



**ROLLING STOCK CERTIFICATE**

Form No. : QMF 9454; Version: 1

|      |   |                        |  |                         |                                |                    |
|------|---|------------------------|--|-------------------------|--------------------------------|--------------------|
| 1.   | SHELL No.   | 4010                   | DISPATCH DATE  |                         |                                | <b>30.6.2014</b>   |
| 2.   | Railway   | SECR                   | Type   | <b>LS3</b>              | Coach No.                      | <b>14403</b>       |
| 3.   | Booked to   | <b>SSE/C&amp;W/BSP</b> |  |                         |                                |                    |
| 4.   | Tare Weight of Coach  | <b>40.665 T</b>        |  |                         |                                |                    |
| 5.   | Carrying Capacity   | Seating                | 100  | <b>Sleeping</b>         | <b>NIL</b>                     | Luggage <b>NIL</b> |
| 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 )  |                        | <b>FAIVELEY</b>  | <b>Fiba Device</b>      | <b>NA</b>                      |                    |
| 7.   | Air Brake Testing:  |                        | Description  |                         | Specified                      | Observed           |
| 7.1  | Full Brake Application  |                        | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> |                         | 6 –10 sec                      | 6 Sec              |
|      |   |                        | Max Pressure in BC                                       |                         | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00               |
|      |   |                        | All Brake are applied                                    |                         | OK                             | OK                 |
| 7.2  | Insensitivity   |                        | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |                         | No brake application           | OK                 |
| 7.3  | Sensitivity   |                        | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |                         | Brake must apply               | OK                 |
| 8.   | PAINTING DEATAILS:  |                        | TYPE OF PAINT  | MAKE                    | AVERAGE GLOSS VALUE            |                    |
| 8.1  | PAINT   |                        | <b>PU PAINT</b>  | <b>GS</b>               | <b>87</b>                      |                    |
| 8.2  | APPLICATION OF PCN-123  |                        | <b>SATISFACTORY</b>                                      |                         |                                |                    |
| 8.3  | INSUALTION  |                        | <b>SATISFACTORY</b>                                      |                         |                                |                    |
| 9.   | Traceability of Furnishing Items:                                   |                        |  | Make                    |                                |                    |
| I    | BRAKE EQUIPMENT   |                        |  | <b>FAIVELEY</b>         |                                |                    |
| li   | SEAT & BERTH  |                        |  | <b>MOHAN</b>            |                                |                    |
| lii  | BODY SIDE DOORS   |                        |  | <b>JBM &amp; SUKATA</b> |                                |                    |
| lv   | WATER TANKS   |                        |  | <b>RUBICON</b>          |                                |                    |
| v    | FLOOR BOARD   |                        |  | <b>TAYAL</b>            |                                |                    |
| vi   | PVC FLOORING  |                        |  | <b>RESPONSIVE</b>       |                                |                    |
| vii  | LP SHEETS   |                        |  | <b>NA</b>               |                                |                    |
| 10.  |   |                        |  |                         |                                |                    |
| 10.1 | Modification / Trail (if any):                                      |                        |  |                         | NIL                            |                    |
| 10.2 | Deviations if any:  |                        |  |                         | NIL                            |                    |



