



Informal document GRBP-71-07-Rev.1
Agenda item 5 (a)

ETRTO study on the Dimensional Requirements for tyres with radial or run flat structure after having performed the load speed endurance test

GRBP session 71, January 2020



1. Background
2. ETRTO study
3. Results
4. Amendment proposal
5. Implementation proposal

1. Background



The existing UN Regulations No 30, 54 and 75 have provisions with dimensional requirements for tyres with all types of structure after having performed the load/speed performance test:

§6.2.3 in R30, R54 and **R75** requires:

The outer diameter of the tyre, measured six hours after the load/speed performance test, must not differ by more than ± 3.5 per cent from the outer diameter as measured before the test.

In context of the Amendment 2 to the Tyre GTR, based on Tyre Industry experience, the proposal was made by the Tyre Industry and the IWG Tyre GTR to remove those dimensional requirements for tyres with radial and run flat structures, and Contracting Parties requested data and evidence before agreeing with the proposal.

2. ETRTO study



The aim of ETRTO study is to provide evidence that the dimensional requirements for tyres with radial or run flat structure after having performed the load/speed performance test are not relevant.

The study is also extended to all tyres falling under load/speed test following UN Reg.54 and to all tyres covered by UN Reg.75.

2. ETRTO study



Number of companies: 5 (Europe and Japan)

Tyre classes: Passenger car, Commercial vehicle and motorcycle

Number of tyres tested:

- C1: 86 radial + 53 run flat
- C2: 51 radial
- C3: 33 radial
- Motorcycle: 176 radial

3. Results



For C1, C2 and C3 tyres, the Outer Diameter of each tyre was measured before and just after the test.

C1 Radial			
number of tyres	average diameter increase	minimum	maximum
86	0,39%	-0,08%	1,15%

C1 (Run flat)			
number of tyres	average diameter increase	minimum	maximum
53	0,51%	0,00%	1,31%

C2 Radial			
number of tyres	average diameter increase	minimum	maximum
51	0,26%	-0,39%	0,78%

C3 Radial			
number of tyres	average diameter increase	minimum	maximum
33	0,34%	0,07%	0,79%

All details are in the appendix of this presentation

3. Results



For Motorcycle tyres, the Outer Diameter of Radial tyre was measured before and just after the test.

Motorcycle Radial			
number of tyres	average diameter increase	minimum	maximum
184	0,14%	-0,24%	1,08%

All details are in the appendix of this presentation

4. Amendment proposal



Based on the study results, it is proposed to amend the UN Regulations No 30, 54 **and 75** by removing the requirements for tyres with radial and run flat structure in paragraph 6.2.3. as the tolerance for the outer diameter growth of maximum 3,5% is very far from being reached.

Proposal for UN Reg.30

“Except for tyres with radial structure or run flat tyres, the outer diameter of the tyre, measured six hours after the load/speed performance test as specified in paragraph 2. of Annex 7, must not differ by more than +/- 3.5 per cent from the outer diameter as measured before the test.”

Proposal for UN Reg.54

“For diagonal (bias-ply) tyres, the outer diameter of the tyre, measured six hours after the load/speed endurance test, must not differ by more than +/- 3.5 per cent from the outer diameter as measured before the test.”

4. Amendment proposal



Proposal for UN Reg.75

“**Except for Radial tyres**, the outer diameter of the tyre, measured at least six hours after the load/speed endurance test, must not differ by more than +/- 3.5 per cent from the outer diameter as measured before the test.”

5. Implementation proposal



ETRTO proposes to GRBP to amend the UN Regulations No 30, 54 **and 75** according to the example shown in the proposal of previous slide, when a future amendment proposal to that Regulation will be submitted to GRBP.

The justification will then refer to this informal document for UN Reg.30, ~~and~~ 54 **and 75**.

~~Regarding UN Reg.75, when the study is completed, an additional informal document will be presented to GRBP to support the proposal of amendment.~~

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C1	R30	145/65R15	72	Q	Snow	Yes	571,0	572,0	0,18%
C1	R30	145/80R13	75	S	Normal	No	558,0	559,0	0,18%
C1	R30	145/80R13	75	S	Normal	No	563,4	565,6	0,39%
C1	R30	155/65R14	75	Q	Snow	Yes	557,7	559,0	0,23%
C1	R30	155/80R12	77	S	Normal	No	552,3	552,6	0,05%
C1	R30	155/80R13	79	S	Normal	No	581,2	583,5	0,40%
C1	R30	165/50R15	73	Q	Snow	Yes	551,0	553,0	0,36%
C1	R30	165/65 R14	79	T	snow	yes	576,46	578,69	0,39%
C1	R30	165/70R14	81	S	Snow	No	596,2	597,8	0,27%
C1	R30	165/70R14	81	S	Normal	No	587,3	588,6	0,22%
C1	R30	165/80R13	83	S	Normal	No	592,2	593,4	0,20%
C1	R30	175/65 R14	82	T	normal	no	586	588	0,34%
C1	R30	175/65R15	84	Q	Snow	No	608,8	611,2	0,40%
C1	R30	175/70R14	84	S	Normal	No	603,2	605,1	0,32%
C1	R30	185/50R16	81	Q	Snow	Yes	596,0	598,0	0,34%
C1	R30	185/55 R15	86	V	normal	no	587,7	591,2	0,60%
C1	R30	185/60 R15	84	T	normal	no	606,06	606,7	0,11%
C1	R30	185/60 R15	85	T	normal	no	611	613	0,33%
C1	R30	185/60R14	82	S	Snow	Yes	584,1	585,7	0,27%
C1	R30	185/65 R14	86	T	normal	no	597	599	0,34%
C1	R30	185/65 R15	88	H	normal	no	623	625	0,32%
C1	R30	185/65 R15	92	V	normal	no	625	628	0,48%
C1	R30	185/65R15	88	Q	Snow	Yes	620,4	622,3	0,31%
C1	R30	185/65R15	88	S	Normal	No	621,0	622,0	0,16%
C1	R30	185/65R15	88	S	Normal	No	620,1	620,7	0,10%
C1	R30	195/55R16	87	Q	Snow	No	624,8	629,0	0,67%

