

Government of India  
Ministry of Railways  
(Railway Board)

S.No 141

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November 19, 2008  
20

The General Managers  
All Zonal Railways

Sub.: Examination of Container Trains.

As per directive of CRB, a Joint Action Plan has been prepared by Mechanical and Traffic Directorate of Railway Board to improve the availability and productivity of container rakes. This includes system of examination, commissioning, additional points for ROH, upgradation of rolling stock, maintenance by private parties, outsourcing of maintenance/repair activities etc. for container rakes. A copy of the Plan is enclosed.

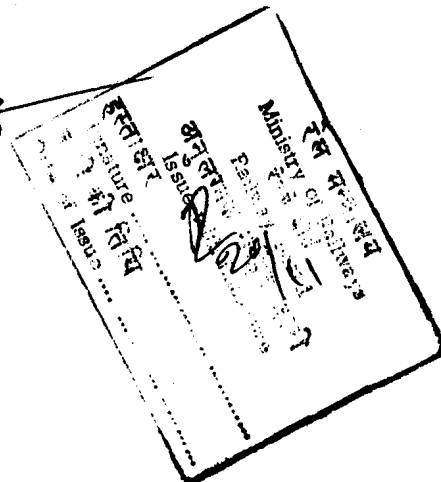
2. Zonal Railways should ensure immediate implementation of above mentioned Plan. Necessary infrastructure and other facilities as outlined in the Plan should also be provided so that quality of examination /repair of container trains is not compromised.

Encls.: As above (consisting of 7 pages).

(G.C. Budhalakoti)  
EDME(Frt.)

Copy to : 1. DG/RDSO/Lucknow – for necessary action on item 6 & 7 of the Action Plan.  
2. EDTT(M) & EDTT(F)/Railway Board.

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## **Examination of Container Trains (BLC/BLL Rakes)**

In order to improve availability and productivity of Container rakes system of examination, commissioning, ROH/POH of these rakes has been reviewed to standardize maintenance practices, minimize empty running and speedup maintenance/repair attention to these wagons by nominating additional points for examination and ROH of these rakes, provision of additional facilities for maintenance etc. Presently, out of nearly 230 rakes of BLC/BLL, about 35-40 rakes are 4500 km CC pattern being nearer to their ROH/POH. All such rakes will be upgraded and examined on 6000 km CC basis. This will bring uniformity in maintenance and also add to the availability of BLC rakes.

### **1.0 Additional points for examination of Container Trains**

- 1.1. As per Concession Agreement, all container trains are to be examined in train examination facilities to be provided by the Concessionaires inside their ICDs. However, ICDs of many operators are yet to be commissioned and thus container trains need to be examined at IR's train examination points also.
- 1.2 Presently 20 points have been nominated for examination of container trains, 13 inside ICDs (10 of M/s CONCOR and 1 each of M/s Adani, M/s Gateway & M/s CWC) and 7 in Railway Yards. In addition to these points, ZRs may henceforth undertake examination of container trains at Bondamunda (SER) also. A ZR wise summary of these 21 examination points is enclosed (**Annexure-1**).
- 1.3 All the 8 yard examination points mentioned above should be developed and provided with all necessary resources including infrastructural facilities, maintenance spares and staff etc. for examination of container trains. GM/DRM should provide these resources under their extant powers within two months.

### **2.0 Special Conditions for Examination of Container Trains (Close Circuit)**

- 2.1 All BLC rakes shall be based for intensive maintenance at a CC base depot, nominated by Board for examination of container trains. All intensive examinations of BLC rakes shall be done in empty condition i.e. without containers on the wagons.
- 2.2 All CC rakes shall be given intensive examination at their base depot after which fresh BPC shall be issued to these rakes, valid for 6000 km or 30 days, whichever is earlier. In case kilometers are not logged on BPC, the validity of BPC shall be for 15 days only from date of its issue (including the date of issue). The rake shall be returned back to its base depot with in validity of the BPC. The name of the base depot shall be clearly mentioned on the BPC. Route specific isolated cases, requiring more than 6000 km validity, shall be dealt by Board on case to case basis.

