

I/72892/2025



भारत सरकार – रेल मंत्रालय
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No. EL/11.5.5/21

Dated: As signed

Principal Chief Electrical Engineers,

- Central Railway, HQs Office, 2nd floor, Parcel Office Bldg., Mumbai – 400 001.
- East Central Railway, Hajipur (Bihar) – 844 101.
- Eastern Railway, Fairlie Place, Kolkata – 700 001.
- East Coast Railway, Railway Complex, Bhubaneswar – 751 023.
- Northern Railway, Baroda House, New Delhi – 110 001.
- North Central Railway, Allahabad – 211 001.
- North Eastern Railway, Gorakhpur – 273 001.
- North Frontier Railway, Maligaon, Guwahati – 781012.
- North Western Railway, Jaipur- 302 006.
- Southern Railway, Park Town, Chennai – 600 003
- South Central Railway, HQs Office, Rail Nilayam, Secunderabad – 500 071
- South Eastern Railway, Garden Reach, Kolkata – 700 043
- South East Central Railway, Bilaspur – 495 004
- South Western Railway, Hubli – 580 020
- West Central Railway, HQs Office, Opp. Indira Market, Jabalpur – 482 001
- Western Railway, Churchgate, Mumbai – 400 020
- Banaras Locomotive Works, Varanasi – 221 004
- Patiala Locomotive Works, Patiala – 147 003.
- Chittaranjan Locomotive Works, Chittaranjan – 713 331.

Modification Sheet No. RDSO/2024/EL/MS/0505 (Rev. '1')**1.0 Title:**

Acknowledgment method of VCD through hand operated push-button switch to eliminate possibility of rhythmic operation of foot operated switch.

2.0 Brief History:

- 2.1** The Railway Board, vide their letter no. 2023/Elect.(TRS)/440/7(3435196) dated 12.06.2024, had directed RDSO to explore an alternative acknowledgment scheme for the Vigilance Control Device (VCD) to eliminate the possibility of rhythmic operation of the foot-operated switch. In response, a modification sheet no. RDSO/2024/EL/MS/0505 (Rev. '0') dated 02/12/2024 was issued vide RDSO letter no. EL/11.5.5/21 dated 04.12.2024 for the acknowledgment method using a mushroom-head, hand-operated push-button switch (BPVG) has been issued for conventional and three-phase electric locomotives. This step aims to eliminate the risk associated with the rhythmic operation of the foot switch after incorporating feedback from Zonal Railways.

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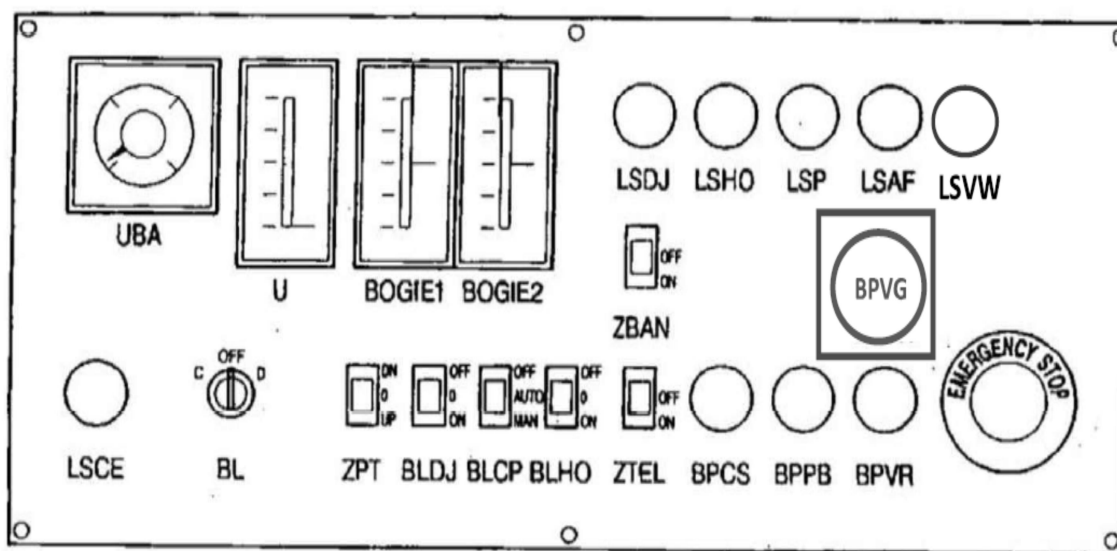
- 2.2** Vide Railway Board, letter no. 2009/Elect(TRS)/441/6 Dated: 09.02.2025, RDSO has been advised to review the location of the push button used in Vande Bharat and Diesel locomotives and take feedback from crew operating freight and coaching services for formulating recommendations. Further, feedback/comments/suggestions regarding the location of the BPVG push button in three phase electric locomotives to ensure the alertness of Loco Pilots without causing undue inconvenience were sought vide RDSO letter no. EL/11.5.5/21 dated 12.02.2025.
- 2.3** Most ZRs suggested placing the BPVG switch on the driver's desk, closer to the Master Controller (Angle transmitter). Positioning the BPVG switch beside the angle transmitter left-hand side makes it easier to locate and operate. Since the BPVG is a mushroom-type switch rather than a push-button, it does not require only finger use. This allows the Loco Pilot to acknowledge the VCD without diverting attention from the track and signal ahead.
- 2.4** Based on feedback/comments/suggestion received from ZRs, the existing modification sheet no. RDSO/2024/EL/MS/0505 (Rev. '0') has been reviewed and modification sheet No. RDSO/2024/EL/MS/0505 (Rev. '1') finalized as under.

