

Tyres, wheels and hubs

10-1 Tyres and wheels

10-2 Hubs and axles

10-3 Mudguards

Summary of legislation

Applicable legislation

- Land Transport Rule: Tyres and Wheels Amendment 2005.

Mandatory equipment

- Vehicles, tyres and wheels must comply with the requirements relating to mandatory equipment set out in the *VIRM: In-service certification*, section 10-1.

Compliance with approved standards

- The following new tyres (**Note 2**) must comply with one or more of the new tyre standards in **Table 10-1-1**, except if one or more of **Notes 3 to 6** apply:
 - tyres manufactured on or after 1 October 2002 that are fitted to vehicles of class LC, LD, LE1, LE2, TA and TB (**Note 6**)
 - tyres manufactured on or after 1 January 1992 that are fitted to vehicles of class MA, MB, MC, MD1, MD2 and NA
 - tyres manufactured on or after 1 October 2004 that are fitted to vehicles of class MD3, MD4, ME, NB, NC, TC and TD.
- The following retreaded tyres must comply with one or more of the retread tyre standards in **Table 10-1-2**, except if any of **Notes 3 to 6** apply:
 - tyres retreaded on or after 1 October 2002 that are fitted to vehicles of class TA and TB
 - tyres retreaded on or after 1 January 1995 that are fitted to vehicles of class MA, MB, MC, MD1, MD2 and NA
 - tyres retreaded on or after 1 October 2004 that are fitted to vehicles of class MD3, MD4, ME, NB, NC, TC and TD.
- Temporary-use spare tyres manufactured on or after 1 October 2002 must comply with one or more of the temporary-use spare tyre standards in **Table 10-1-3**.

Condition and modification

- Tyres and wheels must comply with the requirements relating to condition and modification set out in the *VIRM: In-service certification*, section 10-1

Reasons for rejection

Mandatory equipment

- A vehicle, tyre or wheel does not comply with a requirement relating to mandatory equipment set out in the *VIRM: In-service certification*, section 10-1.

Compliance with approved standards

- A new tyre that is required to comply with an approved new tyre standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in **Table 10-1-1** at the time the tyre was manufactured.
- A retreaded tyre that is required to comply with an approved retread tyre standard did not comply, or cannot be demonstrated to have complied with at least one of the standards listed in **Table 10-1-2** at the time the tyre was retreaded.
- A temporary-use spare tyre that is required to comply with an approved temporary-use spare tyre standard did not comply, or cannot be demonstrated to have complied, with at least one of the standards listed in **Table 10-1-3** at the time the tyre was manufactured.

Condition and modification

- A tyre or wheel does not comply with a requirement relating to condition or modification set out in the *VIRM: In-service certification*, section 10-1.

Note 1 To decode the date of manufacture codes for tyres under ECE, FMVSS and ADR, the requirements are as follows:

- for tyres manufactured before 1 January 2000, codes are three-digit numbers. The first two digits represent the week of the year, the last digit represents the year itself. For example, the code 267 means the 26th week of 1997
- for tyres manufactured on or after 1 January 2000, codes are four-digit numbers. The first two digits represent the week of the year, the last two digits represent the year itself. For example, the code 2501 means the 25th week of 2001.

Note 2 A new tyre is a tyre that has not been retreaded.

Note 3 New or retreaded tyres fitted to vehicles that are towed at speeds not exceeding 30 km/h are not required to comply with approved standards.

Note 4 New or retreaded tyres fitted to groundspreaders or dedicated groundsprayers are not required to comply with approved standards.

Note 5 New or retreaded tyres fitted to all-terrain vehicles are not required to comply with approved standards.

Note 6 New or retreaded tyres fitted to vehicles that are more than 30 years old are not required to comply with approved standards.

Note 7 Class LE2 vehicles have been omitted in the rule in the table for new tyres.

