

U.S. GOVERNMENT PRINTING OFFICE 1981-703-023/6997

FED. SUP CLASS
2620THE TIRE SHALL BE IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS
OF MIL-T-5041 EXCEPT AS SPECIFIED HEREIN

MS PART NO.	SIZE	PLY RATING 1/	STATIC LOAD RATING LBS.	VERTICAL LOAD LBS MIN.	INFL. PRESS PSI RATED	BURST PRESS. PSI MIN. 2/	BEAD WIDTH IN. MAX.	WEIGHT POUNDS MAX.	STATIC UNBAL. OZ-IN MAX.	TREAD 3/	MOLD SKID DEPTH MIN.	DEFLEC. + 3% - 4%
MS26540-1	20x5.5	12 TL	6,150	36,800	180	810	1.38	22.0	12	Rib	0.26	32.0%
MS26540-2	20x5.5	14 TL	7,200	41,500	230	1035	1.38	22.0	12	Rib	0.26	32.0%

1/ Tubeless Tire

2/ New Tire

3/ At least three, but not more than seven continuous circumferential ribs

TIRE DATA (INCH)

INFLATED OUTSIDE DIAMETER		INFLATED SECTION WIDTH		INFLATED SHOULDER DIAMETER		INFLATED SHOULDER WIDTH	
MIN	MAX	MIN	MAX	MAX		MAX	
19.55	20.15	5.35	5.70	19.30		4.95	

RIM DATA (INCH)

WIDTH BETWEEN FLANGES	MIN. FLANGE WIDTH	LEDGE DIAMETER	LEDGE WIDTH	FLANGE HEIGHT	HEEL RADIUS	FLANGE RADIUS	FLANGE EDGE RADIUS
4.25	.656	10.00	1.38	.875	.219	.438	.062

12 PLY RATING MS26540-1

THIS TIRE SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE DURING ALL NORMAL OPERATIONS AT TAKE OFF SPEEDS OF NOT MORE THAN 161 MPH AND LANDING SPEEDS OF NOT MORE THAN 138 MPH ON ALL TYPES OF RUNWAYS AND ON AIRCRAFT CARRIERS.

THIS TIRE SHALL WITHSTAND WITHOUT FAILURE THE TESTS SPECIFIED IN PARAGRAPHS (1), (2) AND (4):

- (1) **BRUISE TESTS** - THE TIRE SHALL BE INFLATED WITH AIR TO 290 PSI AND LOADED AGAINST A ONE AND THREE-EIGHTHS (1-3/8") DIAMETER LENGTH OF PLAIN ROUND STEEL BAR STOCK. A VERTICAL LOAD AS SPECIFIED ABOVE SHALL BE APPLIED WITH THE VERTICAL CENTER-LINE OF THE MOUNTED TIRE MAKING AN ANGLE OF 90 DEGREES WITH THE PLATEN. IMMEDIATELY FOLLOWING THE RELEASE OF THIS LOAD THE TIRE SHALL BE SUBJECTED TO A LOAD OF 27,600 POUNDS USING RATED INFLATION AT A SPOT 180 DEGREES FROM THE INITIAL POINT OF LOADING.
- (2) **DYNAMIC TEST** - FOLLOWING THE ABOVE BRUISE TEST THE TIRE SHALL BE SUBJECTED TO 25 DYNAMOMETER LANDINGS AT A SPEED OF 120 MPH WITH AN UNLANDING SPEED CALCULATED TO MAKE THE TIRE ABSORB 80% OF THE INITIAL FLYWHEEL ENERGY WHEN COMPUTED IN ACCORDANCE WITH SPECIFICATION MIL-T-5041. THE STATIC LOAD SHALL BE SPECIFIED AS ABOVE AND THE INFLATION PRESSURE ADJUSTED FOR FLYWHEEL CURVATURE.
- (3) **BURST TEST** - FOLLOWING THE ABOVE DYNAMIC TEST THE SAME TIRE SHALL BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS AND THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.
- (4) **DYNAMOMETER TEST** - A NEW TIRE SHALL BE SUBJECTED TO 50 HIGH SPEED (120-90 MPH) LANDINGS AND 50 LOW SPEED (90-0) LANDINGS AS DESCRIBED IN MIL-T-5041.

14 PLY RATING MS26540-2

THIS TIRE SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE DURING ALL NORMAL OPERATIONS AT TAKE-OFF SPEEDS OF NOT MORE THAN 200 MPH AND LANDING SPEEDS OF NOT MORE THAN 173 MPH ON ALL TYPES OF RUNWAYS AND AIRCRAFT CARRIERS.

TIRE-1 - THE TIRE SHALL WITHSTAND 50 CYCLES OF TEST A, 50 CYCLES OF TEST B, 5 CYCLES OF TEST C₁ AND 5 CYCLES OF TEST C₂ WITHOUT FAILURE AND THEN BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS AND THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.**TIRE-2** - THE TIRE SHALL BE INFLATED TO 365 PSI AND VERTICALLY LOADED TO 41,500 POUNDS OVER A 1-3/8 INCH DIAMETER STEEL BAR IN TWO LOCATIONS 180° APART ON THE TIRE. THE TIRE SHALL WITHSTAND 25 CYCLES OF TEST A AND 25 CYCLES OF TEST B WITHOUT FAILURE, AND THEN BE SUBJECTED TO A HYDROSTATIC BURST TEST. THE PRESSURE SHALL BE INCREASED UNTIL THE TIRE FAILS AND THE FAILING PRESSURE, DESCRIPTION OF FAILURE AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.

