



TRUCK AND BUS TYRE | **TECHNICAL MANUAL**

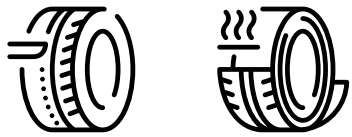
REGROOVING GUIDE

Regrooving introduction
Regrooving technical data

SmartLife Solutions

PREMIUM • VISION • PARTNERSHIP

Up to 250% Mileage Life from 1 new tyre



Cost competitiveness, safety and respect for the environment are all major issues faced by European Transport professionals.

The Hankook SmartLife Solutions can



save money



reduce emissions



improve safety

by extracting the value Hankook built into our premium TBR tyres through regrooving and retreading.

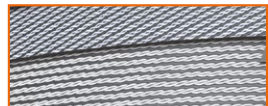
The Hankook SmartLife Solutions

Delivering “built in” value to dealer & fleet partners

- All Hankook TBR tyres are designed and built to be regrooved and retreaded.
- We add 5-8mm more tread rubber under the tread pattern for regrooving.
- We build tyre casings to withstand multiple retreads.

5mm to 8mm of extra tread rubber

Reinforced casing to allow for multiple retreads

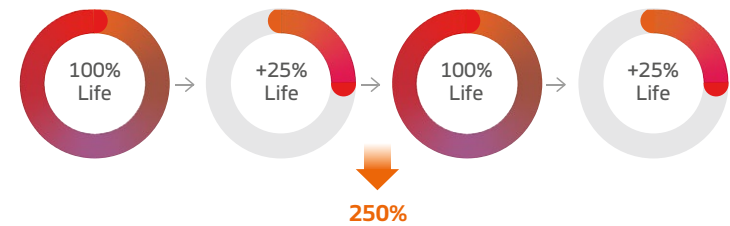


SmartLife Solutions - Extend your tyre life

Premium tyres and casings that deliver up to 250% tyre life

1 st Life	2 nd Life	3 rd Life	4 th Life
New Tyre	Regrooved Tyre	Retreaded Tyre	Regrooved Tyre
100%	25%	100%	25%

1 tyre = 1 casting = 250% tyre life



Be SMART and regroove your premium Hankook tyres you will save resources, preserve the environment and save money on tyres and fuel

SAFETY

Regrooved tyres can provide 10% more grip and traction¹

EFFICIENCY

Up to 25% more km of wear 2L of fuel saved per 100km of driving²

ENVIRONMENT

1.6 tons less CO² per vehicle set per year²
70kg raw materials saved with 4 regrooved tyres

1. When compared to a Hankook tyre at legal minimum tread depth
2. Vehicle with 4 regrooved tyres covering 120k km per year
3. Tyres improve fuel efficiency as they wear. When a tyre is regrooved you extend the tyre life when it is at its most fuel efficient state

Regrooving introduction

INTRODUCTION

A regrooved tyre means a tyre, either new or retreaded, on which a tread pattern has been produced by cutting into the tread in accordance with the tyre manufacturer's recut tread pattern. Recut tread patterns for Hankook tyres are contained in this manual.

Regrooving of truck tyres requires fully trained operators:

- Use only regrooving tools with electrically heated blades.
- Determine the blade setting depth for each individual tyre by referring to the following tables.
- Set the blade in the cutter head to the specified depth.
- While regrooving, hold the cutter so that the underside of the cutting head is flat against the tread surface. Heating of the blade starts automatically as the blade penetrates the rubber.

A minimum depth of remaining undertread rubber is required to avoid:

- Damage of the top steel belt
- Rib tearing caused by groove cracking
- Stone damage

After regrooving, the tyre should be free of any defects (cracks, separations exposed ply or cord) visible on either the mounted or demounted tyre.

TECHNICAL REQUIREMENTS

The tyre must be demounted from the rim before regrooving.

