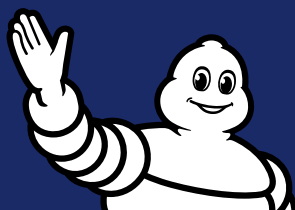
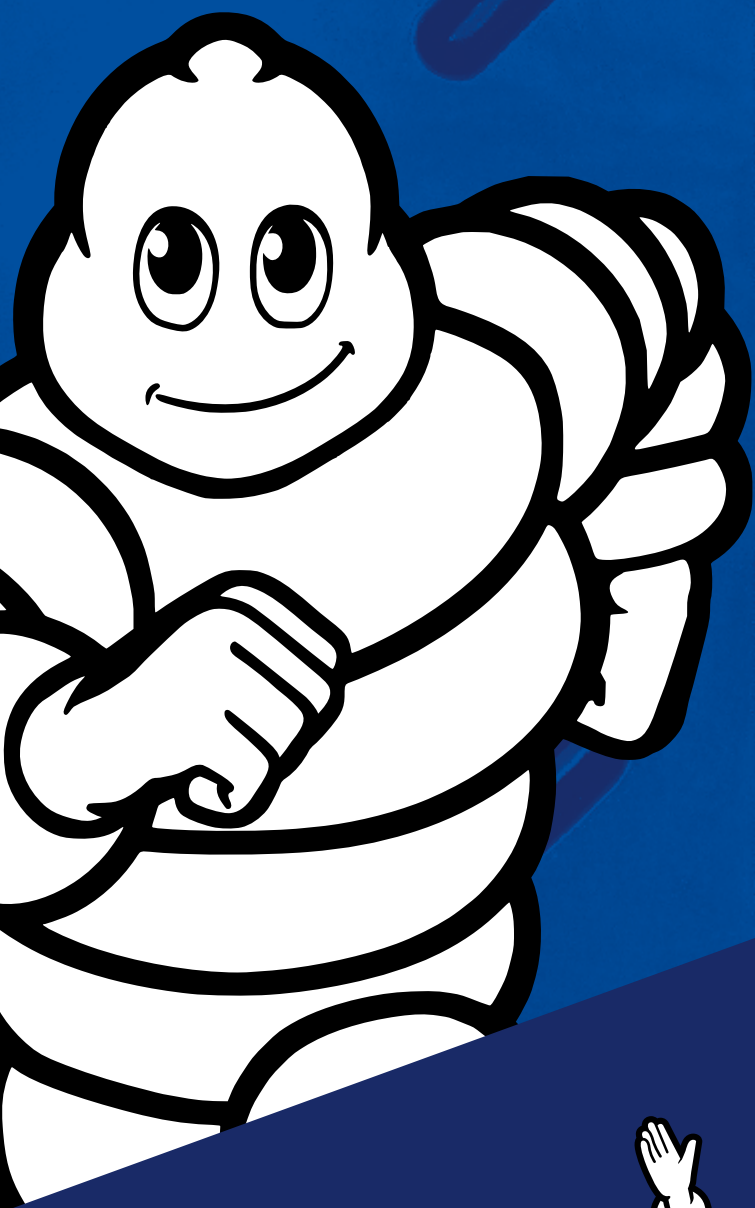


**RALLY
AND CLASSIC
COMPETITION**



MICHELIN

WELCOME TO THE MICHELIN COMPETITION WORLD

Michelin's mission has always been to contribute to better mobility of people and property. In order to respond to the doubling of the number of vehicles over the next thirty years, Michelin is innovating in favour of safer, sustainable and environmentally-friendly mobility.

COMPETITION HAS BEEN PART OF THE MICHELIN DNA AND PHILOSOPHY FROM THE VERY FIRST DAY.

In order to assist in these changes, Michelin has a Technologies Centre, with 6000 researchers, and also an extreme laboratory to test the solutions of tomorrow with its partners on circuits and grounds the world over: competition!

Michelin is the only brand that has developed so many prize-winning Competition technologies for over 100 years. This is Michelin's prestigious and authentic heritage, and is also the expression of a passion shared within the company.

Michelin pulls out all the stops to be present in competition that make sense to the mobility of tomorrow and assists its partners to victory by demonstrating the extraordinary quality and performance of its products while developing innovative technologies that benefit consumers.

These commitments are carried through global or national trials, at both professional and amateur level. They aim to strengthen the renown of the Michelin brand in mature countries and introduce it to its new markets.

For Michelin, competition is also a better way forward.

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ALL ABOUT RFID TECHNOLOGY

The RFID system is a new tool allowing for checking that the tyres physically fitted onto cars actually form part of the list of authorized tyres, created at the start of the weekend. This allows for ensuring that the number of NEW tyres used during the sessions does not exceed the maximum quota authorized by the rules.

THE RFID SYSTEM: WHAT DOES IT DO AND WHY?

- The system uses an RFID TAG transponder placed in the tyres before curing, encoded at the factory after curing and containing the data then allowing the tyres to be identified remotely. Caution! The RFID is not a sensor!
- Content: FIA barcode + a CAI.
- Reading can be taken statically using an RFID Terminal.
- Dynamic reading up to 60 km/h.

THE ADVANTAGES AND CONSEQUENCES OF THE RFID SYSTEM,

Advantages in relation to the FIA barcode labelling system.

- Removes the problem of illegible FIA labels.
- Prevents any chance of cheating as the RFID TAG is locked at the factory (OUT ONLY).
- The TAGs are read instantly and do not require alignment of the Terminal with regard to the tyre
- Allows for managing stocks and traceability of tyres in storage
- Automates controls and reduces the number of technical officials.

ADVICE FROM THE MICHELIN TECHNICIAN

We differentiate between cold and hot pressure. **COLD PRESSURE** varies in accordance with the air/ground temperature and the length of the special stages. The **HOT PRESSURE** corresponds to the value measured at the end of the special stage.

We recommend a **COLD PRESSURE**, i.e. on departing the "pit", of 1.8 bar.

Just before starting the special stage, the pressure must be retaken as indicated below:

	DRY CONDITIONS	WET CONDITIONS
Ground T° < 10° Special stage < 10 km	R5 : 1.8 bar R3+R2 : FR 1.8 bar / RR 2.0 bar	
Ground T° > 15° and < 30° Special stage > 10 km	R5 : 1.7 bar R3+R2 : FR 1.7 bar / RR 1.8 bar	R5 : 2.0 bar R3+R2 : FR 2.0 bar / RR 2.1 bar
Ground T° > 30° Special stage > 20 km	R5 : 1.6 bar R3+R2 : FR 1.6 bar / RR 1.7 bar	

The aim is to have a **HOT PRESSURE** between:

DRY CONDITIONS	WET CONDITIONS
2.0 - 2.3 bar maximum	2.1 - 2.3 bar maximum

It is important to measure the pressure at the end of the special stage in order to know the hot value that corresponds to the operating pressure.

If the operating pressure is:

- below the operating range: no grip felt.
- above the operating range: appearance of vehicle mobility and deterioration of wear features.

If the pressure at the end of the special stage is too high, it is recommended this is adjusted and a maximum of 200 grams removed.

In the wet, there should be no hesitation in raising these pressures back up, as the tyre gains no or little in temperature, and what's more, this is more efficient in evacuating water.

The longitudinal lines allow for water evacuation and preventing aquaplaning, while the "unblockers" improve grip in the event of pollution.



