



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory , Kapurthala

ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

| | | | | | | | |
|-------|---|--|--------------------------------|---------------------|-----------|------------|-----|
| 1. | SHELL No. | 4001 | DISPATCH DATE | | | 28.8.2014 | |
| 2. | Railway | NR | Type | LWSCZAC | Coach No. | 143168 | |
| 3. | Booked to | SSE/C&W/NDLS | | | | | |
| 4. | Tare Weight of Coach | 40.28 T | | | | | |
| 5. | Carrying Capacity | Seating | 78 | Sleeping | NIL | Luggage | NIL |
| 6. | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') | | | | | | |
| 6.1 | Leading Dimensions: | | | | | | |
| i) | Maximum length over Body | 23700+10/-0 mm | | | | | |
| ii) | Maximum width over Body | 3240-8/+0 mm, 3050 mm (LWSCZDAC) | | | | | |
| iii) | Max. Height From Rail Level | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) | | | | | |
| iv) | Buffer/CBC Height | Specified : 1105 +0 /-15 mm | 1105 | 1105 | | | |
| v) | Buffer/CBC (Make) | ESCORTS | Fiba Device | NA | | | |
| 7. | Air Brake Testing: | Description | | Specified | Observed | | |
| 7.1 | Full Brake Application | Reduce pressure of BP from 5.0 to 3.4 kg/cm ² | 6 –10 sec | 6 Sec | | | |
| | | Max Pressure in BC | 3.00 ± 0.15 Kg/cm ² | 3.00 | | | |
| | | All Brake are applied | OK | OK | | | |
| 7.2 | Insensitivity | Exhaust BP @ 0.3 kg/cm ² /min | No brake application | OK | | | |
| 7.3 | Sensitivity | Exhaust BP @ 0.1 kg/cm ² /Sec, After 02 Sec. | Brake must apply | OK | | | |
| 8. | PAINTING DEATAILS: | TYPE OF PAINT | MAKE | AVERAGE GLOSS VALUE | | | |
| 8.1 | PAINT | PU PAINT | VIBGYOR | 86/89 | | | |
| 8.2 | APPLICATION OF PCN-123 | SATISFACTORY | | | | | |
| 8.3 | INSUALTION | SATISFACTORY | | | | | |
| 9. | Traceability of Furnishing Items: | | | | | Make | |
| i. | BRAKE EQUIPMENT | | | | | FAIVELEY | |
| iii. | CDTS | | | | | AMIT | |
| iv. | SEAT & BERTH | | | | | SUTLEJ | |
| v. | BODY SIDE DOORS | | | | | MOHAN RAIL | |
| vi. | SALOON COMPTT DOORS | | | | | KALSI | |
| vii. | VESTIBULE SLIDING DOOR | | | | | JBM | |
| viii. | WATER TANKS | | | | | AMIT | |
| ix | UIC VESTIBULE | | | | | KRP | |
| x | LUGGAGE RACK | | | | | HANS PAL | |
| xi | FLOOR | | | | | TAYAL | |
| xii | PVC | | | | | RESPONSIVE | |
| xii | LP SHEET | | | | | KAE | |
| 10 | 10.1 | Modification / Trail (if any): | | | | NIL | |
| | 10.2 | Deviations if any: | | | | NIL | |



