



Automotive

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TÜV SÜD AUTOMOTIVE

TIRE TEST - 2010

DIMENSION 195/65 R15 91H

CUSTOMER: ZHONGCE





REPORT No.: 76243921

TEST CRITERIA:

WET HANDLING

DRY HANDLING

TIRE IDENTIFICATION TABLE

TÜV-CODE	POSITION	DOT-CODE	BRAND	COMMERCIAL NAME	PRODUCTION COUNTRY	SIZE DESIGNATION	TREAD AND SIDEWALL INFORMATION	E / e - APPROVAL-NO.	UTQG-MARKING	SYMMETRY*	DIRECTIONALITY**	TREAD PROFILE
B1-H H-1P	FL	JUHDDBJ 2510	Goodride	RADIAL SP06+	China	195/65 R15 91H M+S	TR: 1 Polyester 2 Steel 2 Nylon SW: 1 Polyester	E4: 0237644	TW: 500 TR: A TEMP: A	A	N	
	FR	JUHDDBJ 2510										
	RL	JUHDDBJ 2510										
	RR	JUHDDBJ 2510										
	SPARE	JUHDDBJ 2510										
B2-H H-2P	FL	JUHD DCJ 1410	Goodride	RADIAL SP06+	China	195/65 R15 91H M+S	TR: 2 Polyester 2 Steel 1 Nylon SW: 2 Polyester	E4: 0234752	TW: 500 TR: A TEMP: A	A	N	
	FR	JUHD DCJ 1410										
	RL	JUHD DCJ 1410										
	RR	JUHD DCJ 1410										
	SPARE	JUHD DCJ 1410										
B3-H L-1P	FL	JUHDDBJ 2510	Goodride	RADIAL SP06+	China	195/65 R15 91H M+S	TR: 1 Polyester 2 Steel 2 Nylon SW: 1 Polyester	E4: 0237644	TW: 500 TR: A TEMP: A	A	N	
	FR	JUHDDBJ 2510										
	RL	JUHDDBJ 2510										
	RR	JUHDDBJ 2510										
	ROWI	JUHDDBJ 2510										
B4-H L-2P	FL	JUHDDCJ 2510	Goodride	RADIAL SP06+	China	195/65 R15 91H M+S	TR: 2 Polyester 2 Steel 1 Nylon SW: 2 Polyester	E4: 0234752	TW: 500 TR: A TEMP: A	A	N	
	FR	JUHDDCJ 2510										
	RL	JUHDDCJ 2510										
	RR	JUHDDCJ 2510										
	ROWI	JUHDDCJ 2510										