ASPHALT





PILOT SPORT R

- Asymmetrical profile offering a high drive and braking potential
- Optimum ground contact surface when cornering
- Compromise between the architecture and the mixture, allowing better endurance and wear features than the competition



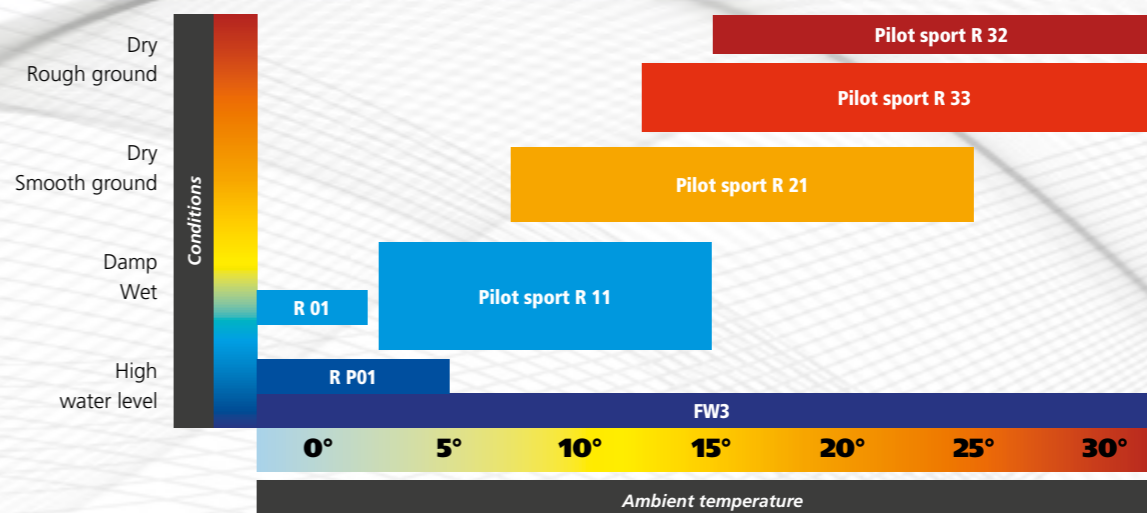
PILOT SPORT R GT

- Optimized architecture and tread for GT cars
- Tread variance used in WRC1 allowing for increased drive and lateral support

Available in:
24/65-18 P01, 11, 21
29/65-18 P01, 21, 31



ASPHALT RANGE POSITIONING



CONDITIONS OF USE

MIXTURE		SURFACE			CONDITION			TEMPERATURE								
Hardness	Type	Smooth	Slightly rough	Very rough	Wet	Damp	Dry	-5	0	5	10	15	20	25	30	30+
Heavy Rain	FW3				█	█										
Rain	P01				█					█	█	█				
Super Soft	R01					█	█		█	█	█	█				
Soft	R11		█			█	█			█	█	█	█			
Medium	R21		█	█			█				█	█	█	█		
Hard	R32, R33		█	█			█							█	█	█

The FW3 is a tyre from WRC. It is used in certain trials where there is a high water level.

REFERENCES AND TECHNICAL CHARACTERISTICS

CAI	DESIGNATION	TYPE	PROFILE	RECOMMENDED RIM (")	TREAD WIDTH (MM)	TYRE SECTION (MM)	INFLATED DIAMETER (MM)	ROLLING CIRCUMFERENCE (MM)
259279	16/57 - 14	R11	Soft	6	152	180	569	1741
341816	16/57 - 14	R21	Medium	6	152	180	569	1741
990676	16/57 - 14	P01	Rain	6	152	180	569	1741
375228	19/58 - 15	R11	Soft	6,5	177	194	581	1784
730497	19/58 - 15	R21 R	Medium	6,5	177	194	581	1784
374784	19/58 - 15	R31	Hard	6,5	177	194	581	1784
053393	19/58 - 15	P01	Rain	6,5	177	194	581	1784
N 332150	20/58 - 15	R11 R	Soft	7	193	210	576	1811
N 366245	20/58 - 15	R21 R	Medium	7	193	210	576	1811
N 632990	20/58 - 15	P01 R	Rain	7	193	210	576	1811
555082	19/60 - 16	R11	Soft	6,5	180	198	602	1851
696623	19/60 - 16	R21 R	Medium	6,5	180	198	602	1851
608664	19/60 - 16	R31	Hard	6,5	180	198	602	1851
590058	19/60 - 16	P01	Rain	6,5	180	198	602	1851
828087	19/63 - 17	R11 R	Soft	7	180	199	631	1942
663741	19/63 - 17	R21 R	Medium	7	180	199	631	1942
650948	19/63 - 17	R31	Hard	7	180	199	631	1942
648447	19/63 - 17	P01	Rain	7	180	199	631	1942
N A venir	20/63 - 17	R11 R	Soft	8	200	222	626	1967
309188	20/63 - 17	R21 R	Medium	8	200	222	626	1967
620895	20/65 - 18	R01	Soft	8	202	225	648	1993
820829	20/65 - 18	R11	Soft	8	202	225	648	1993
517425	20/65 - 18	R21 R	Medium	8	202	225	648	1993
826282	20/65 - 18	R32	Hard	8	202	225	648	1993
622899	20/65 - 18	R33	Hard	8	202	225	648	1993
985340	20/65 - 18	P01	Rain	8	202	225	648	1993
091227	24/65 - 18	R11 R	Soft	9	226	249	649	2038
889408	24/65 - 18	R21 R	Medium	9	229	251	648	2038
456226	24/65 - 18	P01	Rain	9	229	251	648	2038
018333	29/65 - 18	R21 R	Medium	12	321	321	652	2047
894331	29/65 - 18	R31 R	Hard	12	321	321	652	2047
331637	29/65 - 18	P01	Rain	12	321	323	651	2047

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N = NEW

GRAVEL

 **1** = UNIQUE TREAD

 = RECUTTING POSSIBLE

 = COMPLIES WITH FIA REGULATIONS

 **MICHELIN**



NEW

LTX FORCE T

- New architecture and tread
- Symmetrical tread, no longer any difference between right and left
- Greater grip when braking and accelerating



LATITUDE CROSS TZ

- Asymmetrical tyre with protective cord
- Architecture offering extremely good resistance to shock
- The tread guarantees a good compromise between drive and grip when braking
- Recommended in the event of an abrasive track

LATITUDE CROSS TZS

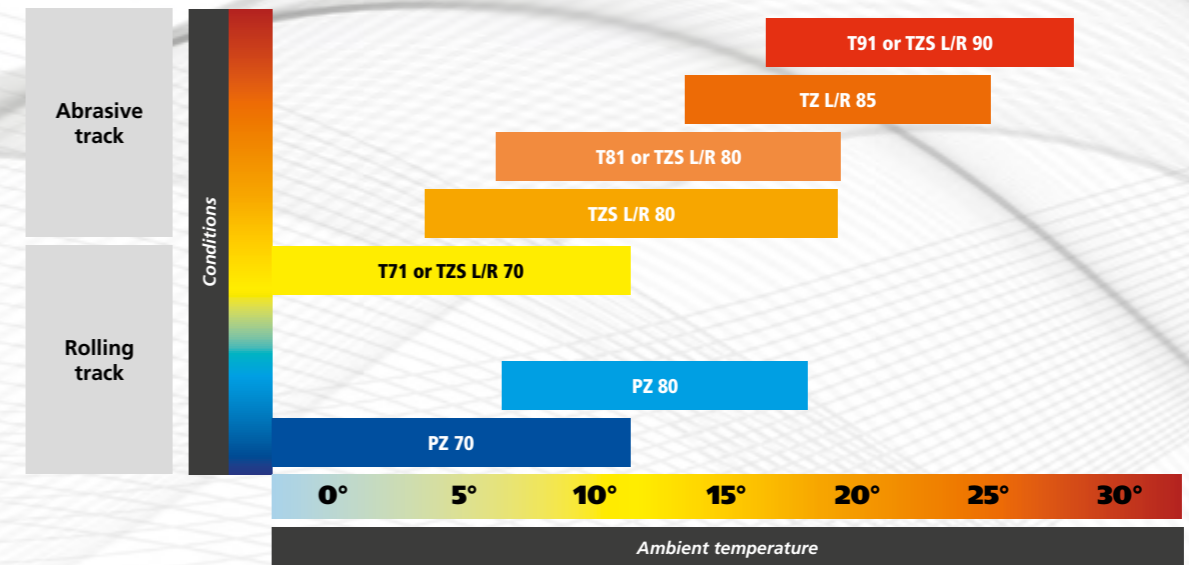
- Asymmetrical tyre without protective cord
- The tread guarantees a good compromise between drive and grip when braking
- More flexible architecture than the Latitude Cross TZ, allowing greater grip when braking and better lateral support
- Intended for R3 group cars

