



# Goodyear Truck Tires.

## Technical Data Book

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Tire Range and Application Map

Technical Data

Regrooving Guidelines

Tire Technology



MADE TO FEEL GOOD.

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# Truck Tire Range and Application Map

|         | ON ROAD FUEL EFFICIENT  | ON ROAD MILEAGE      | MIXED SERVICE        | OFFROAD              | URBAN                     | COACH           | WINTER    |
|---------|-------------------------|----------------------|----------------------|----------------------|---------------------------|-----------------|-----------|
| STEER   | FUELMAX S               | KWMAX S              |                      |                      |                           |                 |           |
|         | LHS II                  | RHS II               | MSS II               | MSS II               |                           |                 | WTS 5-rib |
|         | LHS II 50 series        |                      |                      |                      |                           |                 | WTS 6-rib |
|         | LHS II+                 | RHS II 17.5 and 19.5 | MSS 75 and 90 series | MSS 75 and 90 series | UrbanMax MCA              | Marathon Coach  |           |
| DRIVE   | FUELMAX D               | KWMAX D              | MSD II               | ORD 14.00R20         | UrbanMax MCA              |                 |           |
|         | LHD II                  | RHD II + / RHD II    | MSD II 385/55R22.5   | ORD                  | UrbanMax MCD Super Single | Marathon Coach  |           |
|         | LHD II+                 | RHD II 17.5 and 19.5 | MSD II 495/45R22.5   | ORD 90 series        | UrbanMax MCD Traction     | UltraGrip Coach | WTD       |
|         |                         |                      |                      |                      |                           |                 |           |
| TRAILER | FUELMAX T               | KWMAX T              |                      |                      |                           |                 |           |
|         | LHT II 435/50R19.5      | RHT II               |                      |                      |                           |                 |           |
|         | LHT II 65 and 55 series | RHT II 17.5 and 19.5 | MST II               | MST II               |                           |                 | WTT       |



# On Road Fuel Efficient Tire Range.

Tire Range



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# FUELMAX S



The new FUELMAX S features IntelliMax Groove Technology, an optimized cavity shape and other innovations resulting in improved fuel efficiency and up to 6% better rolling resistance compared to its predecessor\*.



- IntelliMax Groove Technology. Optimized rolling resistance during tire wear
- High Net to Gross to optimize wearable rubber volume with reduced tread depth.
- Improved rolling resistance and mileage
- Optimized Cavity shape. Excellent compromise for rolling resistance, mileage and handling
- Optimized blade angles. Rolling resistance and wet grip enhancement
- Edge blades. Improved wet grip

\*Comparative tests made by Goodyear GIC\*L on size 315/70R22.5 show that new Goodyear FUELMAX S and FUELMAX D steer and drive tires offer an improvement in rolling resistance of up to 6% and 10% respectively vs. Goodyear Marathon LHS II + and LHD II + tires.

## Technical Data



| Size        | Load Index<br>Speed Symbol | Comments          | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|-------------------|-------------|----------------------------|----------|
| 295/80R22.5 |                            | under development | 315/80R22.5 | 156/150 L (154/150 M)      | TL       |
| 315/60R22.5 |                            | under development | 385/55R22.5 | 160 K (158 L)              | A C 70 X |
| 315/70R22.5 | 156/150 L                  | HL TL             | 385/65R22.5 | 160 K (158 L)              | TL       |
|             |                            |                   |             |                            | B C 71 X |

# FUELMAX D



Up to 10% improved rolling resistance compared to its predecessor\*. Thanks to a high-net-to gross ratio in combination to low tread depth the new FUELMAX D tire leads to lower rolling resistance and improved mileage. The new FUELMAX D also features the M+S and 3 Peak Mountain snow flake resulting in excellent winter traction and meeting legal winter requirements.



- High Net-to-Gross ratio. Improved rolling resistance and higher mileage
- Extra wide tread width. Better rolling resistance and mileage
- Reduced Non-skid depth. Better rolling resistance and noise
- Directional tread design. Better traction and noise
- Rain drop / flexomatic blades. Improved mileage, traction and handling

\*Comparative tests made by Goodyear GIC\*L on size 315/70R22.5 show that new Goodyear FUELMAX S and FUELMAX D steer and drive tires offer an improvement in rolling resistance of up to 6% and 10% respectively vs. Goodyear Marathon LHS II + and LHD II + tires.

## Technical Data



| Size        | Load Index<br>Speed Symbol | Comments          | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|-------------------|-------------|----------------------------|----------|
| 295/80R22.5 |                            | under development | 315/70R22.5 | 154/150 L (152/148 M)      | TL       |
| 315/60R22.5 |                            | under development | 315/80R22.5 | 156/150 L (154/150 M)      | TL       |
|             |                            |                   |             |                            | B C 72 X |

# FUELMAX T



The new FUELMAX T tire features a multi – radius cavity and a special tread compound resulting in ultra low rolling resistance, superb fuel savings, improved mileage performance and good braking in wet conditions.



- Multi-radius cavity
- Ultra low rolling resistance and superb fuel savings
- Special tread compound
- High mileage potential and good wet grip

## Technical Data



| Size        | Load Index<br>Speed Symbol | Comments          | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|-------------------|-------------|----------------------------|----------|
| 385/55R22.5 |                            | under development | 435/50R19.5 | 180 J                      | TL       |
| 385/65R22.5 | 160 K (158 L)              | TL                |             |                            | A C 71 X |
|             |                            |                   |             |                            | B C 72 X |

## Marathon LHS II+ / LHS II



Marathon LHS II + features a dedicated tread compound using the Sileflex technology designed to lower the fuel consumption and emissions while keeping wet grip performance and mileage potential at a premium level.



- Wide tread, 5 rib layout (6 rib for 65, 55 and 50 series) for excellent mileage, even wear
- "Flextomic Handling" and "Edge Blading" on grooves for excellent braking on wet, even wear
- Latest technology carcass geometry and materials for reduced weight, enhanced damage resistance, durability and retreadability
- Low rolling resistance (-7% vs HHS II\*)

\* Internal evaluation performed by Goodyear Innovation Center Luxembourg in 2011 on 315/70R22.5

## Technical Data

| Size        | Load Index<br>Standard | Comments      | Size        | Load Index<br>Standard | Comments          |
|-------------|------------------------|---------------|-------------|------------------------|-------------------|
| 235/60R22.5 | 150/147 K (140/146 L)  | LHS 1 version | 355/60R22.5 | 155/150 L              | High load version |
| 235/60R22.5 | 152/148 M              | C             | 355/60R22.5 | 155/150 L              | High load version |
| 235/60R22.5 | 154/149 M              | C             | 355/60R22.5 | 154 K (152 L)          | LHS 1 version     |
| 235/60R22.5 | 152/148 L              | C             | 375/60R22.5 | 166 K                  |                   |
| 235/60R22.5 | 154/148 L              | C             | 395/50R22.5 | 160 K (158 L)          |                   |
| 315/70R22.5 | 154/150 L (152/148 M)  | C             |             |                        |                   |



## Marathon LHD II+ / LHD II



Marathon LHD II + features a dedicated tread compound using the Sileflex technology designed to lower the fuel consumption and emission while keeping good wet traction performance and mileage potential at a premium level.



- Wide tread with large shoulder ribs for excellent mileage, traction and braking as well as even wear pattern
- "3D-BIS" variable blade technology for traction and braking performance and improved handling and stability
- Latest technology carcass geometry and materials for reduced weight, enhanced damage resistance, durability and retreadability
- Reduced rolling resistance (-7% vs LHD II)

**M+S**

## Technical Data

| Size        | Load Index<br>Speed Symbol | Comments                                                                                               | Size       | Load Index<br>Speed Symbol | Comments                                                                                             |
|-------------|----------------------------|--------------------------------------------------------------------------------------------------------|------------|----------------------------|------------------------------------------------------------------------------------------------------|
| 295G50R22.5 | 147/145 K                  | C D 73                | 315/0R22.5 | 154/150 (152/148 M)        | C C 75              |
| 295G60R22.5 | 150/147 K (149/146 L)      | LHD   version C C 74  | 3150R22.5  | 156/150 (154/150 M)        | C C 74              |
| 295G80R22.5 | 152/148 M                  | C C 74                | 495G8R22.5 | 169 K                      | LHD version C C 72  |
| 315G60R22.5 | 152/148 L                  | C C 73                |            |                            |                                                                                                      |



## Marathon LHT II



The Marathon LHT II has been developed to support fleet efficiency and reduce cost per km. It features super low rolling resistance (up to 26% improvement\*) combined to improved mileage performance, good braking on wet and low noise emissions. Additional payload through reduced tire weight is another feature of the marathon trailer tires.



- o Fuel savings
- o Excellent mileage
- o Good braking on wet
- o Increased payload
- o Good durability and retreadability

\* TUV report : No 76242917

## Technical Data

| Size        | Load Index | Speed Symbol | Comments | Size        | Load Index | Speed Symbol | Comments |
|-------------|------------|--------------|----------|-------------|------------|--------------|----------|
| 435/50R19.5 | 160 J      | A C 71       |          | 275/70R22.5 | 152/148    | (1148/145 L) |          |





# On Road Mileage Tire Range.



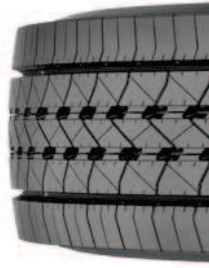
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## KMAX S



Up to 30% more mileage compared to its predecessor\*. Thanks to its computer modeled tread profile for optimized tire pressure distribution, the KMAX S tire offers regular wear, high mileage, robustness, good braking on wet and excellent handling.



- IntelliMax Rib Technology. Stiffer tread. High mileage and regular wear
- Wide tread, optimized foot print. High mileage
- Robust, wide shoulders. Improved robustness
- Specific blading frequency and geometry. Excellent braking on wet

\*Comparative tests made by Goodyear Innovation Centre Luxembourg on size 315/80R22.5 between July 2011 and June 2013 show that new Goodyear KMAX S and KMAX D steer and drive tires offer an improvement in mileage potential of up to 30% and 35% respectively vs. Goodyear RHS II and RHD II+ tires.

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments          | Size        | Load Index<br>Speed Symbol | Comments          |
|-------------|----------------------------|-------------------|-------------|----------------------------|-------------------|
| 295/60R22.5 | 154/149 M                  | under development | 315/70R22.5 | 156/150 L                  | HL TL             |
| 295/80R22.5 | 152/148 M                  | TL                | 315/80R22.5 | 156/150 L (154/150 M)      | TL                |
| 315/60R22.5 |                            | under development | 385/65R22.5 |                            | under development |



## KMAX D



Up to 35% more mileage compared to its predecessor\*. The KMAX D offers high mileage potential, high traction performance and low noise emission thanks to optimized tire pressure distribution, the right number of pitches, the non-skid optimized block geometry and a higher wearable rubber volume compared to its predecessors. The KMAX D also meets established winter requirements carrying both the M+S and the 3 Peak Mountain Snow Flake symbol.



- High Net-to-Gross ratio. Improved rolling resistance and higher mileage
- Extra wide tread width. Better rolling resistance and mileage
- Increased Non-skid depth. Improved mileage
- Directional V-shape tread design. Better traction and noise
- Flexomatic blades . Improved mileage, traction and handling



\*Comparative tests made by Goodyear Innovation Centre Luxembourg on size 315/80R22.5 between July 2011 and June 2013 show that new Goodyear KMAX S and KMAX D steer and drive tires offer an improvement in mileage potential of up to 30% and 35% respectively vs. Goodyear RHS II and RHD II+ tires.

### Technical Data

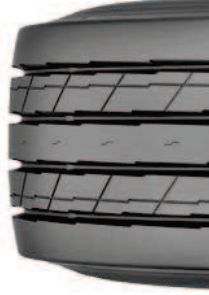
| Size        | Load Index<br>Speed Symbol | Comments          | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|-------------------|-------------|----------------------------|----------|
| 295/60R22.5 | 152/148 M                  | under development | 315/70R22.5 | 154/150 L (152/148) M      | D C 72 X |
| 295/80R22.5 | 152/148 M                  | TL                | 315/80R22.5 | 156/150 L (154/150) M      | D C 71 X |
| 315/60R22.5 |                            | under development |             |                            |          |



## KMAX T



The new KMAX T tire offers superb mileage performance thanks to multi radius cavity shape and high wearable rubber volume associated to an innovative tread compound which also resists to groove cracking and tread chunking.



- Improved casing and tuned footprint. Improved mileage performance
- Innovative tread compound. Fuel saving potential
- High wearable rubber volume. Excellent Mileage potential
- Reduced Stone holding. Resistance to groove cracking
- Improved edge blades. Excellent braking on wet

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|-------------|----------------------------|----------|
| 385/65R22.5 | 160 K (158 L)              | TL       | 435/50R19.5 | 180 J                      | RFD TL   |
| 385/65R22.5 | 160 K (158 L)              | TL       |             |                            |          |



## Regional RHS II 22.5"



The regional haul steer generation tire coping with the demanding requirements of modern regional haul service, dedicated for high mileage and a wide application range. The combination of a specifically developed tread pattern with an innovative high silica content tread compound results in excellent mileage performance, excellent wet braking, even wear and reduced rolling resistance.



- Wide tread, 5 rib pattern, groove edge blading, for excellent mileage, even wear and superb handling and stability
- High density, flexomatic blading, for outstanding braking on wet surfaces combined with high mileage
- Advanced technology, high silica tread compound, for high mileage combined with reduced rolling resistance, good tear and damage resistance

M+S

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments                   | Size        | Load Index<br>Speed Symbol | Comments                   |
|-------------|----------------------------|----------------------------|-------------|----------------------------|----------------------------|
| 11R22.5     | 148/145 L                  | C B 69 X                   | 315/70R22.5 | 154/148 L                  | High load version C B 71 X |
| 12R22.5     | 152/148 L                  | C B 70 X                   | 315/70R22.5 | 154/150 L (152/148 M)      | C B 71 X                   |
| 13R22.5     | 156/150 L (154/150 L)      | D C 70 X                   | 315/70R22.5 | 156/150 L                  | High load version C B 70 X |
| 275/70R22.5 | 148/145 M                  | D B 71 X                   | 315/70R22.5 | 158/150 L (154/150 M)      | High load version C A 70 X |
| 385/70R22.5 | 154/149 M                  | High load version C B 69 X | 385/65R22.5 | 160 K (158 L)              | C B 71 X                   |
| 315/60R22.5 | 153/150 L (150/148 M)      | C B 70 X                   | 315/60R22.5 | 164 K (156 L)              | High load version B B 71 X |
|             | 152/148 L                  | C B 70 X                   |             |                            |                            |

## Regional RHT II



Goodyear RHT II (22.5") offers a superb mileage performance thanks to its multi radius cavity shape and its high wearable rubber volume associated to an innovative tread compound which offers resistance to groove cracking and tread chunking.



- Superb mileage potential (+30% vs RHT\*) and wear evenness
- Excellent robustness and high resistance in shoulder wear
- Reduced stone catching and resistant to groove cracking
- Low rolling resistance for fuel efficiency
- High wet grip level

\* Based on mileage evaluation in two fleets in Spain and in France from 2010 to 2011

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments                   | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------------------------|-------------|----------------------------|----------|
| 385/55R22.5 | 160 K (158 L)              | B B 71 X                   | 425/65R22.5 | 165 K                      | B B 72 X |
|             | 164 K (156 L)              | High Load version B C 71 X | 445/65R22.5 | 168 K                      | B B 72 X |

## Regional RHD II + / RHD II 22.5"



The regional haul drive generation tire coping with the demanding requirements of modern regional haul service. The tire is designed for high mileage and a wide application range and features KMAX technology developed to increase mileage performances without compromising other tire characteristics.

RHD II + brings a further improvement in mileage, handling and wear type thanks to a tuned tread pattern configuration. It suits a wide application range, from long haul to local delivery.



