DURING THE ENVELOPE COMPLIANCE PORTION OF DYNAMIC TESTING TO DETERMINE GROWN AND GROWN AND THROWN COMPLIANCE (FIGURE 1).

**TIRES 1 & 2:** TIRES 1 AND 2 SHALL BE INFLATED TO GIVE A RATED DEFLECTION AT RATED LOAD. THE TIRES SHALL 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 AS FOLLOWS:

- (a) PRIOR TO START OF TEST BUT AFTER TIRE HAS BEEN INFLATED AND MAINTAINED AT SPECIFIED INFLATION PRESSURE FOR 24 HOURS.
- (b) AFTER COMPLETION OF TEST A.
- (c) AFTER COMPLETION OF TEST C.
- (d) AFTER COMPLETION OF TEST F.

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

**TIRE 3:** SHALL WITHSTAND TEST G.

**TEST A - NORMAL TAKEOFF -** THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 34.5 MPH FOR 9000 FEET WITH 24,100 POUNDS LOAD. UPON COMPLETION OF THE TAXI ROLL, THE FLYWHEEL SHALL BE STOPPED AND THEN IMMEDIATELY ACCELERATED AT AN AVERAGE RATE OF 11.98 FT/SEC/SEC FROM 0 MPH TO 230 MPH. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 4750 FEET HAS BEEN COVERED IN APPROXIMATELY 28-29 SECONDS. THE INITIAL TAKEOFF LOAD OF 24,100 POUNDS SHALL BE LINEARLY DECREASED WITH TIME TO 23,800 POUNDS AT 8 SECONDS AFTER START OF ROLL, THEN LINEARLY DECREASED TO 22,100 POUNDS AT 18 SECONDS, THEN LINEARLY DECREASED TO 19,250 POUNDS AT POINT OF LIFT OFF.

**TEST B - OVERLOAD TAKEOFF -** THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 34.5 MPH FOR 9000 FEET WITH 25,000 POUNDS LOAD. UPON COMPLETION OF THE TAXI ROLL, THE FLYWHEEL SHALL BE STOPPED AND THEN IMMEDIATELY ACCELERATED AT AN AVERAGE RATE OF 11.98 FT/SEC/SEC FROM 0 TO 236 MPH. TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL OF 5000 FEET HAS BEEN COVERED IN APPROXIMATELY 28 TO 29 SECONDS. THE INITIAL LOAD OF 25,000 POUNDS SHALL BE LINEARLY DECREASED WITH TIME TO 24,600 POUNDS AT 10 SECONDS AFTER THE START OF THE ROLL, THEN FURTHER DECREASED LINEARLY TO 22,400 POUNDS AT 21 SECONDS, THEN DECREASED LINEARLY TO 20,000 POUNDS AT POINT OF LIFT OFF.

<sup>B</sup> DENOTES CHANGES

P.A. NAVY - AS Other Com	TITLE TIRE, PNEUMATIC, AIRCRAFT, REBUILT, 30 X 8.0-16.00, TYPE VII (NAVY) FABRIC REINFORCED TREAD	MILITARY STANDARD <b>MS14176 (AS)</b>
PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES	SHEET 1 OF 4

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 comply with this standard where applicable.

DD FORM 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

PROJECT NO. 2620 - N 211 PLATE NO. 23071

25 MAR 1981

28 SEP 1979

APPROVED 13 JAN 76

REVISED A

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TEST C - TAKEOFF AT 5000 FEET ALTITUDE ON A HOT DAY - THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 34.5 MPH FOR 7000 FEET WITH 24,100 POUNDS LOAD. UPON COMPLETION OF THE TAXI ROLL THE FLYWHEEL SHALL BE STOPPED AND THEN IMMEDIATELY ACCELERATED AT AN AVERAGE RATE OF 8.46 FT/SEC/SEC FROM 0 MPH TO 247 MPH. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 7750 FEET HAS BEEN COVERED IN APPROXIMATELY 42 TO 43 SECONDS. THE INITIAL LOAD OF 24,100 POUNDS SHALL BE LINEARLY DECREASED WITH TIME TO 23,500 POUNDS AT 16 SECONDS AFTER THE START OF ROLL, THEN DECREASED LINEARLY WITH TIME TO 21,800 POUNDS AT 31 SECONDS, THEN FURTHER DECREASED LINEARLY TO 19,200 POUNDS AT POINT OF LIFT OFF.