Appendix



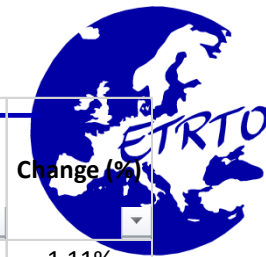
Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C1	R30	195/60 R15	92	V	normal	no	615,1	618,7	0,59%
C1	R30	195/65 R15	95	T	normal	no	634	636	0,32%
C1	R30	195/65R15	91	S	Normal	No	636,3	638,2	0,30%
C1	R30	195/65R15	91	S	Normal	No	634,1	636,6	0,39%
C1	R30	205/40R18	86	W	normal	no	621	624,2	0,52%
C1	R30	205/45R17	88	W	normal	no	618	619	0,16%
C1	R30	205/55 R16	91	H	normal	no	637	641	0,63%
C1	R30	205/60 R16	92	W	normal	no	660	665	0,76%
C1	R30	205/60R15	91	S	Snow	Yes	632,5	633,8	0,21%
C1	R30	205/60R16	92	Q	Snow	Yes	652,5	653,8	0,20%
C1	R30	205/65R15	94	Q	Snow	No	647,7	649,0	0,19%
C1	R30	205/65R16	95	H	normal	no	677,7	682,8	0,75%
C1	R30	205/65R16	95	S	Normal	No	673,2	674,5	0,19%
C1	R30	205/70R15	96	S	Snow	Yes	677,4	677,7	0,04%
C1	R30	215/45 R16	90	V	normal	no	607	610	0,49%
C1	R30	215/50R17	95	v	normal	no	652	657	0,87%
C1	R30	215/65 R16	98	H	normal	no	688,18	689,46	0,19%
C1	R30	215/65 R17	99	V	normal	no	717	720	0,42%
C1	R30	215/80R15	102	S	Snow	No	724,8	726,4	0,22%
C1	R30	215/80R15	102	S	Snow	No	727,0	728,0	0,14%
C1	R30	215/80R15	102	S	Snow	Yes	726,0	727,0	0,14%
C1	R30	215/80R15	102	S	Snow	No	724,2	725,4	0,17%
C1	R30	225/40R18	88	Q	Snow	No	645,8	650,3	0,69%
C1	R30	225/45 R17	91	Y	normal	no	639	645	0,94%
C1	R30	225/45 R18	95	V	normal	no	664,8	669,4	0,69%
C1	R30	225/45R17	94	Y	normal	no	633,1	640,4	1,15%
C1	R30	225/50 R17	98	W	snow	yes	664,95	668,45	0,53%
C1	R30	225/55 R18	102	Y	normal	no	710	711	0,14%
C1	R30	225/60R17	99	Q	Snow	No	704,1	706,0	0,27%
C1	R30	235/35 ZR19	91	Y	normal	no	650,31	655,72	0,83%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C1	R30	235/35 ZR19	87	Y	normal	no	654,13	655,08	0,15%
C1	R30	235/45 ZR19	99	Y	normal	no	699,9	705,7	0,83%
C1	R30	235/45R20	100	W	snow	yes	725,4	730	0,63%
C1	R30	235/55R20	102	V	normal	no	775,1	779,9	0,62%
C1	R30	235/65R17	108	H	snow	yes	734,7	738,2	0,48%
C1	R30	245/40R20	95	Q	Snow	Yes	702,0	704,0	0,28%
C1	R30	245/45R20	99	Q	Snow	Yes	732,1	731,5	-0,08%
C1	R30	245/50R19	101	Q	Snow	Yes	731,5	731,8	0,04%
C1	R30	255/50R20	109	V	normal	no	764	769	0,65%
C1	R30	255/60 R18	91	H	normal	no	765	768	0,39%
C1	R30	265/35ZR19	98	Y	normal	no	669	673	0,60%
C1	R30	265/60R18	110	S	Snow	No	784,0	785,9	0,24%
C1	R30	265/65R17	112	S	Snow	No	773,5	775,7	0,29%
C1	R30	265/70R15	112	S	Snow	No	753,4	754,1	0,09%
C1	R30	265/70R16	112	S	Snow	No	778,9	780,5	0,21%
C1	R30	265/70R17	115	T	snow	no	803	804	0,12%
C1	R30	265/70R17	115	S	Snow	No	811,0	813,0	0,25%
C1	R30	275/35 ZR21	103	Y	normal	no	729,88	736,89	0,96%
C1	R30	275/35R19	100	Y	normal	no	677	682	0,74%
C1	R30	275/40 R19	101	Y	normal	no	706,7	712,8	0,86%
C1	R30	275/40 R19	105	H	snow	yes	717,79	723,2	0,75%
C1	R30	275/40R20	102	Q	Snow	Yes	730,8	731,2	0,05%
C1	R30	285/40 R19	107	H	snow	yes	717,15	722,24	0,71%
C1	R30	295/35 ZR21	107	Y	normal	no	741,34	746,75	0,73%
C1	R30	295/40R21	111	Q	Snow	Yes	775,0	777,0	0,26%
C1	R30	295/40R21	111	Q	Snow	Yes	769,8	773,7	0,51%
C1	R30	305/30ZR20	103	Y	normal	no	694	697	0,43%
C1	R30	T 135/80 R 15	100	M	temporary	no	599	601	0,37%
