

# REMMLOT

**REmote Monitoring & Management  
of LOcomotives & Trains  
(Type MRM 360)**

## PRESENT SYSTEM without REMMLOT

- In Micro Processor Based Control System, the data is stored in the long-term memory and short-term memory
- The MEP system also has an event recorder, which stores the fault messages along with other useful data.
- The data pack stored in the memory card of MEP system is downloaded when the locomotives returns back to shed for maintenance.
- This data can be analysed for taking proper action during schedule maintenance.

## PRESENT SYSTEM without REMMLOT

- This fault data pack is also downloaded for analysis of faults, which are registered during the run of the loco.
- Though the above data and information is available for downloading at any time from the microprocessor of the locomotive, this data normally becomes available to the shed staff only when the locomotive returns to the shed.

# REMMLOT Introduction

- REMMLOT consists of
  1. Locomotive Remote Monitoring System (LRMS)
  2. Loconet Train Management System (LTMS)
- LRMS is a Hardware unit with embedded Software remote interface located in Locomotive, which interacts with LTMS remotely.
- LRMS interfaces with MEP\MAS\MCS to obtain Locomotive's health, fault diagnostics related data and other operational data. This data is transmitted to the remote server by using the commercially available GSM/CDMA Networks. The system also comprises of a GPS receiver from which the position information is acquired and the same will be transferred to LTMS.

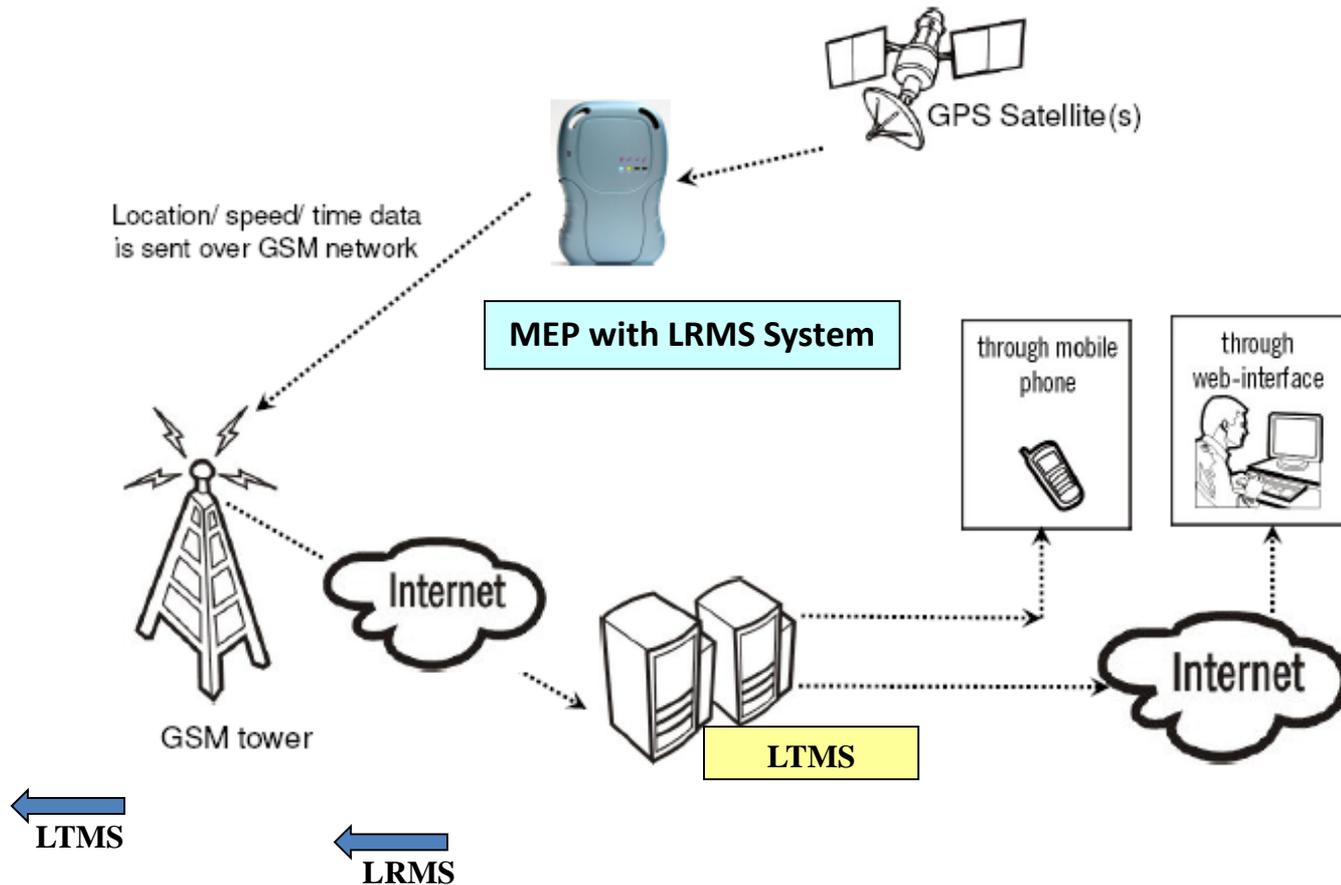
# Introduction

- LTMS is a centralized server connected to the Internet via a Static IP address provided by Internet Service Provider to communicate with Locomotive Remote Monitoring Systems.
- It provides Data with a single point access through Internet to all the Railway Staff at remote Locations.
- LTMS is a 24 X 7 service provider.
- The objective of LTMS is to provide data globally and helping the Railway staff in Fault diagnosis and analyze Driver/Train performance, Locomotive Performance.
- This system is used to improve operational safety and service the locomotives better.

# Features

- It can monitor the locomotives remotely.
- It can monitor healthiness and can generate report of the locomotives on daily basis.
- By monitoring the health data user can avoid the failures by taking preventive action.
- Through alerts user can come to know the problem in the locomotive and can guide the loco pilot in right time to avoid failures.
- User can configure the alerts based on their requirement.
- Overdue status will be indicated.

# Block Diagram of System

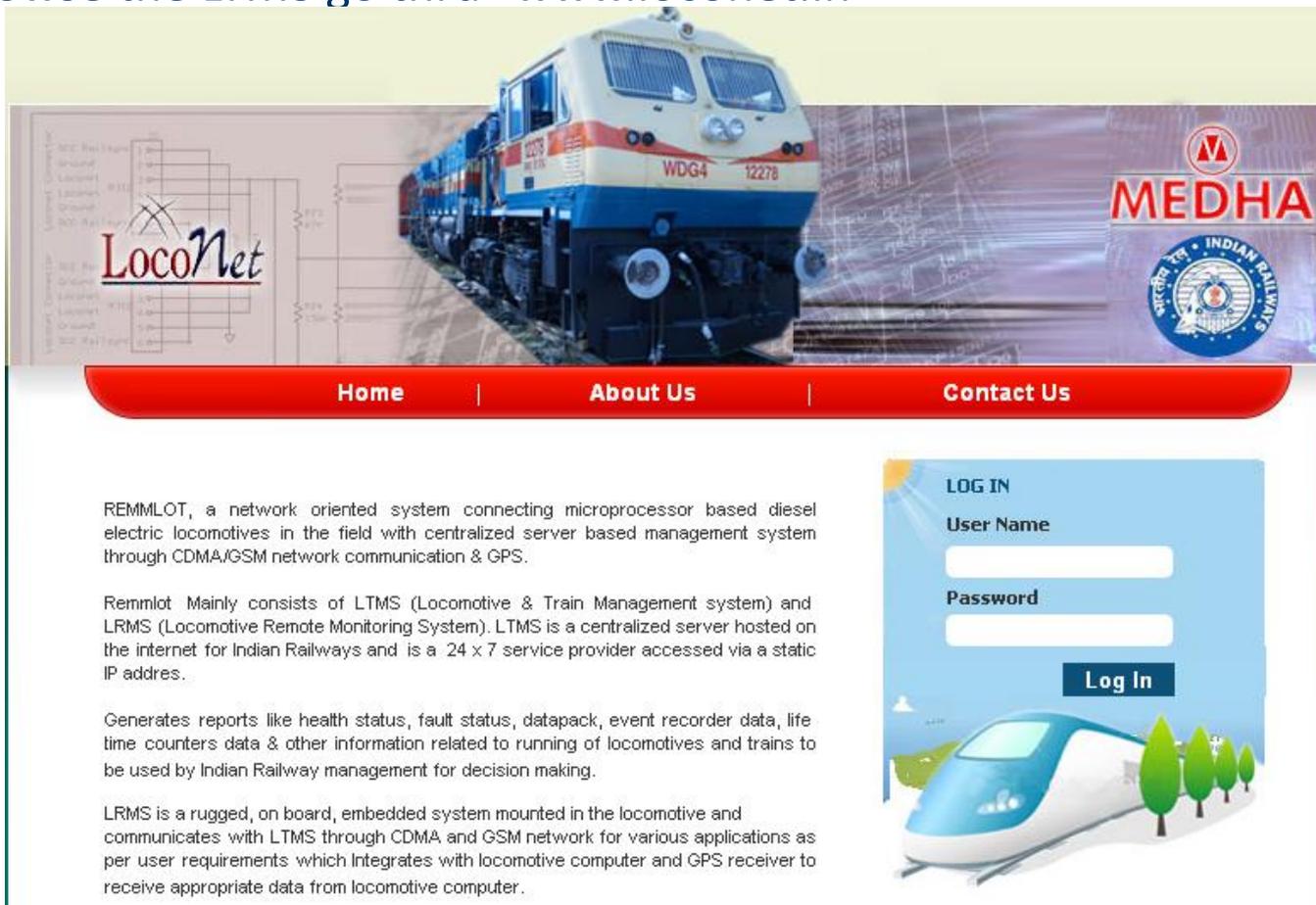


## MOUNTING POSITION OF MEP WITH LRMS AND GPS



# LOGIN / LOGOUT

- To browse the LTMS go thru “www.loconet.in”



REMMLOT, a network oriented system connecting microprocessor based diesel electric locomotives in the field with centralized server based management system through CDMA/GSM network communication & GPS.

Remmlot Mainly consists of LTMS (Locomotive & Train Management system) and LRMS (Locomotive Remote Monitoring System). LTMS is a centralized server hosted on the internet for Indian Railways and is a 24 x 7 service provider accessed via a static IP address.

Generates reports like health status, fault status, datapack, event recorder data, life time counters data & other information related to running of locomotives and trains to be used by Indian Railway management for decision making.

LRMS is a rugged, on board, embedded system mounted in the locomotive and communicates with LTMS through CDMA and GSM network for various applications as per user requirements which Integrates with locomotive computer and GPS receiver to receive appropriate data from locomotive computer.

**LOG IN**

User Name

Password

**Log In**

# LOGIN / LOGOUT

- Login page provides access to the Locomotive data with a valid User Name and Password entered by the user.
  
- There are three types of users:
  - Superuser
  - Supervisor
  - Operator
    - The Superuser has the access to all the available Zones and Sheds.
    - The Supervisor has the access to all the available Sheds of a particular Zone.
    - The Operator has the access only to one particular Shed of a particular Zone.
  