रेल डिब्बा कारखाना, कपूरथला

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|--------------------|---|---------------------------------------|------------------------------------|--------------------|----------------------|--------------------|-----------------------|--------------------|--------------|-----------|
| 12. | Bogie Details: | | Shell No. | Railway | Type | Coach No. | Dispatch Date | | | |
| | | | 4001 | NR | LWSCZAC | 143168 | 06-5-14 | | | |
| 12.1 | Wheel & Axle Details: | | PP Side | | | | NPP Side | | | |
| | i. | Bogie No. | 146368 | | | | 146369 | | | |
| | ii. | Frame No. | FIAT-2993 | | | | FIAT-2996 | | | |
| | iii. | Bolster No. | 101-HEI | | | | 106-HEI | | | |
| | iv. | Axle No. | W-4524 | | RWF-109874 | | RWF-109665 | | W-4625 | |
| | v. | Wheel Dia. | 918.00 | 918.00 | 918.00 | 918.00 | 918.00 | 918.00 | 918.00 | 918.00 |
| | vi. | Wheel Disc No. | 190-50842 | 001-51908 | 291-51908 | 290-46433 | 028-51915 | 195-51915 | 122-51910 | 033-53102 |
| | vii. | R.B. Nos. | 74785 | 12396 | 74623 | 12509 | 09305 | 12473 | 07117 | 74316 |
| | viii. | R.B. Make | SKF | | SKF | | SKF | | SKF | |
| | ix. | RB Type | UIC CARTRIDGE TAPER ROLLER BEARING | | | | | | | |
| 12.2 | Secondary suspension load deflection Values: | | | | | | | | | |
| Description | | Secondary 1 | | Secondary 2 | | Secondary 1 | | Secondary 2 | | |
| | | Outer | Inner | Outer | Inner | Outer | Inner | Outer | Inner | |
| i. | Make & nos. | GBD-10-12-86 | GBD-12-5-63 | GBD-10-12-207 | GBD-12-5-133 | GBD-10-12-79 | GBD-12-5-01 | GBD-10-12-73 | GBD-12-5-132 | |
| ii. | Ht. attest load | 509 | 465 | 509 | 468 | 510 | 468 | 512 | 468 | |
| iii. | Align .deviation | 20 | 27 | 18 | 27 | 30 | 31 | 28 | 28 | |
| 12.3 | Items traceability: | | | | | | | | | |
| | Sno. | Item | | | PP Side Bogie | | NPP side Bogie | | Make | |
| | i. | Primary Outer Spring | | | HZ | | HZ | | HZ | |
| | ii. | Primary inner Spring | | | HZ | | HZ | | HZ | |
| | iii. | Primary Damper | | | | | | | GEREP | |
| | iv. | Secondary damper | | | | | | | GEREP | |
| | v. | Lateral Damper | | | | | | | SACHS | |
| | vi. | Yaw Damper | | | | | | | NIL | |
| | vii. | Brake cylinder & Caliper | | | | | | | FTI | |
| | viii. | Brake Disc | | | | | | | FTI | |
| | ix. | Ball joint Control arm | | | | | | | SGA | |
| | x. | Lateral Bump stop | | | | | | | GMT | |
| | xi. | Traction center make | | | | | | | SARITA | |
| | xii. | Traction lever make | | | | | | | SARITA | |
| | xiii. | Ball joint traction lever | | | | | | | GMT | |
| | xiv. | Traction centre elastic | | | | | | | SGA | |
| | xv. | Secondary rubber pad | | | | | | | TESPAK | |
| | xvi. | Rubber spring | | | | | | | GMT | |
| | xvii. | Anti roll bar make | | | | | | | SARITA | |
| | xviii. | Ball joint roll link | | | | | | | SARITA | |
| | xix. | Fork make | | | | | | | EMSON | |
| 12.4 | i. | Modification / Trial (if any): | | | | NIL | | | | |
| | ii. | Deviations (if any): | | | | NIL | | | | |

LWSCZAC-4001



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Rail Coach Factory , Kapurthala

ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

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|-------|---|--------------------------------|--|--|--------------------------------|---------------------|-----|
| 1. | SHELL No. | 4011 | DISPATCH DATE | | | 29.8.2014 | |
| 2. | Railway | NR | Type | LWSCZAC | Coach No. | 143176 | |
| 3. | Booked to | SSE/C&W/NDLS | | | | | |
| 4. | Tare Weight of Coach | 40.28 T | | | | | |
| 5. | Carrying Capacity | Seating | 78 | Sleeping | NIL | Luggage | NIL |
| 6. | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') | | | | | | |
| 6.1 | Leading Dimensions: | | | | | | |
| i) | Maximum length over Body | | | 23700+10/-0 mm | | | |
| ii) | Maximum width over Body | | | 3240-8/+0 mm, 3050 mm (LWSCZDAC) | | | |
| iii) | Max. Height From Rail Level | | | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) | | | |
| iv) | Buffer/CBC Height | | Specified : 1105 +0 /-15 mm | | 1105 | 1102 | |
| v) | Buffer/CBC (Make) | | ESCORTS | | Fiba Device | NA | |
| 7. | Air Brake Testing: | | Description | | Specified | Observed | |
| 7.1 | Full Brake Application | | Reduce pressure of BP from 5.0 to 3.4 kg/cm ² | | 6 –10 sec | 6 Sec | |
| | | | Max Pressure in BC | | 3.00 ± 0.15 Kg/cm ² | 3.00 | |
| | | | All Brake are applied | | OK | OK | |
| 7.2 | Insensitivity | | Exhaust BP @ 0.3 kg/cm ² /min | | No brake application | OK | |
| 7.3 | Sensitivity | | Exhaust BP @ 0.1 kg/cm ² /Sec, After 02 Sec. | | Brake must apply | OK | |
| 8. | PAINTING DEATAILS: | | TYPE OF PAINT | | MAKE | AVERAGE GLOSS VALUE | |
| 8.1 | PAINT | | PU PAINT | | VIBGYOR | 87/88 | |
| 8.2 | APPLICATION OF PCN-123 | | SATISFACTORY | | | | |
| 8.3 | INSUALTION | | SATISFACTORY | | | | |
| 9. | Traceability of Furnishing Items: | | | | | Make | |
| i. | BRAKE EQUIPMENT | | | | KBI | | |
| iii. | CDTS | | | | AMIT | | |
| iv. | SEAT & BERTH | | | | SUTLEJ | | |
| v. | BODY SIDE DOORS | | | | JBM | | |
| vi. | SALOON COMPTT DOORS | | | | KALSI | | |
| vii. | VESTIBULE SLIDING DOOR | | | | JBM | | |
| viii. | WATER TANKS | | | | AMIT, KUTEER | | |
| ix | UIC VESTIBULE | | | | KRP | | |
| x | LUGGAGE RACK | | | | HANS PAL | | |
| xi | FLOOR | | | | TAYAL | | |
| xii | PVC | | | | RESPONSIVE | | |
| xii | LP SHEET | | | | KAE | | |
| 10 | 10.1 | Modification / Trail (if any): | | | | NIL | |
| | 10.2 | Deviations if any: | | | | NIL | |



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Rail Coach Factory , Kapurthala

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|--------------------|---|---------------------------------------|------------------------------------|--------------------|--------------|-----------------------|----------------------|--------------------|--------------|-----------|
| 12. | Bogie Details: | | Shell No. | Railway | Type | Coach No. | Dispatch Date | | | |
| | | | 4011 | NR | LWSCZAC | 143176 | 14-05-14 | | | |
| 12.1 | Wheel & Axle Details: | | PP Side | | | | NPP Side | | | |
| | i. | Bogie No. | 146377 | | | | 146402 | | | |
| | ii. | Frame No. | FIAT-3100 | | | | FIAT-3104 | | | |
| | iii. | Bolster No. | HEI-094 | | | | 173-HEI | | | |
| | iv. | Axle No. | RWF-110235 | | W-4518 | | T-4558 | | RWF-110280 | |
| | v. | Wheel Dia. | 917.00 | 917.00 | 916.00 | 916.00 | 917.00 | 917.00 | 916.00 | 916.00 |
| | vi. | Wheel Disc No. | 061-50788 | 056-51910 | 159-62321 | 026-63309 | 140-51908 | 128-51915 | 006-63302 | 129-63301 |
| | vii. | R.B. Nos. | 12477 | 07265 | 08383 | 07707 | 92172 | 12475 | 03672 | 77308 |
| | viii. | R.B. Make | SKF | | SKF | | SKF | | SKF | |
| | ix. | RB Type | UIC CARTRIDGE TAPER ROLLER BEARING | | | | | | | |
| 12.2 | Secondary suspension load deflection Values: | | | | | | | | | |
| Description | | Secondary 1 | | Secondary 2 | | Secondary 1 | | Secondary 2 | | |
| | | Outer | Inner | Outer | Inner | Outer | Inner | Outer | Inner | |
| i. | Make & nos. | DN-3-13-2064 | G-11-12-4103 | DN-3-13-2856 | G-11-12-4081 | DN-12-11-2756 | G-13-5-5208 | DN-12-11-2777 | G-13-5-5052 | |
| ii. | Ht. attest load | 505 | 466 | 505 | 466 | 504 | 465 | 502 | 466 | |
| iii. | Align .deviation | 13 | 27 | 14 | 29 | 19 | 20 | 22 | 19 | |
| 12.3 | Items traceability: | | | | | | | | | |
| | Sno. | Item | PP Side Bogie | | | NPP side Bogie | | Make | | |
| | i. | Primary Outer Spring | L&S-02-13 | | | L&S-02-13 | | L&S | | |
| | ii. | Primary inner Spring | L&S-05-12 | | | L&S-05-12 | | L&S | | |
| | iii. | Primary Damper | | | | | | SACHS | | |
| | iv. | Secondary damper | | | | | | GEREP | | |
| | v. | Lateral Damper | | | | | | SACHS | | |
| | vi. | Yaw Damper | | | | | | NIL | | |
| | vii. | Brake cylinder & Caliper | | | | | | KBI | | |
| | viii. | Brake Disc | | | | | | FTI | | |
| | ix. | Ball joint Control arm | | | | | | SGA | | |
| | x. | Lateral Bump stop | | | | | | GMT | | |
| | xi. | Traction center make | | | | | | SARITA | | |
| | xii. | Traction lever make | | | | | | SARITA | | |
| | xiii. | Ball joint traction lever | | | | | | SGA | | |
| | xiv. | Traction centre elastic | | | | | | GMT | | |
| | xv. | Secondary rubber pad | | | | | | TESPAK | | |
| | xvi. | Rubber spring | | | | | | GMT | | |
| | xvii. | Anti roll bar make | | | | | | SARITA | | |
| | xviii. | Ball joint roll link | | | | | | SARITA | | |
| | xix. | Fork make | | | | | | EMSON | | |
| 12.4 | i. | Modification / Trial (if any): | | | | NIL | | | | |
| | ii. | Deviations (if any): | | | | NIL | | | | |