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|      |  |                                |                                    |             |             |               |             |                |             |             |               |  |
|------|--|--------------------------------|------------------------------------|-------------|-------------|---------------|-------------|----------------|-------------|-------------|---------------|--|
| 12.  | Bogie Details:                               |                                | Shell No.                          |             | Railway     |               | Type        |                | Coach No.   |             | Dispatch Date |  |
|      |  |                                | 4010                               |             | SECR        |               | LS3         |                | 14403/C     |             | 21-05-14      |  |
| 12.1 | Wheel & Axle Details:                        |                                | PP Side                            |             |             |               |             |                | NPP Side    |             |               |  |
|      | i.   | Bogie No.                      | 146458                             |             |             |               |             |                | 146459      |             |               |  |
|      | ii.  | Frame No.                      | FIAT-3160                          |             |             |               |             |                | FIAT-2934   |             |               |  |
|      | iii.   | Bolster No.                    | 3150-GT                            |             |             |               |             |                | 3844-P      |             |               |  |
|      | iv.  | Axle No.                       | W-4717                             |             |             | RWF-110110    |             |                | RWF-109909  |             | RWF-109239    |  |
|      | v.   | Wheel Dia.                     | 915.00                             | 915.00      | 916.00      | 916.00        | 916.00      | 916.00         | 915.50      | 915.50      |               |  |
|      | vi.  | Wheel Disc No.                 | 131-63309                          | 626-63305   | 107-63309   | 341-63309     | 244-63307   | 207-63302      | 128-63301   | 344-63307   |               |  |
|      | vii.   | R.B. Nos.                      | 77188                              | 77341       | 06880       | 12404         | 12405       | 91689          | 12287       | 12277       |               |  |
|      | 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.                                  |                                | G-13-12-183                        | G-13-12-217 | G-13-12-182 | G-13-12-400   | G-13-12-259 | G-13-12-231    | G-13-12-184 | G-13-12-375 |               |  |
| ii.  | Ht. attest load                              |                                | 513                                | 468         | 514         | 470           | 512         | 471            | 514         | 470         |               |  |
| iii. | Align .deviation                             |                                | 3                                  | 17          | 4           | 19            | 3           | 19             | 5           | 19          |               |  |
| 12.3 | Items traceability:                          |                                |                                    |             |             |               |             |                |             |             |               |  |
|      | S no.  | Item                           |                                    |             |             | PP Side Bogie |             | NPP side Bogie |             | Make        |               |  |
|      | i.   | Primary Outer Spring           |                                    |             |             | G-13-11       |             | G-13-11        |             | GF          |               |  |
|      | ii.  | Primary inner Spring           |                                    |             |             | G-13-11       |             | G-13-11        |             | GF          |               |  |
|      | iii.   | Primary Damper                 |                                    |             |             |               |             |                |             | GEREP       |               |  |
|      | iv.  | Secondary damper               |                                    |             |             |               |             |                |             | GEREP       |               |  |
|      | v.   | Lateral Damper                 |                                    |             |             |               |             |                |             | GEREP       |               |  |
|      | vi.  | Yaw Damper                     |                                    |             |             |               |             |                |             | NIL         |               |  |
|      | vii.   | Brake cylinder & Caliper       |                                    |             |             |               |             |                |             | FTI         |               |  |
|      | 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           |             |                |             |             |               |  |



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|      |   |  |  |                    |                                |                  |            |
|------|---|--|--|--------------------|--------------------------------|------------------|------------|
| 1.   | SHELL No.   | 4001   | DISPATCH DATE  |                    |                                | <b>17.7.2014</b> |            |
| 2.   | Railway   | SECR   | Type   | <b>LS3</b>         | Coach No.                      | <b>14404</b>     |            |
| 3.   | Booked to   | <b>SSE/C&amp;W/BSP</b>                                   |  |                    |                                |                  |            |
| 4.   | Tare Weight of Coach  | <b>40.665 T</b>  |  |                    |                                |                  |            |
| 5.   | Carrying Capacity   | Seating  | 100  | <b>Sleeping</b>    | <b>NIL</b>                     | Luggage          | <b>NIL</b> |
| 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 )  | <b>FAIVELEY</b>  |  | <b>Fiba Device</b> | <b>NA</b>                      |                  |            |
| 7.   | Air Brake Testing:  |  | Description  |                    | Specified                      | Observed         |            |
| 7.1  | Full Brake Application  |  | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> |                    | 6 –10 sec                      | 6 Sec            |            |
|      |   |  | Max Pressure in BC                                       |                    | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00             |            |
|      |   |  | All Brake are applied                                    |                    | OK                             | OK               |            |
| 7.2  | Insensitivity   |  | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |                    | No brake application           | OK               |            |
| 7.3  | Sensitivity   |  | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |                    | Brake must apply               | OK               |            |
| 8.   | PAINTING DEATAILS:  |  | TYPE OF PAINT  | MAKE               | AVERAGE GLOSS VALUE            |                  |            |
| 8.1  | PAINT   |  | <b>PU PAINT</b>  | <b>GS</b>          | <b>86/89</b>                   |                  |            |
| 8.2  | APPLICATION OF PCN-123  |  | <b>SATISFACTORY</b>                                      |                    |                                |                  |            |
| 8.3  | INSUALTION  |  | <b>SATISFACTORY</b>                                      |                    |                                |                  |            |
| 9.   | Traceability of Furnishing Items:                                   |  |  | Make               |                                |                  |            |
| I    | BRAKE EQUIPMENT   |  |  | <b>FAIVELEY</b>    |                                |                  |            |
| ii   | SEAT & BERTH  |  |  | <b>MOHAN</b>       |                                |                  |            |
| lii  | BODY SIDE DOORS   |  |  | <b>SUKATA, JBM</b> |                                |                  |            |
| lv   | WATER TANKS   |  |  | <b>RUBICON</b>     |                                |                  |            |
| v    | FLOOR BOARD   |  |  | <b>TAYAL</b>       |                                |                  |            |
| 10.  |   |  |  |                    |                                |                  |            |
| 10.1 | Modification / Trail (if any):                                      |  |  |                    | NIL                            |                  |            |
| 10.2 | Deviations if any:  |  |  |                    | NIL                            |                  |            |



