



TRUCK AND BUS TYRE | **TECHNICAL MANUAL**

REGROOVING GUIDE

Regrooving introduction
Regrooving technical data

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 :

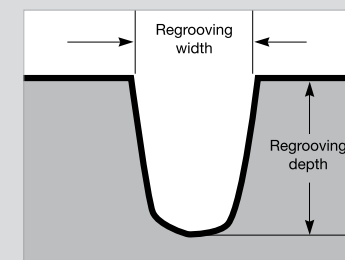
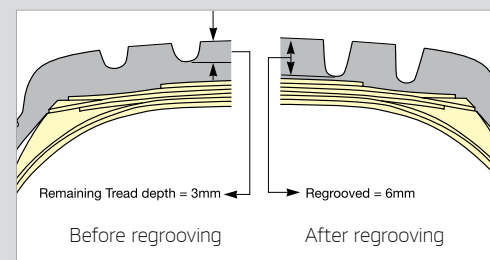
- Before regrooving check there is no damage on any part of the tyre.
- Remove stones and any other foreign objects such as nails from the tread which may have embedded into the grooves. Repair if necessary.
- Particular care should be exercised in selecting a tyre for regrooving where the tread area 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.

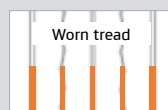
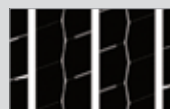
REGROOVING RECOMMENDATIONS



Regrooving technical data

LONG HAUL

e-Cube^{Blue} AL20
/AL20^w



New tread

Regrooved tread

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

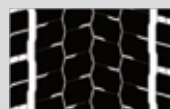
AL20w

TUBELESS

60	295/60R22.5 *			*				
	315/60R22.5 *			*				

* Available in Q2/2019

e-Cube^{Blue} DL20
/DL20^w



New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
70	315/70R22.5	154/150L		*	14.6	3	6

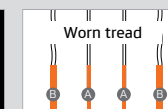
DL20w

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 **			*				
	315/60R22.5 **			*				

** Available in Q3/2019

e-Cube^{Blue} TL20



New tread

Regrooved tread

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

AL10⁺
e-Cube^{MAX}

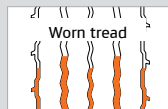
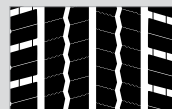


New tread

Regrooved tread

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

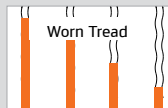
DL10⁺
e-cube MAX

New tread

Regrooved tread

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

*** Available in Q1/2020

TL10⁺
e-cube MAX

New Tread

Regrooved Tread

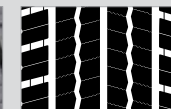
SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
75	215/75R22.5	135/133J		*	10.2	3	9
	235/75R22.5	143/141J		*	10.7	3	10
70	245/70R17.5	143/141J (146/146F)		*	10.7	3	10
	265/70R19.5	143/141J		*	10.7	3	10
65	385/65R22.5	160K		*	14.5	3	10~12
50	435/50R19.5	160J		*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

AL10 e-cube

New Tread

Regrooved Tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	12R22.5	152/148L		*	14.5	3	6~8
80	295/80R22.5	152/148M		*	13.5	3	8~10
70	255/70R22.5	140/137M		*	13.1	3	8~10
	275/70R22.5	148/145M		*	15.0	3	8~10
	305/70R22.5	152/148L		*	13.5	3	8~10

DL10 e-cube

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	152/148M		*	17.5	3	10~12
70	275/70R22.5	148/145M		*	18.5	3	10~12

LONG HAUL



SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
70	275/70R22.5	152/148J		*	12.6	3	10~12
65	445/65R22.5	169K		*	16.5	3	12~14
45	445/45R19.5	160J		*	13.5	3	8~10

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

Smart FLEX
AH31


New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving		
			T/T	T/L	m/m	Depth	Width	
TUBELESS								
	12R22.5	152/149L		*	16.0	3	9~11	
80	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	

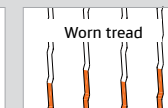
Smart FLEX
DH31


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	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	

**Available in Q3/2018

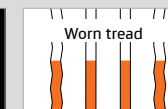
Smart FLEX
TH31


New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	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
55	385/55R22.5	160K (158L)		*	14.6	3	6~8
50	435/50R19.5	160J		*	12.5	3	6~8
40	455/40R22.5 *	160J					

* available in Q2/2019

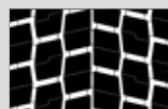
AH33


New tread

Regrooved tread

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

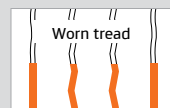
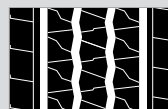
REGIONAL HAUL