Inspection :

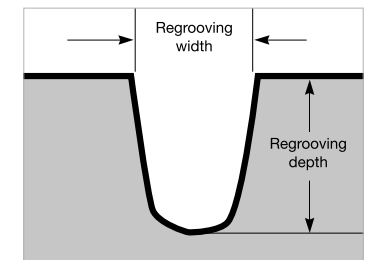
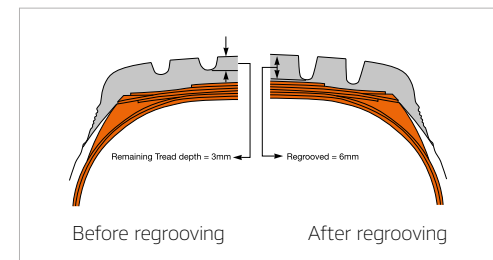
- Before regrooving check there is no damage on any part of the tyre.
- Remove stones and any other foreign objects such as nails from the tread which may have embedded into the grooves. Repair if necessary.
- Particular care should be exercised in selecting a tyre for regrooving where the tread area is damaged in anyway (eg: chipping, tearing and cutting due to abnormal operating conditions)
- Where a tyre has worn abnormally it may be possible to regroove that part of the worn tyre, provided that a sufficient amount of the original groove is visible before regrooving.

It is recommended that the minimum remaining tread depth be between 2mm and 3mm before regrooving. The tread depth should be measured around the circumference at 4 places to find the minimum remaining depth. Set the cutter blade for the recommendations as shown in this publication.

Please make sure that you regroove Hankook tyres steel radials to the patterns, depths and widths recommended in this manual to ensure good service from your tyres.

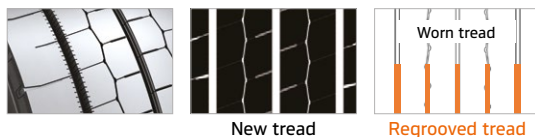
After regrooving, your tyre should be free from defects. It is most important to ensure that the belts under the tread have not been exposed.

REGROOVING RECOMMENDATIONS



Regrooving technical data

LONG HAUL



SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	

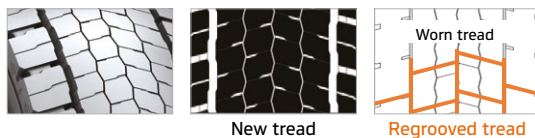
TUBELESS

55	385/55R22.5	160K		*	11.6	3	6~9
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AL20w

TUBELESS

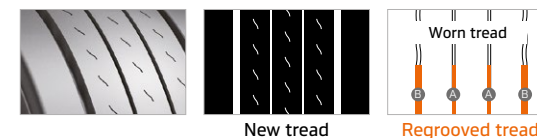
50	355/50R22.5	156L		*	10.6	3	7~9
60	295/60R22.5	150/147L		*	11	3	6~8
	315/60R22.5	154/148L		*	10.5	3	6~8
70	315/70R22.5	156/150L		*	11.6	3	7~9



SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	

TUBELESS

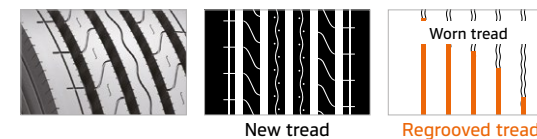
80	315/80R22.5	156/150L		*	15.0	3	5~7
70	315/70R22.5	154/150L		*	14.6	3	6
60	295/60R22.5	150/147L		*	13	3	6~8
	315/60R22.5	152/148L		*	13.4	3	6~8



SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	

TUBELESS

65	385/65R22.5	160K		*	12.2	3	9~11
55	385/55R22.5	160K		*	11.4	3	A6~8 / B12~14
50	435/50R19.5	160J		*	8.7 / 10.2	3	A2.5 / B7~9
45	445/45R19.5	160K		*	8.7 / 10.2	3	A2.5 / B7~9

