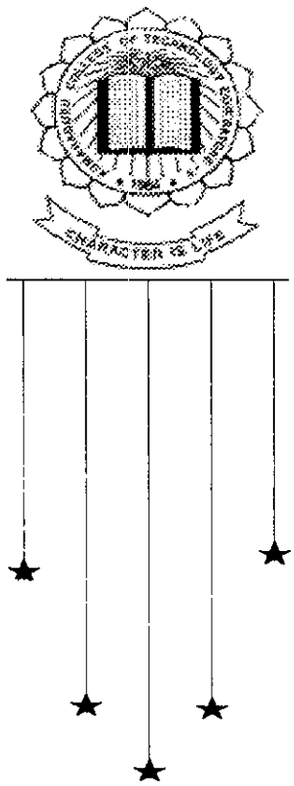
MAINTENANCE SCHEDULER FOR TRANSPORT COMPANY



PROJECT WORK

Submitted By

PRASANNA VENKATESWARAN.M

SREENIVASAN.S.N

JAYA PRATHAP.R

Under the Guidance of

Mr.S. ANDREWS M.sc, Mphil, PGDPM

In partial fulfillment of the requirements for the award of the degree of

BACHELOR OF SCIENCES IN APPLIED SCIENCES – COMPUTER TECHNOLOGY

of the Bharathiar University, Coimbatore.

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Kumaraguru College of Technology

Coimbatore - 641 006.

Kumaraguru College Of Technology

COIMBATORE – 641006.

DEPARTMENT OF COMPUTER SCIENCE AND TECHNOLOGY

Certificate

This is to certify that the project entitled

MAINTENANCE SCHEDULER FOR TRANSPORT COMPANY

has been submitted by

PRASANNA VENKATESWARAN.M,
SREENIVASAN.S.N,
Mr/Ms. JAYAPRATAP.R.

in partial fulfillment of the requirements for the award of Degree of

BACHELOR OF SCIENCE IN

APPLIED SCIENCE – COMPUTER TECHNOLOGY

Branch of the Bharathiar University, Coimbatore,

During the academic year 2000-2001.

Guide

Head of the Department

Certified that the candidates with register number 9827Q0147, 9827Q0164, 9827Q0125 was examined in the project work and viva-voce Examination held on 16.03.2001

Internal Examiner

External Examiner

ARTHANAREESWARAR & Co.,
MINING, EARTH WORK & TRANSPORT CONTRACTORS

7-B, MANAKKADU ITTERI ROAD,
HASTHAMPATTI,
SALEM-636 007.

PHONE : 419287, 41865

P-538

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Mr.M.Prasanna Venkateswaran, Mr.S.N.Sreenivasan and Mr.R.Jayaprathap have developed a "Trucks Maintenance Scheduler" package for our company. This deals with the automatic scheduling for preventive maintenance. It also gives us the tyre efficiency graph. They developed this package as trainees and we agreed to use it in our companies maintenance department.

We are very much happy with the software, and the interest they showed on the project.

We wish them all success in their carrier.

With regards

P. Sundar Rajan.

(P.Sundar Rajan)
Managing Partner.

DECLARATION

We hereby declare that this project entitled "**MAINTENANCE SCHEDULER**" *submitted is a record of original work done by me under the supervision of Mr.Andrews, Sr.Lecture, Department of Computer Technology and Application, Kumaraguru College of Technology and that this project work as not formed the basis for the award of any degree/ diploma/accociateship/felloship or to any candidate, with similar title with any other University .*

Place: Coimbatore.

Date : 15.03.2001.

Endorsed by:

Place: Coimbatore.

Date : 15.03.2001.

Mr.Andrews.,

Dedicated to our beloved Parents and Friends...

CONTENTS

CONTENTS

4. System Design

- Stages of System Design
- Data Flow Diagrams

5. System Testing and Implementation

6. Conclusion

7. Bibliography

8. Appendix

- Forms
- Reports
- Source code

ACKNOWLEDGEMENT

We take this opportunity to express our gratitude to all, whose contribution in this project work can never be forgotten.

We are extremely grateful to Dr.K.K.Padmanaban , B.SC.,(Engg),M.Tech.,Ph.d., Principal, Kumaraguru College of Technology for having given me a golden opportunity to serve the purpose of our education.

We are indebted to Dr.S.Thangasamy ,Head of Department of Computer Science , for his valuable guidance and useful suggestions during the course of this project.

We are deeply incepted to our project guide Mr.Andrews, Sr.Lecture of Department of Computer Technology and Application, KCT for his helpful guidance throughout this project.

With immense pleasure, We express our esteemed gratitude to Mr.P.Sundarrajan, Managing partner, Arthanareswarar & Company(AEC), for providing us the opportunity to do the project in his esteemed organization.

Our thanks to our family members for their love, support and encouragement .

We would like to thank our numerous friends , relatives and well wishes of all whom cannot be named here.

Last but not the least, we would also like to thank those who were indirectly involved in the making of this project.

Above all, we once our gratitude to God Almighty, for showering abundant blessings on us.

INTRODUCTION

ORGANISATIONAL PROFILE:

M/S.ARTHANARESWARAR&COMPANY is a leading mining and transport contractors based in Tamilnadu and Karnataka.

They have two branches. One is at Salem and another at Kolar Gold Fields (KGF). They have a fleet of 49 trucks and their worksites are based on mining and ore transportation.

The trucks are mostly tippers and operators in groups in various worksites. The project 'MAINTENANCE SCHEDULER' is based on Automation of the maintenance scheduling for the above-mentioned trucks.

SCOPE OF THE PROJECT:

The main goal of the project is to automate the process of maintenance scheduling for the trucks, which is at present being done manually.

The software provides options for preventive maintenance and Breakdown maintenance. It also gives a tyre efficiency graph, which gives the Average Efficiency of the different brands of tyres used. It also gives a tyre proportion of tyres employed so far.

The software is also contained with a full functional Web browser, which by default connects to the company's official website, which is under construction.

OVERVIEW OF THE PROJECT:

Maintenance Schedule:

The maintenance scheduling system mainly deals with two types of maintenances viz, Preventive maintenance an breakdown maintenance.

Preventive maintenance further has two types. They are Time-Based and Distance-Based.

Breakdown maintenance is the manual maintenance part in which the random and unpredictable maintenance schedules are framed by the observer.

Tyre Graph:

This feature of the project keeps track of all the tyres that are currently employed and gives us the efficiency graph for various brands of tyres.

Web Browser:

A full functional browser is embedded in the software which by default connects to the official website, is now under construction.

REFERENCES:

The project is actually an automation of a manually done maintenance scheduling process. The software is being developed based on the analysis and reference of the corresponding process.

For example, the tyre graph generation in the project is calculated from the tyre information present in the database table. The table is actually designed by analyzing the manual process of tyre information processing such as 'Tyre Cards'.

GENERAL DESCRIPTION

PROJECT FUNCTIONS:

The main functions of the project are as follows:

- To maintain a database containing information about all the trucks.
- To calculate the maintenance due from the last maintenance date.
- To display the maintenance schedule.
- To update the trip meter for each truck after each shift (User input).
- To provide an option for taking a hard copy of the schedule and the truck details.
- To calculate the tyre efficiency to produce the tyre efficiency graph.
- To provide an option for connecting to the official website of the company.

USERS CHARACTERISTICS:

Basically this software is going to be used in the work site. So, it will be replicated for each group of trucks and it will be accessed only by the Asst.Manager for maintenance at that particular work site.