LWSCZAC-4011



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory , Kapurthala

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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

| | | | | | | | |
|-----|---|--------------------------------|--|--------------------------------|---------------------|------------------|------------|
| 1. | SHELL No. | 4003 | DISPATCH DATE | | | 06.9.2014 | |
| 2. | Railway | NR | Type | LWSCZAC | Coach No. | 143167 | |
| 3. | Booked to | SSE/C&W/NDLS | | | | | |
| 4. | Tare Weight of Coach | 40.28 T | | | | | |
| 5. | Carrying Capacity | Seating | 78 | Sleeping | NIL | Luggage | NIL |
| 6. | Shell Details: (LW90023 alt 'a', LE90009 alt 'nil', LD9009 alt 'b') | | | | | | |
| | 6.1 | Leading Dimensions: | | | | | |
| | i) | Maximum length over Body | 23700+10/-0 mm | | | | |
| | ii) | Maximum width over Body | 3240-8/+0 mm, 3050 mm (LWSCZDAC) | | | | |
| | iii) | Max. Height From Rail Level | 4250 (LWACCN), 4039 (LWACCW, LS, LWSCN), 4366 (LWSCZDAC) | | | | |
| | iv) | Buffer/CBC Height | Specified : 1105 +0 /-15 mm | 1105 | 1105 | | |
| | v) | Buffer/CBC (Make) | ESCORTS | Fiba Device | NA | | |
| 7. | Air Brake Testing: | | Description | Specified | Observed | | |
| | 7.1 | Full Brake Application | Reduce pressure of BP from 5.0 to 3.4 kg/cm ² | 6 –10 sec | 6 Sec | | |
| | | | Max Pressure in BC | 3.00 ± 0.15 Kg/cm ² | 3.00 | | |
| | | | All Brake are applied | OK | OK | | |
| | 7.2 | Insensitivity | Exhaust BP @ 0.3 kg/cm ² /min | No brake application | OK | | |
| | 7.3 | Sensitivity | Exhaust BP @ 0.1 kg/cm ² /Sec, After 02 Sec. | Brake must apply | OK | | |
| 8. | PAINTING DEATAILS: | | TYPE OF PAINT | MAKE | AVERAGE GLOSS VALUE | | |
| | 8.1 | PAINT | PU PAINT | VIBGYOR | 85.6/86.5 | | |
| | 8.2 | APPLICATION OF PCN-123 | SATISFACTORY | | | | |
| | 8.3 | INSUALTION | SATISFACTORY | | | | |
| 9. | Traceability of Furnishing Items: | | | | Make | | |
| | i. | BRAKE EQUIPMENT | | KBI | | | |
| | iii. | CDTS | | AMIT | | | |
| | iv. | SEAT & BERTH | | SUTLEJ | | | |
| | v. | BODY SIDE DOORS | | JBM | | | |
| | vi. | SALOON COMPTT DOORS | | KALSI | | | |
| | vii. | VESTIBULE SLIDING DOOR | | JBM | | | |
| | viii. | WATER TANKS | | AMIT, E C BLADES | | | |
| | ix | UIC VESTIBULE | | KRP | | | |
| | x | LUGGAGE RACK | | HANSPAL | | | |
| 10. | | | | | | | |
| | 10.1 | Modification / Trail (if any): | | | NIL | | |
| | 10.2 | Deviations if any: | | | NIL | | |