3.0 Objective:

To eliminate possibility of rhythmic operation of foot operated switch (PVCD) by making Loco Pilots more vigilant without causing undue inconvenience.

4.0 Existing arrangement:

In the existing scheme VCD is being acknowledged by foot operated switch (PVCD).

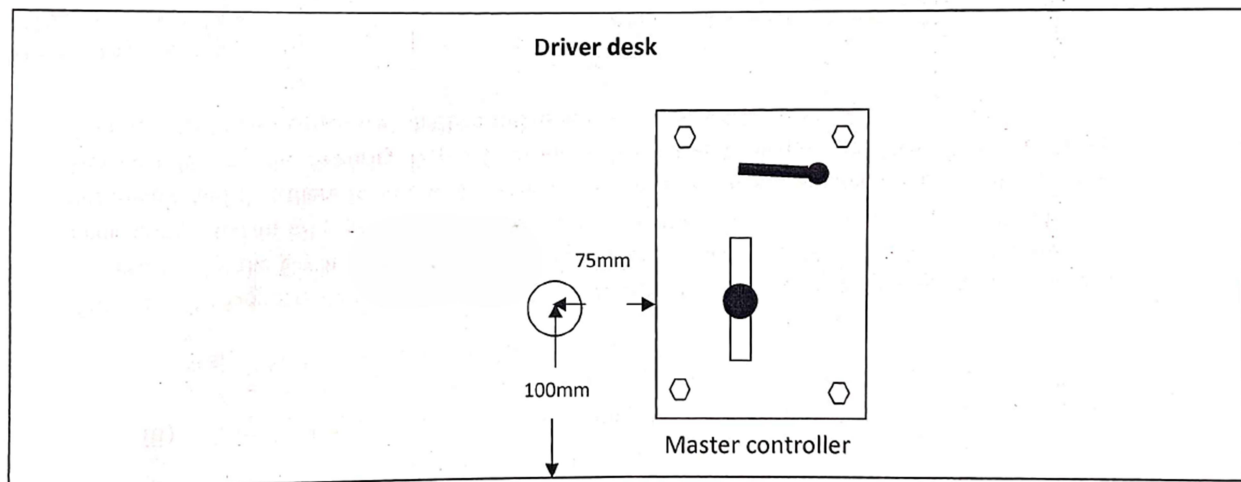


Existing arrangement as per MS 505 Rev. '0'

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5.0 Modified Scheme:

- i. **For Three-phase electric locomotives:** attached at Annexure-I.
 - a. In the modified Scheme foot operated switch (PVCD) will be removed.
 - b. LSVW is to be restored back to its original position, as it was previously shifted to the vacant space on the right hand side of LSAF in the existing scheme (Rev. '0').
 - c. New hand operated mushroom head push button switch (BPVG) to be removed from 'A' panel (as per existing scheme (Rev.'0')) and to be provided in the horizontal plane of driver desk nearer to Angle transmitter.
 - d. Existing BPVR switch having single NO interlock to be provided with one additional NO interlock i.e. total two NO interlock for both cabs.

**Proposed location for three-phase locomotives****Modifications steps:**

- a) Remove existing PVCD switch and related cable to be tapped both side.

