



TEST REPORT

TESTCENTRE



Statement regarding the comparison of different tyres regarding:

- resistance against aquaplaning,
- brakeperformance on wet asphalt surface ABS system engaged,
- brakeperformance on dry asphalt surface ABS system engaged,
- steering performance on a wet circle

Test conducted by order of :

Interstate Europe B.V.
 Marconiweg 9-11
 2627 BA Delft
 The Netherlands

Tested tyre/rim combinations:

1	Tyre	Interstate Sport IXT-1
	Size	205/55 ZR 16 91W
	Rimsize	6,5J x 16
2	Tyre	Dunlop Sportmaxx
	Size	205/55 ZR 16 91W
	Rimsize	6,5J x 16
3	Tyre	Pirelli P6000
	Size	205/55 R 16 91W
	Rimsize	6,5J x 16
4	Tyre	Bridgestone Turanza ER 300
	Size	205/55 R16 91V
	Rimsize	6,5J x 16

Test date(s) : 11/17/19-07-2006

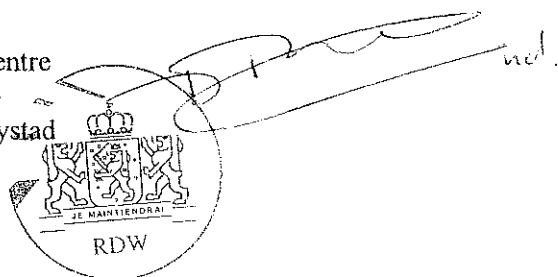
By : G. Boukes *WB*

Agreed : Technical specialist tests,

Lelystad, 20 July, 2006
 Head Test Centre,

lad
[Signature]

Testcourse|Centre
 Talingweg 76
 8218 NX Lelystad



Introduction :

Aquaplaning test.

The test tyres are mounted on the front axle. Wheelspeed sensors on the front axle and a vehicle speed sensor are mounted.

There is a constant waterheight in the aquaplaning trough. (± 12 mm).

The car is driven with one side through the aquaplaning trough and as soon as the car enters the trough the driver gives full throttle to accelerate (always at the same starting point). When the wheel in the trough is loosing contact with the road surface the wheel speed is increased due to the engine torque for accelerating with the vehicle. At the moment that there is a difference of more than 10% in wheelspeed of the left and the right tyre there is a triggering signal introduced.

The test is performed with a car with driven front axle.

The position of the car during the test was with the right wheels through the concrete aquaplaning trough and with the left wheels on wet asphalt.

Brakeperformance on a wet or dry surface (with ABS)

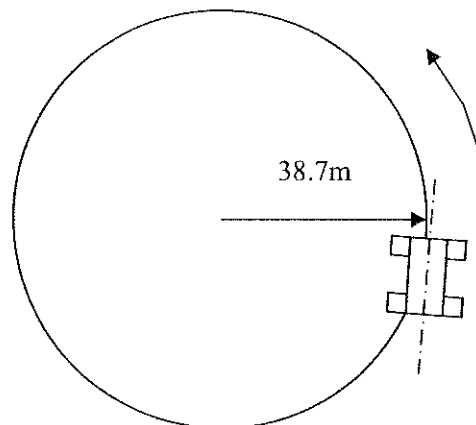
All four wheels are braked, with the ABS system connected. Measured is the mean deceleration and the brake distance in the window between 80 and 20 km/h. This procedure is based upon the ISO/DIS 23671.

Wet steering test on wet asphalt

During this test we measured the actual lateral acceleration by means of DGPS.

The circle was driven anti-clockwise.

