

**HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY CHIEF QUARTERMASTER
Fort Andres Bonifacio, Metro Manila**

PA SPECIFICATION

QM SPEC NR OE-23T425x85 R21

W/ AMENDMENT 2

15 DEC 2021

(Interim)

Supersedes

QM SPEC NR OE-23T425x85 R21

w/ Amend 1 dated 20 March 2020

TIRE, 425x85 R21

Application: Intended for Truck, 8 ton 6 x 6 URAL 4320 (Military tires), Multi-purpose Truck Tires (MPT)	
Technical Data	Requirements
Visual:	
1. Type	All-Terrain, Tube Type with Flap and Tube
2. Construction	Radial
3. Tread Pattern	Lug Type
4. Manufacturer's Tire Designation Markings	425/85 R21
5. Ply Rating	14PR (minimum)
6. Load Index/Rating	146(minimum)
7. Speed Rating	G/J (minimum)
8. Country of origin	Identifiable
9. Manufacturing Date Code	Identifiable
10. Brand Name or Trade Name	Identifiable
11. Maximum Air Pressure Markings	Identifiable
12. PS or ICC Quality Mark or Certificate of Exemption from DTI in case the product offered is beyond the minimum standard of DTI.	Identifiable
13. Manufacturing date covered is within one (1) year prior to delivery period	Identifiable
Dimensional:	
1. Section Width (mm)	440 (maximum)
2. Diameter (mm)	1,260 ± 19
3. Tread Depth (mm)	23 (minimum)

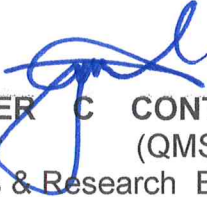
PA SPECIFICATION

QM SPEC NR OE-23T425x85 R21

15 DEC 2021
(Interim)

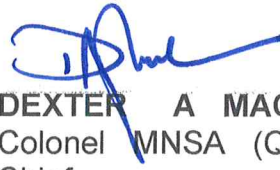
Technical Data	Requirements
Tire strength:	Must pass the plunger rod test based on PNS 25:1994 standards or its equivalent
Other Requirements:	<p>1. The tire shall suit and fit to the intended application without any obstruction or hampers the operational function of the vehicle, like:</p> <ul style="list-style-type: none"> a. No evident damage on Tread or Sidewall or Ply or Cord or Inner liner b. No evident damage on Flap or Tube/Tube valve c. No Bead separation d. No chunking, broken cords, cracking or open splices on tire surface <p>2. The rim width of the "test rim" to be used during dimensional test is 12.2" or 310mm.</p>

Prepared by:



GENERAL C. CONTILLO
Major (QMS) PA
Plans & Research Branch

Recommended by:



DEXTER A. MACASAET
Colonel MNSA (QMS) PA
Chief

Approved by:



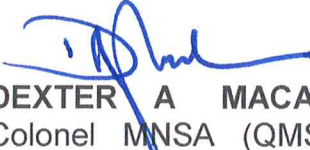
ROMEO S. BRAWNER JR
Major General PA
Commanding General, PA

**HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY CHIEF QUARTERMASTER
Fort Andres Bonifacio, Metro Manila**

**TABLE OF CLASSIFICATION OF DEFECTS
TIRE, 425x85 R21**

DEFECTS	CLASSIFICATION OF DEFECTS	
	Major	Minor
Visual		
1. Without the required Flap and Tube	X	
2. Not an All-Terrain Tire	X	
3. Construction is not Radial	X	
4. Not Lug Type (Tread Pattern)	X	
5. Without PS or ICC Quality Mark or Certificate of Exemption from DTI in case the product offered are beyond the minimum standard of DTI	X	
6. Does not have Brand Name or Trade Name markings	X	
7. Does not have Manufacturer's Tire Designation Markings: 425x85 R21	X	
8. Not within the Minimum Load Index/Rating	X	
9. Not within the Minimum Speed Rating of "G" or "J" that is 100km/h equivalent	X	
10. Not within the Minimum Ply Rating	X	
11. Does not have Maximum Air Pressure Markings	X	
12. Does not have country of origin markings	X	
13. Does not have Manufacturing Date Code	X	
14. Not within the manufacturing period requirement	X	
Dimensional Test		
15. Dimensions (Diameter or Width or Tread Depth) is not within the standard requirement	X	
Workmanship		
16. Presence of dirt and stains:		
a. Does not affect appearance		X
b. Affect over-all appearance	X	
17. The tire does not suit and fit to the intended application, with obstruction, and hampers the operational function of the vehicle, like:		
a. Evident damage on Tread or Sidewall or Ply or Cord or Inner liner	X	
b. Evident damage on Flap or Tube/Tube valve	X	
c. Bead Separation	X	
d. Chunking, Broken Cords, Cracking or Open Splices on tire surface	X	
Tire Strength		
18. Failed to meet the required tire strength	X	
Packing and Packaging:		
19. Each Tire shall be packed in plastic transparent or manufacturer's standard		X
Total test point	21	2


GEN. C. CONTILLO
Major (QMS) PA
Plans & Research Branch


DEXTER A. MACASAET
Colonel MNSA (QMS) PA
Chief

HEADQUARTERS
PHILIPPINE ARMY
OFFICE OF THE ARMY CHIEF QUARTERMASTER
Fort Andres Bonifacio, Metro Manila

TEST AND ACCEPTANCE PROCEDURE
TIRE, 425x85 R21 with Amend 2 dated 15 December 2021

1. GENERAL

1.1. Scope: This Test and Acceptance Procedure shall apply to 425x85 R21 Tires intended for Truck, 8 Ton, 6x6 URAL 4320 (Military Tires), Multi-purpose Truck Tires (MPT).

1.2. Objective: To ascertain compliance of tires with standards and specifications in consonance with the need of the end user.

1.3. References:

- a. Philippine National Standard for Pneumatic Tires, PNS 25: 1994.
- b. ISO 4209-1:2001 International Standard – Truck and Bus Tires and Rims (Metric Series)

2. PROCEDURES

2.1. The Technical Inspection and Acceptance Committee (TIAC) for Quartermaster Items or its representatives shall ensure that the complete quantity stated in the contract is packed/palletized prior to inspection.

2.2. The TIAC shall conduct random sampling from the lot or lots. The samples shall be properly segregated, packed, marked and secured by the members/representatives of the committee.

2.3. Technical inspection and test shall be conducted on the representative samples of the lot by visual, dimensional and functional test to determine the over-all workmanship, markings, size and appropriate packaging of the items.

2.4. Functional Test will be done to determine the functional performance of the tire.

2.5. Results obtained shall be recorded and evaluated to determine the compliance of the items to Technical Specifications and as basis for acceptance or rejection of the lot or lots.

3. PHYSICAL INSPECTION

3.3. Visual Inspection

3.3.1. Purpose: To determine the completeness, overall external workmanship, symbols, codes and markings of the tire set sample/s.

3.3.2. Procedure: Visually inspect the completeness, overall appearance and presence of required symbols or markings of the tire set.

3.3.3. Standard:

3.3.3.1. With the required appropriate size of Flap and Tube.

3.3.3.2. With the required Tread Pattern

3.3.3.3. With PS or ICC Quality Mark or Certificate of Exemption from DTI in case the product offered are beyond the minimum standard of DTI.

3.3.3.4. With Brand Name or Trade Name.

3.3.3.5. Tire Designation Markings: Manufacturer's Standard for Tire, 425x85 R21 (Tire Size, Ply Rating, Load Index/Rating, Speed Rating and Construction).

3.3.3.6. With Maximum Air Pressure Markings.

3.3.3.7. With identifiable markings for country of origin.

3.3.3.8. With Manufacturing Date Code (within 1 year prior to delivery date)

3.3.3.9. No evident damage on tread, sidewall, ply, cord, inner liner and including damage on flap or tube/tube valve. No bead separation, chunking, broken cords, cracking or open splices.

