

FED. SUP CLASS
2620

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

SIZE	PLY RATING	STATIC LOAD RATING LBS.	INFL. PRESS. PSI RATED	BEAD WIDTH IN. MAX.	WEIGHT LBS. MAX.	STATIC UNBAL ± 1/2 OZ.	TREAD	MOLD SKID DEPTH MIN.	DEFLC + 3% - 4%
30x11.50-14.50	1/ 26 TL	25,000	245	2.75	90	10	2/ RIB	.30	35

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

DIMENSIONS: TIRES 1, 2 AND 3 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 475 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 THROWN COMPLIANCE (FIGURE 1).

(C) TIRES 1 AND 2: TIRE 1 SHALL BE INFLATED TO GIVE A RATED DEFLECTION AT RATED LOAD. TIRE 2 SHALL BE INFLATED TO 300 PSI. BOTH 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 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 COULD DAMAGE THE AIR SEAL BETWEEN THE TIRE AND RIM.

TIRE 3: 25 CYCLES OF TEST G

TEST A - NORMAL TAKE-OFF - THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 40 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 11.88 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 25,000 POUNDS SHALL BE DECREASED LINEARLY WITH TIME TO 24,250 POUNDS AT 15 SECONDS AFTER START OF ROLL, THEN LINEARLY DECREASED TO 20,000 POUNDS AT POINT OF LIFT-OFF.

TEST B - OVERLOAD TAKEOFF - THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 40 MPH FOR 9000 FEET WITH 26,200 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. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL OF 5000 FEET HAS BEEN COVERED IN APPROXIMATELY 28 TO 29 SECONDS. THE INITIAL LOAD OF 26,200 POUNDS SHALL BE DECREASED LINEARLY WITH TIME TO 25,500 POUNDS AT 14 SECONDS AFTER THE START OF THE ROLL, THEN FURTHER DECREASED TO 22,000 POUNDS AT THE POINT OF LIFT-OFF.

TEST C - TAKEOFF AT 5000 FEET ALTITUDE ON A HOT DAY - THE TIRE SHALL BE TAXIED ON THE FLYWHEEL AT 40 MPH FOR 7000 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 8.95 FT/SEC/SEC FROM 0 MPH TO 247 MPH. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 7300 FEET HAS BEEN COVERED IN APPROXIMATELY 40 TO 41 SECONDS. THE INITIAL LOAD (25,000 POUNDS) SHALL BE MAINTAINED FOR THE FIRST 7 SECONDS OF THE TAKEOFF ROLL THEN DECREASED LINEARLY WITH TIME TO 23,300 POUNDS AT 30 SECONDS AFTER THE START AND TO 20,000 POUNDS AT THE POINT OF LIFT-OFF.

(C) - DENOTES CHANGES

APPROVED 26 JULY 1976 REVISED A 9 MAY 1977 B 12 DEC 77 C 28 SEP 79

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 TIRE, PNEUMATIC, AIRCRAFT, REBUILT, 30x11.50-14.50, TYPE VIII (NAVY) FABRIC REINFORCED TREAD	MILITARY STANDARD MS14172 (AS)
PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES	SHEET 1 OF 3

DD FORM 1 MAR 72 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PROJECT NO. 2620-N192 PLATE NO. 2071

TEST D - LANDING - THE TIRE SHALL BE LANDED AGAINST A FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 196 MPH. THE FLYWHEEL SPEED SHALL THEN BE DECREASED AT AN AVERAGE DECELERATION RATE OF 5.17 FT/SEC/SEC FROM 196 TO 0 MPH. THE LANDING ROLL DISTANCE OF 8000 FEET SHALL BE COVERED IN APPROXIMATELY 55 TO 56 SECONDS. THE INITIAL TIRE LOAD SHALL BE 17,500 POUNDS AT TOUCHDOWN THEN INCREASED LINEARLY TO 22,000 POUNDS AFTER 8000 FT. IMMEDIATELY FOLLOWING THE LANDING THE TIRE SHALL BE TAXIED ON THE FLYWHEEL FOR 9000 FEET AT 40 MPH WITH 22,000 POUNDS LOAD. AFTER THE TAXI, THE 22,000 POUND LOAD SHALL BE MAINTAINED ON THE TIRE FOR A MINIMUM OF 15 MINUTES.