Dimensions of the circle:



Dimension of wet circle test

Date: 11-07-2006

Initial: *WAS*

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ANNEX: 2

Aquaplaning test

Make of car : Volkswagen	Type of car : Golf type IV
Chassisno. : WVWZZZ1JZ3W381664	Cat. : M1
Roadsurface : Concrete	Place : Lelystad
Weather conditions : Dry	Winddirection : WSW
Barometric pressure : 1021 mBar	Temperature : 20,6 °C
Humidity : 91,4 %	Windforce : 2 m/sec
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 843 kg
Axle 2 : / kg	Axle 2 : 611 kg
Total : / kg	Total : 1454 kg

Make of tyre : Interstate	Type of tyre : Sport IXT-1		
Tyre size : 205/55 ZR 16 91W			
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 1,9 Bar		
	Vstart (km/h)	V at point where aquaplaning starts (km/h)	Diagrammo.
1	66,1	69,3	003
2	66,8	69,1	004
3	65,8	69,0	005
4	66,5	69,7	006
Make of tyre : Dunlop	Type of tyre : Sportmaxx		
Tyre size : 205/55 ZR 16 91 W			
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 1,9 Bar		
	Vstart (km/h)	V at point where aquaplaning starts (km/h)	Diagrammo.
1	69,9	74,7	003
2	69,1	73,9	005
3	69,6	75,1	006
4	68,9	75,0	007

Remarks: -Average waterheight during all aquaplaningtests: 12 mm
 -Tyre pressure according vehicle specifications

Date: 11-07-2006

Initial: *WLB*

RDW TESTCENTRE

ANNEX: 3

Aquaplaning test

Make of car : Volkswagen	Type of car : Golf type IV
Chassisno. : WVWZZZ1JZ3W381664	Cat. : M1
Roadsurface : Concrete	Place : Lelystad
Weather conditions : Dry	Winddirection : WSW
Barometric pressure : 1021 mBar	Temperature : 20,6 °C
Humidity : 91,4 %	Windforce : 2 m/sec
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : kg	Axle 1 : 843 kg
Axle 2 : kg	Axle 2 : 611 kg
Total : kg	Total : 1454 kg

Make of tyre : Pirelli	Type of tyre : P6000	
Tyre size : 205/55 R 16 91W		
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 1,9 Bar	
Vstart (km/h)	V at point where aquaplaning starts (km/h)	Diagrammo.
1 67,4	69,6	001
2 66,5	70,0	2.16.001
3 67,4	71,0	2.16.002
4 67,4	69,7	2.16.003
Make of tyre : Bridgestone	Type of tyre : Turanza ER 300	
Tyre size : 205/55 R 16 91 V		
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 1,9 Bar	
Vstart (km/h)	V at point where aquaplaning starts (km/h)	Diagrammo.
1 67,3	74,2	001
2 67,6	73,5	002
3 67,6	73,9	003
4 67,8	73,5	004

Remarks: -Average waterheight during all aquaplaningtests: 12 mm
 -Tyre pressure according vehicle specifications

Date: 11-07-2006

Initial: *WAB*

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ANNEX: 4

Steering performance test on wet circle

Make of car : SEAT	Type of car : IBIZA 1.9 SDI
Chassisno. : VSSZZZ6LZ5R017835	Cat. : M1
Roadsurface : wet asphalt	Place : Lelystad
Weather conditions : dry	
Barometric pressure : 1019 mBar	Temperature : 34,6 °C
Humidity : 32,0 %	Windforce : 3 m/sec
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 764 kg
Axle 2 : / kg	Axle 2 : 445 kg
Total : / kg	Total : 1209 kg
Make of tyre : Interstate	Type of tyre : Sport IXT-1
Tyre size : 205/55 ZR 16 91W	
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 2,3 Bar
Lateral acceleration (g)	
0,90	
0,90	
0,90	
Diagramno	
INT16 001	
INT16 002	
INT16 003	
Make of tyre : Dunlop	Type of tyre : Sportmaxx
Tyre size : 205/55 ZR 16 91 W	
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 2,3 Bar
Lateral acceleration (g)	
0,84	
0,86	
0,86	
Diagramno	
DUN16 001	
DUN16 003	
DUN16 004	
Make of tyre : Pirelli	Type of tyre : P6000
Tyre size : 205/55 R 16 91W	
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 2,3 Bar
Lateral acceleration (g)	
0,86	
0,85	
0,87	
Diagramno	
PIR16 003	
PIR16 004	
PIR16 005	
Make of tyre : Bridgestone	Type of tyre : Turanza ER 300
Tyre size : 205/55 R 16 91 V	
Tyrepressure front axle : 2,1 Bar	Tyrepressure rear axle : 2,3 Bar
Lateral acceleration (g)	
0,90	
0,90	
0,88	
Diagramno	
BRID16 002	
BRID16 003	
BRID16 004	