- On completion of work, the user can LOGOUT from the Loconet site. The Logout option appears on every screen of the Loconet site. So the user has an advantage of logging out from any of the screen in which he is working.

# MENU NAVIGATION




[Fleet](#)
[Locomotive](#)
[UserSettings](#)
[Locostatus Settings](#)

Welcome to mas\_lrms [LogOut](#)

**Critical Faults** MAP

**Search Criteria**

Zone :  Shed : 
 Date From  (dd/mm/yyyy) To  (dd/mm/yyyy)

Loco Type :  Loco No : 
 Since Last  Days
  Since Last Login

[Summary](#)
[Health Data](#)
[Faults](#)
[Alerts](#)
[List](#)
[Daywise Report](#)
[Power Control](#)
[ALF Report](#)

Shed# KZJ

Last Reported Status

Note : No Communication indicates loco is either switch off or out of coverage area

Loco No.	LocoType	Date/Time	Location	Status	Speed (Kmph)	Fault Name	Critical Faults in last 24 hrs	Engine Status	Due Status
<a href="#">18894</a>	WDM3A	20/06/2011 11:30:40	<a href="#">MADUKKARAI</a>	Stop	0	<a href="#">Wheel Diameters Calibration done</a>	0		3 days
<a href="#">14927</a>	WDG3A	20/06/2011 11:14:40	<a href="#">ADILABAD</a>	Stop	0	<a href="#">Wheel Diameters Calibration done</a>	0	Off	5 days
<a href="#">14907</a>	WDG3A	20/06/2011 06:08:40	<a href="#">IRADATGANJ</a>	No Communication	0	<a href="#">Wheel Diameters Calibration done</a>	0	Off	2 days
<a href="#">14897</a>	WDG3A	19/06/2011 19:29:40	<a href="#">MUDKHED</a>	No Communication	0	<a href="#">Wheel Diameters Calibration done</a>	0	Off	-
<a href="#">14887</a>	WDG3A	20/06/2011 11:30:20	<a href="#">KAZIPET</a>	Stop	0	<a href="#">Communication Link Between MEG and Display unit failed</a>	1	Idle	14 days
<a href="#">14782</a>	WDG3A	20/06/2011 11:27:40	<a href="#">KARIMNAGAR</a>	Running	45	<a href="#">Wheel Diameters Calibration done</a>	0	On	-
<a href="#">14777</a>	WDG3A	20/06/2011 11:32:00	<a href="#">NIZAMABAD</a>	Stop	0	<a href="#">Invalid Notch Command Running at Idle/Notch1</a>	0		6 days
<a href="#">14775</a>	WDM3A	20/06/2011 11:30:01	<a href="#">MUNIRABAD</a>	Stop	0	<a href="#">P2 Stuck Closed Fault Recovered</a>	0		19 days
<a href="#">14629</a>	WDG3A	20/06/2011 11:34:20	<a href="#">BHIGVAN</a>	Stop	0	<a href="#">EXPR Circuit Open Fault Recovered</a>	0		-
<a href="#">14628</a>	WDG3A	20/06/2011 11:32:00	<a href="#">YESWANTNAGAR</a>	Running	7	<a href="#">MFPB Breaker is ON Now</a>	0	On	1 days
<a href="#">13447</a>	WDG3A	20/06/2011 11:35:40	<a href="#">CHERALAPALLY</a>	Running	17	<a href="#">Engine Over Speed Data Pack</a>	2	On	22 days
<a href="#">13446</a>	WDG3A	20/06/2011 12:00:00	<a href="#">MATMARI</a>	Stop	0	<a href="#">BP&lt;2.8 Kq/cm2 Data Pack</a>	0		-
<a href="#">13338</a>	WDG3A	20/06/2011 11:16:20	<a href="#">MUZAFFARNAGAR</a>	Stop	0	<a href="#">Engine RPM at Notch 1 OK Now</a>	0		11 days

# MAIN OPTIONS

Fleet

Locomotive

UserSettings

Locostatus Settings

**FLEET** : Fleet module displays the information of all Locomotive status for selected zone and selected shed.

**LOCOMOTIVE** : Locomotive module displays the reports of selected locomotive.

**USER SETTINGS** : This module helps the user to change the password, configure the alerts for selected locos and view the configured alert report.

**LOCO STATUS SETTINGS** : This module is used to configure the information by the user. Like, ALF settings screen helps to configure ALF parameters, PC settings screen helps to configure PC parameters and Log book screen helps to configure Logbook parameters related to a particular Loco.

# SEARCH OPTIONS

Search Criteria

Zone :	SCR	Shed :	KZJ	<input checked="" type="radio"/> Date From	17/06/2011 (dd/mm/yyyy)	To	18/06/2011 (dd/mm/yyyy)	<input type="radio"/> Since Last		Days	<input type="radio"/> Since Last Login	Go
Loco Type :	All	Loco No :	All									

Summary Health Data Faults Alerts **List** Daywise Report Power Control ALF Report

- This option helps the user to search the Locomotive of particular Type, Zone and Shed by choosing from the search options. The user can select the date since and up to when he wishes to have the information. With the help of Search Option, the user can get the details for the locos for both Fleet based and Locomotive based. In Fleet module, the user can select the Zone/Shed which have been permitted to him. He does not has access to select the Loco Number or the Loco Type. But, for selecting the locos from Locomotive module, the user can select the permitted Zone/Shed as well as the Loco Number and the Loco Type to get the details.

# SELECTING MENU OPTIONS



- It has the options to choose the various details to present the information regarding the different locos.
- **Summary** : This module displays the list of the number of loco's running or Idle.
- **Health Data** : This module displays the latest health status of each and every locomotive of selected zone/shed.
- **Faults** : This module displays the Detailed Fault information of each and every locomotive for the selected criteria.
- **Alerts** : This module displays the user configured alerts for the specific faults or the specific conditions on health data parameters.

# LIST OF DETAILS

Note : No Communication indicates loco is either switch off or out of coverage area

LocoType	No. of Locos	Moving Locos	Locos with No Communication	Stationary Locos
WDG3A	18	6	5	7
WDM3A	3	2	1	0
WDM3D	8	4	3	1
WDG4	6	0	1	5

- It lists the respective information chosen for the different locos. For example, the particular List of Details gives the information about the Loco ID, Shed Name, Date/Time and the Satisfied Alert Description for Zone # SCR and Shed # KZJ selected by the user.

# FLEET → SUMMARY

**Search Criteria**

Zone : SCR    Shed : KZJ    Date From : 17/06/2011 (dd/mm/yyyy) To : 18/06/2011  
 Loco Type : All    Loco No : All    Since Last :    Days    Since I :

**Summary**    Health Data    Faults    Alerts    List    Daywise Report

Zone # SCR    Shed # KZJ

**Note : No Communication indicates loco is either switch off or out of coverage area**

LocoType	No. of Locos	Moving Locos	Locos with No Communication	Stationary Locos
WDG3A	11	4	0	7
WDM3A	2	1	0	1

- Fleet reports displays the information of all Locomotive status for selected zone and selected shed.
- The reports under this module are:
  - Fleet Summary                                      Fleet Health Data                                      Fleet Faults
  - Fleet Alerts    Fleet List    Fleet Day wise Report
  - Fleet ALF Report
- The Fleet Summary option gives the information of Loco Type, Size of the loco, Number of running locos, Number of locos with no signal and Number Idling for the selected Zone and Shed.

# FLEET → HEALTH DATA

**Search Criteria**

Zone : SCR    Shed : KZJ    Date From : 19/06/2011 (dd/mm/yyyy) To : 20/06/2011 (dd/mm/yyyy)  
 Loco Type : All    Loco No : All    Since Last    Days    Since Last Login    Go

**Shed# KZJ**  
 Note : N.A indicates not applicable

Loco No.	LocoType	Date / Time	GHP	BATV (Volts)	BATI (Amps)	EWT (DegC)	LOP (Kg/Cm2)	BAP (Kg/Cm2)	FDP (Kg/Cm2)	EDT (DegC)	EngineTemp (DegC)
13446	WDG3A	20/06/2011 12:00:00	N.A	71.0	1.8	66.4	2.80	0.00	4.54	70.0	N.A
13447	WDG3A	20/06/2011 11:30:00	N.A	70.8	2.4	62.4	2.74	0.01	4.50	69.4	N.A
14628	WDG3A	20/06/2011 11:30:00	13	72.0	2.1	60.7	2.14	0.00	0.00	66.9	61
14629	WDG3A	20/06/2011 11:30:00	N.A	71.8	3.0	64.8	2.48	0.00	4.99	67.6	N.A
14775	WDM3A	20/06/2011 11:30:00	45	71.9	2.3	63.1	2.22	0.00	4.54	66.8	63
14777	WDG3A	20/06/2011 11:30:00	N.A	70.8	3.0	61.0	2.12	0.00	4.13	68.6	N.A
14782	WDG3A	20/06/2011 11:30:00	95	71.2	4.1	61.2	3.99	0.00	0.00	68.4	61
14887	WDG3A	20/06/2011 11:30:00	12	72.0	0.3	62.6	2.20	0.00	4.60	71.8	63
14927	WDG3A	20/06/2011 11:30:00	47	71.8	0.6	67.6	1.82	0.00	4.54	69.7	68
18894	WDM3A	20/06/2011 11:30:00	48	71.5	2.0	62.6	1.67	0.00	0.00	67.0	63
13338	WDG3A	20/06/2011 11:10:00	N.A	71.1	0.0	61.0	1.96	0.00	4.76	64.2	N.A
14907	WDG3A	20/06/2011 06:00:00	45	72.0	4.2	65.3	2.16	0.00	4.67	66.5	65
14897	WDG3A	19/06/2011 19:20:00	47	71.9	5.7	64.8	1.82	0.01	4.83	68.3	65

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- Fleet Health Report displays the latest health status of each and every locomotive of selected zone/shed. It displays the latest information like Battery Voltage, Lube Oil Pressure, Boost Air pressure etc. of each and every locomotive of selected zone/shed.