TEST D - LANDING - THE TIRE SHALL BE LANDED AGAINST A FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 180 MPH. THIS FLYWHEEL SPEED SHALL BE DECREASED AT AN AVERAGE DECELERATION RATE OF 10.56 FT/SEC/SEC BETWEEN 180 MPH AND 90 MPH COVERING A ROLL DISTANCE OF 2475 FEET IN 12.5 SECONDS, THEN DECREASED AT AN AVERAGE DECELERATION OF 7.90 FT/SEC/SEC BETWEEN 90 MPH AND 0. THE TOTAL LANDING ROLL DISTANCE OF 3575 FEET SHALL BE COVERED 30 SECONDS AFTER START OF LANDING ROLL. THE INITIAL TIRE LOAD OF 11,000 POUNDS AT TOUCHDOWN SHALL BE INCREASED LINEARLY WITH TIME TO 15,500 POUNDS AT COMPLETION OF THE ROLL DISTANCE (30 SECONDS). FOLLOWING THE LANDING, THE TIRE SHALL BE TAXIED ON THE FLYWHEEL FOR 9000 FEET AT 34.5 MPH WITH 24,100 POUNDS LOAD. AFTER THE TAXI, THE 24,100 POUND LOAD SHALL BE MAINTAINED ON THE TIRE A MINIMUM OF 15 MINUTES.

TEST E - TAXI OUT, REJECT AND RETURN TO STATION - THIS TEST SHALL CONSIST OF 3 PHASES:

PHASE 1: TAXI THE TIRE ON THE FLYWHEEL FOR 4,000 FEET AT 24,100 POUNDS LOAD AND 46 MPH. STOP THE FLYWHEEL UNDER FULL LOAD. REPEAT THIS FOR A TOTAL OF THREE (3) TIMES SUCH THAT A TOTAL DISTANCE OF 12,000 FEET IS COVERED IN NO MORE THAN 210 SECONDS.

PHASE 2: (A) WHILE UNDER 24,100 POUND LOAD, IMMEDIATELY ACCELERATE THE FLYWHEEL AT A MINIMUM RATE OF 12 FT/SEC/SEC TO 100 MPH, DECREASING THE LOAD LINEARLY TO 23,200 POUNDS.

(B) MAINTAIN THE 23,200 POUND LOAD AND 100 MPH SPEED FOR 3 SECONDS MINIMUM.

(C) THEN DECELERATE AT AN AVERAGE RATE OF 8.6 FT/SEC/SEC TO ZERO (0) SPEED IN 17 TO 18 SECONDS WHILE INCREASING THE LOAD LINEARLY TO 24,100 POUNDS.

PHASE 3: MAINTAIN THE 24,100 POUND LOAD AND TAXI THE TIRE FOR 12,000 FEET AT 46 MPH. THIS PHASE SHALL NOT EXCEED 178 SECONDS.

TEST F - TAXI TO SIMULATE SIDE LOAD DURING TURNING - ONE CYCLE OF TEST "F" SHALL CONSIST OF 25 CYCLES OF "F<sub>1</sub>" AND 25 CYCLES OF "F<sub>2</sub>". THIS TEST SHALL CONSIST OF TAXI AT 34.5 MPH. THE INBOARD AND OUTBOARD CYCLES SHALL BE ALTERNATED, ONE CYCLE OF F<sub>1</sub> FOLLOWED BY F<sub>2</sub> FOR THE ENTIRE TEST SPECTRUM. THE DISTANCE, VERTICAL AND SIDE LOADS SHALL BE AS SPECIFIED FOR EACH CONDITION. THE LOADING SHALL BE ACCOMPLISHED BY ROLLING THE WHEEL AT A YAW ANGLE RELATIVE TO THE DYNAMOMETER. VERIFICATION OF THE SPECIFIED LOADINGS IS REQUIRED. THE SIDE LOAD DEFLECTIONS SHALL BE RECORDED.