Table 10-1-1. Approved new tyre standards*

UN/ECE Regulation no.	EEC/EC Directive	FMVSS	ADR	Japan	Others
30 54 75	92/23 2001/43	109 119	23	JIS D4203 JIS D4230 Article 9	NZS 5453 AS/NZS 2230 The standards of the Japan Automobile Tire Manufacturers' Association, Inc. (JATMA)

* A new tyre that is required to comply with an approved new tyre standard must comply with at least one of the standards listed in the table.

Table 10-1-2. Approved retread tyre standards*

UN-ECE Regulation no.	FMVSS	Others
108 109	117	BS AU 144 AS 1973 NZS 5423

* A retreaded tyre that is required to comply with an approved retread tyre standard must comply with at least one of the standards listed in the table.

Table 10-1-3. Approved temporary-use spare tyre standards*

UN-ECE Regulation no.	FMVSS	ADR	Japan	Others
64	109 129	71 42/04	JIS D4230 Article 9	The standards of the Japan Automobile Tire Manufacturer's Association, Inc. (JATMA)

* A temporary-use spare tyre that is required to comply with an approved temporary-use spare tyre standard must comply with at least one of the standards listed in the table.

The following standard markings may assist in determining compliance with approved standards.



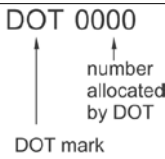

			
Economic Commission for Europe (ECE)	European Economic Commission (EEC)	Federal Motor Vehicle Safety Standards (FMVSS)¹	Japanese Industrial Standards

Figure 10-1-1. Approved tyre standard markings

¹ The DOT marking may appear below the rest of the marking.



New tyres	Retreaded tyres
NZS 5453 (although the tyre need not be marked with the standard) NZS 5464 (although the tyre need not be marked with the standard) ADR 32/00 and 23/01 (the tyre need not be marked with the standard but should be marked MADE IN AUSTRALIA)	NZS 5423 AS 1973 (must be followed by 007, 103, 125 or 4007) BS AU 144

<p>JATMA standards - compliance is assured if the tyre markings contain the full company name or the brand name of one of the following manufacturers together with the words 'Made in Japan':</p> <ul style="list-style-type: none"> • Bridgestone Corporation • The Yokohama Rubber Co Ltd • The Ohtsu Tire and Rubber Co Ltd • Nitto Tire Co Ltd • Sumitomo Rubber Industries Ltd • (Note 8) • Michelin Okamoto Tire Corporation • (Note 9) • Toyo Tire and Rubber Co Ltd 		
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Note 8 Makers of Dunlop and Goodyear brand tyres in Japan.

Note 9 Makers of BF Goodrich and RIKEN brand tyres in Japan.

The following diagram and tables help identify and explain tyre markings.

