

TREAD DATA GUIDE



BANDAG MANUFACTURING PTY LIMITED

70 INDUSTRIAL AVE WACOL
PO BOX 287 CAROLE PARK QLD 4300
PHONE 07 3718 9900
FAX 07 3271 1687
www.bandag.com.au
ABN 26 000 520 687





This manual has been created to help users gain the maximum benefit from their Bandag retreads. While it is not comprehensive, the information and the recommendations provided should assist in achieving the very most out of our very high quality products.

NOTE: The information contained in this book should be used as a guide only. While every effort has been made in its production, no responsibility will be accepted for any loss or damage arising from any undetected error.

Please contact Bandag Manufacturing Pty Limited for up to date information.

CONTENTS

COMPANY	2
---------	---

ENVIRONMENT	3
-------------	---

PROCESS	4 - 5
---------	-------

GENERAL INFORMATION

SIDEWALL	6 - 7
----------	-------

DEFINITIONS	8
-------------	---

MATCHING DUALS	9
----------------	---

ALIGNMENT	10 - 11
-----------	---------

INFLATION PRESSURE	12
--------------------	----

ROTATION	13
----------	----

IRREGULAR WEAR	14
----------------	----

TIPS	15
------	----

TRUCK & BUS TYRE DESIGNS

RIB DESIGNS	16 - 20
-------------	---------

TRACTION DESIGNS	21 - 27
------------------	---------

WIDE BASE DESIGNS	28 - 29
-------------------	---------

SPECIALTY DESIGNS	30 - 32
-------------------	---------

OFF ROAD & EARTHMOVER	33 - 35
-----------------------	---------

SPECIFICATION TABLES	36 - 45
----------------------	---------

Bandag Made... To do a better job.

Bandag Manufacturing Pty Limited is a wholly owned subsidiary of Bridgestone Australia and New Zealand Limited and operates under license to Bridgestone Bandag LLC.

The combination of Bandag Cold Process Retreads and premium new tyres provides road transport operators with one of the most cost effective and reliable tyre solutions on the market today.

Since 1962, Bandag has been part of the Australian and New Zealand transport landscape.

Bandag products are renowned for long life and outstanding performance and they are specifically designed to endure the harshest conditions.

The exclusive Bandag process ensures total quality control and reliability. From our stringent testing of raw materials to final product inspection our focus is to provide our customers with the lowest cost per kilometre retread on the market without compromising our safety or quality standards.

A lot has changed over the years and you can find Bandag Dealerships all over Australia, New Zealand and throughout the South Pacific, so where ever the road may take you, Bandag will always be there.

Bandag often copied, but never equalled.



Environment - Bandag & Our Environment

Retreading ...our way to a better environment

When you choose Bandag retreads you choose, consciously or unconsciously, to make a real contribution to the sustainability of our environment.

Why?

Retreading is a highly practical and efficient form of recycling. Retreading makes it possible to re-use worn tyres. Instead of dumping tyres with worn out tread and good sidewalls, they can be rebuilt and put back to work again, and again.

Commitment to the environment

Protecting our environment for future generations is also important to the employees of Bandag. Not only is the retreading process environmentally friendly but in November 2001 Bandag Manufacturing Pty Limited became accredited to ISO 14001 by a third party assessor.

Reduce pollution

Tyre dumps are a major source of pollution. Not only are they an eye-sore, they attract vermin, hold water, create a breeding ground for mosquitoes and, most dangerously, are highly combustible, releasing toxic fumes and dense smoke into the atmosphere when ignited. With retreading, tyres stay on the road longer so fewer tyres pile up in landfill dumps.

Conserve oil

Studies conducted in the USA show that it takes around 80 litres of crude oil to produce one new truck tyre. With more than one million new truck tyres sold every year in Australia, that's over 80 million litres of crude oil annually.

On the positive side, to retread a worn truck tyre takes only one fifth of the oil required to produce a new tyre. With approximately one million truck retreads produced annually in Australia, retreads are already helping to save around 60 million litres of oil every year.

Less energy

Bandag's unique, advanced Cold Process Retreading technique uses less energy to create a product with a wear performance similar to that of a new tyre.

Whereas some retreads use a hot cap process with temperatures as high as 160 degrees Celsius to cure retreads, Bandag's specially developed process uses a low 99 degrees to bond the tread to the case.

Depending on its quality and condition, a well constructed truck or bus tyre, can be retreaded 2, 3 or more times, and only one worn tyre casing requires disposal instead of many.

Conserve resources

Let's face it, our money is a precious resource that demands careful management. That's why Bandag retreads appeal so much. Quality retreads are a lot less expensive than new tyres.

When you choose Bandag retreads you choose, consciously or unconsciously, to make a real contribution to the sustainability of our environment.



Inspection

We thoroughly inspect your casings to ensure they meet our high retreading standards. Our inspectors look for every cut, bruise and puncture as well as other damage to the tyre body.



Buffing

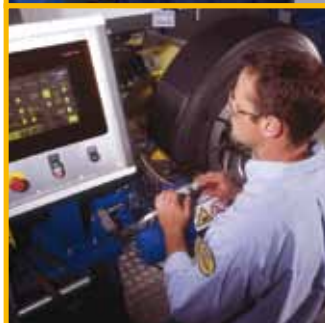
Buffing removes the old, worn tread design. The Bandag buffer works like a lathe as the tyre is buffed, truing your inflated casing with utmost precision.



NDI

The Bandag NDI* is an ultrasonic casing analyser that inspects the tyre for damage that is hidden from normal visual inspection. This non destructive inspection helps detect hidden defects, resulting in a more reliable and safer retreaded tyre.

*Not all Bandag dealers have NDI equipment.



Repair & Bonding Application

Bandag repairs meet or exceed the Australian and New Zealand Standards. The repair materials are designed specifically for today's new generation tyres. Bandag's unique Bonding rubber is applied to the casing or to the back of the tread.

Building

Tread rubber is applied to the casing while the tyre is inflated. When cured the bond created between the tread rubber and the case is stronger than any other bond within the tyre.