"F<sub>1</sub>" - INBOARD YAW TEST (25 CYCLES)

1. LAND TIRE ON FLYWHEEL WITH A PRESELECTED YAW ANGLE WHICH WILL GIVE THE REQUIRED LOADING.
2. INCREASE THE LOADING ON THE TIRE WITH A RADIAL LOAD (IN THE WHEEL PLANE) OF 28,660 POUNDS AND A SIDE LOAD (PERPENDICULAR TO THE WHEEL PLANE) OF 7165 POUNDS ACTING INBOARD. MAINTAIN THIS LOAD FOR THE REMAINDER OF THE CYCLE.
3. UNLAND THE TIRE WHEN A DISTANCE OF 600 FEET HAS BEEN COMPLETED WITH FULL LOAD.

"F<sub>2</sub>" - OUTBOARD YAW TEST (25 CYCLES)

SAME AS "F<sub>1</sub>" EXCEPT WITH THE SIDE LOAD COMPONENT ACTING OUTBOARD.

ALTERNATE SIDE LOAD TEST - SAME AS "F<sub>1</sub>" AND "F<sub>2</sub>" EXCEPT IF UNABLE TO PERFORM CALIBRATION TESTS WITH AN INSTRUMENTED TEST AXLE TO VERIFY SIDE LOADS. THE YAW ANGLE USED FOR THE SIMULATED TURNING TESTS OUTLINED SHALL BE 7° WITH THE VERTICAL LOAD OF 28,660 POUNDS TO ALLOW FOR A DECREASE INSIDE LOAD DUE TO TREAD ABRASION.

TEST G - CATAPULT CONDITION - 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 24,100 POUNDS SHALL BE INCREASED LINEARLY TO 63,000 POUNDS IN 1.75 SECONDS THEN DECREASED LINEARLY TO 42,000 POUNDS AFTER A TOTAL OF 6 SECONDS AT WHICH TIME THE TIRE IS UNLANDED. THE INFLATION PRESSURE SHALL BE 400-525 PSI CORRECTED FOR FLYWHEEL DIAMETER.

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P.A. NAVY - AS Other Code	TITLE TIRE, PNEUMATIC, AIRCRAFT, REBUILT, 30 X 8.0-16.00, TYPE VII (NAVY), FABRIC REINFORCED TREAD	MILITARY STANDARD <b>MS14176(AS)</b>
PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES	SHEET 2 OF 4

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**TIRES 4 AND 5:** TIRES 4 AND 5 SHALL NOT BE SUBJECTED TO CONTRACTOR TESTING; HOWEVER, A HALF SECTION OF TIRE 4 AND THE COMPLETE TIRE 5, ALONG WITH A REPRESENTATIVE HALF SECTION OF TIRES 1, 2 AND 3 AFTER DYNAMIC TESTS SHALL BE SUBMITTED TO THE COGNIZANT GOVERNMENT LABORATORY AS SPECIFIED IN MS3377.

~~WEAR DEPTH INDICATORS - AN EQUAL NUMBER OF TREAD WEAR INDICATORS EQUAL IN DEPTH TO 100 PERCENT OF THE HOLD SKID DEPTH SHALL BE INCORPORATED IN ALL TREAD RIBS AND THE TIRE OUTSIDE SHOULDERS (LOCATED 0.5 INCH FROM THE OUTER TREAD GROOVES). THE NUMBER OF INDICATORS SHALL BE DETERMINED BY DIVIDING THE CIRCUMFERENCE OF THE TIRE BY THE LENGTH OF ITS FOOTPRINT AND ADDING ONE WHEN THE RESULT YIELDS AN ODD NUMBER. THE INDICATORS SHALL BE LOCATED IN SUCH A WAY AS TO BE STAGGERED FROM RIB TO RIB.~~