The schedule will be looked over by the Managing Director at the end of every week.

SYSTEM ANALYSIS

NEED FOR COMPUTERSIZATION:

In M/S Arthanareswarar and company, the maintenance scheduling for their trucks is now being framed manually.

The schedule is being framed manually by referring the respective owner's manual for preventive maintenance. And the breakdown maintenance is carried out according to the type of breakdown.

They have 49 trucks (tippers) and it is very tedious to maintain the schedule for all these trucks manually. So the company likes to computerize the maintenance scheduling process for automize preventive maintenance scheduling.

Other added features of computerization are as follows....

- Easy generation of schedule reports.
- Reduces manual tediousness in maintaining all the trucks details.
- Gives the proportion of different brands of tyres employed so far and also, the efficiency graph.
- Provides option for breakdown maintenance scheduling also.

HARDWARE AND SOFTWARE SPECIFICATION:

Software:

Front End: Visual Basic.6.0.

Back End: Microsoft Access 97.

Package and Distribution: Wise Install 7.0.

The software configuration is chosen in such a way that both front and backs are compatible with each other and by using DAO method all the required updations can be performed.

Hardware:(Minimum requirements)

Processor (>500 Mhz Pentium/Celeron/AMD)

Floppy Disk Drive(1.44Mb)

Random Access Memory(64 Mb)

Hard Disk Space (10 Mb)

Mouse & Keyboard

Modem

PROPOSED SYSTEM:

The proposed system has the following advantages, which eliminates all the drawbacks, which is being there due to the existing system

.

- In computerizing the whole of maintenance scheduling using tools of Visual Basic 6.0 as front-end and MS Access as backend reduces the consumption of manpower and time.
- It gives a clear idea about the maintenances which is to be carried out each day.
- It also gives us the graph for showing us different tyre brand's efficiency.
- It helps in easy generation of schedule reports, and Truck detail reports, providing us an option for taking hard copy.
- It also gives us Tips at start up.
- Specifies kind of lubricants to be used for a particular part.
- The retrieval of information is very fast and easy.

All these features make the proposed system a successful one and a parallel changeover is recommended.

FEASIBILITY STUDY:

Feasibility study is carried out to analyze the pros and corns of being computerizing the "Maintenance Scheduling".

In the company every department works are already computerized. They are in the way of computerizing the works of their maintenance department.

Since the company is already having their platforms working in MS Office, they need their backend to be MS Access. So the choice of Visual Basic as the front-end and MS Access as the backend is easy for the users to work. Also they can go for advanced versions if they need.

Thus technically the computerization is workable.

SYSTEM DESIGN

SYSTEM DESIGN

System study is the process of planning for near future. System design can be stated as the process of planning a new system to replace an existing system.

The design specification describes the features of the system, the components, the elements of the system and the way system interacts with the user.

In designing the system, a thorough study of the existing situations of the system and the fields that are to be considered while going for a new system.

STAGES OF SYSTEM DESIGN:

- Output Design
- Input Design
- Database Design
- Procedure Design

Output Design:

The output is the information required for decision making purpose. An output generally refers to the results generated by the system and is crucial to decide upon the whole work.

When designing the output the contents of the report, their format and positions are considered.

This project gives the following outputs…

- Maintenance Schedules
- Tyre Efficiency Graph
- Recommended Lubricants
- Truck Details
- Tips at startup
- Maintenance Schedule in hard copy (Printing option)
- Truck Details hard copy (Printing option)
- Calendar, Web Browser.

Input Design:

The data input screens are designed so as to be more user friendly. There are 4 main forms which provides the user interface for the following inputs...

- Add/Edit/Delete truck details
- Edit default maintenance schedules
- Add new tyre brands
- Add new lubricant types
- Manual scheduling
- Tyre change update
- Trip meter update for each shift.

Other important constraints take into account are guiding the user by specifying the user with information on the kind of input to be given on the input screen as "NOTE", Displaying messages if user inputs wrong information etc. Extensive error handling methods are employed so as to confirm that the user doesn't input invalid data such as negative inputs etc.

Toolbar with buttons are also included in the software to give instant access to most frequently used forms.

Database Design:

The database is designed in such a way that it stores all the required information and data that can be retrieved as and when required.

There are 10 tables in the database each consisting of relevant fields for storing information on trucks, Schedules, tyres, Lubricants etc.,

Table-MAINTKMS

This table contains all the default Distanced preventive maintenance schedule intervals for different parts.

Field Name	Data Type
SLNO	Number
PART & MAINTENANCE TYPE	Text
MAINTENANCE_DUE_IN_KMS	Number

Table-MAINTMONTHS

This table contains all the default Timed preventive maintenance schedule intervals in months for different parts.

Field Name	Data Type
SLNO	Number
PART & MAINTENANCE TYPE	Text
MAINTENANCE_DUE	Number

Table-RECOLUBES

This table contains all the recommended lubricants details and the part of lubrication.

Field Name	Data Type
SLNO	Number
PART OF LUBRICATION	Text
LUBRICANT SPECIFICATION	Text
LUBRICANT MAKE	Text

Table-SHEDKMS

This table contains the calculated distanced preventive maintenance schedules for all the available vehicles.

Field Name	Data Type
VEHICLE_ID	Text
PART & MAINTENANCE TYPE	Text
LAST_MAINTENANCE	Number
MAINTENANCE_DUE	Number

Table-SHEDKMS

This table contains the calculated timed preventive maintenance schedules for all the available vehicles.

Field Name	Data Type
VEHICLE_ID	Text
PART & MAINTENANCE TYPE	Text
LAST_MAINTENANCE	Date/Time
MAINTENANCE_DUE	Date/Time

Table-VEHICLEID

This table stores all the data of the trucks. VEHICAL_ID is the primary key field.

Field Name	Data Type
VEHICLE_ID	Text
CLASS	Text
MAKE	Text
TYPE	Text
AXLE LOAD IN TONNES	Number
REGISTRATION NUMBER	Text
CHASSIS NUMBER	Text
GEAR BOX NUMBER	Text
TRANSFER CASE NUMBER	Text
CABIN NUMBER	Text
OWNERSHIP DETAILS	Text
DATE OF REGISTRATION	Date/Time
FC DUE DATE	Date/Time
MODEL	Text
ENGINE NUMBER	Text
TOTAL_KILOMETERS_RUN	Number

Table-MAINTMANUAL

This table contains the breakdown maintenance schedule as framed by the user.

Field Name	Data Type
VEHICLE_ID	Text
PART	Text
TYPE OF MAINTENANCE	Text
DUE_DATE	Date/Time

Table-TYREBRAND

This table contains the list of all tyre brands available along with their dealers.

Field Name	Data Type
MANUFACTURERNAME	Text
DEALERNAME	Text

Table-TYRECARD

This table contains the tyre employment for each vehicle.

Field Name	Data Type
VEHICLE_ID	Text
FR	Text
FL	Text
RRO	Text
RRI	Text
RLO	Text
RLI	Text

Table-TYREINFO

This table contains the data of all the tyres employed so far.

Field Name	Data Type
DATE OF PURCHASE	Date/Time
MAKE	Text
FITTED TO (VEHICLE ID)	Text
FITKMS	Number
REMKMS	Number
LIFE	Number
POSITION	Text
SL NO:	Text

PROCEDURE DESIGN:

In the procedural design, there are two types of Maintenance Scheduling i.e., The Preventive Maintenance and The Breakdown Maintenance.