Remark: tyre pressure during test according vehicle specifications

Date: 19-07-2006

Initial: *LB*

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Brakeperformance on wet and dry asphalt

ANNEX: 5

Make of car : SEAT	Type of car : IBIZA 1.9 SDI
Chassisno. : VSSZZZ6LZ5R017835	Cat. : M1
Roadsurface : asphalt	Place : Lelystad
Weather conditions : Dry	Winddirection : ESE
Barometric pressure : 1027 mBar	Temperature : 25,1 °C
Humidity : 47,0 %	Windforce : 3 m/sec
Make of tyre : Interstate	Type of tyre : Sport IXT-1
Tyre size : 205/55 ZR 16 91 W	
Tyrepressure front axle : 2,2 Bar	Tyrepressure rear axle : 2,2 Bar
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 764 kg
Axle 2 : / kg	Axle 2 : 445 kg
	Total : 1209 kg

with ABS on wet Asphalt


	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	84,6	9,65	24,00	2 I
2	85,7	9,65	24,00	3 I
3	85,1	9,97	23,22	4 I
4	85,7	9,80	23,63	5 I
5	86,0	9,83	23,54	6 I
6	83,4	9,84	23,53	7 I
7				
8				
9				
10				

with ABS on dry Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	85,4	10,39	22,28	9 I
2	85,6	10,03	23,07	10 I
3	84,7	10,33	22,80	11 I
4	84,5	10,11	22,90	12 I
5	85,3	10,58	21,89	13 I
6	85,2	10,41	22,25	14 I
7				
8				
9				
10				

Remarks: Tyre pressure according the ISO/DIS 23671

Date: 17-07-2006

Initial: 

RDW TESTCENTRE
Brakeperformance on wet and dry asphalt

ANNEX: 6

Make of car : SEAT	Type of car : IBIZA 1.9 SDI
Chassisno. : VSSZZZ6LZ5R017835	Cat. : M1
Roadsurface : asphalt	Place : Lelystad
Weather conditions : Dry	Winddirection : ESE
Barometric pressure : 1027 mBar	Temperature : 25,1 °C
Humidity : 47,0 %	Windforce : 3 m/sec
Make of tyre : Dunlop	Type of tyre : Sportmaxx
Tyre size : 205/55 ZR 16 91W	
Tyrepressure front axle : 2,2 Bar	Tyrepressure rear axle : 2,2 Bar
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 764 kg
Axle 2 : / kg	Axle 2 : 445 kg
	Total : 1209 kg

with ABS on wet Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	84,4	9,54	24,27	2 D
2	84,1	9,49	24,39	3 D
3	84,5	9,68	23,92	4 D
4	84,0	9,62	24,06	5 D
5	83,9	9,67	23,94	6 D
6	84,1	9,59	24,15	7 D
7				
8				
9				
10				

with ABS on dry Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	84,9	9,58	24,17	9 D
2	84,7	9,84	23,53	10 D
3	85,3	10,12	22,87	11 D
4	83,2	10,10	22,93	12 D
5	84,4	9,93	23,31	13 D
6	84,9	9,90	23,37	14 D
7				
8				
9				
10				