C1	R30	T 135/80 R 15	100	M	temporary	no	599	601	0,33%
C1	R30	T 135/80 R15	100	M	temporary	no	599	601	0,37%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C1	R30	195/50RF16	84	V	Normal	No	601,9	608,6	1,11%
C1	R30	195/55RF16	87	Q	Snow	Yes	623,2	625,5	0,37%
C1	R30	195/60RF15	88	H	Snow	No	617,8	619,1	0,21%
C1	R30	195/65RF15	91	H	Snow	No	635	636,3	0,20%
C1	R30	205/45RF17	88	W	Snow	No	621,7	625,2	0,56%
C1	R30	205/50RF17	93	W	Snow	No	644,3	647,1	0,43%
C1	R30	205/55RF16	91	V	Snow	No	634,7	636	0,20%
C1	R30	205/55RF16	91	Q	Snow	Yes	633,4	635	0,25%
C1	R30	205/60RF16	92	V	Snow	No	655,7	658,3	0,40%
C1	R30	205/60RF16	92	W	Normal	No	653,5	658,6	0,78%
C1	R30	215/55RF16	93	V	Snow	No	642	644,3	0,36%
C1	R30	225/40RF18	92	W	Snow	No	644,6	647,4	0,43%
C1	R30	225/45RF17	91	W	Snow	No	635,3	637,6	0,36%
C1	R30	225/45RF17	91	Q	Snow	Yes	635,2	637,4	0,35%
C1	R30	225/50RF17	94	W	Normal	No	657,9	666,5	1,31%
C1	R30	225/50RF17	94	Q	Snow	Yes	655,4	657,3	0,29%
C1	R30	225/50RF18	95	V	Normal	No	682,5	685	0,37%
C1	R30	225/50RF18	95	V	Snow	No	681,5	684	0,37%
C1	R30	225/55RF16	95	W	Normal	No	656,4	660,8	0,67%
C1	R30	225/60RF16	98	V	Snow	No	677,4	679,9	0,37%
C1	R30	235/50RF18	97	W	Normal	No	697,7	700,9	0,46%
C1	R30	235/55RF19	101	V	Normal	No	743,6	746,1	0,34%
C1	R30	235/55RF19	101	Q	Snow	Yes	744,2	745,8	0,21%
C1	R30	245/35ZRF20	91	(Y)	Normal	No	685,3	689,1	0,55%
C1	R30	245/40RF17	91	W	Snow	No	634,4	636,9	0,39%
C1	R30	245/40RF18	97	W	Snow	No	660,2	663,4	0,48%
C1	R30	245/40RF19	94	W	Normal	No	677,7	685	1,08%
C1	R30	245/40RF20	99	Y	Normal	No	708,2	711,7	0,49%
C1	R30	245/40RF21	96	Y	Normal	No	733,4	737,8	0,60%
C1	R30	245/45RF18	96	Y	Normal	No	678,6	682,1	0,52%
C1	R30	245/45RF19	102	Y	Normal	No	706,6	708,6	0,28%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C1	R30	245/45RF20	99	Y	Normal	No	736,2	739,4	0,43%
C1	R30	245/45RF20	99	Y	Normal	No	730,5	735,3	0,66%
C1	R30	245/45RF20	99	Y	Normal	No	728,3	736,6	1,14%
C1	R30	245/45RF20	99	Y	Normal	No	730,5	735,9	0,74%
C1	R30	245/45RF20	99	V	Snow	Yes	731,8	735,9	0,56%
C1	R30	245/45RF20	99	Q	Snow	Yes	729,2	731,5	0,32%
C1	R30	245/50RF19	101	W	Normal	No	731,8	735,6	0,52%
C1	R30	245/50RF19	101	Q	Snow	Yes	730,2	733,1	0,40%
C1	R30	245/50RF19	101	W	Normal	No	725,1	729,6	0,62%
C1	R30	255/35RF20	97	Y	Normal	No	691	695,2	0,61%
C1	R30	255/40RF17	94	W	Snow	No	639,5	642	0,39%
C1	R30	255/45RF20	101	W	Normal	No	739,1	742,9	0,51%
C1	R30	255/45RF20	101	Q	Snow	Yes	740,4	740,4	0,00%
C1	R30	275/30RF20	97	Y	Normal	No	679,6	683,7	0,60%
C1	R30	275/35RF20	102	Y	Normal	No	704,1	708,2	0,58%
C1	R30	275/35RF21	99	Y	Normal	No	725,4	728,6	0,44%
C1	R30	275/40RF18	99	Y	Normal	No	678,6	682,8	0,62%
C1	R30	275/40RF20	102	Y	Normal	No	729,9	734	0,56%
C1	R30	275/40RF20	102	Q	Snow	Yes	728,6	730,5	0,26%
C1	R30	285/35ZRF20	100	(Y)	Normal	No	713,3	719,4	0,86%
C1	R30	285/35ZRF20	100	(Y)	Normal	No	710,5	716,8	0,89%
C1	R30	P255/40RF19	96	V	Snow	No	691,7	694,6	0,42%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C2	R54	145/80R12LT	86/84	N	Normal	No	539,5	539,9	0,07%
C2	R54	145/80R12LT	80/78	N	Snow	Yes	540,5	539,9	-0,11%