*) S: symmetric A: asymmetric **) U: unidirectional N: non-directional

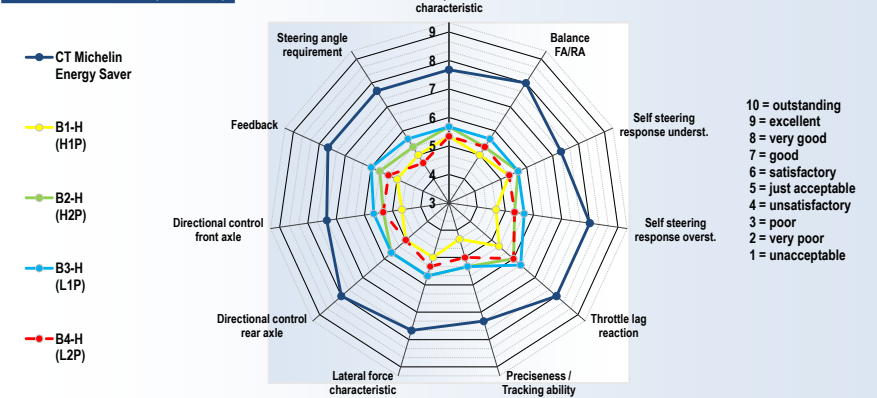
DATASHEET: WET HANDLING

WET HANDLING

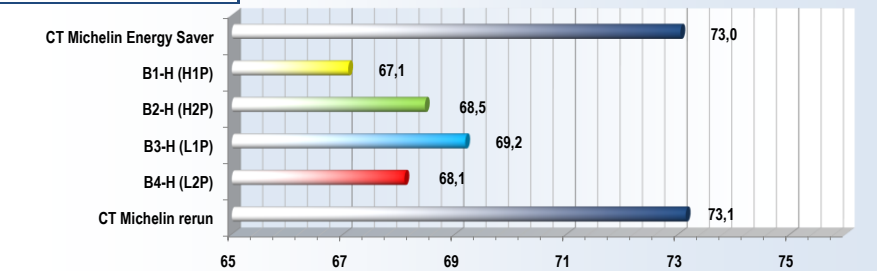
Date:	21-Sep-10	Air Temperature [°C]:	min: 12.0 max: 13.5	Surface Condition:	wet handling , clockwise	Tire Inflation [bar]:	FA: 2.2 RA: 2.2	Test Vehicle:	Golf V 1.9 TDI
Test Location:	OEAMTC Wachauring (A)	Surface Temperature [°C]:	min: 14.0 max: 16.9	Weather Condition:	sunny	Driver:	Stauder	Track Length [m]:	1050

	CT Michelin Energy Saver					B1-H (H1P)			B2-H (H2P)			B3-H (L1P)			B4-H (L2P)			CT Michelin Energy Saver rerun																	
Response characteristic	8-	slow	med.	direct	sharp	5+	slow	med.	direct	sharp	6-	slow	med.	direct	sharp	6-	slow	med.	direct	sharp	5+	slow	med.	direct	sharp	-	slow	med.	direct	sharp					
Steering angle requirement	8-					5					5+					6-					6-					5+					-				
Feedback	8-					5					6-					6-					5+					-					-				
Directional control front axle	7+					5-					5+					6-					6-					5+					-				
Directional control rear axle	8					5					6-					6-					6-					5					-				
Lateral force characteristic	8-					5					6-					6-					6-					5+					-				
Preciseness /Tracking ability	7+					4+					5+					5+					5+					5					-				
Throttle lag reaction	8	none	slight	med.	strong	5+	none	slight	med.	strong	6	none	slight	med.	strong	6+	none	slight	med.	strong	6	none	slight	med.	strong	6	none	slight	med.	strong	-	none	slight	med.	strong
Self steering response overst.	8	none	slight	med.	strong	5-	none	slight	med.	strong	5+	none	slight	med.	strong	6-	none	slight	med.	strong	6-	none	slight	med.	strong	5+	none	slight	med.	strong	-	none	slight	med.	strong
Self steering response underst.	7+	none	slight	med.	strong	5+	none	slight	med.	strong	6-	none	slight	med.	strong	6-	none	slight	med.	strong	6-	none	slight	med.	strong	5+	none	slight	med.	strong	-	none	slight	med.	strong
Balance FA/RA	8					5					5+					6-					6-					5+					-				
Average rating (out of 10)	7,70					4,97					5,55					5,73					5,27					-					-				
Rating compared to Michelin[%]	100,0%					64,6%					72,0%					74,4%					68,5%					-					-				
Lap 1 [mm:ss.ss]	51,80					56,28					55,18					54,70					55,47					51,77					-				
Lap 2 [mm:ss.ss]	51,77					56,41					55,14					54,61					55,52					51,59					-				
Lap 3 [mm:ss.ss]	51,70					56,35					55,33					54,61					55,55					51,71					-				
Average Lap Time [mm:s.ss]	51,76					56,35					55,22					54,64					55,51					51,69					-				
Resulting Speed [kph]	73,0					67,1					68,5					69,2					68,1					73,1					-				
Reference Value [kph]	73,03					73,05					73,06					73,09					73,11					73,13					-				
Speed compared to Michelin [%]	100,0%					91,8%					93,7%					94,6%					93,1%					100,0%					-				
Overall Result compared to Michelin [%] (Rating:Speed = 1:2)	100,0%					82,7%					86,5%					87,9%					84,9%					-					-				