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- b) Remove LSVW lamp from designated place on panel 'A' besides LSAF (as per existing scheme Rev.'0') and provide LSVW at panel 'A' in its original location.
- c) Remove the mushroom head push-button switch (BPVG) from the Panel 'A' (as per existing scheme Rev.'0') and provide BPVG in horizontal plane of driver desk near to angle transmitter. Provide 3 wires in Cab 1 from panel 'F' to BPVG in driver desk (4211A, 4218, 4218) and 3 cables also in Cab 2 from panel 'F' to panel 'A' (4211B, 4218, 4218). Connect additional cables 4211A, 4218 on NO Interlock (13-14) of BPVG. Existing connection may be shifted from Panel 'A' BPVG switch to Driver desk BPVG switch.
- d) Remove the BPVR push-button switch with single NO interlock and provide a new push-button switch (BPVR) with one additional NO interlock (i.e. two NO interlock) in same place on panel 'A'. Connect wire no. 4211A/4211B and 4234 on BPVR push-button switch NO interlock (13-14) and connect wire no. 4211A/4211B and 4218 on BPVR push-button switch additional NO interlock in Cab1/Cab2 respectively.

ii. For Conventional electric locomotives:

In the modified scheme foot operated switch will be removed and mushroom headed push button switch will remain in driver desk near MP (Master Controller) handle to acknowledge VCD. The switch should be prominently marked.

6.0 Material required:

- i. 1.5 sq. mm control cable – As per required length.
- ii. 02 numbers Mushroom Headed Push Button Switch. (Type: Mushroom head push button of front dimension of 40mm and cut out of 22.5mm & Blue color of approved makes by CLW/CRJ).
- iii. 02 numbers push button switch only for three-phase electric locomotives. (Type: Existing BPVR with two NO interlock).

7.0 Material Render Surplus:

- i. Foot operated Switch (PVCD) 02 numbers. (Both three-phase and conventional locomotives).
- ii. BPVR switch 02 numbers (single NO interlock) only in three-phase electric locomotives.

8.0 Reference:

- i. Railway Board letter no. 2023/Elect.(TRS)/440/7(3435196) dated 12.06.2024.
- ii. Railway Board letter no. 2009/Elect(TRS)/441/6 Dated: 09.02.2025.

9.0 Application to the class of locomotive:

All Three-phase and Conventional Electric Locomotives.

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10.0 Agency of Implementation:

All PUs, POH Shops, Electric Loco Sheds holding 3-Phase and Conventional Electric Locomotives.

11.0 Periodicity of Implementation:

Commissioning, POH, all major and minor schedules.

12.0 Instruction for Loco Pilots:

Attached as Annexure-II.

-sd-

Encl: Nil.