C2	R54	145/80R13 LT	82/80	N	Snow	Yes	572,0	572,0	0,00%
C2	R54	155/80R14	88/86	N	Normal	No	602,2	604,5	0,38%
C2	R54	155/80R14LT	88/86	N	Normal	No	606,1	607,0	0,15%
C2	R54	165/80R13	94/93	N	Normal	No	589,2	591,7	0,43%
C2	R54	175/65 R14C	90	T	Snow	yes	586	589	0,51%
C2	R54	175/75R15	103	N	Snow	No	650,6	653,2	0,40%
C2	R54	175/80R14	99/98	N	Normal	No	638,8	640,4	0,25%
C2	R54	175/80R14LT	99/98	N	Normal	No	636,9	637,9	0,16%
C2	R54	175/80R15 LT	101/99	L	Normal	No	660,0	662,0	0,30%
C2	R54	185/80R14LT	97/95	N	Snow	Yes	660,5	657,9	-0,39%
C2	R54	185/80R15 LT	103/101	M	Normal	No	678,0	681,0	0,44%
C2	R54	185/85R16	105/103	N	Snow	No	721,0	722,0	0,14%
C2	R54	185/85R16 LT	105/103	L	Snow	Yes	720,0	722,0	0,28%
C2	R54	195 R14C	106	S	normal	no	667	668	0,15%
C2	R54	195/60 R16C	99/97	H	snow	yes	635,66	639,48	0,60%
C2	R54	195/65 R 16 C	104/102	R	snow	yes	659	661	0,29%
C2	R54	195/65 R 16 C	104/102	R	snow	yes	659	661	0,30%
C2	R54	195/65 R16 C	104/102	R	snow	yes	659	661	0,29%
C2	R54	195/65R16C	104/102	T	snow	yes	656	657	0,15%
C2	R54	195/75 R16C	110/108	R	normal	no	694,87	695,19	0,32%
C2	R54	195/80R14LT	106/104	N	Snow	Yes	674,0	675,0	0,15%
C2	R54	195/80R15	103/101	L	Normal	No	691,4	693,0	0,24%
C2	R54	195/80R15 LT	107/105	L	Snow	No	694,0	694,0	0,00%
C2	R54	195/85R15	113/111	L	Normal	No	713,6	714,9	0,18%
C2	R54	195/85R16	114	N	Normal	No	737,5	741,0	0,47%
C2	R54	195/85R16	114	N	Snow	No	740,2	742,9	0,36%
C2	R54	195/85R16LT	114/112	N	Snow	No	733,4	734,7	0,18%
C2	R54	195R15C	106	S	Normal	No	690,4	692,0	0,23%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C2	R54	205/65R16LT	109/107	N	Snow	No	669,1	670,4	0,19%
C2	R54	205/70R16	111/109	N	Normal	No	689,8	692,8	0,44%
C2	R54	205/75R17.5	122/120	M	Normal	No	759,0	761,0	0,26%
C2	R54	205/80R17.5LT	120/118	N	Snow	No	772,5	773,8	0,17%
C2	R54	205/85R16	117	N	Normal	No	748,5	749,9	0,19%
C2	R54	205/85R16 LT	117/115	N	Normal	No	751,0	754,0	0,40%
C2	R54	205/85R16LT	117/115	N	Normal	No	751,5	754,4	0,39%
C2	R54	205R16C	106/104	N	Snow	No	744,2	745,8	0,22%
C2	R54	215/65 R16C	106	T	normal	no	693	695	0,29%
C2	R54	215/65R15	110	N	Normal	No	657,3	657,9	0,09%
C2	R54	215/70R17.5	118/116	L	Normal	No	747,1	748,3	0,17%
C2	R54	215/70R17.5LT	118/116	N	Normal	No	746,1	748,7	0,35%
C2	R54	215/85R16	120/118	L	Normal	No	773,5	776,0	0,33%
C2	R54	215/85R16LT	120/118	M	Normal	No	772,0	778,0	0,78%
C2	R54	225/70R16LT	117/115	N	Snow	No	719,1	719,7	0,08%
C2	R54	225/75R15C	110	Q	Normal	No	718,7	720,3	0,22%
C2	R54	225/85R16	121/119	L	Snow	No	790,0	790,7	0,08%
C2	R54	225/85R16LT	121/119	N	Normal	No	785,0	789,7	0,60%
C2	R54	235/65R16	115	S	Snow	Yes	713,6	717,6	0,56%
C2	R54	275/70R18	115	S	Snow	No	843,2	844,2	0,12%
C2	R54	LT265/60R20	121	Q	Snow	Yes	831,1	833,7	0,31%
C3	R54	11R22.5	148/145	M	Normal	No	1055,0	1063,0	0,76%
C3	R54	11R22.5	148	M	Normal	No	1049,8	1053,3	0,33%
C3	R54	13 R22.5	154/150	K	special	no	1152	1159	0,61%
C3	R54	215/70R17.5	123/121	J	Snow	Yes	753,4	755,0	0,21%
C3	R54	225/75R17.5	129/127	M	Snow	No	790,0	791,0	0,13%
C3	R54	225/80R17.5	123	L	Snow	No	805,6	806,9	0,16%

