

**LOCO READINGS  
AND  
INFORMATION TO BE FURNISHED BY  
LOCO DEPARTMENT**

**BY  
SHAIK .JOHN SAHEB  
Sr. LECTURER/DSL(MECH)/STC/SC**

# LOCO READINGS AND INFORMATION TO BE FURNISHED BY LOCO DEPARTMENT

## 1. BASIC INFORMATION

- 1) DATE OF ACCIDENT.
- 2) TRAIN NO.
- 3) LOCO NO.
- 4) LOCO CLASS.

# 1. BASIC INFORMATION

- 5). LOCO MANUFACTURE YEAR & PLACE
- 6). BASE SHED OF LOCO
- 7). DATE AND PLACE OF LAST POH
- 8). KMS. EARNED AFTER LAST POH
- 9). DATE AND PLACE OF LAST MAJOR INSPECTION
- 10). DATE AND PLACE OF LAST SCH. INSPECTION
- 11). WHETHER ANY SCHEDULES ARE OVER DUE?

2. Give Brief particulars of Safety items not provided or provided but missing/not working

Whether Loco is provided with:

**SAFETY FITTINGS**

**PROVIDED**

**WORKING**

1. HEAD LIGHT

2. SPEEDOMETER

3. SPEED RECORDER

4. FLASHER LIGHT

5. HORN

6. BRAKE SYSTEM

3. (A) DAMAGE TO LOCO (BRIEF DESCRIPTION)

(B) COST OF DAMAGE TO THE LOCO (IN RS.)

## 4. CHECK AND RECORD THE OBSERVATIONS AS FOLLOWS.

- a) POSITION OF THE CONTROL HANDLES,  
CUTOUT COCKS ETC. AFTER THE ACCIDENT
- b) FUNCTIONING OF BRAKE SYNCHRONIZING  
OF VALVE-WHETHER WORKING OR NOT
- c) POSITION OF BRAKE BLOCKS AFTER THE  
ACCIDENT-WHETHER APPLIED OR NOT

#### 4. CHECK AND RECORD THE OBSERVATIONS AS FOLLOWS.

- d) CONDITION OF CATTLE GUARD.
- e) ANY SIGN OF SEIZURE OF ROLLER BRG. IN AXLE BOX.
- f) COMMENTS IF ANY COIL SPRING IS BROKEN OR DISPLACED
- g) ANY OTHER OBSERVATION IN RESPECT TO MECHANICAL DEFECT OF THE LOCOMOTIVE, WHICH MIGHT HAVE ANY BEARING ON SAFE RUNNING OF THE LOCO.

# 5. MEASUREMENTS FOR WHEELS

1. DIAMETER OF WHEEL AT TREAD 1012 -1097 mm (Express)  
1008 -1097 mm (Goods)
2. WHEEL FLANGE THICKNESS 32 mm wear 3mm
3. WHEEL ROOT WEAR 6 mm
4. TREAD WEAR 6.5 mm
5. UST OF AXLES : Give the date of last UST done
6. WHEEL GAUGE            **STANDERED**    1596 +0.5/-0.5 mm  
                                 **SERVICE LIMIT** 1596 +3.0/-0.5 mm
7. BUFFER HEIGHT 1030 to 1105 mm
8. Cattle Guard Height 6"
9. Rail Guard Height 4"