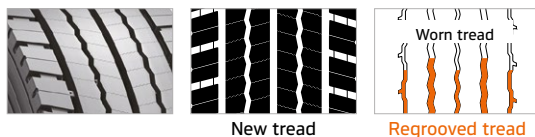


SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	

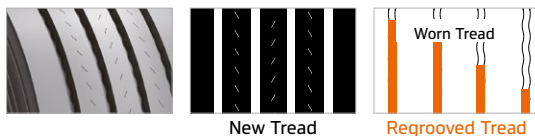
TUBELESS

80	315/80R22.5	156/150L (154/150M)		*	13.5	3	8~10
70	315/70R22.5	156/150L		*	14.5	3	8~10
65	385/65R22.5	160K		*	12.2	3	6~9
60	295/60R22.5	150/147L		*	13.6	3	8~10
	315/60R22.5	154/148L		*	13.5	3	8~10
50	355/50R22.5	156L		*	13.5	3	9~11

LONG HAUL



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	315/80R22.5	156/150L (154/150M)		*	17.7	3	8~10
60	295/60R22.5	150/147K		*	18.9	3	5~7
	315/60R22.5	152/148L		*	19.5	3	8~10
55	295/55R22.5	147/145K		*	10.4	3	7~9
45	315/45R22.5	147/145L		*	17.5	3	6~8



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
75	215/75R22.5	135/133J		*	10.2	3	9
	235/75R22.5	143/141J		*	10.7	3	10
70	245/70R17.5	143/141J (146/146F)		*	10.7	3	10
	265/70R19.5	143/141J		*	10.7	3	10
65	385/65R22.5	160K		*	14.5	3	10~12
50	435/50R19.5	160J		*	12.6	3	12~14
40	455/40R22.5	160J		*	13.5	3	10~12

COACH



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	295/80R22.5	154M		*	14.1	3	8~10
	315/80R22.5	156/150L		*	14.6	3	8~10



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	295/80R22.5	154/149M		*	17.9	3	6~8

REGIONAL HAUL



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
80	12R22.5	152/149L		*	16.0	3	9~11
	295/80R22.5	152/148M(154/149L)		*	17.5	3	9~11
	315/80R22.5	156/150L		*	17.5	3	9~11
70	315/70R22.5	156/150L		*	15.5	3	9~11
	275/70R22.5	148/145M		*	15.0	3	7~11
65	385/65R22.5	164K		*	15.5	3	9~11
	385/65R22.5	160K(158L)		*	15.5	3	9~11
60	315/60R22.5	154/148L		*	13.1	3	8~10
55	385/55R22.5	160K		*	15.0	3	6~8
50	335/50R22.5	156L		*	13.6	3	6~8

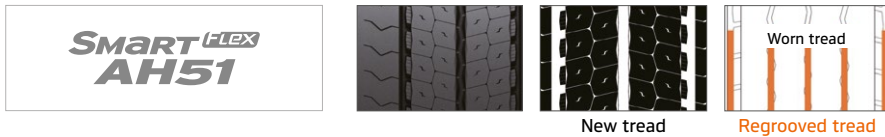


SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
80	295/80R22.5	152/148M		*	20.5	3	6~8
	315/80R22.5	156/150L		*	20.5	3	6~8
70	315/70R22.5	154/150L		*	19.5	3	9~11
	275/70R22.5	148/145M		*	17.7	3	6~8
60	295/60R22.5	150/147K		*	18.9	3	4~6
	315/60R22.5	152/148L		*	19.4	3	5~7

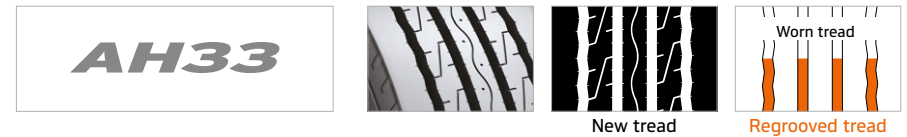


SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
	11R22.5	148/145L		*	11.5	3	6~8
70	275/70R22.5	152/148J		*	12.6	3	6
65	425/65R22.5	165K		*	15.5	3	6~8
	385/65R22.5	160K		*	16.0	3	7.66
	445/65R22.5	169K		*	15	3	12
60	295/60R22.5	150/147K (152J)		*	13.6	3	10
55	385/55R22.5	160K (158L)		*	14.6	3	6~8
	385/55R19.5	156J		*	14.5	3	10
50	435/50R19.5	160J		*	12.5	3	6~8
45	445/45R19.5	160J		*	13	3	9
	455/45R22.5	160J		*	15	3	10
40	455/40R22.5	160J		*	13.6	3	10