The preventive maintenance is carried out based on two factors namely Time and Distance. The timed schedule is calculated by using the system date-time and the default values stored in the MAINTMONTHS database table. The distanced schedule is calculated by using the TOTAL_KILOMETERS_RUN field of the VEHICLEID database table and the MAINTKMS database table's default values.

The above calculations are made in such a way that maintenance schedules are framed prior to the actual deadline in case of distanced maintenances since each day's trip meter reading are random and may exceed the deadline by the middle of the shift.

The tyre information is kept a close track and for each tyre change the life of the worn-out tyre is calculated and recorded in the TYRELIFE column of the TYREINFO database table.

The tyre graph is generated by collecting all the tyres TYRELIFE field if that field does not contain any 'NULL' values.Then the tyres are classified to their brands and the average life of each brand's tyre is calculated and a comparative "Bar Graph" is given to the user.

The Proportion of tyres used in each brand is calculated by counting the number of tyres used in each brand and is displayed with the help of a "Pie Chart Graph".

The Calendar option can used for viewing the days on which the schedules fall in case of planning breakdown maintenance.

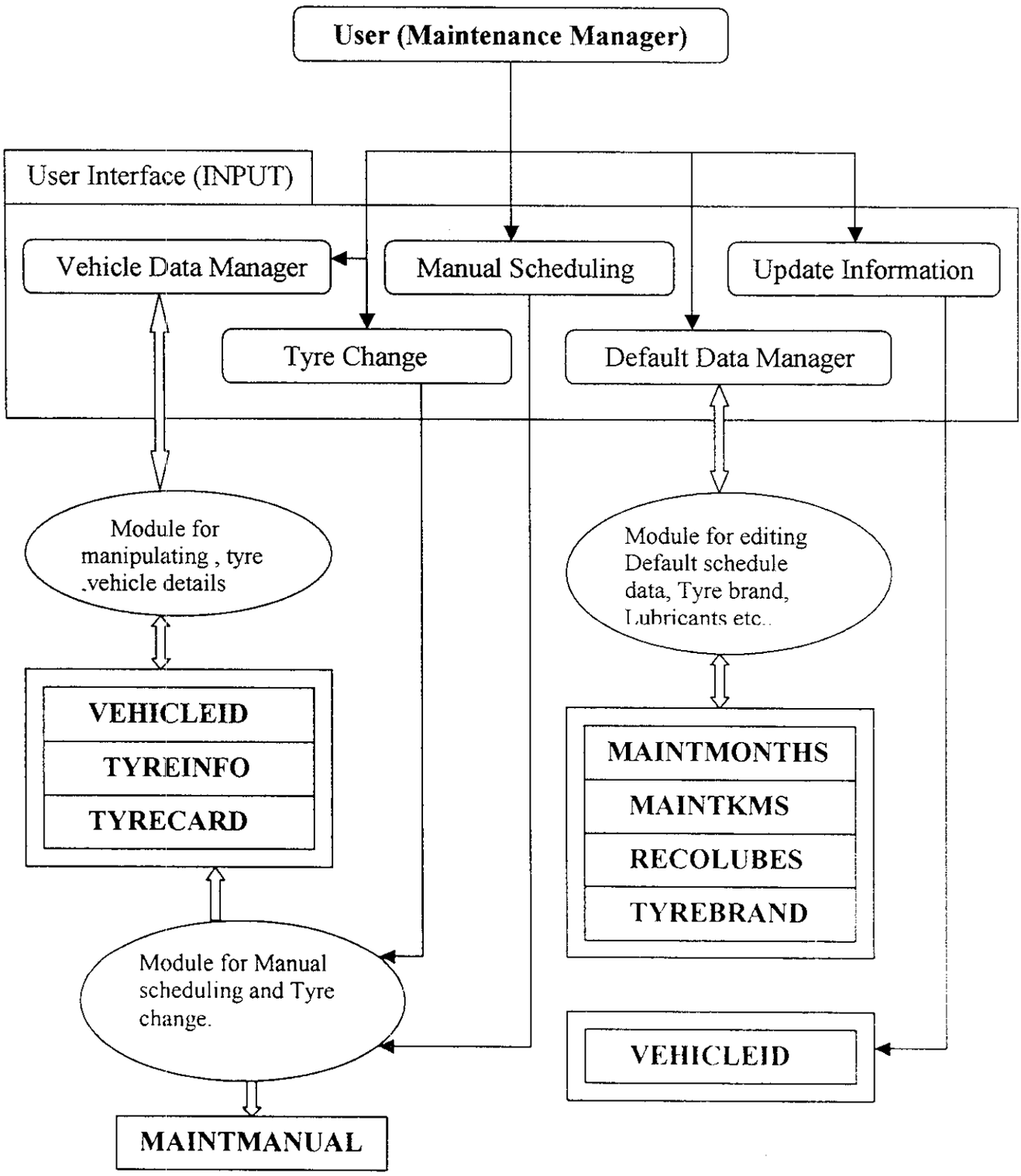
The Full functional web browser which by default connects to the WWW.AECTransports.com can also be used for browsing the net.

(Note: The above website is under construction)

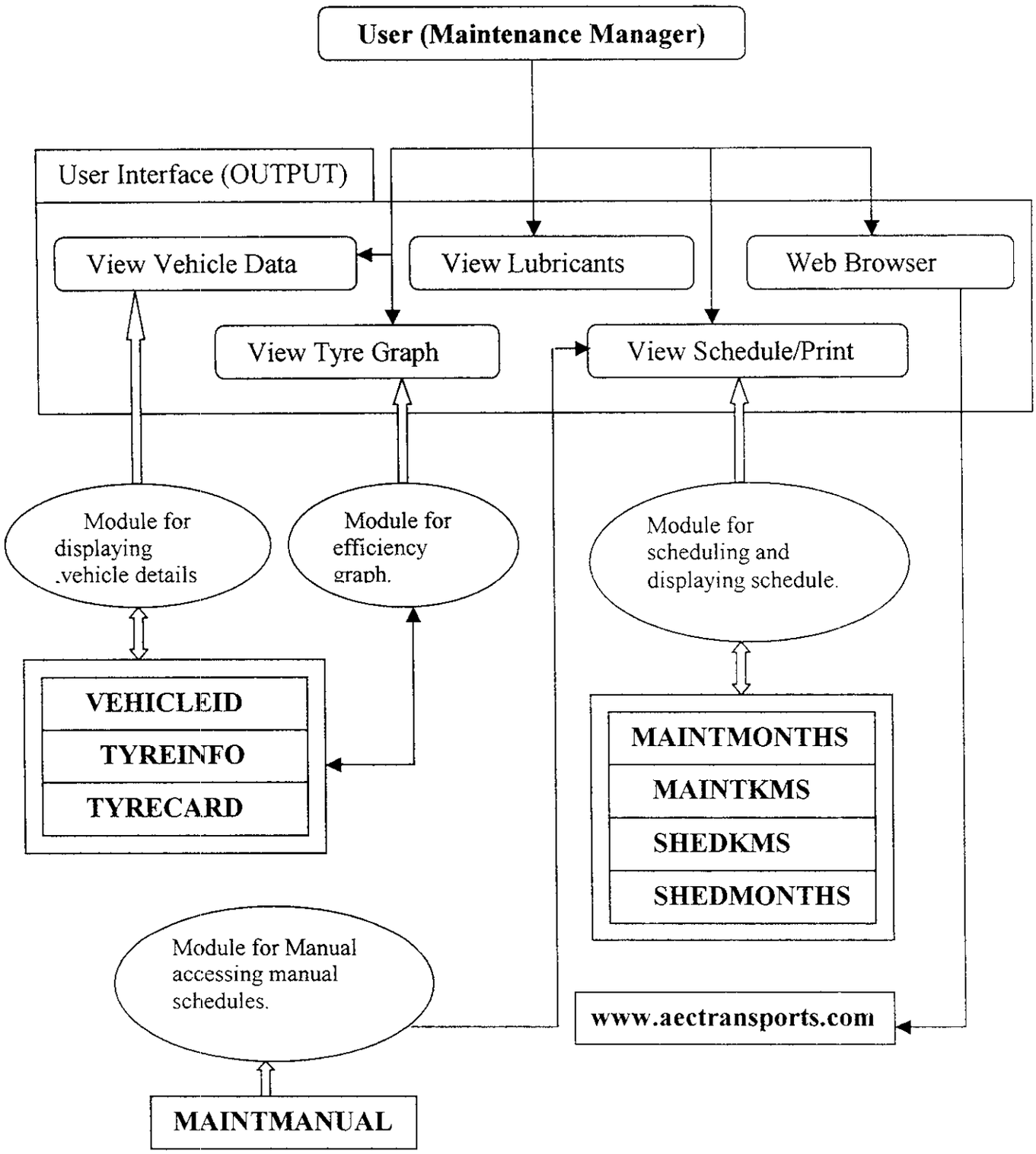
Report generation is done for printing the day's maintenance schedule and also for printing the vehicle details. The report generation is done using the Data Reports and Data Environment modules.