# FLEET → FAULTS

Shed# KZJ

● Critical Fault ● Normal Fault

Alert	Date / Time	Loco No.	LocoType	Fault Code	Fault Description	Location	Select Data
●	18/06/2011 14:40:35	13446	WDG3A	2586	BP<2.8 Kg/cm2 Data Pack	PANCHIKALAPADU	<a href="#">DataPack</a>
●	18/06/2011 13:40:18	13446	WDG3A	1542	EXPR Circuit Open Fault Recovered	GANGAYAPALLE	<a href="#">DataPack</a>
●	18/06/2011 13:40:02	13446	WDG3A	1133	EXPR Circuit Open	GANGAYAPALLE	<a href="#">DataPack</a>
●	18/06/2011 09:49:12	13447	WDG3A	1503	P2 Stuck Closed Fault Recovered	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 09:48:27	13447	WDG3A	1088	P2 Stuck Closed	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 09:42:33	13447	WDG3A	2585	Engine Over Speed Data Pack	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 09:38:39	13447	WDG3A	2581	VCD applied penalty Brake	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 09:19:36	13447	WDG3A	1610	Low Water Level Fault Recovered	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 09:18:33	13447	WDG3A	1001	Low Water Level	KAZIPET	<a href="#">DataPack</a>
●	18/06/2011 07:56:09	14629	WDG3A	1527	GF Circuit Open Fault Recovered	HADAPSAR	<a href="#">DataPack</a>
●	18/06/2011 07:52:50	14629	WDG3A	1018	GF circuit Open	MANJRI	<a href="#">DataPack</a>
●	17/06/2011 20:42:47	14629	WDG3A	2582	High Wheel Slip Occurred	DAUND	<a href="#">DataPack</a>
●	17/06/2011 20:00:50	18894	WDM3A	1618	Wheel Diameters Calibration done	IRUGUR	<a href="#">DataPack</a>
●	17/06/2011 17:26:27	14629	WDG3A	2582	High Wheel Slip Occurred	KUM	<a href="#">DataPack</a>
●	17/06/2011 17:25:32	14629	WDG3A	2582	High Wheel Slip Occurred	KUM	<a href="#">DataPack</a>

- Fleet Fault Report displays the Detailed Fault information of each and every locomotive for the selected criteria.
- It displays the Faults information like fault code, fault description, location etc. and data pack link of all loco's of selected zone and shed.

# FLEET → ALERTS

**Search Criteria**

Zone : SCR    Shed : KZJ     Date From 17/06/2011 (dd/mm/yyyy) To     Since Last    Days

Loco Type : All    Loco No : All

**Summary** | **Health Data** | **Faults** | **Alerts** | **List** | **Daywise**

Zone # SCR    Shed # KZJ

Loco No.	Shed	Date / Time	Satisfied Alert Description
13446	KZJ	18/06/2011 13:40:02	EXPR Ckt Open

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- Fleet alerts report displays the logged user configured alerts for the specific faults or the specific conditions on health data parameters . It displays the loco id for which the alert has been logged, date time at which alert logged, alert condition like fault name or condition on health data parameters.

# FLEET → LIST

Shed# KZJ

Last Reported Status

Note : No Communication indicates loco is either switch off or out of coverage area

Loco No.	LocoType	Date/Time	Location	Status	Speed (Kmph)	Fault Name	Critical Faults in last 24 hrs	Engine Status	Due Status
<a href="#">18894</a>	WDM3A	18/06/2011 17:49:00	<a href="#">PALGHAT JUNCTION</a>	Running	10	<a href="#">Wheel Diameters Calibration done</a>	0	On	1 days
<a href="#">14927</a>	WDG3A	18/06/2011 17:44:40	<a href="#">ADILABAD</a>	Stop	0	<a href="#">Wheel Diameters Calibration done</a>	0	Off	3 days
<a href="#">14907</a>	WDG3A	18/06/2011 17:47:00	<a href="#">AMDORA</a>	Running	63	<a href="#">Direction Reversal Attempted at High speed Cannot Change Direction</a>	0	On	-
<a href="#">14897</a>	WDG3A	18/06/2011 17:47:00	<a href="#">ADILABAD</a>	Stop	0	<a href="#">Wheel Diameters Calibration done</a>	0		-
<a href="#">14887</a>	WDG3A	18/06/2011 17:26:00	<a href="#">WARDHA</a>	Stop	0	<a href="#">Direction Reversal Attempted at High speed Cannot Change Direction</a>	0		12 days
<a href="#">14782</a>	WDG3A	18/06/2011 17:45:00	<a href="#">GODAMGURA</a>	Running	74	<a href="#">Wheel Diameters Calibration done</a>	0	On	-
<a href="#">14777</a>	WDG3A	18/06/2011 17:50:40	<a href="#">LINGAMPALLY</a>	Running	73	<a href="#">Invalid Notch Command Running at Idle/Notch1</a>	0	On	4 days
<a href="#">14775</a>	WDM3A	18/06/2011 17:48:40	<a href="#">MUNIRABAD</a>	Running	70	<a href="#">Wheel Diameters Calibration done</a>	0	On	17 days
<a href="#">14629</a>	WDG3A	18/06/2011 17:51:40	<a href="#">LONAVALA</a>	Stop	0	<a href="#">GF Circuit Open Fault Recovered</a>	1		-
<a href="#">14628</a>	WDG3A	18/06/2011 17:49:20	<a href="#">KAZIPET</a>	Stop	0	<a href="#">Wheel Diameters Calibration done</a>	0		-
<a href="#">13447</a>	WDG3A	18/06/2011 09:51:20	<a href="#">KAZIPET</a>	Stop	0	<a href="#">P2 Stuck Closed Fault Recovered</a>	1	Off	20 days
<a href="#">13446</a>	WDG3A	18/06/2011 18:17:05	<a href="#">KALAMALLA</a>	Running	1	<a href="#">BP&lt;2.8 Kg/cm2 Data Pack</a>	0	On	-
<a href="#">13338</a>	WDG3A	18/06/2011 17:34:40	<a href="#">ROHTAK</a>	Stop	0	<a href="#">LLOB Trip RESET Plunger Fault Recovered</a>	0		9 days

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- List report displays current status of all Locomotives whether they are in Running or Halt, Location etc. Last Reported Time column displays the latest updated long term memory record date/time of that particular loco. Here, From Date, To Date, Locotype, Loco No. fields are disabled in order to display the latest information of all loco's of selected zone /shed.

# FLEET → DAY WISE REPORT

Summary Health Data Faults Alerts List **Daywise Report** Power Control ALF Report

Zone # SCR Shed # KZJ

	LocoNo.	Shed	StartDateTime	EndDateTime	Total Distance Travelled in Kms	IdleTime in HH:MM
☑	18894	KZJ	19/06/2011 00:00:00	20/06/2011 00:00:00	270.340	07:27
☑	14927	KZJ	19/06/2011 00:00:00	20/06/2011 00:00:00	145.871	20:33
☑	14907	KZJ	19/06/2011 00:00:00	20/06/2011 00:00:00	245.188	16:05
☑	14897	KZJ	19/06/2011 00:00:00	19/06/2011 00:00:00	0.000	00:00
☑	14887	KZJ	19/06/2011 06:39:23	20/06/2011 04:07:54	235.551	01:50
☑	14782	KZJ	19/06/2011 00:00:00	20/06/2011 00:00:00	308.141	15:59
☑	14777	KZJ	19/06/2011 09:28:33	20/06/2011 09:40:26	417.000	12:22
☑	14775	KZJ	19/06/2011 00:00:00	20/06/2011 01:49:29	236.199	02:48
☑	14629	KZJ	19/06/2011 00:37:07	20/06/2011 09:36:50	254.000	18:17
☑	14628	KZJ	19/06/2011 00:00:00	20/06/2011 00:00:00	422.602	12:03
☑	13447	KZJ	19/06/2011 14:56:11	20/06/2011 10:05:57	99.000	12:07
☑	13446	KZJ	19/06/2011 00:18:10	20/06/2011 10:17:58	412.000	21:41
☑	13338	KZJ	19/06/2011 00:16:22	20/06/2011 09:16:01	500.000	16:14

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- Day wise report displays the information about the Locomotive daily traveled distance and Idle time of each locomotive of selected zone and selected shed for the selected criteria. It displays the loco number, date, distance traveled and idle time of each and every locomotive of selected zone and selected shed for the selected dates.

# FLEET → PC REPORT

Loco No :   Since Last  Days  Since Last Login

**Summary** **Health Data** **Faults** **Alerts** **List** **Daywise Report** **PC Report** **ALF Report**

**Zone wise PC Report - Zone#All**  
● Passenger ● Goods ● LightEngine

	Zone	Division	Shed	LocoID	ScheduledTime	Remarks	Composition
●	WR.	AHMEDABAD	SBI	12288	04/04/2010 00:00:00	testing purpose	11

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- Power Controller report gives information whether the loco is a passenger Loco, or goods Loco or light Engine. It displays the Power control status of each loco for the selected zone and shed for the selected period. Here the Status of the Loco is displayed in icons i.e yellow indicates passenger, red indicates goods and green indicates light engine trains.

# FLEET → ALF REPORT

Summary Health Data Faults Alerts List Daywise Report PC Report **ALF Report**

Zone# All

Running
  DeadLoco
  ReducedPower

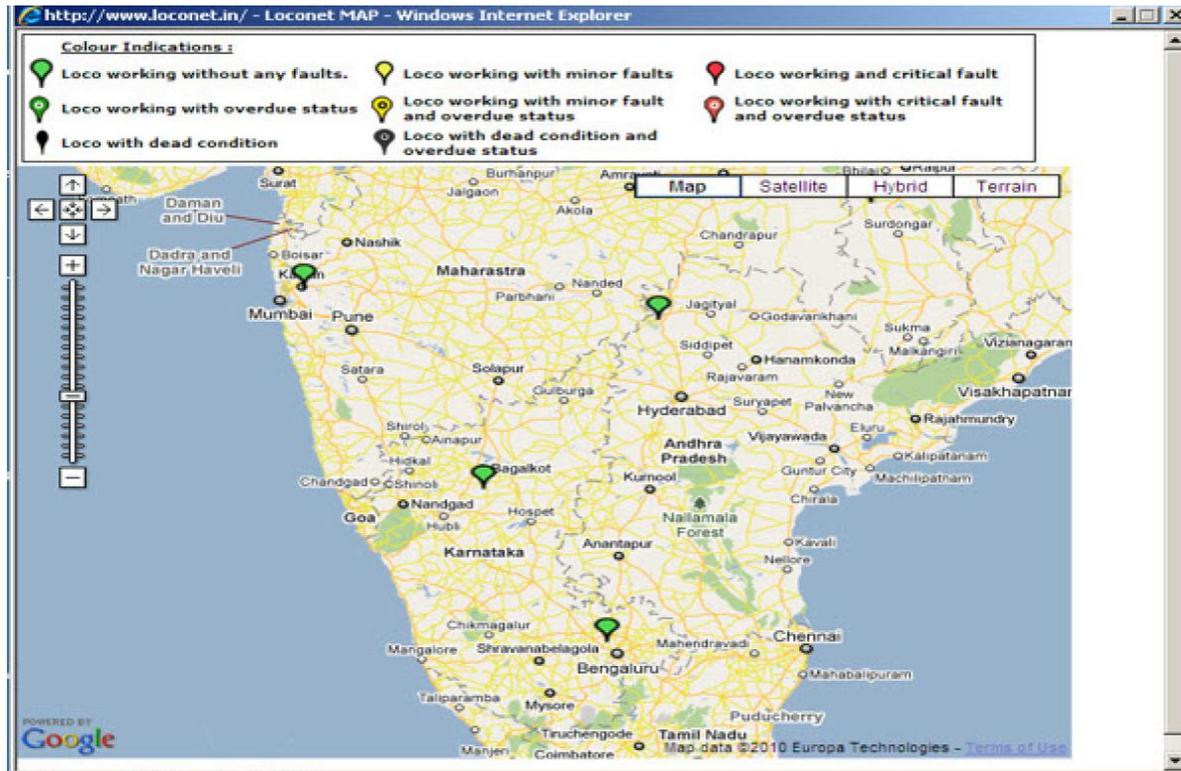
Normal Report
  OverDue Report

	Shed	Loco No.	<u>Schedule Date/Time</u>	Next Schedule	Recalled Schedule	Schedule Type	ShedOut Date/Time	Over Due Days	Remarks
<input checked="" type="radio"/>	HWH	11246	03/02/2010 09:45:00	22/02/2010	21/02/2010	T1/T2	04/03/2010 10:30:00	186	PASSED
<input checked="" type="radio"/>	HWH	11247	20/02/2010 12:00:00	12/03/2010	11/03/2010	T1/T2	26/03/2010 12:10:00	168	PASSED
<input checked="" type="radio"/>	SBI	12288	10/02/2010 00:00:00	04/04/2010	04/04/2010	T1/T2	10/02/2010 15:00:00	145	loco working
<input checked="" type="radio"/>	KZJ	14974	30/01/2010 10:10:10	31/01/2010	30/01/2010	T1/T2	20/01/2010 10:10:10	208	

