

ANDHRA PRADESH STATE ROAD TRANSPORT CORPORATION

O/o VC&MD, Vijayawada.

No: TR2/791(2)/2015-16-MED.

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Sub: MATERIALS - Control of expenditure - Fixing of Norms for RC and Repairs in Tyre Retreading Shops for the year 2022-23 - Reg.

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Expenditure on Tyres and its related material is one of the major constituents of Profit & Loss accounts of the corporation. The Corporation incurred Rs. 73.12 Crores for the year 2021-22 (upto Feb'2022) on New Tyres, Tubes & Flaps and the related material consumed in TRSs for recapping/retreading/repairing the Tyres.

The consumption of materials at TRS play a vital role in fixing the Tyres RC cost of the respective Tyre retreading shop. The PTR requirement for RC Tyres of different sizes of Tyres is given below as per specifications.

| Tyre Size | Туре | EXISTING PTR SPECS | | | Utilized For | | |
|-------------|----------------------------------|--------------------|-----------------------------------|--------------------|---|--|--|
| | | Width (mm) | Length (mm) | Weight (Kgs) | TYRE MAKE | | |
| 9.00R20 | Radial | 195±2MM | 3125±5MM | 10.2 | For all makes | | |
| 1000R20 | Radial 205±2MM | | 11.0 | JK(JUH3+) | | | |
| | Radial | 215±2MM | <u> </u> | 11.8 | MRF(STM),MI(XZE2) | | |
| | Radial | 225±2MM | | 12.4 | MRF(S1R4), MI(Xmulti Z), CEAT (PRO R10), JK(JUH5) | | |
| 295/80R22.5 | Radial 238±2MM Radial 245±2MM | | 14.3 | JK,MI,MRF Tubeless | | | |
| | | 14.6 | MRF(S1R4), MI(X Multi Z) Tubeless | | | | |

The norms for consumables in Tyre Retreading Shops for 2022-23 are worked out by considering the previous 3 years production and material consumption trends at TRSs.

SIZE WISE RC/RT PRODUCTION TRENDS FOR 3 YEARS

| SIZE | 2019-20 | | 2020 |)-21 | 2021-22 | | |
|------------------|---------|-------|-------|-------|---------|-------|--|
| SIZE | QTY | % | QTY | % | QTY | % | |
| 9.00R20 | 1026 | 1.36 | 98 | 0.27 | 22 | 0.04 | |
| 10.00R20 | 70046 | 92.69 | 33258 | 92.81 | 50570 | 91.24 | |
| 295/80R TL | 4500 | 5.95 | 2480 | 6.92 | 4832 | 8.72 | |
| TOTAL PRODUCTION | 75572 | 100 | 35836 | 100 | 55424 | 100 | |

MATERIALS CONSUMPTION TRENDS FOR 3 YEARS

| | 2019-20 | | 20 | 20-21 | 2021-22 | | |
|-------------------------|--------------|------------------|--------------|------------------|--------------|------------------|--|
| MATERIAL CONSUMPTION | AVG/ TYRE | TOTAL CONSUMP | AVG/ TYRE | TOTAL CONSUMP | AVG/ TYRE | TOTAL CONSUMP | |
| PTR (Kgs) | 11.37 | 859254 | 11.62 | 416414 | 11.43 | 633496 | |
| HBG (Kgs) | 1.34 | 101266 | 1.33 | 47662 | 1.30 | 72051 | |
| BVC (Ltrs) | 0.95 | 71793 | 0.98 | 35119 | 0.90 | 49882 | |

NEW, RC AND TOTAL TYRE LIFE TRENDS FOR 3 YEARS

| Parameters | 2019-20 | 2020-21 | 2021-22 | |
|-----------------------|---------|---------|---------|--|
| New Tyre Life (Kms) | 97411 | 100217 | 99011 | |
| RC Tyre Life (Kms) | 52171 | 59779 | 62013 | |
| RT Factor | 2.19 | 2.12 | 2.15 | |
| Total Tyre Life (Kms) | 214365 | 225440 | 235402 | |

From the above data, it can be seen that due to Covid19 pandemic during the year 2021-22 the RC tyres production has been dropped to 30% of the year 2019-20.