- Wide tread, 5 rib directional pattern, for excellent mileage, even wear and superb handling and stability
- Special, directional groove tapers, highly bladed pattern, for improved wet braking and mileage performances, excellent traction and winter grip
- New technology, high silica tread compound, for high mileage combined with good tear and damage resistance
- Dedicated carcass geometry, latest technology carcass materials resulting in enhanced robustness, durability and retreadability
- RHD II +: up to 10% improvement in mileage vs RHD II pending on the application

M+S

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments                       |
|-------------|----------------------------|----------|-------------|----------------------------|--------------------------------|
| 11R22.5     | 148/145 L                  | D C 78 X | 295/60R22.5 | 152/148 M                  | RHD II+ tread pattern D C 77 X |
| 12R22.5     | 152/148 L                  | E C 78 X | 305/70R22.5 | 153/150 L (150/148 M)      | D C 77 X                       |
| 13R22.5     | 156/150 L (154/150 M)      | D C 78 X | 315/60R22.5 | 152/148 L                  | D C 77 X                       |
| 275/70R22.5 | 148/145 M                  | D D 77 X | 315/70R22.5 | 154/150 L (152/148 M)      | RHD II+ tread pattern D C 76 X |
| 295/60R22.5 | 150/147 K (149/146 L)      | D D 75 X |             |                            |                                |

## Regional RHT II low platform



Goodyear RHT II (17.5" / 19.5") has been developed to cover the various low platform trailer applications like car transportation in long and regional haul services. This tread pattern provides improved mileage potential and shoulder wear robustness.



- Excellent mileage potential (+9% vs Marathon LHT (pt\*)) and even wear profile
- Excellent robustness and damage resistance provided by the 4-rib pattern and the strong shoulder ribs
- Reduced Stone catching and resistant to groove cracking

\*Based on mileage evaluation in a car transportation fleet in Germany from 2010 to 2011

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments                   |
|-------------|----------------------------|----------|-------------|----------------------------|----------------------------|
| 9.8R17.5    | 143/141 J                  | C B 70 X | 245/70R19.5 | 141/140 J                  | C B 70 X                   |
| 205/65R17.5 | 129/127 K (130/130 J)      | C B 71 X | 265/70R19.5 | 143/141 J                  | C B 70 X                   |
| 215/75R17.5 | 135/133 J                  | C C 69 X | 285/70R19.5 | 150/148 J                  | B B 71 X                   |
| 235/75R17.5 | 143/141 J (144/144 F)      | C C 69 X | 435/60R19.5 | 160 J                      | 22.5" pattern RFD B C 73 X |
| 245/70R17.5 | 143/141 J (146/146 F)      | B C 69 X |             |                            |                            |

## Regional RHS II 17.5" and 19.5"



The 17.5" and 19.5" steer generation tires feature KMAX Technology – a combination of advanced technology design and construction features. The wide, 5 rib tread pattern, with high density flexomatic blading results in excellent mileage performance, good handling and stability as well as good braking on wet. Latest technology tread compounds, carcass and belt materials assure good durability and retreadability of these steer tires.

RHS II in 17.5" & 19.5" sized tires are developed for a wide application range, covering today's multiple service types in regional and distribution operations.



- Wide, 5 rib tread pattern for high mileage, good handling and even wear
- Flexomatic blading on center ribs, for improved braking on wet and mileage
- Rib edge blading on outer grooves result in even wear pattern and better wet braking
- Specifically developed groove geometries result in reduced stone holding

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|-------------|----------------------------|----------|
| 9.5R17.5    | 129/127 M                  |          | 265/70R17.5 | D C 71                     |          |
| 205/55R17.5 | 124/122 M                  |          | 245/70R19.5 | D C 72                     |          |
| 215/55R17.5 | 126/124 M                  |          | 265/70R19.5 | E C 72                     |          |
| 225/55R17.5 | 129/127 M                  |          | 285/70R19.5 | D C 72                     |          |
| 235/55R17.5 | 132/130 M                  |          | 285/70R19.5 | E B 72                     |          |
| 245/70R17.5 | 136/134 M                  |          | 305/70R19.5 | E C 72                     |          |
|             |                            |          |             | D B 71                     |          |

## Regional RHD II 17.5" and 19.5"



The 17.5" and 19.5" generation drive tires, feature KMAX Technology – a combination of advanced technology design and construction features. The wide tread pattern, featuring a high net to gross center area, with 3D BIS blading, results in high mileage, good all season traction performance and even wear type. Advanced technology tread compounds, carcass and belt materials assure good durability and retreadability of these drive tires.

RHD II in 17.5" & 19.5" sized tires are developed for a wide application range, covering today's multiple service types in regional and distribution operation.



- A wide tread pattern with high net-to-gross area, resulting in excellent mileage, good handling and even wear type
- The high density blading combined to the specific block distribution in the center ribs results in excellent traction performance and all season capabilities.
- Latest technology 3D BIS blades for improved traction and braking on wet and wintry roads.
- Specifically designed groove geometries to reduce stone holding

M+S

### Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|-------------|----------------------------|----------|
| 9.5R17.5    | 128/127 M                  |          | 265/70R17.5 | E C 71                     |          |
| 205/70R17.5 | 124/122 M (126/124 G)      |          | 245/70R19.5 | E D 73                     |          |
| 215/70R17.5 | 126/124 M                  |          | 265/70R19.5 | E C 72                     |          |
| 225/70R17.5 | 129/127 M                  |          | 265/70R19.5 | E B 74                     |          |
| 235/70R17.5 | 132/130 M                  |          | 285/70R19.5 | D B 73                     |          |
| 245/70R17.5 | 136/134 M                  |          | 305/70R19.5 | E B 73                     |          |



## Mixed Service Tire Range.

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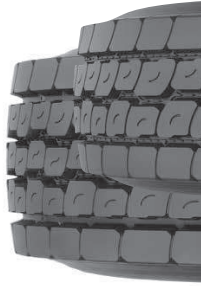
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# Omnitrac MSS II



The Goodyear Omnitrac MSS II features a wide tread, 4-rib and 5-rib pattern for excellent mileage and even wear, combining latest technology materials and design features. Its robust tread pattern provides high mileage in on road use and good damage resistance. The specific groove layouts ensure good self cleaning and reduced stone holding.

- Excellent mileage, even wear pattern
- Improved on/off road braking
- Good damage resistance and stability
- Reduced stone holding/drilling, good self cleaning
- Excellent durability and retreadability



M+S

## Technical Data

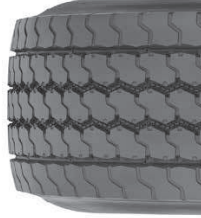
| Size        | Load Index<br>Speed Symbol | Comments    | Size        | Load Index<br>Speed Symbol | Comments                     |
|-------------|----------------------------|-------------|-------------|----------------------------|------------------------------|
| 12.00R20TT  | 154/150 K                  |             | 12R22.5     | 152/148 K                  |                              |
| 12.00R24TT  | 160/156 K                  | C B 71 8    | 275/70R22.5 | 148/145 K                  | D B 72 8                     |
| 285/70R19.5 | 143/141 J (140/138 J)      | D B 71 8    | 295/80R22.5 | 152/148 K                  | 5-rib                        |
| 11R22.5     | 148/145 K                  | MSS pattern | 325/95R24   | 162/160 K                  | TL can be used as TT as well |
|             |                            |             |             |                            | C B 71 8                     |



# Omnitrac MSS 445/75R22.5 and 375/90R22.5

The Goodyear Omnitrac MSS 445/75R22.5 and 375/90R22.5 are especially designed for high load vehicles in mixed service and on-road applications.

- Specific tear- and wear-resistance
- Added protection against cuts, chipping and chunking
- Excellent traction, handling
- Increased cargo payload and flotation characteristics



M+S

## Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|-------------|----------------------------|----------|
| 375/90R22.5 | 164/160 G                  | C B 70 8 | 445/75R22.5 | 170 J                      | C B 71 8 |



# Omnitrac MSD II



The Omnitrac MSD II with a specifically developed robust tread pattern provides excellent traction in on and off road conditions, high mileage in on road use and good damage resistance. The specific groove layouts ensure good self cleaning and reduced stone holding.

- Excellent traction and braking
- High mileage, even wear pattern
- Improved on/off road braking
- Excellent self cleaning
- Enhanced traction on unpaved surfaces
- Improved traction on mud
- Excellent durability and retreadability



M+S

## Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments                     |
|-------------|----------------------------|----------|-------------|----------------------------|------------------------------|
| 12R22.5     | 152/148 K                  | D B 72 8 | 315/60R22.5 | 156/150 K                  | E B 74 8                     |
| 295/60R22.5 | 152/148 K                  | E B 73 8 | 325/65R24   | 162/160 K                  | TL can be used as TT as well |
|             |                            |          |             |                            | D B 73 8                     |



# Omnitrac MSD II Super Single



1st in industry – “Super Single” drive axle tires for mixed service/ construction site applications. The super single range is the best alternative to “dual mounted” drive axle tire fitments on mixed service trucks. The tread pattern is specifically developed to provide excellent traction and braking on mud and wet surfaces, combined to good damage resistance.

- Light weight super single mixed-service drive tire
- Wide tread providing an excellent mileage
- Slatom centerline groove for improved on/off-road braking and traction
- Good stone drilling resistance and groove self cleaning
- Excellent durability and retreadability



M+S

## Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|-------------|----------------------------|----------|
| 385/55R22.5 | 160 K                      |          | 495/45R22.5 | 169 K                      |          |
|             |                            | C C 73   |             |                            | C D 74   |



# Omnitrac MST II



Goodyear MST II features a wide tread and multi radii cavity for even wear and a mileage increase of 14%. \* A Zig-Zag centerline groove and off-set block edge design offer an improved on/ off road traction and massive centerline ribs increase the damage resistance.

- Excellent mileage, increased resistance to cuts, chipping and chunking
- Excellent wet grip
- Self-cleaning
- Excellent traction and resistance to chunking
- Increased durability and retreadability



M+S

## Technical Data

| Size        | Load Index<br>Speed Symbol | Comments | Size        | Load Index<br>Speed Symbol | Comments       |
|-------------|----------------------------|----------|-------------|----------------------------|----------------|
| 385/65R22.5 | 160 J (158 K)              |          | 445/65R22.5 | 169 K                      |                |
|             |                            | C B 72   |             |                            | in preparation |



\*Based on mileage performance of the MST II 385/65R22.5 compared to the Goodyear MST 385/65R22.5 in two fleets in Germany and in Belgium from 2009 to 2011.



## Offroad Tire Range.



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# Offroad ORD

The Goodyear Offroad ORD is a specific tire for off-road applications. It provides excellent damage resistance and enhanced traction properties even on soft or sandy surfaces.



- Secure off-road traction and high mileage
- Exceptional resistance to tearing and cutting
- Excellent resistance to stone holding and self-cleaning ability

M+S

## Technical Data

| Size    | Load Index<br>Speed Symbol | Comments |   |   |    |
|---------|----------------------------|----------|---|---|----|
| 13R22.5 | 156/150 G (154/150 J)      |          |   |   |    |
|         |                            |          | E | B | 76 |



# Offroad ORD 14.00R20, 375/90R22.5 and 365/85R20

Originally developed for special military, airport fire brigade and road maintenance applications, the Goodyear Offroad ORD gives excellent off-road traction, stone holding resistance and balanced wear around the circumference.



- Optimum durability and retreadability
- Exceptional off-road traction and cutting resistance
- Resistance to tearing and cutting for more kilometres
- Self-cleaning to avoid stone holding and increase traction

M+S

## Technical Data

| Size      | Load Index<br>Speed Symbol | Comments |   |   |    |  |  |  |
|-----------|----------------------------|----------|---|---|----|--|--|--|
| 14.00R20  | 164/160 G                  |          |   |   |    |  |  |  |
|           |                            |          | D | B | 76 |  |  |  |
| 365/85R20 | 164 J                      |          |   |   |    |  |  |  |
|           |                            |          | D | B | 75 |  |  |  |

| Size        | Load Index<br>Speed Symbol | Comments |   |   |    |
|-------------|----------------------------|----------|---|---|----|
| 375/90R22.5 | 164/160 G                  |          |   |   |    |
|             |                            |          | E | B | 74 |



Urban Tire Range.



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# UrbanMax MCA



The MCA municipal tire, featuring UrbanMax Technology, a combination of latest technology tread pattern and state of the art materials. UrbanMax MCA tires are specifically developed to provide excellent mileage in "stop & go" applications. In addition it provides good braking and traction on wet. MCA tires are usable as steer or as all position tires on municipal vehicles. All season use possible (M+S marked).



- Wide tread, 5 robust ribs, for superb mileage and even wear
- Centerline blocks with edge and flexomatic blading for good braking on wet and all season capability
- Reinforced sidewalls, with wear indicators, to resist to curb scuffing and enhanced durability and damage resistance
- Regroovable and retreadable

M+S

## Technical Data



| Size        | Load Index            | Speed Symbol | Comments | Size        | Load Index            | Speed Symbol | Comments |
|-------------|-----------------------|--------------|----------|-------------|-----------------------|--------------|----------|
| 285/70R19.5 | 140/138 L             |              |          | 295/60R22.5 | 152/148 J (154/150 E) |              |          |
| 11R22.5     | 148/145 J (152/148 E) |              |          | 315/60R22.5 | 152/148 J             |              |          |
|             |                       | D C 72       |          |             |                       | E C 70       |          |
|             |                       | E C 72       |          |             |                       | D C 71       |          |

# UrbanMax MCD Traction



The MCD Traction municipal drive tire, featuring UrbanMax Technology, a combination of latest technology tread pattern and state of the art materials. UrbanMax MCD Traction tires are specifically developed to provide excellent traction, both in normal and winter applications (M+S marked). In addition it provides superb mileage, good braking. MCD Traction tires are specifically designed for drive axle use on municipal vehicles.



- 6 row block type pattern for excellent traction performance, even in winter conditions
- The wide tread with deep profile depth ensures excellent mileage performance, even wear
- Reinforced sidewalls, with wear indicators, to resist to curb scuffing and enhanced durability and damage resistance
- Regroovable and retreadable

M+S

## Technical Data



| Size        | Load Index            | Speed Symbol | Comments |
|-------------|-----------------------|--------------|----------|
| 275/70R22.5 | 148/145 J (152/148 E) |              |          |
|             |                       | E B 72       |          |



## Coach Tire Range.



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## Marathon Coach

Asymmetric pattern dedicated for all position firmment on long haul and intercity coach applications. Providing excellent mileage, resistance to shoulder wear and high comfort level.



- o Excellent mileage potential and even wear
- o Excellent Ride/Handling and Comfort
- o High resistance to irregular wear and tread cracks
- o Low noise level
- o Reduced rolling resistance
- o Excellent wet skid performance
- o Long lasting carcass & tire life



## Technical Data

| Size                  | Load Index<br>Speed Symbol | Comments  |
|-----------------------|----------------------------|-----------|
| 295/80R22.5           | C B 69                     | 154/149 M |
| 315/80R22.5           | C B 69                     | 157/150 M |
| 156/150 L (154/150 M) | B B 69                     |           |



# Ultragrip Coach

Specific high blade density winter traction drive tire for long haul and intercity coaches. Decoupled blocks and high tear resistance compound lead to a combination of mileage performance and snow traction.



- o High grip/traction on snowy/icy road
- o Extended mileage
- o Even wear profile
- o Road handling & lateral stability
- o Stone damage & cut resistances
- o Robust shoulder rib



## Technical Data

| Size        | Load Index | Speed Symbol | Comments | Size        | Load Index            | Speed Symbol | Comments |
|-------------|------------|--------------|----------|-------------|-----------------------|--------------|----------|
| 295/60R22.5 | 154/149 M  | D C 72       |          | 315/60R22.5 | 156/150 L (154/150 M) | D C 73       |          |





# Winter Tire Range.



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## UltraGrip WTS



The UltraGrip WTS steer axle tire provides a wide, deep tread pattern, specific "Z" blades and a specific technology tread compound, resulting in excellent mileage and traction and braking on wet, snow and ice roads.

WTS City design includes as well reinforced sidewall for better damage resistance in urban applications.

