

**506. Proforma for measurement of Coach Involved in Accident:**

Note: Details regarding all derailed vehicles should be given except:-

1. (i) Where vehicles have derailed due to locomotive derailment.  
(ii) When the obvious or indisputable cause is sabotage or an obstruction on the track or broken axle or wheel.
2. Particulars for each derailed vehicle should be given in one sheet. Information against columns Nos.(5), (6), (7), (14), (50) and (51) should invariably be given for adjacent coaches on the same sheet.
3. Front and Rear, left (L) and Right (R) are with respect to direction of movement.
4. For an obvious case of derailment such as a broken axle, spring dropping off on run, and/or some part of undergear hanging loose and causing obstruction, only relevant particulars need to be filled..
5. Relevant details of adjacent vehicles should also be given if cause of derailment is not apparent.

| S.No. | Date of incident & Time | Train No. | Details of BPC along with the name of station where issued and Engineer (C & W) who issued it. | Coach No. | Type | Tare in tones | carrying capacity in tones |
|-------|-------------------------|-----------|--|-----------|------|---------------|----------------------------|
| 1     | 2                       | 3         | 4  | 5         | 6    | 7             | 8                          |
|       |                         |           |  |           |      |               |                            |

| Built date | Return date | POH details | Station |    | Position from engine<br>From      To | Wheel gauge in mm (to be measure at three locations) measured in empty condition at the horizontal plane passing through the centre of the axle. |
|------------|-------------|-------------|---------|----|--------------------------------------|--|
|            |             |             | From    | To |                                      |  |
| 9          | 10          | 11          | 12      | 13 | 14                                   | 15   |
|            |             |             |         |    |                                      |  |

|                         |                      |                |
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**506. Proforma for measurement of Coach Involved in Accident (Continued):**

| Wheel diameter |   | Any indication of bent axle or wheel having shifted on axle | Wheel and axle face particulars<br>(in case of breakage of any wheel/axle) |   | Stamping particulars on wheel disc regarding manufacturer/ RA/RD (in case of breakage of any wheel/axle) | Observations after measuring the profile with wheel defect gauge (Good/Rejectable) |    |
|----------------|---|---|--|---|--|--|----|
| Measurement    | Record whether below condemning size(Yes/ No) |   | Axle face particulars  | Ultrasonic particulars of the hub of the disc |  | L  | R  |
| 16 (i)         | 16 (ii)                                       | 17  | 18   | 19  | 20   | 21   | 22 |
|                |   |   | 1L   | 1L  | 1L   |  |    |
|                |   |   | 1R   | 1R  | 1R   |  |    |
|                |   |   | 2L   | 2L  | 2L   |  |    |
|                |   |   | 2R   | 2R  | 2R   |  |    |
|                |   |   | 3L   | 3L  | 3L   |  |    |
|                |   |   | 3R   | 3R  | 3R   |  |    |
|                |   |   | 4L   | 4L  | 4L   |  |    |
|                |   |   | 4R   | 4R  | 4R   |  |    |

| Roller bearing (To be recorded in case of any abnormalities observed in Roller bearing/Axle Box) |                               |  |  |
|--|-------------------------------|--|--|
| Condition of axle box, rear and front covers/end cap (FIAT)                                      | Condition of face cover plate | Condition of bearing seal & studs/locking plate and bolts (FIAT) | Condition of Roller Bearing and its components |
| 23   | 24                            | 25   | 26   |

| Spring and Spring Gear  |   |   |   |                              |                                       |                               |
|---|---|---|---|------------------------------|---------------------------------------|-------------------------------|
| Condition of Coil suspension spring i.e. Normal/Fractured (old/fresh) | Condition of Rubber spring i.e. Normal/Creaked including length of crack (for LHB only) | Condition of Air Spring including leakage in piping | Deflected height of primary and secondary Coil spring after re-railing on a level uncharted track | Vertical clearance (for ICF) |                                       |                               |
|   |   |   |   | Crown clearance in mm        | Bogie frame – Bolster clearance in mm | Body – Bogies frame clearance |
| 27  | 28  | 29  | 30  | 31                           | 32                                    | 33                            |
|   |   |   |   |                              |                                       |                               |

