

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

TEST AND EVALUATION PROCEDURE

TIRE, 36 X 12.5 R16.5 LT with QM SPEC NR OE-23T36R165 dated 30 May 2017

A. POST QUALIFICATION INSPECTION

SECTION 1A – GENERAL

1.1. **AUTHORITY:** The Test and Evaluation (T&E) is being conducted in line with the provisions of the RA 9184.

1.2. **OBJECTIVES:** The objective of this T&E is to determine the responsiveness of the Bidder with the Single/Lowest Calculated Bid (SCB/LCB) to the technical specification as endorsed by the Bids and Awards Committee (BAC).

1.3. **SCOPE:** This T&E Procedure will be conducted on the samples of TIRE, 36 X 12.5 R16.5 LT, test reports, certification and brochures submitted by the Bidder with the SCB/LCB as part of the post qualification procedure by the BAC.

1.4. **METHODOLOGY:** The tests include physical inspection and evaluation of documents that will support the compliance of the TIRE, 36 X 12.5 R16.5 LT to the specification. Records check will also be conducted as appropriate including third party publications.

1.5. **REFERENCES:**

1.5.1. Philippine National Standard for Pneumatic Tires, PNS25: 1994

1.5.2. ISO 4209-1:2001 International Standard (minimum) – Truck and Bus Tires and Rims (Metric Series)

1.6. **POST QUALIFICATION CRITERIA:** Post Qualification evaluation shall be based on a Pass (P) or Fail (F) criteria. Any major defect found shall be evaluated as "Failed" and two (2) or more minor defects found shall be evaluated as "Failed".

SECTION 2A – PROCEDURES

1. Allocation Of Samples

One (1) sample shall be submitted to undergo physical, dimensional and tire strength. Previous test results on visual, dimensional and plunger test that is within the period of three (3) years and evaluated as passed can be used in lieu of submission of required samples.

2. Physical Inspection

2.1 **Purpose:** To determine the conformance of the physical characteristics, external workmanship of the Tires to the minimum requirements of the specifications.

2.2 Procedure:

2.2.1 Visually inspect the completeness, overall appearance and presence of the required symbols or markings on the tire sample/s.

2.2.2 Standard:

- 2.2.2.1 With the required Type/Construction
- 2.2.2.2 With the required Traction Design (Lug Type/Mud Terrain)
- 2.2.2.3 With PS or ICC Quality Mark or Certificate of Exemption from DTI in case the product offered are beyond the minimum standard of DTI
- 2.2.2.4 With Brand Name or Trade Name.
- 2.2.2.5 Tire Designation Markings: Manufacturer's Standard for Tire, 36 x 12.5 R16.5 LT. (Tire Size and Ply Rating, Load Index/Rating).
- 2.2.2.6 With Maximum Air Pressure Markings.
- 2.2.2.7 With identifiable markings for country of origin if imported
- 2.2.2.8 With Maximum Load Capacity markings.
- 2.2.2.9 With Manufacturing Date Code (within 1 year prior to delivery date)
- 2.2.2.10 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. Dimensional Test

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

3.2 Procedure:

3.2.1 The tire set sample/s shall be mounted on its corresponding rim (228mm to 254mm 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 Overall Diameter, Overall Width and Size Factor by hanging the tire to avoid any obstruction from any external factor which may affect the dimensional test.

3.2.2 Outer 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.

3.2.3 Sectional 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.

3.2.4 Thread Width shall be measured in the internationally accepted "Thread Design Guide" or if not indicated, it is the distance between the two outer edges of a tire's thread.

3.2.5 Standard:

Parameters	Traction Design
Overall Diameter (mm)	916 (± 6)
Section Width (mm)	305 (± 6)
Thread Width (mm)	250(± 6)

4. Tire Strength Test

4.1 Purpose: To determine the strength of the tire

4.2 Procedure:

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

4.2.2 Force a required 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 50 mm/min±10 mm/min.

4.2.3 The plunger is stopped before reaching the rim or the standard required tire strength value is reached without the tire breaking.

4.2.4 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.

