

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

MS PART NO.	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 UNBAL. -1/2 OZ.	TREAD	MOLD SKID DEPTH MIN.	DEFLEC +3% -4%
MS26533-1	26x6.6	1/14TT	10,000	59,000	225	2/ 945	1.60	32.0	17	3/RIB	0.21	32.0%
MS26533-2	26x6.6	1/14TL	10,000	59,000	225	2/ 945	1.75	36.0	17	3/RIB	0.21	32.0%
MS26533-3	26x6.6	1/16TT	12,000	63,800	270	2/1200	1.70	34.0	17	3/RIB	0.21	32.0%
MS26533-4	26x6.6	1/16TL	12,000	63,800	270	2/1200	1.85	38.0	17	3/RIB	0.21	32.0%

1/ TL-TUBELESS TT-TUBE TYPE

2/ NEW TIRE

3/ AT LEAST THREE, BUT NOT MORE THAN SEVEN CONTINUOUS CIRCUMFERENTIAL
RIBS. THE TREAD GROOVES SHALL BE SHAPED, INsofar AS PRACTICABLE
TO PREVENT FOREIGN OBJECTS FROM BEING TRAPPED BETWEEN THE RIBS.

SERVICE LIFE

14 PLY RATING - THIS TIRE SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE ON NAVY CARRIER TYPE AIRCRAFT DURING ALL NORMAL OPERATIONS AT TAKE-OFF SPEEDS OF NOT MORE THAN 160 MPH AND LANDING SPEEDS OF NOT MORE THAN 140 MPH ON ALL TYPES OF RUNWAYS AND ON AIRCRAFT CARRIERS.

16 PLY RATING - THIS TIRE SHALL BE SUITABLE FOR USE AND PROVIDE REASONABLE SERVICE LIFE ON NAVY CARRIER TYPE AIRCRAFT DURING ALL NORMAL OPERATIONS AT TAKE-OFF SPEEDS OF NOT MORE THAN 200 MPH AND LANDING SPEEDS OF NOT MORE THAN 160 MPH ON ALL TYPES OF RUNWAYS AND ON AIRCRAFT CARRIERS.

NOTE - - - WHEN CONSTRUCTION OF THE TUBETYPE AND TUBELESS TIRES IS IDENTICAL, EXCEPT FOR THE TUBELESS INNERLINER, ONLY THE TUBELESS TIRE NEED BE QUALIFIED IN ACCORDANCE WITH THE REQUIREMENTS OF THIS DRAWING.

TESTING SEQUENCE

14 PLY RATING TIRES - THE 14 PLY QUALIFICATION TEST TIRE SHALL WITHSTAND, WITHOUT FAILURE, TEST A, TEST B, TEST C, AND TEST D. AIR RETENTION TESTS SHALL BE RUN ON A NEW TIRE.

16 PLY RATING TIRES - THE 16 PLY QUALIFICATION TIRE SHALL WITHSTAND 50 CYCLES OF TEST D, 50 CYCLES OF TEST E, 1 CYCLE OF TEST F, TEST A, 25 CYCLES OF TEST C, FOLLOWED BY TEST H. A FAILURE DURING OR PRIOR TO THE SECOND CYCLE OF TEST G SHALL BE CAUSE TO REJECT THE QUALIFICATION TEST TIRE. A FAILURE AFTER THE SECOND CYCLE OF TEST G SHALL BE RECTIFIED AS FOLLOWS:

1. REPORT NUMBER OF CYCLES AND THE NATURE OF THE FAILURE.
2. A NEW TIRE SHALL WITHSTAND WITHOUT FAILURE, TEST A, 25 CYCLES OF TEST G AND 2 CYCLES OF TEST D (THIS CONSTITUTES COMPLETION OF THE MINIMUM REQUIRED RETEST) CONTINUE WITH TEST D UNTIL THE TIRE FAILS (REPORT NUMBER OF CYCLES AND NATURE OF FAILURE) OR COMPLETES 15 CYCLES. THE TIRE SHALL THEN BE SUBJECTED TO TEST A.

TEST A - BRUISE TEST - 14 PLY TIRES INFLATED WITH AIR TO 360 PSI AND 16 PLY TIRES INFLATED TO 450 PSI SHALL BE LOADED AGAINST A ONE AND THREE EIGHTHS (1-3/8") DIAMETER LENGTH OF PLAIN ROUND STEEL BAR STOCK. A VERTICAL LOAD AS APPLICABLE TO THE PLY RATING SPECIFIED SHALL BE APPLIED WITH THE VERTICAL CENTER-LINE OF THIS MOUNTED TIRE MAKING AN ANGLE OF 90 DEGREES WITH THE PLATE. INSTANTLY FOLLOWING THE RELEASE OF THIS LOAD THE TIRE SHALL BE SUBJECTED TO THE SAME LOADING CONDITION AT A SPOT 180 DEGREES FROM THIS INITIAL POINT OF LOADING.