The consumption trends of different sizes of Radial patches & Uniseals are analysed and fixed norms in percentage for every 100 nos of patches consumed for repair of different type of Tyres.

Even though instructions were already there to repair the injuries upto 1" on Repair Tyres with Uniseals only, Consumption of Uniseals indicate that due attention is not being given at Tyre Retreading Shops for proper classification and usage of Uniseals.

Uniseals increases the life of the tyre and avoids curing. This advantage shall be obtained with usage of Uniseals.

On the similar lines, the consumption trends of different materials are analysed at corporate level to have realistic budgeted estimates. The same are to be communicated to Accounts section in the form of Norms for the year 2022-23. These norms also form a bench mark for Tyre retreading shops so as to have control over the consumptions and to assess the reasons in a realistic way on the excess or less consumptions.

Therefore the Norms are being communicated to all AMEs (T) every year for proper planning of material and analyzing the reasons for deviations in reality against the reference norms.

The norms fixed for the year 2022-23 are enclosed at Annexure-A. Efforts are to be made to control the consumption within the limits duly exercising regular inspection of Tyre Retreading process at floor level and interacting with the Vulcanisers and other staff and also by avoiding process failures and wastage of materials in RC/Repair process.

The Works Managers are advised to monitor the consumption pattern on fortnightly basis with respect to the norms given and initiate corrective actions involving AMEs(T) and Tyre Shop supervisors.

The Executive directors of zone are requested to review this in the periodical PRC meetings and take suitable steps to control the excess consumption of materials in TRSs and there by the RC and Repairs costs.

Please acknowledge.

EXECUTIVE DIRECTOR (E)

Copy to: ED(A), ED(O), FA&CAO for information.

Copy to: All Executive Directors(Zone) for inf. and n/a.

Copy to: OSD to VC&MD for information.

Copy to: CME(M), CE(IT), CCOS, CM(F&A) for information.

Copy to: All Works Managers for necessary action.

Copy to: All Dy.CAOs & Controllers of Stores for necessary action.
Copy to: All Asst. Mechanical Engineer (Tyres) for necessary action.