Curing

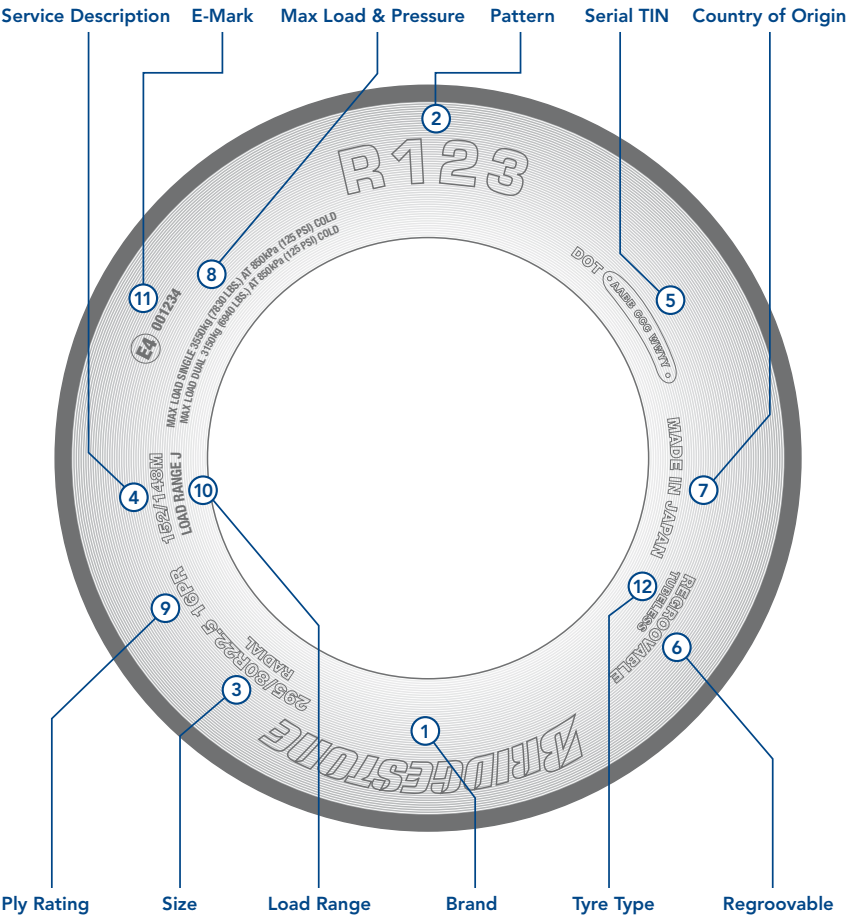
Bandag bonds new tread rubber to your casing using a low curing temperature. No excessive heat or rigid metal moulds means your casings avoid the stress associated with other retreading processes.

Final Inspection

Every Bandag retread we produce is thoroughly inspected before it leaves our shop. The last place we want to discover a tyre problem is after the tyre is back in service.



The exclusive Bandag manufacturing process ensures a quality product every time.



Speed symbol indicates the speed at which the tyre can carry a load corresponding to its load index under service conditions specified by the tyre manufacturer.

Speed Category Symbol	F	G	J	K	L	M
Maximum Speed (km/h)	80	90	100	110	120	130

Note: This image is not to scale and should be used as a guide only. The presence, size, positioning and lettering of markings will vary.

Marking Descriptions

The Bridgestone range of local and imported truck tyres has a number of different markings on the sidewall. The most important and relevant markings are described below.

- 1 **Brand:** Bridgestone
- 2 **Pattern:** R123
- 3 **Size:** 295/80R22.5
 - 295 Section width (in mm)
 - 80 Aspect ratio (in %)
 - R Radial construction
 - 22.5 Rim diameter (in inches)
- 4 **Service Description:** 152/148 M
 - 152/148 Load index (single/dual)
 - M Speed symbol: see table p2
- 5 **Serial TIN:** DOT ABB CCC WWYY
 - DOT US Department of Transport
 - AA Factory code
 - BB Size code
 - CCC Optional code
 - WW Week manufactured
 - YY Year manufactured
- 6 **Regroovable:** Shows that the tyre is capable of being regrooved.
- 7 **Country of Origin:** Japan. Country of tyre manufacture.
- 8 **Max Load and Pressure:** Maximum inflation pressure to carry the tyre's maximum load. Note that this might be more than the legal pressure limit of 825kPa (120psi) in Australia.
- 9 **Ply Rating:** 16PR. Index of tyre strength.
- 10 **Load Range:** J. Equivalent to ply rating, as required under US TRA standards.
- 11 **E-Mark:** (E) 001234. For compliance with European regulations
- 12 **Tyre Type:** Tubeless. Indicates that the tyre does not require an inner tube.

Aspect Ratio

$\frac{\text{Section Height}}{\text{Section Width}} \times 100\%$

Overall Diameter (OD)

The measurement of the distance of an unladen tyre from tread surface to tread surface on opposite sides of the tyre.

Overall Width (OW)

Measurement of the cross section of an unladen tyre, including ribs and protrusions. Usually the same as section width on radial tyres.

Section Width

Measurement of the cross section of an unladen tyre across the casing only – not including ribs or protrusions.

Tread Width

Distance across the tread face of an unladen tyre.

Tread Depth

Distance from tread surface to major groove base at a designated measuring point.

Section Height

Distance from the bead seat to the tread surface of an unladen tyre.

Rim Width (RW)

Distance between the rim flanges.

Nominal Rim Diameter

Diameter of the rim from bead seat to bead seat in inches.

Static Loaded Radius

Distance from the centre of the axle to the ground of a loaded tyre under maximum dual load and inflation pressure.

Loaded Width

The maximum section width of a loaded tyre under maximum dual load and inflation pressure.

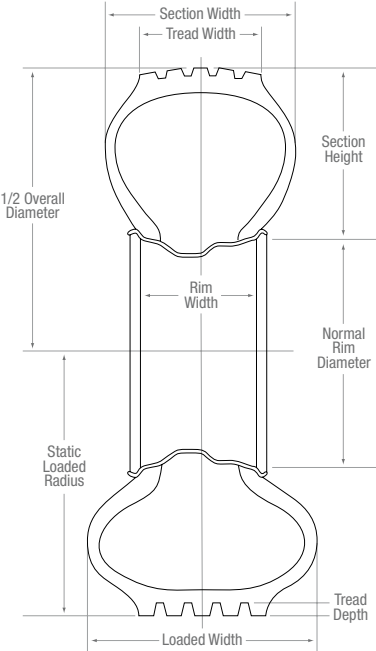
Minimum Dual Spacing

The minimum allowable distance between the wheel centre lines in a dual arrangement.

Revolutions Per Kilometre (RPK)

The number of tyre revolutions in one kilometre, measured at: 100km/h, maximum dual load and inflation pressure.

