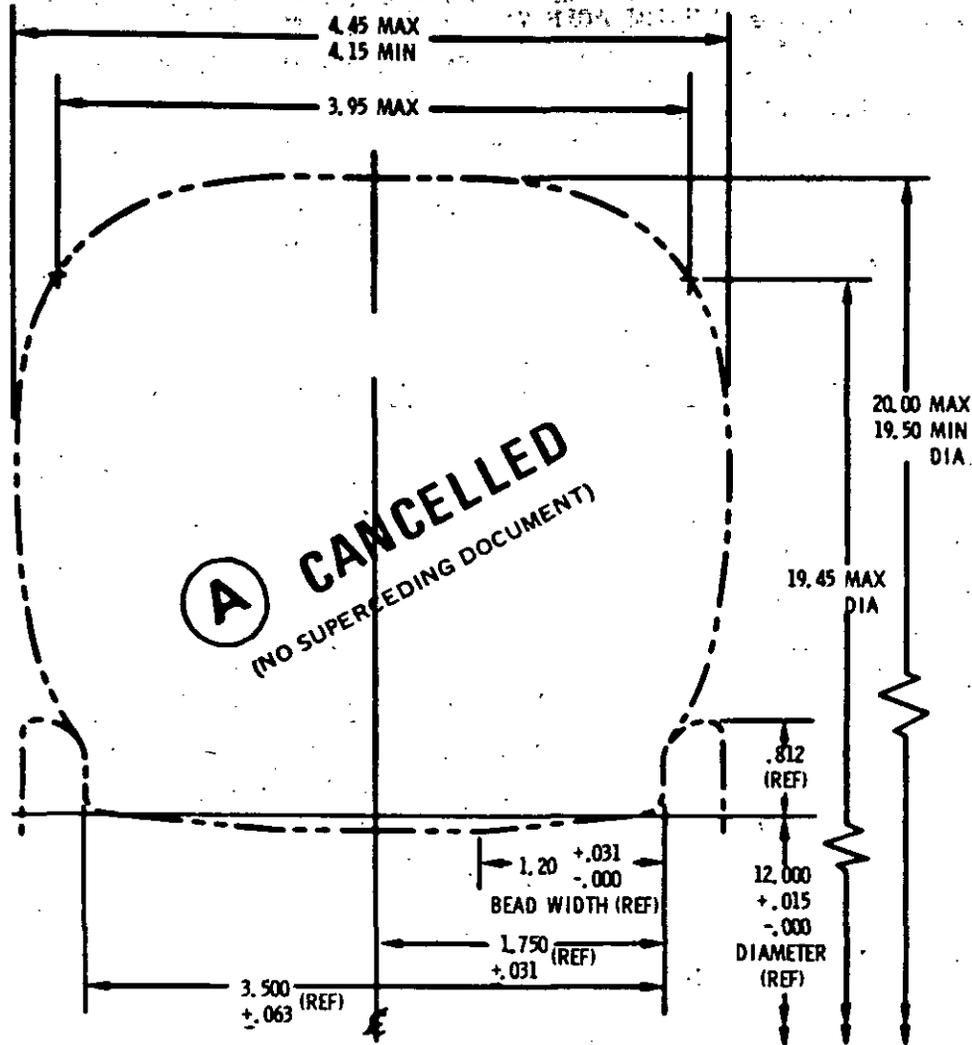


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2620

NOTE: ALL DIMENSIONS ARE IN INCHES



(A) CANCELLED
(NO SUPERSEDING DOCUMENT)

WHEEL & TIRE

For Changes See Sheets 2 & 3

FIGURE 1

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APPROVED 10 JUNE 77 REVISED (A) 25 JUL 86

P.A. 99 Other Code AS	TITLE	TIRE-PNEUMATIC TYPE VII 20 x 4.4/12 PR	MILITARY STANDARD
	PROUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES:	MS22076
			SHEET 1 OF 4