3.4. Dimensional Test

3.4.1. Purpose: To determine the actual dimensions of the tire sample/s.

3.4.2. Procedure:

3.4.2.1. The tire set sample/s shall be mounted on its corresponding rim (12.2" or 310 mm width) and inflated to the indicated maximum permissible inflation pressure at maximum load as labeled on the tire sidewall. The tire shall be allowed to stand for a minimum of 24 hours at room temperature. The pressure thereafter should be measured and adjusted to within 10kPa of the pressure specified for the tire type, being the ideal condition for measurement of the tire. Measure the Section Width, Overall Diameter and Tread Depth by hanging the tire to avoid any obstruction from any external factor which may affect the dimensional test.

3.4.2.2. Overall Diameter shall be determined to the nearest millimeter by measuring the outside circumference by a tape and then divide the value by constant 3.1416 (π). or by means of a measuring device calibrated to show directly the diameter of the tire. Figure 1, 2 and 3.

3.4.2.3. Overall Width is the average of maximum widths including the sidewalls, side ribs, bars decorations, letters or numerals. The width shall be measured by nearest millimeters at four different points equally distributed around the tire and the result averaged.

3.4.2.4. Size Factor shall be the sum of overall diameter and overall width.

3.4.3. Standard:

Parameters	Traction Design
Section Width (mm)	440 (maximum)
Overall Diameter (mm)	1,260 ± 19
Thread Depth (mm)	23 (minimum)

3.5. Tire Strength Test

3.5.1. Purpose: To determine the strength of the tire

3.5.2. Allocation of samples

3.5.2.1. Post Qualification: One (1) sample shall be submitted to undergo the plunger test. Previous test result of plunger test that is within the period of one (1) year and evaluated as passed can be used in lieu of submission of required samples.

3.5.2.2. Pre Delivery/Final Acceptance: One (1) sample shall be subjected to plunger test that will be taken at random from the delivery which had already undergone the physical inspection and dimensional test. Additional sample for plunger test will be provided when prescribed in the contract which will be determined by procuring entity's representative.

3.5.3. Procedure:

3.5.3.1. To be conducted by Philippine Geo Analytics Inc (PGAI) if done in-Country or equivalent government recognized testing center at the country of origin.

3.5.3.2. Force a 38mm diameter cylindrical steel plunger rod with a hemispherical end at 5 equally distributed points perpendicularly into the tread rib as near to the centerline as possible, avoiding penetration into the groove, at the rate of 50mm/min±10 mm/min.

3.5.3.3. The plunger is stopped before reaching the rim or the required tire strength value of 2203Jis reached without the tire breaking.

60

3.5.3.4. Should there be a Pre Delivery Inspection at the country of origin, all the required Functional Tests and Inspections shall be conducted through a capable independent third party entity or that host country/government accredited test facility or in the absence thereof, at the manufacturer's test facilities. The Manufacturer shall issue a document certifying that the tested tire came from the lots delivered and have passed the Tire Strength Test.


3.5.4. Standard: Tire Strength requirement based on PNS 25:1994 standards if done in-Country or its equivalent standard used at the country of origin if conducted thereat.

3.5.4.1. All tire samples must pass the test. Any samples that fail the tire strength test shall cause the rejection of the lot.

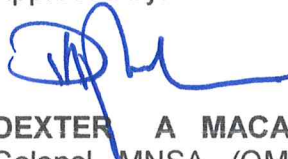
4. ACCEPTABILITY

4.1 The result of the test based on the above criteria shall be the basis for evaluation of the Acceptance Committee in the acceptance/rejection of the above item for use of the PA.

Prepared by:


GENER C CONTILLO
Major (QMS) PA
Plans & Research Branch

Approved by:


DEXTER A MACASAET
Colonel MNSA (QMS) PA
Chief