- Excellent braking and traction on wet and snow
- Superb lateral grip, handling and steering stability
- High mileage, even wear pattern
- Usable as "all position" fitment



### Technical Data



| Size        | Load Index<br>Speed Symbol | Comments     | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|--------------|-------------|----------------------------|----------|
| 12R22.5     | 152/148 K (150/146 L)      |              | 315/70R22.5 | 154/150 K (152/148 L)      |          |
| 275/70R22.5 | 148/145 J (152/148 E)      | City version | 315/80R22.5 | 156/150 K (154/150 L)      |          |
| 295/60R22.5 | 150/147 K (149/146 L)      |              | 355/50R22.5 | 154 K (152 L)              |          |
| 295/80R22.5 | 152/148 L                  |              | 385/55R22.5 | 160 K (158 L)              |          |
| 315/60R22.5 | 152/148 L                  |              | 385/65R22.5 | 160 K (158 L)              |          |

## UltraGrip WTD



The UltraGrip WTD drive axle tire is designed to provide outstanding traction on snowy, icy roads while featuring dedicated technology tread compounds and carcass constructions. The WTD tire is dedicated for use in severe winter conditions. With a specific blading technology, traction, stability and braking are improved while still providing high mileage performance.

WTD City design includes as well reinforced sidewall for better damage resistance in urban applications.

- Excellent winter traction and braking (snow and ice)
- Superb lateral grip, handling and steering stability
- High mileage, even wear pattern



### Technical Data



| Size        | Load Index<br>Speed Symbol | Comments     | Size        | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|--------------|-------------|----------------------------|----------|
| 12R22.5     | 152/148 K                  |              | 315/60R22.5 | 152/148 L                  |          |
| 275/70R22.5 | 148/145 J (152/148 E)      | City version | 315/70R22.5 | 154/150 K (152/148 L)      |          |
| 295/60R22.5 | 150/147 K (149/148 L)      |              | 315/80R22.5 | 156/150 L (154/150 M)      |          |
| 295/80R22.5 | 152/148 L                  |              |             |                            |          |

## UltraGrip WTT



Goodyear UltraGrip WTT truck tire range has been developed to cope with today's demanding winter transport operations. This trailer axle tire features excellent performance in winter conditions, keeping fleet efficiency at maximum level by providing good mileage and all season capability.

The 265/70R19.5 UltraGrip WTT trailer tire complements the steer and drive tire range, for specific severe winter conditions. The WTT was developed for the use on paved national roads as well as on unpaved and forest roads. The high level of carcass robustness against external damages meets the needs of latter application.

- 4-rib design for massive rib distribution and excellent damage resistance
- Wide tread width for an extended mileage and a good lateral stability
- Excellent snow / mud traction thanks to staggered blocks and semi-open shoulders



### Technical Data



| Size        | Load Index<br>Speed Symbol | Comments | Size | Load Index<br>Speed Symbol | Comments |
|-------------|----------------------------|----------|------|----------------------------|----------|
| 265/70R19.5 | 143/141 J                  |          | D    | B                          | 72       |



## Technical data.



Technical Data

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# Goodyear Technical Data

| Goodyear Design               |                    |                                    |                                | Tire Dimensions <sup>a)</sup> |                                  |                           |                       | Max load               |                       | Rim Data            |                   | Load Capacity per axle (in kg) at inflation pressure (in bar) |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|-------------------------------|--------------------|------------------------------------|--------------------------------|-------------------------------|----------------------------------|---------------------------|-----------------------|------------------------|-----------------------|---------------------|-------------------|---------------------------------------------------------------|----------------------|------------|------------------------|----------------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|--|--|--|--|--|--|
| Size                          | Load / Speed index | Single Point marking <sup>b)</sup> | Additional Markings / comments | Overall Diameter (+/-1.5%)    | Overall Section Width (+/- 1.5%) | Static Loaded Radius (mm) | Rolling Circumf. (mm) | Nominal pressure (bar) | Single Axle load (kg) | Dual Axle load (kg) | Recomm. Rim width | Permitted Rims                                                | Minimal Dual spacing | Load index | Single / dual mounting | Tire pressure in bar |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 17.5" sizes - 70 series       |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 205/65R17.5                   | RHT II             | 129/127 K (132/132 F)              | RRT <sup>a)</sup>              | 716                           | 209                              | 334                       | 2169                  | 9.00                   | 3700                  | 7000                | 6.00              | 6.00-6.75                                                     | 231                  | 129        | S                      | 2310                 | 2500 | 2680 | 2850  | 3000  | 3110  | 3200  | 3280  | 3370  | 3450  | 3530  | 3620  | 3700 |  |  |  |  |  |  |
|                               |                    |                                    |                                | 127                           | D                                | 4370                      | 4720                  | 5060                   | 5400                  | 5730                |                   |                                                               |                      | 5990       | 6150                   | 6210                 | 6370 | 6530 | 6690  | 6840  | 7000  |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 245/70R17.5                   | RHS II-L           | 136/134 M                          | RHD II-L                       | 790                           | 236                              | 368                       | 2411                  | 8.50                   | 4480                  | 8480                | 7.50              | 6.75-7.50                                                     | 279                  | 143        | S                      | 3480                 | 3760 | 4030 | 4300  | 4560  | 4630  | 4620  | 4650  | 5070  | 5200  | 5330  | 5450  |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 141                           | D                                | 6580                      | 7100                  | 7620                   | 8120                  | 8620                |                   |                                                               |                      | 8860       | 9100                   | 9350                 | 9590 | 9830 | 10060 | 10300 |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               | RHT II             | 143/141 J (146/146 F)              | RRT <sup>a)</sup>              | 795                           | 253                              | 366                       | 2427                  | 8.75                   | 5450                  | 10300               | 7.50              | 6.75-7.50                                                     | 279                  | 136        | S                      | 2930                 | 3160 | 3390 | 3610  | 3940  | 3940  | 4050  | 4160  | 4270  | 4370  | 4480  | 8480  |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 134                           | D                                | 5550                      | 5990                  | 6420                   | 6840                  | 7260                |                   |                                                               |                      | 7470       | 7670                   | 7880                 | 8080 | 8280 | 8480  |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 265/70R17.5                   | RHS II             | 139/136 M                          | RHD II                         | 819                           | 265                              | 379                       | 2500                  | 8.00                   | 4860                  | 8860                | 7.50              | 6.75-8.25                                                     | 295                  | 139        | S                      | 3340                 | 3600 | 3860 | 4120  | 4370  | 4490  | 4620  | 4740  | 4860  |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 136                           | D                                | 6150                      | 6640                  | 7120                   | 7590                  | 8050                |                   |                                                               |                      | 8280       | 8510                   | 8740                 | 8960 |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 17.5" sizes - 75 Series       |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 205/75R17.5                   | RHS II-L           | 124/122 M                          | RHD II-L                       | 761                           | 209                              | 356                       | 2323                  | 7.50                   | 3200                  | 6000                | 6.00              | 5.25-6.75                                                     | 231                  | 124        | S                      | 2310                 | 2500 | 2680 | 2850  | 3000  | 3110  | 3200  |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 122                           | D                                | 4340                      | 4680                  | 5020                   | 5350                  | 5680                |                   |                                                               |                      | 5940       | 6000                   |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 215/75R17.5                   | RHS II-L-HL        | 128/126 M                          | RHD II-L                       | 778                           | 215                              | 362                       | 2375                  | 7.50                   | 3600                  | 6800                | 6.00              | 6.00-6.75                                                     | 239                  | 135        | S                      | 2950                 | 3080 | 3300 | 3520  | 3730  | 3840  | 3940  | 4050  | 4150  | 4260  | 4360  | 4480  | 8240 |  |  |  |  |  |  |
|                               |                    |                                    |                                | 133                           | D                                | 5390                      | 5820                  | 6240                   | 6650                  | 7050                |                   |                                                               |                      | 7260       | 7450                   | 7650                 | 7850 | 8050 | 8240  |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 128                           | S                                | 2600                      | 2810                  | 3010                   | 3210                  | 3410                |                   |                                                               |                      | 3500       | 3600                   |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 126                           | S                                | 2530                      | 2730                  | 2920                   | 3120                  | 3310                |                   |                                                               |                      | 3400       |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               | RHT II             | 135/133 J                          | RRT <sup>a)</sup>              | 769                           | 211                              | 356                       | 2347                  | 8.50                   | 4360                  | 8240                | 6.00              | 6.00-6.75                                                     | 239                  | 126        | S                      | 2530                 | 2730 | 2920 | 3120  | 3310  | 3400  |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 126                           | D                                | 4340                      | 4680                  | 5020                   | 5350                  | 5680                |                   |                                                               |                      | 5940       | 6000                   |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 124                           | D                                | 4750                      | 5130                  | 5500                   | 5860                  | 6220                |                   |                                                               |                      | 6400       |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 129                           | S                                | 2750                      | 2970                  | 3180                   | 3390                  | 3600                |                   |                                                               |                      | 3700       |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 225/75R17.5                   | RHS II             | 129/127 M                          |                                | 790                           | 235                              | 368                       | 2411                  | 7.25                   | 3700                  | 7000                | 6.75              | 6.00-6.75                                                     | 254                  | 127        | D                      | 5200                 | 5810 | 6020 | 6410  | 6810  | 7000  |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 235/75R17.5                   | RHS II             | 132/130 M                          | RHD II                         | 809                           | 239                              | 377                       | 2469                  | 7.75                   | 4000                  | 7600                | 6.75              | 6.75-7.50                                                     | 262                  | 143        | S                      | 3480                 | 3760 | 4030 | 4300  | 4560  | 4630  | 4620  | 4650  | 5070  | 5200  | 5330  | 5450  |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 141                           | D                                | 6580                      | 7100                  | 7620                   | 8120                  | 8620                |                   |                                                               |                      | 8860       | 9100                   | 9350                 | 9590 | 9830 | 10060 | 10300 |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 132                           | S                                | 2820                      | 3040                  | 3260                   | 3470                  | 3680                |                   |                                                               |                      | 3790       | 3800                   | 4000                 |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 130                           | D                                | 5350                      | 5780                  | 6190                   | 6600                  | 7010                |                   |                                                               |                      | 7210       | 7400                   | 7600                 |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 17.5" sizes - Standard Series |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 9.8R17.5                      | RHS II             | 129/127 M                          | RHD II                         | 847                           | 241                              | 392                       | 2585                  | 7.50                   | 3700                  | 7000                | 6.00              | 6.00-6.75                                                     | 261                  | 143        | S                      | 3480                 | 3760 | 4030 | 4300  | 4560  | 4680  | 4820  | 4950  | 5070  | 5200  | 5330  | 5450  |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 855                           | 237                              | 400                       | 2610                  | 7.50                   | 3700                  | 7000                |                   |                                                               |                      | 141        | D                      | 6580                 | 7100 | 7620 | 8120  | 8620  | 8860  | 9100  | 9350  | 9590  | 9830  | 10060 | 10300 |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 846                           | 246                              | 390                       | 2582                  | 8.75                   | 5450                  | 10300               |                   |                                                               |                      | 129        | S                      | 2680                 | 2990 | 3100 | 3300  | 3500  | 3600  | 3700  |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 435/50R19.5                   | FUELMAX T          | 160 J                              | RRT <sup>a)</sup>              | 920                           | 429                              | 421                       | 2788                  | 9.00                   | 9000                  |                     | 14.00             | 14.00-15.00                                                   |                      | 160        | S                      | 5820                 | 6070 | 6510 | 6940  | 7360  | 7570  | 7780  | 7990  | 8190  | 8390  | 8600  | 8800  | 9000 |  |  |  |  |  |  |
|                               |                    |                                    |                                | 925                           | 427                              | 423                       | 2883                  | 9.00                   | 9000                  |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 920                           | 429                              | 421                       | 2788                  | 9.00                   | 9000                  |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 925                           | 427                              | 423                       | 2883                  | 9.00                   | 9000                  |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 19.5" sizes - 50 Series       |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 245/70R19.5                   | RHS II             | 136/134 M                          | RHD II                         | 849                           | 255                              | 393                       | 2592                  | 8.25                   | 4480                  | 8480                | 6.75              | 6.75-7.50                                                     | 279                  | 141        | S                      | 3370                 | 3640 | 3900 | 4160  | 4410  | 4530  | 4660  | 4780  | 4910  | 5000  | 5150  |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 853                           | 255                              | 395                       | 2604                  | 8.25                   | 4480                  | 8480                |                   |                                                               |                      | 140        | D                      | 6540                 | 7060 | 7570 | 8070  | 8560  | 8810  | 9050  | 9290  | 9530  | 9760  | 10000 |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 848                           | 252                              | 389                       | 2389                  | 8.50                   | 5150                  | 10000               |                   |                                                               |                      | 136        | S                      | 3000                 | 3240 | 3470 | 3700  | 3930  | 4040  | 4150  | 4260  | 4370  | 4480  |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                |                               |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 265/70R19.5                   | RHS II             | 140/138 M                          | RHD II                         | 870                           | 267                              | 404                       | 2666                  | 7.75                   | 5000                  | 9440                | 7.50              | 6.75-8.25                                                     | 295                  | 143        | S                      | 3560                 | 3850 | 4120 | 4400  | 4670  | 4800  | 4930  | 5060  | 5190  | 5320  | 5450  |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 873                           | 267                              | 406                       | 2665                  | 7.75                   | 5000                  | 9440                |                   |                                                               |                      | 141        | D                      | 6740                 | 7270 | 7800 | 8310  | 8820  | 9070  | 9320  | 9570  | 9810  | 10060 | 10300 |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 872                           | 269                              | 405                       | 2662                  | 8.50                   | 5450                  | 10300               |                   |                                                               |                      | 140        | S                      | 3520                 | 3800 | 4070 | 4340  | 4610  | 4740  | 4870  | 5000  |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 866                           | 266                              | 400                       | 2643                  | 8.50                   | 5450                  | 10300               |                   |                                                               |                      | 138        | D                      | 6650                 | 7100 | 7600 | 8200  | 8700  | 8950  | 9200  | 9440  |       |       |       |       |      |  |  |  |  |  |  |
| 285/70R19.5                   | RHS II             | 143/141 J                          | RHD II                         | 876                           | 266                              | 405                       | 2674                  | 8.50                   | 5450                  | 10300               | 7.50              | 7.50-8.25                                                     | 295                  | 143        | D                      | 6650                 | 7100 | 7600 | 8200  | 8700  | 8950  | 9200  | 9440  |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 876                           | 266                              | 405                       | 2674                  | 8.50                   | 5450                  | 10300               |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 897                           | 291                              | 413                       | 2738                  | 9.00                   | 6000                  | 11200               |                   |                                                               |                      | 150        | S                      | 4190                 | 4520 | 4840 | 5160  | 5480  | 5640  | 5790  | 5940  | 6100  | 6250  | 6400  | 6550  | 6700 |  |  |  |  |  |  |
|                               |                    |                                    |                                | 903                           | 291                              | 416                       | 2756                  | 9.00                   | 6000                  | 11200               |                   |                                                               |                      | 148        | D                      | 7670                 | 8500 | 9110 | 10310 | 10890 | 11180 | 11470 | 11750 | 12040 | 12320 | 12600 |       |      |  |  |  |  |  |  |
| 305/70R19.5                   | RHS II             | 146/144 L (144/142 M)              | RHD II                         | 882                           | 289                              | 410                       | 2723                  | 9.00                   | 6700                  | 12600               | 8.25              | 8.25-9.00                                                     | 318                  | 146        | S                      | 3750                 | 4050 | 4340 | 4620  | 4900  | 5050  | 5190  | 5320  | 5460  | 5600  | 5730  | 5870  | 6000 |  |  |  |  |  |  |
|                               |                    |                                    |                                | 150/146 J                     |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |
| 305/70R19.5                   | RHS II             | 149/145 M                          | RHD II                         | 927                           | 290                              | 428                       | 2830                  | 8.50                   | 6300                  | 11600               | 9.00              | 8.25-9.00                                                     | 343                  | 148        | S                      | 4120                 | 4450 | 4770 | 5080  | 5380  | 5550  | 5700  | 5850  | 6000  | 6150  | 6300  |       |      |  |  |  |  |  |  |
|                               |                    |                                    |                                | 149/145 M                     |                                  |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |      |      |       |       |       |       |       |       |       |       |       |      |  |  |  |  |  |  |

<sup>a)</sup> Additional Service Description based on UNECE Regulation N° 54 located on the sidewall of the tire in a circle close to the principal service description. Loadspeed variations do not apply to the additional Service Description.  
<sup>b)</sup> Measured fire dimension using the Goodyear recommended rim.  
<sup>c)</sup> FRT = "Free Rolling Tire"; this tire may only be fitted on a trailer or bag axle and not on a drive or steer axle.  
<sup>d)</sup> HCT = Hot Climate Technology: Tire made with specific technical features to cope with special conditions in hot climate countries.