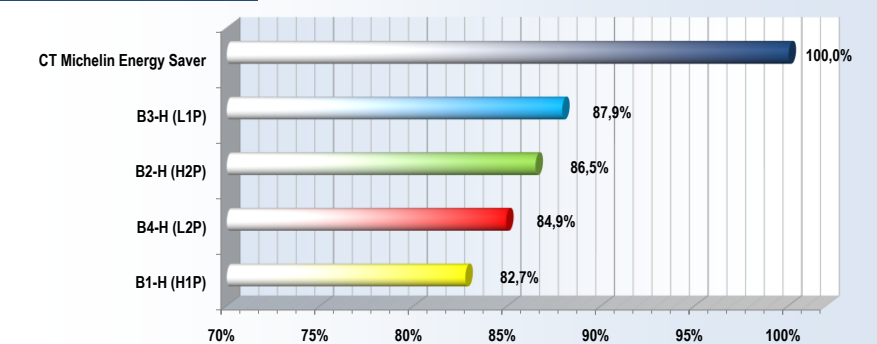
WET HANDLING RATINGS (INDIVIDUAL)



WET HANDLING, AVERAGE SPEED [KM/H]



WET HANDLING TOTAL PERFORMANCE [%]



COMMENTS: WET HANDLING
COMMENTS ON WET HANDLING

CT Michelin Energy Saver	<p>constantly a good feedback requiring relatively small steering angles. Very good balance, rear axle always stable. Slightly stronger understeering in sharp curves and slight deficits in preciseness passing s-curves.</p>
B1-H (H1P)	<p>the overall impression is inharmonious. Relatively large steering angles but barely acceptable. Throttle lag reactions are hard and are coming up very delayed. Permanent changes between oversteering and understeering are demanding many corrections. Overall the level of directional control is too low, resulting in insufficient safety reserves. The progressive lateral force characteristic makes it more difficult to drive precisely.</p>
B2-H (H2P)	<p>Compared to B1, the throttle lag reaction is less intense but slightly delayed. The lateral force characteristic is a little bit better balanced giving a better feedback around steering angle zero. Overall the direction control is on a too low level. In comparison to 1, the demand of correction is lower. The significant understeering and nervous rear axle are decreasing the tracking ability.</p>
B3-H (L1P)	<p>The response characteristic is almost similar to B1 with a slightly more harmonically the lateral force characteristic. This tire offers a slightly better feedback and a similar steering angle requirement as B2. The balance is slightly better. The rear axle pushes constantly and requires more attention of the driver, but demands less corrections in comparison to B1 and B2. In total the directional control is better but still too low. The level of feedback is also too low.</p>
B4-H (L2P)	<p>This tire leaves nearly the same unbalanced overall impression as B1, but the lateral force built-up is better. The center point is badly defined and the response characteristic is slightly less progressive. The rear axle is extremely nervous, the vehicle changes permanently between understeering and oversteering what results in a bad tracking ability. Throttle lag reaction is less critical and less delayed than B1-B3. The feedback is worse than B2 and B3.</p>

