



THE NETHERLANDS

COMMUNICATION

Concerning ⁽¹⁾:

- ~~approval granted~~
- approval extended
- ~~approval refused~~
- ~~approval withdrawn~~
- ~~production definitely discontinued~~

of a type of tyre with regard to 'rolling sound emission level' and/or 'adhesion performance on wet surfaces' and/or 'rolling resistance' pursuant to Regulation number 117.

Approval number⁽²⁾: E4*117R02/14*5451*05

Suffix(es)⁽³⁾: S2WR2

- | | | |
|--------|--|---|
| 1. | Manufacturer's name and address | : <u>Double Coin Group (Jiang Su) Tyre Co., Ltd.</u>
<u>No.888 North Yishou Road, Chengbei Street,</u>
<u>226500, Rugao city, Jiangsu Province, China (PRC)</u> |
| 2. | If applicable, name and address of manufacturer's representative | : not applicable |
| 3. | "Tyre class" of the type of tyre | : Class C1 / Class C2 / Class C3 |
| 4. | "Category of use" of the type of tyre | : normal / snow / special |
| 4.1. | Snow tyre for use in severe snow conditions | : yes/ no ⁽¹⁾ |
| 4.1.1. | Ice grip tyre | : yes /no ⁽¹⁾ |
| 4.2. | Traction tyre | : yes /no ⁽¹⁾ |
| 5. | Tyre structure | : diagonal (bias ply) / radial |
| 6. | Type of tyre designation | : |
| 6.1. | Brand name(s)/trademark(s) of the type of tyre | : DOUBLE COIN; <u>Warrior</u> (Brand names) |

- 6.2. Trade description(s)/Commercial name(s) : RT910; WS291(Tread pattern names) of the type of tyre
7. Technical service and, where applicable, test laboratory approved for purposes of approval or of verification of conformity tests : TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität
Schönscheidtstr. 28,
D-45307 Essen
8. Performance(s) approved : sound level at (~~stage 1~~/stage 2)⁽¹⁾, wet adhesion level, rolling resistance level (~~stage 1~~/stage 2)⁽¹⁾
- 8.1. Sound level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 3: 73 dB(A) at reference speed of ~~70~~/80 km/h⁽¹⁾
- 8.2. Wet adhesion level of the representative tyre size, see paragraph 2.7. of this Regulation, as per the test report examples shown in the appendix to Annex 5: 1.14(G) using the vehicle ~~or trailer~~ method⁽¹⁾.
- 8.3. Rolling resistance level of the representative tyre size, see paragraph 2.7. of this Regulation, as per item 7. of the test report in Appendix 1 to Annex 6: 4.10 N/kN.
- 8.4. Snow performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix⁽⁴⁾ to Annex 7: 1.45 (Snow grip index) using the brake on snow method⁽¹⁾, ~~spin traction method⁽¹⁾ or acceleration method⁽¹⁾~~.
- 8.4.1. Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8: --- (Ice grip index) using the brake on ice method⁽¹⁾.
9. Number of report issued by that service : CS117-A0-2013-01131
CS117-B0-2015-02931
CS117-E0-2021-00621
CS117-F0-2023-02703
10. Date of report issued by that service : June 15, 2013;
July 14, 2015;
April 20, 2021
August 31, 2023
11. Reason(s) of extension (if applicable) : trade mark and tread pattern, The previous test data is still valid. Update the manufacturer's name and address, Upgrade the supplement of the regulation
12. Any remarks : the application is based on the provision in 12.12 and 12.13 according ECE R117 supplement 14
13. Place : Zoetermeer
14. Date : 15 September 2023
15. Signature :



T. H. K. Spatz

16. Annexed to this communication are:
- 16.1 A list of documents in the approval file deposited at the Type Approval Authorities having delivered the approval and which can be obtained upon request ⁽³⁾.
- 16.2 A list of tyre size designations: Specify for each brand name/trademark and/or each trade description/commercial name the list of tyre size designations and service descriptions, adding in case of Class C1 tyres whether "reinforced" (or "extra load") or not.

⁽¹⁾ Strike out what does not apply.

⁽²⁾ According to Schedule 4 to Revision 3 of the 1958 Agreement.

⁽³⁾ In the case of "snow tyre for use in severe snow conditions" a test report according to Appendix 2 or Appendix 3, as applicable, to Annex 7 shall be submitted.

⁽⁴⁾ Appendix 2 for C1 and C2 tyres.
Appendix 3 for C3 tyres.



Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 1 of 8

RELATING TO ECE TYPE-APPROVAL FOR A TYPE OF TYRE WITH REGARD TO ROLLING SOUND EMISSIONS AND TO ADHESION ON WET SURFACES AND ROLLING RESISTANCE (ECE Regulation No. 117. 02)

1. GENERAL

- 1.1 The performance characteristics to be assessed for the tyre type : rolling sound level / adhesion performance level on wet surfaces / rolling resistance / Snow performance
- 1.2 Manufacturer's name and address : Double Coin Group (Jiang Su) Tyre Co.,Ltd.
No.888 North Yishou Road
Chengbei Street
226500, Rugao city, Jiangsu Province
China (PRC)
- 1.3 If applicable, name and address of manufacturer's representative : not applicable
:
:
- 1.4 Brand name(s)/trademark(s), trade description(s)/commercial name(s) : Double Coin;Warrior
: RT910;WS291

2. TYRE

- 2.1 Tyre classification (class C1, C2, C3) : ~~Class C1 / Class C2~~ / Class C3
- 2.2 Category of use (normal, snow, special) : ~~normal~~ / snow / ~~special~~
- 2.3 Tyre structure : ~~diagonal~~ / ~~bias belted~~ / radial
- 2.3.1 For Class C1 tyres, state whether :
- 2.3.1.1 Reinforced (or extra load) in case of approval with regard to rolling sound mission level : not applicable
- 2.3.1.2 Whether tyre for use in severe snow conditions or not for stage 2 : not applicable
- 2.3.2 For Class C2 and C3 tyres, state whether:
- 2.3.2.1 M+S marked in case of approval with regard to rolling sound emission level at stage 1 : Yes / ~~No~~
- 2.3.2.2 Traction in case of approval with regard to rolling sound emission level at stage 2. : ~~Yes~~ / No
- 2.3.2.3 Whether tyre for use in severe snow conditions or not for stage 2 : Yes / ~~No~~
- 2.4 A list of tyre designations covered by this application : see attached list of tyre size
- 2.5 Details of major features, with respect to the effects on tyre performance (i.e. rolling emission level or adhesion on wet surfaces, respectively) of the tread pat-tern(s) to be used on the designated range of tyre sizes.
This may be by drawing, photograph or description but must be sufficient to allow the type approval authority or technical service to determine whether any subsequent changes to the major features will adversely affect the tyre performance : see attached drawing of tread pattern

Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 2 of 8

MANUFACTURER'S STAMP



Signature:



.....

Name: ...Xie bin...