TEST B - DYNAMIC TEST - THE TIRE SHALL BE SUBJECTED TO 25 DYNAMOMETER LANDINGS AT A SPEED OF 120 MPH WITH AN UNLOADING SPEED CALCULATED TO MAKE THE TIRE ABSORB 80% OF THE INITIAL FLYWHEEL ENERGY WHEN COMPUTED IN ACCORDANCE WITH SPECIFICATION MIL-T-5041. THE TIME BETWEEN LANDING SHALL BE SUCH THAT THE CONTAINED AIR PEAK TEMPERATURE WILL NOT EXCEED 175 F + 10 F OR THE CARCASS PEAK TEMPERATURE WILL NOT EXCEED 195 F + 10 F. THE STATIC LOAD SHALL BE AS APPLICABLE TO THE PLY RATING SPECIFIED ABOVE AND THE INFLATION PRESSURE VARIED AS NECESSARY TO PRODUCE A STATIC DEFLECTION OF 32% ON THE FLYWHEEL SURFACE.

TEST C - DYNAMOMETER TEST - A NEW TIRE SHALL BE SUBJECTED TO 50 HIGH SPEED (120-90 MPH) AND 50 LOW SPEED (90-0 MPH) LANDINGS AS DESCRIBED IN SPECIFICATION MIL-T-5041.

TEST D - NORMAL TAKEOFF - THE TIRE SHALL BE LANDED AGAINST A FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 20 MPH AND TAXIED AT THIS SPEED FOR A DISTANCE OF 10,000 FT. LOAD DURING THE TAXI TEST TO BE MAINTAINED AT 12,000 LBS. IMMEDIATELY AFTER COMPLETION OF THE TAXI ROLL, THE FLYWHEEL SHALL BE ACCELERATED FROM 20 MPH TO 200 MPH IN APPROXIMATELY 50 SECONDS AT AN ACCELERATION RATE OF 3.6 FT/SEC/SEC.

D ENTIRE STANDARD REVISED

P.A. NAVY - AS Other Cust	TITLE TIRE, PNEUMATIC, AIRCRAFT, 26x6.6, TYPE VII (NAVY)	MILITARY STANDARD MS26533(AS)
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES	SHEET 1 OF 2

APPROVED 26 APR 56 REVISED 9 FEB 78

This military standard is approved by NAVAL AIR SYSTEMS COMMAND, Dept of the Navy and shall be used by that activity. All other military activities are required to employ this standard where suitable.

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AT WHICH TIME THE TIRE SHALL BE UNLANDED. THE ROLL DISTANCE FOR THE ACCELERATION PART OF THE TEST IS APPROXIMATELY 7350 FT. THE INFLATION PRESSURE SHALL BE VARIED AS NECESSARY TO OBTAIN A STATIC DEFLECTION OF 32% ON THE FLYWHEEL SURFACE AT A LOAD OF 12,000 LBS. THE LOAD SHALL BE MAINTAINED AT 12,000 LBS FOR THE FIRST 10 SECONDS OF THE ACCELERATION TEST AND THEN DECREASED LINEARLY WITH TIME TO 1200 LBS AT THE INSTANT OF UNLANDING.

TEST E - LANDING - THE TIRE SHALL BE LANDED AGAINST A FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 160 MPH. THE FLYWHEEL SPEED SHALL BE DECREASED FROM 160 MPH TO 50 MPH IN 30 SECONDS AT A CONSTANT DECELERATION RATE OF APPROXIMATELY 5.4 FT/SEC/SEC. THE FLYWHEEL SPEED SHALL THEN BE DECREASED FROM 50 MPH TO 20 MPH IN 26 SECONDS AT A CONSTANT DECELERATION RATE OF APPROXIMATELY 1.7 FT/SEC/SEC. THE ROLL DISTANCE FOR THE LANDING PART OF THIS TEST IS APPROXIMATELY 5900 FT. THE FLYWHEEL SHALL IMMEDIATELY BE ACCELERATED TO 23 MPH AND REMAIN AT THAT SPEED UNTIL THE TIRE HAS TAXIED 10,000 FT. AT WHICH TIME THE TIRE SHALL BE UNLANDED. THE LOAD SHALL INCREASE FROM 0 TO 3000 LBS IN 1 TO 3 SECONDS AND THEN INCREASED LINEARLY WITH TIME TO A VALUE OF 11,500 LBS IN 30 TO 40 SECONDS. THE LOAD SHALL BE MAINTAINED AT 11,500 LBS UNTIL THE TIRE IS UNLANDED.