# Goodyear Technical Data

| Size                                               |                         | Goodyear Design       | Load / Speed index | Single Point marking <sup>a)</sup> | Additional Markings / comments | Tire Dimensions <sup>a)</sup> |                         |                           |                       | Max load               |                       | Rim Data            |                   | Load Capacity per axle (in kg) at inflation pressure (in bar) |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------|-------------------------|-----------------------|--------------------|------------------------------------|--------------------------------|-------------------------------|-------------------------|---------------------------|-----------------------|------------------------|-----------------------|---------------------|-------------------|---------------------------------------------------------------|----------------------|------------|------------------------|----------------------|-------------|--|--|--|--|--|--|--|--|--|--|--|
|                                                    |                         |                       |                    |                                    |                                | Overall Diameter (+/-1.5%)    | Section Width (+/-1.5%) | Static Loaded Radius (mm) | Rolling Circumf. (mm) | Nominal pressure (bar) | Single Axle load (kg) | Dual Axle load (kg) | Recomm. Rim width | Permitted Rims                                                | Minimal Dual spacing | Load index | Single / dual mounting | Tire pressure in bar |             |  |  |  |  |  |  |  |  |  |  |  |
| 22.5" sizes - 70 Series                            |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 275/70R22.5                                        |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 385/70R22.5                                        | RHS II                  | 148/145 M             |                    |                                    |                                | 966                           | 274                     | 447                       | 2949                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTS CITY                | 148/145 J (152/148 E) |                    |                                    |                                | 979                           | 271                     | 459                       | 2988                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MSS II                  | 148/145 K             |                    |                                    |                                | 973                           | 275                     | 455                       | 2970                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MCA HL                  | 150/145 J (152/148 E) | High Load          |                                    |                                | 972                           | 273                     | 457                       | 2976                  | 9.00                   | 6700                  | 11600               |                   | 7.50                                                          | 7.50-8.25            | 303        |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MCA                     | 148/145 J (152/148 E) |                    |                                    |                                | 976                           | 271                     | 457                       | 2979                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHD II                  | 148/145 M             |                    |                                    |                                | 972                           | 272                     | 455                       | 2987                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MCD                     | 148/145 J (152/148 E) |                    |                                    |                                | 976                           | 276                     | 459                       | 2985                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTD CITY                | 148/145 J (152/148 E) |                    |                                    |                                | 977                           | 288                     | 458                       | 2982                  | 9.00                   | 6300                  | 11600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHT II                  | 152/148 J (148/145 L) | FRT <sup>a)</sup>  |                                    |                                | 963                           | 273                     | 451                       | 2940                  | 9.00                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS II                  | 153/150 L (150/148 M) |                    |                                    |                                | 1000                          | 288                     | 462                       | 3053                  | 9.00                   | 7300                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHD II                  | 153/150 L (150/148 M) |                    |                                    |                                | 1010                          | 295                     | 471                       | 3083                  | 9.00                   | 7300                  | 13400               |                   | 8.25                                                          | 8.25-9.00            | 334w       |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | 315/70R22.5             |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MCS*                    | 152/148 J (154/150 E) |                    |                                    |                                | 1008                          | 301                     | 482                       | 3077                  | 9.00                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | FUELMAX S HL            | 156/150 L             | High Load          |                                    |                                | 1089                          | 311                     | 467                       | 3086                  | 9.00                   | 8000                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | KMAX S HL               | 156/150 L             | High Load          |                                    |                                | 1015                          | 314                     | 470                       | 3103                  | 9.00                   | 8000                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS II+ HL              | 156/150 L             | High Load          |                                    |                                | 1011                          | 316                     | 489                       | 3086                  | 9.00                   | 8000                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS II HL               | 156/150 L             | High Load          |                                    |                                | 1014                          | 315                     | 471                       | 3095                  | 9.00                   | 8000                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS II+                 | 154/150 L (152/148 M) |                    |                                    |                                | 1011                          | 315                     | 469                       | 3086                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS                     | 154/150 L (152/148 M) |                    |                                    |                                | 1015                          | 314                     | 471                       | 3088                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTS                     | 154/150 K (152/148 L) |                    |                                    |                                | 1020                          | 314                     | 489                       | 3114                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | FUELMAX D               | 154/150 L (152/148 M) |                    |                                    |                                | 1013                          | 312                     | 471                       | 3100                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | KMAX D                  | 154/150 L (152/148 M) |                    |                                    |                                | 1021                          | 313                     | 475                       | 3110                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHD II                  | 154/150 L (152/148 M) |                    |                                    |                                | 1017                          | 315                     | 472                       | 3104                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHD II+                 | 154/150 L (152/148 M) |                    |                                    |                                | 1017                          | 315                     | 472                       | 3104                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHD II+                 | 154/150 L (152/148 M) |                    |                                    |                                | 1019                          | 315                     | 471                       | 3110                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTD                     | 154/150 K (152/148 L) |                    |                                    |                                | 1025                          | 314                     | 472                       | 3129                  | 9.00                   | 7500                  | 13400               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 22.5" sizes - 75 Series                            |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 445/5922.5                                         |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| MSS                                                |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 170 J                                              |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| MRT(3)                                             |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 13.00                                              |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      | 13.00-14.00 |  |  |  |  |  |  |  |  |  |  |  |
| 170 S                                              |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      | 13.00       |  |  |  |  |  |  |  |  |  |  |  |
| 8240 8890 9530 10160 10780 11090 11400 11700 12000 |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 22.5" sizes - 80 Series                            |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
| 285/80R22.5                                        |                         |                       |                    |                                    |                                |                               |                         |                           |                       |                        |                       |                     |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MARATHON COACH          | 154/148 M             | High Load          |                                    |                                | 1050                          | 299                     | 486                       | 3205                  | 8.50                   | 7500                  | 13000               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | ULTRA GRIP COACH        | 154/148 M             | High Load          |                                    |                                | 1061                          | 298                     | 492                       | 3239                  | 8.50                   | 7500                  | 13000               |                   | 9.00                                                          | 8.25-9.00            | 335        |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | KMAX S HL               | 154/148 M             | High Load          |                                    |                                | 1057                          | 302                     | 491                       | 3217                  | 8.50                   | 7500                  | 13000               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS II+ HL              | 154/148 M             | High Load          |                                    |                                | 1050                          | 298                     | 486                       | 3205                  | 8.50                   | 7500                  | 13000               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS II                  | 152/148 M             |                    |                                    |                                | 1053                          | 299                     | 489                       | 3214                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS II+                 | 152/148 M             |                    |                                    |                                | 1053                          | 299                     | 489                       | 3214                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS II HL               | 154/148 M             | High Load          |                                    |                                | 1056                          | 299                     | 489                       | 3223                  | 8.50                   | 7500                  | 13000               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS II                  | 152/148 M             |                    |                                    |                                | 1054                          | 298                     | 489                       | 3217                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHS II HC <sup>c)</sup> | 152/148 M             | HC <sup>c)</sup>   |                                    |                                | 1052                          | 295                     | 491                       | 3211                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTS                     | 152/148 L             |                    |                                    |                                | 1056                          | 294                     | 489                       | 3223                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MSS II                  | 152/148 K             |                    |                                    |                                | 1057                          | 300                     | 491                       | 3226                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHS LRB                 | 152/148 M             | LRB                |                                    |                                | 1047                          | 295                     | 484                       | 3196                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTD                     | 152/148 J (154/150 E) |                    |                                    |                                | 1061                          | 198                     | 494                       | 3239                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | KMAX D                  | 152/148 M             |                    |                                    |                                | 1065                          | 305                     | 496                       | 3227                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | LHD II+                 | 152/148 M             |                    |                                    |                                | 1059                          | 299                     | 492                       | 3233                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHD II+                 | 152/148 M             |                    |                                    |                                | 1065                          | 299                     | 495                       | 3251                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | RHD II HC <sup>c)</sup> | 152/148 M             | HC <sup>c)</sup>   |                                    |                                | 1062                          | 296                     | 495                       | 3242                  | 8.50                   | 7100                  | 12600               |                   | 8.25                                                          | 8.25-9.00            | 326        |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | WTD                     | 152/148 L             |                    |                                    |                                | 1064                          | 297                     | 494                       | 3248                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |
|                                                    | MSS II                  | 152/148 K             |                    |                                    |                                | 1065                          | 298                     | 497                       | 3251                  | 8.50                   | 7100                  | 12600               |                   |                                                               |                      |            |                        |                      |             |  |  |  |  |  |  |  |  |  |  |  |

<sup>a</sup> Additional Service Description based on UNECE Regulation N° 54 located on the sidewall of the tire in a circle close to the principal service description. Load/speed variations do not apply to the additional Service Description.  
<sup>b</sup> Measured fire dimension using the Goodyear recommended rim.  
<sup>c</sup> FRT = "Free Rolling Tire"; this tire may only be fitted on a trailer or tag axle and not on a drive or steer axle.  
<sup>d</sup> HCT = Hot Climate Technology: Tire made with specific technical features to cope with special conditions in hot climate countries.

# Goodyear Technical Data

| Size                          | Goodyear Design          | Load / Speed index | Single Point marking <sup>1)</sup> | Additional Markings / comments | Tire Dimensions <sup>2)</sup> |                         |                           | Max load              |                        | Load Capacity per axle (in kg at inflation pressure (in bar)) |                     |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------------|--------------------------|--------------------|------------------------------------|--------------------------------|-------------------------------|-------------------------|---------------------------|-----------------------|------------------------|---------------------------------------------------------------|---------------------|-------------------|----------------|----------------------|------------|------------------------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
|                               |                          |                    |                                    |                                | Overall Diameter (+/-1.5%)    | Section Width (+/-1.5%) | Static Loaded Radius (mm) | Rolling Circumf. (mm) | Nominal pressure (bar) | Single Axle load (kg)                                         | Dual Axle load (kg) | Recomm. Rim width | Permitted Rims | Minimal Dual spacing | Load index | Single / dual mounting | Tire pressure in bar |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3150R22.5                     | FUELMAX S                | 150/150 L          | (154/150 M)                        |                                | 1080                          | 313                     | 501                       | 3294                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | KMAX S                   | 150/150 L          | (154/150 M)                        |                                | 1084                          | 313                     | 502                       | 3298                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | LHS II+ HL               | 150/150 L          | (154/150 M)                        | High Load                      | 1080                          | 316                     | 499                       | 3297                  | 9.00                   | 8500                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | LHS II                   | 150/150 L          | (154/150 M)                        |                                | 1080                          | 316                     | 499                       | 3297                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | LHS II+                  | 150/150 L          | (154/150 M)                        |                                | 1080                          | 316                     | 499                       | 3297                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHS II HL                | 150/150 L          | (154/150 M)                        | High Load                      | 1080                          | 317                     | 501                       | 3297                  | 9.00                   | 8500                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHS II                   | 150/150 L          | (154/150 M)                        |                                | 1080                          | 317                     | 501                       | 3297                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHS II HCT <sup>3)</sup> | 150/150 L          | (154/150 M)                        | HCT <sup>4)</sup>              | 1081                          | 317                     | 502                       | 3300                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | WTS                      | 150/150 K          | (154/150 L)                        |                                | 1083                          | 316                     | 500                       | 3306                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSS II                   | 150/150 K          |                                    |                                | 1086                          | 316                     | 502                       | 3315                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ORS                      | 150/150 K          |                                    |                                | 1085                          | 315                     | 502                       | 3312                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MARRATHON COACH          | 150/150 L          | (154/150 M)                        |                                | 1081                          | 315                     | 500                       | 3300                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | FUELMAX D                | 150/150 L          | (154/150 M)                        |                                | 1083                          | 315                     | 502                       | 3297                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22.5" sizes - Standard Series | KMAX D                   | 150/150 L          | (154/150 M)                        |                                | 1084                          | 313                     | 510                       | 3307                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | LHD II                   | 150/150 L          | (154/150 M)                        |                                | 1087                          | 316                     | 503                       | 3318                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | LHD II+                  | 150/150 L          | (154/150 M)                        |                                | 1087                          | 316                     | 503                       | 3318                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHD II+                  | 150/150 L          | (154/150 M)                        |                                | 1092                          | 314                     | 506                       | 3333                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHD II                   | 150/150 L          | (154/150 M)                        |                                | 1091                          | 307                     | 505                       | 3330                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ULTRA GRIP COACH         | 150/150 L          | (154/150 M)                        |                                | 1093                          | 314                     | 506                       | 3336                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | WTD                      | 150/150 L          | (154/150 M)                        |                                | 1093                          | 316                     | 505                       | 3336                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSD II                   | 150/150 K          |                                    |                                | 1094                          | 316                     | 506                       | 3339                  | 8.50                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | 12R22.5                  | RHS II             | 140/145 L                          |                                |                               | 1058                    | 274                       | 492                   | 3220                   | 8.50                                                          | 6300                | 11000             |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               |                          | MSS                | 140/145 K                          |                                |                               | 1059                    | 274                       | 492                   | 3233                   | 8.50                                                          | 6300                | 11000             |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               |                          | MCA                | 140/145 J                          | (152/146 E)                    |                               | 1065                    | 284                       | 499                   | 3251                   | 8.50                                                          | 6300                | 11000             |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               |                          | RHD II             | 140/145 L                          |                                |                               | 1064                    | 275                       | 497                   | 3248                   | 8.50                                                          | 6300                | 11000             |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RHS II                        |                          | 152/148 L          |                                    |                                | 1083                          | 296                     | 502                       | 3306                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RHS II HCT <sup>3)</sup>      |                          | 152/148 L          |                                    | HCT <sup>4)</sup>              | 1085                          | 287                     | 507                       | 3321                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MSD II                        |                          | 152/148 K          |                                    |                                | 1100                          | 288                     | 513                       | 3358                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RHD II                        |                          | 152/148 L          |                                    |                                | 1091                          | 289                     | 509                       | 3330                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| RHD II HCT <sup>3)</sup>      |                          | 152/148 L          |                                    | HCT <sup>4)</sup>              | 1094                          | 287                     | 509                       | 3330                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MSD II                        |                          | 152/148 K          |                                    |                                | 1095                          | 294                     | 513                       | 3358                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| MSD II HCT <sup>3)</sup>      |                          | 152/148 K          |                                    | HCT <sup>4)</sup>              | 1095                          | 294                     | 512                       | 3342                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ORD                           |                          | 152/146 J          |                                    |                                | 1102                          | 296                     | 512                       | 3364                  | 8.50                   | 7100                                                          | 12600               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13R22.5                       | RHS II                   | 150/150 L          | (154/150 M)                        |                                | 1120                          | 318                     | 519                       | 3419                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSS II                   | 150/150 K          |                                    |                                | 1130                          | 314                     | 525                       | 3449                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSS                      | 150/150 K          |                                    |                                | 1131                          | 317                     | 522                       | 3452                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | RHD II                   | 150/150 L          | (154/150 M)                        |                                | 1134                          | 316                     | 526                       | 3462                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSD II                   | 150/150 K          |                                    |                                | 1139                          | 314                     | 530                       | 3477                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ORD                      | 150/150 G          | (154/150 J)                        |                                | 1140                          | 319                     | 533                       | 3480                  | 8.75                   | 8000                                                          | 13400               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22.5" sizes - 90 Series       | MSS                      | 164 G              |                                    |                                | 1244                          | 376                     | 571                       | 3797                  | 7.50                   | 10000                                                         |                     |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ORD                      | 164 G              |                                    |                                | 1262                          | 382                     | 580                       | 3852                  | 7.50                   | 10000                                                         |                     |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24" sizes                     | MSS II                   | 160/156 K          |                                    |                                | 1219                          | 315                     | 566                       | 3694                  | 8.50                   | 9000                                                          | 16000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSD II                   | 160/156 K          |                                    |                                | 1222                          | 315                     | 572                       | 3733                  | 8.50                   | 9000                                                          | 16000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ORD                      | 160/156 G          |                                    |                                | 1235                          | 312                     | 571                       | 3770                  | 8.50                   | 9000                                                          | 16000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | MSS II                   | 162/160 K          |                                    |                                | 1220                          | 312                     | 564                       | 3724                  | 8.50                   | 9500                                                          | 18000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3250R24                       | MSD II                   | 162/160 K          |                                    |                                | 1229                          | 312                     | 570                       | 3752                  | 8.50                   | 9500                                                          | 18000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                               | ORD                      | 162/160 G          |                                    |                                | 1233                          | 319                     | 571                       | 3764                  | 8.50                   | 9500                                                          | 18000               |                   |                |                      |            |                        |                      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

<sup>1)</sup> Additional Service Description based on UNECE Regulation N° 54 located on the sidewall of the tire in a circle close to the principal service description. Leadspeed variations do not apply to the additional Service Description.  
<sup>2)</sup> Measured fire dimension using the Goodyear recommended rim.  
<sup>3)</sup> FRT = "Free Rolling Tire"; this tire may only be fitted on a trailer or tag axle and not on a drive or steer axle.  
<sup>4)</sup> HCT = Hot Climate Technology: Tire made with specific technical features to cope with special conditions in hot climate countries.