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**506. Proforma for measurement of Coach Involved in Accident (continued):**

|  |  |
|--|--|
| Condition of Rubber Disc and Bump Stop of Primary Suspension (for LHB) | Height of Bogie Bolster base plate from rail level (for LHB) |
| 34   | 35   |
|  |  |

| Condition of Bogie Components |  |                                    |   |
|-------------------------------|--|------------------------------------|---|
| Condition of Hanger (for ICF) | Condition of Equalizing Stay (for ICF) | Condition of Anchor Link (for ICF) | Condition of Control Arm, Rubber element and Bore (for LHB) |
| 36                            | 37                                     | 38                                 | 39  |
|                               |  |                                    |   |

| Damping System   |                                |                                      |
|--|--------------------------------|--------------------------------------|
| Condition of Axle Guide Cum Dash Pot including Oil level (for ICF) | Condition of Hydraulic Dampers | Condition of Anti Roll Bar (for LHB) |
| 40   | 41                             | 42                                   |
|  |                                |                                      |

| System of Bogie Rotation and Clearances                                |   |  |   |  | Condition of Grounding cables, Wheel Slip Protection (WSP), and Speed sensor (for LHB) | Condition of Brake Gear Assembly |
|--|---|--|---|--|--|----------------------------------|
| Condition of Centre Pivot including verticality of Pivot Pin (for ICF) | Condition of Side Bearer including Oil level and Wear (for ICF) | Condition of Longitudinal/ Lateral flexibility of Secondary Spring (for LHB) | Clearance between Traction Centre and Longitudinal/ Lateral Bump Stop (for LHB) | Remarks regarding free movement of bolster and pivot and their condition |  |                                  |
| 43   | 44  | 45   | 46  | 47   | 48   | 49                               |
|  |   |  |   |  |  |                                  |

| Buffer/Coupler height (to be taken on a level uncharted track after uncoupling and re-railing) (in mm) | Condition of Side Buffers Working, dead, drooping, entanglement. | Details of broken parts giving location w.r.t. point of mount and derailment and whether breakage considered due to accident. | Any other defect in the vehicles which may have contributed to or caused the derailment such as condition of coupler, draft gear pocket, shearing plates etc. | List of Damages to the Coach due to accident | Other Observations considered relevant to derailment |
|--|--|---|---|--|--|
| Front  | Rear   |   |   |  |  |
| 50   | 51   | 52  | 53  | 54   | 55   |
|  |  |   |   |  | 56   |

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### **506 Proforma for measurement of Coach Involved in Accident (Continued):**

- Note:**
1. The wheel gauge is to be measured at the horizontal plane passing through the centre of Axle.
  2. The wheel profile is to be checked with tyre defect gauge only (Ref:- IRC A PT. IV Rule no. 2.95, 3.2.2 and 54.22.1, Plate No. 45 to 53).
  3. Measurement of item no. 5 of opening note, item no. 24, item nos. 28-49, item no. 54 and item no. 56 shall be done as per site condition.

#### **506.1 Measurement Table for Wagon Involved in Accident:**

**Note:** Details regarding all derailed vehicles should be given except:-

1. (i) Where vehicles have derailed due to locomotive derailment.  
(ii) When the obvious and indisputable cause is sabotage or an obstruction on track.
2. Front and rear and left (L) and right (R) are with respect to direction of movement.
3. For an obvious cause of derailment such as broken axle, spring dropping off the run, and/or some part of under gear hanging loose and causing obstruction, only relevant particulars need be filled..
4. Particulars for each derailing vehicle should be given in one sheet. Information against columns (5), (6), (8), (16), (17), (21), (22) should invariably be given for adjacent wagons on the same sheet.
5. Relevant details of adjacent vehicles should also be given if the cause of derailment is not apparent.

| S.No . | Date of Incident & Time | Train No. | Details of BPC along with the name of station from where it is issued and of engineer (C&W) who issued | Wagon No. | Type | Mech. Code | Tare in Tonnes | Carrying capacity and axle load | Built Date |
|--------|-------------------------|-----------|--|-----------|------|------------|----------------|---------------------------------|------------|
| 1      | 2                       | 3         | 4  | 5         | 6    | 7          | 8              | 9                               | 10         |
|        |                         |           |  |           |      |            |                |                                 |            |

| Return Date | POH Particulars |      | ROH Particulars |       | Payload in Tonnes |                       | Commodity loaded and remarks regarding uneven loading (give sketch for details of uneven loading) |
|-------------|-----------------|------|-----------------|-------|-------------------|-----------------------|---|
|             | Date            | Shop | Date            | Depot | From Labels       | From Actual Weighment |   |
| 11          | 12              | 13   | 14              | 15    | 16                | 17                    | 18  |
|             |                 |      |                 |       |                   |                       |   |

|                         |                      |                |
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**506.1 Measurement Table for Wagon Involved in Accident: (Continued..)**

| Station |    | Position from Engine | Buffer/ Coupler height  |
|---------|----|----------------------|---|
| From    | To |                      | Measure Buffer/Coupler height<br>after uncoupling &re-railing on uncanted level track)<br>Record whether there is buffer entanglement<br>(Yes/No) |
| 19      | 20 | 21                   | 22  |
|         |    | End 1L               |   |
|         |    | End 1R               |   |
|         |    | End 2L               |   |
|         |    | End 2R               |   |