THIS APPLICATION IS ACCOMPANIED BY:

- List of tyre size
- Drawing of tread pattern
- The test report

Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 3 of 8

List of tyre size

Brand name(s) or Trade mark(s) : Double Coin ;Warrior

Tread pattern : RT910;WS291

Tyre size	Approval No.	Trademark	Tread pattern	S2	W	R2	Indication	Marking
385/65R22.5 160K	E4-0027021	Double Coin	RT910	73	0.65	7.5	---	M+S/ 
445/45R19.5 160J	E4-0025004	Double Coin	RT910					
435/50R19.5 160J	E4-0025003	Double Coin	RT910					
385/65R22.5 164K	E4-0036389	Double Coin <u>Warrior</u>	RT910 <u>WS291</u>					
385/55R22.5 160K	E4-0041935	Double Coin <u>Warrior</u>	RT910 <u>WS291</u>					

Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 4 of 8

Test size for tyre noise:

Test Size	:	445/45R19.5 160J
Because of	:	Largest section width
		Lowest aspect ratio
		Largest rim diameter

Test size for wet grip:

Test Size	:	445/45R19.5 160J
Because of	:	---
Calculated limit value	:	0.715

Test size for rolling resistance:

Test Size	:	385/65R22.5 160K
Because of	:	Lowest load index.
Calculated limit value	:	---

Test size for snow performance:

Test Size	:	385/65R22.5 160K
Because of	:	---
Calculated limit value	:	1.45

Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 5 of 8

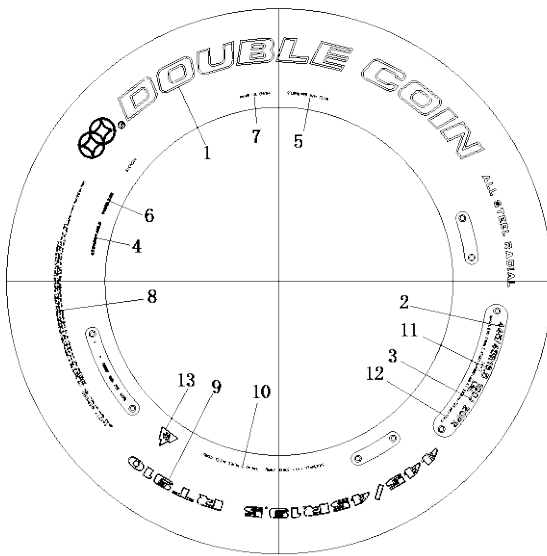
Drawing of the tread pattern (for measured tyre)

Manufacturer name	Double Coin Group (Jiang Su) Tyre Co., Ltd.
Pattern name	Double Coin RT910
Tyre Size	445/45R19.5 160J
Market	EU/US
Marking	M+S
Pitch number	46
Pitch ratio	1
Number of circumferential block like elements on traction tyre	
Void volume [%]	22
Width: main grooves [mm]	16.0/16.5/16.0
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0
Pattern	

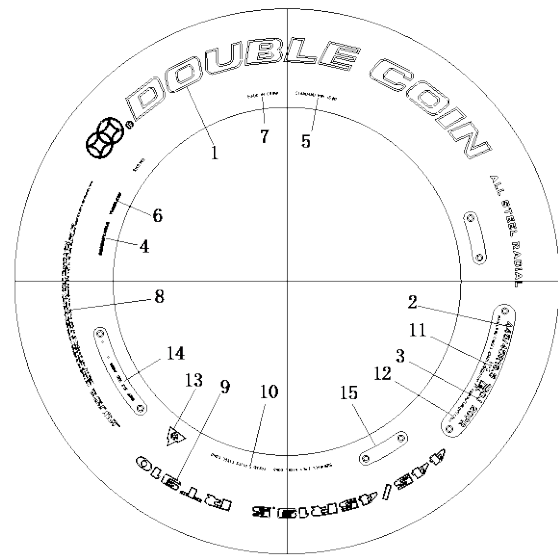


Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 6 of 8



UPPER MOLD



LOWER MOLD

NO.	UPPER MOLD	NO.	LOWER MOLD
1	DOUBLE COIN	1	DOUBLE COIN
2	445/45R19.5	2	445/45R19.5
3	160J	3	160J
4	REGROOVABLE	4	REGROOVABLE
5	STANDARD RIM 15.00	5	STANDARD RIM 15.00
6	TUBELESS	6	TUBELESS
7	MADE IN CHINA/MADE IN THAILAND	7	MADE IN CHINA/MADE IN THAILAND
8	SAFETY WARNING	8	SAFETY WARNING
9	RT910	9	RT910
10	TREAD 5 STEELCORD SIDEWALL 1 STEELCORD	10	TREAD 5 STEELCORD SIDEWALL 1 STEELCORD
11	M+S	11	M+S
12	MAX. LOAD SINGLE 9920LBS AT 135PSI	12	MAX. LOAD SINGLE 9920LBS AT 135PSI
13		13	
		14	DOT **** (WEEK NUMBER)
		15	E4 *****

Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 7 of 8

Drawing of the tread pattern (for measured tyre)

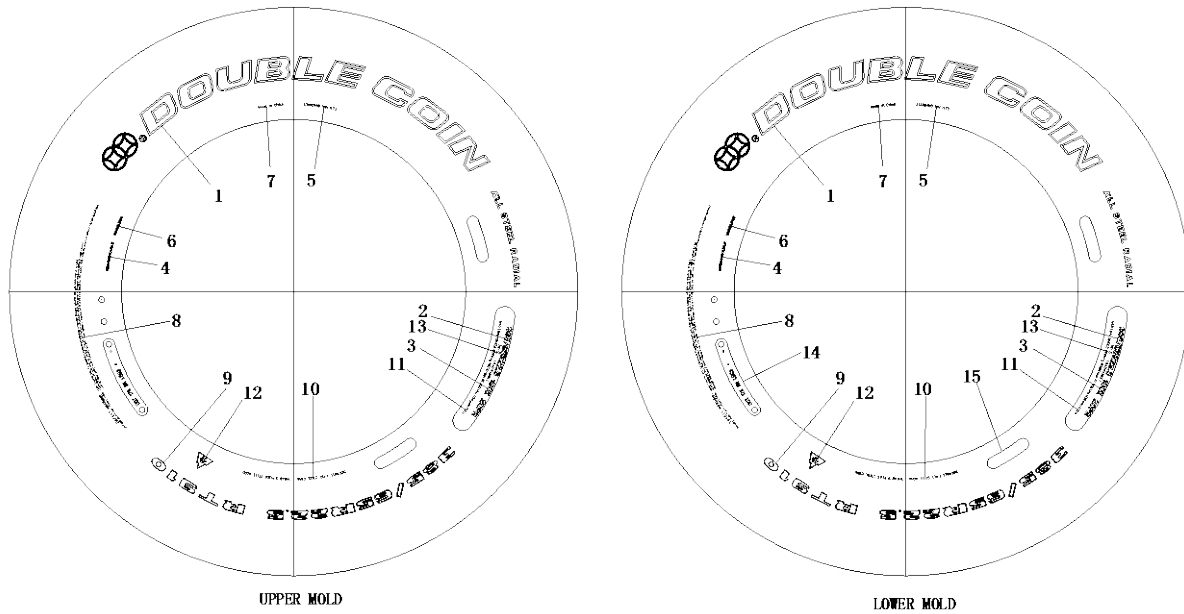
Manufacturer name	Double Coin Group (Jiang Su) Tyre Co., Ltd.
Pattern name	Double Coin RT910
Tyre Size	385/65R22.5 160K
Market	EU/US
Marking	M+S
Pitch number	46
Pitch ratio	1.00
Number of circumferential block like elements on traction tyre	
Void volume [%]	22
Width: main grooves [mm]	16.5
Depth: center groove [mm]	15.0
Depth: shoulder groove [mm]	15.0

Pattern



Double Coin Group (Jiang Su) Tyre Co., Ltd.