LATITUDE CROSS PZ



- Asymmetrical tyre with protective cord
- The tread guarantees a good compromise between drive and grip when braking
- More flexible architecture than the Latitude Cross TZ, allowing greater grip when braking and better lateral support
- Lighter than the Latitude Cross TZ
- Recommended for rolling tracks and Nordic countries

GRAVEL RANGE POSITIONING



CONDITIONS OF USE

MIXTURE		SURFACE			CONDITION			TEMPERATURE								
Hardness	Type	Gravel	Compact	Abrasive	Mud	Mixed	Dry	-5	0	5	10	15	20	25	30	30+
Soft	70															
Medium Soft	80															
Medium	85															
Hard	90															


REFERENCES AND TECHNICAL CHARACTERISTICS


CAI	DESIGNATION	TYPE	PROFILE	RECOMMENDED RIM (")	TREAD WIDTH (MM)	TYRE SECTION (MM)	INFLATED DIAMETER (MM)	ROLLING CIRCUMFERENCE (MM)
615419	14/60 - 14	TL 80	Medium	6	146	182	633	1899
627150	14/60 - 14	TL 90	Hard	6	146	182	633	1899
932092	14/62 - 15	TL 70	Soft	6	145	184	624	1871
139318	14/62 - 15	TL 80	Medium	6	145	184	624	1871
342871	16/64 - 15	TZ L 70	Soft	6	164	205	644	1934
982672	16/64 - 15	TZ R 70	Soft	6	164	205	644	1934
850736	16/64 - 15	TZ L 80	Medium	6	164	205	644	1934
817052	16/64 - 15	TZ R 80	Medium	6	164	205	644	1934
214699	16/64 - 15	TZ L 90	Hard	6	164	205	644	1934
251214	16/64 - 15	TZ R 90	Hard	6	164	205	644	1934
N 192795	17/65 - 15	T 71	Soft	6	186	197	643	2019
N 262110	17/65 - 15	T 81	Medium	6	186	197	643	2019
N 989374	17/65 - 15	T 91	Hard	6	186	197	643	2019
799488	17/65 - 15	TZS L 70	Soft	6	180	213	647	1947
672244	17/65 - 15	TZS R 70	Soft	6	180	213	647	1947
880446	17/65 - 15	TZS L 80	Medium	6	180	213	647	1947
111678	17/65 - 15	TZS R 80	Medium	6	180	213	647	1947
184675	17/65 - 15	TZS L 90	Hard	6	180	213	647	1947
940351	17/65 - 15	TZS R 90	Hard	6	180	213	647	1947
474576	17/65 - 15	TZ L 80	Medium	7	180	222	646	1945
221247	17/65 - 15	TZ R 80	Medium	7	180	222	646	1945
149188	17/65 - 15	TZ L 85	Medium	7	180	222	646	1945
182943	17/65 - 15	TZ R 85	Medium	7	180	222	646	1945
791823	17/65 - 15	PZ L 70	Soft	7	180	213	647	1947
270428	17/65 - 15	PZ R 70	Soft	7	180	213	647	1947
830513	17/65 - 15	PZ L 80	Medium	7	180	213	647	1947
509206	17/65 - 15	PZ R 80	Medium	7	180	213	647	1947
140393	18/66 - 15	T71	Soft	6	152	180	569	1741

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N = NEW

SNOW AND ICE

 = UNIQUE TREAD

 = RFID CHIP

 = COMPLIES WITH FIA REGULATIONS

 **MICHELIN**

NEW**15/65 - 15 NA01 RFID**

- New architecture offering better lateral support
- Greater resistance to stud tearing
- Tread identical to WRC1
- Winner in the WRC2 at the 2019 Rally Sweden

**PILOT ALPIN NA01**

- New generation of snow and ice tyres
- New architecture allowing greater drive and optimizing the ground contact area
- Studded version complies with the Monte Carlo regulations
- Intended for R2 cars

PILOT ALPIN NA00

- "Super Soft" rubber
- Strip tread that ensures drive and road holding under winter conditions.
- Available in RFID version (18/65-18)



Studded version

?**WHAT IS THE RFID?**

The RFID is a chip inserted into the tyre during manufacture, before curing. It allows the technical officials to identify tyres more quickly thanks to contactless detection of the RFID chip. This fluidifies control and improves ergonomics while guaranteeing a unique code per product.

**REFERENCES AND TECHNICAL CHARACTERISTICS**

CAI	DESIGNATION	TYPE	STUDED	RECOMMENDED RIM (")	TREAD WIDTH (MM)	TYRE SECTION (MM)	INFLATED DIAMETER (MM)	ROLLING CIRCUMFERENCE (MM)
N	043907	15/65 - 15 NA01R RFID	Studded	7	150	204	650	1954
N	958109	15/65 - 15 NA01L RFID	Studded	7	150	204	650	1954
	857931	16/61 - 15 NA00	-	6	167	200	612	1836
	460943	16/61 - 16 NA01	-	6,5	160	196	493	1934
	066330	16/61 - 17 NA00	-	7	164	200	615	1844
	139571	18/65 - 18 NA00 RFID	-	8	178	222	648	1955

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N = NEW

HILL CLIMBING



NEW

PILOT SPORT H S5C

- Quick warm up, like its predecessor
- Consistency throughout the climb
- New mixture that has greatly reduced pickup



REFERENCES AND TECHNICAL CHARACTERISTICS

CAI	DESIGNATION	TYPE	RECOMMENDED RIM (")	TREAD WIDTH (MM)	TYRE SECTION (MM)	INFLATED DIAMETER (MM)	ROLLING CIRCUMFERENCE (MM)	
	417166	20/54 - 13	S5C	9J13	199	245	541	1661
N	166944	22/54 - 13	S5C	10J13	220	270	541	1661
N	799284	24/57 - 13	S5C	10J13	241	289	585	1765
	308815	26/64 - 13	S5C	12J13	288	328	634	1958
	024687	19/57 - 15	S5B	7J17	185	212	568	1759
N	546802	19/57 - 15	S5C	7J17	185	206	573	1774
	816036	20/61 - 17	S5B	8J17	190	221	604	1861
N	384649	20/61 - 17	S5C	8J17	187	219	606	1870
	628978	24/61 - 17	S5B	9J17	235	249	605	1872
N	562022	24/61 - 17	S5C	9J17	235	250	605	1857
	833429	24/65 - 18	S5A	9J18	229	251	647	1988
N	658524	24/65 - 18	S5C	9J18	229	251	647	1988
	869437	27/65 - 18	S5A	11J18	262	298	647	1988
N	547868	27/65 - 18	S5C	11J18	262	298	647	1988
N	667424	30/65 - 18	S5C	12.5J18	288	329	650	1996
N	472130	31/71 - 18	S5C	13J18	316	343	709	2192

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N = NEW

CLASSIC COMPETITION



FIA Reg. ✓ = COMPLIES WITH FIA REGULATIONS

1 = UNIQUE TREAD



TB 5+ NEW THE KING OF DRY ROADS

- Use on dry and rough roads
- New architecture providing greater lateral grip
- New mixture from modern technologies, allowing better warm-up
- **A product that is easier to use and more consistent in performance**

Two rubber types available:

- TB 5+ F soft rubber (soft equivalent to modern R11 mixture)
- TB 5+ R intermediate rubber (intermediate equivalent to modern R21 mixture).