**NOTES:**

1. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCE 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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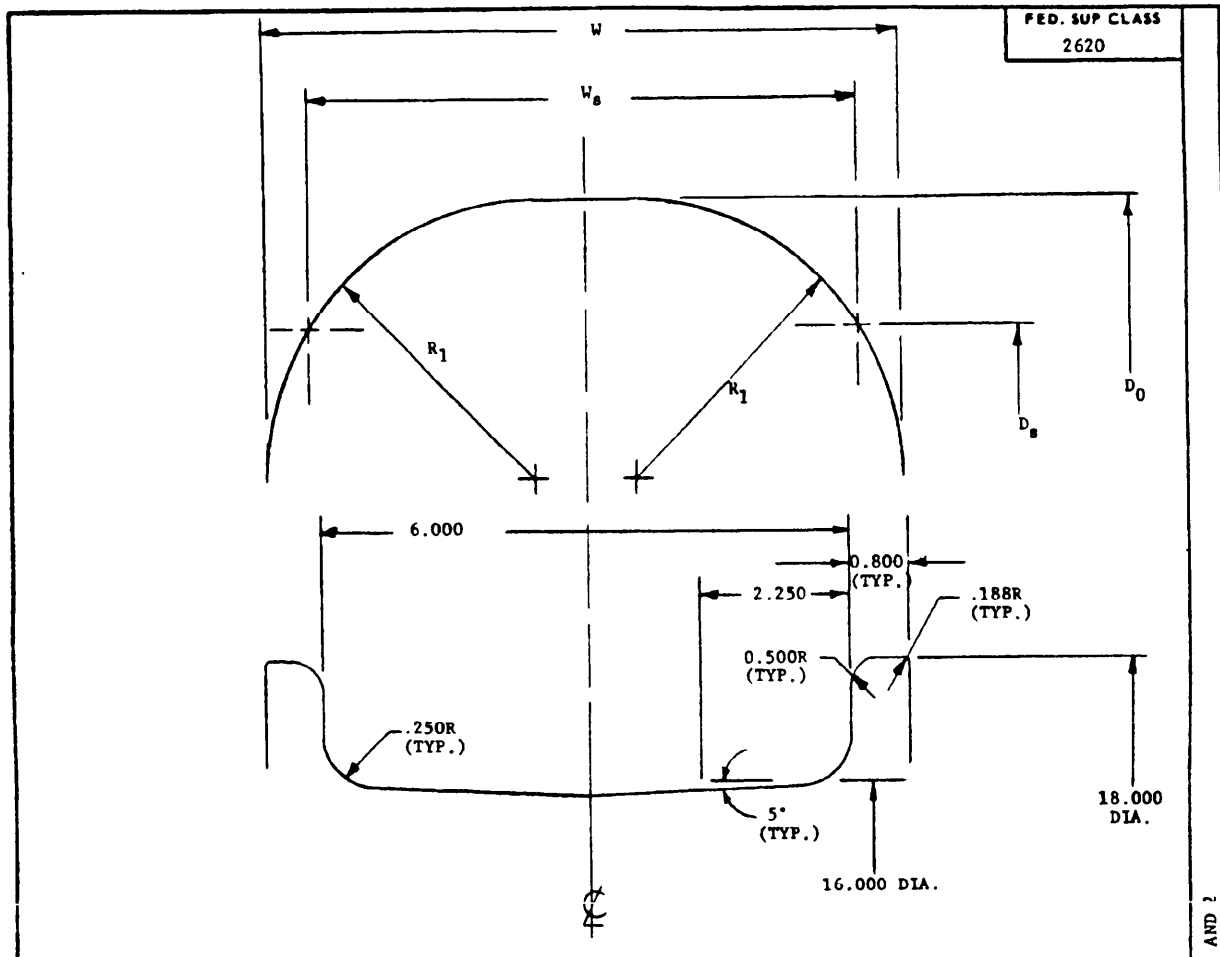
P.A. NAVY - AS Other Cost	TITLE TIRE, PNEUMATIC, AIRCRAFT, REBUILT, 30 X 8.0-16.00, TYPE VII (NAVY), FAHRTC REINFORCED TREAD	MILITARY STANDARD <b>MS14176(AS)</b>
PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES	SHEET 3 OF 4

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PLATE 141 1/2071

APPROVED 13 JAN 76 REVISED B FOR CHANGES SEE SHEETS 1 AND 2



TIRE DIMENSIONS (INCH)	RATED INFLATION PRESSURE		GROWN MAX.	GROWN AND THROWN MAX.
	MIN.	MAX.		
OUTSIDE DIA. ( $D_0$ )	29.40	29.80	30.20	30.60
SECTION WIDTH ( $W$ )	7.76	7.96	8.20	-
SHOULDER DIA. ( $D_s$ )	-	26.90	-	-
SHOULDER WIDTH ( $W_s$ )	-	6.95	-	-
RADIUS ( $R_1$ )	-	-	-	3.42

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 CHAFFING OF THE SIDEWALL WHEN TESTED TO THE DYNAMIC PORTION OF THIS DRAWING.

FIGURE 1

☆ U.S. GOVERNMENT PRINTING OFFICE: 1981-703-023/4116

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