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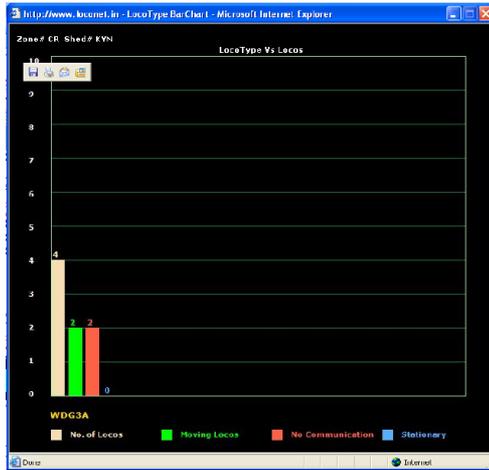
- ALF Report displays the ALF status of each and every loco of selected zone and selected shed for selected criteria.
- ALF status is displayed in two types of reports:
  - Normal report: This report displays the ALF status of all the locomotives of selected zone and selected shed without over dues.
  - Over Due Report: This report displays the ALF status of all the locomotives running with overdue.

# FLEET → LOCATE IN MAP



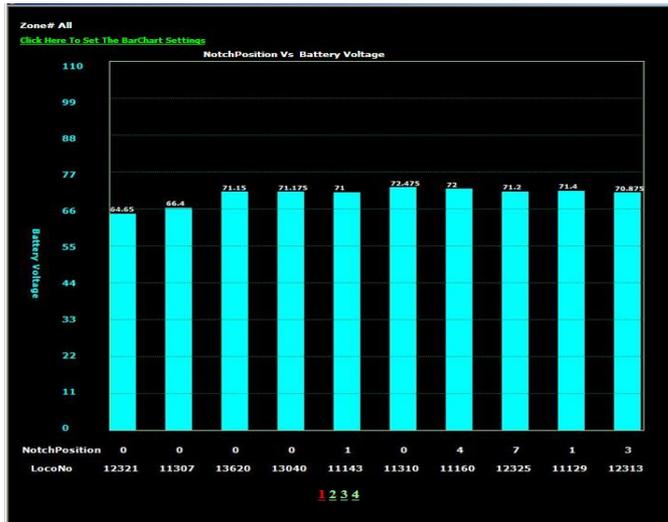
- This map gives the location information of the particular selected Zone and Shed.
- On keeping the cursor, “ Click here to view locos on map” occurs. On clicking, a new window pops out, as shown.

# FLEET → VIEW LOCOTYPE CHART



- This chart gives the information about the size of the selected loco operating and also the number of locos operating in various modes. Be it in running, idling or no signal mode. Here the different modes of operations are indicated by different colors. Green is used for Running mode, blue for no signal mode and Red for Idling mode.

# FLEET → VIEW DATA LOG CHART



- This charts gives the information about the parameters like Battery current, Battery voltage etc. for the selected Loco of the particular Zone and Shed.
- On clicking, a new window pops out, as shown.
- This window has the ' Select parameters' for the ' Y-Axis Scale Settings' in the Bar Chart Settings.

# FLEET → VIEW DATALOG CHART (cont.)



- For Example, on selecting the option as ' Engine Water Temperature', the Bar Chart is changed showing the Engine Water Temperature of the Loco number 14974 of Zone SCR and Shed KZJ, as shown.

# LOCOMOTIVE → SUMMARY




Fleet
Locomotive
UserSettings
Locostatus Settings

Welcome to kyn\_shed [| LogOut](#)

[GPSHistory](#) | [Critical Faults](#)   MAP  

**Search Criteria**

Zone :  Shed :   Date From  (dd/mm/yyyy) To  (dd/mm/yyyy)

Loco Type :  Loco No :   Since Last  Days  Since Last Login

Summary
Health Data
Faults
Lifetime Data
Event Rec SHM
Event Rec LGM
SSIP
Fuel
APU

**Loco# 13637**

Last Update			
DateTime	20/06/2011 13:14:00	Status	Stop
Speed	0 Kmph		

Health Status			
Battery Voltage	71.4 Volts	Fuel oil pressure	4.2 Kg/Cm2
Boost air pressure	0.01 Kg/Cm2	Lube oil temperature	65.3 Deg C
Engine Water temperature	60.8 Deg C	EngineTemperature	60.80 Deg C
Battery Current	-2 Amps	Main Reservoir Pressure	9.80 Kg/Cm2
Lube oil pressure	3.6 Kg/Cm2	Brake Pipe Pressure	5.0 Kg/Cm2

Fault Data			
Latest Fault	20/06/2011 07:33:43	MFPB Breaker is ON Now	<a href="#">DataPack Available</a>
Critical Faults in last 24 hrs	0		

# LOCOMOTIVE → SUMMARY

- Locomotive Reports is use to display the reports of selected zone and selected shed and loco number for selected dates.
- It includes :
  - Loco Summary
  - Loco Health
  - Loco Faults
  - Life Time Counters
  - Event Recorder SHM
  - Event Recorder LGM
  - SSIP Data
  - Fuel Data
  - APU
- Summary report displays the Latest Updated information about the locomotive. This report displays the last updated data of long term memory like date time, speed, status of the locomotive and the latest information of health data parameters.

# LOCOMOTIVE → HEALTH DATA

LocoNo : 13637 All

Date/Time	Speed (kmph)	Notch	BATV (Volts)	LOP (Kg/cm2)	BAP (Kg/cm2)	FOP (Kg/cm2)	EWT (DegC)	LOT (DegC)	BATI (Amps)	ENG TEMP (DegC)	MRPR (Kg/cm2)	BPP (Kg/cm2)	TAV (Volts)	TAAT (Amps)
20/06/2011 13:10:00	0.0	0	71.4	3.6	0.01	4.2	60.8	65.3	-2	60.8	9.8	5.0	1	10
20/06/2011 13:00:00	0.0	0	71.5	3.5	0.01	4.1	64.6	66.9	0	64.6	9.5	3.6	1	6
20/06/2011 12:50:00	0.0	0	71.3	3.6	0.01	4.2	61.8	65.5	-2	61.8	9.6	5.0	1	6
20/06/2011 12:40:00	0.0	0	71.3	3.6	0.01	4.2	65.1	67.4	-2	65.1	8.4	5.0	1	9
20/06/2011 12:30:00	0.0	0	71.4	3.6	0.01	4.2	62.5	66.1	-1	62.5	8.9	5.0	1	9
20/06/2011 12:20:00	13.0	0	71.4	3.6	0.01	4.2	63.2	68.0	-1	63.2	9.5	4.9	2	9
20/06/2011 12:10:00	9.0	0	71.4	3.5	0.02	4.2	61.4	68.0	0	61.4	11.2	4.9	2	5
20/06/2011 12:00:00	11.0	2	71.4	4.4	0.06	4.1	62.7	70.8	-1	62.7	10.3	4.9	225	986
20/06/2011 11:50:00	55.0	0	71.4	3.2	0.03	4.3	67.4	73.4	-1	67.4	9.1	4.9	1	9

- Health Data report displays the health status of the locomotive like different type of pressures values, temperature values, speed, notch etc., for a particular period of a selected Locomotive.

# LOCOMOTIVE → FAULTS

**Search Criteria**

Zone : CR    Shed : KYN    Date From : 19/06/2011 (dd/mm/yyyy) To : 20/06/2011 (dd/mm/yyyy)  
 Loco Type : All    Loco No : 13637    Since Last :    Days    Since Last Login    Go

**Summary** | **Health Data** | **Faults** | Lifetime Data | Event Rec SHM | Event Rec LGM | SSIP | Fuel | APU

LocoNo # 13637    ● Critical Fault    ● Normal Fault

Alert	Date / Time	Fault Code	Fault Description	Location	Select Data
●	20/06/2011 07:33:43	1765	MFPB Breaker is ON Now		<a href="#">DataPack</a>
●	19/06/2011 21:01:22	1117	MFPB Breaker Tripped/TL13 Missing	LGATPURI	<a href="#">DataPack</a>
●	19/06/2011 02:50:52	1765	MFPB Breaker is ON Now	KHARBAO	<a href="#">DataPack</a>
●	19/06/2011 02:50:18	1117	MFPB Breaker Tripped/TL13 Missing	KHARBAO	<a href="#">DataPack</a>

[Download to File](#)

- Faults Data displays the Detailed Fault information like fault code, fault description, logged date time of the fault to view Fault data pack of a selected locomotive or the selected criteria. Here user can select particular loco information within selected dates.

# LOCOMOTIVE → FAULT DATA PACK



Date: 18/06/2011 Time: 14:40:35 Fault No.: 2586  
Message: BP<2.8 Kg/cm2 Data Pack  
Shed Name: K23 Loco no: 13446



Sel	Field Name	Units	18/06/2011 14:40:30	18/06/2011 14:40:31	18/06/2011 14:40:32	18/06/2011 14:40:33	18/06/2011 14:40:34	18/06/2011 14:40:35	18/06/2011 14:40:36	18/06/2011 14:40:37
<input type="checkbox"/>	Loco_Status	.								
<input type="checkbox"/>	Loco Speed	KMPH	41.8	41.2	40.7	40.3	39.9	39.9	39.7	38.9
<input type="checkbox"/>	Excitation limit Para	.	EPWM Off							
<input type="checkbox"/>	Notch	NUM	1	1	1	1	1	1	1	1
<input type="checkbox"/>	Engine RPM	RPM	407	413	410	402	393	389	393	402
<input type="checkbox"/>	Excitation PWM	%	0	0	0	0	0	0	0	0
<input type="checkbox"/>	Excitor Field Current	Amps	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<input type="checkbox"/>	Excitor Armature Current	Amps	0	0	0	0	0	0	0	0
<input type="checkbox"/>	Traction Alternator Voltage	Volts	3	4	3	3	3	3	3	3
<input type="checkbox"/>	Traction Alternator Current	Amps	10	10	10	10	10	10	10	10
<input type="checkbox"/>	Output Power	HP	0	0	0	0	0	0	0	0
<input type="checkbox"/>	Gross HP	HP	15	16	16	15	15	15	15	15
<input type="checkbox"/>	LCP Voltage	%	0	0	0	0	0	0	0	0

Show Selected Rows

Show All Rows

[Download to File](#)

- It is a pop up screen in the Fault Module. For the selected fault, it shows the status of different parameters for the past of 3 & 5 seconds of the selected faults.