NOTE: All dimensions measured following a 24-hour inflation period.



Dual tyre assemblies are commonly used on drive and trailer axles, however, they do require attention if tyre life is to be maximised.

Diameter Variations

Dual assemblies with significantly different diameters will return less than optimum wear results because:

- > The tyre with the larger diameter will carry more of the load, causing rapid wear.
- > The tyre with the smaller diameter will be subjected to very high levels of slip, creating rapid and irregular wear.

Pressure Differentials

When tyres in a dual assembly are inflated to different pressures they will return less than optimum wear results because:

- > The tyre with the higher inflation pressure will have a higher contact pressure with the road, carrying more of the load causing rapid wear.
- > The tyre with the lower inflation pressure will have a lower contact pressure with the road resulting in rapid and irregular wear.

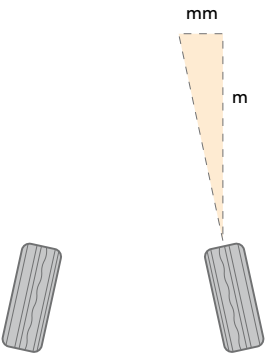
Recommendations

The tyre industry recommends that the same brand, pattern, size, load index and speed symbol be used where possible when matching duals. The following upper matching limits for dual tyres should also be observed:

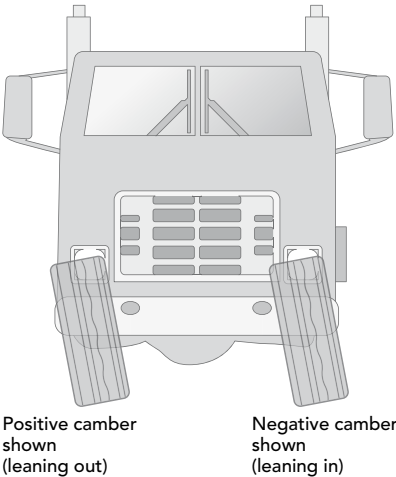
Tyre Width:	Less than 9.00"	More than 9.00"
Overall diameter difference	6mm	8mm
Tread depth difference	3mm	4mm
Inflation pressure difference	5%	

A vehicle's wheel alignment can have a dramatic effect on how evenly and quickly the tyres wear. The following diagrams illustrate the key alignment parameters.

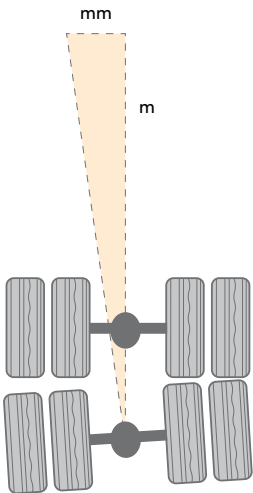
Steer Axle Toe (mm/m)



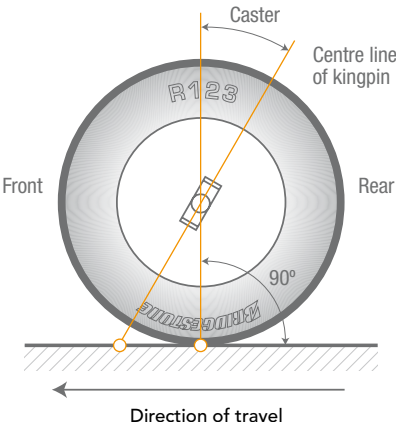
Steer Axle Camber



Rear Drive Axle Square (mm/m)



Positive Caster Angle



Typical Alignment Settings*

Parameter	Typical Range	Explanation
Steer axle toe (total)	0mm/m to +1.5 mm/m	Toe out can cause instability, so is unacceptable. Must be measured to thrust centreline.
Steer axle camber	L 0° to - 0.6° R +0.6° to +1.5°	Slight RH positive camber can help to overcome road camber effect. It must be on the RH side because the LH side carries higher load and operates on greater road camber. It will suffer inner shoulder wear if negative camber is excessive.
Steer axle caster	L +3° to + 4.5° R 0.5° to 0.75° less than left	Slightly more caster on the left induces a slight RH turn, helping to overcome road camber effect.
Front drive axle square	Square to vehicle centreline ± 2 mm/m	Out-of-parallel produces a turning moment which must be countered by the steer axle.
Rear drive axle square	0 mm/m to 4mm/m left	In some conditions, slight drive thrust to the left induces a turning moment to the right, overcoming road camber.
Trailer axles	All square and parallel to pin centreline ± 2 mm/m	Trailer axles perform best when tracking parallel to the centreline of the road.

*Note: All vehicles and operations are different, thus no one alignment setting can cover the range entirely. Typical alignment settings for prime movers operating in line haul applications have been provided. Please consult an alignment professional for settings for specific operations.

Load and Inflation Pressure

It is the air in the tyre that carries the load. Lowering the inflation pressure is equivalent to increasing the load on the tyre. The relationship between load and the minimum inflation pressure can be found in the tables on pages 36-43. It should be noted that the maximum cold inflation pressure allowed in Australia is 825kPa (120psi), which has been accounted for in these tables.

Recommended Pressure

The correct inflation pressure will depend on: tyre size, service description, actual load, actual speed, fitment (tyres in dual configuration are able to carry less load per tyre because of unequal loading conditions) and operating conditions. Incorrect inflation pressure can result in irregular wear, reduced wear life, damage or even tyre failure.

Inflation pressures should be checked on cold tyres at least every month using a reliable pressure gauge. Always use a sealing type valve cap as the valve core seal is only secondary and must not be relied upon.

How inflation affects Tread-to-Road Contact

Both overinflation and underinflation reduce tread contact with the road. Proper inflation assures maximum contact.

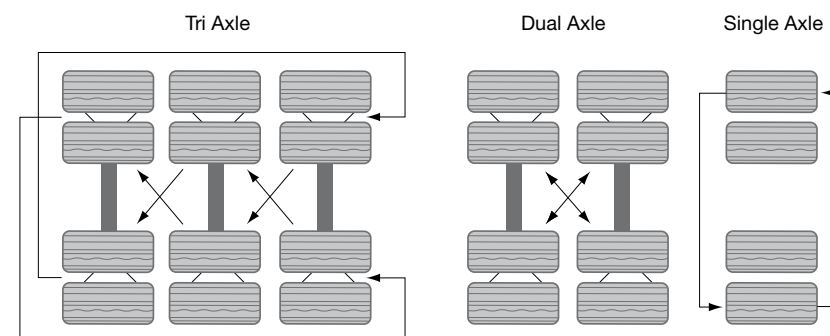


Why Rotate

Tyre rotation is a practical means of reducing operating costs by helping to overcome irregular wear patterns and minimising the effects of different wear rates. Rotation can ensure that a tyre's tread is fully utilised - reducing the cost per kilometre.