Various validation checks are also made in different parts of the program and whenever there any necessary for messages they are displayed. The message box in the procedural design helps the user interact in an easy way with the module.

DATA FLOW DIAGRAM



DATA FLOW DIAGRAM cont…



SYSTEM TESTING & IMPLEMENTATION

TESTING OF THE SYSTEM:

The importance of system testing is to pave the way for the software quality assurance .The testing has to be performed in unit wise, module wise and by giving sample data.

The testing and its implications respect to software quality cannot be over emphasized.

1.UNIT TESTING:

Using important procedural description, we can test to uncover errors within the boundary of the module. It is mainly focused on the smallest unit of software design, to ensure proper informational flow in and out of the program unit under list.

The unit test eliminates all the errors due to incorrect function errors due to data structure etc.

2.INTEGRATION TESTING:

The test mere carried out to ensure that all the modules in the application is interacting satisfactorily. The integrity and accuracy of data should be maintained and taken care by the integration testing using the inter module communication.

Apart from the above two, the system is fed with all types of inputs meeting the requirements of the user and the output generated are tested for its Validity and accuracy.

3.IMPLEMENTATION:

The important phase in the system development Life cycle is the implementation. It is a stage of the project work that transforms the design into a working model.

This software is completed successfully and it is implemented in M/S.Arthanareswarar & Company, after complete testing. The implementation is a parallel change over in the organization.

CONCLUSION

CONCLUSION

This project "Maintenance Scheduler" for the trucks has the following highlighted features.

- Easy generation of reports.
- Reduces manual tediousness in maintaining all the trucks details.
- Gives the proportion of tyres employed so far and also the efficiency graph.

The project also gives options for adding new tyre brands, editing default schedule details etc, for accurate performance.

BIBLOGRAPHY

BIBLIOGRAPHY

Visual Basic 6.0 From The Ground Up – Gary Cornell

Visual Basic 6.0 – Peter Drucker

Visual Basic 6.0 – James .P. Amber

System Analysis & Design – Lee

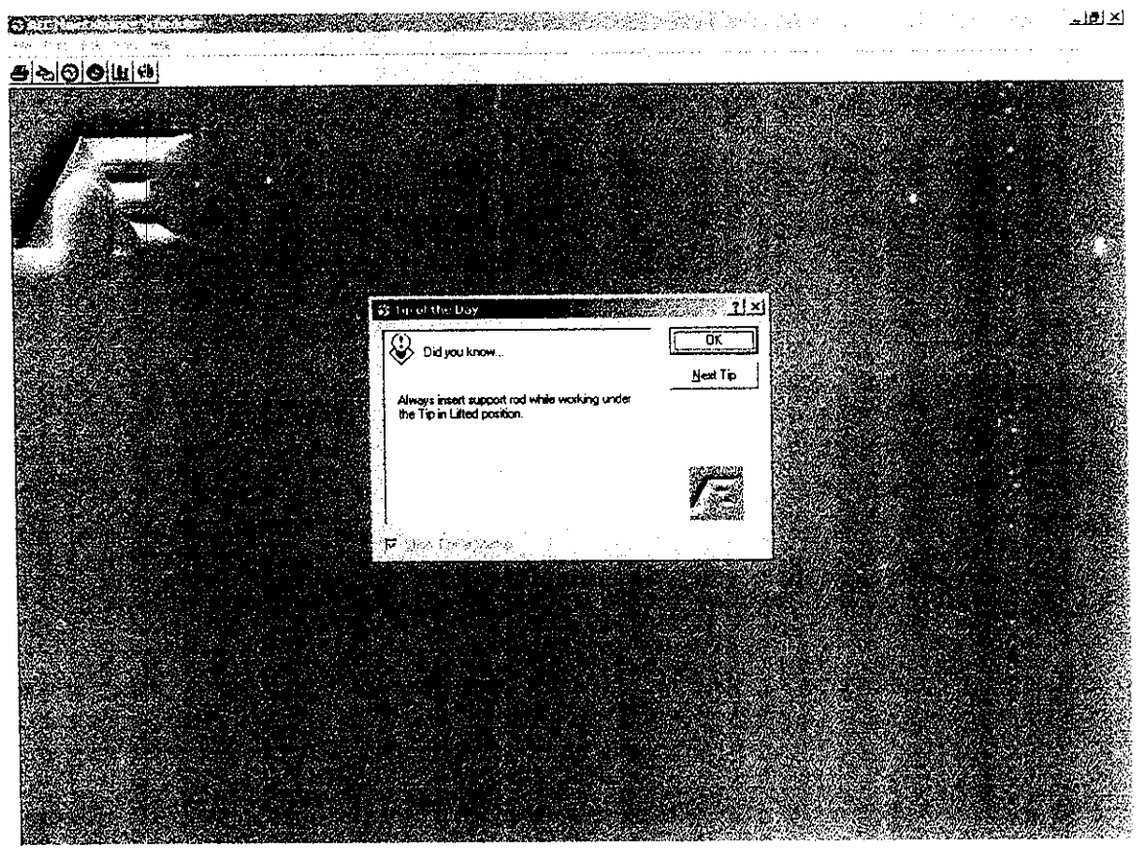
MS ACCESS – Eddy.

