The Chief Mech. Engineers,
All Indian Railways except NR

Sub: Innovations and System improvements in Indian Railways

CME/NR through his MCDO for the month of March, 2014 has informed about the following innovations/system improvements on the freight side.

(i) 3-in-1 Device (To change EM Pad, MBR Pad, & Springs) for On Load Repairs in Examination Yards.

(ii) Striker Casting & Shank Wear Plate Changing Device for Examination Yards.

(iii) LSD Test/Repair Bench to replace & repair Load Sensing Device.

The same innovations are enclosed for yours kind information please.

(Ashesh Agrawal)
Executive Director Mech. Engg.(Fr.)
Railway Board

Encl.: 03 Pages
Copy to: EDS(W)/RDSO.
3-in-1 DEVICE FOR ON LOAD REPAIRS IN EXAMINATION YARDS

Attachments has been fitted on a portable trolley to lift empty wagons which have its power pack mounted on trolley itself. With the help of this power pack, jacks (10 Ton Hydraulic Jacks) & respective attachments perished elastomeric pads; broken bolster springs and perished side bearer pads/Broken springs are replaced on train during examination in yard. With the help of this device undue wagon detachments on above accounts has reduced as wagons are made fit on train which has resulted in higher availability of stock for traffic use.

EM PAD CHANGE

MBR PAD CHANGE

SPRINGS CHANGE

WAGON GAP DEVICE FOR CBC KNUCKLE CHANGING

If any wagon up to 10th from either end is having knuckle defective, Wagon Gap Device for CBC knuckle changing is used for replacement of knuckle by which is gap (250 mm both side) is created by using above device. In this way the exercise of wagon detachment, placement in Sick Line and again attachment is eliminated for such defect. The under gear examination gang can easily change the knuckle with the help of this device.
1.8 STRIKER CASTING & SHANK WEAR PLATE CHANGING DEVICE FOR EXAMINATION YARDS.

Provision to replace striker casting & shank wear plate in lesser time and safely, a fixture (up to 250 mm) has been developed by staff of BCN- ROH Depot for the lifting of assembled Coupler Bodies (heavy components). It is a gadget to lift and hold it. By using this gadget DVS marking (on account of Striker Casting Wear Plate worn out, resulting in coupler body one side low and mismatching of knuckles) of Wagons averted.
1.9 LSD test/repair bench

Wagon Care Centre, Ghaziabad was facing problem in replacing defective Load Sensing device (LSD), in different BLC rakes based at Noli, as no testing facility for this was available. Defective LSDs were sent to TKD for repair.

To overcome this problem, depot has developed an *in house* LSD test/repair bench. With the help of this bench, LSD withdrawn from BLC rakes are tested and repaired locally within a short time. After having developing this device, 102 LSDs have been repaired within a period of one month.

![LSD Test/Repair Bench Diagram]

1.10 Skate to clear Hot Axle wagon

JUC Depot has developed skates to clear hot axle wagon (Empty) from the mid section or from-sites. The hot axle wheel is offloaded with the help of bottle jacks and skates are put under the wheel set. The structure is so designed that the wheel fits in the cavity provided in the skates and there is only a marginal 175 mm increase in height of the wagon. Thus wagon can be worked to clear block section at a speed of 15 kmph on straight line & 5 kmph on points & crossing. Complete structure is very handy, strong enough, rigid, light weight and above all foldable.