# Regrooving Guidelines.



**GOODYEAR**

MADE TO FEEL GOOD.

Regrooving Guidelines

# Regrooving Guidelines

Depending on conditions of use and maintenance, Goodyear's high-quality tire casings can give each tire multiple lives (new, regrooved, retread, regrooved retread) lowering operating costs.

## Regrooving basics

1. A regrooved tire is a tire, either new or retreaded, on which the tread pattern has been renewed or a new tread pattern has been produced by cutting into the tread deeper than the original moulded groove depth.
2. The regrooving of truck tires should be entrusted solely to fully trained operators.
3. Only proven regrooving tools with electrically heated blades should be used.
4. A minimum of remaining undertread rubber is essential to avoid damage at the top breaker belt, groove cracking and/or stone damage.
5. If regrooved according to the recommendations outlined in this manual, Goodyear tires can, in principle, be mounted on all wheel positions. However, since it has become standard practice for users to normally fit new tires on front axes, the regrooved tires will usually be mounted on the rear axes or trailer positions.
6. Tires which are heavily damaged in the tread area (e.g. rib tearing, multiple cutting and chipping) should not be regrooved but retreaded.

All tires that are marked 'Regroovable' in the sidewall areas have extra undertread thickness for regrooving purposes.

## Regrooving recommendations

1. Under NO circumstances should the tire be completely worn before regrooving. It is strongly recommended to regroove when 3 to 6 mm of the original design is still left.
2. Determine the blade setting depth for each individual tire as follows:
  - a) Measure the remaining groove depth AT THE POINT OF LOWEST TREAD DEPTH;
  - b) Set the blade in the cutter head to the 'minimum remaining groove depth' + 3 mm maximum regrooving depth. This will maintain a 3 mm gauge under the regrooved tread.
3. While regrooving, hold the cutter so that the underside of the cutting head is flush against the tread surface.
4. The maximum regrooving depth for all Goodyear tires is 3 mm.
5. If the wear is irregular, probing of the remaining undertread gauge is necessary to ensure that 3 mm of undertread will remain after regrooving.

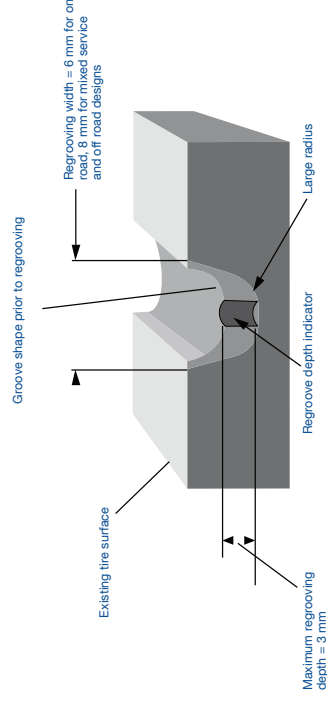
## Regrooving Goodyear remould tires

Provided that the retreading process is on Goodyear casings carried out by Goodyear Authorised Retreader, Goodyear remould tires may be regrooved to the same pattern as the new tire, with a maximum regrooving depth of 3 mm.

## Regrooving parameters

Regroove Goodyear truck tires when there is still sufficient tread depth. Suggested remaining tread depths are: 3-4 mm for regular highway user; 5-6 mm in operating conditions where penetration damage is likely.

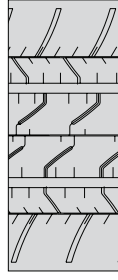
Regrooving depth indicators are moulded into the tire design. They allow regrooving tools to be set to the optimum depth.



## On Road Fuel Efficient

### FUELMAX S

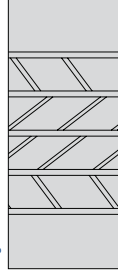
New tire tread



80% worn



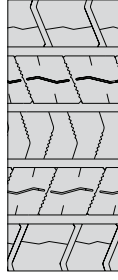
Regrooved tire



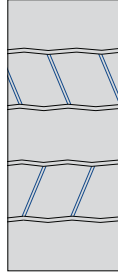
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### FUELMAX D

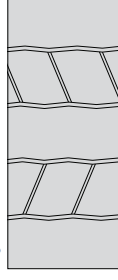
New tire tread



80% worn



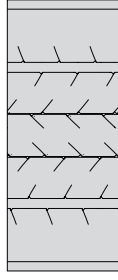
Regrooved tire



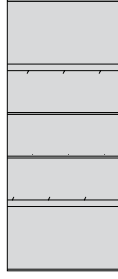
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### FUELMAX T

New tire tread



80% worn



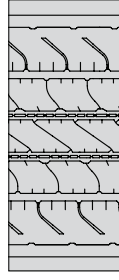
Regrooved tire



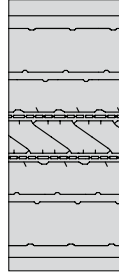
Maximum regrooving depth 3 mm, regrooving width 6 mm. Retreadable by Goodyear TreadMax.

### Marathon LHS II / LHS II+ 22.5

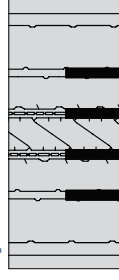
New tire tread



80% worn



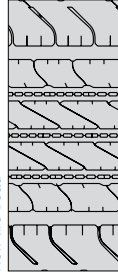
Regrooved tire



Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### Marathon LHS II 65, 55 and 50 series

New tire tread



80% worn



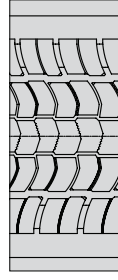
Regrooved tire



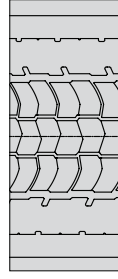
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### Marathon LHD II / LHD II+ 22.5

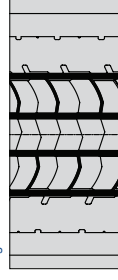
New tire tread



80% worn



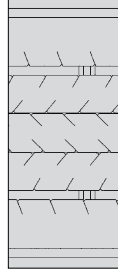
Regrooved tire



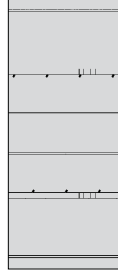
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### Marathon LHT II 22.5

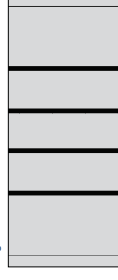
New tire tread



80% worn



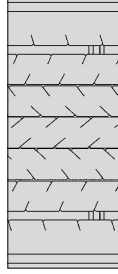
Regrooved tire



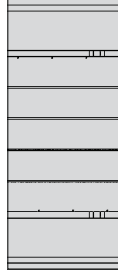
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### Marathon LHT II 435/50R19.5

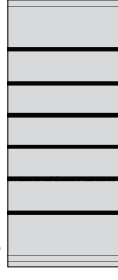
New tire tread



80% worn



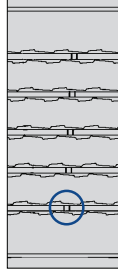
Regrooved tire



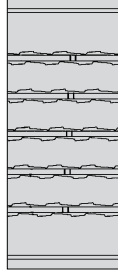
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### Marathon LHT 435/50R22.5

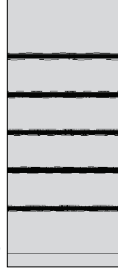
New tire tread



80% worn



Regrooved tire



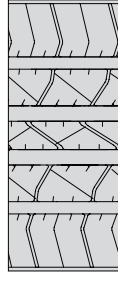
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

O = Regrooving depth indicators

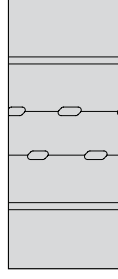
# On Road Mileage

## KMAX S

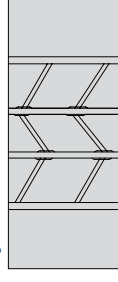
New tire tread



80% worn



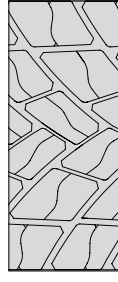
Regrooved tire



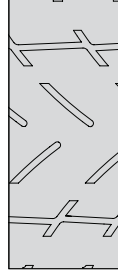
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## KMAX D

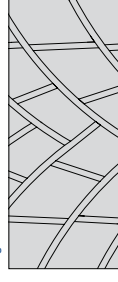
New tire tread



80% worn



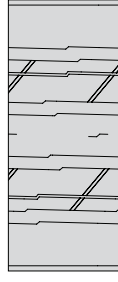
Regrooved tire



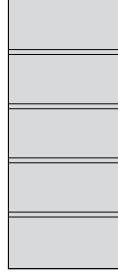
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## KMAX T

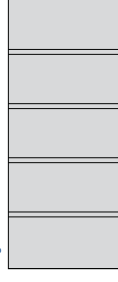
New tire tread



80% worn



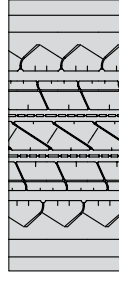
Regrooved tire



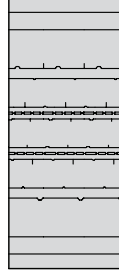
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHS II 22.5

New tire tread



80% worn



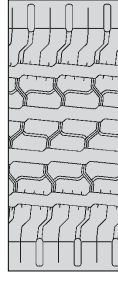
Regrooved tire



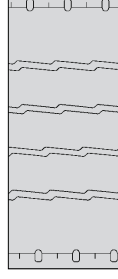
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHS II 17.5 and 19.5

New tire tread



80% worn



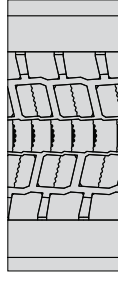
Regrooved tire



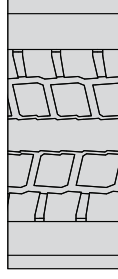
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHD II / RHD II+ 22.5

New tire tread



80% worn



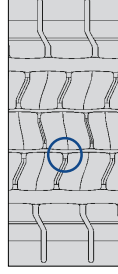
Regrooved tire



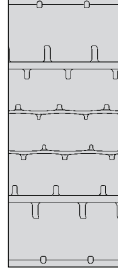
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHD II 17.5 and 19.5

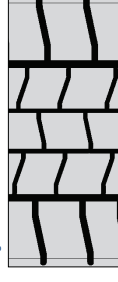
New tire tread



80% worn



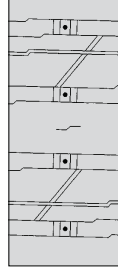
Regrooved tire



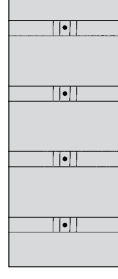
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHT II

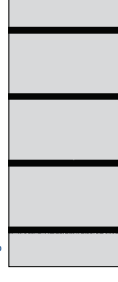
New tire tread



80% worn



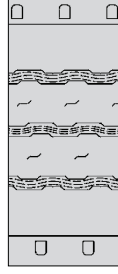
Regrooved tire



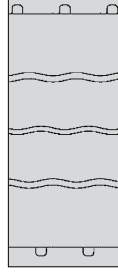
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Regional RHT II low platform

New tire tread



80% worn



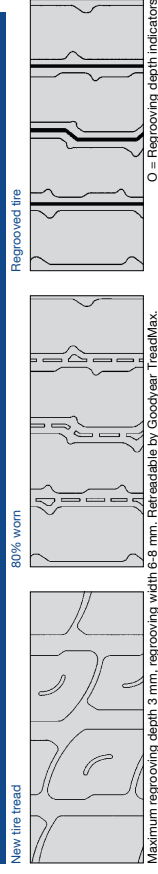
Regrooved tire



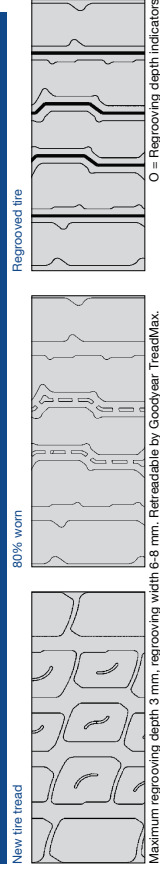
Maximum regrooving depth 2.5 mm, regrooving width 8-10 mm. Retreadable by Goodyear TreadMax.

## Mixed Services

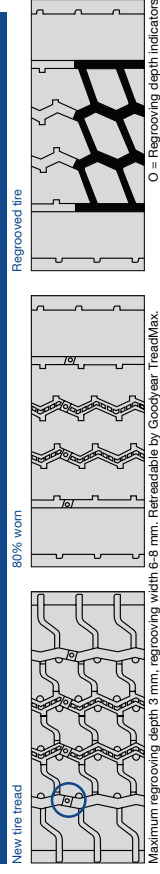
### OmniTrac MSS II 4 ribs



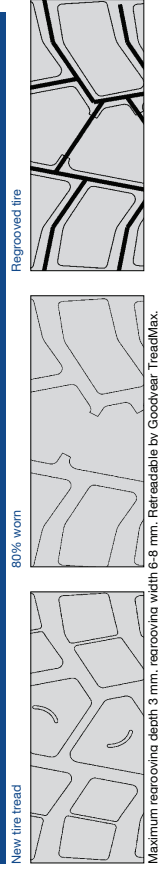
### OmniTrac MSS II 5 ribs



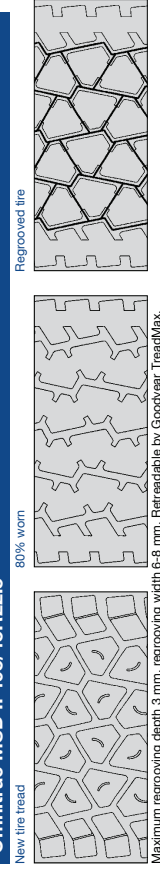
### OmniTrac MSS 75 and 90 series



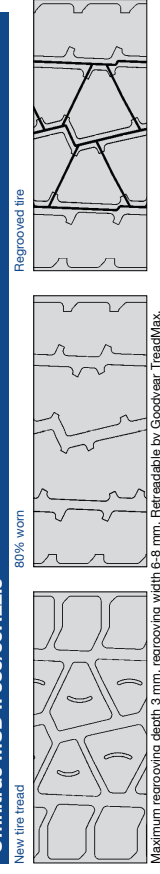
### OmniTrac MSD II



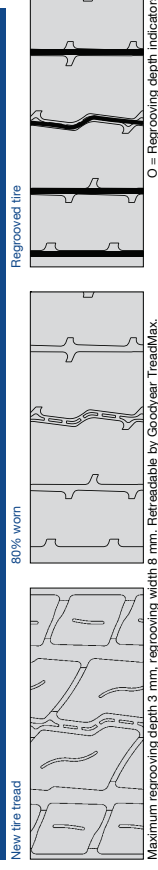
### OmniTrac MSD II 495/45R22.5



### OmniTrac MSD II 385/55R22.5



### OmniTrac MST II



## Offroad

### Offroad ORD

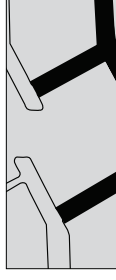
New tire tread



80% worn



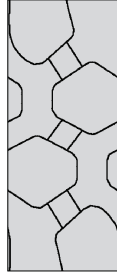
Regrooved tire



Maximum regrooving depth 3 mm, regrooving width 8-10 mm. Retreadable by Goodyear TreadMax.

