

भारत सरकार GOVERNMENT OF INDIA
रेल मंत्रालय MINISTRY OF RAILWAYS
(रेलवे बोर्ड RAILWAY BOARD)

No. 2014/M(C)/141/2

New Delhi, dated: 28.04.2017

Chief Mechanical Engineers'
(All Indian Railways)

Sub : Standardization of Hand Tools to be carried by the Pit line gangs

Vide item No.12 of his inspection note of RNCC on 15/02/2015, MRS has mentioned that the staff working in the pit lines should be given proper tools to enhance the work output and that a standard tool kit should be made available to all the fitters individually.

A. In this regard, the set of tools and gauges that need to be carried by the Under gear, Side examination and Pressure testing gangs of pit line examination of LHB and ICF trains have been finalized considering current working trends and requirements. The list of these tools / gauges is given in **Annexure**. It needs to be ensured that these tools / gauges are available with the pit line staff as mentioned in the Annexure. Minor changes may be made in the set of tools and gauges as per the Annexure based on local conditions with the approval of CME.

The tools / gauges, that are not mentioned in Annexure, may be kept in the Tool Room of the depots, based on the requirement.

The Tool Bag given to the staff should have 3 compartments and should be made out of good quality and durable material (Rexene / leather / canvas, etc.). It should have approximate dimensions of 15" width, 18" length and 8" thick. It should have a shoulder strap.

It is also advised that, based on local requirements, the following types of portable lights may be provided to the Pit line staff or kept in the Tool room:

- A. **Portable lights for carrying out train examination and light repairs:** These shall be re-chargeable, white LED lights of intensity 300-500 Lux at a distance of 12-18 inches. Suitable arrangement shall be available so that the lights can be fixed on the helmets as well as be used in a detached condition.
- B. **Portable / Trolley mounted lights for carrying out the Heavy Works :** These shall be re-chargeable White LED lights of approximately 20 to 50 W power rating. It should be possible to completely swivel and adjust these lights so that they could be kept both inside and on the side of the pits while carrying out heavy work. The portable / trolley mounted light should be light weight and easy to maneuver.

Such lights have been procured or under procurement at BCT / WR and NDLS / NR Depots. The detailed specifications may be obtained from these Railways or be prepared based on market survey.

DA: As above


(Brijesh Dixit)
Dir. Mech Engg.(Chg.)
Railway Board

Copy to: PSO to MRS for the kind information of MRS
PPS to AM/ME for the kind information of MRS

(1)

Annexure : List of Tools and Gauges required for Pit line Gangs					
S.No.	Item	LHB Gang	Utilization	ICF Gang	Utilization
	Under Gear Gang				
	Tools				
	Cotter Punch 12"	Yes	Split Pins	Yes	Split pin, bulb cotter
	Pin Punch 12"	Yes	Split Pins	Yes	Split pin, bulb cotter
	Nylon Mallet 200 gm	Yes	Tapping of Brake Disc	No	
	Full set of Allen keys	Yes	Tighten studs of Longitudinal Bump stop	No	
	Ball Pein Hammer 900 gm	Yes	Split pins	Yes	Split pin, bulb cotter
	Open Spanner-16x17	Yes	Lateral Bump stop, lateral damper	No	
	Open Spanner-18x19	Yes	Longitudinal Bump stop, lateral damper	Yes	ESR Safety Bracket bolt
	Ring Spanner-18x19	Yes	Lateral damper	Yes	ESR safety bracket
	Open Spanner-24x27	Yes	Replace Brake pads	Yes	Truss bar safety wire rope bolt
	Ring Spanner-24x27	Yes	Rocker arm bolts	Yes	Truss bar safety wire rope bolt
	Open Spanner-30x32	Yes	Supporting device securing bolt	Yes	Brake cylinder Mounting bolts
	Ring Spanner-30x32	No	Supporting device securing bolt	Yes	Brake cylinder Mounting bolts
	Open Spanner-32x36	Yes	Buffer Bolt	Yes	Centre pivot bolts, anchor link bolt
	Ring Spanner-32x36	No		Yes	Centre pivot bolts, anchor link bolt
	Open Spanner-36x41	Yes	Angle cock / ferrule check nut, adjusting brake cylinder	No	
	Open Spanner-41x46	Yes	Angle cock / ferrule check nut, adjusting brake cylinder	No	
	Chisel 8 inch	No		Yes	Cutting of defective split pins, bolts
	Gauges				
	Steel measuring tape 2 m	Yes	Buffer stroke, buffer Height, etc.	Yes	Buffer stroke, buffer Height, etc.
	Tyre Defect Gauge	Yes	Wheels	Yes	Wheels
	Inside Calliper 2"	Yes	Gap between Lateral / Longitudinal / Vertical Bump Stops	No	
	Side Inspection Gang				
	Tools				
	Ball Pein Hammer 900gm	Yes	Split pins of lift pin (J bracket), Anti-rotation Roller	Yes	Tapping of BSS link, BSS stone, split pins, bulb cotter, Bk. block key
	Cotter Punch 12"	Yes	Split Pins	No	check metal bonding
	Open Spanner 16x17	Yes	Foot Board	Yes	Axle box crown bolt
	Ring Spanner 16x17	Yes	Foot Board	Yes	Axle box crown bolt
	Open Spanner 18x19	Yes	Secondary Damper	Yes	Dashpot safety U bolt
	Ring Spanner 18x19	Yes	Secondary Damper	Yes	Dashpot safety U bolt
	Open Spanner 24x27	Yes	Primary Damper, Axle Box Face Plate	Yes	Brake head shoe bolt, dashpot vent screw
	Ring Spanner <u>OR</u> Box Spanner with ratchet, size 24x27	Yes	Primary Damper, Axle Box Face Plate	Yes	Brake head shoe bolt, dashpot vent screw
	Open Spanner 30x32	No	#VALUE!	Yes	Axle box face plate bolts, bolster safety U strap, shock absorber bolt (bottom)