Appendix



Tyre class	Regulation	Size designation	Load Index	Speed Symbol	Category of use	3PMSF marking	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
C3	R54	235/75R17.5	143/141	J	snow	yes	799	802,5	0,44%
C3	R54	235/75R17.5	143/141	J	Normal	No	805,3	808,5	0,40%
C3	R54	245/70 R17.5	143/141	J	snow	no	799	802,1	0,39%
C3	R54	245/70R19.5	136/134	J	Snow	Yes	852,8	853,4	0,07%
C3	R54	245/70R19.5	136/134	J	Normal	No	839,4	841,9	0,30%
C3	R54	265/70R19.5	143/141	J	Normal	No	869,3	872,5	0,37%
C3	R54	275/70R22.5	148/145	J	Snow	No	970,8	973,4	0,26%
C3	R54	275/80R22.5	151/148	J	Normal	No	1015,1	1017,0	0,19%
C3	R54	285/70R19.5	146/144	J	Normal	No	893,2	895,4	0,25%
C3	R54	295/70R22.5	151/148	J	Snow	No	990,4	992,5	0,21%
C3	R54	295/80R22.5	155/149	M	y	yes	1054	1059	0,47%
C3	R54	295/80R22.5	153/150	J	Normal	No	1050,1	1051,7	0,15%
C3	R54	295/80R22.5	152/148	L	Snow	No	1064,0	1070,0	0,56%
C3	R54	295/80R22.5	152	M	Normal	No	1054,2	1059,0	0,46%
C3	R54	305/70R19.5	148/145	M	snow	yes	927	928	0,11%
C3	R54	315/70R22.5	156/150	L	Normal	No	1017,0	1025,0	0,79%
C3	R54	315/80 R22.5	156/150	L	snow	yes	1078,1	1080,7	0,24%
C3	R54	315/80 R22.5	156/150	K	special	no	1105	1112	0,63%
C3	R54	315/80R22.5	154/150	M	Snow	Yes	1088,0	1095,0	0,64%
C3	R54	315/80R22.5	154	M	Normal	No	1082,9	1088,0	0,47%
C3	R54	385/65 R22.5	160	K	snow	no	1069,5	1071,4	0,18%
C3	R54	385/65 R22.5	160	K	snow	no	1087	1089	0,18%
C3	R54	385/65R22.5	164	K	snow	no	1082,6	1085,6	0,28%
C3	R54	445/80R22.5	168	J	Snow	No	1014,5	1015,4	0,09%
C3	R54	7.50 R16	114	K	normal	no	813	816	0,37%
C3	R54	7.50R16LT	123/119	L	normal	no	808	810	0,25%
C3	R54	7.50R16LT	123	L	Normal	No	804,0	807,4	0,42%