| WHEEL AND AXLE FACE PARTICULARS(In case of breakage of wheel/axle) |   |   |   |
|--|---|---|---|
| Axle face particulars  | Ultrasonic particulars on the hub of the disc | Stamping particulars on wheel disc regarding Manufacturer/RA/RD | Wheel diameter Measurement<br>Record whether below condemning size (Yes/No) |
| 23   | 24  | 25  | 26  |
|  |   |   |   |

| Wheel gauge in mm *(taken at three places) | Observation after measuring the profile with tyre defect gauge (Good/Rejectable)** |             |              |               |             |             |           |
|--|--|-------------|--------------|---------------|-------------|-------------|-----------|
| 27   | 28   |             |              |               |             |             |           |
| 1  |  | Thin flange | Sharp flange | Worn out root | Deep flange | Hollow tyre | Flat tyre |
|  | 1L   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
| 2  | 1R   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
|  | 2L   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
| 3  | 2R   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
|  | 3L   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
| 4  | 3R   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
|  | 4L   |             |              |               |             |             |           |
|  |  |             |              |               |             |             |           |
|  | 4R   |             |              |               |             |             |           |

Note:

1. The wheel gauge is to be measured at the horizontal plane passing through the centre of the axle.
2. The wheel profile is to be checked with tyre defect gauge only (Ref:- IRCA PT. III Rule no. 3.2.2(d) and 4.18.1, Plate No. 57 to 66)

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**506.1 Measurement Table for Wagon Involved in Accident: (Continued..)**

| Roller bearing<br>(To be recorded in case of any abnormalities observed in Roller bearing/ Axle Box) |                                     |  |
|--|-------------------------------------|--|
| Condition of face cover plate  | Condition of locking plates & studs | Condition of roller bearing and its components |
| 29   | 30                                  | 31   |
|  |                                     |  |

| Axe box (for IRS stock/UIC)<br>(To be recorded only when failure of plain bearing is involved as a cause) |                            |                         |                      |   |
|---|----------------------------|-------------------------|----------------------|---|
| Brass thickness mm.   | Condition of box and brass | Condition of sole plate | Condition of journal | Clearance between brass and collar of journal in (mm) |
| 32  | 33                         | 34                      | 35                   | 36  |
|   |                            |                         |                      |   |

| Axe guard (for IRS/UIC stock)                             |   |   |                             |
|---|---|---|-----------------------------|
| Lateral clearance between axle box and axle guard in (mm) | Whether axle guard can work clear of axle box | Are the axle guard bent or otherwise damaged to prevent free movement of axle box | Remark regarding bridle bar |
| 37  | 38  | 39  | 40                          |
|   |   |   |                             |

| Clearances for Casnub Bogie (Corresponding measurements to be taken for IRS/UIC Bogie) |  |   |  |
|--|--|---|--|
| Type of Bogie  | Lateral clearance between side frame & bolster in mm | Lateral clearance between side frame & axle box adopter in mm | Longitudinal clearance between side frame & axle box adopter in mm |
| 41   | 42   | 43  | 44   |
|  |  |   |  |

| Spring and Spring Gear  |  |  |   |  |  |   |
|---|--|--|---|--|--|---|
| Any Broken/cracked/missing/clearance of shackle and shackle pin and general condition (for UIC/IRS) | Thickness of packing plate under spring seat in mm | Remarks whether and spring eye touches sole bar(for laminated spring only) | Condition of suspension springs i.e. normal, broken/fresh and old fractured or deformities occurred after derailment due to sudden impact | Camber Free Camber of all springs, in mm after re-railing on a level uncanted track (for laminated spring only and for coil springs) | Deflected height of coil spring after re-railing on level, uncanted track (for Casnub) | Condition of elastomeric pad above adaptor (for Casnub) |
| 45  | 46   | 47   | 48  | 49   | 50   | 51  |
|   |  |  |   |  |  |   |

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| SSE/SE(C&W)             | Supervisor (Traffic) | SSE/SE (P.Way) |
|                         |                      |                |

**506.1 Measurement Table for Wagon Involved in Accident: (Continued..)**

| Bogie   |   |   |
|---|---|---|
| Condition of Centre Pivot including lubrication and wear (for Casnub) | Condition of Side Bearer including Vertical clearance at side bearers (for stock having clearance type side bearers only) | Condition of Friction Snubber Wedge Assembly (for Casnub) |
| 52  | 53  | 54  |
|   |   |   |

| Whether a load is placed on more than one wagon | Any other defects in vehicle which may have contributed to or caused the derailment | Details of broken parts giving location w.r.t. point of mount and drop | List of damages to the wagon due to accident | Other observations* |
|---|---|--|--|---------------------|
| 55  | 56  | 57   | 58   | 59                  |
|   |   |  |  |                     |

Note- Measurement of Item 3, 4 & 5 of opening note, item **42,43,44,46,47,49,50,56 & 59** will be done as per site condition

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