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S.No.	Item	LHB Gang	Utilization	ICF Gang	Utilization
	Ring Spanner <u>OR</u> Box Spanner with ratchet, size 30x32	No		Yes	Axle box face plate bolts, bolster safety U strap, shock absorber bolt (bottom)
	Open Spanner 32x36	No		Yes	Crown bolt, shock absorber bolt (Top)
	Ring Spanner 32x36	No		Yes	Crown bolt, shock absorber bolt (Top)
	Full set of Allen keys	No	For CBC lock bracket, speed sensor fixing, etc.	Yes	
	Box Spanner with ratchet, size 13, 15	No	For earthing device maintenance	Yes	
	Circlip plier 6"	No	For earthing device maintenance	Yes	
	Magnifying Glass for checking minor cracks	Yes	For checking of minor cracks in the components.	Yes	For checking of minor cracks in the components
	Gauges				
	Steel scale 6 inches	No		Yes	A, B, C dimension of bogie, gap between safety U strap and a lug.
	Dip stick	No		Yes	Dashpot oil level
	Resetting Key for ACP	Yes	CBC handle resetting key	No	
	Feeler gauge	No		Yes	To check rubber bonding of silent blocks
	Pressure Testing Gang				
	Tools				
	Ball Hammer 900gm	Yes	Ferrules, Air Hose change	Yes	Split pin, bulb cotter
	Pipe Wrench 14"	Yes	Air Hose change	Yes	Angle cock, air hose, drain cock, pipeline of ACP
	Pipe Wrench 18"	Yes	Air Hose change	Yes	Angle cock, air hose, drain cock, pipeline of ACP
	8 inches long ferrule punch (8X32 mm)	Yes	For replacing the ferrules	No	
	Screw Driver 9 inch	No		Yes	Opening of PESD cover
	Socket 10 mm	Yes	Angle cock Bracket	No	
	Open Spanner 10x11	Yes	Angle cock Bracket	No	
	Open Spanner 11x12	No		Yes	PEASD and PEV fixing bolt, DV released choke
	Ring Spanner 11x12	No		Yes	PEASD and PEV fixing bolt, DV released choke
	Open Spanner 12x13	Yes	Speed Sensor Stud	No	
	Open Spanner 18x19	No		Yes	DV / CR
	Ring Spanner 18x19	Yes	Tighten inspection stud of Axle Box Speed Sensor	No	
	Open Spanner 24x27	No		Yes	Flexible hose of brake cylinder, brake pipeline, common pipe bracket / DV / CR, dirt collector, drain cock, AR dummy bolt, AR pipes
	Open Spanner 41x46	Yes	Ferrules, BP/FP Mainline	Yes	Angle cock, air hoses
	Screw driver set (Flat/Phillips)	Yes	WSP cards, connectors, hose clips for speed sensors, etc.	No	
	Wire stripper	Yes	For wiring related work	No	
	Multimeter	Yes	For wiring related checks	No	
	Full set of Allen keys	Yes	For ICV pull box, junction box; etc.	No	
	Gauges				

(3).

S.No.	Item	LHB Gang	Utilization	ICF Gang	Utilization
	Feeler gage	Yes	Gap between speed sensor & phonic wheel	No	
	Stop watch	Yes	For releasing time	Yes	For releasing time
	Steel scale 6 inch / Piston stroke gauge (GO-NO GO type)	No		Yes	To check the piston travel
	Spring balance (0-15 kg)	Yes	To check the ACP apparatus	Yes	To check the ACP apparatus
	Resetting Key for ACP	Yes	Resetting of ACP	No	
	Adopter for Pressure gauge	Yes	For checking brake cylinder pressure	No	
	TXR				
	Measuring tape	Yes		Yes	