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|                    |   |                                       |                                    |                    |                      |                    |                       |                    |                  |           |                      |  |
|--------------------|---|---------------------------------------|------------------------------------|--------------------|----------------------|--------------------|-----------------------|--------------------|------------------|-----------|----------------------|--|
| 12.                | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |                    | <b>Railway</b>       |                    | <b>Type</b>           |                    | <b>Coach No.</b> |           | <b>Dispatch Date</b> |  |
|                    |   |                                       | 4001                               |                    | SECR                 |                    | LSCN                  |                    | 14404/C          |           | 29-05-14             |  |
| 12.1               | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                    |                      |                    |                       |                    | <b>NPP Side</b>  |           |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 146460                             |                    |                      |                    |                       |                    | 146461           |           |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-3167                          |                    |                      |                    |                       |                    | FIAT-3150        |           |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 3835-P                             |                    |                      |                    |                       |                    | 3856-P           |           |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | RWF-109603                         |                    |                      | RWF-109760         |                       |                    | W-4570           |           | W-4635               |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 915.00                             | 915.00             | 916.00               | 916.00             | 917.00                | 917.00             | 916.00           | 916.00    |                      |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 160-63307                          | 112-63309          | 169-63305            | 327-63302          | 065-63307             | 061-63305          | 028-63305        | 320-63302 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 40628                              | 40837              | 40982                | 40698              | 06887                 | 91536              | 03707            | 40571     |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |                    |                      | SKF                |                       |                    | SKF              |           | SKF                  |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                    |                      |                    |                       |                    |                  |           |                      |  |
| 12.2               | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |                    |                      |                    |                       |                    |                  |           |                      |  |
| <b>Description</b> |   | <b>Secondary 1</b>                    |                                    | <b>Secondary 2</b> |                      | <b>Secondary 1</b> |                       | <b>Secondary 2</b> |                  |           |                      |  |
|                    |   | <b>Outer</b>                          | <b>Inner</b>                       | <b>Outer</b>       | <b>Inner</b>         | <b>Outer</b>       | <b>Inner</b>          | <b>Outer</b>       | <b>Inner</b>     |           |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | CMFSK-2-14-96                         | CMFSK-2-14-99                      | CMFSK-2-14-5101    | CMFSK-2-14-5100      | CMFSK-2-14-5101    | CMFSK-2-14-5100       | CMFSK-2-14-5101    | CMFSK-2-14-5100  |           |                      |  |
| ii.                | <b>Ht. attest load</b>                              | 514                                   | 470                                | 515                | 469                  | 511                | 468                   | 512                | 471              |           |                      |  |
| iii.               | <b>Align .deviation</b>                             | 7                                     | 8                                  | 10                 | 4                    | 6                  | 6                     | 6                  | 6                |           |                      |  |
| 12.3               | <b>Items traceability:</b>                          |                                       |                                    |                    |                      |                    |                       |                    |                  |           |                      |  |
|                    | <b>S no.</b>  | <b>Item</b>                           |                                    |                    | <b>PP Side Bogie</b> |                    | <b>NPP side Bogie</b> |                    | <b>Make</b>      |           |                      |  |
|                    | i.  | Primary Outer Spring                  |                                    |                    | CMFSK-02-14          |                    | CMFSK-02-14           |                    | CMFSK            |           |                      |  |
|                    | ii.   | Primary inner Spring                  |                                    |                    | CMFSK-02-14          |                    | CMFSK-02-14           |                    | CMFSK            |           |                      |  |
|                    | iii.  | Primary Damper                        |                                    |                    |                      |                    |                       |                    | GEREP            |           |                      |  |
|                    | iv.   | Secondary damper                      |                                    |                    |                      |                    |                       |                    | GEREP            |           |                      |  |
|                    | v.  | Lateral Damper                        |                                    |                    |                      |                    |                       |                    | GEREP            |           |                      |  |
|                    | vi.   | Yaw Damper                            |                                    |                    |                      |                    |                       |                    | NIL              |           |                      |  |
|                    | vii.  | Brake cylinder & Caliper              |                                    |                    |                      |                    |                       |                    | FTI              |           |                      |  |
|                    | 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             |                                    |                    |                      |                    |                       |                    | GMT              |           |                      |  |
|                    | xiv.  | Traction centre elastic               |                                    |                    |                      |                    |                       |                    | SGA              |           |                      |  |
|                    | xv.   | Secondary rubber pad                  |                                    |                    |                      |                    |                       |                    | TESPAK           |           |                      |  |
|                    | xvi.  | Rubber spring                         |                                    |                    |                      |                    |                       |                    | GMT              |           |                      |  |
|                    | xvii.   | Anti roll bar make                    |                                    |                    |                      |                    |                       |                    | EMSON            |           |                      |  |
|                    | xviii.  | Ball joint roll link                  |                                    |                    |                      |                    |                       |                    | SARITA           |           |                      |  |
|                    | xix.  | Fork make                             |                                    |                    |                      |                    |                       |                    | EMSON            |           |                      |  |
| 12.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |                    |                      |                    | NIL                   |                    |                  |           |                      |  |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                    |                      |                    | NIL                   |                    |                  |           |                      |  |