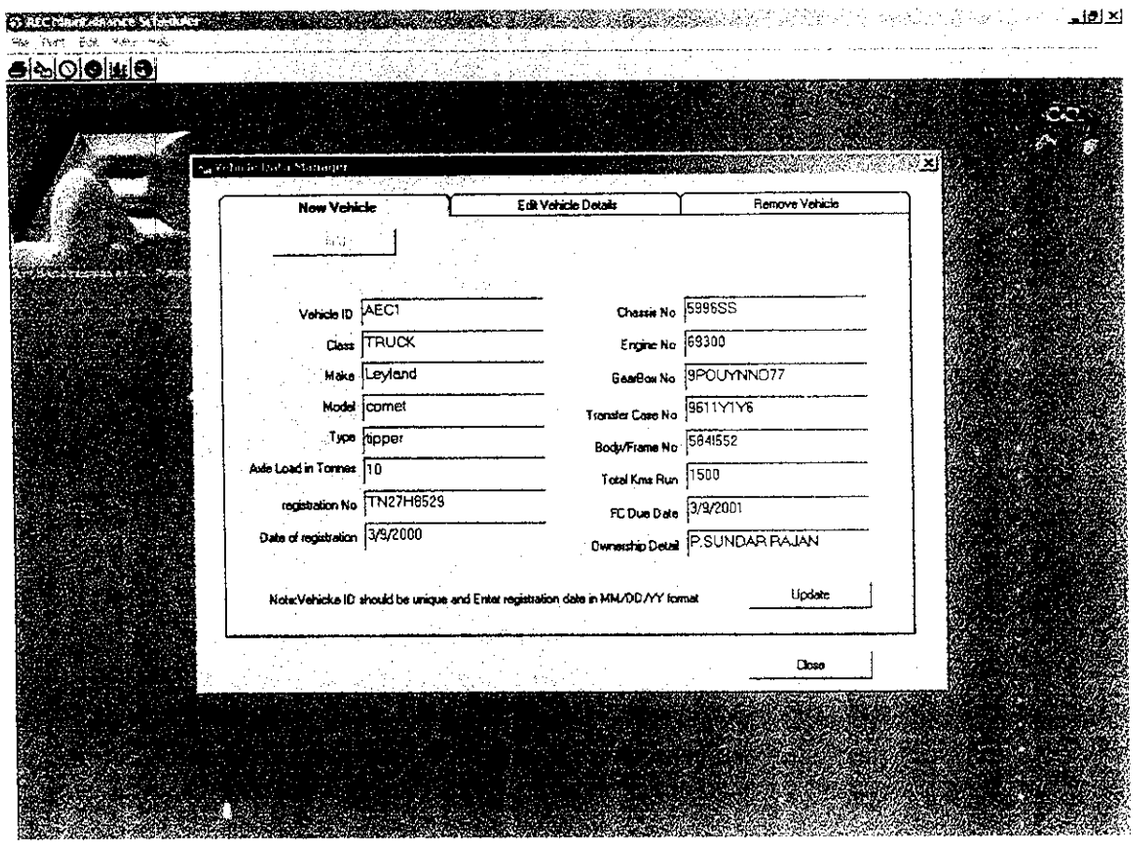
Maintenance manual for Ashok Leyland

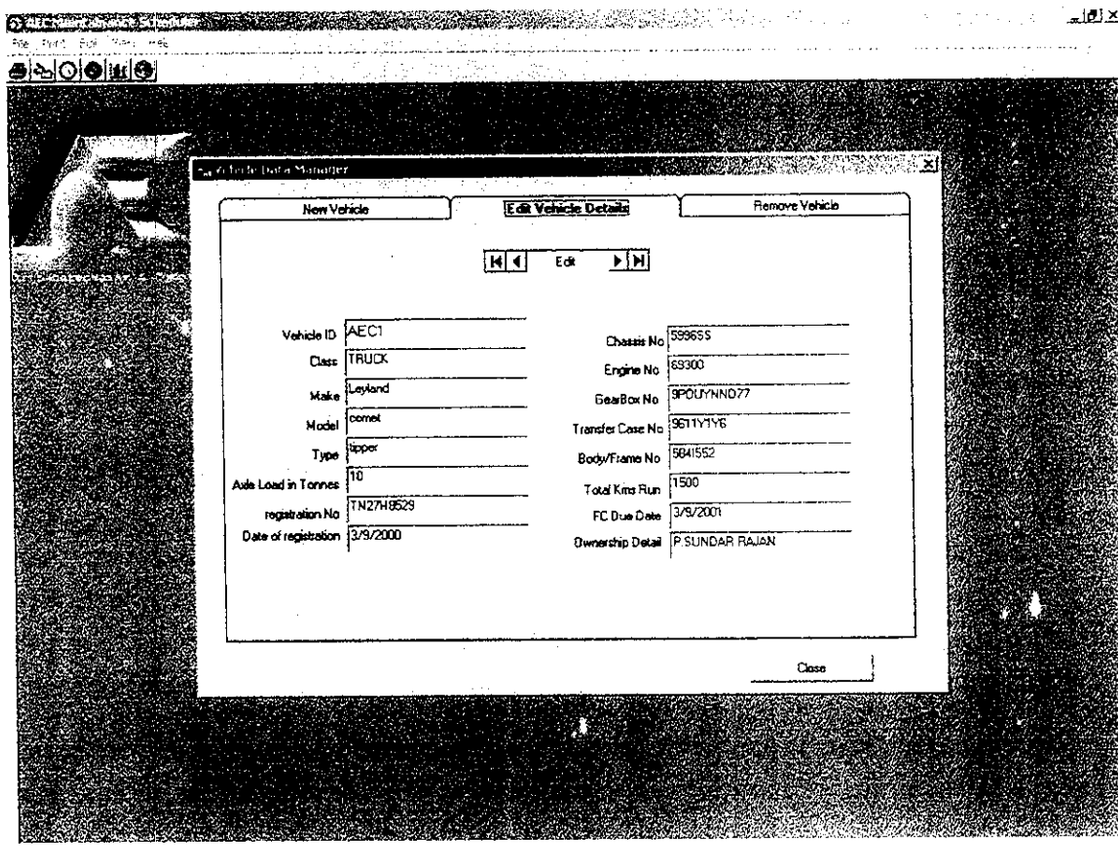
Maintenance manual for Tata

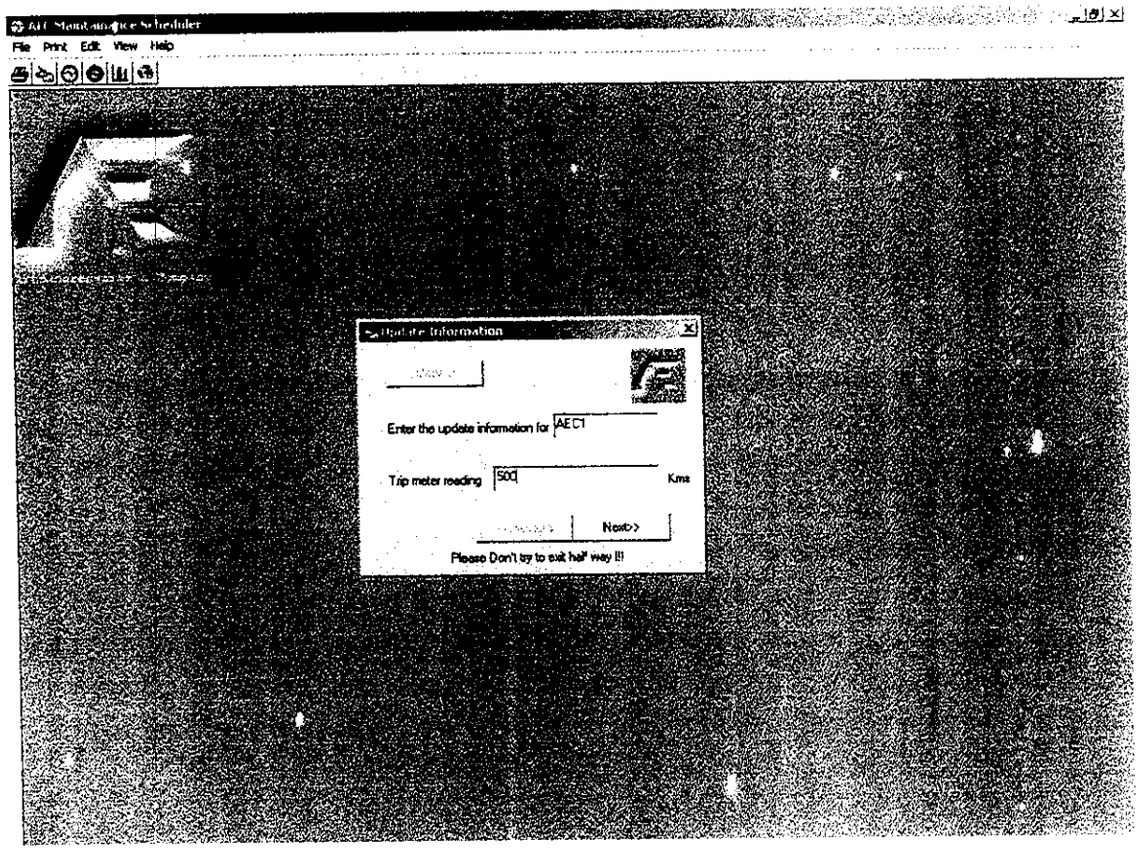
APPENDIX