REGIONAL HAUL



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
80	315/80R22.5	156/150L(154/150M)		*	16.5	3	6~8
	315/70R22.5	156/150L		*	15	3	7~9
65	385/65R22.5 20P	160K(158L)		*	14	3	8~10
	385/65R22.5 24P	164K		*	14	3	8~10



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
	10R22.5	141/139M		*	13.5	3	6~8
	11R22.5	148/145L		*	16	3	6~8
	12R22.5	152/148L		*	16.5	3	7~9
	13R22.5	156/150L		*	16.5	3	6~8

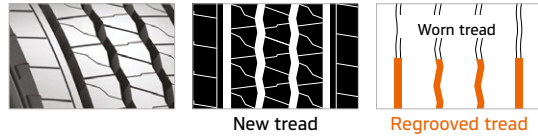


SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
80	315/80R22.5	156/150L (154/150M)		*	17.5	3	5~7
70	315/70R22.5	154/150L		*	19.7	3	5~7



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
	12R22.5	152/149L		*	24	3	4~5

REGIONAL HAUL



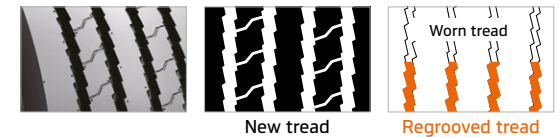
SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
75	8.5R17.5	121/120L	*		12.1	3	4~6
	9.5R17.5	131/129L	*		13.6	3	4~6
	8R19.5	124/122L	*		12.5	3	4~6
	205/75R17.5	124/122M	*		12.1	3	5~7
	215/75R17.5	126/124M	*		12.6	3	5~7
	215/75R17.5	128/126M	*		12.6	3	5~7
	225/75R17.5	129/127M	*		12.1	3	6~8
70	235/75R17.5	132/130M	*		12.1	3	7~9
	245/70R17.5	136/134M	*		12.1	3	7~9
	265/70R17.5	140/136M	*		12.6	3	7~9
	245/70R19.5	136/134M	*		13.6	3	7~9
	265/70R19.5	140/138M	*		13.1	3	7~9
	285/70R19.5	146/144M	*		13.1	3	5~7
	305/70R19.5	148/145M	*		14.6	3	6~8



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
75	8.5R17.5	121/120L	*		12.1	3	5~7
	9.5R17.5	131/129L	*		15.0	3	5~7
	205/75R17.5	124/122M	*		13.1	3	5~7
	215/75R17.5	126/124M	*		13.0	3	6~8
	225/75R17.5	129/127M	*		12.6	3	6~8
	235/75R17.5	132/130M	*		12.6	3	6~8
	70	245/70R17.5	136/134M	*		13.1	3
265/70R17.5		139/136M	*		15.0	3	5~7
245/70R19.5		136/134M	*		13.1	3	5~7
265/70R19.5		140/138M	*		13.0	3	5~7
285/70R19.5		146/144M	*		14.1	3	6~8
305/70R19.5		148/145M	*		15.5	3	6~8



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	12R22.5	152/149K	*		18.9	3	8~10
	295/80R22.5	152/148M	*		21.4	3	7~8