FED. SUP CLASS
2620

GENERAL NOTES

1. ANY DEVIATION FROM GIVEN DIMENSIONS MUST BE AUTHORIZED BY WRITTEN APPROVAL OF THE PROCURING AGENCY.
2. REFERENCE TO ANY SPECIFICATION HEREIN SHOULD BE CONSTRUED AS REFERENCE TO THE ISSUE IN EFFECT ON THE DATE OF INVITATIONS FOR BIDS.
3. WHERE CONFLICT EXISTS BETWEEN THIS STANDARD AND ANY OTHER MILITARY SPECIFICATION, THE REQUIREMENTS OF THIS STANDARD SHALL APPLY.
4. THE TIRE QUALITY ASSURANCE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF MIL-T-5041.

TIRE NOTES

THE TIRE SHALL CONFORM TO THE APPLICABLE REQUIREMENTS OF MIL-T-5041 AND SHALL COMPLY WITH THE REQUIREMENTS LISTED BELOW.

SIZE	PLY RATING	INFLATION PRESSURE PSI (RATED)	BEAD WIDTH (MAX) IN	WEIGHT LBS (MAX)	STATIC UNBALANCE IN OZ (MAX)	MOLD SKID DEPTH (MIN) IN	STATIC LOAD LBS
20X4.4	12	225	1.30*	15.0	11	RIB .26	5,150

*MAXIMUM BEAD TOE FLASH OF 5/32 INCH NOT INCLUDED.

1. THE TIRE SHALL SATISFACTORILY WITHSTAND WITHOUT EVIDENCE OF FAILURE, THE FOLLOWING:

- (1) 5 CYCLES OF TEST "A"
- (2) 25 CYCLES OF TEST "B"
- (3) 5 CYCLES OF TEST "C"
- (4) 25 CYCLES OF TEST "D"
- (5) 5 CYCLES OF TEST "E"
- (6) 45 CYCLES OF TEST "F"

THE TEST SEQUENCE SHALL BE THAT AS SHOWN, A-B-C-D-E-F.
THE DYNAMIC TEST INFLATION PRESSURE FOR ALL PHASES SHALL BE THAT INFLATION PRESSURE WHICH WILL PRODUCE THE SAME DEFLECTION ON THE FLYWHEEL AS IS PRODUCED ON A FLAT PLATE AT RATED TIRE LOAD AND RATED INFLATION PRESSURE.

TEST A-YAW LANDING: THE TIRE SHALL BE LANDED IN A POSITION

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P.A. 99 Other Code	TITLE TIRE - PNEUMATIC	MILITARY STANDARD
AS	TYPE VII 20 X 4.4/12 PR	MS22076
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES:	SHEET 2 OF 4

FED. SUP CLASS.
2620

OF 3° YAW ANGLE AGAINST THE FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 155 MPH. DECELERATE THE FLYWHEEL AT AN AVERAGE RATE OF 5 FT/SEC/SEC FROM 155 MPH TO 110 MPH. THE TIRE LOAD SHALL BE INCREASED FROM 0 TO 3100 POUNDS DURING THE INITIAL 3 TO 4 SECONDS AFTER LANDING AND FURTHER INCREASED LINEARLY WITH TIME TO 4100 POUNDS AT THE END OF THE LANDING ROLL. A LANDING ROLL DISTANCE OF 2550 + 100 FEET SHALL BE COVERED IN

APPROXIMATELY 12 to 14 SECONDS AFTER DECELERATION BEGINS.