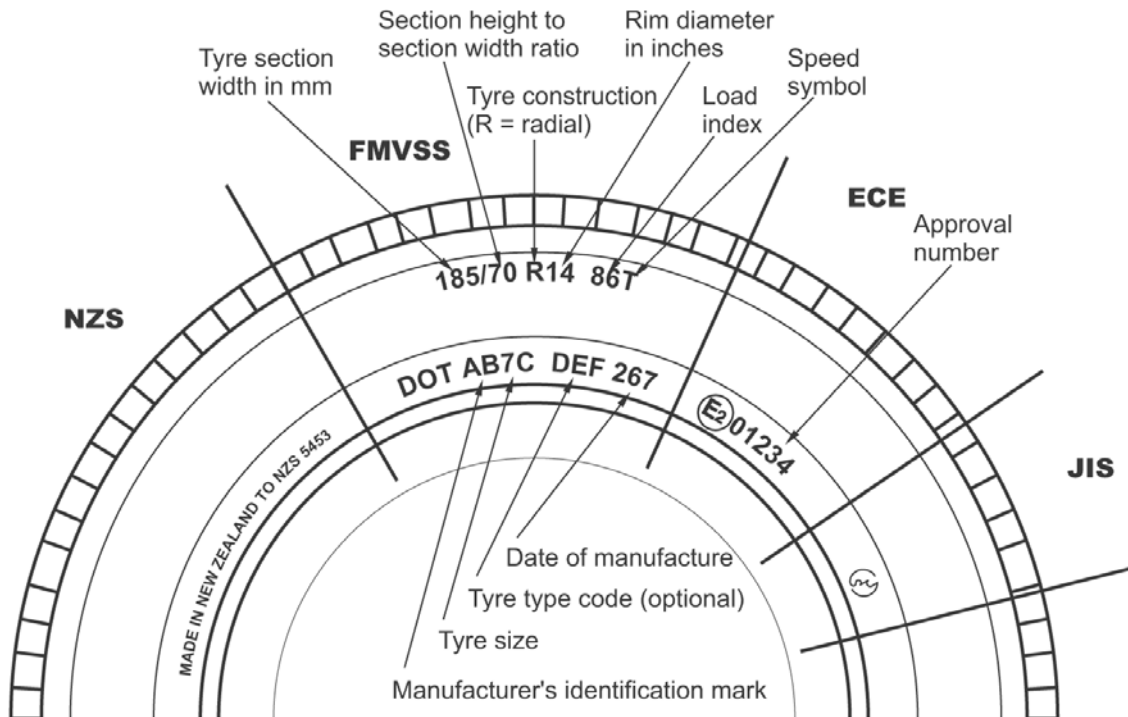


Figure 10-1-2. Identifying tyre markings

The load index is a numerical code associated with the maximum load (kg) a tyre can carry at the speed indicated by its speed symbol under specified service conditions up to 210 km/h.

Table 10-1-4. Load indices

Load index - (kg)								
70 - 335	80 - 450	90 - 600	100 - 800	110 - 1060	120 - 1400	130 - 1900	140 - 2500	150 - 3350
71 - 345	81 - 462	91 - 615	101 - 825	111 - 1090	121 - 1450	131 - 1950	141 - 2575	151 - 3450
72 - 355	82 - 475	92 - 630	102 - 850	112 - 1120	122 - 1500	132 - 2000	142 - 2650	152 - 3550
73 - 363	83 - 487	93 - 650	103 - 875	113 - 1150	123 - 1550	133 - 2060	143 - 2725	153 - 3650
74 - 375	84 - 500	94 - 670	104 - 900	114 - 1180	124 - 1600	134 - 2120	144 - 2800	154 - 3750
75 - 387	85 - 515	95 - 690	105 - 925	115 - 1215	125 - 1650	135 - 2180	145 - 2900	155 - 3875
76 - 400	86 - 530	96 - 710	106 - 950	116 - 1250	126 - 1700	136 - 2240	146 - 3000	156 - 4000
77 - 412	87 - 545	97 - 730	107 - 975	117 - 1285	127 - 1750	137 - 2300	147 - 3075	157 - 4125
78 - 425	88 - 560	98 - 750	108 - 1000	118 - 1320	128 - 1800	138 - 2360	148 - 3150	158 - 4250
79 - 437	89 - 580	99 - 775	109 - 1030	119 - 1360	129 - 1850	139 - 2430	149 - 3250	159 - 4375
								160 - 4500
								161 - 4625

Speed symbols represent the following speed categories:

Table 10-1-5. Speed symbols

Speed symbol - Speed category (km/h)							
A1 - 5	A5 - 25	B - 50	F - 80	L - 120	Q - 160	U - 160	Y - 300
A2 - 10	A6 - 30	C - 60	G - 90	M - 130	R - 170	H - 210	ZR - over 240
A3 - 15	A7 - 35	D - 65	J - 100	N - 140	S - 180	V - 240	
A4 - 20	A8 - 40	E - 70	K - 110	P - 150	T - 190	W - 270	

Vehicles must comply with the requirements relating to condition, performance and modification set out in the *VIRM: In-service certification*, section 10-2.

There are no additional requirements in respect of hubs and axles for the inspection and certification of vehicles for entry into service.

Vehicles must comply with the requirements relating to mandatory equipment and condition set out in the *VIRM: In-service certification*, section 10-3.

There are no additional requirements in respect of mudguards for the inspection and certification of vehicles for entry into service.