TB 5

- Use on roads that are dry, rough and with major stress.
- Available in soft (TB 5 F) and hard rubbers (TB 5 R)



TB 15 A ROAD-APPROVED RACE TYRE

- Mixed tyres
- **Very good performances on damp roads**



PB20 THE V.H.C SPECIAL MAXI-RAIN

- Very high groove rate
- **Optimum grip on soaking wet roads**

TECHNICAL CHARACTERISTICS

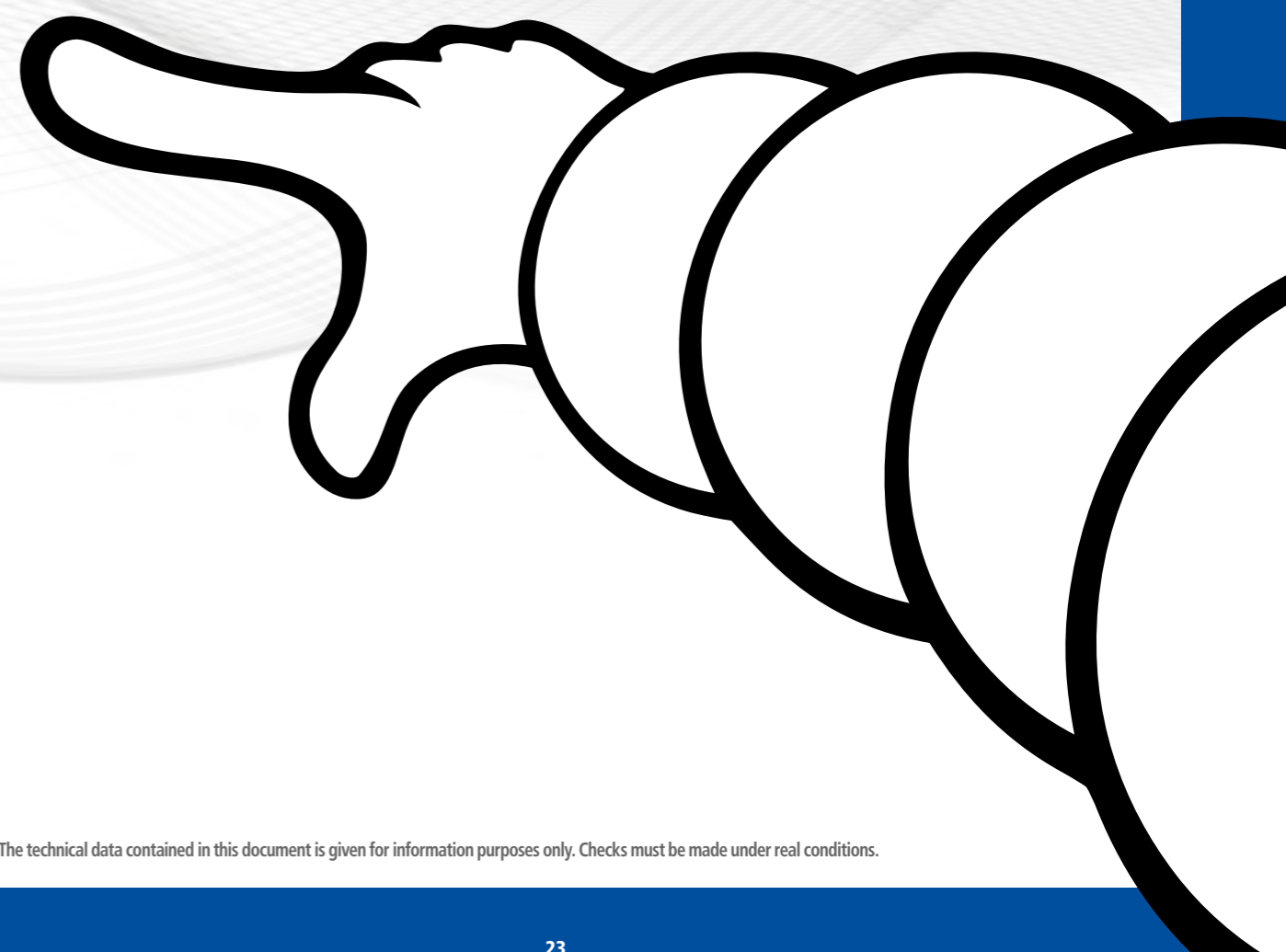
RANGES	Michelin designation for competition tyres	Equivalent metric dimension + load and speed indicator	Ext. dia. (mm)	Rolling circumference (mm)	Recommended ETRTO rim widths (inches)	Section / Rim (mm / inches)
TB5+ <small>NEW</small>	16/53-13 TB5+ F	185/55 R 13 72 V	533	1677	5 à 6,5	
	16/53-13 TB5+ R	185/55 R 13 72 V	533	1677	5 à 6,5	
	20/53-13 TB5+ F	245/40 R 13 77 V	528	1659	8 à 9,5	
	20/53-13 TB5+ R	245/40 R 13 77 V	528	1659	8 à 9,5	
	18/60-15 TB5+ F	225/50 R 15 79 V	608	1912	6 à 8	
	18/60-15 TB5+ R	225/50 R 15 79 W	608	1912	6 à 8	
	23/59-15 TB5+ R	265/40 R 15 92 W	-	-	8,5 à 10	
	23/62-15 TB5+ F	270/45 R 15 86 W	-	-	8,5 à 10,5	
	23/62-15 TB5+ R	270/45 R 15 86 W	-	-	8,5 à 10,5	
	26/61-15 TB5+ F	285/40 R 15 87 W	611	1920	9,5 à 11	
	26/61-15 TB5+ R	285/40 R 15 87 W	611	1920	9,5 à 11	
	29/61-15 TB5+ R	335/35 R 15 93 W	-	-	11 à 13	
	TB5	16/53 - 13 TB 5 F	185/55 R 13 72 V	531	1625	5 à 6,5
20/53 - 13 TB 5 F		245/40 R 13 77 V	531	1625	8 à 9,5	252 / 9
18/60 - 15 TB 5 F		225/50 R 15 79 V	605	1857	6 à 8	230 / 7
18/60 - 15 TB 5 R		225/50 R 15 79 W	605	1857	6 à 8	230 / 7
23/62 - 15 TB 5 F		270/45 R 15 86 W	620	1903	8,5 à 10,5	278 / 9
23/62 - 15 TB 5 R		270/45 R 15 86 W	620	1903	8,5 à 10,5	278 / 9
23/59 - 15 TB 5 R		265/40 R 15 92 W	592	1817	8,5 à 10,5	269 / 9
26/61 - 15 TB 5 F		285/40 R 15 87 W	610	1871	9,5 à 11	291 / 10
26/61 - 15 TB 5 R		285/40 R 15 87 W	610	1871	9,5 à 11	291 / 10
29/61 - 15 TB 5 R		335/35 R 15 93 W	616	1890	11 à 13	341 / 11,5
TB 15 (MIXTE) PB 20 (MAXI-PLUIE)		16/53 - 13 TB15	175/60 R 13 72 V	536	1640	5 à 6
	20/53 - 13 TB15	225/45 R 13 77 V	533	1635	7 à 8,5	231 / 8
	15/60 - 15 TB 15	170/65 R 15 77 V	601	1847	5 à 6	185 / 6
	18/60 - 15 TB 15	215/55 R 15 79 V	612	1885	6 à 7,5	224 / 7
	23/62 - 15 TB 15	270/45 R 15 86 V	625	1923	8,5 à 10,5	268 / 9
	26/61 - 15 TB 15	295/40 R 15 87 V	615	1891	10 à 11,5	288 / 10
	29/61 - 15 TB 15	335/35 R 15 93 V	621	1903	11 à 13	330 / 11,5
	18/60 - 15 PB 20	205/55 R 15 79 H	609	1869	5,5 à 7,5	220 / 6,5
	23/62 - 15 PB 20	275/45 R 15 86 H	628	1928	8,5 à 10,5	266 / 9

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TECHNICAL CHARACTERISTICS

RANGES	Michelin designation for competition tyres	Average cross-section widths measured in mm, at 1.3 bar and at 25°C												
		Rim: 5"	Rim: 5,5"	Rim: 6"	Rim: 6,5"	Rim: 7"	Rim: 7,5"	Rim: 8"	Rim: 8,5"	Rim: 9"	Rim: 9,5"	Rim: 10"	Rim: 10,5"	Rim: 11"
TB5+ <small>NEW</small>	16/53-13 TB5+ F	178,08	183,08	188,28	193,28									
	16/53-13 TB5+ R	178,08	183,08	188,28	193,28									
	20/53-13 TB5+ F							237,88	243,08	248,08	253,28			
	20/53-13 TB5+ R							237,88	243,08	248,08	253,28			
	18/60-15 TB5+ F			212,78	217,78	222,98	227,98	232,98						
	18/60-15 TB5+ R			212,78	217,78	222,98	227,98	232,98						
	23/59-15 TB5+ R							PENDING						
	23/62-15 TB5+ F							PENDING						
	23/62-15 TB5+ R							PENDING						
	26/61-15 TB5+ F										283,63	288,63	293,63	298,83
	26/61-15 TB5+ R										283,63	288,63	293,63	298,83
	29/61-15 TB5+ R								PENDING					