TEST F - CAMBER TESTS - ONE CYCLE OF THE CAMBER TEST SHALL CONSIST OF 50 CYCLES OF TEST F₁ (OUTBOARD CAMBER) AND 50 CYCLES OF TEST F₂ (INBOARD CAMBER)

F₁ - OUTBOARD CAMBER -

- A. ACCELERATE FLYWHEEL TO 20 MPH AND MAINTAIN THIS SPEED THROUGHOUT THE TEST.
- B. LAND THE TIRE AGAINST THE FLYWHEEL IN A POSITION 15° CAMBER AND LOAD THE TIRE TO 14,500 LBS WITHIN 4 SECONDS. MAINTAIN THIS LOAD UNTIL A ROLL DISTANCE OF 2300 FEET HAS BEEN COVERED.

F₂ - INBOARD CAMBER - SAME AS F₁ EXCEPT THAT THE LOAD SHALL BE APPLIED TO PROVIDE 15° INBOARD CAMBER

TEST G - DYNAMIC TEST - THE TIRE SHALL BE LANDED ON A DYNAMOMETER FLYWHEEL WHICH IS ROTATING AT A PERIPHERAL SPEED OF 120 MPH AND SHALL BE UNLANDED AT A SPEED CALCULATED TO MAKE THE TIRE ABSORB 90% OF THE INITIAL FLYWHEEL ENERGY AS COMPUTED IN ACCORDANCE WITH SPECIFICATION MIL-T-5041. THE TIME BETWEEN LANDINGS SHALL BE SUCH THAT THE CONTAINED AIR TEMPERATURE WILL BE NOT LESS THAN 110° F AT THE START OF A CYCLE NOR LESS THAN 165° F AT THE CONCLUSION OF THE CYCLE. CARCASS PEAK TEMPERATURES OF 110° F AND 185° F MAY BE USED IN LIEU OF THE CORRESPONDING SPECIFIED CONTAINED AIR TEMPERATURES FOR TIMING THE TEST CYCLES. THE IMPOSED TIRE LOAD SHALL BE 12,000 LBS DURING THE ENTIRE TEST CYCLE AND THE TEST INFLATION PRESSURE SHALL BE THAT NECESSARY TO PROVIDE FOR A STATIC DEFLECTION DETERMINED AT 12,000 LBS LOAD AND 270 PSI ON A FLAT PLATE.

TEST H - 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 360 PSI FOR 14 PR AND 450 PSI FOR 16 PR AND ALLOWED TO STAND FOR A PERIOD OF 24 HOURS AT WHICH TIME THE PRESSURE DROP DUE TO GROWTH SHALL BE RE-PLACED. 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 PERCENT AND THE TIRE SHALL NOT REVEAL ANY APPEARANCE AND PERFORMANCE DEFECTS SUCH AS SIDEWALL BLISTERS, TREAD SEPARATION, ETC.

INFLATED PROFILE - 16 PLY ONLY - A SKETCH OF THE TIRE PROFILE AT THE RATED INFLATION PRESSURE AND 450 PSI SHALL BE PREPARED AND INCLUDED AS PART OF THE QUALIFICATION TEST REPORT.

MARKING - IN ADDITION TO THE MARKING REQUIRED BY SPECIFICATION MIL-T-5041 THE MS PART NUMBER SHALL BE ENGRAVED OR EMBOSSED ON ONE SIDEWALL IN THE VICINITY OF THE SIZE AND PLY RATING MARKINGS.

QUALIFICATION TEST REPORT - 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 2 & 3 OF SPECIFICATION MIL-T-5041. IN ADDITION IT SHALL ALSO LIST THE ACTUAL TIRE DIMENSIONS WHEN THE TIRE IS INFLATED TO 360 PSI FOR 14 PR AND 450 PSI FOR 16 PR. THE REPORT SHALL INDICATE THE MANUFACTURER'S TEST REPORT AND TOGETHER WITH THE DATA AND MATERIAL SPECIFIED ABOVE BE FORWARDED TO THE NAVAL AIR SYSTEMS COMMAND WASHINGTON, DC 20361 ATTN: AIR-530321.

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.

APPROVED 26 APRIL 56 REVISED (D) P. 1 (CHANGES SEE SHEETS 1 & 2)

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PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES	SHEET 2 OF 2

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

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

PLATE NO 23071