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|      |   |             |  |  |                                |                     |          |
|------|---|-------------|--|--|--------------------------------|---------------------|----------|
| 1.   | SHELL No.   | 4003        | DISPATCH DATE  |  |                                | 18.7.2014           |          |
| 2.   | Railway   | SECR        | Type   | LS3  | Coach No.                      | 14407               |          |
| 3.   | Booked to   | SSE/C&W/BSP |  |  |                                |                     |          |
| 4.   | Tare Weight of Coach  | 40.665 T    |  |  |                                |                     |          |
| 5.   | Carrying Capacity   | Seating     | 100  | 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 )  |             | FAIVELEY   |  | 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 <sup>2</sup> |  | 6 –10 sec                      |                     | 6 Sec    |
|      |   |             | Max Pressure in BC                                       |  | 3.00 ± 0.15 Kg/cm <sup>2</sup> |                     | 3.00     |
|      |   |             | All Brake are applied                                    |  | OK                             |                     | OK       |
| 7.2  | Insensitivity   |             | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |  | No brake application           |                     | OK       |
| 7.3  | Sensitivity   |             | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |  | Brake must apply               |                     | OK       |
| 8.   | PAINTING DEATAILS:  |             | TYPE OF PAINT  |  | MAKE                           | AVERAGE GLOSS VALUE |          |
| 8.1  | PAINT   |             | PU PAINT   |  | GS                             | 87/87               |          |
| 8.2  | APPLICATION OF PCN-123  |             | SATISFACTORY   |  |                                |                     |          |
| 8.3  | INSUALTION  |             | SATISFACTORY   |  |                                |                     |          |
| 9.   | Traceability of Furnishing Items:                                   |             |  |  |                                | Make                |          |
| i    | BRAKE EQUIPMENT   |             |  | FAIVELEY   |                                |                     |          |
| ii   | SEAT & BERTH  |             |  | MOHAN  |                                |                     |          |
| iii  | BODY SIDE DOORS   |             |  | JBM  |                                |                     |          |
| iv   | WATER TANKS   |             |  | RUBICON  |                                |                     |          |
| v    | FLOOR BOARD   |             |  | OVPL   |                                |                     |          |
| vi   | PVC FLOORING  |             |  | RESPONSIVE   |                                |                     |          |
| vii  | LP SHEETS   |             |  | PUNJAB LAMINATES   |                                |                     |          |
| 10.  |   |             |  |  |                                |                     |          |
| 10.1 | Modification / Trail (if any):                                      |             |  |  | NIL                            |                     |          |
| 10.2 | Deviations if any:  |             |  |  | NIL                            |                     |          |



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Rail Coach Factory , Kapurthala

