



Laboratory **Controllerate of Quality Assurance (Vehicles) Laboratory, Ministry of Defence (DGQA), Aurangabad Road, Ahmednagar, Maharashtra**

Accreditation Standard **ISO/IEC 17025: 2005**

Certificate Number **TC-7821 (in lieu of T-2283)**

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Validity **18.09.2018 to 17.09.2020**

Last Amended on **18.03.2019**

| Sl.         | Product / Material of Test                 | Specific Test Performed                         | Test Method Specification against which tests are performed | Range of Testing / Limits of Detection            |
|-------------|--|---|---|---|
|             |  | Performance                                     | Clause 7.1.5  | Upto 39.24 kN                                     |
|             |  | Operating Torque                                | Clause 7.1.7  | Upto 500kgf.cm                                    |
| <b>III.</b> | <b>RUBBER &amp; RUBBER PRODUCTS</b>        |   |   |   |
| <b>1.</b>   | <b>Vulcanized Rubber Products</b>          | Tensile strength                                | IS 3400 (Part 1)  | Upto 25 MPa                                       |
|             |  | Elongation at break                             |   | Upto 800 %  |
|             |  | Accelerated Ageing                              | IS 3400 (Part 4)  |   |
|             |  | Change in Hardness                              |   | 20 Shore A to 90 Shore A                          |
|             |  | Change in Tensile Strength & % Elongation       |   | 5 % to 90 %                                       |
|             |  | Permeability of Gases- Constant Pressure Method | IS 3400 (Part 21)   | Upto $10 \times 10^{-17} \text{ m}^2/\text{Pa.S}$ |
|             |  | Splice Flex Strength for Tubes                  | IND/VEH/2081/2011/b Issue No. 02, Issue Date 27/01/2012     | Qualitative                                       |
|             |  | Shore 'A' Hardness                              | IS 3400 (Part 23)   | 20 Shore 'A' to 90 Shore 'A'                      |
|             |  | Tension Set (%)                                 | IS 3400 (Part 13)   | 5 % to 95 %                                       |
| <b>2.</b>   | <b>Pneumatic Tube</b>                      | Pull Out Strength of Rubber Based Valves        | IS 9081 Clause 6.4  | 5 kg to 250 kg                                    |
| <b>3.</b>   | <b>Vulcanized Rubber Products</b>          | Ash Content                                     | IS 3400 (Part 22) Clause 8-A                                | Upto 50 %   |
| <b>4.</b>   | <b>Rubber - NR, SBR, NBR, CR &amp; IIR</b> | Compression Set                                 | IS 3400 (Part 10) (Method B)                                | 5 % to 90 %                                       |
|             |  | Resistance to the Action of Liquid              | IS 3400 (Part 6)  |   |
|             |  | -Change in Mass                                 | Clause 8.2  | 5 % to 90 %                                       |
|             |  | -Change in Volume                               | Clause 8.3  | 5 % to 90 %                                       |
|             |  | -Change in Hardness                             | Clause 8.6  | 5 % to 90 %                                       |
|             |  | -Change in Tensile Strength & % Elongation      | Clause 8.7  | 5 % to 90 %                                       |

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|-----|---|--|---|---|
|     |   | Identification of Vulcanized Rubber                        | IS 3400 (Part 22)   | Qualitative                                     |
| 5.  | Rubber Hoses  | Testing of Rubber Hoses                                    | IS 443  |   |
|     |   | -Tensile Stress-Strain Properties                          | Clause 5  | Upto 34.335 MPa                                 |
|     |   | -Accelerated Aging   | Clause 6  | 5 % to 95 %                                     |
|     |   | -Hydrostatic Pressure                                      | Clause 8  | Upto 300 kg/cm <sup>2</sup><br>29.42MPa         |
|     |   | -Effect of Chemicals on Hose Lining and Cover              | Clause 9  | 5 % to 95 %                                     |
|     |   | -Effect of Liquids on Hose-Change in Physical Properties   | Clause 10   | 5 % to 95 %                                     |
|     |   | -Resistance to Oil   | Clause 11   | Qualitative                                     |
| 6.  | Rubber - NR, SBR, NBR, CR & IIR                       | Density  | IS 3400 (Part 9) (Method A)                                 | 0.5 g/cm <sup>3</sup> to 5.0 g/cm <sup>3</sup>  |
| 7.  | Automotive Tyres (Two & Three Wheeled Motor Vehicles) | Visual and Marking   | IS 15627  | Qualitative                                     |
|     |   | <b>Tyre Dimensions:</b><br>Section width<br>Outer Diameter | IND/VEH/2079/2018<br>Issue No. 02,<br>Issue date Jan 2018   | 300 mm<br>800 mm                                |
|     |   | Endurance  |   | Upto Load 90 kN & Drum Speed 100 km/h / 300 rpm |
|     |   | Load/Speed Performance                                     |   | Upto Load 90 kN & Drum Speed 100 km/h / 300 rpm |
|     |   | Tread Wear Indicators                                      |   | Upto 3 mm                                       |
| 8.  | Automotive Tyres (Passenger Car Vehicles)             | Visual and Marking   | IS 15633  | Qualitative                                     |
|     |   | <b>Tyre Dimensions:</b><br>Section width<br>Outer Diameter | IND/VEH/2079/2018<br>Issue No. 02,<br>Issue date Jan 2018   | 300 mm<br>800 mm                                |
|     |   | Endurance  |   | Upto 90 kN & Drum Speed 100 km/h/300 rpm        |
|     |   | Load/Speed Performance                                     |   | Upto 90 kN & Drum Speed 100 km/h/300 rpm        |