# LOCOMOTIVE → LIFE TIME DATA

The screenshot shows the MEDHA Locomotive Life Time Data web application. The header includes the LocoNet logo, MEDHA logo, and navigation links for Fleet, Locomotive, UserSettings, and Locostatus Settings. A welcome message 'Welcome to kyn\_shed' and a 'LogOut' link are also present. Below the header, there are search criteria for Zone (CR), Shed (KYN), Date From (19/06/2011), and To (20/06/2011). The Loco No is 13637. The interface includes a navigation menu with options like Summary, Health Data, Faults, Lifetime Data (selected), Event Rec SHM, Event Rec LGM, SSIP, Fuel, and APU. The main content area shows 'Loco No : 13637' and options for 'Notchwise values in %' (selected) and 'Notchwise Data'. A table displays the following data:

Notch Position	Engine Runtime in %	Distance travelled in %	Gross HP in %	Traction Power in %
Low IDLE	50.08		3.43	
IDLE	10.21		1.73	
Notch 1	5.64	5.94	1.86	1.70
Notch 2	3.94	5.28	3.36	3.34
Notch 3	3.23	5.24	5.77	6.00
Notch 4	1.51	4.41	4.07	4.24
Notch 5	1.43	5.18	5.42	5.87
Notch 6	2.57	9.59	13.77	14.57
Notch 7	2.12	7.46	14.79	15.79
Notch 8	5.45	24.14	45.43	48.46

- Lifetime Data displays the Runtime, distance traveled, power consumed for each notch, coasting distance, coasting time, DB distance, DB time of a particular locomotive for a selected period. Distance is shown in Km's and time in hh:mm:ss format.

# WISE LTC REPORT & CUMULATIVE DATA

http://www.loconet.in - Monthwise LTC Report - Microsoft Inter...




LocoNo : 13446

Month Name	Distance travelled in Kms	Energy in KWH
Jan - 2011	10,430.197	144395
Feb - 2011	8,584.870	124836
Mar - 2011	9,364.176	157373
Apr - 2011	12,575.775	165238
May - 2011	9,213.789	120166
Jun - 2011	3,116.023	42488
Jul - 2010	N.A	N.A
Aug - 2010	N.A	N.A
Sep - 2010	N.A	N.A
Oct - 2010	N.A	N.A
Nov - 2010	3,691.884	56968
Dec - 2010	8,866.007	122088

[Download to File](#)

Done Internet

http://www.loconet.in - Monthwise LTC Report - Microsoft Inter...




LocoNo : 13446

Month Name	Distance travelled in Kms	Energy in KWH
Jan - 2011	10,430.197	144395
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Apr - 2011	12,575.775	165230
May - 2011	9,213.789	120166
Jun - 2011	3,116.023	42488
Jul - 2010	N.A	N.A
Aug - 2010	N.A	N.A
Sep - 2010	N.A	N.A
Oct - 2010	N.A	N.A
Nov - 2010	3,691.884	56968
Dec - 2010	8,866.007	122088

[Download to File](#)

Done Internet

- Monthly Lifetime counters: Lifetime counters link displays the month wise counters of the selected loco.
- Cumulative Life Time Counters link displays the cumulative data of the selected loco.

# LOCOMOTIVE → EVENT REC SHM

The screenshot shows the MEDHA Locomotive SHM interface. At the top, there are navigation tabs: Fleet, Locomotive, UserSettings, and Locostatus Settings. Below this is a search criteria form with the following fields: Zone (CR), Shed (KYN), Date From (19/06/2011), To (20/06/2011), Loco No (13637), and radio buttons for Date selection (Date From, Since Last, Since Last Login). A 'Go' button is present. Below the search criteria is a menu bar with tabs: Summary, Health Data, Faults, Lifetime Data, Event Rec SHM (selected), Event Rec LGM, SSIP, Fuel, and APU. A note states: '\*Note: Only one day data can be downloaded'. Below the menu bar is a search by Date/Time field and a 'Go' button. The main data table is as follows:

Date/Time	KMPH	Dist (Mtrs)	BPP (kg/cm <sup>2</sup> )	BCP (kg/cm <sup>2</sup> )	TELI	Notch	MOT	BRK	PLT	FOR	REV	FLGT With FOR	FLGT With REV	HL1	HL2	TE	VCD T2	VCD T3	VCD ACK	VCD FAIL	VCD ISO
20/06/2011 13:00:49	0	0	4.70	3.60	8	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:57:58	0	0	4.94	1.18	11	1	Yes	No	No	No	Yes	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:56:26	5	2	4.95	0.00	8	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:55:26	3	1	4.95	0.00	828	1	Yes	No	No	No	Yes	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:54:02	0	0	4.96	0.76	10	1	Yes	No	No	No	Yes	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:41:51	2	1	4.96	0.00	6	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:40:51	5	2	4.96	0.00	779	1	Yes	No	No	Yes	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:39:14	1	1	4.96	0.16	6	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:23:06	7	2	4.76	0.00	6	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:22:06	9	2	4.92	0.00	9	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:21:06	12	3	4.51	0.00	6	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:20:06	13	4	4.91	0.00	3	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No
20/06/2011 12:19:06	11	4	4.89	0.00	8	0	No	No	No	No	No	Off	Off	Off		Off	Off	Off	No	No	No

- SHM report displays the Event Recorder data of 1 second data i.e speed, distance, pressure values, notch etc. for the selected loco for the selected period . Here only one day data can be downloaded. Here, in Search by Date/Time control when a particular date and time is entered and 'Go' button is clicked, it navigates the data page where the entered date time has been matched and it is displayed as a first record.

# LOCOMOTIVE → EVENT REC LGM

Loco# 13637

\*Note: Only one day data can be downloaded

Date /Time	Speed (Kmph)	Distance (Mtrs)	Fuel Oil Level (Lbs)	FT Calibrated	FDL Sensor Connected	FDL Sensor Faulty	Remarks
20/06/2011 13:25:00	0	0.000	0	No	No	No	
20/06/2011 13:24:40	0	0.000	0	No	No	No	
20/06/2011 13:24:20	0	0.000	0	No	No	No	
20/06/2011 13:24:00	0	0.000	0	No	No	No	
20/06/2011 13:23:40	0	0.000	0	No	No	No	
20/06/2011 13:23:20	0	0.000	0	No	No	No	
20/06/2011 13:23:00	0	0.000	0	No	No	No	
20/06/2011 13:22:40	0	0.000	0	No	No	No	
20/06/2011 13:22:20	0	0.000	0	No	No	No	
20/06/2011 13:22:00	0	0.000	0	No	No	No	
20/06/2011 13:21:40	0	0.000	0	No	No	No	

- LGM report displays the Event Recorder data of 20 second data i.e speed, distance, Fuel Oil Level, FT calibrated etc. for the selected loco for the selected period. Here only one day data can be downloaded. Here, in Search by Date/Time control when a particular date and time is entered and 'Go' button is clicked, it navigates the data page where the entered date time has been matched and it is displayed as a first record.

# LOCOMOTIVE → SSIP DATA

The screenshot shows the MEDHA Locomotive SSIP Data interface. The page includes a search criteria section with the following details:

- Zone: CR
- Shed: KYN
- Date From: 19/06/2011
- To: 20/06/2011
- Loco No: 13637
- Since Last / Since Last Login

The SSIP data table for Loco # 13637 is as follows:

Date/Time	Speed (kmph)	Notch	BATV (Volts)	LOP (Kg/cm2)	BAP (Kg/cm2)	FOP (Kg/cm2)	EWT (DegC)	LOT (DegC)	BATI (Amps)	ENG TEMP (DegC)	MRPR (Kg/cm2)	BPP (Kg/cm2)	TAV (Volts)	TAAI (Amps)
19/06/2011 17:00:00	37.0	8	71.1	8.4	1.96	3.2	67.6	82.8	-4	67.6	9.0	4.8	978	2019
19/06/2011 16:50:00	42.0	8	71.2	8.4	2.01	2.7	69.4	84.0	-1	69.4	8.9	4.9	533	3700
19/06/2011 16:40:00	37.0	8	71.1	8.5	1.90	3.2	70.8	80.2	-4	70.8	9.7	4.8	953	2008
19/06/2011 16:10:00	31.0	8	71.3	8.4	1.69	3.7	69.3	84.1	3	69.3	9.2	4.8	819	1996
19/06/2011 16:00:00	31.0	8	71.2	8.5	1.97	3.5	66.8	81.5	-3	66.8	8.5	4.8	865	2304
19/06/2011 15:50:00	64.0	8	71.4	8.5	1.93	2.5	69.7	79.2	0	69.7	8.0	4.8	719	2745
19/06/2011 15:30:00	44.0	8	71.3	8.8	1.12	3.3	60.8	70.9	-4	60.8	8.8	4.8	537	3098

Below the table, there is a 'Download to file' link.

- SSIP displays the Steady State Information of the selected locomotive for a selected period. It displays SSIP status of the locomotive like Engine RPM, Lube oil pressure, BAP etc., for a particular period of a selected locomotive.
- On clicking, the Download File link saves the entire information of selected locomotive of selected dates.

# LOCOMOTIVE → FUEL DATA

Search Criteria

Zone : SWR    Shed : KJM    Date From : 15/06/2011 (dd/mm/yyyy) To : 20/06/2011 (dd/mm/yyyy)

Loco Type : WDG3A    Loco No : 13512     Since Last     Since Last Login    Go

Summary   Health Data   Faults   Lifetime Data   Event Rec SHM   Event Rec LGM   SSIP   **Fuel**   APU

Loco # 13512 WDG3A

Start Date/Time	End Date/Time	Total Time (HH:MM:SS)	Idle Time (HH:MM:SS)	Distance (Km)	Fuel Consumed (Litres)	Fuel Added (Litres)	Location
13/06/2011 20:42:00	14/06/2011 07:18:20	10:36:00	07:22:00	157.843	1034	0	NAYANDAHALLI
13/06/2011 07:10:40	13/06/2011 20:42:00	13:31:00	04:09:00	130.395	987	2036	PANDAVAPURA
12/06/2011 20:38:20	13/06/2011 07:10:40	10:32:00	07:29:00	158.288	1052	0	HANUMANTHRAYANAGUDI
12/06/2011 07:29:40	12/06/2011 20:38:20	13:09:00	10:33:00	130.950	738	1604	BYADRAHALLI
11/06/2011 20:42:40	12/06/2011 07:29:40	10:47:00	07:30:00	159.128	1512	0	NAYANDAHALLI
11/06/2011 06:40:40	11/06/2011 20:42:40	14:02:00	06:39:00	141.940	1102	1380	PANDAVAPURA
10/06/2011 20:44:40	11/06/2011 06:40:40	09:56:00	07:24:00	143.368	698	0	KENGER
10/06/2011 07:21:20	10/06/2011 20:44:40	13:23:00	06:04:00	130.702	936	3063	PANDAVAPURA
09/06/2011 20:47:00	10/06/2011 07:21:20	10:34:00	06:27:00	155.266	857	0	NAYANDAHALLI
08/06/2011 17:50:00	09/06/2011 20:47:00	26:57:00	08:01:00	201.484	1299	0	PANDAVAPURA
08/06/2011 12:07:40	08/06/2011 17:50:00	05:42:00	03:18:00	119.342	837	0	HANAKERE
06/06/2011 19:41:40	08/06/2011 12:07:40	40:26:00	20:53:00	128.714	747	2095	MADDUR
06/06/2011 14:21:40	06/06/2011 19:41:40	05:20:00	02:11:00	137.246	1254	0	NAYANDAHALLI

- Fuel Data report displays the fuel consumed, distance traveled by a loco on each day for last seven days, the fuel oil level, fuel added and location of the loco along with date/time at which the fuel was added for last selected dates.