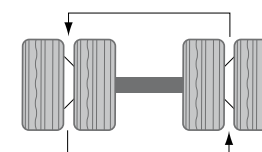
Method

Tyres should be rotated to the positions shown in the diagrams below. Note that dual pairs should be rotated in the same pairing, ie. outside tyre remains on the outside, but in the new position.



If the application allows, steer tyres can be rotated onto the drive and trailer axles and drive tyres can be rotated onto the trailer axle.

Single axles with dual tyres should be rotated as shown:




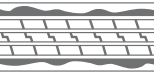




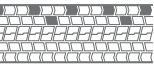
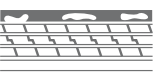
Typical Frequency:

Steer tyres: 25,000km

Drive Tyres: 50,000km

Otherwise, rotate as often as required to minimise irregular wear.

The table below outlines some common types of irregular wear and some typical causes.

Appearance		Causes
	Shoulder Edge Wear: Even wear in centre but shoulder wearing rapidly. Note: Often results in little or no loss of removal mileage.	Incorrect toe; Drive axle misalignment; Worn suspension; Incorrect camber.
	River Wear: Circumferential wear along rib edges. Common on free rolling axles. Note: Often a sign of a tyre achieving good mileage	Light loading; Excessive turning; Worn suspension; Assembly lateral runoff.
	Heel/Toe Wear: Each block worn high to low from front to back.	Mismatched duals; Incorrect inflation pressure; High traction operating conditions; Lack of rotation.
	Feather Wear: One side of each rib is worn. Note: Often seen on both steer tyres.	Excessive toe; Drive axle misalignment; Bent tie rod or chassis; Worn suspension.
	Diagonal Wear: Localised flat spots worn diagonally across the tread.	Mismatched duals; Underinflation; Radial runoff; Excessive imbalance; Misalignment; Other wear condition; Loose wheel bearings.
	Rib Punch Wear: One or more of the inner ribs is worn.	Incorrect inflation pressure; Poor shock absorbers; Worn wheel bearings; High speed empty hauls; Excessive imbalance.
	Block Punch: Alternate blocks worn different amounts.	Mismatched duals; Incorrect inflation pressure; Axle misalignment; Large variation in loads; Worn suspension; Lack of rotation.
	Island Wear: Small 'islands' of tread are less worn.	Assembly imbalance; Incorrect inflation pressure; Worn suspension; Mismatched duals; Misalignment.

Note: Certain route and vehicle influences such as cross winds, road camber and unequal load share on tyres are unavoidable. Irregular wear from these influences should be managed by tyre rotation and increased maintenance.

Storage

Tyres being stored should be kept away from direct sunlight, heat sources, ozone creating generators, motors and welders, moisture, dirt, oils and chemicals in order to prevent the tyre from degrading.

Mounting The Tyre-Wheel Assembly

Wheel nuts should be done up in the sequence recommended by the vehicle manufacturer. Furthermore, wheel nuts must be checked within 50km of fitment. Torque levels and sequences are recommended by the vehicle manufacturer. Always use a torque bar to tighten wheel nuts.

Damage

Ignoring tyre damage is dangerous. Damaged tyres must be assessed and where possible repaired by a qualified technician as soon as possible in order to avoid further deterioration of the tyre structure.

Regrooving

Regrooving a tyre will extend its life and improve fuel economy. Tyres should only be regrooved if the word REGROOVABLE appears on the sidewall as pictured below.



BITUMEN SPECIAL



Size	Base Width	Tread Depth MM	Weight/ Metre
BS194	194	17.5	3.9
BS203	203	17.5	4.1
BS219	219	17.5	4.5
BS233	233	17.5	4.9

A 5-Rib design that provides excellent mileage and an outstanding penetration resistance. Performs brilliantly in waste haulage and bus applications.

BRM



Size	Base Width	Tread Depth MM	Weight/ Metre
BRM210	210	20.5	4.7
BRM220	220	20.5	5.0
BRM230	230	20.5	5.3
BRM250	250	20.5	5.9

This unique, deep tread design is ideally suited to frequently stopping vehicles such as route buses and waste removal trucks.

BRAWNY RIB



Size	Base Width	Tread Depth MM	Weight/ Metre
BRYR114	114	9.5	1.3
BRYR127	127	10.0	1.4
BRYR140	140	10.0	1.5
BRYR152	152	11.5	1.8
BRYR165	165	11.5	2.0

Brawny Rib delivers excellent mileage and outstanding performance in light truck applications.

HIGHWAY



Size	Base Width	Tread Depth MM	Weight/ Metre
HW165	165	13.0	2.5
HW178	178	13.0	2.7
HW194	194	13.0	3.0
HW203	203	13.0	3.0
HW219	219	12.5	3.3
HW233	233	13.0	3.8

Highway - A truly universal all-wheel-position rib tread with a history of proven performance.

R4200



Size	Base Width	Tread Depth MM	Weight/ Metre
R4200194	194	15.5	3.3
R4200203	203	15.5	3.4
R4200219	219	15.5	3.7
R4200233	233	15.5	4.0
R4200250	250	15.5	4.4

A 5-Rib Tread with ample tread depth. Delivers exceptional mileage in drive wheel applications that don't require above normal traction demands.

RIB TRAC ELITE



Size	Base Width	Tread Depth MM	Weight/ Metre
RTE203	203	15.8	3.6
RTE220	220	15.8	3.9
RTE232	232	15.8	4.2

Rib Trac Elite (RTE) is designed for tyres in applications that require a little more protection. Bandag RTE has super thick undertread, increased skid depth and unique stone ejection grooves that saves your valuable casings from damage.

RIB TRAC



Size	Base Width	Tread Depth MM	Weight/ Metre
RT178	178	15.0	3.0
RT194	194	14.5	3.1
RT203	203	14.5	3.2
RT219	219	14.5	3.6
RT233	233	14.5	4.0
RT250	250	14.5	4.4

An outstanding 4-Rib all-wheel- position tread with deep skid depth. Delivers superior mileage in heavy duty on and off-the road applications.

