



ETRTO

The European Tyre and Rim
Technical Organisation

In coordination with



Tyres and abrasion

Validation, Correlation and Alignment plan

Contents

- **Target of the plan**
 - Objective
 - Test method concept
- **Test plan description**
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Target of the plan

- **Validation**

- Measure the stability of the method in the ranking of candidate .vs. parameters variation:
 - Temperature variation,
 - Vehicle model variation,
 - Driving style variation,
 - Circuit variation.

- **Correlation**

- Compare 2 different methods measuring tyre abrasion rate,
- Make sure both (or more) methods will deliver at least the same ranking and scale of performance for tyre population in the scope of the test

- **Alignment**

- Compare different test facilities applying the same method to make sure they rank the tested tyres

Description of the plan

- 4 repetitions 11 tyres
- Repetitions will be run at different period, different temperatures, different circuits...

es	Circu	Rep	T range	T°	Veh1	T1 desc	Veh2	T2 desc	Veh3	T3 desc	Veh4	T4 desc	kM tota
11	Dekra	1	low	7~16	small 1	155/65R14 75 SL P1	medium1	205/55R16 94 XL P3	medium 1	205/55R16 91 SL P3	medium 1	225/45R17 94 XL ADV	32 0
21	IFV	1	low	0~7	small 1	155/65R14 75 SL P2	medium 1	205/55R16 91 SL P7	big 1	235/55R19 101 SL P10	medium 1	225/45R17 94 XL GWF2	32 0
31	Dekra	1	low	7~16	big 1	235/55R19 101 SL P8	big 1	235/60R18 101 SL P11			medium 1	225/45R17 94 XL ADV	24 0
41	Dekra	1	low	7~16	medium 1	205/55R16 94 XL P5	medium 1	205/55R16 94 XL P6	big 1	235/55R19 101 SL P9	medium 1	225/45R17 94 XL ADV	32 0
12	IFV	2	medium 1	17~26	small 1	155/65R14 75 SL P1	medium 1	205/55R16 94 XL P3	medium 1	205/55R16 91 SL P3	medium 1	225/45R17 94 XL ADV	32 0
22	Dekra	2	medium 1	7~16	small 1	155/65R14 75 SL P2	medium 1	205/55R16 91 SL P7	big 1	235/55R19 101 SL P10	medium 1	225/45R17 94 XL GWF2	32 0
32	IFV	2	medium 1	17~26	big 1	235/55R19 101 SL P8	big 1	235/60R18 101 SL P11			medium 1	225/45R17 94 XL ADV	24 0
42	Dekra	2	medium 1	17~26	medium 1	205/55R16 94 XL P5	medium 1	205/55R16 94 XL P6	big 1	235/55R19 101 SL P9	medium 1	225/45R17 94 XL ADV	32 0
13	Dekra	3	medium 2	17~26	small 2	155/65R14 75 SL P1	medium 2	205/55R16 94 XL P3	medium 2	205/55R16 91 SL P3	medium 1	225/45R17 94 XL ADV	32 0
23	IFV	3	medium 2	7~16	small 2	155/65R14 75 SL P2	medium 2	205/55R16 91 SL P7	big 2	235/55R19 101 SL P10	medium 1	225/45R17 94 XL GWF2	32 0
33	Dekra	3	medium 2	17~26	big 2	235/55R19 101 SL P8	big 2	235/60R18 101 SL P11			medium 1	225/45R17 94 XL ADV	24 0
43	IFV	3	medium 2	17~26	medium 2	205/55R16 94 XL P5	medium 2	205/55R16 94 XL P6	big 2	235/55R19 101 SL P9	medium 1	225/45R17 94 XL ADV	32 0
14	Dekra	4	high	26~35	small 2	155/65R14 75 SL P1	medium 2	205/55R16 94 XL P3	medium 2	205/55R16 91 SL P3	medium 1	225/45R17 94 XL ADV	32 0
24	IFV	4	high	13~20	small 2	155/65R14 75 SL P2	medium 2	205/55R16 91 SL P7	big 2	235/55R19 101 SL P10	medium 1	225/45R17 94 XL GWF2	32 0
34	Dekra	4	high	26~35	big 2	235/55R19 101 SL P8	big 2	235/60R18 101 SL P11			medium 1	225/45R17 94 XL ADV	24 0
44	Dekra	4	high	26~35	medium 2	205/55R16 94 XL P5	medium 2	205/55R16 94 XL P6	big 2	235/55R19 101 SL P9	medium 1	225/45R17 94 XL ADV	32 0
total	2	4	3	4	6	11	4	11	4	11	1	2	480 0



Tyres included in the plan

- **List has been established by Tyre Industry organizations (ETRTO, JATMA, TC19, USTMA)**
 - Sizes selection: representing market possibilities for diameter, vehicle categories,
 - Pattern selection: representing regulatory clusters and pattern design styles
 - Different zones of design and production (America, China, Europe)
- **Companies supplying tyres for the test plan:**

Brand
Bridgestone
Continental
Goodyear
Maxxis
Michelin
Sailun
Vredestein
Yokohama