(B) ENTIRE STANDARD REVISED

P.A. NAVY - AS Other Cust	TITLE TIRE, PNEUMATIC, AIRCRAFT, 20x5.5 TYPE VII (NAVY)	MILITARY STANDARD MS26540(AS)
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES:	SHEET 1 OF 2

APPROVED 15 DEC 1953 REVISED (B) 11 SEP 1981

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

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TIRE-3 - THE TIRE SHALL WITHSTAND A MINIMUM HYDROSTATIC BURST PRESSURE OF 1035 PSI PRESSURE, UNLESS THE BURST PRESSURE OF TIRES 1 AND 2 MEET THE MINIMUM BURST PRESSURE REQUIREMENT. THE FAILING PRESSURE, DESCRIPTION OF FAILURE, AND LOCATION SHALL BE REPORTED IN THE QUALIFICATION TEST REPORT.

TEST-A - TAXI - TAKE OFF - TAXI THE TIRE ON THE FLYWHEEL, STOP THE FLYWHEEL UNDER FULL LOAD, AND THEN ACCELERATE (SIMULATING TAKE-OFF) TO 173 KNOTS IN ACCORDANCE WITH THE FOLLOWING DATA:

	LOAD (LBS)	SPEED (MPH)	TIME (SEC)	DISTANCE (FT)
TAXI	7,200	23	296	10,000
TAKE-OFF	7,200	0	0	0
	7,100	41	5	140
	7,000	83	10	600
	6,800	121	15	1400
	6,600	156	20	2390
	6,400	189	25	3650
	5,700	194	26	3940
	5,000	196	26.2	4000
	4,200	197	26.4	4050
	3,200	198	26.6	4100
	0	199	26.8	4160

TEST B - LANDING - TAXI - THE TIRE SHALL BE LANDED AGAINST THE FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 173 MPH, DECELERATED TO 0 MPH AND TAXIED IN ACCORDANCE WITH THE FOLLOWING DATA:

	LOAD (LBS)	SPEED (MPH)	TIME (SEC)	DISTANCE (FT)
	0	173	0	
	2,450	158	5	
	3,700	133	10	
	4,500	109	15	
LAND	4,900	86	20	
	5,200	62	25	
	5,350	38	30	
	5,400	14	35	
	5,400	0	38	5,000
TAXI	5,400	23	296	10,000

TEST C - TAXI YAW TEST

C₁ - LEFT YAW - LAND THE TIRE AGAINST THE FLYWHEEL WITH THE PLANE OF THE TIRE YAWED LEFT AT AN ANGLE OF 5°. A CYCLE SHALL CONSIST OF A ROLL DISTANCE OF 10,000 FEET WITH A SPEED OF 23 MPH AND A LOAD OF 7200 POUNDS.

C₂ - RIGHT YAW - SAME AS C₁ EXCEPT THE PLANE OF THE TIRE SHALL BE YAWED RIGHT AT AN ANGLE OF 5°.

12 AND 14 PLY RATING

AIR RETENTION - THE TIRE SHALL BE INFLATED TO A PRESSURE OF 290 PSI FOR THE 12 PR AND 365 PSI FOR THE 14 PR AND ALLOWED TO STAND FOR A PERIOD OF 12 HOURS AT WHICH TIME THE PRESSURE DROP DUE TO GROWTH SHALL BE REPLACED. THE TIRE SHALL THEN STAND FOR AN ADDITIONAL 24 HOURS AT WHICH TIME THE PRESSURE SHALL BE MEASURED AND THE TIRE INSPECTED. THE AIR PRESSURE LOSS SHALL NOT EXCEED 5 PER CENT AND THE TIRE SHALL NOT REVEAL ANY APPEARANCE AND PERFORMANCE DEFECTS SUCH AS SIDEWALL BLISTERS, TREAD SEPARATION, ETC.

QUALIFICATION TEST REPORTS - THE QUALIFICATION TEST REPORT SHALL LIST THE RESULTS OF ALL QUALIFICATION TESTS AND THE CONSTRUCTION DETAILS OF THE QUALIFICATION TEST SAMPLE IN THE GENERAL FORM SHOWN IN FIGURES 6 OF MIL-T-5041 WITH DIMENSIONS LISTED AT RATED INFLATION. IN ADDITION, IT SHALL ALSO LIST THE ACTUAL TIRE DIMENSIONS WHEN THE TIRE IS INFLATED TO 290 PSI FOR THE 12 PR AND 365 FOR THE 14 PR. TWO (2) 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, D.C. 20361 ATTN: 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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		MS26540(AS)	
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES:	SHEET	OF
		2	2