RIB LOGGER



Size	Base Width	Tread Depth MM	Weight/ Metre
RL203	203	17.0	4.1
RL219	219	17.0	4.5
RL233	233	17.0	4.9

A deep and durable pattern that is suitable for Drive and Trailer applications. Rib Logger is ideally suited to the harshest of road conditions.

T4100



Size	Base Width	Tread Depth MM	Weight/ Metre
T4100194	194	11.5	2.5
T4100203	203	11.5	2.8
T4100219	219	11.5	2.9
T4100233	233	12.0	3.2
T4100250	250	11.5	3.7

A dedicated trailer tread pattern that is designed to deliver outstanding mileage. This lightweight tread runs cool and extends casing life.

BDE



Size	Base Width	Tread Depth MM	Weight/ Metre
BDE203	203	19.0	4.1
BDE219	219	19.0	4.4
BDE233	233	19.0	4.7
BDE250	250	18.5	4.9

BDE is a long lasting high performance drive pattern. It is designed to provide those extra kilometres that modern transport fleets require.

BRL3



Size	Base Width	Tread Depth MM	Weight/ Metre
BRL3 210	210	12.7	3.15
BRL3 220	220	12.7	3.25
BRL3 230	230	12.7	3.40
BRL3 240	240	12.7	3.55
BRL3 250	250	12.7	3.70

BRL3 is a rib pattern and compound designed to reduce rolling resistance and the associated running costs. BRL3 delivers Bandag's best in class tread life and performance on highway use, for either trailer or drive applications not requiring above normal traction demands.

BDLT



Size	Base Width	Tread Depth MM	Weight/ Metre
BDLT140	140	12.7	2.0
BDLT150	150	12.7	2.1
BDLT160	160	12.7	2.2
BDLT170	170	12.7	2.3
BDLT180	180	12.7	2.4

BDLT fearlessly delivers relentless traction, responsive handling and proven reliability.

BDR-HT



Size	Base Width	Tread Depth MM	Weight/ Metre
BDRHT210	210	22.2	4.5
BDRHT220	220	22.2	4.7
BDRHT230	230	22.2	4.9
BDRHT250	250	22.2	5.4

Count on our new, uniquely designed BDR-HT to offer performance advantages over its competition. After thousands of kilometres of testing by leading fleets, the BDR-HT has proven to be a real winner.

CROSS BAR



Size	Base Width	Tread Depth MM	Weight/ Metre
CB127	127	12.0	1.7
CB142	142	12.5	2.0
CB152	152	12.5	2.1
CB165	165	13.5	2.5
CB174	174	13.5	2.7
CB184	184	15.0	3.1
CB194	194	15.0	3.2
CB203	203	15.0	3.5
CB219	219	15.0	3.9

Deep sculpted traction design offering excellent mileage and penetration resistance in both on and off-the-road drive axle applications.

BDY



Size	Base Width	Tread Depth MM	Weight/ Metre
BDY220	220	21.0	4.9
BDY230	230	21.0	5.2
BDY250	250	21.0	5.6

BDY is a directional drive tread designed for vehicles operating in harsh on/off road conditions such as logging, construction, quarrying and waste haul applications.

D4310



Size	Base Width	Tread Depth MM	Weight/ Metre
D4310194	194	16.5	3.4
D4310203	203	16.5	3.6
D4310219	219	16.5	3.8
D4310233	233	16.5	4.2
D4310250	250	16.5	4.7

A deep all-weather drive axle tread. Delivers excellent mileage while meeting the traction requirements of normal linehaul applications.

HIGHWAY TRACTION



Size	Base Width	Tread Depth MM	Weight/ Metre
HWT257	257	18.0	5.5
HWT295	295	17.5	6.8

Deep sculpted traction design offering excellent mileage and penetration resistance in both on and off-the-road drive axle applications.

LUG TRAC



Size	Base Width	Tread Depth MM	Weight/ Metre
LGT220	220	22.5	5.1
LGT230	230	22.5	5.5
LGT250	250	22.5	5.9

Lug Trac (LGT) is a deep and aggressive drive axle tread design that is suitable for short hauls and heavy loads. LGT will give you the traction and protection when you need it most.

LUG LOGGER



Size	Base Width	Tread Depth MM	Weight/ Metre
LL179	179	17.0	3.4
LL194	194	17.0	3.5
LL205	205	17.0	3.9

An aggressive traction, drive axle tread engineered to provide maximum service under rigorous on-road and off-the-road conditions.

ROCK LUG MODIFIED



Size	Base Width	Tread Depth MM	Weight/ Metre
RLM203	203	22.0	4.5
RLM219	219	22.0	5.2
RLM233	233	22.0	5.5
RLM246	246	22.5	5.9

An aggressive drive tread pattern that is designed for severe short haul and off-the-road applications. RLM has a deep skid depth that offers long mileage and increased penetration resistance.

WH-LUG



Size	Base Width	Tread Depth MM	Weight/ Metre
WHL210	210	22.2	5.1
WHL219	219	22.2	5.2
WHL240	240	22.2	5.9

WH-Lug is designed for slow speed short haul applications requiring maximum traction and is not recommended for high speed linehaul applications.

BPSD



Size	Base Width	Tread Depth MM	Weight/ Metre
BPSD200	200	21.0	4.6
BPSD210	210	21.0	4.9
BPSD220	220	21.0	5.1
BPSD230	230	21.0	5.4
BPSD240	240	21.0	5.6
BPSD250	250	21.0	5.8

A deep tread drive axle pattern for on/off highway use. The BPSD combines the traction needed on unsealed roads with the performance capabilities needed for highway conditions.

B729



Size	Base Width	Tread Depth MM	Weight/ Metre
B729210	210	21.0	4.8
B729220	220	21.0	5.1
B729230	230	21.0	5.4
B729240	240	21.0	5.6
B729250	250	21.0	5.8

The B729 is a drive tread pattern for on highway service. The B729 delivers long tread life and superior wet performance for on highway drive applications.

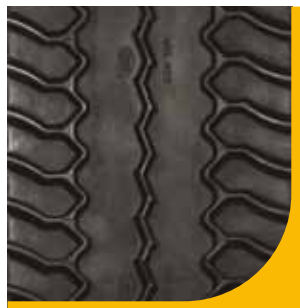
BDL3



Size	Base Width	Tread Depth MM	Weight/ Metre
BDL3 210	210	19.0	4.45
BDL3 220	220	19.0	4.60
BDL3 230	230	19.0	4.75
BDL3 240	240	19.0	4.90
BDL3 250	250	19.0	5.05

BDL3 is a drive pattern and compound designed to reduce rolling resistance and the associated running costs. BDL3 delivers Bandag's best in class tread life and performance on highway drive applications.