Appendix



UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	140/70R18M/C	radial	67	V	654,4	652,9	-0,24%
R75	190/50ZR17M/C	radial	73	W	632,2	631,5	-0,11%
R75	150/70ZR17M/C	radial	69	W	641,1	640,4	-0,11%
R75	120/70R17M/C	radial	58	H	600,3	599,7	-0,10%
R75	170/60R17M/C	radial	72	H	637,3	636,9	-0,06%
R75	130/70R16M/C	radial	61	S	588,9	588,6	-0,05%
R75	110/70R17M/C	radial	54	H	592,4	592,1	-0,05%
R75	110/80ZR18M/C	radial	58	W	635,3	635,0	-0,05%
R75	110/80ZR18M/C	radial	58	W	635,3	635,0	-0,05%
R75	150/70ZR17M/C	radial	69	W	641,4	641,1	-0,05%
R75	110/70ZR17M/C	radial	54	W	590,8	590,8	0,00%
R75	110/70ZR17M/C	radial	54	W	593,3	593,3	0,00%
R75	110/80R18M/C	radial	58	H	635,3	635,3	0,00%
R75	120/70R17M/C	radial	58	H	603,0	603,0	0,00%
R75	120/70ZR17M/C	radial	58	W	601,0	601,0	0,00%
R75	120/70ZR17M/C	radial	58	W	599,7	599,7	0,00%
R75	120/70ZR17M/C	radial	58	W	601,0	601,0	0,00%
R75	120/70ZR19M/C	radial	60	W	651,6	651,6	0,00%
R75	150/70R17M/C	radial	69	V	642,0	642,0	0,00%
R75	150/70R18M/C	radial	70	H	670,0	670,0	0,00%
R75	150/70ZR17M/C	radial	69	W	640,8	640,8	0,00%
R75	150/70ZR17M/C	radial	69	W	641,4	641,4	0,00%
R75	150/70ZR17M/C	radial	69	W	641,0	641,0	0,00%
R75	160/60R14M/C	radial	65	H	549,4	549,4	0,00%
R75	160/60R15M/C	radial	67	H	573,0	573,0	0,00%
R75	160/60ZR17M/C	radial	69	W	633,4	633,4	0,00%
R75	160/60ZR17M/C	radial	69	W	624,8	624,8	0,00%
R75	160/60ZR17M/C	radial	69	W	624,8	624,8	0,00%
R75	170/60ZR17M/C	radial	72	W	636,6	636,6	0,00%
R75	170/60ZR17M/C	radial	72	W	636,9	636,9	0,00%
R75	170/60ZR17M/C	radial	72	W	636,9	636,9	0,00%

Appendix



UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	180/55R17M/C	radial	73	H	628,7	628,7	0,00%
R75	180/55ZR17M/C	radial	73	W	628,3	628,3	0,00%
R75	180/55ZR17M/C	radial	73	W	631,5	631,5	0,00%
R75	190/50ZR17M/C	radial	73	W	632,5	632,5	0,00%
R75	190/50ZR17M/C	radial	73	W	631,8	631,8	0,00%
R75	190/55ZR17M/C	radial	75	W	650,6	650,6	0,00%
R75	200/55R17M/C	radial	78	W	656,0	656,0	0,00%
R75	200/55ZR17M/C	radial	78	W	655,7	655,7	0,00%
R75	200/55ZR17M/C	radial	78	W	657,0	657,0	0,00%
R75	240/40R18M/C	radial	79	V	650,0	650,0	0,00%
R75	150/60R17 M/C	radial	66V	V	615,3	615,3	0,00%
R75	110/70R17 M/C	radial	54V	V	582,8	582,8	0,00%
R75	200/55ZR17M/C	radial	78	W	656,4	656,7	0,05%
R75	160/70ZR17M/C	radial	73	W	655,4	655,7	0,05%
R75	160/70ZR17M/C	radial	73	W	655,1	655,4	0,05%
R75	200/55R17M/C	radial	78	V	655,1	655,4	0,05%
R75	120/70ZR19M/C	radial	60	W	650,0	650,3	0,05%
R75	160/60ZR18M/C	radial	70	W	648,4	648,7	0,05%
R75	160/60ZR18M/C	radial	70	W	648,1	648,4	0,05%
R75	180/55R17M/C	radial	73	V	639,8	640,1	0,05%
R75	170/60R17M/C	radial	72	V	637,3	637,6	0,05%
R75	180/55ZR17M/C	radial	73	W	631,2	631,5	0,05%
R75	150/70R18M/C	radial	70	H	667,5	667,8	0,05%
R75	180/55ZR17M/C	radial	73	W	629,0	629,3	0,05%
R75	180/55ZR17M/C	radial	73	W	628,7	629,0	0,05%
R75	190/50ZR17M/C	radial	73	W	628,7	629,0	0,05%
R75	180/55ZR17M/C	radial	73	W	628,0	628,3	0,05%
R75	150/60ZR17M/C	radial	66	W	620,4	620,7	0,05%
R75	140/80R17 M/C	radial	69S	S	654,8	655,1	0,05%
R75	180/60ZR17M/C	radial	75	W	647,4	647,8	0,05%