Information folder No.: S150003 Page 8 of 8



NO.	UPPER MOLD	NO.	LOWER MOLD
1	DOUBLE COIN	1	DOUBLE COIN
2	385/65R22.5	2	385/65R22.5
3	160K	3	160K
4	REGROOVABLE	4	REGROOVABLE
5	STANDARD RIM 11.75	5	STANDARD RIM 11.75
6	TUBELESS	6	TUBELESS
7	MADE IN CHINA/MADE IN THAILAND	7	MADE IN CHINA/MADE IN THAILAND
8	SAFETY WARNING	8	SAFETY WARNING
9	RT910	9	RT910
10	TREAD 5 STEELCORD SIDEWALL 1 STEELCORD	10	TREAD 5 STEELCORD SIDEWALL 1 STEELCORD
11	MAX. LOAD SINGLE 9920LBS AT 130PSI	11	MAX. LOAD SINGLE 9920LBS AT 130PSI
12		12	
13	M+S	13	M+S
		14	DOT ****(WEEK NUMBER)
		15	Ⓔ4 *****

Type : RT910; WS291

Manufacturer : Double Coin Group (Jiang Su) Tyre Co., Ltd.

Test Report

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

**Uniform Provisions Concerning The Approval Of Types With
Regard To Rolling Sound Emissions And To Adhesion On Wet
Surfaces And Rolling Resistance And Snow Performance**

ECE-R 117

as last amended

Revision 4-Amendment 2

Supplement 14 to the 02 series of amendments

Approval status	
ECE	Number of approval
	E4*117R02/14*5451*05

Test Report
No. :CS117-F0-2023-02703
 ECE Regulation No.117

Type : **RT910; WS291**

Manufacturer : **Double Coin Group (Jiang Su) Tyre Co., Ltd.**

1. Genreal information

1.1. Manufacturer's name and address : Double Coin Group (Jiang Su) Tyre Co., Ltd.
No.888 North Yishou Road, Chengbei Street,
226500, Rugao city, Jiangsu Province, China
(PRC)

1.2. Brand Name(s) or Trade(s) description : DOUBLE COIN; Warrior(Brand names)

RT910; WS291(Tread pattern names)

1.3. Tyre class : C3

1.4. Category of use : snow(M+S&3PMSF)

1.5. Tyre structure : radial

1.6. Worse case : refer to RDW announcement 2018-1

1.7. Sound level according to paras. 4.4. and 4.5. of Annex 3 : 445/45R19.5 160J 73 dB(A)

limit value for list of tyre size(s) : ≤73 dB(A)

1.8. Wet adhesion level of the representative tyre size, see paragraph 2.5. of Regulation No. 117, as per item 7. of the test report in the Appendix to Annex 5 : 445/45R19.5 160J 1.14 (G)

limit value for list of tyre size(s) : ≥0.65*1.1=0.715 (G)

1.9. Rolling resistance coefficient of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.2 and 6.3 of Annex 6 : 385/65R22.5 160K 4.1 N/kN

limit value for list of tyre size(s) : ≤7.5 N/kN

1.10. Traction tyre fulfils the requirement according to paragraph 6.5.1 of Regulation No. 117. : N.A

Test Report
No. :CS117-F0-2023-02703
 ECE Regulation No.117

Type : **RT910; WS291**

Manufacturer : **Double Coin Group (Jiang Su) Tyre Co., Ltd.**

-
- 1.11. Test date
- rolling sound emission : July 14, 2015
- wet grip : July 14, 2015
- rolling resistance : June 15, 2013
- 1.12. Snow grip index of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.4 of Annex 7
- 385/65R22.5 160K 1.45 (SG)
- limit value : $\geq 1.25 + 0.2 = 1.45$
- test date : December 17, 2020
- 1.13. Ice performance level of the representative tyre size, see paragraph 2.7. of Regulation No. 117, as per item 7. of the test report in the appendix 2 to Annex 8
- N.A
- limit value : N.A
- test date : N.A
- 1.14. Final conclusion for all testing : Pass
- Sound level : refer to TÜV NORD test report CS117-B0-2015-02931 corresponding with type approval No. E4-117R-025451 S2WR2 Ext.01
- Wet adhesion level : refer to TÜV NORD test report CS117-B0-2015-02931 corresponding with type approval No. E4-117R-025451 S2WR2 Ext.01
- Rolling resistance coefficient : refer to TÜV NORD test report CS117-A0-2013-01131 corresponding with type approval No. E4-117R-025451 S2R2 Ext.00
- Snow grip level : refer to TÜV NORD test report CS117-E0-2021-00621 corresponding with type approval No. E4-117R-025451-S2WR2 Ext.04
- Ice performance level : N.A
- 1.15. Comments (if any) : trade mark and tread pattern, The previous test data is still valid. Update the manufacturer's name and address, Upgrade the supplement of the regulation

2. Remarks concerning tested object(s) :

All versions of the type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

Type : RT910; WS291

Manufacturer : Double Coin Group (Jiang Su) Tyre Co., Ltd.

3. Appendices

0 List of modifications

Information document no. : S150003

Tyre noise test report : N.A

Wet grip test report : N.A

Rolling resistance test report : N.A

Snow performance test report : N.A

Ice performance test report : N.A

4. Statement of conformity

The type described in this test report and the appendices attached are in compliance with the Test Specification mentioned above.

The samples / test vehicles used were representative in terms of the type to be approved.

The Test Report comprises pages 1 to 5

The Test Report shall be reproduced and published in full only and by the client only. It shall be reproduced partially with the written permission of the Test Laboratory only.

TEST LABORATORY

TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität,
Schönscheidtstr. 28, D-45307 Essen

Designated Technical Service
RDW No. RDWT-04

Shanghai, August 31, 2023

CS/PY



B.S.M.E Patrick Yu



Type : RT910; WS291

Manufacturer : Double Coin Group (Jiang Su) Tyre Co., Ltd.