WIDE BASE LUG



Size	Base Width	Tread Depth MM	Weight/ Metre
WBL405	405	18.5	8.7

An aggressive all-wheel-position tread offering excellent mileage and traction in Wide Base applications.

WIDE SINGLE



Size	Base Width	Tread Depth MM	Weight/ Metre
WSE290	290	14.0	4.7

This Rib design is ideal for wide base service where outstanding mileage is an important criterion.

WIDE BASE RIB



Size	Base Width	Tread Depth MM	Weight/ Metre
WBR302	302	14.5	4.7
WBR325	325	14.5	5.0
WBR350	350	14.5	5.9

This Rib design tread is ideal for wide base services where outstanding mileage is an important criterion.

WIDE SINGLE MODIFIED



Size	Base Width	Tread Depth MM	Weight/ Metre
WSM290	290	14.0	5.2
WSM302	302	14.0	5.3

This advanced Wing design gives extra protection so that casing life can be increased, in addition to giving protection against tread edge tearing during cornering and tight manoeuvring.

ALL TERRAIN



Size	Base Width	Tread Depth MM	Weight/ Metre
AT165	165	16.0	2.7

All durable four-wheel-drive pattern suitable for all conditions.

MODIFIED RIB LOGGER



Size	Base Width	Tread Depth MM	Weight/ Metre
MRL290	290	17.0	6.0
MRL325	325	17.0	7.0

Suitable for Super Single and off-the-road applications, performs well under the most extreme conditions.

BAS 500



Size	Base Width	Tread Depth MM	Weight/ Metre
BAS500	500	22.5	13.0

Specifically designed for 24R21 size tyres used for Airport Fire Services.

SLICK



Size	Base Width	Tread Depth MM	Weight/ Metre
SL204	204	12.5	3.0
SL210	210	21.0	5.0
SL300	295	19.5	6.7
SL395	395	31.0	13.5
SL440	440	31.0	15.0

Solid rubber, with no tread design. Slick treads have far greater resistance to cutting, chipping and abrasive wear than lug treads.

B857



Size	Base Width	Tread Depth MM	Weight/ Metre
B857380	380	14.0	5.7

The B857 is an all position tread for on/off highway use offering excellent mileage performance in Wide Base applications. Available in New Zealand only.

BGLA



Size	Base Width	Tread Depth MM	Weight/ Metre
BGLA330	330	28.5	8.5

A proven high performing Grader tread designed to work best on radial casings.

BX MODIFIED



Size	Base Width	Tread Depth MM	Weight/ Metre
BX330	330	28.0	10.5
BX395	395	29.0	12.3

A deep, dynamic, hard-pulling tread designed for drive axles in short haul and severe off-the-road applications, exceptional mileage and penetration resistance.

GRADER



Size	Base Width	Tread Depth MM	Weight/ Metre
GR300	300	26.0	7.3
GR330	330	28.5	9.2
GR415	415	36.5	11.9

An extremely aggressive design for on and off-the-road applications.

SKID STEER
LOADER



Size	Base Width	Tread Depth MM	Weight/ Metre
SSL245	245	22.0	4.8

A proven high performing tread designed for Skid Steer Loaders.

ROCK BOSS



Size	Base Width	Tread Depth MM	Weight/ Metre
RB305	305	27.0	9.1
RB395	395	27.0	12.0
RB440	440	32.0	15.7

A deep, dynamic, hard pulling tread designed for drive axles in short haul and severe off-the-road applications. Exceptional mileage and penetration resistance.

MAXIMUM LOAD AT VARIOUS
COLD INFLATION PRESSURES

Size	Load Index	Speed Symbol (km/h)	Rim		kPa		450	475	500		525	550	575	600	625	650	675	689	700	725	750	775	800	825
			Design (inch)	Optional (inch)	PSI		65	69	73		77	80	84	87	90	94	98	100	102	106	109	112	116	120
					LI	S/D																		
15"																								
Standard Series																								
7.50 R 15	135/133	J (100)	6.0	6.50	135	S					1485	1540	1595	1650	1705	1760	1815	1845	1870	1920	1975	2025	2080	2130
					133	D					1400	1455	1505	1560	1610	1660	1710	1740	1760	1815	1860	1910	1960	2010
8.25 R 15	142/141	L (120)	6.5	6.0/7.0	142	S					1810	1880	1950	2015	2080	2150	2215	2250	2280	2345	2410	2475	2535	2600
					141	D					1750	1820	1885	1950	2015	2080	2140	2175	2205	2270	2330	2390	2455	2515
	143/141	L (120)			143	S					1855	1925	1995	2060	2130	2200	2265	2305	2330	2400	2465	2530	2595	2660
					141	D					1750	1820	1885	1950	2015	2080	2140	2180	2205	2270	2330	2390	2455	2515
20"																								
Standard Series																								
8.25 R 20	133/131	K (110)	6.5	5.5/6.0/7.0	133	S						1750	1810	1875	1935	2000	2060							
					131	D						1655	1715	1775	1835	1890	1950							
9.00 R 20	140/137	K (110)	7.0	6.0/6.5/7.5	140	S						2005	2075	2150	2220	2290	2360	2400	2430	2500				
					137	D						1845	1910	1975	2040	2110	2170	2210	2235	2300				
10.00 R 20	146/143	K(110) L(120)	7.5	8.0	146	S			2120		2190	2270	2340	2410	2480	2575	2620	2655	2680	2750	2800	2880	2940	3000
					143	D			1950		2020	2090	2150	2220	2280	2360	2410	2445	2470	2530	2575	2650	2700	2725
12.00 R 20	154/150	K (110)	8.5	8.0/9.0	154	S			2630		2730	2820	2910	3000	3080	3180	3250	3300	3340	3420	3500	3550	3660	3750
					150	D			2320		2400	2480	2560	2640	2710	2800	2900	2925	2940	3000	3080	3150	3220	3350
14.00 R 20	164/160	F (80)	10.0	9.0	164	S			3615		3760	3900	4045	4185	4320	4460	4595	4670	4730	4865	5000			
					160	D			3255		3385	3510	3640	3765	3890	4015	4135	4205	4260	4380	4500			
24"																								
Standard Series																								
12.00 R 24	156/153	J (100)	8.5	7.33/7.5 8.0/9.0	156	S						3040	3150	3260	3370	3475	3580	3640	3685	3790	3895	4000		
					153	D						2775	2875	2975	3075	3170	3270	3320	3365	3460	3555	3650		

Note: Loads indicated are rounded to the nearest 5kg from:

- The Tyre and Rim Association of Australia 2008 Standards Manual.
- European Tyre & Rim Technical Organisation Standards 2007, 1995, 1989 & 1988.
- 2008 Year Book, Tyre and Rim Association, Inc.