|                    |   |                                       |                                    |             |                      |             |             |                       |                  |           |                      |  |
|--------------------|---|---------------------------------------|------------------------------------|-------------|----------------------|-------------|-------------|-----------------------|------------------|-----------|----------------------|--|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |             | <b>Railway</b>       |             | <b>Type</b> |                       | <b>Coach No.</b> |           | <b>Dispatch Date</b> |  |
|                    |   |                                       | 4003                               |             | SECR                 |             | LS3         |                       | 14407/C          |           | 20-05-14             |  |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |             |                      |             |             |                       | <b>NPP Side</b>  |           |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 146456                             |             |                      |             |             |                       | 146457           |           |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-3123                          |             |                      |             |             |                       | FIAT-2370        |           |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 3582-P                             |             |                      |             |             |                       | 3197-GT          |           |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | RWF-109288                         |             |                      | RWF-110296  |             |                       | RWF-109829       |           | RWF-109682           |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 916.00                             | 916.00      | 916.00               | 916.00      | 915.00      | 915.00                | 916.00           | 916.00    |                      |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 263-63305                          | 088-63307   | 260-63307            | 098-63307   | 300-51912   | 016-50840             | 080-63307        | 679-62321 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 12046                              | 03789       | 12062                | 03778       | 77360       | 12585                 | 06980            | 07010     |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |             |                      | SKF         |             |                       | SKF              |           | SKF                  |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |             |                      |             |             |                       |                  |           |                      |  |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |             |                      |             |             |                       |                  |           |                      |  |
| <b>Description</b> |   | Secondary 1                           |                                    | Secondary 2 |                      | Secondary 1 |             | Secondary 2           |                  |           |                      |  |
|                    |   | Outer                                 | Inner                              | Outer       | Inner                | Outer       | Inner       | Outer                 | Inner            |           |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | G-12-13-137                           | G-12-13-401                        | G-12-13-194 | G-12-13-411          | G-12-13-262 | G-12-13-379 | G-12-13-268           | G-12-13-405      |           |                      |  |
| ii.                | <b>Ht. attest load</b>                              | 512                                   | 469                                | 513         | 470                  | 515         | 470         | 514                   | 470              |           |                      |  |
| iii.               | <b>Align .deviation</b>                             | 3                                     | 17                                 | 2           | 17                   | 5           | 18          | 4                     | 16               |           |                      |  |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                       |                                    |             |                      |             |             |                       |                  |           |                      |  |
| <b>S no.</b>       |   | <b>Item</b>                           |                                    |             | <b>PP Side Bogie</b> |             |             | <b>NPP side Bogie</b> |                  |           | <b>Make</b>          |  |
| i.                 | Primary Outer Spring                                |                                       |                                    | G-13-11     |                      |             | G-13-11     |                       |                  | GF        |                      |  |
| ii.                | Primary inner Spring                                |                                       |                                    | G-13-11     |                      |             | G-13-11     |                       |                  | GF        |                      |  |
| 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                                  |                                       |                                    |             |                      |             |             |                       |                  | EMSON     |                      |  |
| xviii.             | Ball joint roll link                                |                                       |                                    |             |                      |             |             |                       |                  | SARITA    |                      |  |
| xix.               | Fork make   |                                       |                                    |             |                      |             |             |                       |                  | EMSON     |                      |  |
| 12.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |             |                      | NIL         |             |                       |                  |           |                      |  |
| 12.4               | ii.   | <b>Deviations (if any):</b>           |                                    |             |                      | NIL         |             |                       |                  |           |                      |  |



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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|      |   |  |  |                         |                                |                    |
|------|---|--|--|-------------------------|--------------------------------|--------------------|
| 1.   | SHELL No.   | 4008   | DISPATCH DATE  |                         |                                | <b>21.7.2014</b>   |
| 2.   | Railway   | SECR   | Type   | <b>LS3</b>              | Coach No.                      | <b>14405</b>       |
| 3.   | Booked to   | <b>SSE/C&amp;W/BSP</b>                                   |  |                         |                                |                    |
| 4.   | Tare Weight of Coach  | <b>40.665 T</b>  |  |                         |                                |                    |
| 5.   | Carrying Capacity   | Seating  | 100  | <b>Sleeping</b>         | <b>NIL</b>                     | Luggage <b>NIL</b> |
| 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 )  | <b>FAIVELEY</b>  |  | <b>Fiba Device</b>      | <b>NA</b>                      |                    |
| 7.   | Air Brake Testing:  |  | Description  |                         | Specified                      | Observed           |
| 7.1  | Full Brake Application  |  | Reduce pressure of BP from 5.0 to 3.4 kg/cm <sup>2</sup> |                         | 6 –10 sec                      | 6 Sec              |
|      |   |  | Max Pressure in BC                                       |                         | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00               |
|      |   |  | All Brake are applied                                    |                         | OK                             | OK                 |
| 7.2  | Insensitivity   |  | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |                         | No brake application           | OK                 |
| 7.3  | Sensitivity   |  | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |                         | Brake must apply               | OK                 |
| 8.   | PAINTING DEATAILS:  |  | TYPE OF PAINT  | MAKE                    | AVERAGE GLOSS VALUE            |                    |
| 8.1  | PAINT   |  | <b>PU PAINT</b>  | <b>GS</b>               | <b>86/87</b>                   |                    |
| 8.2  | APPLICATION OF PCN-123  |  | <b>SATISFACTORY</b>                                      |                         |                                |                    |
| 8.3  | INSUALTION  |  | <b>SATISFACTORY</b>                                      |                         |                                |                    |
| 9.   | Traceability of Furnishing Items:                                   |  |  | Make                    |                                |                    |
| I    | BRAKE EQUIPMENT   |  |  | <b>FAIVELEY</b>         |                                |                    |
| ii   | SEAT & BERTH  |  |  | <b>MOHAN</b>            |                                |                    |
| lii  | BODY SIDE DOORS   |  |  | <b>JBM, SUKATA</b>      |                                |                    |
| lv   | WATER TANKS   |  |  | <b>RUBICON</b>          |                                |                    |
| v    | FLOOR BOARD   |  |  | <b>OVPL</b>             |                                |                    |
| Vi   | PVC FLOORING  |  |  | <b>RESPONSIVE</b>       |                                |                    |
| vii  | LP SHEETS   |  |  | <b>PUNJAB LAMINATES</b> |                                |                    |
| 10.  |   |  |  |                         |                                |                    |
| 10.1 | Modification / Trail (if any):                                      |  |  |                         | NIL                            |                    |
| 10.2 | Deviations if any:  |  |  |                         | NIL                            |                    |