TEST E - TAXI TO SIMULATE SIDE LOAD DURING TURNING - ONE CYCLE OF TEST "E" SHALL CONSIST OF 25 CYCLES OF "E₁" AND 25 CYCLES OF "E₂". THIS TEST SHALL CONSIST OF TAXI AT 35 MPH WITH THE TIRE LOADED IN A MANNER TO DUPLICATE THE LOADINGS OBTAINED DURING A .25G TURN. 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.

"E₁" - 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 29,580 LBS. AND A SIDE LOAD (PERPENDICULAR TO THE WHEEL PLANE) OF 7400 LBS. 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.

"E₂" - OUTBOARD YAW TEST (25 CYCLES)

SAME AS "E₁" EXCEPT WITH THE SIDE LOAD COMPONENT ACTING OUTBOARD.

ALTERNATE SIDE LOAD TEST - SAME AS "E₁" AND "E₂" 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 6° WITH THE VERTICAL LOAD OF 29,580 POUNDS TO ALLOW FOR A DECREASE INSIDE LOAD DUE TO TREAD ABRASION.

TEST F - 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 FT AT 25,000 LBS. LOAD AND AT 46 MPH. STOP THE FLYWHEEL UNDER FULL LOAD. REPEAT THIS THREE (3) TIMES SUCH THAT A TOTAL DISTANCE OF 12,000 FT. IS COVERED IN NO MORE THAN 210 SECONDS.

PHASE 2: (A) WHILE UNDER 25,000 LB. LOAD, IMMEDIATELY ACCELERATE THE FLYWHEEL AT A MINIMUM RATE OF 12 FT/SEC/SEC TO 115 MPH, DECREASING THE LOAD LINEARLY TO 24,000 LBS.

(B) MAINTAIN THE 24,000 LB. LOAD AND 115 MPH SPEED FOR 5 TO 6 SECONDS.

(C) THEN DECELERATE AT AN AVERAGE RATE OF 8.7 FT/SEC/SEC TO ZERO (0) SPEED IN 20 TO 21 SECONDS WHILE INCREASING THE LOAD LINEARLY TO 25,000 LBS.

PHASE 3: MAINTAIN THE 25,000 POUND LOAD AND TAXI THE TIRE FOR 12,000 FEET AT 46 MPH. THIS PHASE SHALL NOT EXCEED 178 SECONDS.

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 24,500 POUNDS SHALL BE INCREASED LINEARLY TO 67,000 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 400-500 PSI CORRECTED FOR FLYWHEEL DIAMETER.

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 - TREAD WEAR INDICATORS SHALL BE PROVIDED TO ESTABLISH ALLOWABLE WEAR OF TREAD DOWN TO 1/32 INCH FROM THE BOTTOM OF THE TREAD GROOVES. OR LONG HOLES (3/4 X 3/16 INCH) OR ROUND HOLES (7/16 INCH DIAM.) SHALL BE LOCATED IN THE TREAD RIBS. KILLETS (0.5 INCH LONG) SHALL BE LOCATED IN THE TREAD GROOVES. INDICATORS SHALL BE LOCATED NOT MORE THAN 45 DEGREES APART.