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
75	9.5R17.5	143/141J	*		13.5	3	5~7
	11R22.5	148/146L	*		12.6	3	6~8
	215/75R17.5	135/133J	*		12.0	3	6~8
	235/75R17.5	143/141J	*		12.5	3	6~8
	70	245/70R17.5	143/141J (146/146F)	*		12.5	3
245/70R19.5		141/140J	*		14.0	3	6~8
265/70R19.5		143/141J	*		13.5	3	7~9
285/70R19.5		150/148J	*		14.0	3	6~8
65		205/65R17.5	129/127K(132/132F)	*		11.6	3
	425/65R22.5	165K	*		16.5	3	8~10
55	385/55R22.5	160K (158L)	*		15.0	3	12~14

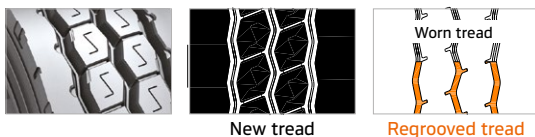
MIXED SERVICE (ON AND OFF-ROAD)



SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
70	265/70R19.5	143/141J	*		16.0	3	8~10	
	275/70R22.5	148/145K	*		18.0	3	8~10	
65	425/65R22.5	165K	*		18.5	3	10~12	
	445/65R22.5	169K	*		18.9	3	10~12	

AM15+

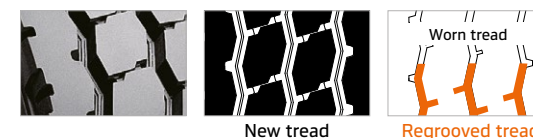
TUBELESS								
65	385/65R22.5	160K (158L)	*		18.0	3	12~14	



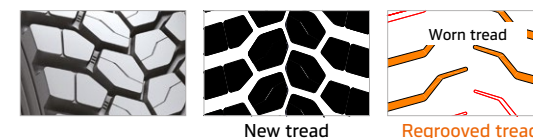
SRS	Size	LI/SS	Type		Tread Depth		Regrooving	
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
80	315/80R22.5	156/150K	*		16.3	3	10~12	
	13R22.5	156/150K	*		16,8	3	11~13	



SRS	Size	LI/SS	Type		Tread Depth	Regrooving		
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
95	10R22.5	144/142K	*		15.0	3	A9~11 / B8~10	
	11R22.5	148/145K	*		22.5	3	12~14	
	12R22.5	152/149K	*		18.9	3	8~10	
	13R22.5	156/150K	*		18.0	3	A13~15 / B10~12	
80	325/95R24	162/160K	*		18.2	3	8~10	
	295/80R22.5	152/148K (154/150J)	*		17.0	3	A11~13 / B8~10	
	315/80R22.5	156/150K	*		17.0	3	A12~14 / B9~11	



SRS	Size	LI/SS	Type		Tread Depth	Regrooving		
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
95	325/95R24	162/160K	*		18.4	4	7-9	



SRS	Size	LI/SS	Type		Tread Depth	Regrooving		
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
80	315/80R22.5	156/150K	*		19.7	3	5~13	
	295/80R22.5	154/150L	*		11	3	6~12	
	13R22.5	156/150K	*		20	3	7~12	
70	315/70R22.5	154/150L	*		18,7	3	6~14	

MIXED SERVICE (ON AND OFF-ROAD)



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
80	11R22.5	148/145K		*	23.5	3	7-11
	12R22.5	152/148K		*	22.5	3	7-11
	13R22.5	156/150K		*	23.0	3	7-12
	1200R20	154/150K		*	23.0	2	7-12
	295/80R22.5	152/148K		*	23.8	3	5-10
	315/80R22.5	156/150K		*	21.8	3	6-12



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
95	325/95R24	162/160K		*	19.4	3	12-22

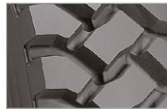


SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
65	385/65R22.5	160K (158L)		*	17.5	3	7-9



SRS	Size	LI/SS	Type		Tread Depth m/m	Regrooving	
			T/T	T/L		Depth	Width
TUBELESS							
65	385/65R22.5	160K(158L)		*	16.5	3	10-12