- 2.3 Infrastructure facilities at all points nominated for CC examination of container trains shall be upgraded to 'A' category (by ZRs in case the examination point is in the yard and by the concerned operator in case it is inside the ICD) on top priority within two months.
- 2.4 Till the facilities are upgraded to 'A' category, concerned DRMs (for points in Railway yards) and CTOs (for points inside ICDs) should ensure that proper lighting arrangement, material handling equipments, welding facilities etc. are made available at these points immediately by hiring (if not possible otherwise) so that quality of examination/repairs and safety is not compromised.
- 2.5 All rakes examined on CC pattern shall be subjected to safe to run examination by TXR (at TXR point) or by Guard & Driver (at other points) after every loading/un-loading. Such safe to run examination, will be followed by endorsement or revalidation of original BPC. In such safe to run examination only brake power, hanging parts and other defects, which can be noticed visually on wagon loaded with containers, shall be checked and given proper attention.
- 2.6 All CTOs shall monitor movement of their CC rakes and ensure that the rakes are worked back to their respective base depots before completion of stipulated kilometers/days limit.
- 2.7 All CTOs shall advise daily position of rake wise details of base, km and days since last examination to CRSE of the concerned ZR and Sr.DME of the concerned division through fax/e-mail. Rake wise record shall be maintained on day to day basis by the Divisional TXR control and also by the CC base depot. For this, CC base depot and TXR control in the divisions shall be provided with computer, fax machine, telephone & broadband connection in GM/DRM's powers.
- 2.8 Rakes with invalid BPC shall normally not be permitted to run in service. Further loading shall not be permitted in rakes with invalid BPC.
- 2.9 In case the BPC of CC rake becomes invalid due to completion or near completion of 6000 km or 30 days (15 days if km are not logged on BPC) after issue of last BPC, at other than its base depot, it shall be handled in the following manner:

**a. In empty condition (containers off loaded from wagons):**

Rake shall be offered at the nearest TXR point for intensive examination, where after examination its BPC will be revalidated for a period of 7 days, with endorsement on BPC by TXR that rake is safe to run upto its base depot. During this period of 7 days, one loading/unloading shall be permitted in the direction of CC base depot. The revalidation of BPC in above manner is permitted only once and rake shall be returned back to its CC base depot within this 6 days period. Else, the rake shall lose its CC character and will become normal end-to-end rake. Re-conversion of such end-to-end rakes to CC shall be permitted only after personal approval of CME and COM of the concerned ZR.

**b. In loaded condition (containers loaded on the wagons):**

Rake shall be offered at the nearest TXR point, for safe-to-run examination and endorsement on BPC by TXR that train is safe to run upto its destination. After unloading of consignment at destination, such potentially unsafe rake shall be offered at the nearest TXR point for safe to run examination and endorsement by TXR on BPC that the train is safe to run in unloaded condition upto its CC base depot. With containers loaded on wagon, shall be done only in case of extreme urgency with prior approval of COM & CME of the concerned Zonal Railway.

- 2.10 Container rakes detained for more than 24 hours at a TXR point, shall be subjected to safe to run examination and endorsement on BPC by TXR that rake is safe to run for the remaining validity period of BPC.
- 2.11 Besides special conditions mentioned herein above, with respect to examination and operation of container trains, all other instructions regarding maintenance of air braked freight stock and 6000 km CC rakes, issued from time to time, shall be observed.

**3.0 ROH of Container Wagons**

- 3.1 Presently ROH of BLC wagons is being undertaken at TKD/JUDW only. The ROH arising of container wagons from next year is going to exceed capacity of NR. Hence in order to avoid un-necessary movement of ROH wagons to TKD/NR, it is imperative to develop facilities of ROH on priority (under GM's powers) at additional points latest by 31.1.2009.
- 3.2 Requirement of ROH facilities for wagons, based on XI Plan projection, including container wagons, was examined by an EDs' Committee comprising of ED/Plg, EDTT/M, EDFX-I and EDME(Frt.). The report has been accepted by the Board (MM, MT & CRB) and accordingly, vide Board's letter No. 2005/M(N)/951/13 Pt Vol-I dated 14.8.2007 & 7.11.2007 Railways have been advised to develop facilities for ROH of BLC wagons at GIM and TNPM and augment capacity of TKD to meet additional requirement. These facilities should be developed on top priority.
- 3.3 Besides above mentioned points facilities for ROH of container wagons should also be developed at NH (for ER/SER/ECOR/SECR rakes) and GMC (for NCR rakes). Moreover, as facility for ROH at GIM may not be available before Year 2010-11, WR should in the meanwhile undertake ROH of BLC rakes of SBI/GIM/MD/Nagpur at Sabarmati ROH depot.
- 3.4 All necessary resources including infrastructural facilities, maintenance and unit exchange spares and staff etc. should be provided at above mentioned points, for ROH of container wagons. GM/DRM should provide these resources under their extant powers within two months.

#### **4.0 Commissioning of new BLC/BLL rakes**

All new rakes of BLC/BLL wagons shall be commissioned by their respective CC base depot. The depot undertaking commissioning of new BLC rakes will send detailed wagon-wise commissioning report of such rakes to all concerned including Northern Railway, for centralized planning for ROH/POH of all BLC/BLL wagons. During movement of new rakes from the manufacturer's place to CC base depot, rake can be loaded one time in the direction of CC base depot.

#### **5.0 Examination of container rakes in loaded condition**

It is not feasible to examine BLC/BLL wagons with containers loaded on wagons as under frame safety items cannot be attended because of lower wheel dia and floor height. In order to carry out examination of rakes in loaded conditions (container on wagon) on non-pit lines, following inputs are required:

- i. Replacement of under frame mounted brake system with Bogie Mounted Brake System for which a suitable design should be developed by RDSO.
- ii. Mechanized defect detection systems like acoustic bearing detectors and online bogie monitoring systems etc. to be installed within 50 km from base so that list of defects become available to TXR

CTO may provide inputs as above or construct examination pit in their ICD for examination of rakes.