List of modifications**Appendix 0****More details for application of : Date : August 31, 2023**

Correction of : ---

Modification of : ---

Addition of : trade mark and tread pattern, The previous test data is still valid. Update the manufacturer's name and address, Upgrade the supplement of the regulation

Deletion of : ---

Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

Test Report

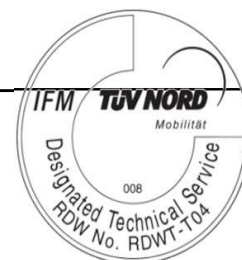
Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform Provisions Concerning The Approval Of Types With Regard To Rolling Sound Emissions And To Adhesion On Wet Surfaces And Rolling Resistance And Snow Performance

ECE-R 117
as last amended

Revision 4-Amendment 2
Supplement 12 to the 02 series of amendments

Approval status	
ECE	Number of approval
	E4-117R-025451-S2WR2 Ext.04



C1

Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

1. Genreal information

- 1.1. Manufacturer's name and address : Double Coin Group Jiangsu Tyre Co., Ltd.
No.888 North Yishou Road, Chengbei Street,
226500 Rugao, Jiangsu, China (PRC)
- 1.2. Brand Name(s) or Trade(s) description : DOUBLE COIN(Brand names)

RT910(Tread pattern names)
- 1.3. Tyre class : C3
- 1.4. Category of use : snow
- 1.5. Tyre structure : radial
- 1.6. Worse case : refer to RDW announcement 2018-1
- 1.7. Sound level according to paras. 4.4. and 4.5. of Annex 3 : 445/45R19.5 160J 73 dB(A)

limit value for list of tyre size(s) : ≤73 dB(A)
- 1.8. Wet adhesion level of the representative tyre size, see paragraph 2.5. of Regulation No. 117, as per item 7. of the test report in the Appendix to Annex 5 : 445/45R19.5 160J 1.14 (G)

limit value for list of tyre size(s) : ≥0.65*1.1=0.715 (G)
- 1.9. Rolling resistance coefficient of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.2 and 6.3 of Annex 6 : 385/65R22.5 160K 4.1 kN/N

limit value for list of tyre size(s) : ≤7.5 kN/N
- 1.10. Traction tyre fulfils the requirement according to paragraph 6.5.1 of Regulation No. 117. : N.A



Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

- 1.11. Test date
- | | |
|------------------------|-----------------|
| rolling sound emission | : July 14, 2015 |
| wet grip | : July 14, 2015 |
| rolling resistance | : June 15, 2013 |
- 1.12. Snow grip index of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.4 of Annex 7
- | | |
|----------------------------|----------------------------|
| 385/65R22.5 160K 1.45 (SG) | |
| limit value | : $\geq 1.25 + 0.2 = 1.45$ |
| test date | : December 17, 2020 |
- 1.13. Final conclusion for all testing : Pass
- | | |
|--------------------------------|--|
| Sound level | : refer to TUV NORD test report CS117-B0-2015-02931 corresponding with type approval No. E4-117R-025451 S2WR2 Ext.01 |
| Wet adhesion level | : refer to TUV NORD test report CS117-B0-2015-02931 corresponding with type approval No. E4-117R-025451 S2WR2 Ext.01 |
| Rolling resistance coefficient | : refer to TUV NORD test report CS117-A0-2013-01131 corresponding with type approval No. E4-117R-025451 S2R2 Ext.00 |
| Snow grip level | : Pass |
- 1.14. Comments (if any) : Addition of The marking of "Alpine Symbol" and snow performance test, upgrade supplement number of the regulation

2. Remarks concerning tested object(s) :

All versions of the type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

3. Appendices

- 0 List of modifications
- | | |
|--------------------------------|--------------|
| Information document no. | : RT910 |
| Tyre noise test report | : N.A |
| Wet grip test report | : N.A |
| Rolling resistance test report | : N.A |
| Snow performance test report | : Appendix 1 |



Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

4. Statement of conformity

The type described in this test report and the appendices attached are in compliance with the Test Specification mentioned above.

The samples / test vehicles used were representative in terms of the type to be approved.

The Test Report comprises pages 1 to 7.

The Test Report shall be reproduced and published in full only and by the client only. It shall be reproduced partially with the written permission of the Test Laboratory only.

TEST LABORATORY

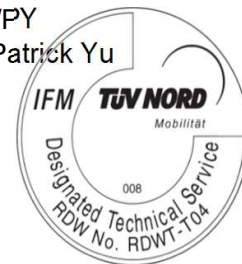
TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität,
Schönscheidtstr. 28, D-45307 Essen

Designated Technical Service
RDW No. RDWT-04

Shanghai, April 20, 2021

Patrick Yu

CS/PY
B.S.M.E Patrick Yu



Test Report
No. : CS117-E0-2021-00621
ECE Regulation No.117



Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

List of modifications

Appendix 0

More details for application of : **Date** : **March 30, 2021**

Correction of : -

Modification of : -

Addition of : The marking of "Alpine Symbol" and snow performance test, upgrade supplement number of the regulation

Deletion of : -



Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

Appendix 1

1. Snow performance

1.1. Test data

1.1.1. Test Location and address : Heihe Red Valley Automotive test center

1.1.2. Test tyre details

tyre size designation and service description : 385/65R22.5 160K

tyre brand and trade description : DOUBLE COIN RT910

Category of use : snow(M+S&3PMSF)

Reference inflation pressure : 900 kPa

Indication : M+S&3PMSF

ECE Approval No. : E4-0027021

1.1.3. Snow index relative to SRTT according to paragraph 6.4.1.1.

Test method : acceleration method

Test with control tyres : NO

Test procedure : SRTT-T1-T2-T3-SRTT

1.1.4. Test vehicle (make, model and type, year)

For control tyre : N.A

For candidate tyre : FAW J6P LFWSRXRJXF1E19020

1.1.5. Test tyre data 1 :

Test track characteristics	Begin	Finish	standard
Weather	Cloudy	Cloudy	---
Ambient temperature	-12.3	-11.7	-2 °C to -15 °C
Snow temperature	-14.3	-13.8	-4 °C to -15 °C
CTI index	85	85	80 to 90



Test Report
No. : CS117-E0-2021-00621
ECE Regulation No.117



Type : **RT910**
Manufacturer : **Double Coin Group Jiangsu Tyre Co., Ltd.**

Appendix 1

1.1.5.1 Test results

No.	S1		C1		C2		C3		S1	
Trademark	C3W-SRTT		Double Coin						C3W-SRTT	
Tread pattern	ASTM F 2870		RT910						ASTM F 2870	
SIZE	315/70R22.5		385/65R22.5						315/70R22.5	
Service description	154/150L		160K						154/150L	
Tyre Identification	M+S		snow						M+S	
Reference load (kg)	3750		4500						3750	
Reference pressure(kPa)	900		900						900	
Test rim width code	9		11.75						9	
Tyre loads FA (kg)	2258	2217	755	740					2258	2217
Tyre loads RA (kg)	1880	1887	995	980					1880	1887
Ratio of FA/RA	120%	117%	76%	76%					120%	117%
Load index RA	50%	50%	22%	22%					50%	50%
FA pressure (kPa)	930	930	930	930					930	930
RA pressure (kPa)	630	630	630	630					630	630
Run number	Dis(m)	AD	Dis(m)	AD	Dis(m)	AD	Dis(m)	AD	Dis(m)	AD
1	29.32	0.81	19.40	1.22					28.52	0.83
2	29.14	0.81	19.12	1.24					27.44	0.86
3	28.41	0.84	20.12	1.18					28.97	0.82
4	28.06	0.85	20.32	1.17					28.75	0.83
5	30.02	0.79	19.26	1.23					27.13	0.87
6	29.54	0.80	18.75	1.27					27.28	0.87
Mean	29.08	0.82	19.50	1.22					28.02	0.85
Std-deviation	0.664	0.019	0.552	0.034					0.748	0.023
Slip ratio(percent)	16.36	18.39	13.15	12.66					17.13	19.76
CV (%)	2.298		2.810						2.669	
Validation SRTT (%)	---		---						3.83%	
AFC(Ra)	---		0.086						---	
Snow index	---		1.45						---	

Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

Test Report

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform Provisions Concerning The Approval Of Types With Regard To Rolling Sound Emissions And To Adhesion On Wet Surfaces And Rolling Resistance

ECE-R 117
as last amended

Revision 2 – Amendment 1
Supplement 1 to the 02 series of amendments

Approval status	
ECE	Number of approval
	E4-117R-025451-S2R2



Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

0. Tire noise, wet grip test and rolling resistance test description

0.1. Test facilities : The test facilities are in compliance with the requirements of the regulation

0.2. Noise Measurement

0.2.1.measurement : The test course satisfies the requirements of ISO 10844:1994 and the test surface is dry and clean for all measurement.

Measurement equipment corresponds to class 1 of IEC 60651.

The microphones are arranged at a distance of $7.5m \pm 0.05m$ to the centreline at a height of $1.20m \pm 0.02m$ above the measurement surface. A suitable windscreen may be fitted to the microphone provided that account is taken of its effect on the sensitivity and directional characteristics of the microphone.

The microphones were calibrated prior to commencement.

Wind speed at the microphone height $\leq 5m/s$.

Ambient noise is at least 10 dB (A) less than the measured tyre-road sound emission.

Prior to actual measurement, the tyres were run in for about 100 Km on public roads, to remove mold-release agents, mold discharges etc. from the tyres.

The tyres fitted to the test rotate in the same direction as when they were run-in. Prior to testing tyres are warmed up by running under test conditions.

0.2.2. Test results

: The vehicle was rolled across the test course in neutral gear with the engine switched off. The maximum sound pressure levels in dB (A) right and left of the vehicle were recorded together with the speed.

This measurement was carried out 8 times at different speeds; the different speeds were distributed as evenly as possible across the defined speed range.

Regression analysis is used to establish the relationship between the results and the reference speed.

Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

0.3. Wet grip test Measurement

0.3.1.Measurement

: The test track are in compliance with the requirements of the regulation paragraph 1.1 annex 5

Standard reference test tyre (SRTT) in accordance with the American Society for Testing and Materials (ASTM) standard E 1136 – 93 (re-approved 1998).

Wetting conditions according paragraph 1.2 annex 5

The water depth shall be between 0.5 and 1.5 mm.

The wetted surface temperature shall be between 5 °C and 35 °C and shall not vary during the test by more than 10 °C.

Trailer or special purpose tyre evaluation vehicle method according the regulation paragraph 2.1 annex 5.

Standard vehicle method

according the regulation paragraph 2.2 annex 5.

0.3.2. Test results

: The type of tyre complies with the requirements of the regulation paragraph 6.2.1.

0.4. Rolling resistance test Measurement

0.4.1.Measurement

: Test equipment tolerances in compliance with the requirements of Appendix 1, Annex 6, Regulation 117 and EC/1235/2011.

Test rim,

For passenger car tyre rims (C1 tyres), the test rim width shall be the same as the measuring rim determined in ISO 4000-1: 2010 clause 6.2.2.

For truck and bus tyres (C2 and C3), the rim width shall be the same as the measuring rim determined ISO 4209-1:2001 clause 5.1.3.

Run-out,

Run-out shall meet the following criteria:

(a) Maximum radial run-out: 0.5 mm

(b) Maximum lateral run-out: 0.5 mm

Load application

The direction of tyre loading application shall be kept normal to the test.



Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

surface and shall pass through the wheel centre within
(a) 1 mrad for the force and deceleration methods;
(b) 5 mrad for the torque and power methods.

Tyre alignment

Camber angle

The plane of the wheel shall be perpendicular to the test surface within 2 mrad for all methods.

Slip angle

The plane of the tyre shall be parallel to the direction of the test surface motion within 1 mrad for all methods.

Control accuracy

(a) Tyre loading:

(i) For $LI \leq 121$ ± 20 N or ± 0.5 per cent, whichever is greater;

(ii) For $LI > 121$ ± 45 N or ± 0.5 per cent whichever is greater;

(b) Cold inflation pressure: ± 3 kPa;

(c) Surface speed:

(i) ± 0.2 km/h for the power, torque and deceleration methods;

(ii) ± 0.5 km/h for the force method;

(d) Time: ± 0.02 s.

Instrumentation accuracy

Parameter	Load Index ≤ 121	Load Index > 121
Tyre load	± 10 N or ± 0.5 % ^(a)	± 30 N or ± 0.5 % ^(a)
Inflation pressure	± 1 kPa	± 1.5 kPa
Spindle force	± 0.5 N or ± 0.5 % ^(a)	± 1.0 N or ± 0.5 % ^(a)
Torque input	± 0.5 Nm or ± 0.5 % ^(a)	± 1.0 Nm or ± 0.5 % ^(a)
Distance	± 1 mm	± 1 mm
Electrical power	± 10 W	± 20 W
Temperature	± 0.2 °C	
Surface speed	± 0.1 km/h	
Time	± 0.01 s	
Angular velocity	± 0.1 %	

In cases where reverse tyre rotation immediately follows the completion of the forward tyre rotation, a warm-up time for reverse tyre rotation shall be at least 10 minutes for Class C1 tyres and 30 minutes for all other tyre types.

Test surface roughness

The roughness, measured laterally, of the smooth steel drum surface shall have a maximum enterline average height value of 6.3 mm.

Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

Part 1

1. General information

- 1.1. Name and address of applicant : DOUBLE COIN HOLDINGS LTD.
Double Coin Heavy-Duty Tyre Co.
2613, Jian Chun Road, Minhang,
200245, Shanghai,
P.R.China
- 1.2. Manufacturer and Brand Name(s) or Trade(s) description : Double Coin; Warrior (Trademarks)
RT910 (Tread pattern)
- 1.3. Tyre Class : ~~Class C1/ Class C2~~ / Class C3
- 1.4. Category of use : normal/~~snow/special~~
- 1.5. Worst case : refer to RDW announcement 2013-01
- 1.6. Sound level according to paras. 4.4. and 4.5. of Annex 3 at reference speed of 70/~~80~~ km/h : 385/65R22.5 160K 73 dB(A)
- limit value : 73 dB(A) (~~Stage 1~~ / Stage 2)
- 1.7. Wet adhesion level of the representative tyre size, see paragraph 2.5. of Regulation No. 117, as per item 7. of the test report in the Appendix to Annex 5: using ~~vehicle~~/trailer method : not applicable
- limit value : not applicable
- 1.8. Rolling resistance coefficient of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.2 and 6.3 of Annex 6 using force /~~torque~~ / ~~deceleration~~ / power method : 385/65R22.5 160K 4.10 N/kN
- limit value : 6.5 N/kN (~~Stage 1~~ / Stage 2)
- 1.9. Final conclusion for all testing : Pass /~~Fail~~
- 1.10. Comments (if any) : ---



Type : **Tyre / Road Noise Emission and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

Part 2

2. Regard to rolling sound emission level

2.1. Test data

Test tyre type 1

- 2.1.1. Date of test : May 04, 2013
- 2.1.2. Test vehicle
- Manufacturer : Dongfeng
- Vehicle name : Tianlong
- VIN or Year : LGAX2BA398D000027
- Transmission : ---
- ENG displacement : 6200 cc
- Test vehicle wheelbase : 4200 mm(<5000mm for C2 & C3)
- 2.1.3. Location of test track : National Center of Supervision and Inspection on Motor Vehicle Products Quality (Xiangfan)
Checheng Road, Fancheng Town, 233210, Xiangfan, Hubei, P.R. China
- 2.1.3.1. Date of track certification to ISO 10844:1994 : December 03, 2007
- 2.1.3.2. Issued by : China Department of Transportation Highway Inspection Center
- 2.1.3.3. Method of certification : Residual void content, Sound absorption coefficient, Texture depth
- 2.1.4. Tyre test details
- 2.1.4.1. Tyre size designation : 385/65R22.5 160K
- Manufactures date code : 1713
- Category of use : normal
- Indication : ---
- ECE Approval No. : E4-0027021
- 2.1.4.2. Tyre service description : not applicable
- 2.1.4.3. Reference inflation pressure : 900 kPa



Test Report
No. : CS117-A0-2013-01131
 ECE Regulation No.117



Type : **Tyre / Road Noise Emission and Rolling Resistance**
 Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

2.1.4.3. Test data

Reference load : 4500 kg

	Front left	Front right	Rear left	Rear right	Average
Test mass (kg)	2500	2550	3750	3800	3150
Tyre load index (%)	55.56	56.67	83.33	84.44	70.00
Inflation pressure (cold) (kPa)	470.0	480.0	750.0	750.0	---

2.1.4.4. Test rim width code : 11.75

2.1.4.5. Temperature measurement : not applicable
 sensor type

2.1.5. Valid Test results :

Running No.	Speed Km/h	Direction of run	Sound Level Measured dB(A)		Air Temp. °C	Track Temp. °C	Sound Level Measured dB(A)		Comments
			Left	Right			Left Temp. correction	Right Temp. correction	
1	61.9	one direction	71.9	72.3	24.0	19.0	---	---	---
2	64.0	one direction	73.1	72.8	24.0	19.0	---	---	---
3	66.7	one direction	73.7	73.8	24.0	19.0	---	---	---
4	68.1	one direction	74.0	74.6	24.0	19.0	---	---	---
5	72.0	one direction	75.8	75.9	24.0	19.0	---	---	---
6	73.9	one direction	76.3	76.1	24.0	19.0	---	---	---
7	76.1	one direction	76.7	76.5	24.0	19.0	---	---	---
8	77.6	one direction	77.5	77.8	24.0	19.0	---	---	---
Limit value	60~80	---			5°C ~ 40°C	5°C ~ 50°C			

2.1.5.1. Regression line slope : a=53.97

2.1.5.2. Sound level according to paraphrase 4.3. of annex3 : 74.98 dB(A)

Sound level according to paras. 4.4. and 4.5. of Annex 3 at reference speed of 70/80 km/h : 73 dB(A)



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
 Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

3. Rolling resistance

3.1. Test data	Test tyre type 1
3.1.1. Date of test	May 07, 2013
3.1.2. Test machine identification	: Doublecoin-RR
drum diameter	: 1.7070 m
surface	: smooth steel
3.1.3. Test location	: Shanghai, P.R.China
3.1.4. Test tyre details	:
tyre size designation and service description	: 385/65R22.5 160K
tyre brand and trade description	: Double Coin RT910
Reference inflation pressure	: 900 kPa
Indication	: ---
ECE Approval No.	: E4-0027021
3.1.5. Measurement method	: force / torque / deceleration / power method
3.1.6. Test speed	: 80 km/h
3.1.7. Load on the tyre normal to the drum surface L_m	: 37487.0 N
3.1.8. Test inflation pressure, initial	: 900 kPa
3.1.9. Distance from the tyre axis to the drum outer surface under steady state conditions, in meters, r_L	: 0.5047 m
3.1.10. Test rim width	: 11.75
material	: Steel
3.1.11. Ambient temperature	: 27.0 °C
3.1.12. Skim test load (except deceleration method)	: 400.0 N



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

3.1.13. Spindle force F_t during Skim test : 70.43 N

3.2. Rolling resistance coefficient

3.2.1. Initial value (or average in the case : 5.28 N/kN
of more than 1)

3.2.2. Temperature corrected N/kN : 0.006 N/kN

3.2.3. Temperature and drum diameter : 4.10 N/kN
corrected

4. Remark concerning tested object(s)

All versions of the type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

5. Appendices

0 List of modifications

Information document no. : S130001

6. Statement of conformity

The type described in this test report and the appendices attached are in compliance with the Test Specification mentioned above.

The samples used, were representative in terms of the type to be approved.

The Test Report comprises pages 1 to 9.

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TEST LABORATORY

TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität,
Adlerstr. 7, 45307 Essen

Designated Technical Service
RDW No. 99050016

Shanghai, June 15, 2013



RZ PY
B.S.M.E R. Zhu



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

Test Report

Agreement concerning the adoption of uniform technical prescriptions for the wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles and the conditions for reciprocal recognition of approvals granted on the basis of these prescriptions

Uniform Provisions Concerning The Approval Of Types With Regard To Rolling Sound Emissions And To Adhesion On Wet Surfaces And Rolling Resistance And Snow Performance

ECE-R 117

as last amended

Revision 3-Amendment 2

Supplement 6 to the 02 series of amendments

Approval status	
ECE	Number of approval
	E4-117R-025451-S2WR2



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

0. Tire noise, wet grip test and rolling resistance test description

0.1. Test facilities : The test facilities are in compliance with the requirements of the regulation

0.2. Noise Measurement

0.2.1.measurement : The test course satisfies the requirements of ISO 10844:1994 and the test surface is dry and clean for all measurement.

Measurement equipment corresponds to class 1 of IEC 60651.

The microphones are arranged at a distance of $7.5m \pm 0.05m$ to the Centreline at a height of $1.20m \pm 0.02m$ above the measurement surface. A suitable windscreen may be fitted to the microphone provided that account is taken of its effect on the sensitivity and directional characteristics of the microphone.

