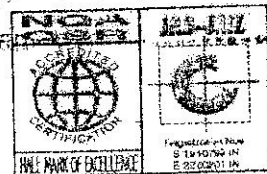


भारतीय रेल (रेल मंत्रालय)  
डीजल रेल इंजन कारखाना  
वाराणसी-२२१००४, भारत  
INDIAN RAILWAYS (MINISTRY OF RAILWAYS)  
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No. DLW/TOT/1690

Office of the CDE  
Dated: 16.01.13

**DESIGN BULLETIN**

1. **Design bulletin no.** DB/03/2013/01
2. **Subject** Issue of Failure of Inverter card of Air conditioning unit supplied by M/s DPG/USA.
3. **Background** Three cases of Inverter card of Air conditioner unit supplied by M/s DPG/USA has failed at DLW. One on WDP4B 40070 and two units on WDG4D 12681 at DLW.
4. **Objective** To issue the directive for welding on locomotive fitted on AC system.
5. **Details of study/ Investigation** Based on past experience, M/s DPG/USA has informed vide letter no. DPG/HVAC dated 31.12.2013 that they have observed random failure of Inverter due to welding.  
  
M/s Subros has also intimated that AC unit may get damaged if Arc Welding job is performed on any part of the locomotive body.
6. **Corrective action**
  1. Weld the mounting frame after removing HVAC and Gasket as present practice.
  2. Complete all the welding work to the cab before HVAC installation. It would be better to install the HVAC unit after welding of cab on locomotive frame.
  3. If any welding work is must to be done on the locomotive after installation of HVAC, please ensure the following:
    - a. Remove all power connections that are installed on HVAC.
    - b. Provide ground near the welding area and away from the direction of the HVAC.
    - c. Do not weld within 160mm of the HVAC as this could melt the gasket between the frame and the HVAC.
    - d. Sufficient time (15-30 minutes) should be allowed between disconnections and welding in

etc

order to provide discharge time for stored charges in capacitor/inductors of AC circuits.  
e. Keep welding cable at least 1 meter away from HVAC from all sides.

8. **Drg/Spec/Test plan/  
QP modified** NIL

9. **Implementation** To be implemented with immediate effect on all locomotives to be manufactured with Air conditioning Unit.

10. **Circulation** CME/P, CQAM, DY.CME/Loco, Dy. CME/Plg., WM/LAS, SQAM, AWM/Test, SSE/TAS, SSE/LAS

  
16.1.13  
Dy. Chief Design Engineer/EM