Remarks: Tyre pressure according the ISO/DIS 23671

Date: 17-07-2006

Initial: *WR*

RDW TESTCENTRE
Brakeperformance on wet and dry asphalt

ANNEX: 7

Make of car : SEAT	Type of car : IBIZA 1.9 SDI
Chassisno. : VSSZZZ6LZ5R017835	Cat. : M1
Roadsurface : asphalt	Place : Lelystad
Weather conditions : Dry	Winddirection : ENE
Barometric pressure : 1026 mBar	Temperature : 28,8 °C
Humidity : 35,6 %	Windforce : 3 m/sec
Make of tyre : Pirelli	Type of tyre : P6000
Tyre size : 205/55 R 16 91W	
Tyrepressure front axle : 2,2 Bar	Tyrepressure rear axle : 2,2 Bar
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 764 kg
Axle 2 : / kg	Axle 2 : 445 kg
	Total : 1209 kg

with ABS on wet Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	83,0	9,26	25,00	2 P
2	84,5	9,19	25,19	3 P
3	84,7	9,13	25,35	4 P
4	84,1	9,14	25,34	5 P
5	83,1	9,25	25,02	6 P
6	84,5	9,13	25,36	7 P
7	84,2	9,31	24,86	8 P
8				
9				
10				

with ABS on dry Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	84,9	9,79	23,65	10 P
2	85,3	9,94	23,28	11 P
3	85,7	10,08	22,97	12 P
4	84,7	10,00	23,16	13 P
5	85,4	9,99	23,18	14 P
6	85,2	9,92	23,32	15 P
7	84,8	10,07	22,99	16 P
8				
9				
10				

Remarks: Tyre pressure according the ISO/DIS 23671

Date: 17-07-2006

Initial: *VB*

RDW TESTCENTRE

ANNEX: 8

Brakeperformance on wet and dry asphalt

Make of car : SEAT	Type of car : IBIZA 1.9 SDI
Chassisno. : VSSZZZ6LZ5R017835	Cat. : M1
Roadsurface : asphalt	Place : Lelystad
Weather conditions : Dry	Winddirection : ENE
Barometric pressure : 1026 mBar	Temperature : 28,8 °C
Humidity : 35,6 %	Windforce : 3 m/sec
Make of tyre : Bridgestone	Type of tyre : Turanza ER 300
Tyre size : 205/55 R16 91V	
Tyrepressure front axle : 2,2 Bar	Tyrepressure rear axle : 2,2 Bar
Weights (Mass)	
laden (incl. pers.)	unladen (incl. 1 pers.)
Axle 1 : / kg	Axle 1 : 764 kg
Axle 2 : / kg	Axle 2 : 445 kg
	Total : 1209 kg

with ABS on wet Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	83,8	9,52	24,32	2 B
2	83,8	9,62	24,06	3 B
3	84,7	9,90	23,39	4 B
4	83,9	9,88	23,44	5 B
5	84,0	9,86	23,47	6 B
6	83,7	9,72	23,82	7 B
7	84,6	9,80	23,61	8 B
8				
9				
10				

with ABS on dry Asphalt

	Vstart [km/h]	MFDD 80-20 km/h [m/s ²]	s 80-20km/h [m]	Diagram no.
1	85,4	9,86	23,49	10 B
2	85,5	9,81	23,60	11 B
3	85,6	10,11	22,89	12 B
4	84,9	10,02	23,09	13 B
5	84,9	10,10	22,92	14 B
6	84,4	9,86	23,48	15 B
7	83,9	9,91	23,36	16 B
8				
9				
10				

Remarks: Tyre pressure according the ISO/DIS 23671

Date: 17-07-2006


Initial: *MB*

USED TESTEQUIPMENT		order nr. : VR123223
Description	Registration number	
Scale	OPS 07	
Pressure meter		
Speed measuring equipment	GPS 03 / 01 VIJF 46	
Deceleration meter		
Pedalforce meter	PKM 03	
Temperature meter	TEM 43	
Tirepressure meter	MAN 86	
Force measurement equipment		
Dynometer		
Time measure testequipment		
Angle meter		
Reactiontime measure testequipment		
Engine rev. Meter		
Braketest bench		
Hydr. parkingbrake pull equipment		
Recorder(s)		
Noise measure testequipment		
Torque measurement equipment		
Dynamic fatigue testequipment		
Length measurement equipment		
Amplifier		
Filter		
Extra		
Abs equipment		

Remarks:

date: 11,17,19-07-2006

Wp5101a.r01/1:1/e

Initial: 

foto's van de banden van rapport RDW-SPE-0610



Interstate



Dunlop



Pirelli



Bridgestone