Single (S), Dual (D)

MAXIMUM LOAD AT VARIOUS
COLD INFLATION PRESSURES

Size	Load Index	Speed Symbol (km/h)	Rim		kPa		450	475	500		525	550	575	600	625	650	675	689	700	725	750	775	800	825		
			Design (inch)	Optional (inch)	PSI		65	69	73		77	80	84	87	90	94	98	100	102	106	109	112	116	120		
					LI	S/D																				
17.5"																										
70 Series																										
245/70R17.5	136/134	M (130)	7.5	6.75	136	S									1750	1805	1860	1890	1915	1970	2025	2080	2130	2185		
					134	D									1660	1710	1765	1790	1815	1865	1920	1970	2020	2070		
75 Series																										
215/75R17.5	135/133	J (100)	6.0	6.75	135	S										1760	1815	1845	1870	1920	1975	2025	2080	2130		
					133	D									1660	1710	1740	1760	1815	1860	1910	1960	2010			
	126/124	M (130)			126	S			1340		1390	1440	1485	1530	1570	1610	1660	1685	1700							
					124	D			1260		1305	1350	1395	1440	1475	1510	1560	1585	1600							
235/75R17.5	132/130	M (130)	6.75	7.5	132	S			1470		1520	1570	1620	1670	1720	1770	1820	1845	1860	1910	1950	2000				
					130	D			1380		1430	1480	1525	1570	1615	1660	1710	1735	1750	1800	1830	1900				
80 Series																										
225/80R17.5	123/122	L (120)	6.75	6.00	123	S	1180	1225	1265		1305	1360	1380	1415	1450	1485	1520	1535	1550							
					122	D	1120	1170	1205		1240	1285	1315	1350	1400	1415	1450	1480	1500							
90 Series																										
225/90R17.5	127/125	L (120)	6.75	6.00	127	S	1335	1380	1425		1470	1510	1555	1595	1635	1675	1710	1735	1750							
					125	D	1260	1305	1345		1390	1430	1465	1505	1545	1580	1620	1635	1650							
Standard Series																										
9.5 R 17.5	129/127	M (130)	6.75	6.0	129	S						1445	1495	1550	1600	1650	1700	1730	1750	1800	1850					
					127	D						1365	1415	1465	1510	1560	1610	1635	1655	1705	1750					
	143/141	J (100)			143	S					1810	1880	1950	2015	2080	2150	2215	2250	2280	2345	2410	2475	2535	2600		
					141	D					1715	1780	1845	1905	1970	2035	2095	2130	2155	2220	2280	2340	2400	2460		
19.5"																										
70 Series																										
245/70R19.5	136/134	M (130)	7.5	6.75	136	S									1735	1795	1850	1910	1940	1965	2020	2075	2130	2185	2240	
					134	D									1645	1700	1750	1805	1835	1860	1910	1965	2015	2070	2120	
265/70R19.5	140/138	M (130)	7.5	6.75/8.25	140	S							1970	2035	2105	2170	2240	2275	2305	2370	2435	2500				
					138	D							1860	1925	1985	2050	2115	2150	2175	2235	2300	2360				
	143/141	J (100)			143	S							2060	2130	2200	2265	2305	2330	2400	2465	2530	2595	2660			
					141	D							1950	2015	2080	2140	2175	2205	2270	2330	2390	2455	2515			
305/70R19.5	148/145	J (100) M (130)	9.0	8.25	148	S								2385	2465	2540	2620	2660	2695	2775	2850	2925	3000	3075		
					145	D							2195	2265	2340	2410	2450	2480	2550	2620	2690	2760	2830			

Note: Loads indicated are rounded to the nearest 5kg from:

- The Tyre and Rim Association of Australia 2008 Standards Manual.
- European Tyre & Rim Technical Organisation Standards 2007, 1995, 1989 & 1988.
- 2008 Year Book, Tyre and Rim Association, Inc.

Single (S), Dual (D)

MAXIMUM LOAD AT VARIOUS
COLD INFLATION PRESSURES

	Size	Load Index	Speed Symbol (km/h)	Rim		kPa		450	475	500		525	550	575	600	625	650	675	689	700	725	750	775	800	825	
				Design (inch)	Optional (inch)	PSI		65	69	73		77	80	84	87	90	94	98	100	102	106	109	112	116	120	
						LI	S/D																			
22.5"																										
60 Series																										
285/60R22.5	148/145	L (120)	9.0	8.25	148	S										2280	2355	2430	2505	2545	2580	2650	2725	2795	2870	2940
					145	D										2095	2165	2235	2305	2340	2370	2440	2505	2575	2640	2705
295/60R22.5	150/147	L (120)	9.0	9.75	150	S	1920	2005	2090		2175	2255	2335	2420	2500	2580	2655	2700	2735	2815	2890	2970	3045	3120		
					147	D	1765	1845	1925		2000	2075	2150	2225	2300	2370	2445	2485	2515	2590	2660	2730	2800	2870		
65 Series																										
385/65R22.5	158 160	L (120) K (110)	11.75	12.25	160	S											3575	3635	3685	3790	3890	3995	4100	4200		
	425/65R22.5	165	K (110)	13.0	14.0	165	S									4125	4255	4385	4460	4515	4645	4770	4900	5025	5150	
445/65R22.5	169	K (110)	14.0	-	169	S										4330	4470	4610	4685	4745	4880	5015	5145	5280	5410	
70 Series																										
255/70R22.5	140/137	J (100) L (120)	7.5	6.75/ 8.25	140	S			1650		1720	1790	1860	1930	1995	2060	2150	2200	2240	2300	2340	2410	2500			
		137			D			1550		1615	1680	1750	1820	1880	1940	2000	2035	2060	2110	2130	2190	2300				
275/70R22.5	148/145	J (100) K (110)	8.25	7.5	148	S													2580	2650	2725	2795	2870	2940		
		L (120) M (130)																								
		145			D														2370	2440	2505	2575	2640	2705		
305/70R22.5	150/148	M (130)	9.0	8.25	150	S										2700	2785	2830	2865	2950	3030	3110	3190	3270		
		148			D												2540	2620	2660	2695	2775	2850	2925	3000	3075	
75 Series																										
295/75R22.5	146/143	L (120)	9.0	8.25	146	S			2100		2180	2240	2320	2380	2440	2490	2570	2620	2655	2730	2780	2875	2910	3000		
					143	D			1915		1995	2060	2115	2165	2220	2285	2355	2395	2425	2490	2555	2950	2670	2725		
80 Series																										
275/80R22.5	151/148	J (100)	8.25	7.5/9.0	151	S									2720	2785	2850	2915	2955	2980	3040	3100	3160	3220	3280	
					148	D									2485	2545	2605	2660	2695	2720	2775	2830	2885	2940	2995	
	148/144	M (130)			148	S								2440	2525	2605	2685	2725	2760	2840	2920	2995	3075	3150		
					144	D								2170	2240	2315	2385	2425	2455	2525	2595	2665	2730	2800		