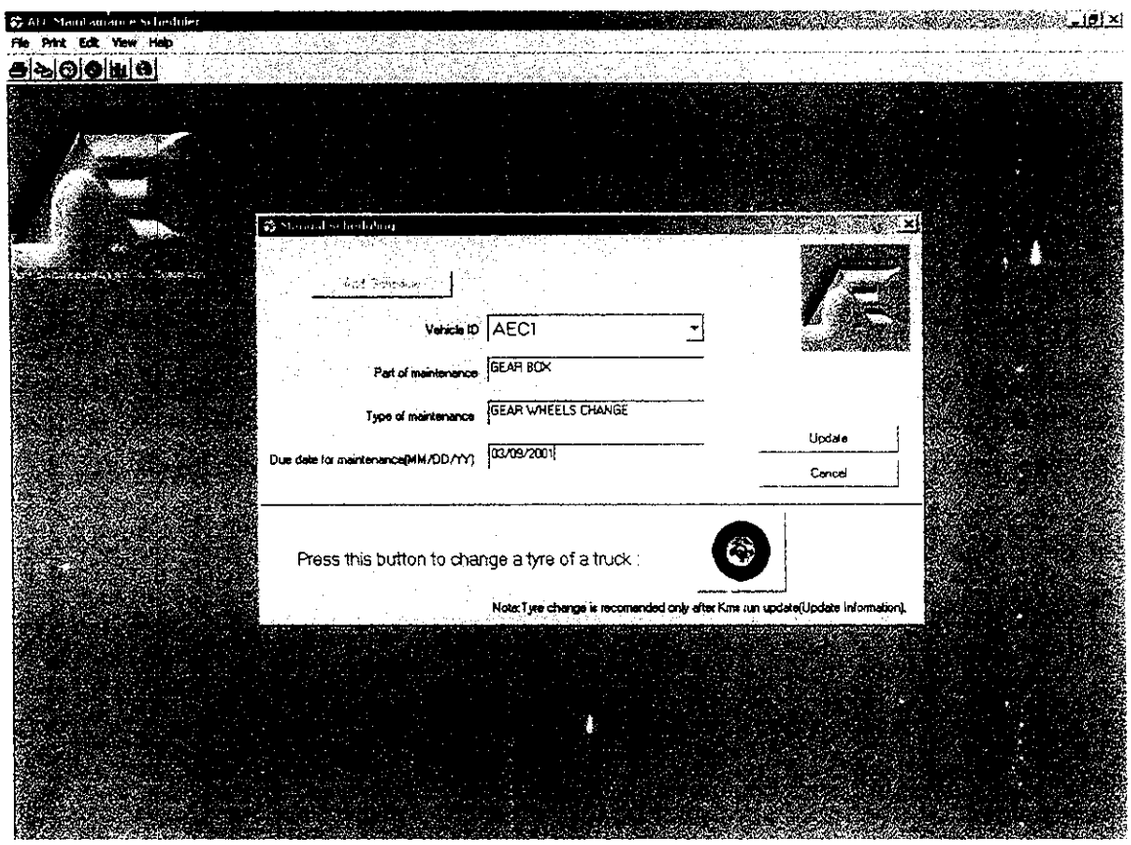
Forms

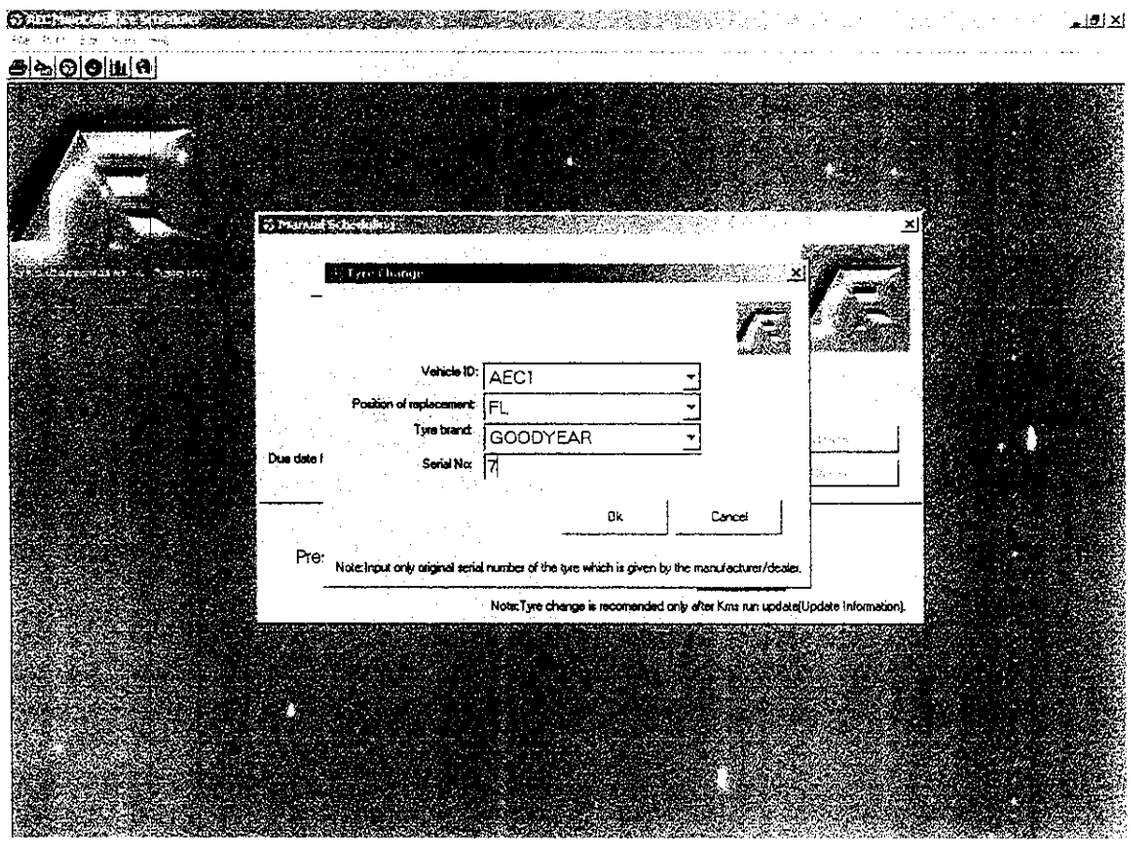

Tip of the Day
Did you know...
Always insert support rod while working under the Tip in Lifted position.
OK
Next Tip