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REFERENCES WITHDRAWN IN 2019

ASPHALT

CAI	DESIGNATION	TYPE	PROFILE	STATUS
127807	20/65 - 18	R31	Hard	S
712902	24/65 - 18	SA02	Soft	S
378850	24/65 - 18	SA20	Medium	S
031876	24/65 - 18	PE00	Rain	S
963741	29/65 - 18	SA22	Medium	X
827217	29/65 - 18	SA32	Hard	S
948964	29/65 - 18	PE00	Rain	S

GRAVEL

CAI	DESIGNATION	TYPE	PROFILE	STATUS
002807	18/66 - 15	T70	Medium	X
398714	18/66 - 15	T 80	Medium	X

SNOW AND ICE

CAI	DESIGNATION	TYPE	PROFILE	STATUS
755122	9/58 - 13	NA00	Studded	X
462467	9/58 - 14	NA00	Studded	X
862103	10/65 - 15	NA00	Studded	X
351973	10/65 - 15	NA00	-	S
441325	10/65 - 16	NA00	Studded	X
101001	10/65 - 16	NA00	-	S
789925	10/65 - 16	GEL00	Studded	X
262497	10/65 - 16	GER00	Studded	X

HILL CLIMBING

CAI	DESIGNATION	TYPE	PROFILE	STATUS
472441	20/54 - 13	SSA	Ultra Soft	S
643143	20/54 - 13	SSB	Ultra Soft	X
811674	22/54 - 13	SSB	Ultra Soft	X
102571	24/57 - 13	SSA	Ultra Soft	S
920069	24/57 - 13	SSB	Ultra Soft	X
628267	26/64 - 13	SSB	Ultra Soft	X

X = as long as stocks last
S = withdrawn definitively

GUIDE TO USING RALLY AND CLASSIC COMPETITION TYRES



INTRODUCTION

We recommend you comply with the following safety and usage instructions. These instructions are valid subject to more restrictive local statutory provisions for tyres decreed or required by the competition, raid or track organizers. Failure to comply with these instructions or procedures may give rise to an incorrect fitting or firmment and cause premature deterioration of the tyre.

Use on banking circuits requires specific tyres and/or conditions of use. Prior to any use, read the recommendations for use on our website www.michelinmotorsport.com or make enquiries with Michelin services: 00 33 (0) 4 73 30 14 55.

RECOMMENDATIONS

Pre-use verification rules

The tyre choice must comply with the vehicle's fittings, as defined by this vehicle's manufacturer and constructor. Ensure that the tyres are of the same type on the same axle (brand, trade name, dimensions, structure).

Prior to fitting, ensure:

- That the rim diameter corresponds exactly to the internal diameter of the tyre.
- That the rim width complies with the manufacturer's recommendation or failing that with listed standards (ETRTO, TRA, JATMA, etc.).
- That the rim type (tubeless, tube type) corresponds to the tyre type.
- That the rim is in good condition and shows no signs of deterioration (split, deformation, etc.).
- That the rim has sufficient resistance to support the pressure required for the fitment.
- That the tyres are not showing any signs of repairs.

TYRE RETREADS

- Retreading a tyre modifies its characteristics and performance. The operation requires suitable equipment and tools, as well as compliance with instructions.
- Retreading a used tyre (not new) is prohibited.
- Prior to any retreading operation, contact the Michelin department: +33 (0) 4 73 30 14 55.

Reminder: Retreading or regrooving ECE R30-approved tyres, intended for use on public roads, is prohibited.

CONDITIONS OF USE

- Never treat the tread rubber with a chemical.
- Do not use tyres for which the background is unknown.
- Within the framework of the use of heating cabinets, never place fitted assemblies in contact with metal parts and/or directly over the heat source.
- Ensure that the pressure, bodywork, speed and axle load values are those recommended by Michelin in accordance with the intended use (update the recommendations in accordance with use)

Standard recommendations for use are available on our website www.michelinmotorsport.com or contact Michelin services: 00 33 (0) 4 73 30 14 55.

FITTING AND REMOVING A TYRE

Fitting, removing, inflating and balancing tyres must be carried out using suitable equipment in good condition, and entrusted to trained and qualified personnel, who will ensure, in particular:

- Compliance with the constructor's and the legal rules in choosing tyres.
- Prior inspection of the external and internal appearance of the tyre by the fitter.
- Compliance with the tyre fitting, removal, balancing and inflation procedures.
- Compliance with the positioning of the tyre on the vehicle (left, right; front, rear).
- Compliance with the working pressure.
- Measurement equipment such as a pressure gauge or torque wrench must be calibrated and inspected at least once a year by an approved body, or failing this by the supplier or manufacturer.

Fitting - Removal:

- Ensure that the fitting equipment is suited to the fitment type. When using this equipment, refer to the machine manufacturer's user manual.
- Comply with the fitting direction for a directional tyre.
- Lubricate rim seats and tyre beads with a suitable product.
- In the case of a tube type fitment (with inner tube), the dimension of the inner tube must correspond to that of the tyre (cross section and diameter) and the rim must be in a condition to accept the inner tube without damaging it.

Inflation

- Important note: only use inflation stations intended for this purpose. In no event should the operator remain in immediate proximity to the tyre assembly. As a result, you must ensure that the compressed air pipe fixed to the valve is equipped with a safety clip and that it is of a sufficient length to allow the operator to move beyond any projection trajectories, in the event of an incident. Keep people not involved in the inflation operation away from the site where this is carried out.
- Remove the interior part of the valve.
- Start inflation and check the beads are correctly centred in relation to the edge of the rim.
- If the beads are poorly centred, deflate and start the operation again in full, including lubrication.
- Continue to inflate to 3.5 bar in order to obtain correct bead placement. For higher pressures, use a protection cage when inflating the tyre.
- Replace the valve interior and adjust the pressure of use.
- Install the polyamide cap with seal in order to ensure full leak-tightness.

Balancing

- It is recommended the four tyres be balanced for track use.
- The balancing machines must be calibrated in accordance with manufacturer instructions.
- Specific attention will be paid to the mechanisms (cone/screw plate) centering the assembly on the machine.

STORAGE AND TRANSPORT

There should be compliance with certain important points during storage and transport, such as temperature, which must be higher than:

Range	Minimum storage temperature	Minimum transport temperature
Slick (Track)	10°C	15°C
Rain (Track)	5°C	10°C

Furthermore, tyres must not be subject to:

- Direct and prolonged exposure to sunlight
- Sources of extreme heat and humidity (storage in tropical-type weather conditions)
- Solvents, lubricants, fuels and other chemicals
- Ozone emissions from equipment such as a transformer, welder, electric motor, etc.
- Long-term storage in a stack.

Non-compliance with these storage recommendations may significantly reduce the period over which the tyre retains its performances.

The storage location must be dry, ventilated, out of direct light and kept solely for tyres. Racks allowing tyres to be stored vertically are to be used in order to avoid tension on the casings.

TYRE AGING

- Tyres age, even if they are not used, or if they are only used occasionally; excessive tyre age can lead to a loss of grip.
- Remove tyres from use when these show clear signs of aging or wear (cracks in the rubber of the tread, shoulder or lower zone sidewall, deformations, etc.). If in doubt, refer to a tyre professional.
- We recommend using Michelin Competition tyres within a maximum of twenty four months following their date of purchase (within 3 months in the event of storage in severe tropical-type conditions).

