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भारत सरकार - रेल मंत्रालय  
अनुरागान अभिनवता और मानक संगठन  
लखनऊ - 226011  
Govt. of India - Ministry of Railways  
Research, Designs & Standards Organization,  
LUCKNOW - 226011

No. EL/11.5.5/21

Date: 07-08-2019

Principal Chief Electrical Engineer,  
Chittaranjan Locomotive Works,  
Chittaranjan - 713 331(WB).

Sub: Permission to download software package for improvement of M/s BTIPL make propulsion system.

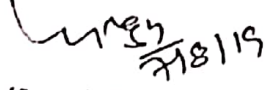
Ref: M/s BTIPL letter No. IR..RDSO.20190726.0166 dtd. 29.07.2019.

Vide ref. above, M/s BTIPL has requested for clearance to download the software for field trial in 5 locomotives - 2 locos at ELS/BRC & 3 locos at ELS/HWH.

The issue regarding approval of trial version and downloading of same by Electric Loco Sheds was deliberated in the Customer Meet held at DLW, Varanasi on 2/3.08.2019. As per discussion, it was decided that a new page will be created on CLW website where trial versions of different makes of software will be uploaded which can be accessed by concerned Loco Sheds nominated to carry out the software trial.

In view of above, please find enclosed the letter of M/s BTIPL referred above for needful action at your end. After the trial period is over, the performance report may be sent to RDSO for further necessary action.

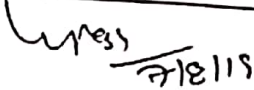
Encl: As above

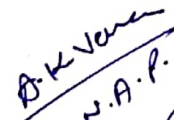
  
(Suresh Kumar)  
For Director General (Elect.)

Copy to:

M/s. Bombardier Transportation India Pvt. Ltd., ERDA Road, Maneja, Vadodara-390 013	(Kind Attn: Shri C. Ramanujam, Head of Business Improvement) It is requested to contact Dy. CEE/D&D/CLW.
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Encl: As above

  
(Suresh Kumar)  
For Director General (Elect.)

  
A.K. Verma  
R.N.A.P.  
  
28/08/19

Date: 29<sup>th</sup> July 2019

**BOMBARDIER**  
the evolution of mobility

TRANSPORTATION  
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No. IR..RDSO.20190726.0166

To,  
The Director Electrical  
Research Design & Standards Organization,  
Manak Nagar,  
Lucknow

Kind Attn. – Shri Suresh Kumar

**Sub:** Request for permission of download software package for improvement of Propulsion locomotive.

Dear Sir,

This is further to our investigations on failure of IGBTs of Hitachi make in BT traction converters used in 3 phase electric locos. We have been investigating the same with support from our principals in Europe. We have already commenced replacement of orifices in the coolant circuit of traction converters.

In addition to the above we also propose to improve the software to limit the impact of low coolant flow during the ramp up period of the auxiliary converter post the neutral section. This is implemented by the VCU ramping up the demanded tractive effort sent to the traction converter after the neutral section as a function of increase in the coolant pressure.

We request approval for downloading the software for field trials in 2 locos at Electric Loco Shed, Vadodara and 3 locos at Electric Loco Shed, Howrah.

Should you need any further clarification we would be glad to provide you the same.

Thanking & assuring you of our best attention at all times.

Yours sincerely,



C. Ramdnujam  
Head of Business Improvement