Appendix



UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	160/60R18	radial	70	V	650,0	650,3	0,05%
R75	190/55ZR17M/C	radial	81	W	642,0	642,4	0,05%
R75	120/70ZR17M/C	radial	58	W	599,7	600,0	0,05%
R75	170/60R17 M/C	radial	72S	S	636,3	636,6	0,05%
R75	180/55R17M/C	radial	73	W	630,9	631,2	0,05%
R75	180/55ZR17M/C	radial	73	W	630,9	631,2	0,05%
R75	120/60ZR17M/C	radial	55	W	582,8	583,1	0,05%
R75	120/60ZR17M/C	radial	55	W	582,5	582,8	0,05%
R75	120/60ZR17M/C	radial	55	W	582,2	582,5	0,05%
R75	120/70ZR17M/C	radial	58	W	601,0	601,3	0,05%
R75	129/70ZR17 M/C	radial	58W	W	599,7	600,0	0,05%
R75	150/70R18M/C	radial	70	H	666,5	666,9	0,06%
R75	190/55R17M/C	radial	75	V	650,9	651,3	0,06%
R75	190/55R17M/C	radial	75	V	642,3	642,7	0,06%
R75	170/60ZR17M/C	radial	72	W	636,9	637,3	0,06%
R75	170/60ZR17M/C	radial	72	W	636,9	637,3	0,06%
R75	190/50ZR17M/C	radial	73	W	628,3	628,7	0,06%
R75	150/60ZR17M/C	radial	66	W	619,7	620,1	0,06%
R75	120/70ZR17M/C	radial	58	W	600,7	601,1	0,07%
R75	120/70ZR17M/C	radial	58	W	600,7	601,1	0,07%
R75	160/60R15M/C	radial	67	H	572,6	573,0	0,07%
R75	120/70R15M/C	radial	56	V	550,0	550,4	0,07%
R75	120/70R17M/C	radial	58	H	632,3	632,8	0,08%
R75	110/80ZR19M/C	radial	59	W	660,5	661,1	0,09%
R75	110/80ZR19M/C	radial	59	W	660,5	661,1	0,09%
R75	110/80R19M/C	radial	59	V	660,2	660,8	0,09%
R75	120/70R19M/C	radial	60	V	651,6	652,2	0,09%
R75	120/70ZR19M/C	radial	60	W	651,6	652,2	0,09%
R75	190/55ZR17M/C	radial	75	W	650,3	650,9	0,09%
R75	150/70R17M/C	radial	69	H	643,0	643,6	0,09%

Appendix



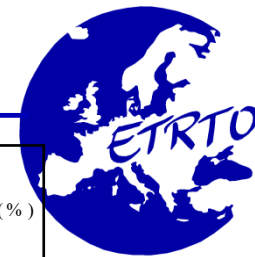
UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	190/55R17M/C	radial	75	W	641,7	642,3	0,09%
R75	190/55R17M/C	radial	75	W	641,4	642,0	0,09%
R75	160/60R17M/C	radial	69	V	633,8	634,4	0,09%
R75	180/55ZR17M/C	radial	73	W	630,3	630,9	0,10%
R75	120/70ZR18M/C	radial	59	W	629,0	629,6	0,10%
R75	140/70R17M/C	radial	66	H	629,0	629,6	0,10%
R75	180/55R17M/C	radial	73	H	629,0	629,6	0,10%
R75	180/55ZR17M/C	radial	73	W	629,0	629,6	0,10%
R75	180/55ZR17M/C	radial	73	W	628,7	629,3	0,10%
R75	140/70R17M/C	radial	66	H	627,1	627,7	0,10%
R75	120/70ZR19 M/C	radial	60W	W	651,6	652,2	0,10%
R75	190/55ZR17 M/C	radial	(75 W)	(W)	648,4	649,0	0,10%
R75	180/60ZR17M/C	radial	75	W	647,1	647,8	0,10%
R75	120/70ZR17M/C	radial	58	W	601,9	602,5	0,10%
R75	170/60ZR17 M/C	radial	72W	W	637,6	638,2	0,10%
R75	180/55R17M/C	radial	73	W	630,3	630,9	0,10%
R75	180/55ZR17M/C	radial	73	W	630,3	630,9	0,10%
R75	110/70ZR17M/C	radial	54	W	591,1	591,7	0,10%
R75	160/60ZR17	radial	(69)	W	626,4	627,1	0,10%
R75	150/70ZR18M/C	radial	70	W	666,5	667,2	0,11%
R75	120/70ZR 17 M/C	radial	(58W)	(W)	599,4	600,0	0,11%
R75	120/70ZR 17 M/C	radial	(58W)	(W)	599,4	600,0	0,11%
R75	120/70ZR 17 M/C	radial	(58W)	(W)	599,4	600,0	0,11%
R75	120/70R19M/C	radial	60	H	653,8	654,5	0,11%
R75	170/60ZR17M/C	radial	72	W	636,9	637,6	0,11%
R75	160/60ZR17M/C	radial	69	W	629,9	630,6	0,11%
R75	180/55ZR17M/C	radial	73	W	629,9	630,6	0,11%
R75	120/70ZR18M/C	radial	59	W	629,6	630,3	0,11%
R75	150/60R17M/C	radial	66	H	619,7	620,4	0,11%
R75	150/60ZR17M/C	radial	66	W	619,7	620,4	0,11%