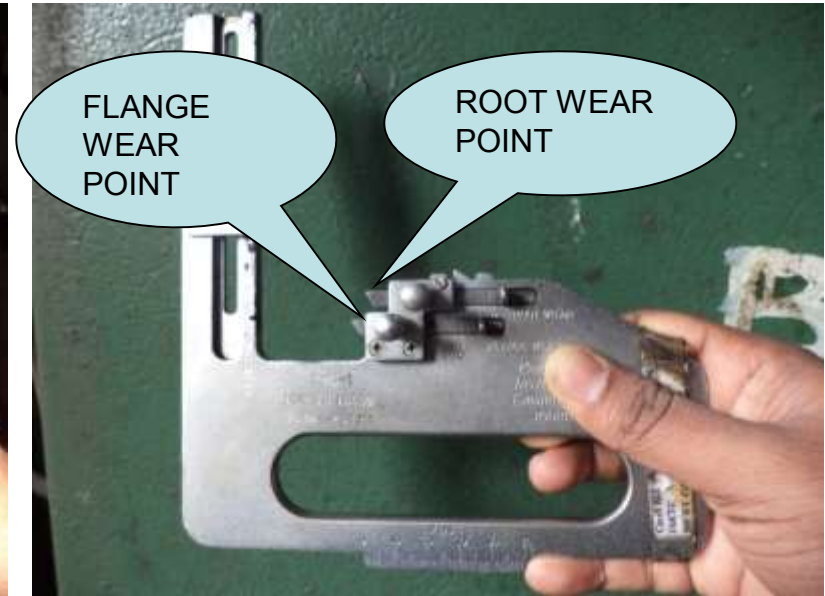


# WHEEL PROFILE: TREAD WEAR-6.5mm(max)



WHEEL PROFILE:

ROOT WEAR-6mm(max)  
FLANGE WEAR-3mm(max)



# WHEEL GAUGE-1596+3/-0.5mm



# 6. DIAMETER OF WHEEL AT TREAD

Variation in dia  
allowed

	WT	Service limit
1. On same axle	0.5	--
2. On same truck	2.0	8.0
3. On same loco	15.0	25.0

BUFFER HEIGHT: 1030-1105mm



# AXLE BOX LINER CLEARANCES

LOCO	MEASUREMENT	NEW CONDITION VALUE IN mm	SERVICE LIMIT VALUE IN mm
WDM2(WITHOUT CONICAL TRUST PAD)	LATERAL CLEARANCE OF END AXLE PER AXLE	6	12
	LATERAL CLEARANCE OF MIDDLE AXLE PER AXLE	25	31
	LONGITUDINAL CLEARANCE OF ALL AXLES PER BOX	0.363-1.9	5
WDM3A AND WDM3C WITH CONICAL TRUST PAD	LATERAL CLEARANCE OF END AXLE PER AXLE	22.4-24.8	30
	LATERAL CLEARANCE OF MIDDLE AXLE PER AXLE	4.0-6.6	12
	LONGITUDINAL CLEARANCE OF ALL AXLES PER BOX	0.4-1.0	3.5
WDG3A AND WDM3D	LATERAL CLEARANCE OF END AXLE PER AXLE	22.0-25.2	30.7
	LATERAL CLEARANCE OF MIDDLE AXLE PER AXLE	2.4-6.0	11.5
	LONGITUDINAL CLEARANCE OF ALL AXLES PER BOX	2.0-4.0	6

WHEEL DIAMETER:- PASSENGER:1012-1097  
GOODS:1008-1097



# BOGIE FRAME





# AXLE BOX LINER CLEARANCES

LATERAL  
CLEARANCE



LONGITUDINAL  
CLEARANCE



# HSNBC AXLE BOX Lateral Clearance



# HSNBC AXLE BOX Longitudinal Clearance



# Wheel Measurements for WDM2 & WDM3A

ANNEXURE-I

## CLEARANCES FOR DIESEL LOCOMOTIVES (All Dimensions are in mm)

Loco	New Wheel diameter	Root wear limit	Flange Wear	Total tread wear	Lateral & Longitudinal clearances			Difference in Wheel diameter		
					Measurement	New Condition	Service Limit	Location	Diff. In Dia.	Permissible limit
WDM2 (Co-Co Trimount Bogies without conical thrust pad)	1092+5/-0.0	6.0	3.0	6.5	As per MP.MI 71/78			As per MP.IB.BD- 01.01.05 dt. 01/02/05		
					Lateral clearances End Axle (C1+C2) per axle	6.0	12.0	On same Axle	0.5	-
					Lateral clearances Middle Axle (B1+B2) per axle	25.0	31.0	On same Bogie	2.0	8.0
					Longitudinal Clearances for Middle & End axles (A1+A2) per axle box	0.363-1.9	5.0	On same Loco	15.0	25.0
WDM3A & WDM3C (Co-Co Trimount Bogies with conical thrust pad)	1092+5/-0.0	6.0	3.0	6.5	As per MP.IB.VL-03.04.06 (Rev.01) dt.28.11.08			As per MP.IB.BD- 01.01.05 dt. 01/02/05		
					Lateral clearances End Axle (C1+C2+C3+C4) per axle	22.4-24.8	30.0	On same Axle	0.5	-
					Lateral clearances Middle Axle (B1+B2+B3+B4) per axle	4.0-6.6	12.0	On same Bogie	2.0	8.0
					Longitudinal Clearances for Middle & End axles (A1+A2) per axle box	0.4-1.9	3.5	On same Loco	15.0	25.0