# LOCOMOTIVE → APU DATA

**Search Criteria**

Zone : SCR    Shed : GY    Date From : 21/06/2011 (dd/mm/yyyy) To : 22/06/2011 (dd/mm/yyyy)  
 Loco Type : All    Loco No : 13602    Since Last : Days    Since Last Login    **Go**

**Summary** | **Health Data** | **Faults** | **Lifetime Data** | **Event Rec SHM** | **Event Rec LGM** | **SSIP** | **Fuel** | **APU**

[Download APU Data](#) \*Note: Only one day data can be downloaded

Loco # 13602    Search by Date/Time            **Go**

Date/Time	Avg Engine RPM	APU Engine RPM	Avg MR Pressure kg/cm2	Avg agai Amps	Avg bati Amps	Avg batv volts	Avg EWT deg c	Avg EDT deg c	Brake cyl pr kg/cm2	LocoSpeed kmph	FDP kg/cm2	GF_ON	Motoring	DBraking	Coasting	engin
22/06/2011 12:54:45	401	0	8.0	41.1	1	71.2	58.0	60	3.64	0	4.63	No	Yes	No	No	↗
22/06/2011 12:54:44	400	0	8.0	41.7	1	71.2	58.0	60	3.64	0	4.69	No	Yes	No	No	↗
22/06/2011 12:54:43	399	0	8.1	42.0	1	71.2	58.0	60	3.64	0	4.64	No	Yes	No	No	↗
22/06/2011 12:54:42	399	0	8.1	40.8	1	71.2	58.0	60	3.64	0	4.39	No	Yes	No	No	↗
22/06/2011 12:54:41	400	0	8.1	41.1	1	71.2	58.0	60	3.64	0	3.96	No	Yes	No	No	↗
22/06/2011 12:54:40	400	0	8.1	41.4	1	71.2	58.0	60	3.64	0	3.98	No	Yes	No	No	↗
22/06/2011 12:54:39	400	0	8.1	40.8	1	71.2	58.0	60	3.64	0	4.11	No	Yes	No	No	↗
22/06/2011 12:54:38	399	0	8.1	42.0	1	71.2	58.0	60	3.64	0	4.22	No	Yes	No	No	↗
22/06/2011 12:54:37	399	0	8.1	41.7	1	71.2	58.0	60	3.64	0	4.78	No	Yes	No	No	↗
22/06/2011 12:54:36	399	0	8.1	41.1	1	71.2	58.0	60	3.64	0	4.42	No	Yes	No	No	↗
22/06/2011 12:54:35	400	0	8.1	41.4	1	71.2	58.0	60	3.64	0	4.36	No	Yes	No	No	↗

- If loco is provided with Auxiliary Power Unit (APU), then all the relevant parameters of APU will be indicated as given above for further analysis.

# LOCOMOTIVE → APU Counters

**Search Criteria**

Zone : SCR    Shed : GY     Date From : 21/06/2011 (dd/mm/yyyy) To : 22/06/2011 (dd/mm/yyyy)     Since Last :    Days     Since Last Login   

Loco Type : All    Loco No : 13802

**Summary** | **Health Data** | **Faults** | **Lifetime Data** | **Event Rec SHM** | **Event Rec LGM** | **SSIP** | **Fuel** | **APU**

**Loco# 13602**

IDLE Start Date/Time	APU Start Date/Time	MainEng Stop Date/Time	APU Stop Date/Time	MainEng Start Date/Time	IDLE Stop Date/Time	APU Run Hours	IDLE Hours
21/06/2011 16:09:38	21/06/2011 16:21:09	21/06/2011 16:21:15	21/06/2011 16:28:43	21/06/2011 16:30:36	21/06/2011 16:21:15	00:07:34	00:11:37
21/06/2011 15:23:01	21/06/2011 15:36:02	21/06/2011 15:36:08	21/06/2011 16:07:34	21/06/2011 16:09:37	21/06/2011 15:36:08	00:31:32	00:13:07
21/06/2011 10:12:39	21/06/2011 10:24:22	21/06/2011 10:24:28	21/06/2011 10:30:18	21/06/2011 10:32:14	21/06/2011 10:24:28	00:05:56	00:11:49
21/06/2011 08:18:02					21/06/2011 09:08:35	00:00:00	00:50:33
21/06/2011 07:49:40					21/06/2011 08:11:35	00:00:00	00:21:55

[Download File](#)

- APU run time counters can be monitored in this screen. When the loco entered into fuel save mode, fuel saving time etc., will be indicated in this screen. If system is not entering into the fuel save mode, appropriate message will be given by the system why it is not entering into the fuel save mode.

# LOCOMOTIVE → APU Summary

**Search Criteria**

Zone : SCR    Shed : GY    Date From : 21/06/2011 (dd/mm/yyyy) To : 22/06/2011 (dd/mm/yyyy)  
 Loco Type : All    Loco No : 13602    Since Last : Days    Since Last Login    Go

**Summary** | Health Data | Faults | Lifetime Data | Event Rec SHM | Event Rec LGM | SSIP | Fuel | **APU**

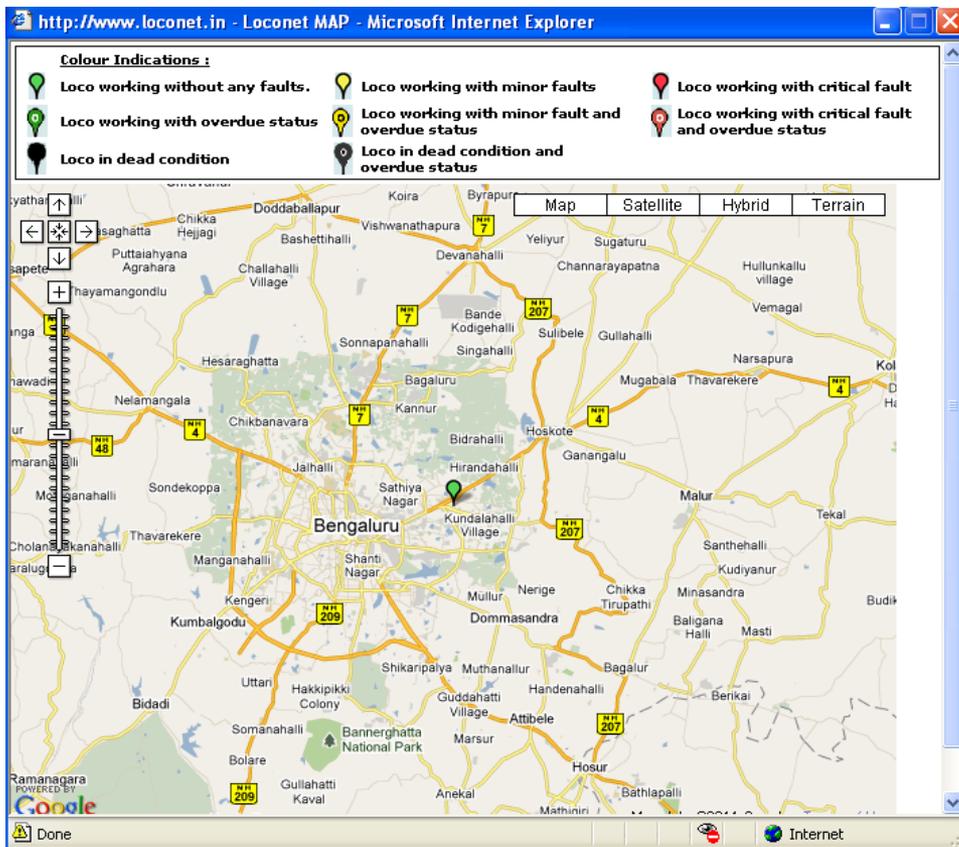
**Loco# 13602**      **Data Logged from 21/06/11 15:23:01 to 22/06/11 12:37:11**

TOTAL TIME in Hrs	
Total IDLE Time monitored	15:09:18
AES Switch Enabled	15:02:41
AES Switch Disabled	00:06:37
Actual Engine IDLE Time	03:28:15
Engine OFF/ APU run time	11:41:03
ENGINE IDLING TIME in Hrs	
Throttle Zero, RH is F/R or BCP< 1.5 kgs/Cm2	01:26:41
Throttle Zero, RH neutral & BCP>1.5 kgs/Cm2	13:28:59
CUMULATIVE AS ON 22/06/11 11:58:34	
IDLE Hours	2935:17:41 Hrs
APU run Hours	863:11:40 Hrs

ENGINE STOP & STARTS RESTARTED			
Main Engine Shutdown by APU	11		
Main Engine Restarted by APU	10		
ENGINE RESTARTED			
Due to RH kept in working direction	7		
Due to AES disabled	0		
Due to MR pressure is< 6.5 kgs/cm2	0		
Due to Loco Batteries Not charging	0		
Due to Eng. Temperature	0		
Due to APU faults	0		
Due to Manual Shut down of APU	3		
CURRENT APU STATUS AT 22/06/11 12:37:11			
APU STATUS	OFF	ENGINE TEMP	Normal
ENGINE STATUS	RUN	APU safety Devices	OK
LOCO SPEED	Stationary	BATTERY Charge	OK
AES ENABLED	YES	MR PRESSURE	Normal
RH - POSITION	NEUTRAL	LOCO BRAKES	Applied
TH - POSITION	NOT IN IDLE		

- In this screen total summary will be prompted related to APU. How many times system entered into fuel save mode, for what reason it come out from the fuel save mode etc., will be shown as above.