VALVE

- Comply with the instructions for use provided by the manufacturers (tightening and rim compatibility, type of alloys, alignment).
- Systematically retighten the polyamide valve cap with seal (equipment necessary for correct heat resistance). This ensures the valve mechanism is protected and that the tyre assembly is leak proof.
 - Ensure the valve is in good condition (no ovalisation, signs of impact, etc.).
 - Regularly check the tightening torques on screw valves.
 - Only use metal valves (track)

MONITORING AND MAINTENANCE

- Tyre pressure verification prior to each outing and correction of this pressure if it no longer corresponds to the working pressure. Tyre pressures must be checked when cold (tyre that has not been run on, that has not been heated).
- Inflation with nitrogen does not do away with the need for regular tyre pressure checks.
- In the event of unusual pressure loss, check the internal and external condition of the tyre as well as the condition of the wheel and valve.
- Any visible perforation, cut or deformity must form the subject of an in-depth inspection by a tyre professional. Without intervention by a professional, never use a damaged tyre or one that has been run flat.

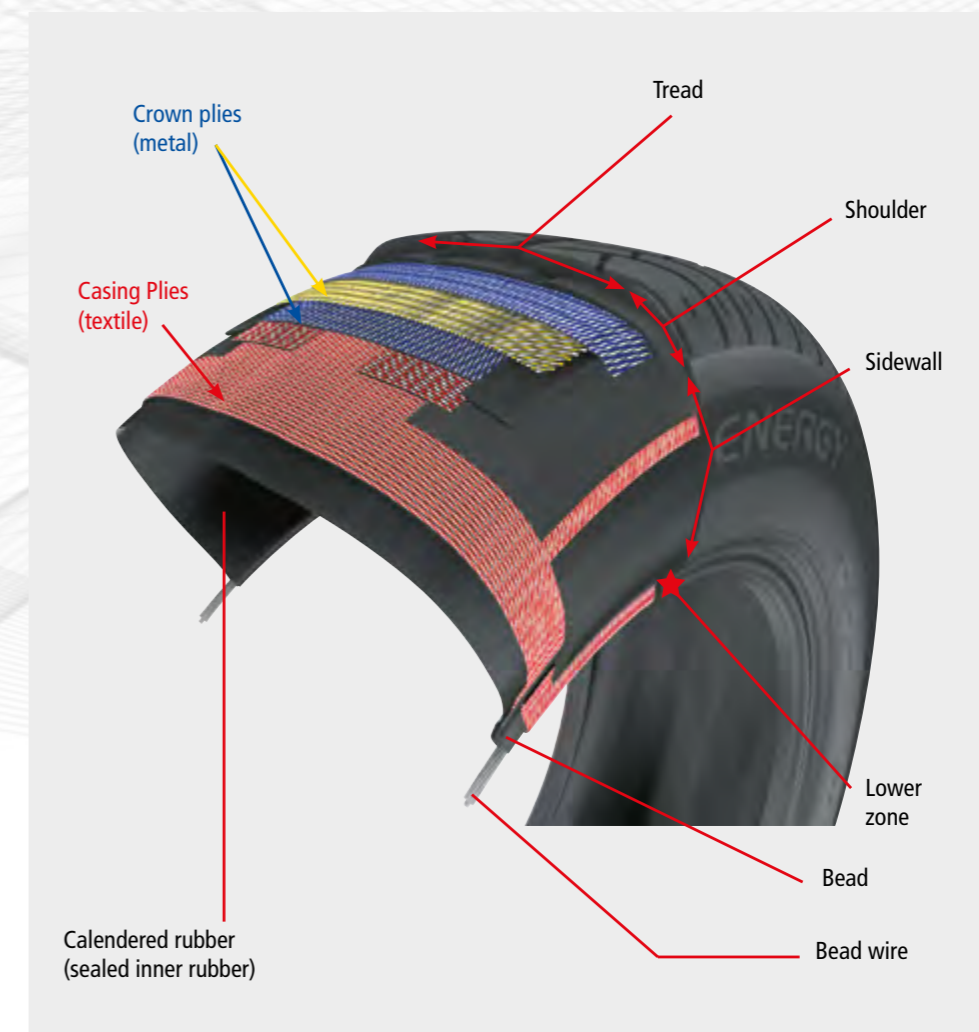
DAMAGE **RECOGNISING AND ACTING**



DAMAGE TO TYRES

NO INJURY OR DEFORMATION IS TO BE IGNORED

Any visible injury or abnormal sign (sidewall or tread deformation, deep cut, break, appearance of vibrations, racking suffered by the vehicle, etc.) must form the subject of an in-depth examination. The diagnostic will allow for establishing whether the tyre can be repaired or is to be definitively withdrawn from use.



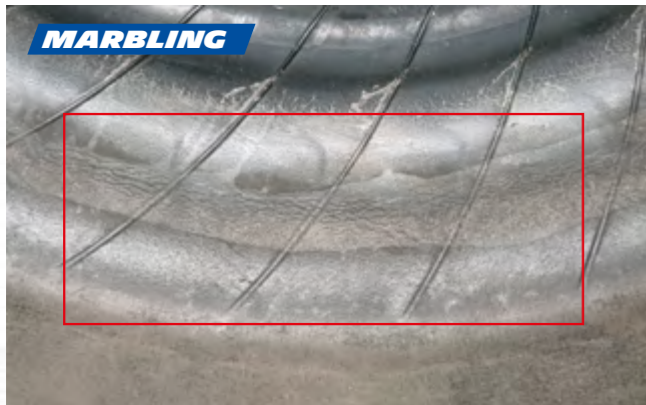
THE CONSEQUENCES OF UNDER-INFLATION

Running at an insufficient pressure leads to excessive tyre flexion, causing abnormal overheating and irreversible damage.

The signs and consequences of running on under-inflated tyres can be seen in the form of:

1. Marbling (folding of the inner calendered rubber).
2. Dislocation of part or all of the inner calendered rubber.
3. Total or partial loss of tread.
4. Circular rupture of the casing ply.

The signs are undetectable from the outside, hence the need to remove the tyre in the event of a puncture, in order to check its condition.



A tyre showing marbling must in no event be repaired and put back into use.



CRACKS

Description
Tread cracks.

Causes
Product ageing. Exposure to ozone, UV, use of aggressive cleaning product. Risk of developing into breaks.

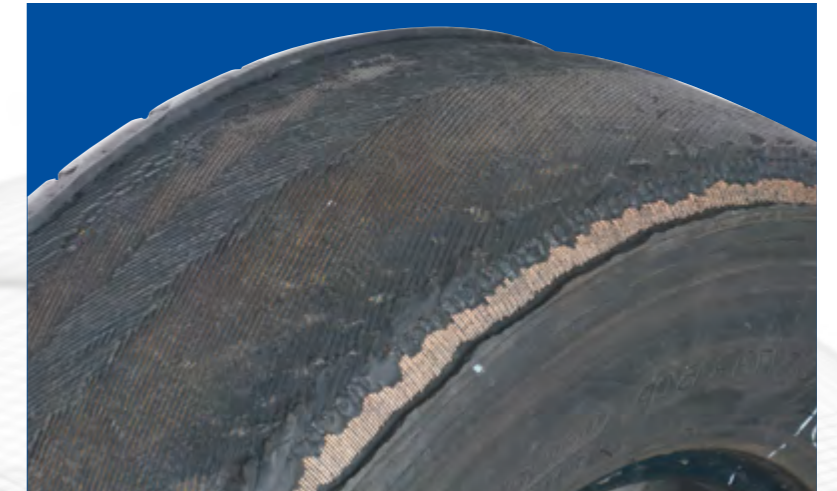
Changes
Breaks.

Checks/advice

- Check the use, parking/storage and vehicle maintenance conditions.
- Replace the product(s) concerned if the cracks are deep and reach the plies or the casing.



CROWN SEPARATION



Observation

Tear to all or part of the tread

Probable cause(s)

These tears are the result of separations between the elements forming the internal structure, generally caused by excessive overheating due to:

- prolonged running on under- or over-inflated tyres
- equipment not complying with the vehicle constructor's recommendations (speed/load indices)

- generalized rusting of the internal metal structure, due to cuts, punctures, and miscellaneous aggression suffered by the tread.

Tips

Tyre: remove from use

Vehicle :

- check all the vehicle's tyres
- comply with the constructor's recommendations (speed/load indices)
- check and re-establish the pressures in accordance with the constructor, or failing this, manufacturer recommendations.