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|                    |   |                                       |                                    |                     |                     |                      |                     |                       |                     |                     |                      |  |
|--------------------|---|---------------------------------------|------------------------------------|---------------------|---------------------|----------------------|---------------------|-----------------------|---------------------|---------------------|----------------------|--|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |                     | <b>Railway</b>      |                      | <b>Type</b>         |                       | <b>Coach No.</b>    |                     | <b>Dispatch Date</b> |  |
|                    |   |                                       | 4008                               |                     | SECR                |                      | LS3                 |                       | 14405               |                     | 03-06-14             |  |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |                     |                     |                      |                     |                       | <b>NPP Side</b>     |                     |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 146492                             |                     |                     |                      |                     |                       | 146493              |                     |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-2913                          |                     |                     |                      |                     |                       | FIAT-3165           |                     |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 3837-P                             |                     |                     |                      |                     |                       | 3707-VT             |                     |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | RWF-110565                         |                     |                     | RWF-110637           |                     |                       | RWF-110173          |                     | RWF-109646           |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 918.00                             | 918.00              | 918.00              | 917.50               | 918.00              | 918.00                | 917.00              | 917.00              |                      |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 003-63309                          | 231-63305           | 055-51908           | 062-51912            | 218-63305           | 129-63309             | 089-63309           | 152-63309           |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 06922                              | 91978               | 11290               | 92017                | 40611               | 92030                 | 03700               | 97159               |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | SKF                                |                     |                     | SKF                  |                     |                       | SKF                 |                     | SKF                  |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |                     |                     |                      |                     |                       |                     |                     |                      |  |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |                     |                     |                      |                     |                       |                     |                     |                      |  |
| <b>Description</b> |   | Secondary 1                           |                                    | Secondary 2         |                     | Secondary 1          |                     | Secondary 2           |                     |                     |                      |  |
|                    |   | Outer                                 | Inner                              | Outer               | Inner               | Outer                | Inner               | Outer                 | Inner               |                     |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              |                                       | CMFSK-02-14-5101-16                | CMFSK-02-14-5100-15 | CMFSK-02-14-5101-97 | CMFSK-02-14-5100-19  | CMFSK-02-14-5101-42 | CMFSK-02-14-5100-113  | CMFSK-02-14-5101-41 | CMFSK-02-14-5100-37 |                      |  |
| ii.                | <b>Ht. attest load</b>                              |                                       | 511.50                             | 471                 | 512                 | 471                  | 513                 | 469                   | 514.50              | 468                 |                      |  |
| iii.               | <b>Align .deviation</b>                             |                                       | 5                                  | 6                   | 9                   | 7                    | 6                   | 4                     | 8                   | 6                   |                      |  |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                       |                                    |                     |                     |                      |                     |                       |                     |                     |                      |  |
|                    | <b>S no.</b>  | <b>Item</b>                           |                                    |                     |                     | <b>PP Side Bogie</b> |                     | <b>NPP side Bogie</b> |                     | <b>Make</b>         |                      |  |
|                    | i.  | Primary Outer Spring                  |                                    |                     |                     | CMFSK-2-14           |                     | CMFSK-2-14            |                     | CMFSK               |                      |  |
|                    | ii.   | Primary inner Spring                  |                                    |                     |                     | CMFSK-2-14           |                     | CMFSK-2-14            |                     | CMFSK               |                      |  |
|                    | iii.  | Primary Damper                        |                                    |                     |                     |                      |                     |                       |                     | GEREP               |                      |  |
|                    | iv.   | Secondary damper                      |                                    |                     |                     |                      |                     |                       |                     | GEREP               |                      |  |
|                    | v.  | Lateral Damper                        |                                    |                     |                     |                      |                     |                       |                     | GEREP               |                      |  |
|                    | 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.  | <b>Modification / Trial (if any):</b> |                                    |                     |                     | NIL                  |                     |                       |                     |                     |                      |  |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |                     |                     | NIL                  |                     |                       |                     |                     |                      |  |