### Offroad ORD 90 series

New tire tread



80% worn



Regrooved tire



Maximum regrooving depth 3 mm, regrooving width 8-10 mm. Retreadable by Goodyear TreadMax.

### Offroad ORD 14.00R20

New tire tread



80% worn



Regrooved tire

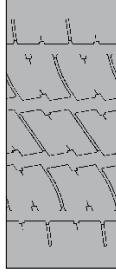


Maximum regrooving depth 3 mm, regrooving width 8-10 mm. Retreadable by Goodyear TreadMax.

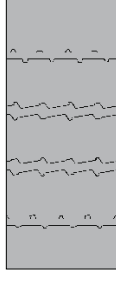
## Urban

### UrbanMax MCA

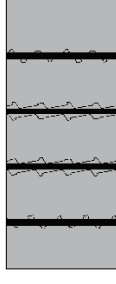
New tire tread



80% worn



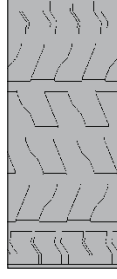
Regrooved tire



Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### UrbanMax MCD Traction

New tire tread



80% worn



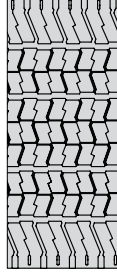
Regrooved tire



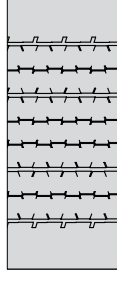
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

### MCD Super Single

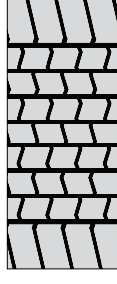
New tire tread



80% worn



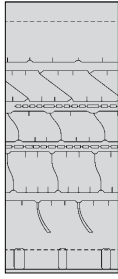
Regrooved tire



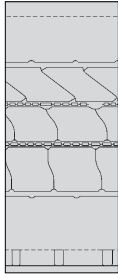
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## Marathon Coach

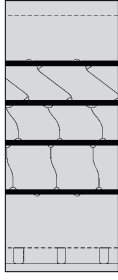
New tire tread



80% worn



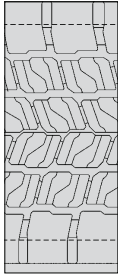
Regrooved tire



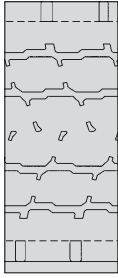
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## UltraGrip Coach

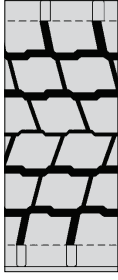
New tire tread



80% worn



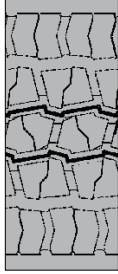
Regrooved tire



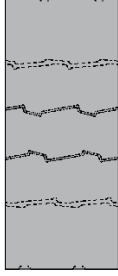
Maximum regrooving depth 3 mm, regrooving width 6-10 mm. Retreadable by Goodyear TreadMax.

## UltraGrip WTS

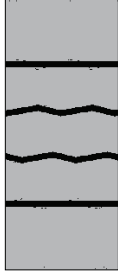
New tire tread



80% worn



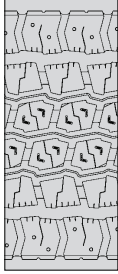
Regrooved tire



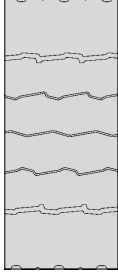
Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.

## UltraGrip WTS 6-rib

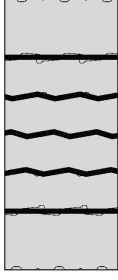
New tire tread



80% worn



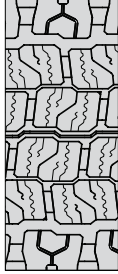
Regrooved tire



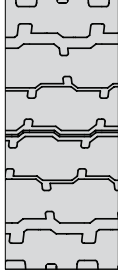
Maximum regrooving depth 3 mm, regrooving width 6-10 mm. Retreadable by Goodyear TreadMax.

## UltraGrip WTD

New tire tread



80% worn



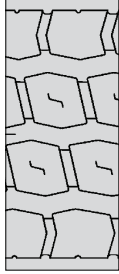
Regrooved tire



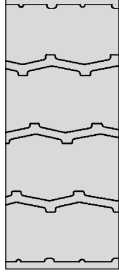
Maximum regrooving depth 3 mm, regrooving width 6-10 mm. Retreadable by Goodyear TreadMax.

## UltraGrip WTT

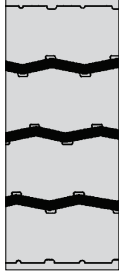
New tire tread



80% worn



Regrooved tire



Maximum regrooving depth 3 mm, regrooving width 6-8 mm. Retreadable by Goodyear TreadMax.



# Tire Technology.

**GOODYEAR**

MADE TO FEEL GOOD.

# Tire construction and tire terminology

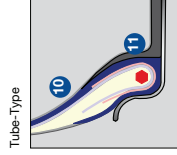
Truck tires are a high value investment whose performance potential can be dramatically influenced by a multitude of service parameters – which can be globally identified as operating and maintenance conditions. In other words, the true cost per kilometre is not only a function of the tire quality and price, but is primarily a direct consequence of the actual running conditions of the tire. In order to be able to optimise these conditions, it is essential to first of all be familiar with the construction characteristics of a tire and to understand its mechanical properties.

It will also be advisable to have a basic knowledge of vehicle dynamics and to recognise the importance of environmental factors such as road design and ambient temperature.

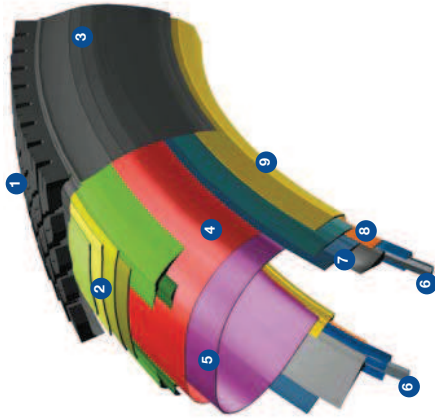
This brochure is designed to convey these elementary rules and guidelines and to therefore help minimize fleet operating expenses. For further clarifications and updated facts and figures, please consult with your Goodyear truck tire specialist.

## Tire construction

The commercially available tire is a composite product, made up from rubber compounds and textile, steel synthetic reinforcements. The major components of the Goodyear radial ply, steel carcass and belt tire are described below.



- Features
- 1 Tread
  - 2 Belt Package
  - 3 Sidewall
  - 4 Ply
  - 5 Insealer
  - 6 Bead Bundle
  - 7 Apexes
  - 8 Chipper
  - 9 Chafer
  - 10 Tube\*
  - 11 Flap\*
- \*Only applicable to tube type tires



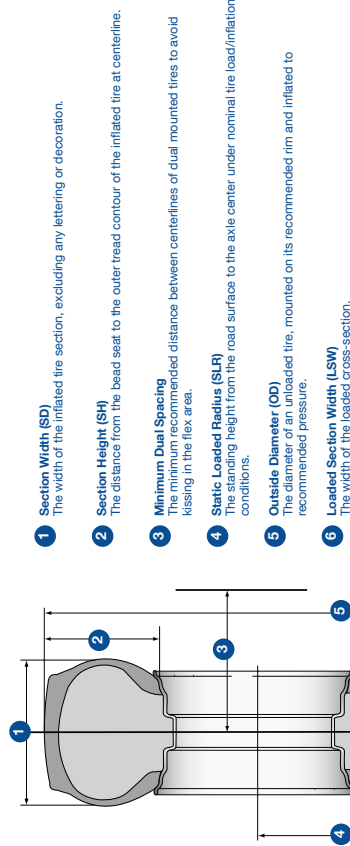
## Tire terminology

- o **Tread**  
Provides primarily traction and wear and protects the carcass underneath.
- o **Belt**  
Multiple, low angle, steel cord layers provide strength to the tire, stabilise the tread and prevent penetrations into the carcass.
- o **Sidewall**  
Provides protection for the ply and withstands flexing and weathering.
- o **Ply**  
The radial (90°) ply transmits all load, braking and steering forces between the wheel and the road and withstands the burst loads of the tire under operating pressure.
- o **Insealer**  
A layer of rubber in tubeless tires specially compounded to prevent loss of air.
- o **Bead bundle**  
The steel bead bundle properly seats and seals the tire on the rim and maintains it in position.
- o **Apex**  
Rubber filler in the bead and lower sidewall area to provide progressive transition from the stiff bead area into the flexible sidewall.
- o **Chafer**  
A layer of hard rubber that resists erosion of the bead zone by the rim flange.
- o **Tube\***  
A separate air chamber, compounded to prevent loss of air, inserted into tube-type tires.
- o **Flap\***  
A rubber band placed between tube and rim. Protects the tube from chafing and prevents damage to the tube by the rim.

\*Only applicable to tube type tires.

## Tire dimension definitions

Tire companies throughout the world are members of regional tire manufacturers associations (ETRTO for Europe), which establish tire dimensions and tolerances, load carrying capacities and inflation pressures for the different tire categories and sizes. The basic tire and rim dimension nomenclature is explained below.



**Aspect Ratio**  
The section height (SH) expressed as a percentage of the section width (SD).

# Truck Tire Label

## What is it?

Thanks to new legislation, commercial vehicle operators are to be helped in choosing their tyres. Tire labeling, which the European Union introduces on 1st November 2012, will ensure that tires sold in the EU are accompanied by data related to their fuel efficiency, wet grip and exterior noise.

Clear and informative, the label information resembles that on existing energy efficiency labels with A being the highest performing and G the lowest.

## What does change?

Dealers have to provide information about the tire label to the buyer at the time of purchase.

- This can be done in two different ways:
- By including the information on the receipt
  - By handing over a separate note

## What does it mean?



**FUEL EFFICIENCY / ROLLING RESISTANCE**  
**A = Most fuel efficient tire**  
**F = Least fuel efficient tire**  
 (Class G will not be used for truck tires)

A rolling tire deforms and dissipates energy, and is one of the resistive forces acting on a vehicle. The energy that is lost in this way is known as 'rolling resistance' and directly impacts on fuel consumption and the environment. With lower rolling resistance the tire deformation requires less energy, less fuel and, in turn, less CO<sub>2</sub> is emitted. A win-win situation.

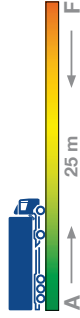
Effects may vary according to the vehicle and driving conditions. However, the difference between a complete set of new A-class and F-class tires could reduce a truck's fuel consumption by up to 15%.\*



**WET GRIP / BRAKING**  
**A = Shortest braking distance**  
**F = Longest braking distance**  
 (Class G will not be used for truck tires)

Tires with excellent grip in the wet have shorter braking distances on slippery roads, essential for safety.

Effects may vary according to the vehicle, driving conditions and test method adopted. However, in the case of full braking, the difference between A-class and F-class tires could be up to 30% shorter braking distance. This means for a typical truck driving at 80 km/h up to 25 m shorter braking distance.\*\*

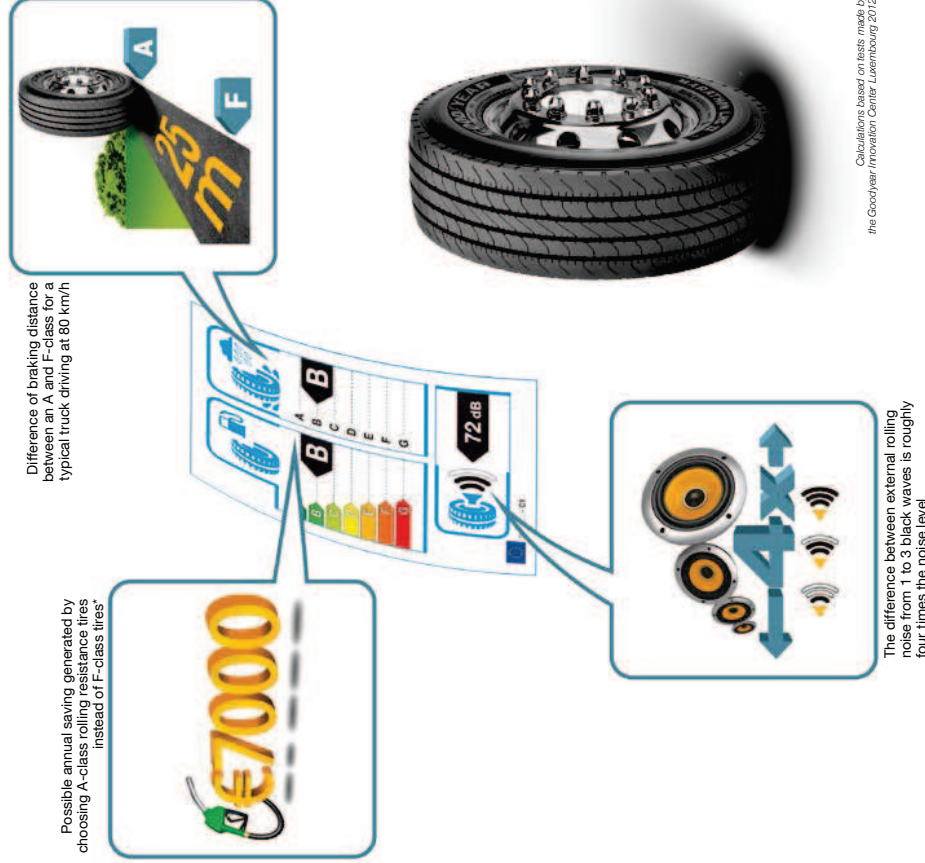


**NOISE EMISSION / EXTERIOR NOISE**  
 Measured in decibels (dB)  
 Three classes

A tire's exterior noise grading is expressed in decibels (dB) and accompanied by one, two or three sound waves on the label.

One wave corresponds to the quietest tire, three to the noisiest. In fact, three waves is the current limit, while two meets future laws and one is a further 3dBs below. The quieter the tire the more environmental-friendly it is.

## Benefits of the labeling at a glance



## Not the full story. What's not covered?

While we're completely in favour of the introduction of tire labeling, it's essential to remember that it doesn't tell customers everything they need to know. So while it's a great starting point for customers to get information that is comparable, reliable and objective, it's by no means exhaustive. After all, tires are more than simply black and round; they're a complex piece of engineering, it's therefore important to look at the bigger picture.

- Tire labeling only covers fuel efficiency, wet grip and exterior noise.
- Key criteria such as mileage performance, traction and retreadability are not covered.
- Winter conditions are not taken into consideration.

\*The calculation is based on the following assumption: Average fuel consumption of vehicle 32.3l/100km → 323l/1000km → 14,7% potential savings = 47,5l less fuel consumption per 1000 km → fuel price 1.50 EUR/liter = 71,25 EUR/1000km → 100,000 km mileage/year = 7,125 EUR savings/year.

## Tire markings

## Size markings

There are various forms of tire size marking and these differ in order to differentiate between tire types. The size markings should be treated the same as a part number on a vehicle, so the motorist should ensure that the tires on his vehicle carry the precise markings indicated in the vehicle handbook or are an approved alternative fitment.