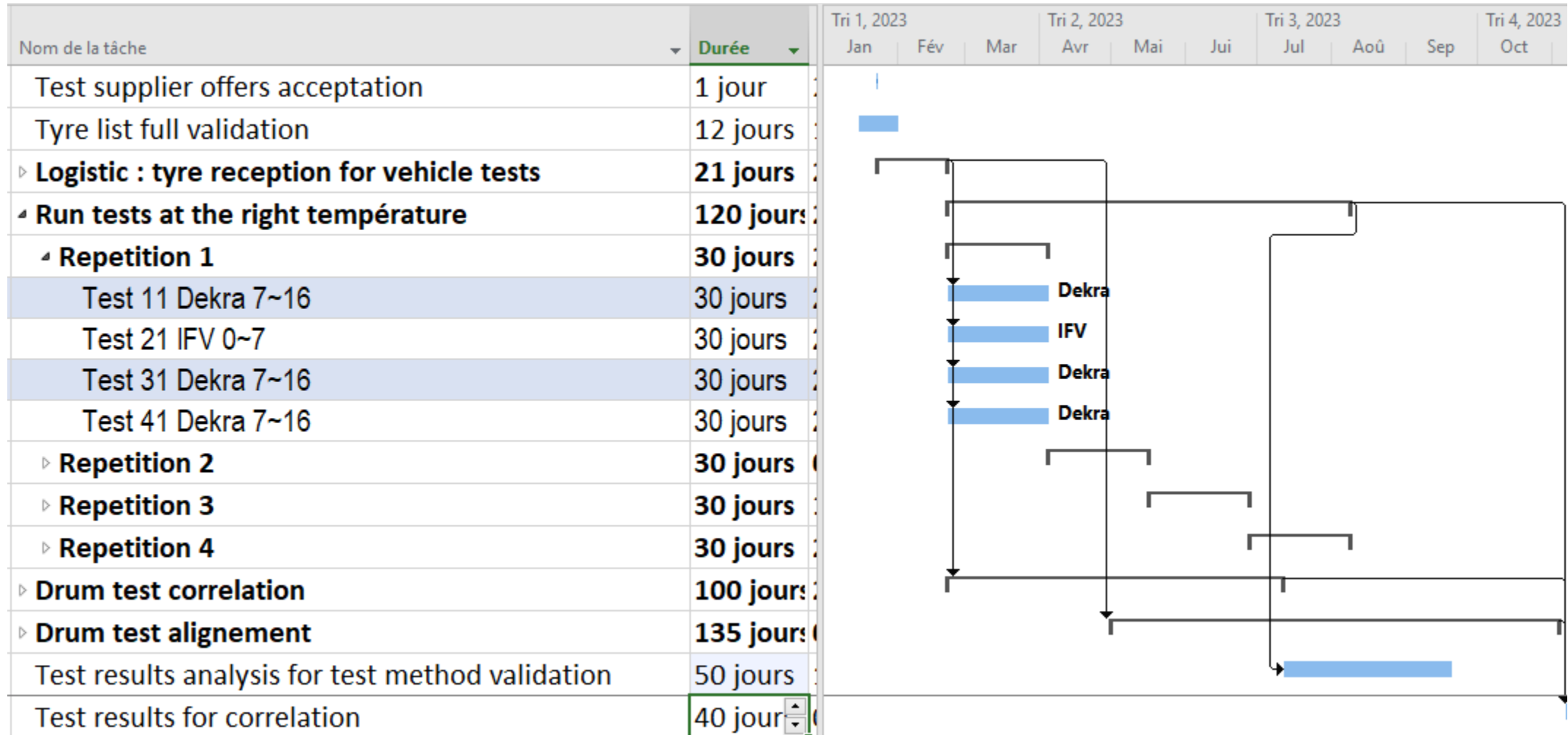
Tyres included in the plan

- Cover market diameters
- Cover regulatory segment (Normal, M+S, 3PMSF, Normal/Extra load)
- Cover vehicle segments

Pattern #	TSD	Design Diameter	LI/SS	SS	rim	car segment	DOT mark?	category <i>Normal, M+S, 3PMSF</i>	load	abrasion rate expectation*	Current tyre number	Correlation vehicle	Correlation Drum	Alignment Drum 1/2/?	Alignment Veh 1/2/3	Other alignments (UTAC, EDAG...)
1	155/65R14	557	75	H	5	Small		Normal	SL	low abrasion	99	20	8	6	45	20
2	155/65R14	557	75	T	5	Small		3PMSF	SL	low abrasion	99	20	8	6	45	20
3	205/55R16	632	94	V	6,5	Medium		Normal	XL	high abrasion	99	20	8	6	45	20
4	205/55R16	632	91	V	6,5	Medium		Normal	SL	high abrasion	99	20	8	6	45	20
5	205/55R16	632	91	V	6,5	Medium		M+S	SL	low abrasion	99	20	8	6	45	20
6	205/55R16	632	91	V	6,5	Medium		M+S	SL	high abrasion	99	20	8	6	45	20
7	205/55R16	632	91		6,5	Medium		3PMSF	SL	high abrasion	99	20	8	6	45	20
8	235/55R19	741	101	Y	7,5	SUV		Normal	SL	low abrasion	99	20	8	6	45	20
9	235/55R19	741	105	V	7,5	SUV		M+S	XL	low abrasion	99	20	8	6	45	20
10	235/55R19	741	105	H	7,5	SUV		3PMSF	XL	high abrasion	99	20	8	6	45	20
11	235/60R18	739	101	H	7,5	SUV		Special Use*	SL	high abrasion	99	20	8	6	45	20
Ref S	225/45R17	634	94	V	7,5	Medium	Possible	Normal	XL	Reference	113	60	8		45	
Ref W	225/45R17	634	94	H	7,5	Medium	Possible	3PMSF	XL	Reference	73	20	8		45	
Ref 16"	225/60R16	676	97	S	7,5	Medium	Yes	Normal	SL	Reference			88	30		



Schedule



- Validation of test method in September should allow to have a GRBP Working Doc in 2024

Next steps

- **The method is ready to use**
- **The plan is to validate the method(s) in 2023 September**
- **A Working Document describing the test method(s) could then be available beginning of 2024**

- **Next step: Market assessment**



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Many thanks for your attention