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ROLLING STOCK CERTIFICATE

Form No. : QMF 9454; Version: 1

|      |   |             |  |  |                                |                     |     |
|------|---|-------------|--|--|--------------------------------|---------------------|-----|
| 1.   | SHELL No.   | 4011        | DISPATCH DATE  |  |                                | 11.7.2014           |     |
| 2.   | Railway   | SEC         | Type   | LS3  | Coach No.                      | 14406               |     |
| 3.   | Booked to   | SSE/C&W/BSP |  |  |                                |                     |     |
| 4.   | Tare Weight of Coach  | 40.665 T    |  |  |                                |                     |     |
| 5.   | Carrying Capacity   | Seating     | 100  | 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 )  |             | FAIVELEY   |  | 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 <sup>2</sup> |  | 6 –10 sec                      | 6 Sec               |     |
|      |   |             | Max Pressure in BC                                       |  | 3.00 ± 0.15 Kg/cm <sup>2</sup> | 3.00                |     |
|      |   |             | All Brake are applied                                    |  | OK                             | OK                  |     |
| 7.2  | Insensitivity   |             | Exhaust BP @ 0.3 kg/cm <sup>2</sup> /min                 |  | No brake application           | OK                  |     |
| 7.3  | Sensitivity   |             | Exhaust BP @ 0.1 kg/cm <sup>2</sup> /Sec, After 02 Sec.  |  | Brake must apply               | OK                  |     |
| 8.   | PAINTING DEATAILS:  |             | TYPE OF PAINT  |  | MAKE                           | AVERAGE GLOSS VALUE |     |
| 8.1  | PAINT   |             | PU PAINT   |  | GS                             | 86/87               |     |
| 8.2  | APPLICATION OF PCN-123  |             | SATISFACTORY   |  |                                |                     |     |
| 8.3  | INSUALTION  |             | SATISFACTORY   |  |                                |                     |     |
| 9.   | Traceability of Furnishing Items:                                   |             |  | Make   |                                |                     |     |
| i    | BRAKE EQUIPMENT   |             |  | FAIVELEY   |                                |                     |     |
| ii   | SEAT & BERTH  |             |  | MOHAN  |                                |                     |     |
| iii  | BODY SIDE DOORS   |             |  | JBM & SUKATA   |                                |                     |     |
| iv   | WATER TANKS   |             |  | RUBICON & RAIL FAB                                       |                                |                     |     |
| v    | FLOOR BOARD   |             |  | OVPL   |                                |                     |     |
| vi   | PVC FLOORING  |             |  | RESPONSIVE   |                                |                     |     |
| vii  | LP SHEETS   |             |  | PUNJAB LAMINATES   |                                |                     |     |
| 10.  |   |             |  |  |                                |                     |     |
| 10.1 | Modification / Trail (if any):                                      |             |  |  | NIL                            |                     |     |
| 10.2 | Deviations if any:  |             |  |  | NIL                            |                     |     |