CONSUMPTION NORMS FOR THE MATERIAL IN TRSs FOR 2022-23

| | | | , | _ | | |
|--|--|--|--|---|--|--|
| DESCRIPTION | UNIT | Corp. | VZM | VJA | KDP | NLR |
| PRECURED RC: | | | | | | |
| PTR (AVG of all Sizes) | Kgs/Tyre | 11.35 | 11.50 | 11.32 | 11.32 | 11.24 |
| BVC | Ltrs/Tyre | 0.89 | 0.92 | 0.99 | 0.81 | 0.83 |
| HBG | Kgs/Tyre | 1.26 | 1.30 | 1.28 | 1.30 | 1.17 |
| Envelopes | Nos/Tyre | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| Curing Bags | Nos/Tyre | 0.02 | 0.02 | 0.02 | 0.02 | 0.03 |
| Flaps | Nos/Tyre | 0.03 | 0.02 | 0.04 | 0.02 | 0.04 |
| Poly Propylene Cloth | Nos/Tyre | 0.01 | 0.01 | 0.01 | 0.01 | 0.01 |
| RADIAL PATCHES | | | | | | |
| CT40 | % | 47 | 55 | 40 | 38 | 58 |
| CT42 | % | 31 | 25 | 41 | 36 | 20 |
| CT44 | % | 4 | 1 | 1 | 9 | 4 |
| UNISEALS (RADIAL) | | | | | | |
| 6mm (1/4") | % | 3 | 4 | 3 | 3 | 2 |
| 9mm (3/8") | % | 9 | 10 | 10 | 9 | 8 |
| 13mm (1/2") | % | 6 | 5 | 5 | 5 | 8 |
| Total no. of Patches (II + III) | % | 100 | 100 | 100 | 100 | 100 |
| Rub-O-Matic per Patch | Lts | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| Chemical Vul.Fluid/ Chemical Vul.Cement/ Kwik solution per Patch | Lts | 0.03 | 0.01 | 0.03 | 0.03 | 0.03 |
| BVC per Patch | Lts | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 |
| HBG per Patch | Kgs | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |
| | PRECURED RC: PTR (AVG of all Sizes) BVC HBG Envelopes Curing Bags Flaps Poly Propylene Cloth RADIAL PATCHES CT40 CT42 CT44 UNISEALS (RADIAL) 6mm (1/4") 9mm (3/8") 13mm (1/2") Total no. of Patches (II + III) Rub-O-Matic per Patch Chemical Vul.Fluid/ Chemical Vul.Cement/ Kwik solution per Patch BVC per Patch | PRECURED RC: PTR (AVG of all Sizes) BVC Ltrs/Tyre HBG Envelopes Curing Bags Flaps Poly Propylene Cloth RADIAL PATCHES CT40 CT42 CT44 UNISEALS (RADIAL) 6mm (1/4") 9mm (3/8") 13mm (1/2") Total no. of Patches (II + III) Rub-O-Matic per Patch Cts Experimental Val. Fluid/ Chemical Val. Cement/ Kwik solution per Patch BVC per Patch Kgs/Tyre Kgs/Ty | PRECURED RC: PTR (AVG of all Sizes) Kgs/Tyre 11.35 BVC Ltrs/Tyre 0.89 HBG Kgs/Tyre 1.26 Envelopes Nos/Tyre 0.01 Curing Bags Nos/Tyre 0.02 Flaps Nos/Tyre 0.03 Poly Propylene Cloth Nos/Tyre 0.01 RADIAL PATCHES CT40 % 47 CT42 % 31 CT44 % 4 UNISEALS (RADIAL) % 3 6mm (1/4") % 3 9mm (3/8") % 9 13mm (1/2") % 6 Total no. of Patches (II + III) % 100 Rub-O-Matic per Patch Lts 0.03 Chemical Vul.Fluid/ Chemical Vul.Cement/ Kwik solution per Patch Lts 0.03 BVC per Patch Lts 0.03 | PRECURED RC: PTR (AVG of all Sizes) BVC Ltrs/Tyre Ltrs/Ltrs/Tyre Ltrs/Ltrs/Tyre Ltrs/Ltrs/Tyre Ltrs/Ltrs/Ltrs/Ltrs/Ltrs/Ltrs/Ltrs/Ltrs/ | PRECURED RC: PTR (AVG of all Sizes) BVC Ltrs/Tyre 0.89 0.92 0.99 HBG Kgs/Tyre 1.26 1.30 1.28 Envelopes Nos/Tyre 0.01 0.01 0.01 Curing Bags Nos/Tyre 0.02 0.02 Flaps Nos/Tyre 0.03 0.02 0.04 Poly Propylene Cloth Nos/Tyre 0.01 CT42 CT40 CT42 % 31 CT44 W 4 UNISEALS (RADIAL) 6mm (1/4") 9mm (3/8") 7mm (3/8") Total no. of Patches (II + III) Rub-O-Matic per Patch Chemical Vul.Fluid/ Chemical Vul.Cement/ Kwik solution per Patch BVC per Patch Lts 0.03 0.03 0.03 0.03 0.03 | PRECURED RC: PTR (AVG of all Sizes) BVC Ltrs/Tyre 0.89 0.92 0.99 0.81 HBG Kgs/Tyre 1.26 1.30 1.28 1.30 Envelopes Nos/Tyre 0.01 0.01 0.01 0.01 0.01 Curing Bags Nos/Tyre 0.02 0.02 0.02 0.02 Poly Propylene Cloth Nos/Tyre 0.01 0.01 RADIAL PATCHES CT40 W 31 CT42 W 31 CT44 W UNISEALS (RADIAL) 6mm (1/4") 9mm (3/8") Total no. of Patches (II + III) Rub-O-Matic per Patch Lts 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03 |

Note: Item No: II, III are given in percentage for every 100 patches consumed in repair of different type of tyres.