#### **6.0 Examination on 7500 km CC Bases**

6.1 As a special case, TKD & Dadri points have been permitted to issue BPC for CC running of BLC rakes upto 7500 km. However, this has not been successful as only in about 10% cases, such extension (7000 km and above) in examination period has been utilized. In the months of June and July 2008, at TKD out 54 and 45 examinations of 7500km CC rakes, examination of only 6 and 5 rakes respectively was 7000 - 7500 km. In nearly 50% cases, rakes were offered for examination even before running of 6000 km.

Thus, presently out of total 230 rakes of BLC only about 7-8 (less than 5%) rakes are actually being offered for examination after extended run in 7000 to 7500 km range. Moreover, 7500 km CC rakes have been formed only out of new and off ROH/POH wagons which are comparatively much better in condition than other rakes. Thus based on the performance of few rakes it may not be appropriate to universalize 7500 km CC pattern for all BLC wagons irrespective of their condition/age. This would require upgradation of brake system, bogie and bearings.

The BLC wagon was developed by RDSO for RITES and design is jointly owned by RDSO and RITES. Hence RDSO/RITES will be asked to work out an upgradation package for these wagons which will be offered to

40

operators to modify their rakes. Target time for RDSO/RITES to work out the package will be 6 months.

6.2 There is well established statistical/managerial method based on risk factors i.e. RAMS (Reliability, Availability, Maintainability & safety), to determine required periodicity of maintenance of equipments. RDSO shall be advised to carryout such study in consultation with IIM.

## 7.0 Private Maintenance

7.1 Examination and maintenance of rolling stock by private operators is a complex issue linked with safety of trains. The implications of any slip in this area can be of very serious nature as any dilution in maintenance standard will lead to unreliable and unsafe operation on IR system. Mere certification of rakes by TXR, based on visual examination is not sufficient to ensure safe conditions.

7.2 Moreover, besides infrastructural facilities, quality of maintenance is also dependent on job related training and experience of staff and supervisors. IR has a well laid down system of training and also selection/promotion of staff based on skill and seniority. It is also supported by well established system of periodic inspection by maintenance inspector/officers etc. These systems will have to be developed and documented for proper monitoring and implementation. Proper documented systems are required such as:

- a. Comprehensive Maintenance Manual
- b. TXR Booklet for Rejectable Defects
- c. Standard Computerized Maintenance Record & monitoring and documentation system
- d. Components, procurement/outsourcing /inspection system
- e. Engineers/staff training needs/qualification
- f. Maintenance quality standards and approval system including periodic renewal inspection
- g. System for fixation of responsibilities and penalties for recovery of losses to railways due to equipment failure, accident etc on line/yards
- h. Categorization of maintenance/repair, system of evaluation of costs of different repairs and methods of cost realization in case the examination repair done by railways/other operators at places other than operators on facilities.

7.3 This requires extensive study and report preparation. RDSO/CAMTECH neither have any past experience nor any facility to examine this issue and prepare necessary documents for maintenance of container wagons by private agencies/operators in the limited period. Hence, RDSO may be advised to undertake this study in consultation with RITES, on single tender basis, and develop a comprehensive system and related documents for implementation by CTOs and monitoring by Railways, within a target time


of 6 months. RDSO/RITES may also take views of the CTOs during their study.


### 8.0 Increase in Population of Rakes and Availability of Staff

Over last few years, there has been a significant increase in the population of BLC rakes. The population of these rakes has grown from 150 odd rakes to nearly 230 rakes. The trend is likely to continue in future. Hence, besides other facilities and material, there is going to be increased requirement of staff for maintenance of these rakes. In order to meet this requirement, without addition of manpower, following line of action is proposed:

- 8.1 Maintenance of sub-assemblies to be out-sourced to the OEMs and released manpower to be utilized for maintenance of rakes in the yards/sick lines.
- 8.2 Except dismantling, assembly and testing other activities like overhauling of brake equipment/bogies to be out sourced in ROH depots/workshop so that additional work can be handled.

Encl: As above

  
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**List of Points Nominated for Intensive Examination/ROH of Container Trains**

RLY	Existing Points		Additional Points
	ICD	Yard	Yard
NR	TKD, GarhiHarsaru Patli, Noli, DDL	TKD <sup>@</sup>	
NCR	DER, GMC	GMC <sup>@</sup>	
ER	MJT	NH <sup>@</sup>	
CR	NGP		
WR	SBI	GIM <sup>@#</sup>	
WCR			
SCR	SNF		
SR	TNPM	TNPM <sup>@</sup>	
SWR	WFD		
SER			BNDM
NWR		Madar	
SECR		Gondia (Non-CC)	
<b>Total</b>	13	7	1

<sup>@</sup> Points nominated to undertake ROH of container wagons

<sup>#</sup> Till ROH facilities are developed at GIM, WR to undertake ROH of container wagons at SBI ROH depot.