# Wheel Measurements for WDG3A & WDM3AD

Loco	New Wheel diameter	Root wear limit	Flange Wear	Total tread wear	Lateral & Longitudinal clearances			Difference in Wheel diameter					
					Measurement	New Condition	Service Limit	Location	Diff. In Dia.	Permissible limit			
WDG3A/ WDM3D	1092+5/- 0.0	6.0	3.0	6.5	<b>As per MP.IB.VL-01.02.06 (Rev.0.00) dated 27.01.0-2006</b>			<b>As per MI. VL-02/96</b>					
					Lateral clearances End Axle (C1+C2+C3+C4) per axle	22.0-25.2	30.7	On same Axle	0.5	2.5			
					Lateral clearances Middle Axle (B1+B2+B3+B4) per axle	2.4-6.0	11.5	On same Bogie	2.0	8.0			
					Longitudinal Clearances for Middle & End axles (A1+A2) per axle box	2.0-4.0	6.0	On same Loco	15.0	25.0			
(SV.WDG2 dt. 19.02.99)													
WDP1	1092+5/- 0.0	6.0	3.0	6.5	<b>As per MP.IB.VL-05.06.06 (Rev.0.00) dated 03.08.2006</b>			<b>As per DLW MI - CHS-009</b>					
					Lateral clearances All Axles (C1+C2+C3+C4) per axle	22.0-25.0	31.0	On same Axle	0.5	1.5			
					Longitudinal Clearances for Middle & End axles (A1+A2) per axle box	0.6-2.2	5.0	On same Bogie	2.0	5.0			
WDP3A	1092+5/- 0.0	6.0	3.0	6.5	<b>As per MI. VL-04/98</b>			On same Loco	15	25			
					Lateral clearances Middle Axle (C1+C2) per axle box	1.2-3.0	6.0				On same Axle	0.5	2.5
					Longitudinal Clearances (Middle axle) (A1+A2) per axle box	2.0-4.0	6.0				On same Bogie	2.0	8.0

# Wheel Measurements for WDG4 & WDP4

Loco	New Wheel diameter	Root wear limit	Flange Wear	Total tread wear	Lateral & Longitudinal clearances					Difference in Wheel diameter		
					Measurement	New Condition		Service Limit		Location	Diff. In Dia.	Permissible limit
WDG4	1092+5/-0.0	6.0	3.0	6.5	IB No. MP.IB.VL-03.28.08 (Rev 00) dated 30.09.08					EMD Maintenance Instruction no. 1517 (Rev. A)		
					For End Axle Lateral clearances between thrust pad & bearing adapter (A1+A2) per axle	Nominal Inch/mm	Min. Inch/mm	Max Inch/mm	Service limit Inch/mm	On same Axle	0.5	1.6
						0.38/ 9.6	0.3/ 7.6	0.5/ 12.7	0.62/ 15.7			
					For Middle Axle Lateral clearances between thrust pad & bearing adapter (B1+B2) per axle	0.62/ 15.7	0.54/ 13.7	0.74/ 18.8	1.0/ 25.4	On same Bogie	3.2	6.4
On same Loco	14.2	31.8										
WDP4	1092+5/-0.0	6.0	3.0	6.5	IB No. MP.IB.VL-03.28.08 (Rev 00) dated 30.09.08					EMD Maintenance Instruction no. 1517 (Rev. A)		
					For End Axle Lateral clearances between thrust pad & bearing adapter (A1+A2) per axle	Nominal Inch/mm	Min. Inch/mm	Max Inch/mm	Service limit Inch/mm	On same Axle	0.5	1.6
						0.24/ 6.1	0.16/ 4.1	0.36/ 9.1	0.5/ 12.7			
					For Middle Axle Lateral clearances between thrust pad & bearing adapter (B1+B2) per axle	0.62/ 15.7	0.54/ 13.7	0.74/ 18.8	1.0/ 25.4	On same Bogie	3.2	6.4
On same Loco	14.2	31.8										

THANK YOU