DEFORMATIONS



Observation

Blister(s), localized hernia(s) with or without signs of impact (cuts, scratches, etc.)

Probable cause(s)

These deformations are the result of an accidental rupture of one or more casing ply cables, caused by:

- contact with an obstacle (pavement, pothole, etc.),
- sidewall pinched between obstacle and rim.

Under- or over-inflation encourages this type of damage.

Tips

Tyre: remove from use

Vehicle: check the condition of the rim

WHAT SHOULD BE DONE IN THE EVENT OF DAMAGE?

When an end client notices damage, he/she must report this to his/her dealer or to an on-site Michelin technician.

If there is no technician at the event, the official Michelin dealer must collate the information below and forward it to the Michelin technician for his/her country or who is responsible for the championship.

The complaint must be drawn up and sent by the Michelin technician to the Michelin Quality Service.

The major data to be provided to the Michelin technician is:

- **Client identification:** team/driver name / address / tel. / email address
- **Does the client expect a response?**
- **What event?** Championship / track / date / stage (race, qualification, test, etc.)
- **What vehicle?** make / model / power / CC / 2WD/4WD / category
- **What tyre?** dimension/position / rim used / FIA/Label. Was the tyre driven on?
- **What were the conditions of use?** camber / cold pressure / hot pressure / total distance covered by the tyre / air and ground temperatures
- **What damage?** equipment? bodily harm?
- **Description of the problem**
- **How many tyres affected?**
- **Attach photos if possible**

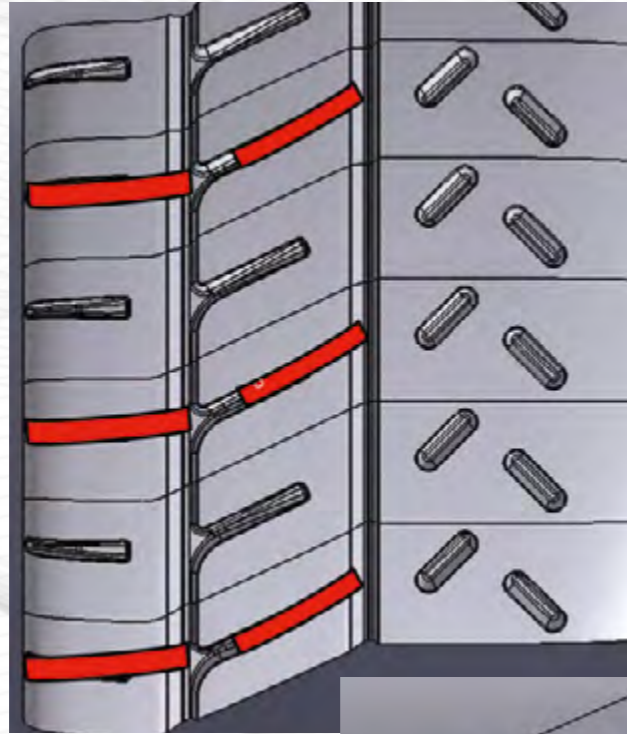
The depth of information contributes highly to the quality and speed of the response.

RECUTTING RALLY TYRES

RECUTTING ASPHALT TYRES

Our range of asphalt PILOT SPORT R tyres can be recut in two ways:

1. "WET" use



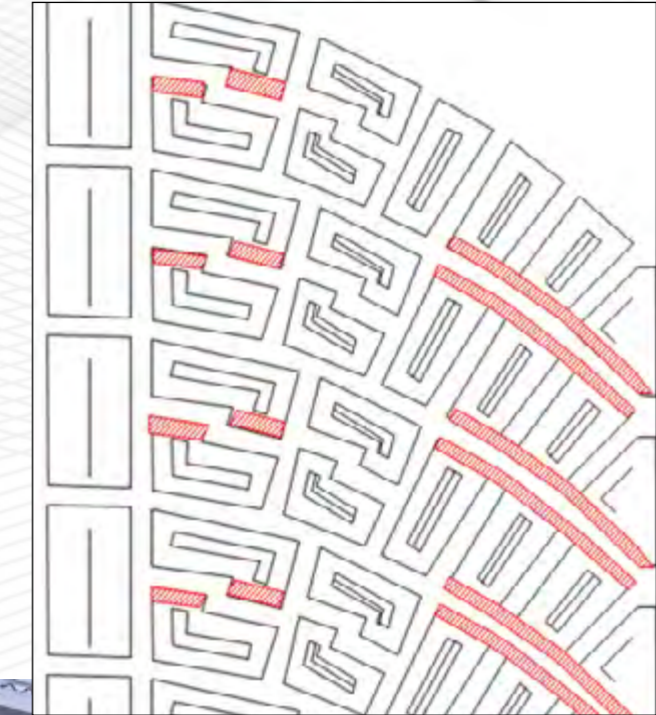
2. "FULL WET" use



RECUTTING GRAVEL TYRES

We have two ranges of gravel tyres with different treads:

1. Tread: LATITUDE CROSS TZS / TZ / PZ



2. Tread: LTX FORCE T



Cambered side
Vehicle ext.

Non-cambered side
Vehicle ext.

RECOMMENDATIONS FOR USE

RALLY AND CLASSIC COMPETITION TYRES



MAJOR RECOMMENDATIONS RELATING TO 4R RALLY TYRES

COMPETITION CLIENT

We ask anyone using Michelin Group Auto client competition tyres for the Rally to read the "User Guide" in this document.

- Michelin Competition tyres are intended for competition use on closed roads and not for road use outside of competitions.
- Exceeding certain recommendations (e.g. Camber or low pressure) may cause deterioration to the tyre or a drop in performance: quicker tyre wear, impact on vehicle balance (under- or oversteer).
- The integrity of the rally tyre construction is guaranteed for the wear or grip potential.
- These recommendations extend beyond driving hazards such as punctures.

Contact the Michelin Rally technical services for any use outside the defined recommendations.

› Tel. + 33 (0) 4 73 32 90 25

9/58-13

Ice Rally recommendation: 9/58-13 NA00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	5 J 13
Minimum cold pressure	1.7 Bar
Relay distance	NA Km

9/58-14

Ice Rally recommendation: 9/58-14 NA00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	5 J 14
Minimum cold pressure	1.7 Bar
Relay distance	NA Km

10/65-15

Ice Rally recommendation: 10/65-15 NA00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	5 J 15
Minimum cold pressure	1.7 Bar
Relay distance	NA Km

10/65-16

Ice Rally recommendation: 10/65-16 NA00 / GER00 / GEL00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	5 J 16
Minimum cold pressure	Minimum 1,6 - max 2.0 Bar
Relay distance	NA Km

16/57-14

Rally recommendation: 16/57-14 R21 / SA30 / R11 / P01

Use	Asphalt rally
Maximum load	310 DaN
Maximum speed	190 Km/h
Nominal rim	6.0 (+/-0.5) J 14
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

16/61-15

Snow Rally recommendation: 16/61-15 NA00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	6.0 (+/-0.5) J 15
Minimum cold pressure	Minimum 1,6 - max 1.9 Bar
Relay distance	NA Km

16/61-16

Snow Rally recommendation: 16/61-16 PILOT ALPIN NA01 / PILOT ALPIN NA01 CL

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	6.5 (+/-0.5) J 16 H2
Minimum cold pressure	Minimum 1,6 - max 1.9 Bar
Relay distance	NA Km

16/61-17

Snow Rally recommendation: 16/61-17 NA00

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	7.0 (+/- 0,5) J 17
Minimum cold pressure	Minimum 1,6 - max 1.9 Bar
Relay distance	NA Km

16/64-15

Rally recommendation: 16/64-15 TZL90 / TZR90 / TZL70 / TZR80 / TZL80 / TZR70

Use	Dirt/Gravel Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	6.0 (+/-0.5) J 15
Minimum cold pressure	1.7 Bar
Relay distance	NA Km

17/65-15

Rally recommendation: 17/65-15 TZSR70 / TZSR80 / TZSL80 / TZSL90 / TZSR90 / TZSL70 / TZL80 / TZR80