NOTES:

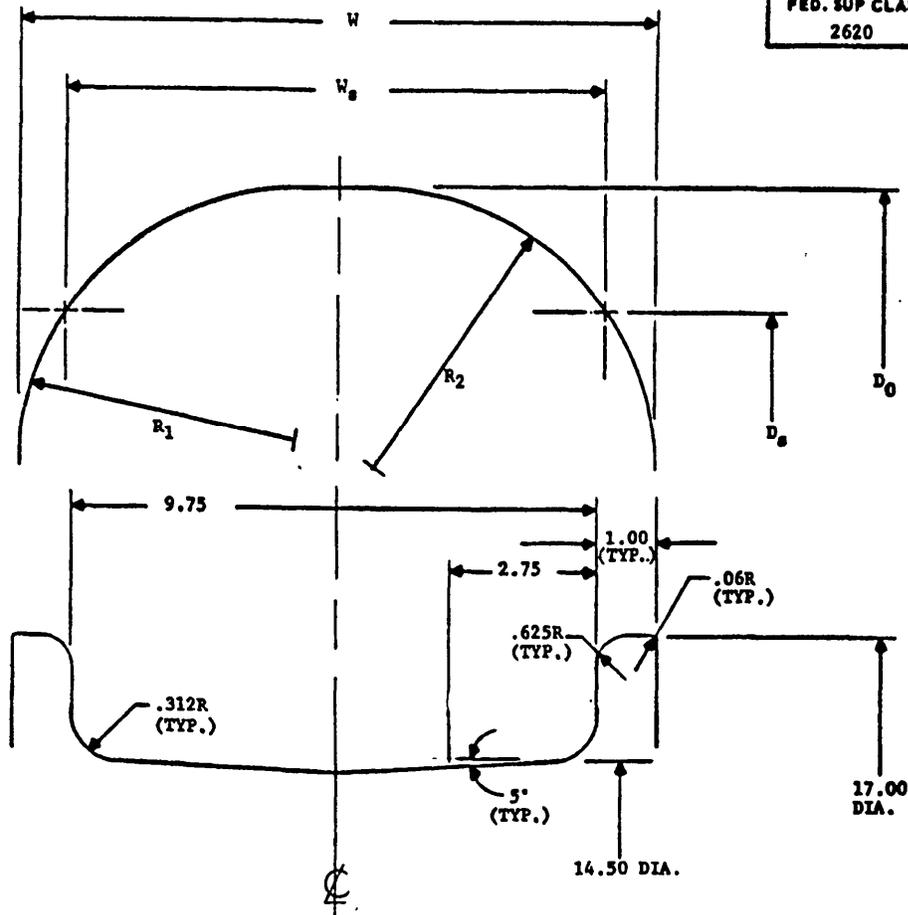
1. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL EXCEPT THAT REFERENCED ADOPTED INDUSTRY STANDARDS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
2. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED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

APPROVED 26 JULY 1976 REVISED C FOR CHANGES SEE SHEET 1 AND 2

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P.A. NAVY-AS Other Cust	TITLE	MILITARY STANDARD
	TIRE, PNEUMATIC, AIRCRAFT, REBUILT, 30x11.50-14:50, TYPE VIII(NAVY) FABRIC REINFORCED TREAD	MS14172 (AS)
PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES	SHEET 2 OF 3

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TIRE DIMENSIONS (INCH)	RATED INFLATION PRESSURE		GROWN OR GROWN AND THROWN
	MIN.	MAX.	MAX.
OUTSIDE DIA. (D_0)	28.75	29.75	31.00
SECTION WIDTH (W)	11.00	11.50	11.95
SHOULDER DIA. (D_s)	-	28.50	28.54
SHOULDER WIDTH (W_s)	-	10.50	10.60
RADIUS (R_1)	-	-	5.15
RADIUS (R_2)	-	-	5.30

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

APPROVED 26 JULY 1976 REVISED C FOR CHANGES SEE SHEET 1 AND 2

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PROCUREMENT SPECIFICATION MIL-R-7726	SUPERSEDES:	SHEET 3 OF 3

DD FORM 13 MAR 72 672-1 (Limited coordination)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE.

PLATE NO. 2871