The microphones were calibrated prior to commencement.

Wind speed at the microphone height $\leq 5m/s$.

Ambient noise is at least 10 dB (A) less than the measured tyre-road sound emission.

Prior to actual measurement, the tires were run in for about 100 Km on public roads, to remove mold-release agents, mold discharges etc. from the tires.

The tyres fitted to the test rotate in the same direction as when they were run-in. Prior to testing tyres are warmed up by running under test conditions.

0.2.2. Test results

: The vehicle was rolled across the test course in neutral gear with the engine switched off. The maximum sound pressure levels in dB (A) right and left of the vehicle were recorded together with the speed.

This measurement was carried out 8 times at different speeds; the different speeds were distributed as evenly as possible across the defined speed range.

Regression analysis is used to establish the relationship between the results and the reference speed.

Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

0.3. Wet grip test Measurement

0.3.1.Measurement

The test track are in compliance with the requirements of the regulation paragraph 1.1 annex 5

Standard reference test tyre (SRTT) in accordance with the American Society for Testing and Materials (ASTM) standard E 1136 - 93 (re-approved 1998).

Wetting conditions according paragraph 1.2 annex 5

The water depth shall be between 0.5 and 1.5 mm.

The wetted surface temperature shall be between 5 °C and 35 °C and shall not vary during the test by more than 10 °C.

Trailer or special purpose tyre evaluation vehicle method according the regulation paragraph 2.1 annex 5.

Standard vehicle method

according the regulation paragraph 2.2 annex 5.

0.3.2.Test results

The type of tyre complies with the requirements of the regulation paragraph 6.2.1.

0.4. Rolling resistance test Measurement

0.4.1.Measurement

Test equipment tolerances in compliance with the requirements of Appendix 1, Annex 6, Regulation 117 and EC/1235/2011.

Test rim,

For passenger car tyre rims (C1 tyres), the test rim width shall be the same as the measuring rim determined in ISO 4000-1: 2010 clause 6.2.2.

For truck and bus tyres (C2 and C3), the rim width shall be the same as the measuring rim determined ISO 4209-1:2001 clause 5.1.3.

Run-out,

Run-out shall meet the following criteria:

- (a) Maximum radial run-out: 0.5 mm;
- (b) Maximum lateral run-out: 0.5 mm.

Load application

The direction of tyre loading application shall be kept normal to the test.

Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

surface and shall pass through the wheel centre within
(a) 1 mrad for the force and deceleration methods;
(b) 5 mrad for the torque and power methods.

Tyre alignment

Camber angle

The plane of the wheel shall be perpendicular to the test surface within 2 mrad for all methods.

Slip angle

The plane of the tyre shall be parallel to the direction of the test surface motion within 1 mrad for all methods.

Control accuracy

(a) Tyre loading:

(i) For $LI \leq 121$ ± 20 N or ± 0.5 per cent, whichever is greater;

(ii) For $LI > 121$ ± 45 N or ± 0.5 per cent whichever is greater;

(b) Cold inflation pressure: ± 3 kPa;

(c) Surface speed:

(i) ± 0.2 km/h for the power, torque and deceleration methods;

(ii) ± 0.5 km/h for the force method;

(d) Time: ± 0.02 s.

Instrumentation accuracy

Parameter	Load Index ≤ 121	Load Index > 121
Tyre load	± 10 N or ± 0.5 % ^(a)	± 30 N or ± 0.5 % ^(a)
Inflation pressure	± 1 kPa	± 1.5 kPa
Spindle force	± 0.5 N or ± 0.5 % ^(a)	± 1.0 N or ± 0.5 % ^(a)
Torque input	± 0.5 Nm or ± 0.5 % ^(a)	± 1.0 Nm or ± 0.5 % ^(a)
Distance	± 1 mm	± 1 mm
Electrical power	± 10 W	± 20 W
Temperature	± 0.2 °C	
Surface speed	± 0.1 km/h	
Time	± 0.01 s	
Angular velocity	± 0.1 %	

In cases where reverse tyre rotation immediately follows the completion of the forward tyre rotation, a warm-up time for reverse tyre rotation shall be at least 10 minutes for Class C1 tyres and 30 minutes for all other tyre types.

Test surface roughness

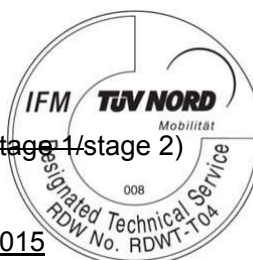
The roughness, measured laterally, of the smooth steel

Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
 Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

drum surface shall have a maximum centreline average height value of 6.3 mm.

1. General information

- 1.1. Name and address of applicant : DOUBLE COIN HOLDINGS LTD.
 Double Coin Heavy-Duty Tyre Co.
 2613, Jian Chun Road, Minhang, 200245, Shanghai, P.R. China
- 1.2. Manufacturer and Brand Name(s) or Trade(s) description : Double Coin; Warrior (Trademarks)
 RT910 (Tread pattern)
- 1.3. Tyre Class : ~~Class C1/ Class C2~~ / Class C3
- 1.4. Category of use : ~~normal~~/snow/special
- 1.5. Worst case : refer to RDW announcement 2015-1
- 1.6. Sound level according to paras. 4.4. and 4.5. of Annex 3 at reference speed of ~~70/80~~ km/h : 445/45R19.5 160J 73 dB(A)
- limit value for list of tyre size : 73 dB(A) (~~stage 1~~/stage 2)
- 1.7. Wet adhesion level of the representative tyre size, see paragraph 2.5. of Regulation No. 117, as per item 7. of the test report in the Appendix to Annex 5: using vehicle/~~trailer~~ method : 445/45R19.5 160J 1.14(G)
- limit value for list of tyre size : 0.65×1.1 (G)
- 1.8. Rolling resistance coefficient of the representative tyre size, see paragraph 2.5. of Regulation No. 117, according to paragraph 6.2 and 6.3 of Annex 6 using force/~~torque~~ / ~~deceleration~~ / power method : 385/65R22.5 160K 4.10 N/kN
- limit value for list of tyre size : 6.5 N/kN (~~stage 1~~/stage 2)
- 1.9. Test date : March 04, 2015
 rolling sound emission : April 07, 2015
 wet grip : May 07, 2013
 rolling resistance
- 1.10. Final conclusion for all testing : Pass /-~~Fail~~
- 1.11. Comments (if any) : Addition of tyre size and wet grip test, retest tyre noise. The previous test data of other test sizes



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

are still valid.
Details in item 5-6

2. Remark concerning tested object(s)

All versions of the type as stated in the information document are covered with the tested version(s) and test object(s) respectively.

3. Appendices

0 List of modifications

Information document no. : S150003

4. Statement of conformity

The type described in this test report and the appendices attached are in compliance with the Test Specification mentioned above.

The samples / ~~test vehicles~~ used, were representative in terms of the type to be approved.

The Test Report comprises pages 1 to 11.