Use	Dirt/Gravel Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	7 (+/- 0,5) J 15
Minimum cold pressure	1.7 Bar
Relay distance	NA Km

Loose Gravel Rally recommendation: 17/65-15 PZR70 / PZL70 / PZR80 / PZL80 /

Use	Dirt/Gravel Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	7.0 (+/- 0,5) J 17
Minimum cold pressure	1.9 Bar
Relay distance	NA Km

18/65-18

Snow Rally recommendation: 18/65-18 NA00 / PILOT ALPIN NA01 RFID / NA00 RFID /

Use	Snow and Ice Rally
Maximum load	NA DaN
Maximum speed	NA Km/h
Nominal rim	8 (+/- 0,5) J 18
Minimum cold pressure	Minimum 1,6 - max 1.9 Bar
Relay distance	NA Km

Asphalt Rally recommendation: Full WET : 18/65-18 FW2R

Use	Asphalt Rally
Maximum load	380 DaN
Maximum speed	210 Km/h
Nominal rim	8 (+/- 0,5) J 18
Minimum cold pressure	2.2 Bar
Relay distance	NA Km

19/57-15

Slick Hill Climbing recommendation: 19/57-15 S5B

Use	Hill climbing
Maximum load	290 DaN
Maximum speed	230 Km/h
Nominal rim	7 (+/- 0,5) J 15
Minimum cold pressure	1.6 Bar
Relay distance	50 Km

19/58-15

Rally recommendation: 19/58-15 P01 / R31 / R11 / R21 / R21 ROUTE

Use	Asphalt Rally
Maximum load	400 DaN
Maximum speed	190 Km/h
Nominal rim	6.5 (+/-0.5) J 15
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

19/60-16

Rally recommendation: 19/60-16 R21 ROUTE / R21 / R11 / R31 / P01 ROUTE

Use	Asphalt Rally
Maximum load	420 DaN
Maximum speed	190 Km/h
Nominal rim	6.5 (-/+0.5) J 16
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

19/63-17

Rally recommendation: 19/63-17 R11 / P01 / R31 / R21 ROUTE / R21 / R11 ROUTE

Use	Asphalt Rally
Maximum load	430 DaN
Maximum speed	190 Km/h
Nominal rim	7.0 (+/- 0,5) J 17
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

20/54-13

Slick Hill Climbing recommendation: 20/54-13 S5A

Use	Hill climbing
Maximum load	360 DaN
Maximum speed	230 Km/h
Nominal rim	9 (+/- 0,5) J 13
Minimum cold pressure	1.2 Bar
Relay distance	50 Km

Slick Hill Climbing recommendation: 20/54-13 S5B

Use	Hill climbing
Maximum load	360 DaN
Maximum speed	230 Km/h
Nominal rim	9 (+/- 0,5) J 13
Minimum cold pressure	1.0 Bar
Relay distance	50 Km

20/61-17

Slick Hill Climbing recommendation: 20/61-17 S5B

Use	Hill climbing
Maximum load	400 DaN
Maximum speed	230 Km/h
Nominal rim	7.5 (+/- 0,5) J 17
Minimum cold pressure	1.6 Bar
Relay distance	50 Km

20/63-17

Rally recommendation: 20/63-17 R21 / R21 ROUTE

Use	Asphalt Rally
Maximum load	430 DaN
Maximum speed	190 Km/h
Nominal rim	8 (+/- 0,5) J 17
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

20/65-18

Rally recommendation: 20/65-18 R31 / R21 ROUTE / R21 / R01 / R11 / R32 / P01

Use	Asphalt Rally
Maximum load	380 DaN
Maximum speed	210 Km/h
Nominal rim	8 (+/- 0,5) J 18
Minimum cold pressure	1.6 Bar
Relay distance	NA Km

21/ 5-19

Slick Hill Climbing recommendation: 21/65-19 S5B

Use	Hill climbing
Maximum load	550 DaN
Maximum speed	230 Km/h
Nominal rim	8 (+/- 0,5) J 19
Minimum cold pressure	1.4 Bar
Relay distance	50 Km

22/54-13

Slick Hill Climbing recommendation: 22/54-13 S5B

Use	Hill Climbing
Maximum load	360 DaN
Maximum speed	230 Km/h
Nominal rim	10 (+/- 0,5) J 13
Minimum cold pressure	1.0 Bar
Relay distance	50 Km

24/57-13

Slick Hill Climbing recommendation: 24/57-13 S5A

Use	Hill climbing
Maximum load	455 DaN
Maximum speed	230 Km/h
Nominal rim	10 (+/- 0,5) J 13
Minimum cold pressure	1.2 Bar
Relay distance	50 Km

Slick Hill Climbing recommendation: 24/57-13 S5B

Use	Hill climbing
Maximum load	455 DaN
Maximum speed	230 Km/h
Nominal rim	10 (+/- 0,5) J 13
Minimum cold pressure	1.0 Bar
Relay distance	50 Km

24/61-17

Slick recommendation: 24/61-17 S5B

Use	Hill Climbing
Maximum load	400 DaN
Maximum speed	230 Km/h
Nominal rim	9 (+/- 0,5) J 17
Minimum cold pressure	1.6 Bar
Relay distance	50 Km

24/65-18

Rally recommendation: 24/65-18 SA20 / SA02

Use	Asphalt Rally
Maximum load	300 DaN
Maximum speed	220 Km/h
Nominal rim	9 (+/- 0,5) J 18
Minimum cold pressure	Minimum 1,6 - max 1.8 Bar
Relay distance	NA Km

Wet Rally recommendation: 24/65-18 PE00

Use	Asphalt Rally
Maximum load	300 DaN
Maximum speed	220 Km/h
Nominal rim	9 (+/- 0,5) J 18
Minimum cold pressure	1.8 Bar
Relay distance	NA Km

24/65-18

Slick recommendation: 24/65-18 S5A

Use	Hill Climbing
Maximum load	500 DaN
Maximum speed	230 Km/h
Nominal rim	9 (+/- 0,5) J 18
Minimum cold pressure	1.6 Bar
Relay distance	50 Km

26/64-13

Slick Hill Climbing recommendation: 26/64-13 S5B

Use	Hill Climbing
Maximum load	450 DaN
Maximum speed	300 Km/h
Nominal rim	11,75 (+/- 0,5) J 13
Minimum cold pressure	1.1 Bar
Relay distance	50 Km

27/65-18

Slick recommendation: 27/65-18 S5A

Use	Hill climbing
Maximum load	500 DaN
Maximum speed	230 Km/h
Nominal rim	11 (+/- 0,5) J 18
Minimum cold pressure	1.6 Bar
Relay distance	50 Km

29/65-18

Rally recommendation: 29/65-18 SA32 / SA20

Use	Asphalt rally
Maximum load	420 DaN
Maximum speed	220 Km/h
Nominal rim	12 J 18
Minimum cold pressure	Minimum 1,6 - max 1.7 Bar
Relay distance	NA Km

Wet Rally recommendation: 29/65-18 PE00

Use	Asphalt Rally
Maximum load	420 DaN
Maximum speed	220 Km/h
Nominal rim	12 J 18
Minimum cold pressure	1.8 Bar
Relay distance	NA Km

BIMP AIR

RIDE DON'T STOP

PATENTED

88G CO2 REFILLABLE CARTRIDGE

THE HIGHEST CO2 CAPACITY
ON THE MARKET!



INFLATE AND DEFLATE FUNCTIONS



REFILLABLE THROUGH
MICHELIN MOTORSPORT'S DEALERS



EXCHANGE A FULL CARTRIDGE
FOR AN EMPTY ONE

RESULTS

Refill a standard car tyre completely, or
adjust the pressure on all 4 tyres (300g per tyre)

For example:

1.490 bars for 1 205x55x16 tyre
or 0.372 bars for each 1 of 4 tyres

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Motorsport

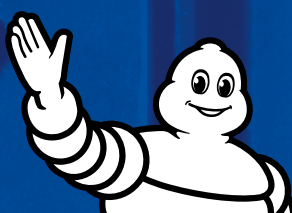


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