B. PRE-DELIVERY INSPECTION

SECTION 1B – GENERAL

1.1. **AUTHORITY:** The Test and Evaluation (T&E) is being conducted in line with the provisions of the RA 9184.

1.2. **OBJECTIVES:** The objective of this T&E is to determine the compliances to the technical specification of the samples selected at random during Pre-delivery Inspection (PDI).

1.3. **SCOPE:** This T&E Procedure will be conducted on the samples of TIRE, 36 X 12.5 R16.5 LT taken at random by the PDI Team.

1.4. **METHODOLOGY:** The tests include physical inspection, dimensional, strength test and evaluation of documents that will support the compliance of the TIRE, 36 X 12.5 R16.5 LT to the specification. Records check will also be conducted as appropriate including third party publications.

SECTION 2B – PROCEDURES

2.1. The Pre-Delivery Inspection (PDI) Team or its representatives shall ensure that the complete quantity stated in the contract is packed/palletized prior to inspection.

2.2. The PDI team 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.

SECTION 3B - TEST PARAMETERS

1. Allocation Of Samples

Two (2) samples shall be picked at random from the delivery to undergo tire strength. If one (1) tire fails on the strength test, the other one may be substituted to the failed tire. Number of samples to be selected for Visual Inspection shall be based on Mil Std 105E dated 10 May 1989.

2. Physical Inspection

2.1 Purpose: To determine the conformance of the physical characteristics, external workmanship of the Tires to the minimum requirements of the specifications.

2.2 Procedure:

2.2.1 Visually inspect the completeness, overall appearance and presence of required symbols or markings of the on the tire sample/s.

2.2.2 Standard

2.2.2.1 With the required Traction Design (Lug Type/Mud Terrain)

2.2.2.2 With Brand Name or Trade Name.

2.2.2.3 Tire Designation Markings: Manufacturer's Standard for Tire, 36 x 12.5 R16.5 LT. (Tire Size and Ply Rating, Load Index/Rating).

2.2.2.4 With Maximum Air Pressure Markings.

2.2.2.5 With identifiable markings for country of origin if imported

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

2.2.2.7 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. Dimensional Test

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

3.2 Procedure:

3.2.1 The tire set sample/s shall be mounted on its corresponding rim (228mm to 254mm 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 Overall Diameter, Overall Width and Size Factor by hanging the tire to avoid any obstruction from any external factor which may affect the dimensional test.

3.2.2 Outer 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.

3.2.3 Sectional 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.

3.2.4 Thread Width shall be measured in the internationally accepted "Thread Design Guide" or if not indicated, it is the distance between the two outer edges of a tire's thread.

3.2.5 Standard:

Parameters	Traction Design
Overall Diameter (mm)	916 (± 6)
Section Width (mm)	305 (± 6)
Thread Width (mm)	250 (± 6)

4. Tire Strength Test

4.1 Purpose: To determine the strength of the tire

4.2 Procedure:

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

4.2.2 Force a required 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 50 mm/min \pm 10 mm/min.

4.2.3 The plunger is stopped before reaching the rim or the standard required tire strength value is reached without the tire breaking.

4.2.4 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.

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C. FINAL INSPECTION

SECTION 1C - GENERAL

- 1.1. **AUTHORITY:** The Test and Evaluation (T&E) is being conducted in line with the provisions of the RA 9184.
- 1.2. **OBJECTIVES:** The objective of this procedure is to ensure the completeness of the delivery site and that the items delivered are the one and the same from those that were inspected during the Pre-delivery inspection.
- 1.3. **SCOPE:** This procedure will be conducted on the delivered TIRES, 36 X 12.5 R16.5 LT which were previously inspected during the Pre-delivery inspection.
- 1.4. **METHODOLOGY:** The procedure will involve visual inspection and accounting of the completeness of the item delivered.
- 1.5. **Samples:** 100% of items delivered
- 1.6. 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.

SECTION 2C – PROCEDURES

1. Physical Count

To determine the completeness of the items delivered, its consistency of the items inspected during Pre-Delivery Inspection vis-à-vis the actual tires delivered, and physical state of the delivered items.