रेल डिब्बा कारखाना, कपूरथला
Rail Coach Factory , Kapurthala

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| 12. | Bogie Details: | | Shell No. | | Railway | | Type | | Coach No. | | Dispatch Date | |
| | | | 4033 | | NR | | LWSCZAC | | 143167 | | 24-05-14 | |
| 12.1 | Wheel & Axle Details: | | PP Side | | | | | | NPP Side | | | |
| | i. | Bogie No. | 146471 | | | | | | 146470 | | | |
| | ii. | Frame No. | FIAT-3157 | | | | | | FIAT-3168 | | | |
| | iii. | Bolster No. | 141-HEI | | | | | | 011-HEI | | | |
| | iv. | Axle No. | RWF-109664 | | | RWF-109953 | | | RWF-109587 | | RWF-110350 | |
| | v. | Wheel Dia. | 915.00 | 915.00 | 915.00 | 915.00 | 916.00 | 916.00 | 915.00 | 915.00 | | |
| | vi. | Wheel Disc No. | 237-51912 | 173-51915 | 07745/00198 | 07756/0010 | 021-63309 | 315-63305 | 244-51916 | 244-51915 | | |
| | vii. | R.B. Nos. | 91619 | 77320 | 77311 | 35961 | 77142 | 12054 | 06924 | 06907 | | |
| | viii. | R.B. Make | SKF | | | SKF | | | SKF | | SKF | |
| | ix. | RB Type | UIC CARTRIDGE TAPER ROLLER BEARING | | | | | | | | | |
| 12.2 | Secondary suspension load deflection Values: | | | | | | | | | | | |
| Description | | Secondary 1 | | Secondary 2 | | Secondary 1 | | Secondary 2 | | | | |
| | | Outer | Inner | Outer | Inner | Outer | Inner | Outer | Inner | | | |
| i. | Make & nos. | BPS-2013-20 | BPS-2013-124 | BPS-2013-110 | BPS-2013-094 | BPS-2013-83 | BPS-2013-9 | BPS-2013-75 | BPS-2013-86 | | | |
| ii. | Ht. attest load | 507 | 464 | 507 | 465 | 507 | 463 | 507 | 467 | | | |
| iii. | Align .deviation | 7 | 18 | 6 | 17 | 12 | 30 | 11 | 27 | | | |
| 12.3 | Items traceability: | | | | | | | | | | | |
| | S no. | Item | | | PP Side Bogie | | | NPP side Bogie | | | Make | |
| | i. | Primary Outer Spring | | | BPS-2013 | | | BPS-2013 | | | BPS | |
| | ii. | Primary inner Spring | | | BPS-2013 | | | BPS-2013 | | | BPS | |
| | iii. | Primary Damper | | | | | | | | | GEREP | |
| | iv. | Secondary damper | | | | | | | | | GEREP | |
| | v. | Lateral Damper | | | | | | | | | GEREP | |
| | vi. | Yaw Damper | | | | | | | | | NIL | |
| | vii. | Brake cylinder & Caliper | | | | | | | | | KBI | |
| | viii. | Brake Disc | | | | | | | | | KBI | |
| | ix. | Ball joint Control arm | | | | | | | | | SGA | |
| | x. | Lateral Bump stop | | | | | | | | | GMT | |
| | xi. | Traction center make | | | | | | | | | SARITA | |
| | xii. | Traction lever make | | | | | | | | | SARITA | |
| | xiii. | Ball joint traction lever | | | | | | | | | SGA | |
| | xiv. | Traction centre elastic | | | | | | | | | GMT | |
| | xv. | Secondary rubber pad | | | | | | | | | TESPAK | |
| | xvi. | Rubber spring | | | | | | | | | GMT | |
| | xvii. | Anti roll bar make | | | | | | | | | SARITA | |
| | xviii. | Ball joint roll link | | | | | | | | | SARITA | |
| | xix. | Fork make | | | | | | | | | EMSON | |
| 12.4 | i. | Modification / Trial (if any): | | | | | | | | | | NIL |
| | ii. | Deviations (if any): | | | | | | | | | | NIL |

LWSCZAC-4003