TEST B-TAXI-TAKEOFF/MAXIMUM TIRE LOAD CONDITION: THE TIRE SHALL BE LOADED AGAINST THE FLYWHEEL AT 5150 POUNDS LOAD. ACCELERATE THE FLYWHEEL TO 40 MPH AND MAINTAIN THIS SPEED UNTIL A TAXI ROLL DISTANCE OF 14,000 FEET HAS BEEN COVERED. DECELERATE THE FLYWHEEL TO 0 MPH MAINTAINING 5150 POUNDS TIRE LOAD. IMMEDIATELY ACCELERATE THE FLYWHEEL (SIMULATING TAKEOFF) AT AN AVERAGE RATE OF 9.5 FT/SEC/SEC TO 200 MPH. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 4500 + 100 FEET HAS BEEN COVERED IN APPROXIMATELY 30 TO 32 SECONDS AFTER ACCELERATION BEGINS. THE TIRE LOAD SHALL BE MAINTAINED AT 5150 POUNDS FOR THE FIRST 14 SECONDS OF THE TAKEOFF ROLL, DECREASED LINEARLY WITH TIME IN THE NEXT 6 SECONDS TO 3750 POUNDS, INCREASED LINEARLY WITH TIME IN THE NEXT 2 SECONDS TO 4120 POUNDS, AND MAINTAINED AT 4120 POUNDS FOR THE REMAINDER OF THE TEST CYCLE.

TEST C-TAXI-TAKEOFF/MAXIMUM LOAD AND SPEED CONDITIONS: THE TIRE SHALL BE LOADED AGAINST THE FLYWHEEL AT 5150 POUNDS LOAD. ACCELERATE THE FLYWHEEL TO 40 MPH AND MAINTAIN THIS SPEED UNTIL A TAXI ROLL DISTANCE OF 14,000 FEET HAS BEEN COMPLETED. DECELERATE THE FLYWHEEL TO 0 MPH MAINTAINING 5150 POUNDS TIRE LOAD. IMMEDIATELY ACCELERATE THE FLYWHEEL (SIMULATING TAKEOFF) AT AN AVERAGE RATE OF 9.5 FEET/SEC/SEC TO 225 MPH. THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 5,720 + 100 FEET HAS BEEN COVERED IN 34 to 36 SECONDS. THE TIRE LOAD SHALL BE MAINTAINED AT 5150 POUNDS FOR THE FIRST 14 SECONDS OF THE TAKEOFF ROLL, DECREASED LINEARLY WITH TIME IN THE NEXT SIX SECONDS TO 3750 POUNDS, MAINTAINED FOR EIGHT SECONDS, INCREASED LINEARLY WITH TIME FOR THE NEXT FOUR SECONDS TO 4120 POUNDS, FOR THE REMAINDER OF THE TEST CYCLE.

TEST D-TAXI-TAKEOFF/MINIMUM TIRE LOAD CONDITION: THE TIRE SHALL BE LOADED AGAINST THE FLYWHEEL AT 3500 POUNDS LOAD. ACCELERATE THE FLYWHEEL TO 40 MPH AND MAINTAIN THIS SPEED UNTIL A TAXI ROLL DISTANCE OF 14,000 FEET HAS BEEN COVERED. DECELERATE THE FLYWHEEL TO 0 MPH MAINTAINING 3500 POUNDS TIRE LOAD. IMMEDIATELY ACCELERATE THE FLYWHEEL (SIMULATING TAKEOFF) AT AN AVERAGE RATE OF 7.85 FT/SEC/SEC TO 160 MPH: THE TIRE SHALL BE UNLANDED AFTER A TAKEOFF ROLL DISTANCE OF 3500 + 100 FEET HAS BEEN COVERED IN APPROXIMATELY 29 TO 31 SECONDS AFTER ACCELERATION BEGINS. THE TIRE LOAD SHALL BE MAINTAINED AT 3500 POUNDS FOR THE FIRST 5 SECONDS OF TAKEOFF ROLL, DECREASED LINEARLY WITH TIME DURING THE NEXT 11 SECONDS TO 2600 POUNDS, INCREASED LINEARLY WITH TIME DURING THE NEXT

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P A. 39 Other Cust AS	TITLE TIRE-PNEUMATIC TYPE VII. 20 x 4.4/12 PR	MILITARY STANDARD
		MS22076
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES	SHEET 3 OF 4

DD FORM 672-1 (Coordinated)