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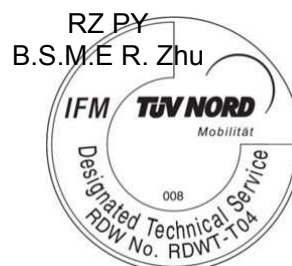
TEST LABORATORY

TÜV NORD Mobilität GmbH & Co. KG
IFM - Institut für Fahrzeugtechnik und Mobilität,
Adlerstr. 7, 45307 Essen

Designated Technical Service
RDW No. RDWT-T04

Shanghai, July 14, 2015

Ribvanzh



Test Report
No. : CS117-B0-2015-02931
ECE Regulation No.117



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

List of modifications

Appendix 0

More details for application of : **Date** : **July 14, 2015**

Correction of : -

Modification of : -

Addition of : tyre size and wet grip test, retest tyre noise. The previous test data of other test sizes are still valid.

Deletion of : -



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

5. Regard to rolling sound emission level

5.1. Test data Test tyre type 1

- 5.1.1. Date of test : March 04, 2015
- 5.1.2. Test vehicle
- Manufacturer : DFAC
- Vehicle name : DFL4251A1
- VIN or Year : LGAX2BAGHDD001226
- Transmission : ---
- ENG displacement : 6200 cc
- Test vehicle wheelbase : 4200 mm(<5000mm for C2 & C3)
- 5.1.3. Location of test track : National Center of Supervision and Inspection on Motor Vehicle Products Quality (Xiangfan)
Fangang Town, Dingyuan District ,
233210, Anhui,
P.R. China
- 5.1.3.1. Date of track certification to ISO : March 08, 2006
10844:1994
- 5.1.3.2. Issued by : China Department of Transportation Highway Inspection Center
- 5.1.3.3. Method of certification : Residual void content, Sound absorption coefficient, Texture depth
- 5.1.4. Tyre test details
- 5.1.4.1. Tyre size designation : 445/45R19.5 160J
- Manufactures date code : 0515
- Category of use : snow
- Indication : ---
- ECE Approval No. : E4-0025004
- 5.1.4.2. Tyre service description : not applicable
- 5.1.4.3. Reference inflation pressure : 900 kPa



Test Report
No. : CS117-B0-2015-02931
 ECE Regulation No.117



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
 Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

5.1.5. Test data

Reference load : 4500 kg

	Front left	Front right	Rear left	Rear right	Average
Test mass (kg)	2712	2789	3631	3645	3194.25
Tyre load index (%)	60.27	61.98	80.69	81.00	70.98
Inflation pressure (cold) (kPa)	520.0	520.0	740.0	740.0	---

5.1.5.3. Test rim width code : 11.75

5.1.5.4. Temperature measurement : Not applicable
 sensor type

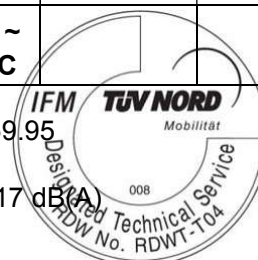
5.1.6. Valid Test results :

Runnin g No.	Speed Km/h	Direction of run	Sound Level Measured dB(A)		Air Temp. °C	Track Temp. °C	Sound Level Measured dB(A)		Comment s
			Left	Right			Left Temp. correction	Right Temp. correction	
1	61.9	One direction	71.2	70.8	15.0	18.0	---	---	---
2	64.0	One direction	72.6	73.0	15.0	18.0	---	---	---
3	66.2	One direction	71.9	72.5	15.0	18.0	---	---	---
4	68.1	One direction	72.8	73.3	15.0	18.0	---	---	---
5	71.9	One direction	74.8	74.9	15.0	18.0	---	---	---
6	74.1	One direction	75.2	75.9	15.0	18.0	---	---	---
7	75.9	One direction	76.2	76.2	15.0	18.0	---	---	---
8	77.8	One direction	77.8	77.2	15.0	18.0	---	---	---
Limit value	60~80	---			5°C ~ 40°C	5°C ~ 50°C			

5.1.6.1. Regression line slope : a=59.95

5.1.6.2. Sound level according to paraphrase 4.3. of annex3 : 74.17 dB(A)

5.1.6.3. Sound level according to paras. 4.4. and 4.5. of Annex 3 at reference speed of 70/80 km/h : 73 dB(A)



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

6. Adhesion on wet surface

6.1. Test data : **Test tyre type 1**

6.1.1. Date of test : April 07, 2015

6.1.2. Test vehicle(make, model, year, : DFM, TIANLONG, LGAG3DV28D2809664
modifications, etc or trailer
identification)

6.1.3. Location of test track : Dingyuan Gound for Highway and Traffic
Fangang Town, Dingyuan District,
233210, Anhui,
P.R.China

6.1.4. Test track characteristics
Texture depth (mm) : 0.654
BPN : 57.49

6.1.5. Issued by : TUV NORD

6.1.6. Method of certification : BPN / ASTM E 965

6.1.7. Water depth (mm) : 0.50-2.00

6.1.8. Identification of SRTT : FVKP OOTX 3911

6.1.9. Initial speed (km/h) : 60

6.1.10. Final speed (km/h) : 20



Test Report
No. : CS117-B0-2015-02931
 ECE Regulation No.117



Type : **Tyre / Road Noise Emission and adhesion performance on wet surfaces and Rolling Resistance**
 Manufacturer : **DOUBLE COIN HOLDINGS LTD.**
Double Coin Heavy-Duty Tyre Co.

6.1.11. Valid test results

No.	SRTT1	Candidate1	Candidate2	SRTT2
Tread pattern	F 2870-11	RT910		F 2870-11
SIZE	315/70R22.5	445/45R19.5		315/70R22.5
Service description	154/150M	160J		154/150M
Category of use	M+S	M+S		M+S
Tyre identification	3911	0515		3911
Reference load (kg)	3750	4500		3750
Reference pressure(kPa)	900	900		900
Rim	9.00	15.00		9.00
Tyre loads FA (kg)	2645	3100		2645
Tyre loads RA (kg)	3100	3300		3100
Load index FA (%)	70.5	68.9		70.5
Load index RA (%)	82.7	73.3		82.7
FA pressure (kPa)	630	630		630
RA pressure (kPa)	709	630		709
Wet surface temp (°C)	31.0	31.2		31.6
Ambient temp (°C)	29.5	29.6		29.9
	BD (m)	WA (m/s ²)		BD (m)
Measurement	1	24.45	5.049	21.03
	2	24.74	4.990	21.21
	3	24.31	5.078	21.17
	4	---	---	21.71
	5	---	---	21.61
	6	---	---	21.78
Average AD (m/s ²)	24.50	5.04	21.42	5.77
Standard deviation(m/s ²)	0.18	0.04	0.29	0.08
Validation of results	0.729	1.360		1.190
Coeff. of variation ≤ 3%				1.02
total SRTT ≤ 3%				
BFC (R) reference tyre	0.514	0.515		0.516
BFC (T) candidate tyre	0.514	0.588		0.516
Wet grip index (%)	1.00	1.14		1.00