2. Procedure:

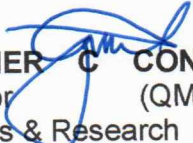
- 2.1. Account for the completeness (quantity) of the tires delivered including its required size of flaps and tubes.
- 2.2. Visually inspect the physical state of the delivered items.
- 2.3. With PS or ICC Quality Mark or Certificate of Exemption from DTI in case the product offered are beyond the minimum standard of DTI

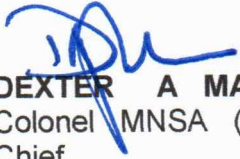
3. Standard

- 3.1. The total tires delivered shall be complete in quantity based on the contract.
- 3.2. There shall be no damaged that could affect the functionality and appearance of the delivered items.

Prepared by:

Approved by:


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Army Vision: By 2028, a world-class Army that is a source of national pride.

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PA SPECIFICATION

QM SPEC NR OE-22T36R165

MAY 30 2017
(Interim)

Supersede


SPEC NR MT06-14

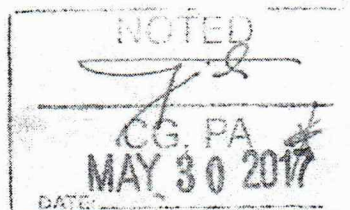
Dated 03 September 2014

TIRE, 36x12.5 R16.5 LT

Application: Intended for use in Truck Light, Cargo/Troop Carrier, 1 ¼ Ton KM450, (military tactical vehicle).	
Technical Data	Requirements
Visual	
1. Type/Construction	Tubeless/Radial
2. Brand name or trade name	Identifiable
3. Nominal size including ply rating and load range	Identifiable
Tire size	36x12.5 R16.5LT
Ply rating/Load range	10PR/E (minimum)
4. Maximum air pressure	Identifiable
5. The words "Made in the Philippines" or country of origin if imported.	Identifiable
6. Maximum load capacity (kgs)	At least 1,850 @ 450 KPa
7. Manufacturing date	Identifiable
Dimensional	
8. Outer Diameter (mm)	916 ± 6
9. Sectional Width (mm)	305 ± 6
10. Tread Width (mm)	250 ± 6
Tire Strength	Must pass the plunger rod test

Note: The measuring rim width to be used during testing is 228-254mm (9" - 10").


AURELIO T BADAJOS
Colonel, QMS (GSC) PA
Chief



Army Core Purpose: Serving the people. Securing the land.

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TEST PARAMETERS

**TECHNICAL SPECIFICATIONS FOR
TIRE, 36x12.5 R16.5 LT**

D E F E C T S	CLASSIFICATION OF DEFECTS	
	MAJOR	MINOR
Visual		
1. Without the Tire's Flap and Tube as required	x	
2. Not the required Traction Design (Directional/Rib or Lug Type as appropriate)	x	
3. Without PS or ICC Quality Mark or DTI Exemption Certificate	x	
4. Without Brand Name or Trade Name markings	x	
5. Without Manufacturer's Tire Designation Markings for 36x12.5 R16.5 LT.	x	
6. Not within the Minimum Load Range and/or Ply Rating and Type/Construction requirements	x	
7. Without Maximum Air Pressure Markings	x	
8. Without the words "Made in the Philippines" or country of origin if imported.	x	
9. Without Manufacturing Date Mark/Symbol	x	
10. Not within the Manufacturing Period requirement	x	
11. Without Maximum Load Capacity Markings	x	
12. Not within the Maximum Load Capacity Requirement	x	
13. Evident damage on Tread or Sidewall or Ply or Cord or Inner liner	x	
14. Evident damage on Flap or Tube/Tube valve	x	
15. Bead Separation	x	
16. Chunking or Cracking or Open Splices on tire surface	x	
Dimensional Test		
17. Dimensions (Diameter or Width or Tread Depth) is not within the standard requirement		x
18. Size Factor is not within the standard requirement	x	
Workmanship		
19. Does not affect appearance		x
20. Affect appearance	x	
Tire Strength		
21. Did not meet the required tire strength	x	
Total test point	19	2


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