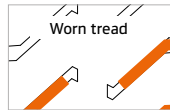
OFF-ROAD



New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
95	1100R20	152/148K		*	20.0	3	10~12
95	325/95R24	162/160G		*	23.3	3	10~12

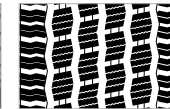


New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	11R22.5	148/145G		*	25.0	4	14~16
	12R22.5	152/148G		*	25.0	4	14~16
	13R22.5	154/150K		*	24.0	4	14~16
80	315/80R22.5	156/150K		*	22.5	4	15~17
TUBE TYPE							
	1200R20	154/150G		*	24.0	4	14~16
	1200R24	156/153G		*	20.9	4	14~16

WINTER



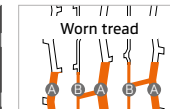
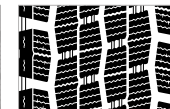
New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	295/80R22.5	154/149M		*	16.5	3	9~11
	315/80R22.5	156/150L		*	17.0	3	8~10
70	275/70R22.5	150/145J		*	18	3	5~6
	315/70R22.5	154/150L		*	16.0	3	8~10
65	385/65R22.5	160K		*	15.5	3	8~10
55	385/55R22.5	160K (158L)		*	15.0	3	8~10

AWO2+

TUBELESS							
65	385/65R22.5	160K (158L)		*	15.5	3	8~10

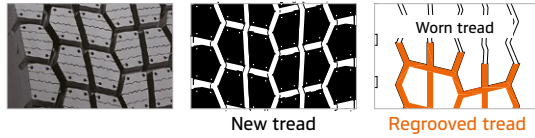


New tread

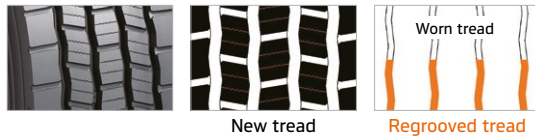
Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	12R22.5	152/148L		*	19.5	3	A4~6 / B4~6
	315/80R22.5	156/150L		*	20.5	3	A5~7 / B4~6
	295/80R22.5	152/148L		*	20.5	3	A5~7 / B4~6
70	275/70R22.5	150/145J		*	18.4	3	3.5~5
	315/70R22.5	154/150L		*	17.5	3	A6~8 / B4~6

WINTER

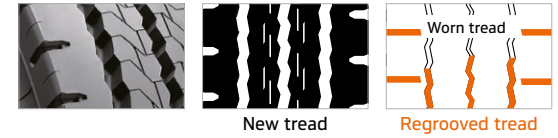


SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	295/80R22.5	152/148L		*	21.3	3	10~12
	315/80R22.5	156/150L		*	21.3	3	10~12
70	315/70R22.5	154/150L		*	21.3	3	10~12



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
65	385/65R22.5	160K (158L)		*	12.1	3	9.5
55	385/55R22.5	160K/158L		*	14.1	3	9
45	445/45R19.5	160J		*	13.6	3	9

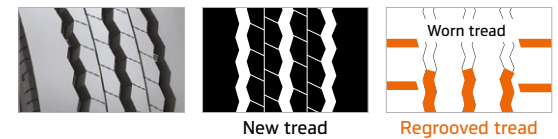
URBAN



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	11R22.5	148/145J		*	19.0	3	9~11
	275/80R22.5	149/146J		*	19.0	3	9~11
70	295/80R22.5	152/148J		*	19.0	3	9~11
	245/70R19.5	136/134M		*	15.5	3	7~9
	265/70R19.5	140/138M		*	15	3	8~10

AU03+

TUBELESS							
70	275/70R22.5	150/145J (152/148)		*	20.5	3	9~11



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
70	275/70R22.5	150/148J (152/148F)		*	19	3	7~8
60	315/60R22.5	154/148J (156/152F)		*	13.1	3	7~8

AU04

TUBELESS							
80	11R22.5	148/145J		*	20.2	3	9~11
	295/80R22.5	152/148J		*	16.5	3	9~11