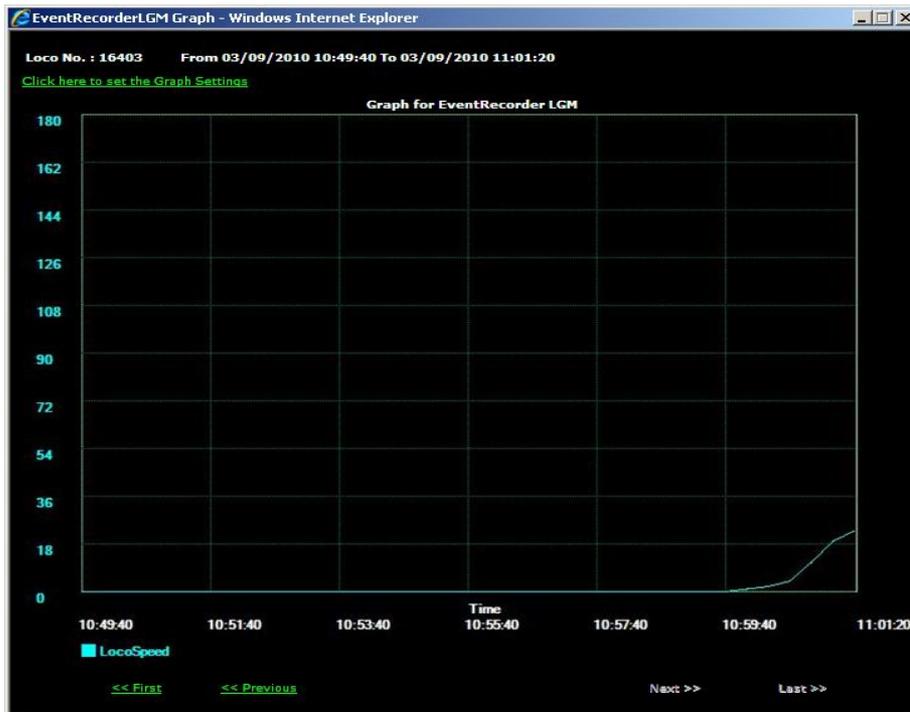
# LOCOMOTIVE → GPS DATA → VIEW MAP



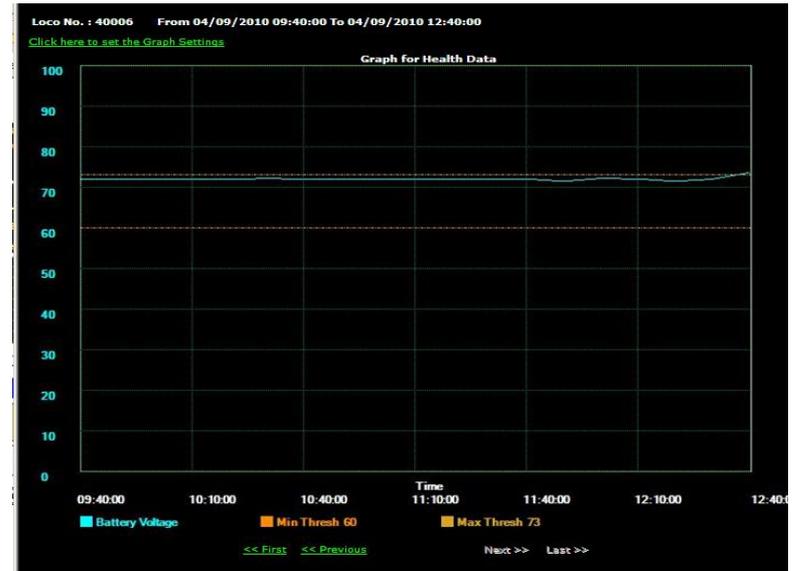
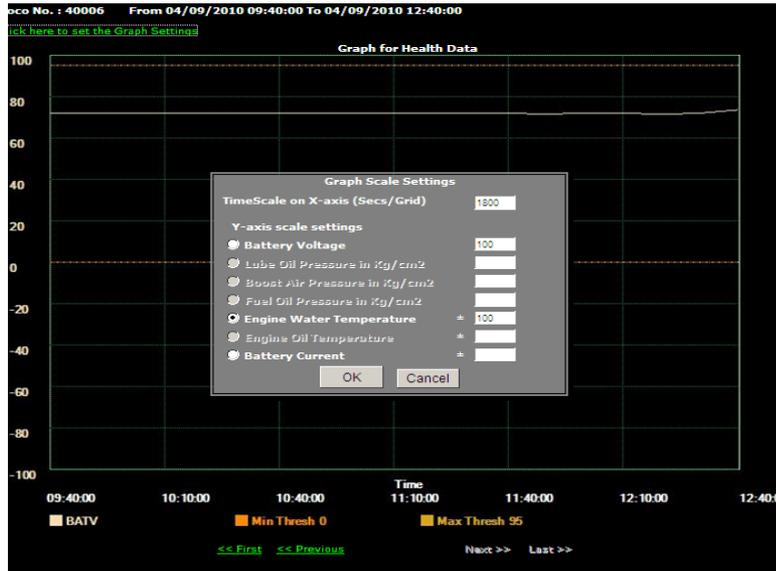
- This Map displays the location of the particular selected loco.
- On keeping the cursor on View Map, “Click here to view loco map” occurs.
- On clicking, a new window pops out, as shown.
- This option provides the location of the selected Locomotive. The locations can be viewed accordingly by choosing the various options as View Map, Satellite, Hybrid and Terrain respectively.

# LOCOMOTIVE → VIEW GRAPH

- This graph shows the “Speed vs Time” or “Speed vs Distance” relationship of the particular selected Loco.
- On keeping the cursor on View Graph, “Click here to view Event recorder LGM” occurs. On clicking, a new window pops out, as shown.
- This particular graph shows the “Speed vs Time” relationship of Loco number 16403 on 03-09-10 10:49:40 to 03-09-10 11:01:20.

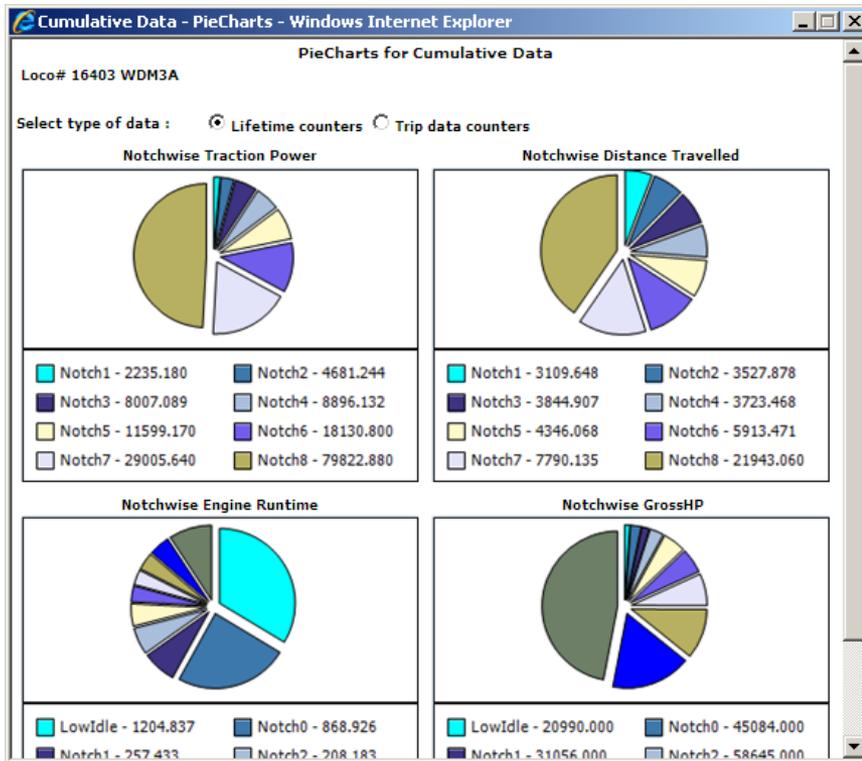


# LOCOMOTIVE → VIEW GRAPH



- There are Graph Scale Settings for the user to choose. For a particular loco, the user can see the “Speed vs Time” relationship or Speed vs Distance relationship. Speed is marked on the Y-axis whereas Time or Distance is marked on the X-axis.
- The scale for Time is marked as Secs/Grid and the scale for Distance is marked as Kms/Grid. Speed is set in KMPH.

# LOCOMOTIVE → VIEW LTC PIE CHART



- These Pie charts shows the various Notch wise distribution of the particular Loco as selected by the user. The eight notches are differentiated by different colors for showing the particular distribution. These charts shows the distribution of the cumulative data for Notch wise Energy Consumption, Notch wise Distance Traveled and Notch wise Energy Runtime.
- On clicking View LTC Pie Chart, a new window pops out showing the cumulative data, as shown

# USER SETTINGS

LocoNet

[Critical Faults](#)

MEDHA

Fleet Locomotive **UserSettings** Locostatus Settings

Welcome to kyn\_shed | [LogOut](#)

**Password Settings** Alerts **Alerts List**

No Data Available

- The reports under this module are:
  - ✓ Password Settings
  - ✓ Alerts
  - ✓ Alerts List

# USER SETTINGS → Password Settings

The screenshot displays the MEDHA web application interface. At the top left is the 'LocoNet' logo with the text 'Critical Faults' below it. The top center features the 'MEDHA' logo. The top right navigation bar includes 'Fleet', 'Locomotive', 'UserSettings' (highlighted in yellow), and 'Locostatus Settings'. Below this, a welcome message 'Welcome to kyn\_shed' and a 'LogOut' link are visible. A secondary navigation bar at the bottom right contains 'Password Settings' (highlighted in red), 'Alerts', and 'Alerts List'. The main content area shows a modal window titled 'Enter Transaction Password' with a text input field and three buttons: 'Change Password', 'Submit', and 'Cancel'.

- Password Setting Screen is used to change the password of the respective user. This screen helps the user to change password.
- When this screen is loaded, by default, it will ask to 'Enter Transaction Password'.
- It will prompt User name, Mobile Number, Email ID are loaded in the screen.
- User can change the password by entering data in all fields and on click of the submit button it saves the new password.

# USER SETTINGS → ALERTS CONFIGURATION

The screenshot displays the 'Alerts Configuration' interface. At the top, there is a navigation bar with 'MEDHA' logo and links for 'Fleet', 'Locomotive', 'UserSettings', and 'Locostatus Settings'. Below this, a 'Welcome to kyn\_shed' message and a 'LogOut' link are visible. A secondary navigation bar includes 'Password Settings', 'Alerts', and 'Alerts List'. The main configuration area is divided into several sections: 'Alerts Configuration' with radio buttons for 'Enable New Alert Description' (selected) and 'Enable to Edit Alert Description'; 'Alert Description' with a text input field containing 'Enter the description for this alert'; 'Click here to hide the content' with a list of faults including 'Low Water Level', 'LLOP Trip at OFF', 'LLOP Trip at RUN', 'HOT ENGINE. Cannot Power UP', 'Power Circuit Ground Fault', 'Control Circuit Ground Fault', and 'Locked Axle on Wheel Number 1-4', along with 'Add Faults' and 'Remove' buttons; 'Click here to hide the Threshold Settings' with two rows of dropdowns for 'Select the Parameter1/2' and 'Select the condition', and input fields for 'Enter the value'; and 'Action Message' with a text input field. At the bottom, 'Submit' and 'Cancel' buttons are present.

- Alerts configuration is mainly used to configure the alerts for selected loco's.
- Alerts Configuration Screen is used for configuring the alerts for selected faults for selected loco's in order to receive the email alerts.
- Zone, Shed, Loco number, Faults, Email id and Mobile numbers are loaded by default when the screen is loaded.