## Service description

In accordance with the European regulation (ECE-R54), all tires intended for commercial vehicles will be marked with a "Service Description" located near to the tire size marking. This consists of a code which indicates operating limits of load and speed and includes a "load index" for single and dual tire fitment and a "speed symbol" (e.g. 156/150 L).

An additional marking may be used to show the corresponding tire loads for an alternative higher speed or for an alternative higher load. This additional marking will be placed in a circle.

## Free Rolling Tire (FRT)

'FRT' stands for 'Free Rolling Tire' and is a legal marking according to the UNECE Regulation No. 54, which indicates that the tire is specifically designed and intended for the equipment of trailer axles and axles of motor vehicles other than front steering and all drive axles.

Therefore these trailer tires marked 'FRT' should be used exclusively on trailer axles and axles of motor vehicles other than front steering and all drive axles and should not be fitted in any other position.

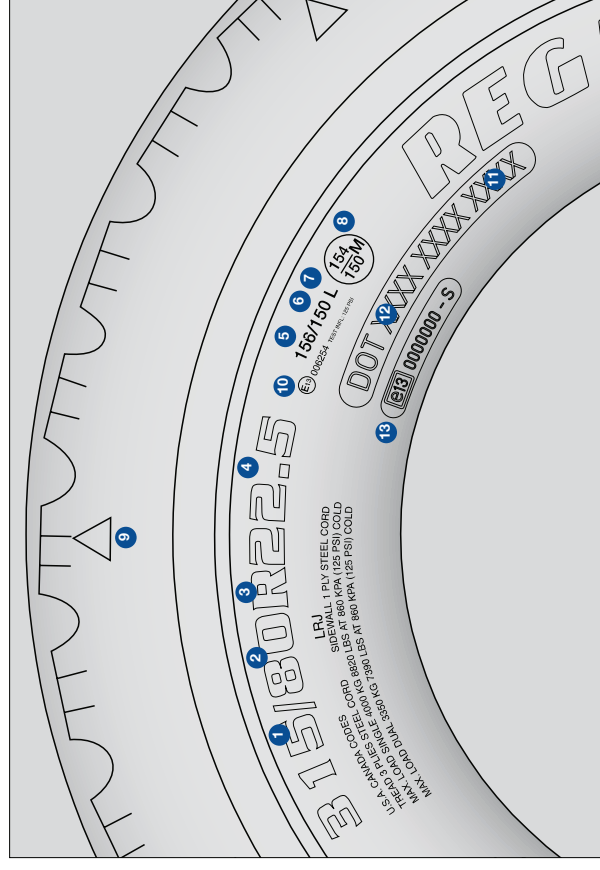
Goodyear Dunlop will not warrant and cannot be held accountable for any potential liability claim involving FRT tires fitted outside these recommendations.



## Size definitions

Listed below are the size designations that are being used on truck tires. With each size is an explanation of what each component describes.

|                            |          |          |                           |                                     |                 |
|----------------------------|----------|----------|---------------------------|-------------------------------------|-----------------|
| <b>12</b>                  | <b>/</b> | <b>R</b> | <b>22.5</b>               | <b>152/148</b>                      | <b>M</b>        |
| Section width<br>in inches |          | R-radial | Rim diameter<br>in inches | Load index<br>(single/dual mounted) | Speed<br>symbol |
| <b>295</b>                 | <b>/</b> | <b>R</b> | <b>22.5</b>               | <b>152/148</b>                      | <b>M</b>        |
| Section width<br>in mm     |          | R-radial | Rim diameter<br>in inches | Load index<br>(single/dual mounted) | Speed<br>symbol |
| <b>365</b>                 | <b>/</b> | <b>R</b> | <b>20.0</b>               | <b>160</b>                          | <b>J</b>        |
| Section width<br>in mm     |          | R-radial | Rim diameter<br>in inches | Load index<br>(single/dual mounted) | Speed<br>symbol |



The position of the major tire markings are as shown:

- 1 Tire Section width (mm or inches)
- 2 Aspect ratio SH / SD
- 3 Radial construction (R=Radial)
- 4 Rim Diameter (inches)
- 5 Load Index (Max. load per tire - Single tire)
- 6 Load Index (Max. load per tire - dual mounted)
- 7 Speed Symbol
- 8 Alternative load indices when used with alternative speed
- 9 TWI - Tread Wear Indicator
- 10 ECE Homologation number
- 11 Date code (week, year)
- 12 DOT Manufacturing Code
- 13 Noise number - indicates that the tire conforms to ECE noise regulations

USA and Canada

In accordance with US Safety Regulation MVSS 109 for Car tires, and 119 for Truck tires, the maximum load of the tire in pounds (LBs) and its corresponding air pressure in pounds per square inch (PSI) must be shown on the tire.

Additionally, the tire must be marked D.O.T. (Department of Transportation) to insure that it conforms to all valid regulations in these countries.

# Load Index and Speed Symbol

These parameters are established by ETRTO and are the two most important service factors determining tire performance.

Load indices and speed symbols are shown on both tire sidewalls. Example: 149/145 L. The first number denotes the tire load carrying capacity in SINGLE application, while the second number refers to DUAL fitment. The letter "L" defines the maximum speed limit. Unmarked Radial tires are allowed up to a speed of 110 km/h. (Bias ply tires are confined to 100 km/h).

Retreaded tires can be run up to a maximum speed of 110 km/h, unless they are marked otherwise.

Special purpose tires, for specific heavy duty applications must have the respective speed limitations identified on the sidewall.

The speed and load service identifications below are required by the European ECE-R54 regulation. The scale below shows the relationship between the Load Index (LI) and actual load values in kilograms (kg).

| LI | kg  | LI | kg  | LI  | kg   | LI  | kg   | LI  | kg   | LI  | kg   |
|----|-----|----|-----|-----|------|-----|------|-----|------|-----|------|
| 51 | 195 | 71 | 345 | 91  | 615  | 111 | 1090 | 131 | 1950 | 151 | 3450 |
| 52 | 200 | 72 | 355 | 92  | 630  | 112 | 1120 | 132 | 2000 | 152 | 3550 |
| 53 | 206 | 73 | 365 | 93  | 650  | 113 | 1150 | 133 | 2060 | 153 | 3650 |
| 54 | 212 | 74 | 375 | 94  | 670  | 114 | 1180 | 134 | 2120 | 154 | 3750 |
| 55 | 218 | 75 | 387 | 95  | 680  | 115 | 1215 | 135 | 2180 | 155 | 3875 |
| 56 | 224 | 76 | 400 | 96  | 710  | 116 | 1250 | 136 | 2240 | 156 | 4000 |
| 57 | 230 | 77 | 412 | 97  | 730  | 117 | 1285 | 137 | 2300 | 157 | 4125 |
| 58 | 236 | 78 | 425 | 98  | 750  | 118 | 1320 | 138 | 2360 | 158 | 4250 |
| 59 | 243 | 79 | 437 | 99  | 775  | 119 | 1360 | 139 | 2430 | 159 | 4375 |
| 60 | 250 | 80 | 450 | 100 | 800  | 120 | 1400 | 140 | 2500 | 160 | 4500 |
| 61 | 257 | 81 | 462 | 101 | 825  | 121 | 1450 | 141 | 2575 | 161 | 4625 |
| 62 | 265 | 82 | 475 | 102 | 850  | 122 | 1500 | 142 | 2650 | 162 | 4750 |
| 63 | 272 | 83 | 487 | 103 | 875  | 123 | 1550 | 143 | 2725 | 163 | 4875 |
| 64 | 280 | 84 | 500 | 104 | 900  | 124 | 1600 | 144 | 2800 | 164 | 5000 |
| 65 | 290 | 85 | 515 | 105 | 925  | 125 | 1650 | 145 | 2900 | 165 | 5150 |
| 66 | 300 | 86 | 530 | 106 | 950  | 126 | 1700 | 146 | 3000 | 166 | 5300 |
| 67 | 307 | 87 | 545 | 107 | 975  | 127 | 1750 | 147 | 3075 | 167 | 5450 |
| 68 | 315 | 88 | 560 | 108 | 1000 | 128 | 1800 | 148 | 3150 | 168 | 5600 |
| 69 | 325 | 89 | 580 | 109 | 1020 | 129 | 1850 | 149 | 3250 | 169 | 5800 |
| 70 | 335 | 90 | 600 | 110 | 1060 | 130 | 1900 | 150 | 3350 | 170 | 6000 |

The LOAD INDEX denotes the maximum load a given tire can carry at the maximum speed as indicated by the speed symbol.

## Speed Symbol

| Speed symbol | Speed (km/h) |
|--------------|--------------|
| E            | 70           |
| F            | 80           |
| G            | 90           |
| J            | 100          |
| K            | 110          |
| L            | 120          |
| M            | 130          |
| N            | 140          |

The SPEED SYMBOL denotes the maximum speed at which a given tire can carry the load indicated by the load index.

# Interaction of Load and Speed

Below information is based on the "European Tire and Rim Technical Organization - Standards Manual" - Load Variation with Speed section.

Variations in Load Carrying Capacity with Speed (%)

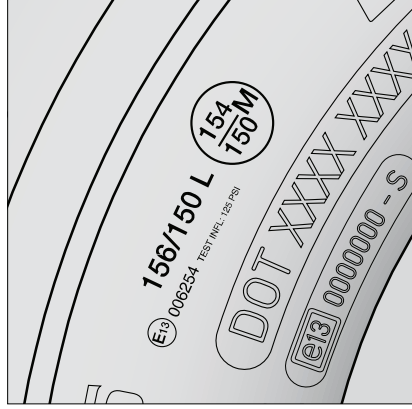
| Speed km/h | F 80 km/h | G 90 km/h | J 100 km/h | K 110 km/h | L 120 km/h | M 130 km/h | Inflation Pressure (%)* Compensation |
|------------|-----------|-----------|------------|------------|------------|------------|--------------------------------------|
| Static     | +150      | +150      | +150       | +150       | +150       | +150       | +40                                  |
| 5          | +110      | +110      | +110       | +110       | +110       | +110       | +40                                  |
| 10         | +80       | +80       | +80        | +80        | +80        | +80        | +25                                  |
| 15         | +65       | +65       | +65        | +65        | +65        | +65        | +25                                  |
| 20         | +50       | +50       | +50        | +50        | +50        | +50        | +21                                  |
| 25         | +35       | +35       | +35        | +35        | +35        | +35        | +17                                  |
| 30         | +25       | +25       | +25        | +25        | +25        | +25        | +13                                  |
| 35         | +19       | +19       | +19        | +19        | +19        | +19        | +11                                  |
| 40         | +15       | +15       | +15        | +15        | +15        | +15        | +10                                  |
| 45         | +13       | +13       | +13        | +13        | +13        | +13        | +9                                   |
| 50         | +12       | +12       | +12        | +12        | +12        | +12        | +8                                   |
| 55         | +11       | +11       | +11        | +11        | +11        | +11        | +7                                   |
| 60         | +10       | +10       | +10        | +10        | +10        | +10        | +6                                   |
| 65         | +7.5      | +8.5      | +8.5       | +8.5       | +8.5       | +8.5       | +4                                   |
| 70         | +5        | +7        | +7         | +7         | +7         | +7         | +2                                   |
| 75         | +2.5      | +5.5      | +5.5       | +5.5       | +5.5       | +5.5       | +1                                   |
| 80         | 0         | +4        | +4         | +4         | +4         | +4         | 0                                    |
| 85         | 2         | +3        | +3         | +3         | +3         | +3         | 0                                    |
| 90         | 0         | 0         | +2         | +2         | +2         | +2         | 0                                    |
| 95         | 0         | 0         | +1         | +1         | +1         | +1         | 0                                    |
| 100        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 105        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 110        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 115        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 120        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 125        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |
| 130        | 0         | 0         | 0          | 0          | 0          | 0          | 0                                    |

NOTES: Increment to be applied in the absence of any specific agreement with the tire manufacturer. These increments do only apply to the "nominal" load/speed indices.

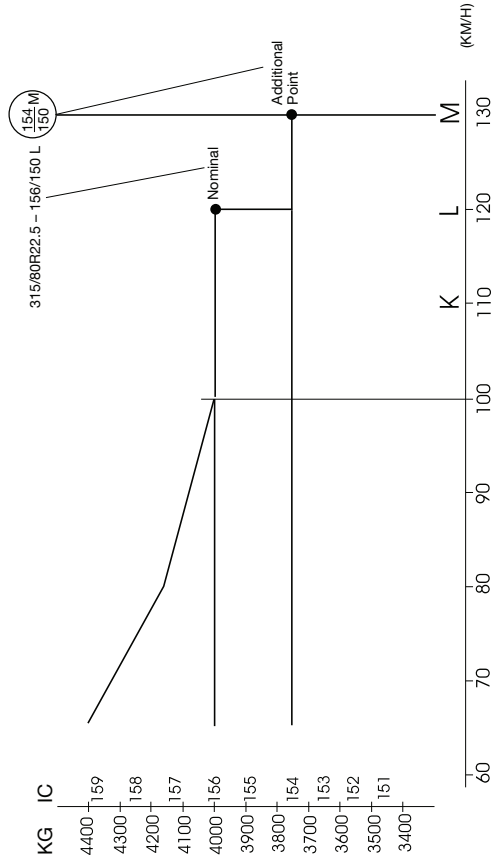
## Additional load/speed markings

The tire manufacturer has the possibility to add to the "nominal" load/speed indices an additional load/speed index with different load index and different speed index. This additional load/speed index is circled.

For other load benefits due to maximum speed variations please consult the table and notes in the "Interaction of Load and Speed" section.



NOTES: ETRTO tables apply only to nominal L/SI marking.



## Notes concerning "Variations in load capacity with speed (%)"

(Below notes refer to the ETRTO (European Tire and Rim Technical Organisation) Guidelines, in case more details are required, please refer to the actual valid ETRTO Standards Manual)

- For the application being considered, "SPEED" means:
  - either the maximum speed capability of the motor vehicle
  - or any overriding national requirement/legislation for the type of motor vehicle
  - or, in case of "special applications", the specific conditions of use.
- The load carrying capacity of tires in dual fitments is twice the load carrying capacity in single up to 40 km/h. Bonus loads will not be permitted for speeds of 40 km/h and above if the wheel axles are rigidly fixed to the body of vehicle.
- Bonus loads are not applicable for trailers and semi-trailers at speeds over 65 km/h.

### General definitions

Buses (Category M3 vehicles in the EU Directive) are subdivided into three classes depending on the intended type of use. Category M3 vehicles, for the carriage of passengers, have more than eight seats in addition to the driver's seat and exceed 5 tonnes in overall weight.

#### Class I

Urban-bus or City bus – foreseen for urban use with frequent stops, these vehicles have spaces for standing passengers and allow movements of passengers.

#### Class II

Suburban bus or Interurban bus – foreseen for passenger transport within a given district, these vehicles have no specific spaces for standing passengers, but allow them to keep standing in the gangway for some distances during the trip.

#### Class III

Touring coach – These vehicles mainly foreseen for long distances, are conceived for transportation of sitting passengers only.

On the basis of the specific conditions of use of the buses designed for urban or suburban services and irrespective of their actual maximum speed capability, the following bonus loads apply:

#### Class I

+ 15% of the load indices marked on the tire, when the average speed does not exceed 40 km/h.

#### Class II

+ 10% of the load indices marked on the tire, when the operating speed is restricted to 60 km/h.

#### Class III

no bonus load Class

- For the equipment of special public service vehicles in urban and suburban applications (for instance road sweepers, fire tenders, etc.), on the basis of specific conditions of use and irrespective of the actual maximum speed capabilities of the vehicle, a bonus load of 10% applies with respect to the load indices marked on the tire.

- In any case, it is recommended to avoid the maximum permissible load capacity if the resulting inflation pressure is higher than 1000 kPa. In that case, the load capacity shall be reduced accordingly.

- It is imperative to consult Rim/Wheel Manufacturers for the choice of rims and wheels suitable for the load carrying capacities and the inflation pressures required for applications at speeds of 40 km/h and below.