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|                    |   |                                       |                                    |             |                      |             |                       |                 |                  |           |                      |  |
|--------------------|---|---------------------------------------|------------------------------------|-------------|----------------------|-------------|-----------------------|-----------------|------------------|-----------|----------------------|--|
| <b>12.</b>         | <b>Bogie Details:</b>                               |                                       | <b>Shell No.</b>                   |             | <b>Railway</b>       |             | <b>Type</b>           |                 | <b>Coach No.</b> |           | <b>Dispatch Date</b> |  |
|                    |   |                                       | 4011                               |             | SEC                  |             | LS3                   |                 | 14406/C          |           | 24-06-2014           |  |
| <b>12.1</b>        | <b>Wheel &amp; Axle Details:</b>                    |                                       | <b>PP Side</b>                     |             |                      |             |                       | <b>NPP Side</b> |                  |           |                      |  |
|                    | i.  | <b>Bogie No.</b>                      | 146550                             |             |                      |             |                       | 146551          |                  |           |                      |  |
|                    | ii.   | <b>Frame No.</b>                      | FIAT-3201                          |             |                      |             |                       | FIAT-3106       |                  |           |                      |  |
|                    | iii.  | <b>Bolster No.</b>                    | 099-VTC/ASR                        |             |                      |             |                       | 3933-P          |                  |           |                      |  |
|                    | iv.   | <b>Axle No.</b>                       | 126293/474                         |             | 128618/989           |             | 128837/990            |                 | 127970/988       |           |                      |  |
|                    | v.  | <b>Wheel Dia.</b>                     | 915.50                             | 915.50      | 916.00               | 916.00      | 917.00                | 917.00          | 915.50           | 915.50    |                      |  |
|                    | vi.   | <b>Wheel Disc No.</b>                 | 281-11611                          | 327-63309   | 141-10583            | 204-10583   | 148-63302             | 222-10559       | 006-10583        | 051-10582 |                      |  |
|                    | vii.  | <b>R.B. Nos.</b>                      | 34570                              | 34305       | 34259                | 34248       | 00190                 | 00022           | 34222            | 34589     |                      |  |
|                    | viii.   | <b>R.B. Make</b>                      | TIMKEN                             |             | TIMKEN               |             | TIMKEN                |                 | TIMKEN           |           |                      |  |
|                    | ix.   | <b>RB Type</b>                        | UIC CARTRIDGE TAPER ROLLER BEARING |             |                      |             |                       |                 |                  |           |                      |  |
| <b>12.2</b>        | <b>Secondary suspension load deflection Values:</b> |                                       |                                    |             |                      |             |                       |                 |                  |           |                      |  |
| <b>Description</b> |   | Secondary 1                           |                                    | Secondary 2 |                      | Secondary 1 |                       | Secondary 2     |                  |           |                      |  |
|                    |   | Outer                                 | Inner                              | Outer       | Inner                | Outer       | Inner                 | Outer           | Inner            |           |                      |  |
| i.                 | <b>Make &amp; nos.</b>                              | G12-3-176                             | G12-3-179                          | G12-3-257   | G12-3-184            | G12-3-175   | G12-3-319             | G12-3-165       | G12-3-171        |           |                      |  |
| ii.                | <b>Ht. attest load</b>                              | 513                                   | 471                                | 515         | 471                  | 514         | 471                   | 513             | 471              |           |                      |  |
| iii.               | <b>Align .deviation</b>                             | 5                                     | 16                                 | 5           | 14                   | 3           | 18                    | 4               | 19               |           |                      |  |
| <b>12.3</b>        | <b>Items traceability:</b>                          |                                       |                                    |             |                      |             |                       |                 |                  |           |                      |  |
| <b>S no.</b>       |   | <b>Item</b>                           |                                    |             | <b>PP Side Bogie</b> |             | <b>NPP side Bogie</b> |                 | <b>Make</b>      |           |                      |  |
| i.                 | Primary Outer Spring                                |                                       |                                    | G-13-11     |                      | G-13-11     |                       | GF              |                  |           |                      |  |
| ii.                | Primary inner Spring                                |                                       |                                    | G-13-11     |                      | G-13-11     |                       | GF              |                  |           |                      |  |
| iii.               | Primary Damper                                      |                                       |                                    |             |                      |             |                       | KONI            |                  |           |                      |  |
| iv.                | Secondary damper                                    |                                       |                                    |             |                      |             |                       | GEREP           |                  |           |                      |  |
| v.                 | Lateral Damper                                      |                                       |                                    |             |                      |             |                       | SACHS           |                  |           |                      |  |
| vi.                | Yaw Damper  |                                       |                                    |             |                      |             |                       | NIL             |                  |           |                      |  |
| vii.               | Brake cylinder & Caliper                            |                                       |                                    |             |                      |             |                       | FTI             |                  |           |                      |  |
| 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                           |                                       |                                    |             |                      |             |                       | GMT             |                  |           |                      |  |
| xiv.               | Traction centre elastic                             |                                       |                                    |             |                      |             |                       | SGA             |                  |           |                      |  |
| xv.                | Secondary rubber pad                                |                                       |                                    |             |                      |             |                       | TESPAK          |                  |           |                      |  |
| xvi.               | Rubber spring                                       |                                       |                                    |             |                      |             |                       | GMT             |                  |           |                      |  |
| xvii.              | Anti roll bar make                                  |                                       |                                    |             |                      |             |                       | EMSON           |                  |           |                      |  |
| xviii.             | Ball joint roll link                                |                                       |                                    |             |                      |             |                       | SARITA          |                  |           |                      |  |
| xix.               | Fork make   |                                       |                                    |             |                      |             |                       | SARITA          |                  |           |                      |  |
| 12.4               | i.  | <b>Modification / Trial (if any):</b> |                                    |             |                      | NIL         |                       |                 |                  |           |                      |  |
|                    | ii.   | <b>Deviations (if any):</b>           |                                    |             |                      | NIL         |                       |                 |                  |           |                      |  |