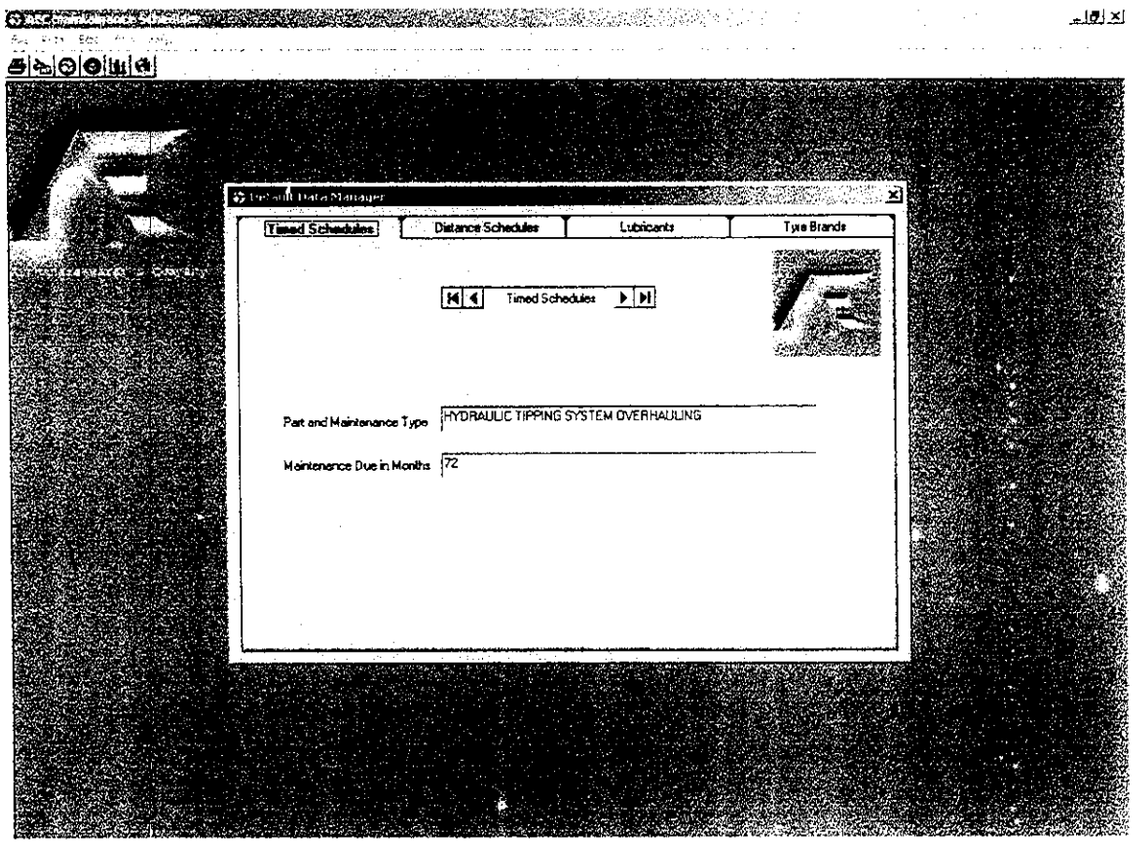

New Vehicle
Edit Vehicle Details
Remove Vehicle
Add
Vehicle ID
AEC1
Class
TRUCK
Make
Leyland
Model
comet
Type
tipper
Axle Load in Tonnes
10
registration No
TN27H6529
Date of registration
3/9/2000
Chassis No
5996SS
Engine No
69300
GearBox No
9POUYNND77
Transfer Case No
9611Y1Y6
Body/Frame No
5841552
Total Kms Run
1500
FC Due Date
3/9/2001
Ownership Detail
P.SUNDAR RAJAN
Note:Vehicle ID should be unique and Enter registration date in MM/DD/YY format
Update
Close

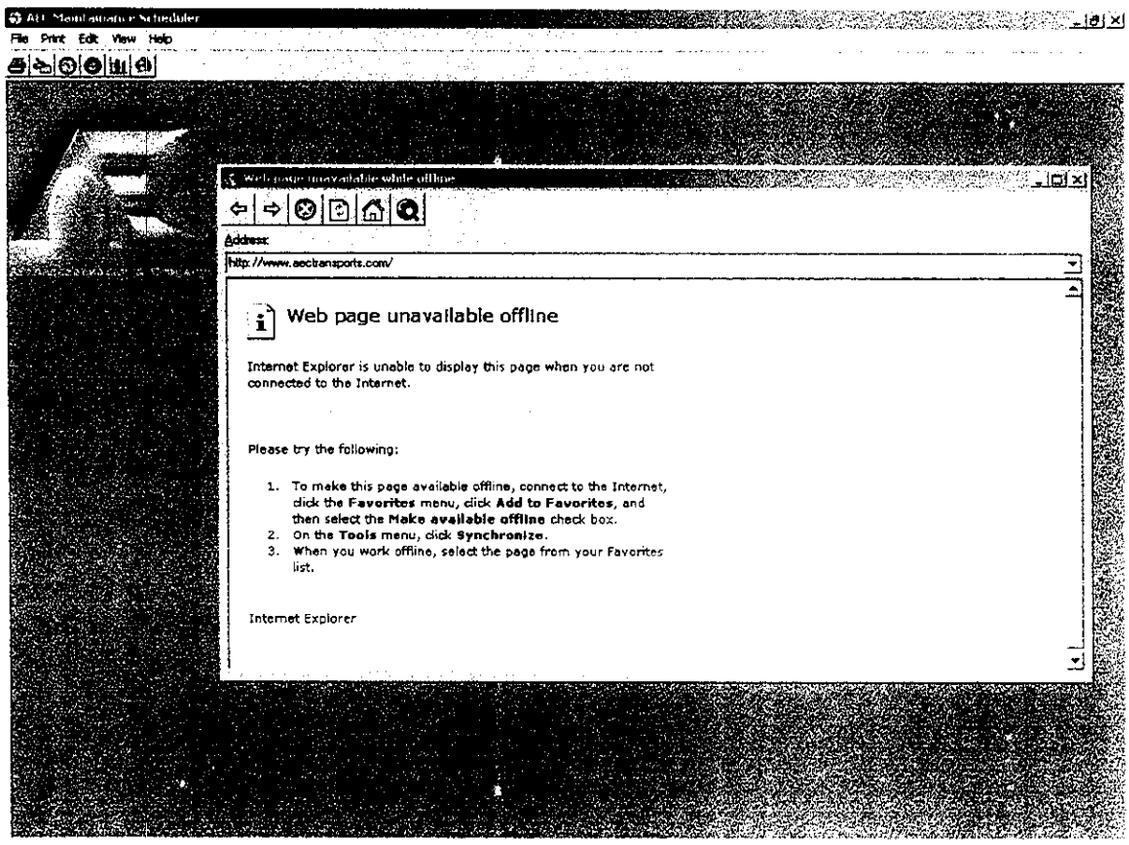

New Vehicle
Edit Vehicle Details
Remove Vehicle
Edit
Vehicle ID
AEC1
Class
TRUCK
Make
Leyland
Model
comet
Type
tipper
Axle Load in Tonnes
10
registration No
TN27H8529
Date of registration
3/9/2000
Chassis No
59966S
Engine No
69300
GearBox No
9POUYNND77
Transfer Case No
9611Y1Y6
Body/Frame No
5841552
Total Kms Run
1500
FC Due Date
3/9/2001
Ownership Detail
P.SUNDAR RAJAN
Close