# USER SETTINGS → ALERTS MANAGEMENT

The screenshot shows the 'Alerts Management' section of the MEDHA web application. The interface includes a navigation bar with 'Fleet', 'Locomotive', 'UserSettings', and 'Locostatus Settings'. Below the navigation bar, there are tabs for 'Password Settings', 'Alerts', and 'Alerts List'. The main content area is divided into several sections:

- Alerts Management:** A section with a 'Management Description' field containing 'Description for Alert Management'.
- Select Locos:** A section with two dropdown menus: 'Select the Zone' (set to 'CR') and 'Select the Shed' (set to 'KYN'). Below these are two lists of locomotive numbers. The first list contains 13618, 13619, 13620, and 13637. The second list is empty. There are '>>Add' and 'Remove' buttons between the lists.
- Click here to hide the content:** A section with a list of alert types: 'All internal critical faults', 'APU Faults alert', and 'low water'. To the right of this list are 'Add Desc', 'View', and 'Remove' buttons.
- Click here to hide the content:** A section with an 'Enter Email-ID' field and an 'Add >>' button. The email address 'kyndmic@yahoo.com' is displayed in a box to the right. There is also a 'Remove' button.
- (Click here to close the content):** A section with an 'Enter Mobile Number' field and an 'Add>>' button. The mobile number '09769342714' is displayed in a box to the right.

# USER SETTINGS → ALERTS LIST

The screenshot displays the MEDHA web application interface. At the top left is the LocoNet logo. In the center is the MEDHA logo. To the right are navigation tabs: Fleet, Locomotive, UserSettings (highlighted), and Locostatus Settings. Below these tabs, it says 'Welcome to kyn\_shed' and a 'LogOut' link. On the right side, there are three buttons: Password Settings, Alerts, and Alerts List (highlighted). Below the navigation, a large white box contains the text 'No Data Available'.

- Alerts List displays the list of user configured alerts and from this report user can change the existing alert and view the configured alert report in small pop up window.
- On clicking, the Edit the alert link navigates to Alerts configuration Screen.
- There user can modify the selected alert and then click on Update button to modify the alert. The modified data is displayed in Alerts List screen.

# LOCOSTATUS SETTINGS → ALF SETTINGS

The screenshot shows the MEDHA LocoNet interface. At the top, there is a navigation bar with 'Fleet', 'Locomotive', 'UserSettings', and 'Locostatus Settings' (highlighted). Below this is a 'Welcome to kyn\_shed' message and a 'LogOut' link. A secondary navigation bar contains 'ALFSettings' (highlighted), 'Power Control Settings', and 'LogBook'.

The main content area is titled 'ALF Settings' and includes a note: '\*\*Note:History and Remarks Max Length is 500 Characters\*\*'. The form contains the following fields:

- Zone:** CR (dropdown)
- Shed:** KYN (dropdown)
- Loco:** 13618 (dropdown)
- Status:** Select (dropdown)
- Type Of Schedule:** T1/T2 (dropdown)
- Schedule Done:** [ ] [ ] (text input)
- Next Type Of Schedule:** T1/T2 (dropdown)
- Next Schedule:** [ ] (text input)
- Shed Out Date/Time:** [ ] [ ] (text input)
- Recalled Date:** [ ] (text input)
- CreatedBy:** [ ] (text input)
- Designation:** [ ] (text input)
- History:** [ ] (text area)
- Remarks:** [ ] (text area)

At the bottom of the form are 'Submit' and 'Cancel' buttons. Below the form is a table with the following data:

Zone	Shed	LocoNo	ScheduleDate/Time	ALFStatus
<a href="#">CR</a>	KYN	13620	09/09/2010 10:10:10	Running
<a href="#">CR</a>	KYN	13619	08/03/2011 12:12:12	Reduced Power

Loco Status Reports is used to configure the information by the user. The reports under this module are:

- ◆ ALF Settings
- ◆ Power Control Settings
- ◆ Log Book

# LOCOSTATUS SETTINGS → ALF SETTINGS

ALF settings screen is used to configure ALF parameters related to a particular Loco by entering data into all the fields like Zone, Shed and Schedule done, Next schedule time etc.

User can modify the data that he has entered by selecting select option in the table format. The data that is selected is displayed in the above fields, there the user can update the data and click on update button. The updated data is displayed in the table format.

# LOCOSTATUS SETTINGS → PC SETTINGS

**Power Controller**

Zone: CR | Division: Select Divisio | Shed: KYN | Loco: | Status: Select | TrainNo: | Train Composition: | Schedule Type: Select | Train Tonnage: |

Click Here Take Over/handing Over

CreatedBy: | Designation: |

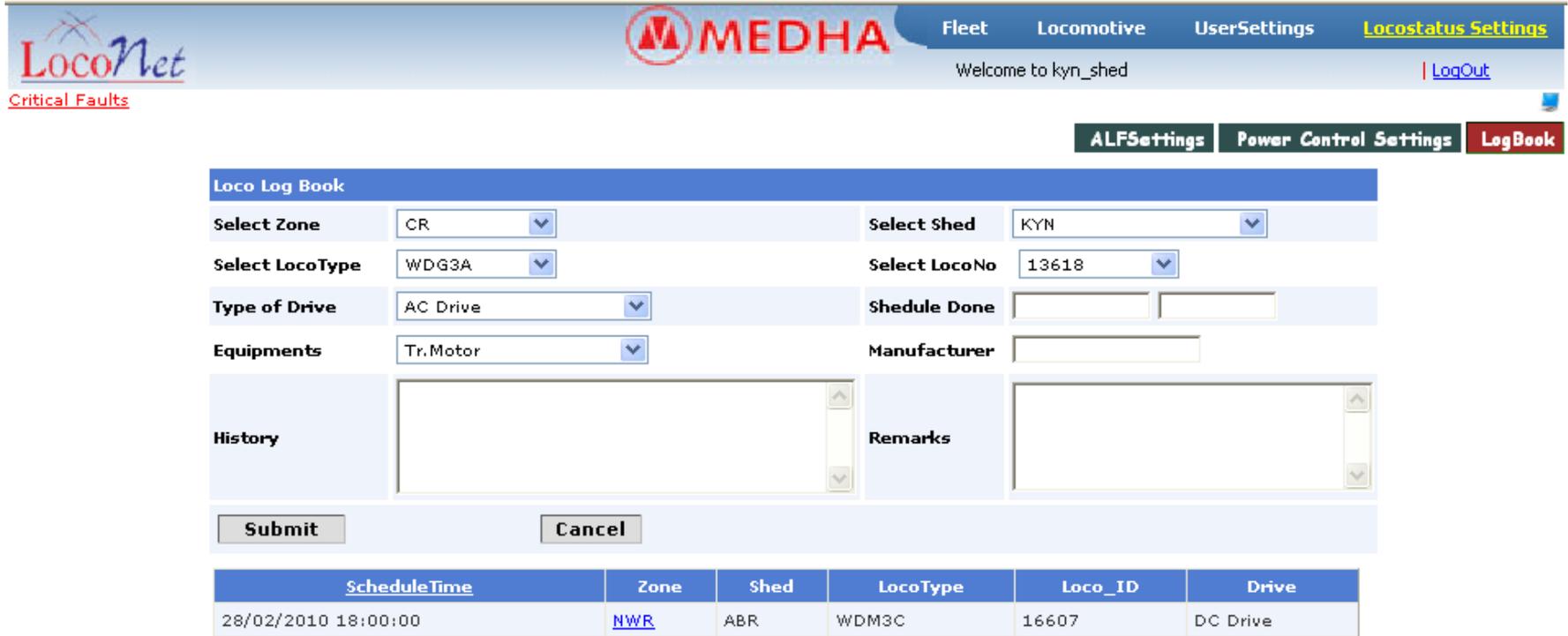
Remarks: |

Submit Cancel

ScheduleTime	Zone	Division	Shed	LocoID	Remarks	Composition	ScheduleType	TrainTonnage
01/03/2011 11:01:01	<a href="#">CR</a>	MUMBAI	KYN	Select Loco	gud	1	T1/T2	

- PC settings screen is used to configure power control parameters related to
- a particular Loco by entering data into all the fields like Zone, Schedule date etc. Status is loaded as per data related to the ALF report of that particular loco.

# LOCOSTATUS SETTINGS → LOG BOOK



**Loco Log Book**

Select Zone: CR      Select Shed: KYN

Select LocoType: WDG3A      Select LocoNo: 13618

Type of Drive: AC Drive      Schedule Done:

Equipments: Tr.Motor      Manufacturer:

History:

Remarks:

ScheduleTime	Zone	Shed	LocoType	Loco_ID	Drive
28/02/2010 18:00:00	<a href="#">NWR</a>	ABR	WDM3C	16607	DC Drive

- Logbook screen is used to store the data related to a particular Loco by entering data into all the fields like type of drive, Schedule done, equipments, manufacturers, history, remarks etc.

# CRITICAL FAULTS

Critical Fault Code	Critical Fault Name
1001	Low Water Level
1004	LLOP Trip at OFF
1005	LLOP Trip at RUN
1006	HOT ENGINE, Cannot Power UP
1007	Power Circuit Ground Fault
1008	Control Circuit Ground Fault
1009	Locked Axle on Wheel Number 1
1010	Locked Axle on Wheel Number 2
1011	Locked Axle on Wheel Number 3
1012	Locked Axle on Wheel Number 4
1013	Locked Axle on Wheel Number 5
1014	Locked Axle on Wheel Number 6
1016	Alternator Field Circuit Open FAULT
1017	Exciter Field Circuit Open (or) Short FAULT
1018	GF circuit Open Fault
1020	Rectifier Diodes -HOT
1023	BKT Stuck in Braking.
1024	BKT-M Aux. Contact ckt.Open
1029	Cranking Contactor CK Stuck Closed
1030	SLBR/SLBC Contactor Stuck Closed

- This option is placed at the upper right end of the home page. This lists the various critical faults occurred by the locos for the reference purpose. It gives the details of the various critical faults occurred.
- On clicking the CRITICAL FAULTS, a new window pops out, as shown side. This window lists the various critical faults occurred with the critical fault code and critical fault name.

## CONCLUSION AND RECOMMENDATIONS

- MEP system with GPS is very helpful for monitoring the health of the loco when loco is working on line.
- In case of some failures prior indications are available
- The parent shed shall monitor the health of the locomotive, once or twice daily.
- This may result in prevention of some of the failure on line.

## CONCLUSION AND RECOMMENDATIONS

- The home shed either can intimate the near by shed or power controller where loco having some defect is working, to take preventive action or to remove the loco from service on first opportunity depending on the gravity of the problem.
- Presently the password to retrieve the data is available with the home shed only for their own loco. Thus the near by shed where the loco is working will not be able to analyse the problem.

## CONCLUSION AND RECOMMENDATIONS

- Thus it is recommended to provide the password to all sheds to enable them to check the health of the loco operating in their territory before arrival of same in shed, so that preventive measures can be taken.
- If lube oil level in sump and water level in extension tanks are also available, it will help to take proper preventive action on line
- ALF and Power control shall be advised to fill the prescribed format of loco fitted with MEP and REMMLOT.

# REMMLOT

**Questions Please...???**

THANK YOU