

SHED – DIESEL SHED, GONDA

I. BRIEF HISTORY

Photo of Shed



Loco of Shed in colour Scheme



1. Year of establishment: 1982
2. Road No./ Type of the first loco homed in Shed: WDM1 (17008)
3. Details of any heritage Locos in Shed on pedestal or otherwise: NIL
4. ISO Certification Year
9001 - Year 2005 (19.09.05)
14001
18001
5. Type wise holding:

S.No.	Type	Holding
1	WDM2A	39
2	WDM2B	33
3	WDM3A	70
4	WDM3B	6
5	WDM3C	2
6	WDM3D	12
7	WDS6	2
	TOTAL	164

6. Maximum Holding (Year/ Number of Locos) Year 2002-03 - 200 Locos
7. Present Loco link: 93
8. Homing Capacity: 130
9. Augmentation Plans Administrative approval obtained for 8 Locos & case sent to Sr DFM for finance vetting.
10. Other History (Not more than 4 lines)

II. VITAL STATISTICS

1. Sanctioned Strength: 1286
2. On Roll Strength 1135
3. No. of Officers 6
4. No. of Supervisors 80
5. Total area 165096 Sq.meter
6. Covered Area 12585 Sq.meter
7. %age of staff housed in Railway Quarters: 36%
8. Power Consumption 3369 unit per day
9. Water Consumption 56582 Gallon per day.
10. Education Profile of staff

upto 8th	>8 th	10 th pass	10-12th	ITI	Graduate

11. Age Profile of Staff:

<30 Yrs	30-40	41-50	51-55	56-60
%				

12. MPR as circulated by E & R Dte. 6.5 staff per loco
(Bench Marking for GD shed -6.29)

III. Performance Parameters:

1. SFC

Freight	Passenger
1.85	3.89

2. LOC 2.45

3. Shed Consumption of fuel 76320
4. Kms. Earned by Shed Locos/month 1752461

IV. Any Important Innovations:

1. Water Pump test stand –



A water pump test stand has been developed by the shed in such a way that discharge rate may be taken along with discharge pressure to clearly observe the water pump performance. This will help to reduce the water pump failure as well as improving the loco reliability.

2. Universal shaft run out test stand:



A test stand has been fabricated in Gonda Diesel Shed for checking of run out of universal shaft during overhauling. This will help in improving the loco reliability.

3. Expressor/ Compressor test stand



A test stand has been developed in shed with its own resources. Air and Vacuum pressure is being measured with this test stand & all Expressor/Compressor are being tested after overhauling. If air or vacuum pressure is not according to limits, Expressor/Compressor is not allowed to be fitted on loco. This will help to improve the reliability of the loco as well as performance of Expressor / Compressor.

4. Test stand for Large After Cooler testing:



To overcome the failures & for improving testing facility of Large After Cooler, a test stand has been fabricated in Gonda Diesel shed as per RDSO's Drawing No. SK-E-0970 with its own resources for testing of leakages. This facilitates pneumatic as well as hydraulic testing. Previously it was only hydraulically tested. After cooler is being fitted on test stand at 75 PSI & water temp. of 60°C for 5 minutes. In this process the leakage from particular tube is clearly observed.

5. Hydraulic puller for the TA/ TG bull gear



A Hydraulic puller has been developed in shed which is able to pull the TA/ TG bull gear easily and in short time in comparison to older technique.

6. Modification in Fuel tank suction pipe line:



To overcome the failures of fuel oil pressure problem due to dirt (Foreign particles such as polythene, rubber pieces etc ingresses with fuel oil during fuelling) accumulated in fuel oil tank & for improving loco reliability, suction pipe fitted inside the fuel tank is being provided with a in built strainer so that screened fuel oil may be circulated in fuel oil system.

7. Developtment of Mica cutting machine:



Manual Mica cutting



Mica cutting machine

Manual mica cutting suffers from following disadvantage:
Depth of mica cut is not uniform leading to bad commutation and reduced reliability.
Very high labour intensive operation.
The mica dirt generated a potential health hazard.

To overcome these problems a motorized jig had been developed using serviceable component as Single phase A.C. motor, C.C.E.Motor & scrap materials. Armature is mounted between two spindle & can be rotated manually. Mica cutting tool gets drive through a right angle gear train from Single phase A.C. motor. Feed can be manually adjusted. Following

8. Design and Fabrication of Mechanical puller for Traction Motor end Fittings:-



Traction Motor end fittings were removed by gas heating. This practice suffered from various drawbacks. Hence a work-group was formed and detailed technical analysis was carried out to find out solution to the problem. After detailed technical deliberation, different mechanical puller has been designed and fabricated by technicians themselves.

9. Modification carried out in TSC for preventing oil throwing :



Modification -
Flexible pipe
fitted

Problem of oil throwing & bearing seizure was faced in past months. The matter was discussed in quality control circle to overcome the problem. During study & analysis it was noticed that improper air cushioning was the main cause of the oil throwing & bearing seizure.

Pressurized air was being given to intermediate casing & turbine disc with the four holes given in blower casing through intermediate casing. Now the pressurized air is being given the blower casing directly through a flexible pipe from the union/elbow of 22mm fixed near the neck of the blower casing. Problem of oil throwing from TSC chimney has been eliminated.

10. **Temperature measurement of Cam gear cover-** A drive has been launched for measuring Cam gear cover temperature to arrest suspected cases preventing of Cam gear & Split gear before its failure. This practice will help to reduce the cases of Cam gear & Split gear failure as well as to improve the loco reliability. Total 109 locos have been attended till date with this drive.