Note: Loads indicated are rounded to the nearest 5kg from:

- The Tyre and Rim Association of Australia 2008 Standards Manual.
- European Tyre & Rim Technical Organisation Standards 2007, 1995, 1989 & 1988.
- 2008 Year Book, Tyre and Rim Association, Inc.

Single (S), Dual (D)

MAXIMUM LOAD AT VARIOUS
COLD INFLATION PRESSURES






	Size	Load Index	Speed Symbol (km/h)	Rim		kPa		450	475	500		525	550	575	600	625	650	675	689	700	725	750	775	800	825	
				Design (inch)	Optional (inch)	PSI		65	69	73		77	80	84	87	90	94	98	100	102	106	109	112	116	120	
						LI	S/D																			
22.5" Cont.																										
80 Series Cont.																										
295/80R22.5	152/148	J (100)	9.0	8.25	152	S											2865	2950	3000	3040	3125	3210	3295	3380	3465	
		K (110)			148	D											2540	2620	2660	2695	2775	2850	2925	3000	3075	
		M (130)																								
315/80R22.5	156/150	K (110)	9.0	9.75	156	S									3125	3225	3325	3380	3425	3520	3620	3715	3810	3905		
					150	D										2620	2700	2785	2830	2865	2950	3030	3110	3190	3270	
	154/150	M (130)	9.0	9.75	154	S							2905	3005	3100	3195	3245	3290	3380	3475	3565	3660	3750			
					150	D								2595	2685	2770	2855	2900	2935	3020	3105	3185	3270	3350		
Standard Series																										
9 R 22.5	133/131	L (120)	6.75	6.0	133	S	1490	1555	1620		1685	1750	1810	1875	1935	2000	2060									
					131	D	1410	1470	1535		1595	1655	1715	1775	1835	1890	1950									
11 R 22.5	148/145	J (100)			148	S									2465	2540	2620	2660	2695	2775	2850	2925	3000	3075		
		K (110)			145	D								2265	2340	2410	2450	2480	2550	2620	2690	2760	2830			
		L (120)																								
	146/144	L (120)	8.25	7.5	146	S								2385	2460	2540	2620	2660	2695	2775	2850	2925	3000			
		144			D								2225	2300	2370	2445	2485	2515	2590	2660	2730	2800				
	146/143	J (100)			146	S			2120		2190	2270	2340	2410	2480	2550	2620	2655	2680	2750	2800	2880	2940	3000		
		L(120)			143	D			1950		2020	2090	2150	2220	2280	2350	2410	2445	2470	2530	2575	2650	2700	2725		

Note: Loads indicated are rounded to the nearest 5kg from:

- The Tyre and Rim Association of Australia 2008 Standards Manual.
- European Tyre & Rim Technical Organisation Standards 2007, 1995, 1989 & 1988.
- 2008 Year Book, Tyre and Rim Association, Inc.

Single (S), Dual (D)

This is a general guide to assist with the selection of Bandag tread patterns.
Please discuss your specific needs with your local supplier of Bandag retreads.

SURFACE	HIGHWAY	REGIONAL	ON/OFF ROAD	OFF ROAD	METRO/P.U.D.
					
STEER				Rib Trac Elite	Bitumen Special
					Brawny Rib
					BRM
					R4200
					Rib Trac
DRIVE	BDE	BDE	Highway Traction	Lug Logger	BDLT
	BDR-HT	BDR-HT	Lug Logger	Lug Trac	Brawny Rib
	Cross Bar	Cross Bar	Lug Trac	Rib Trac Elite	Cross Bar
	D4310	D4310	Rib Logger	Rock Lug Modified	Highway
	R4200	Highway	Rock Lug Modified	WH-Lug	Rib Trac
	Rib Trac	BPSD	WH-Lug		BRM
	B729 / BPSD		BPSD (P) / BDY	BDY	Bitumen Special
TRAILER	Highway	Bitumen Special	Rib Logger	Rib Logger	Highway
	R4200	Highway	Rib Trac	Rib Trac	R4200
	Rib Trac	R4200	Rib Trac Elite	Rib Trac Elite	Rib Trac
	T4100	Rib Trac			T4100
		T4100			

TRUCK TYRE SPECIFICATION DATA

	B729	B857	BDE	BDLT	BDR-HT	BDY	BPSD	BRYR	BRM	BS	CB	D4310	HW	HWT	LGT	LL	R4200	RL	RT	RTE	RLM	T4100	WHL	WBL	WBR	WSE/WSM
600 X 9																										
700 X 12																										
700 X 15																										
750 X 15																										
825 X 15																										
1000 X 15																										
650 X 16																										
700 X 16																										
750 X 16																										
825 X 16																										
215/75R17.5																										
215/95R17.5																										
9.5R17.5																										
225/90R17.5																										
265/70R19.5																										
305/70R19.5																										
435/50R19.5																										
825 X 20																										
900 X 20																										
1000 X 20																										
1100 X 20																										
1200 X 20																										
11R22.5																										
12R22.5																										
255/70R22.5																										
275/70R22.5																										
275/80R22.5																										
295/80R22.5																										
305/70R22.5																										
315/80R22.5																										
385/65R22.5																										
425/65R22.5																										
445/65R22.5																										