For **Director General (Elect.)**

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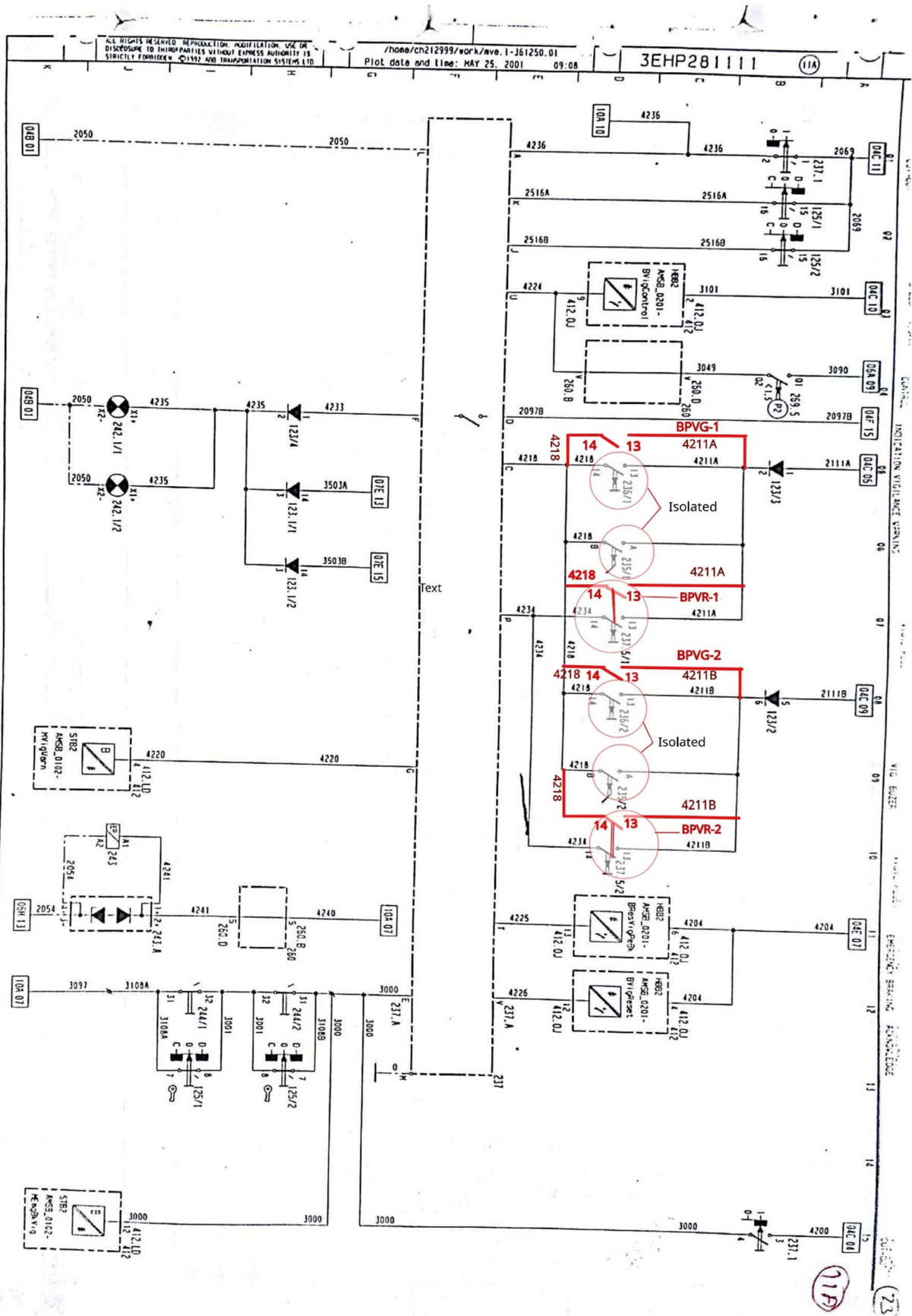
- Secretary (Electrical Engg./RS), Railway Board, Rail Bhawan, New Delhi-110 001:
(Kind attn.: Sh. Vikash Anand, DEE/RS): For kind information.

Encl: Nil.

For **Director General (Elect.)**

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Annexure-I



Annexure-II

➤ लोको पायलट के लिए निर्देश

लोको पायलट कृपया ध्यान दें

- इस लोको में विजिलेंस वार्निंग को एक्नॉलेज करने के लिए, ड्राइवर डेस्क के क्षैतिज तल में मशरूम हेड पुश-बटन स्विच (BPVG) प्रदान किया गया है
- लोको चालक कृपया विजिलेंस वार्निंग को एक्नॉलेज करने के लिए बीपीवीजी (BPVG) स्विच का उपयोग करें! विजिलेंस फुट स्विच पीवीसीडी (PVCD) को आइसोलेट कर दिया गया है और अब विजिलेंस वार्निंग फुट स्विच पीवीसीडी (PVCD) से एक्नॉलेज नहीं की जा सकेगी!
- यदि किसी तकनीकी कारण से विजिलेंस वार्निंग बीपीवीजी से एक्नॉलेज ना हो तो विजिलेंस वार्निंग को एक्नॉलेज करने के लिए बीपीवीआर (BPVR) पुश बटन का उपयोग करें! बीपीवीआर (BPVR) स्विच में बीपीवीजी (BPVG) स्विच की भी सुविधा जोड़ दी गई है जिससे लोको पायलट विजिलेंस वार्निंग को बीपीवीआर (BPVR) स्विच से भी एक्नॉलेज कर सकते हैं!

Loco Pilot Please Note

- In this loco, to acknowledge the vigilance warning, mushroom head push-button switch (BPVG) has been provided in horizontal plane of Driver desk.
- Loco Pilots should use the mushroom head push-button switch (BPVG) to acknowledge the vigilance warning. The vigilance foot switch (PVCD) has been isolated and now vigilance warning cannot be acknowledged by the foot switch (PVCD).
- In case, due to any technical reason the vigilance warning is not acknowledged by BPVG, then use BPVR switch to acknowledge the vigilance warning. The facility of BPVG switch has also been added in BPVR switch, so that the Loco Pilots can acknowledge the vigilance warning through BPVR switch.