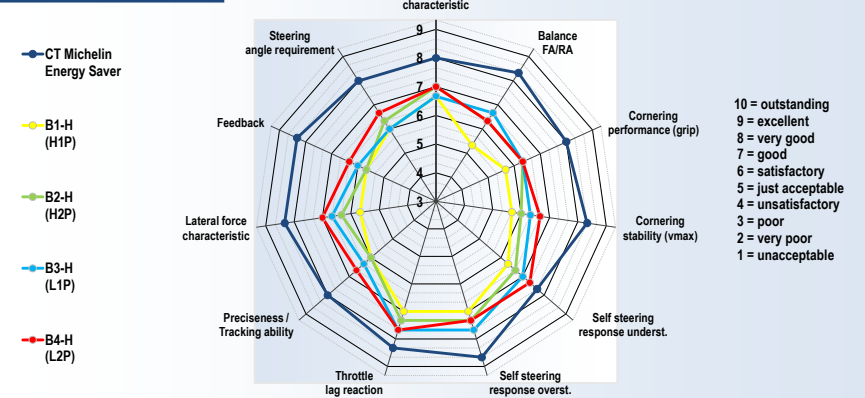
DATASHEET: DRY HANDLING

DRY HANDLING

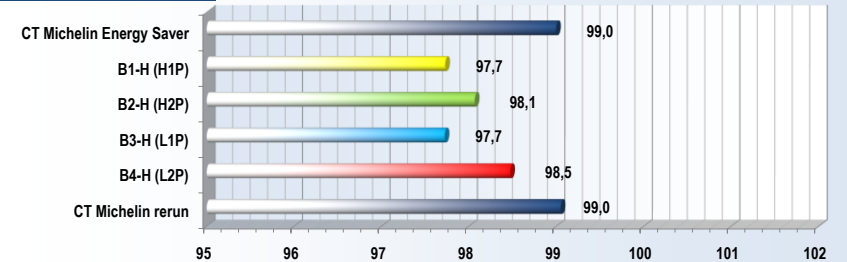
Date:	23-Sep-10	Air Temperature [°C]:	min: 18.0 max: 21.6	Surface Condition:	HAK, clockwise	Tire Inflation [bar]:	FA: 2.2 RA: 2.2	Test Vehicle:	VW Golf V 1.9 TDI
Test Location:	ATP Papenburg (D)	Surface Temperature [°C]:	min: 19.5 max: 25.1	Weather Condition:	sunny	Driver:	Staude	Track Length [m]:	2600

	CT Michelin Energy Saver				B1-H (H1P)				B2-H (H2P)				B3-H (L1P)				B4-H (L2P)				CT Michelin Energy Saver rerun														
	8	slow	med.	direct	sharp	7-	slow	med.	direct	sharp	7	slow	med.	direct	sharp	7-	slow	med.	direct	sharp	7	slow	med.	direct	sharp	-	slow	med.	direct	sharp					
Response characteristic	8	slow	med.	direct	sharp	7-	slow	med.	direct	sharp	7	slow	med.	direct	sharp	7-	slow	med.	direct	sharp	7	slow	med.	direct	sharp	-	slow	med.	direct	sharp	-	slow	med.	direct	sharp
Steering angle requirement	8					6					6+					6					7-					-					-				
Feedback	8+					6-					6-					6					6+					-					-				
Lateral force characteristic	8+					6-					6+					7-					7					-					-				
Preciseness / Tracking ability	8					6					6					6+					7-					-					-				
Throttle lag reaction	8+	none	slight	med.	strong	7	none	slight	med.	strong	7+	none	slight	med.	strong	8-	none	slight	med.	strong	8-	none	slight	med.	strong	8-	none	slight	med.	strong	-	none	slight	med.	strong
Self steering response overst.	9-	none	slight	med.	strong	7	none	slight	med.	strong	7+	none	slight	med.	strong	8-	none	slight	med.	strong	7+	none	slight	med.	strong	7+	none	slight	med.	strong	-	none	slight	med.	strong
Self steering response underst.	8-	none	slight	med.	strong	6+	none	slight	med.	strong	7-	none	slight	med.	strong	7	none	slight	med.	strong	7+	none	slight	med.	strong	7+	none	slight	med.	strong	-	none	slight	med.	strong
Cornering stability (vmax)	8+					6-					6					6+					7-					-					-				
Cornering performance (grip)	8					6-					6+					6+					6+					-					-				
Balance FA/RA	8+					5+					6+					7-					6+					-					-				
Average rating (out of 10)	8,18					6,09					6,48					6,67					6,85					-					-				
Rating compared to Michelin [%]	100,0%					74,5%					79,3%					81,5%					83,7%					-					-				
Lap 1 [mm:ss,ss]	01:34,63					01:35,57					01:35,03					01:35,90					01:35,16					01:34,50					01:34,50				
Lap 2 [mm:ss,ss]	01:34,53					01:35,85					01:35,73					01:35,76					01:35,04					01:34,57					01:34,57				
Lap 3 [mm:ss,ss]	01:34,49					01:35,91					01:35,58					01:35,69					01:34,96					01:34,43					01:34,43				
Average lap time [mm:ss,ss]	01:34,55					01:35,78					01:35,45					01:35,78					01:35,05					01:34,50					01:34,50				
Resulting speed [kph]	99,0					97,7					98,1					97,7					98,5					99,0					99,0				
Reference value [kph]	99,00					99,01					99,02					99,03					99,04					99,05					99,05				
Speed compared to Michelin [%]	100,0%					98,7%					99,0%					98,7%					99,4%					100,0%					100,0%				
Overall result compared to Michelin [%] (Rating:Speed = 1:2)	100,0%					90,6%					92,4%					93,0%					94,2%					-					-				