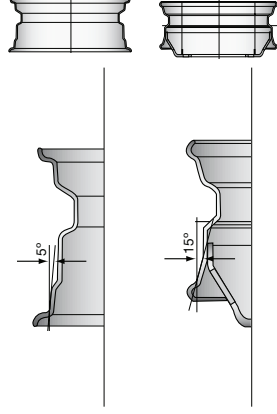
# Rims and Wheels

For truck tires, there are essentially 3 basic rim types available on the market:

- one-piece tubeless drop center rims
- multi-piece tube-type flat base rims
- multi-piece tubeless flat base rims

## One-piece tubeless drop center

5° Drop center Rim – (13", 14", 17" etc...) symmetric and asymmetric rims for standard and low section light truck (C) tires.



15° Drop center Rim – (17.5", 19.5", 22.5" etc...) rims for standard and wide section (Low Aspect Ratio, Super Single) tires.

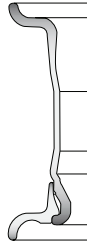
## Two and four-piece tube-type flat base

(Mainly 20") rims for high aspect ratio tires. It will be important to avoid interchanging of parts from both systems.



NOTE: Each system is usually identified accordingly (stamped 2P or 4P).

## Two-piece tube-type flat base



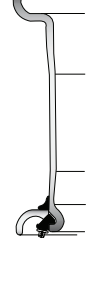
Combination Side Ring

## Four-piece tube-type flat base



Lock ring  
Side ring  
Bead seat band

## Four-piece tube-type flat base

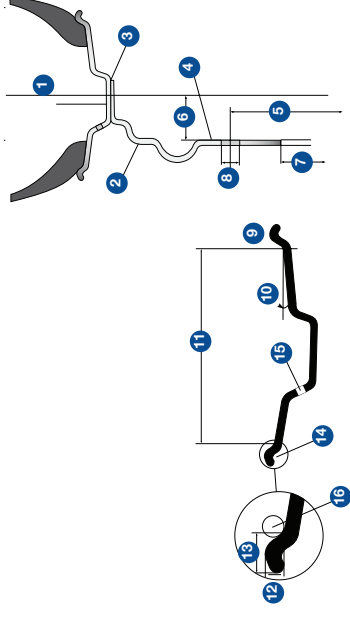


Lock ring  
Side ring  
Bead seat band

(20") rims for mainly 80-series tires. They require a new sealing gasket for each new tire.

Complete wheel details are shown below:

- 1 Drop center
- 2 Disc
- 3 Rim/disc junction
- 4 Hub contact face
- 5 Hub (bolt) circle diameter
- 6 Offset
- 7 Center hole diameter
- 8 Stud hole diameter
- 9 Rim flange
- 10 Taper
- 11 Rim width
- 12 Rim flange height
- 13 Rim flange width
- 14 Rim flange radius
- 15 Valve hole
- 16 Ball tape



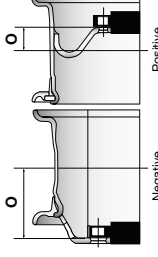
NOTE: Rim diameters can only be accurately measured by means of a special ball tape.

All wheels have a given offset (O) which does not only provide for the necessary brake drum space, but which also determines track width, kingpin offset, handling characteristics and wheel bearing load. On dual assemblies, it also influences the dual spacing.

Tire fitters and mechanics must therefore pay attention that:

- specific vehicles are fitted with the correct offset wheels.
- wheels with different offsets are not mixed up on the same axle.

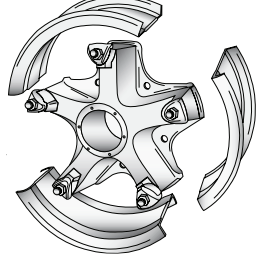
Wheel offsets can be positive, negative or zero. The offset is defined as the distance from the wheel center to the inside face of the disc (against the hub) and is called positive whenever this inside face is located outside of the centerline, negative when located inside, zero when matching the centerline exactly.



As a general maintenance rule, assembling and disassembling of multi-piece rims should only be done with specially designed tools. This will not only assure the safety of the fitter, but will also avoid usage of hammers and other inadequate equipment which could sooner or later damage or break vital rim parts. Also, for 1-piece tubeless rims, proper tooling is essential, since it will otherwise be extremely difficult or even impossible to mount such tires safely and without bead area damage.

For demountable 1- or multiple-piece spoke-type wheels, the following additional precautions should be taken:

- Contact surfaces between rim and star should not be painted to guarantee perfected centring.
- Bolts should be tightened clockwise (not crosswise) – without exceeding the recommended maximum torque given by the vehicle manufacturer.
- Bolts and clamps should be re-checked at 50-100 km after wheel fitment and re-tightened if necessary.
- In case of dual mounting, the spacer ring should be pre-centered over the centering cams (placed on spokeheads).



# Tubes and Flaps

Only use "Radial" marked tubes and flaps in Radial Tires. Preferably fit a new tube and a new flap when mounting a new tire. Due to their inherent construction, Radial Tires impose far greater local stresses on inner tubes than Bias Tires. "Radial" marked Tubes are specially compounded to withstand these stresses and their use in Radial Tires is mandatory. "Radial" marked Tubes may also be used in Bias Tires, but in this application, unmarked Bias Tubes are perfectly satisfactory.

The higher stresses in Radial Tires render the tube more susceptible to Flap Edge Cutting, and the use of "Radial" marked flaps, specially compounded such that they will not harden excessively in service is mandatory.

## Tubes

Tubes are designed within well defined limits of Radial and Total Stretch. A tube too large will be liable to buckling, and to early failure. A tube too small will be stretched excessively, leading to reduced rub resistance, and poorer air retention. In an emergency, a small tube is better than a large tube, since the failure mode is less likely to be catastrophic.

- In case of necessity, a tube may be reused, if,
- There is no apparent damage and
  - If the tube has not grown excessively during the first life. It is suggested that for a tube to be reused, a residual radial stretch of at least 15% is required.

NOTE: The fitment of tubes to "tubeless" tires is not recommended.

## Flaps

The flap is designed to:

- Protect the tube from the roughness of the rim.
- To prevent the tube being pinched by the component parts of multi-pieced rims.
- To prevent the tube being pushed through the valve slot.

As a rule we can say that flaps are necessary for any rim which has a valve slot as against a valve hole.

All Drop center rims including passenger, truck and farm, have a valve hole on the side of the well and require an off center valve on the tube. They do not require a Flap.

Drop center truck rims occasionally have the valve hole on center, but these are normally only fitted with run out tubes in emergency cases which is a practice not endorsed by Goodyear.

All flat base rims with a removable flange have a valve slot extending from the centerline of the rim to the edge. These rims require a flap, and a tube with an on center valve.

All Semi Drop center rims have a short valve slot, which may be on or off center dependant on the type of rim, and upon the rim manufacturer, and require flaps and tubes with respectively on or off center valvehole, and tube valve.

## Rim slot cover plates

Even the best flaps, subjected as they are to high pressure and temperature, (wheel temperatures as high as 200°C have been measured on the inside rear position in City Bus service in Europe) are liable to be pushed through the rim slot in service.

Flaps are designed with fabric, or heavy rubber reinforcement in the valve slot area to overcome this problem, but for critical applications, the use of commercially available rim slot coverplates, or even a large diameter metal washer are recommended. Since the push through, and possible failure occurs next to the bead, rather than around the valve, Bridge plates, are not really effective, and their use in Europe is decreasing.

## Medium truck – 20/24"

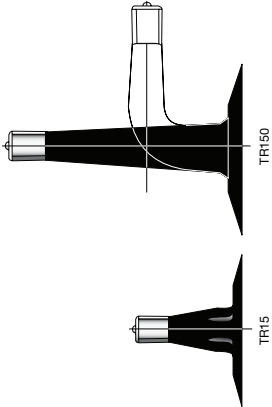
| Tire size | Tube     | Rim      | Flap   |
|-----------|----------|----------|--------|
| 12.00R20  | 12.00R20 | 8.0      | 20R8.5 |
|           |          | 8.5      | 20R8.5 |
|           |          | 9.0      | 20R8.5 |
| 14.00R20  | 14.00R20 | 10.0     | 20R9.0 |
|           |          | 12.00R24 | 24R8.5 |
|           |          | 8.5      | 24R8.5 |
|           |          | 9.0      | 24R9.0 |
|           |          |          |        |

# Valves

Three types of Inner Tube Valve exist in Commercial service:

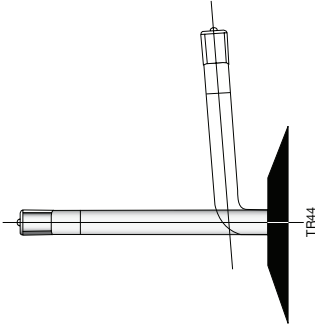
## Rubber covered valves

Rubber covered valves which may be rigid as for the TR15, or hand bendable as for the TR150.



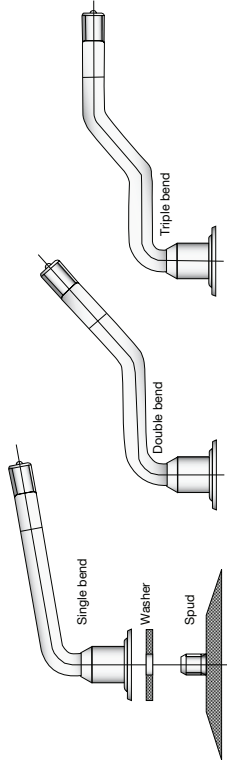
## One-piece metal valves

One-piece metal valves, such as the TR44 series. These are generally supplied with the required bent form, and may be single, double or triple bent.



## Two-piece metal valves

European style two-piece metal valves consist of a spud (a short threaded metal tube) vulcanised onto the tube and a pre-bent extension which screws onto the spud, using a rubber washer as the air seal.

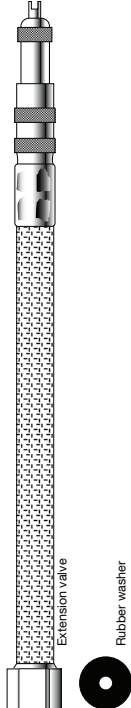


## Fitting extension valves

Extensions are actually coded in the form V-\*\*-\*, but to avoid confusion are generally referred to as the designation of the one piece metal valve to which they are equivalent.

The weakest part of the design of the extension type valves is the rubber washer. The washer is compressed when the valve is tightened, and loses its elasticity with age. Rubber washers should never be reused since they harden and take a permanent set. Similarly, extensions should never be backed off to make them line up with the rim slots.

The correct procedure is to wind the extension onto the stem until it just contacts the washer. Take another half turn. Then mount the tire/tube/flap assembly, and line the extension up with the slot by tightening further.



## Valve caps

Valves must always be fitted with a valve cap.

The valve core is present to allow the internal air pressure to be measured and changed. It is the valve cap which is the primary air seal. Valve caps are always made of metal and have a rubber sealing ring. The plastic dust caps are not suitable for field service. They are designed to prevent damage to the Tube/Valve/Valve Core during transportation from point of manufacture to point of use.

## Valve cores

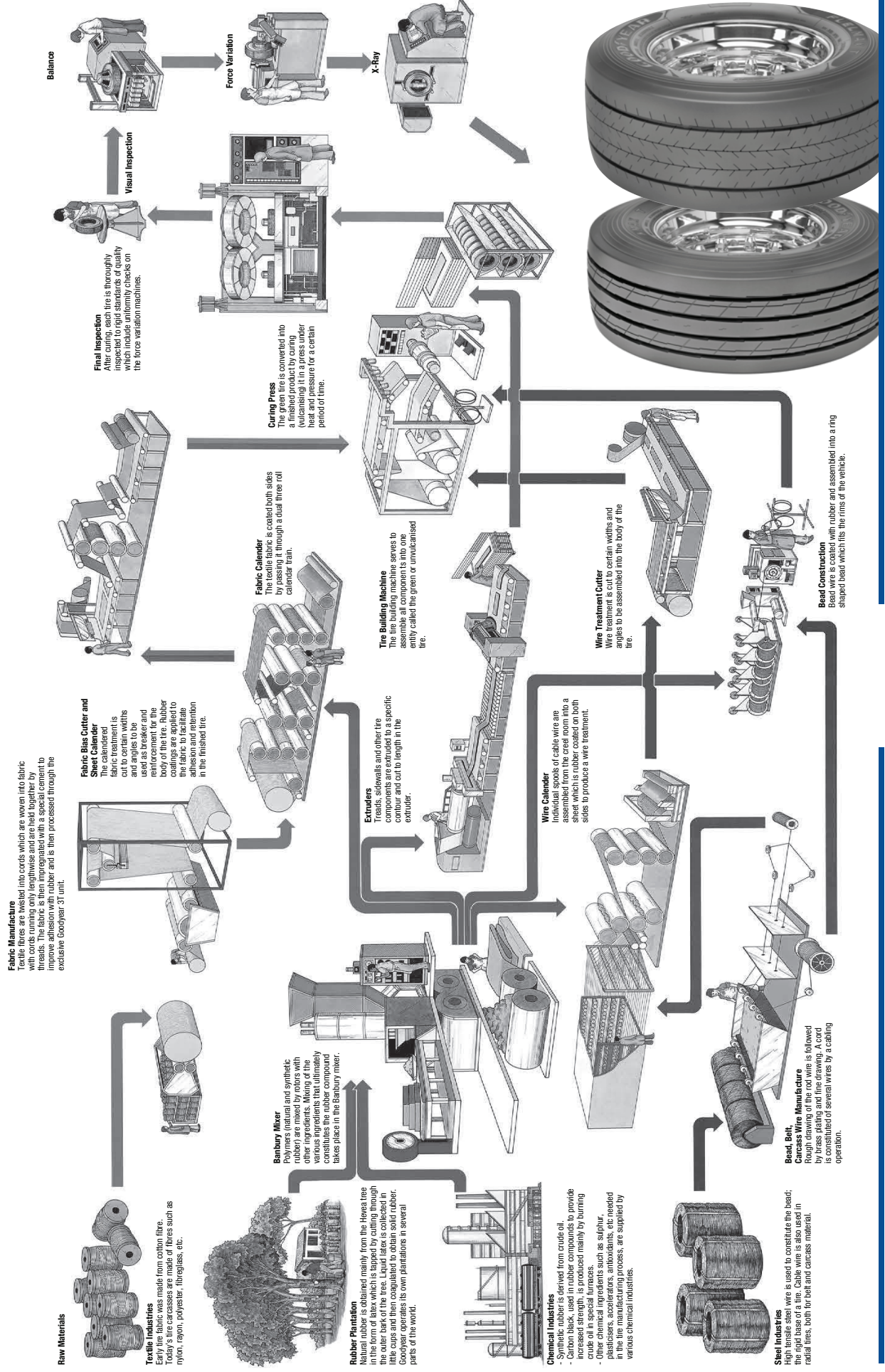
Valve cores are available in two lengths, two temperature ranges, and with either internal or external springs. Fortunately all these cores are interchangeable. It is recommended to use the short core, internal spring, heat resistant type. These are recognisable since the small rubber collar around the core is coloured red.

## Conversion from T&RA to reference numbers

| T&RA  | Single   | ETRTO Double | Triple  |
|-------|----------|--------------|---------|
| TR75  | V3.02.27 |              |         |
| TR76  | V3.02.8  |              |         |
| TR78  | V3.02.12 | V3.04.6      | V3.06.5 |
| TR75  | V3.02.10 | V3.04.4      | V3.06.3 |
| TR77  | V3.02.9  | V3.04.3/10   | V3.06.1 |
| TR78  | V3.02.14 |              |         |
| TR79  | V3.02.15 |              | V3.06.6 |
| TR285 |          |              | V3.07.1 |

NOTE: Goodyear primarily manufactures truck tubes with spud/screw on extension type valves.

# The tire manufacturing process



## Notes

## Notes

**Goodyear Dunlop Tires  
Operations S.A.**

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**Telefax**

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Contact your local Goodyear dealer for tire availability

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For detailed and up to date information, please refer to your dealer or to [www.goodyear.eu](http://www.goodyear.eu)

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Goodyear Dunlop Tires Operations S.A.  
217/0614/LUX-ENG

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