DH33+

New tread

Regrooved tread

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

Smart FLEX AH35

New tread

Regrooved tread

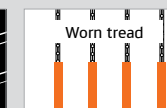
SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	8.5R17.5	121/120L		*	12.1	3	4~6
	9.5R17.5	131/129L		*	13.6	3	4~6
	8R19.5	124/122L		*	12.5	3	4~6
75	205/75R17.5	124/122M		*	12.1	3	5~7
	215/75R17.5	126/124M		*	12.6	3	5~7
	215/75R17.5	128/126M		*	12.6	3	5~7
	225/75R17.5	129/127M		*	12.1	3	6~8
	235/75R17.5	132/130M		*	12.1	3	7~9
70	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

Smart FLEX DH35

New tread

Regrooved tread

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
70	235/75R17.5	132/130M		*	12.6	3	6~8
	245/70R17.5	136/134M		*	13.1	3	6~8
	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

AH11

New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	8R17.5	117/116L		*	13.0	3	8~10
	10R22.5	141/139L		*	13.5	3.5	11~13
	13R22.5	156/150L		*	16.5	3.5	11~13
TUBE TYPE							
	1000R20	147/143L		*	16.0	3	8~10
	1100R20	150/146L		*	16.0	4	8~10

REGIONAL HAUL

AH22

New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	11R22.5	148/145L		*	16.5	3	8~10
	12R22.5	152/148L		*	16.5	3	8~10

DH03

New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	11R22.5	148/145M		*	16.5	3	11~13
	295/80R22.5	152/148M		*	13.5	3	11~13

DH16

New tread

Regrooved tread

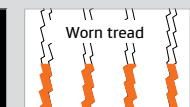
SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
	12R22.5	152/149K		*	18.9	3	8~10

DH05

New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	8R17.5	117/116L		*	14.0	3	6~8
	11R22.5	148/145L		*	21.0	3	10~12
	12R22.5	152/148L		*	22.5	3	10~12
	295/80R22.5	152/148M		*	23.0	3	10~12
	315/80R22.5	154/150M (156L)		*	23.5	3	10~12
70	315/70R22.5	154/150L		*	19.5	3	10~12
TUBE TYPE							
	1000R20	147/143L		*	22.5	3	8~10
	1100R20	150/146L		*	22.5	3	10~12

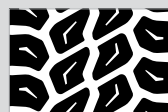
TH22

New tread

Regrooved tread

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	6~8
	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	6~8
	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)

SMART^{WORK} AM15
/AM15+


New tread

Regrooved tread

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	
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SMART^{WORK} AM11


New tread

Regrooved tread

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

* available in Q2/2019

SMART^{WORK} AM09


New tread

Regrooved tread

SRS	Size	LI/SS	Type		Tread Depth	Regrooving	
			T/T	T/L	m/m	Depth	Width
TUBELESS							
80	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
	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

AM06


New tread

Regrooved tread

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

SMART^{WORK} DM11

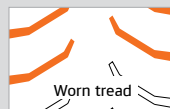

New tread

Regrooved tread

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

* available in Q2/2019

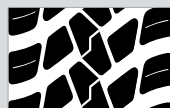
MIXED SERVICE (ON AND OFF-ROAD)

SMART^{WORK}
DM09

New tread

Regrooved tread

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

DM06

New tread

Regrooved tread

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

DM07

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

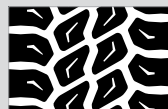
DM04

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

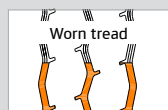
MIXED SERVICE (ON AND OFF-ROAD)

SMART^{WORK}
TM15

New tread

Regrooved tread

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

SMART^{WORK}
TM11

New tread

Regrooved tread

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

* available in Q2/2019

WINTER

SMART^{CONTROL}
AW02

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

AW02+

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

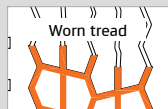
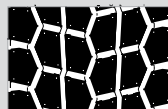
SMART^{CONTROL}
DW07

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

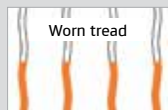
WINTER

DW06

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	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

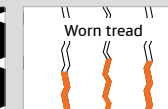
**SMART CONTROL
TW01**

New tread

Regrooved tread

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

**AU03 /
AU03+**

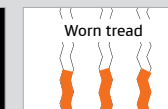
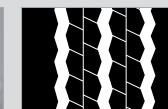
New tread

Regrooved tread

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
	295/80R22.5	152/148J		*	19.0	3	9~11
70	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	
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**SMART City AU04
/AU04+**

New tread

Regrooved tread

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	