No.2012/M(N)/951/24

The Chief Mechanical Engineers
All Indian Railways except CR

Sub: Innovations and system improvements in Indian Railways

CME/CR through his MCDO for the month of February, 2014 has informed about the following innovations/system improvements on the freight side:

- Gauge for measuring ARL (Anti rotation lug & bearing piece) of CBC Operating handle for staff of goods examination yard.

The same is enclosed for your kind information.

(Gaurav Puri)
Deputy Director, M(N)

Encl: 01 page

Copy to: EDS(W)/RDSO
Dear Shri. M. Jothy,

विषय: वाणिज्यिक विभाग का एम सी डी ऑ - फरवरी, 2014
Sub: - Mechanical Department - MDCO for the month of February 2014.

1.0 INNOVATIONS:

1.1 Hydraulic arrangement for extraction of Cam Gear:

The Cam gear assembly consists of Cam Gear, Snap Ring & Locking Nut. During POH of a loco, the cam gear assembly is uncoupled for overhauling. While uncoupling of cam gear nut, the snap ring frequently breaks and causes cam gear to remain in position. In this condition, cam gear cannot be extracted from the cam shaft. Presently, the practice of cutting cam shaft or gear is being adopted.

In order to salvage the Cam Gear and Cam shaft, Parel Workshop has developed a hydraulic puller arrangement. The arrangement saves the gear and shaft from damage. It is expected that average 24 cam gears will be salvaged per year by using this arrangement. Considering cost of cam gear as Rs. 70000/- the annual saving will work out to approximately Rs. 17 lakhs.

Hydraulic Jack  Turning Plate for Engine Block  Puller Bracket  Cam Gear

Hydraulic Puller under use
1.1 Gauge for measuring ARL (Anti rotation lug & bearing piece) of CBC Operating handle for staff of goods examination yard:

The Anti-Rotation Lug and the bearing piece of CBC Operating mechanism contribute a major role in case of load bearing of goods trains due to wear of the lug and slot of bearing piece. For detection of such defective wear, it is required to check those areas by application of handy gauges. A Gauge for measuring ARL (Anti rotation lug & bearing piece) of CBC Operating handle has been fabricated Nagpur Division, locally for being utilized by the staff of goods examination yard. This gauge is very useful to detect the wear of Anti Rotation Lug and the slot of bearing piece and also the location of ARL at operating handle. It is easy to handle and to apply by goods train examination staff at examination.

2.0 HIGHLIGHTS:

2.1 Manufacture of BG Diesel locomotives at Parel Workshop:

During the month of Feb' 2014, 02 BG Diesel Locomotives (2 WDS6) have been manufactured in Parel Workshop. Cumulatively 240 BG Locos have been manufactured till date by Parel Workshop.

2.2 Out-turn of MLR of BG Coaches:

During the month of Feb' 2014, 13 coaches have been turned out after MLR against the target of 12. Cumulatively, this year 131 coaches have been turned out from Parel workshop.

2.3 POH of BG Diesel Locomotives:

During the month of Feb' 2014, 04 BG Diesel Locomotives have been given POH in Parel Workshop. Cumulatively, 67 BG Locos have been given POH during 2013-14 by Parel Workshop.

2.4 POH Outturn of BG Mainline Coaches:

During the month, 186.0 (153.1 Non-AC + 32.9 AC) equated Coach POH Units have been achieved by Matunga Workshop against the monthly target of 180. Cumulatively, 2029 (1677.7 Non-AC + 351.3 AC) equated Coach POH Units have been achieved during 2013-14.