Appendix



UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	160/70ZR17M/C	radial	73	W	654,8	655,7	0,14%
R75	110/80R18M/C	radial	58	H	634,4	635,3	0,14%
R75	190/55ZR17	radial	(75)	W	650,3	651,3	0,15%
R75	190/55ZR17 M/C	radial	(75 W)	(W)	647,4	648,4	0,15%
R75	150/70R17 M/C	radial	69S	S	644,9	645,9	0,15%
R75	170/60R17	radial	72	V	638,9	639,8	0,15%
R75	170/60R17	radial	72	V	638,5	639,5	0,15%
R75	140/75R17	radial	67	V	645,2	646,2	0,15%
R75	100/90R18 M/C	radial	56V	V	631,2	632,2	0,15%
R75	140/75R15M/C	radial	65	H	590,8	591,7	0,15%
R75	120/70R19M/C	radial	60	V	650,9	651,9	0,15%
R75	120/70ZR19M/C	radial	60	W	650,6	651,6	0,15%
R75	190/55R17M/C	radial	75	V	641,7	642,7	0,16%
R75	110/80R18M/C	radial	58	H	636,3	637,3	0,16%
R75	110/80ZR18M/C	radial	58	W	634,7	635,7	0,16%
R75	160/60ZR17M/C	radial	69	W	633,1	634,1	0,16%
R75	200/50R17M/C	radial	75	V	632,8	633,8	0,16%
R75	160/60ZR17M/C	radial	69	W	631,0	632,0	0,16%
R75	160/60R 15M/C	radial	67	H	629,5	630,5	0,16%
R75	120/70ZR18M/C	radial	59	W	629,3	630,3	0,16%
R75	120/70ZR 17 M/C	radial	(58W)	(W)	599,7	600,7	0,16%
R75	120/70R17M/C	radial	58	V	603,8	604,8	0,17%
R75	120/70ZR17M/C	radial	58	W	601,0	602,0	0,17%
R75	130/70ZR17M/C	radial	62	W	615,6	616,7	0,18%
R75	200/55R16M/C	radial	77	H	626,8	628,0	0,19%
R75	200/55R17	radial	78	V	659,2	660,5	0,19%
R75	160/60R14M/C	radial	65	H	549,1	550,2	0,20%
R75	160/60ZR18M/C	radial	70	W	646,5	647,8	0,20%
R75	140/75R17M/C	radial	67	V	643,9	645,2	0,20%
R75	120/70ZR17M/C	radial	58	W	600,6	601,9	0,22%

Appendix



UN regulation	Size designation	Construction	Load Index	Speed Symbol	Outer diameter before test (mm)	Outer diameter after test (mm)	Change (%)
R75	120/70ZR17M/C	radial	58	W	600,6	601,9	0,22%
R75	240/45ZR17	radial	(82)	W	654,4	656,0	0,24%
R75	120/70R19	radial	60	V	648,1	649,7	0,24%
R75	120/70ZR18M/C	radial	59	W	631,8	633,4	0,25%
R75	120/70ZR18M/C	radial	59	W	629,3	630,9	0,25%
R75	120/70ZR17M/C	radial	58	W	602,2	603,8	0,27%
R75	190/55ZR17M/C	radial	75	W	642,0	643,9	0,30%
R75	130/80R17M/C	radial	65	H	639,5	641,4	0,30%
R75	120/70R14M/C	radial	55	H	526,5	528,1	0,30%
R75	120/70ZR17M/C	radial	58	W	602,6	604,5	0,32%
R75	120/70ZR18M/C	radial	59	W	628,3	630,3	0,32%
R75	120/70ZR17M/C	radial	58	W	600,6	602,6	0,33%
R75	130/70R18M/C	radial	63	H	641,4	643,6	0,34%
R75	150/70ZR17	radial	(69)	W	641,7	643,9	0,35%
R75	120/70ZR18M/C	radial	59	W	631,8	634,1	0,36%
R75	120/70ZR17M/C	radial	58	W	600,3	602,6	0,38%
R75	160/70R17M/C	radial	73	V	648,7	651,3	0,39%
R75	110/80ZR19M/C	radial	59	W	659,2	661,8	0,39%
R75	190/55ZR17M/C	radial	75	W	643,3	645,8	0,40%
R75	110/80ZR19M/C	radial	59	W	659,2	662,1	0,44%
R75	130/70ZR16M/C	radial	61	W	590,1	592,7	0,44%
R75	130/70ZR16M/C	radial	61	W	589,5	592,1	0,44%
R75	180/55ZR17M/C	radial	73	W	636,3	639,2	0,45%
R75	160/60ZR17M/C	radial	69	W	632,8	635,7	0,45%
R75	130/70ZR16M/C	radial	61	W	588,9	591,7	0,48%
R75	120/70ZR18M/C	radial	59	W	632,3	636,3	0,63%
R75	160/60R18M/C	radial	70	V	650,0	654,8	0,73%
R75	150/70R18M/C	radial	70	V	673,2	678,3	0,76%
R75	200/55R16M/C	radial	77	H	625,5	630,6	0,81%
R75	120/70ZR17M/C	radial	58	W	605,4	610,8	0,89%
R75	120/70ZR17M/C	radial	58	W	601,6	607,0	0,90%
R75	130/80R17 M/C	radial	65V	V	640,1	646,5	0,99%
R75	110/70ZR17M/C	radial	54	W	590,1	596,5	1,08%