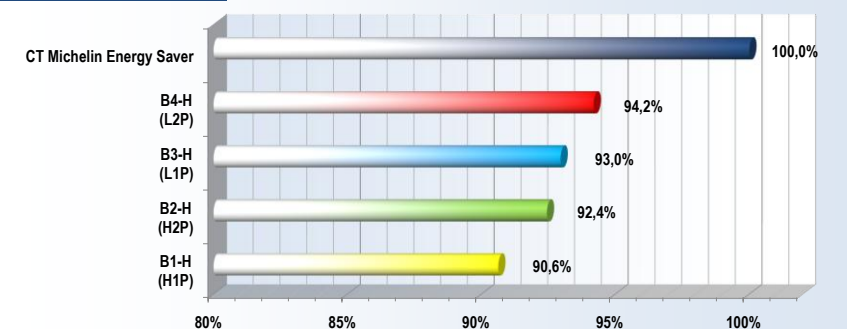
DRY HANDLING RATINGS (INDIVIDUAL)



DRY HANDLING, AVERAGE SPEED [KM/H]



DRY HANDLING TOTAL PERFORMANCE [%]



COMMENTS: DRY HANDLING

COMMENTS ON DRY HANDLING

<p>CT Michelin Energy Saver</p>	<p>The center point is well defined and the tire offers a very harmonious lateral force characteristic. Only small steering angles required, very wide stability limit and very good balance.</p>
<p>B1-H (H1P)</p>	<p>The response characteristic is slightly delayed but still ok. The lateral force characteristic is inharmonious, requiring large steering angles. The undefined feedback causes a relatively bad tracking ability. The stability limit is insufficient and appears with changes between understeering and oversteering. Throttle of lag reaction is clearly noticeable but ok. Poor and undefined feedback.</p>
<p>B2-H (H2P)</p>	<p>Compared to 1, this tire has a quite better response characteristic with an obvious more harmonically lateral force characteristic what leads to a significant improvement of the tracking ability which is just reduced by the comparative poor feedback. The stability limit is easier to handle and better signalized. Throttle lag reaction behaviour is more harmonically than B2, but more intensive than the reference.</p>
<p>B3-H (L1P)</p>	<p>In comparison to B2, the response characteristic is slightly delayed but better than the B1. Again a little improvement of lateral force characteristic offering a slightly better feedback. Compared to the Reference, the feedback performance is still too low. The stability limit signalizes more clearly than B2 and the tire offers a better balance, what gives a little bit more safety reserve. The throttle lag reaction is almost harmonically.</p>
<p>B4-H (L2P)</p>	<p>The response characteristic is similar to B2, but offering a better lateral force characteristic. The feedback performance is ok, tracking ability sufficient and the balance slightly worse than B3. In fast s-turns the rear axle is only able to follow front axle with a delay. In total the stability limit is ok. The lateral force characteristic is still delayed in comparison to reference. The steering feeling more defined than B2.,</p>