APPROVED 10 JUN 77 REVISED 25 JUL 86

FED. SUP CLASS
2620

2 SECONDS TO 3500 POUNDS, AND MAINTAINED AT 3500 POUNDS FOR THE REMAINDER OF THE TEST CYCLE.

TEST E - LANDING-TAXI (AFTER YAW) MAXIMUM TIRE LOAD CONDITION:
NOTE: A CYCLE OF TEST "E" IS A SIMULATED CONTINUANCE OF A LANDING CONDITION INITIATED AS A CYCLE OF TEST "A", I.E., UPON CORRECTION OF INITIAL LANDING INSTABILITY (TEST A) NORMAL LANDING ROLLOUT AND TAXI (TEST E) IS RESUMED. THE TIRE SHALL BE LANDED AGAINST THE FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 110 MPH. DECELERATE THE FLYWHEEL AT AN AVERAGE RATE OF 10 FT/SEC/SEC FROM 110 PMH TO 40 MPH. THE TIRE LOAD SHALL BE INCREASED FROM 0 TO 4100 POUNDS DURING THE INITIAL 3 TO 4 SECONDS AFTER LANDING AND MAINTAINED AT 4100 POUNDS UNTIL A LANDING ROLL DISTANCE OF 1100 ± 150 FEET HAS BEEN COVERED IN APPROXIMATELY 8 TO 12 SECONDS AFTER DECELERATION BEGINS. THE TIRE SHALL THEN BE TAXIED, MAINTAINING 4100 POUNDS LOAD, AT A CONSTANT SPEED OF 40 MPH UNTIL A TAXI ROLL DISTANCE OF 14,000 FEET HAS BEEN COVERED.

TEST F-LANDING-TAXI/MAXIMUM TIRE LOAD CONDITION. THE TIRE SHALL BE LANDED AGAINST THE FLYWHEEL ROTATING AT A PERIPHERAL SPEED OF 160 MPH. DECELERATE THE FLYWHEEL AT AN AVERAGE RATE OF 10 FT/SEC/SEC FROM 160 MPH TO 40 MPH. THE TIRE LOAD SHALL BE INCREASED FROM 0 TO 4100 POUNDS DURING THE INITIAL 3 TO 4 SECONDS AFTER LANDING AND MAINTAINED AT 4100 POUNDS UNTIL A LANDING ROLL DISTANCE OF 2500 ± 100 FEET HAS BEEN COVERED IN APPROXIMATELY 16 TO 18 SECONDS AFTER DECELERATION BEGINS. THE TIRE SHALL THEN BE TAXIED, MAINTAINING 4100 POUNDS LOAD, AT A CONSTANT SPEED OF 40 MPH UNTIL A TAXI ROLL DISTANCE OF 14,000 FEET HAS BEEN COVERED.

2. THE TREAD PATTERN SHALL HAVE A MAXIMUM AND MINIMUM OF THREE FULL GROOVES, THESE GROOVES SHALL BE CONTINUOUS AND CIRCUMFERENTIAL WITH A MOLD SKID DEPTH AS SPECIFIED ABOVE. ONE GROOVE SHALL BE LOCATED ON CENTERLINE OF CARCASS, AND ALL GROOVES SHALL BE COMPLETELY IDENTIFIED WITHIN THE FOOTPRINT AREA AT 60% OF RATED LOAD AND 225 PSI INFLATION PRESSURE.

3. THE TIRE SHALL BE LEGIBLY MARKED 195 KNOTS ON BOTH SIDEWALLS IN THE VICINITY OF THE SIZE AND PLY RATING MARKING PER THE REQUIREMENTS OF MIL-T-5041.

APPROVED 10 JUN 77 REVISED 25 JUL 86

P.A. Other Cust	99 AS	TITLE TIRE-PNEUMATIC TYPE VII 20 x 4.4/12 PR	MILITARY STANDARD MS 22076
PROCUREMENT SPECIFICATION MIL-T-5041	SUPERSEDES.	SHEET 4	OF 4

DD FORM 672-1 (Coordinated)

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