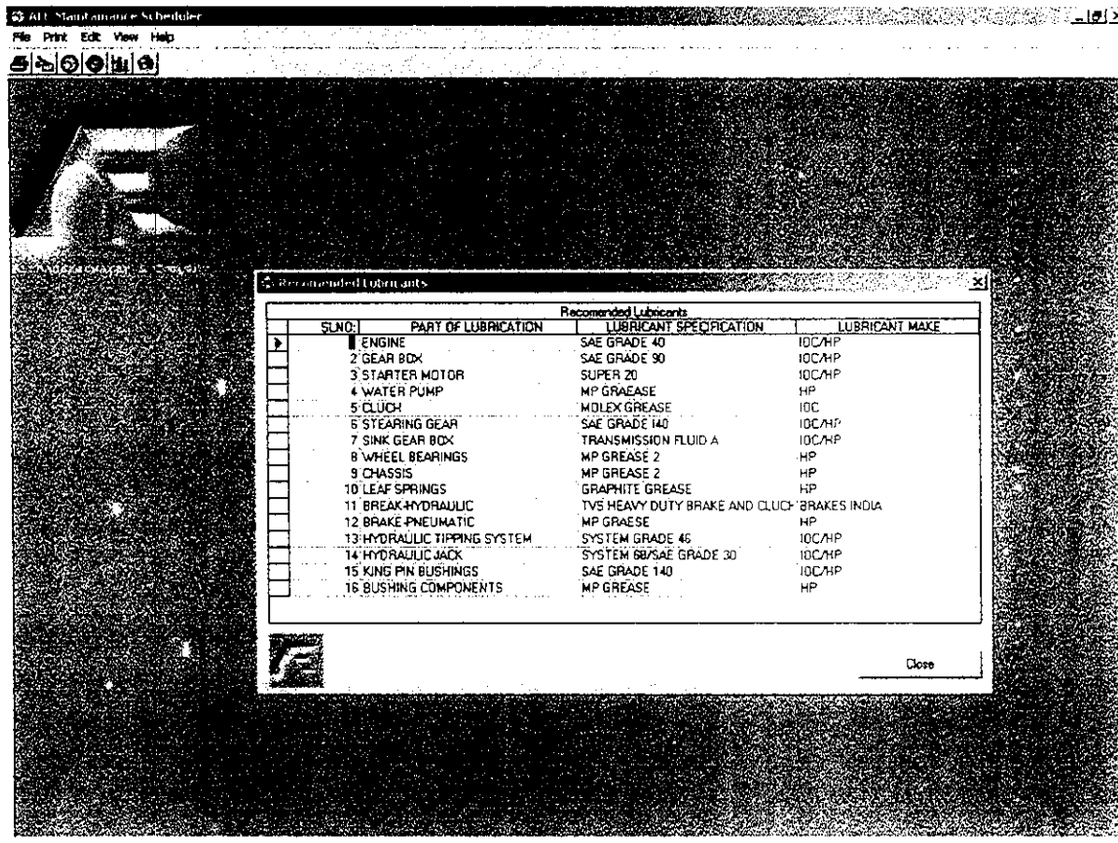

File Print Edit View Help
Update Information
Enter the update information for AE C1
Trip meter reading 500 Kms
Next>>
Please Don't try to exit half way !!!

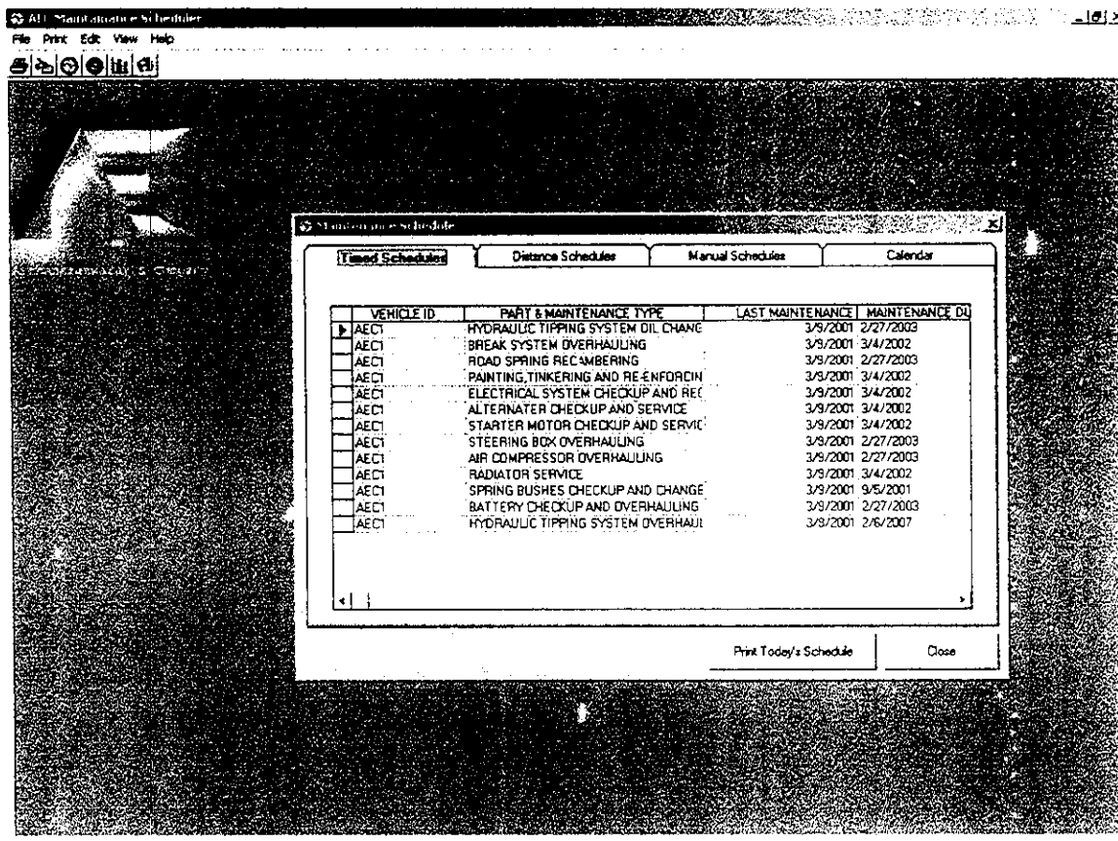

File Print Edit View Help
Vehicle ID
AEC1
Part of maintenance
GEAR BOX
Type of maintenance
GEAR WHEELS CHANGE
Due date for maintenance(MM/DD/YY)
03/09/2001
Update
Cancel
Press this button to change a tyre of a truck :
Note:Tyre change is recomended only after Kms run update(Update information).

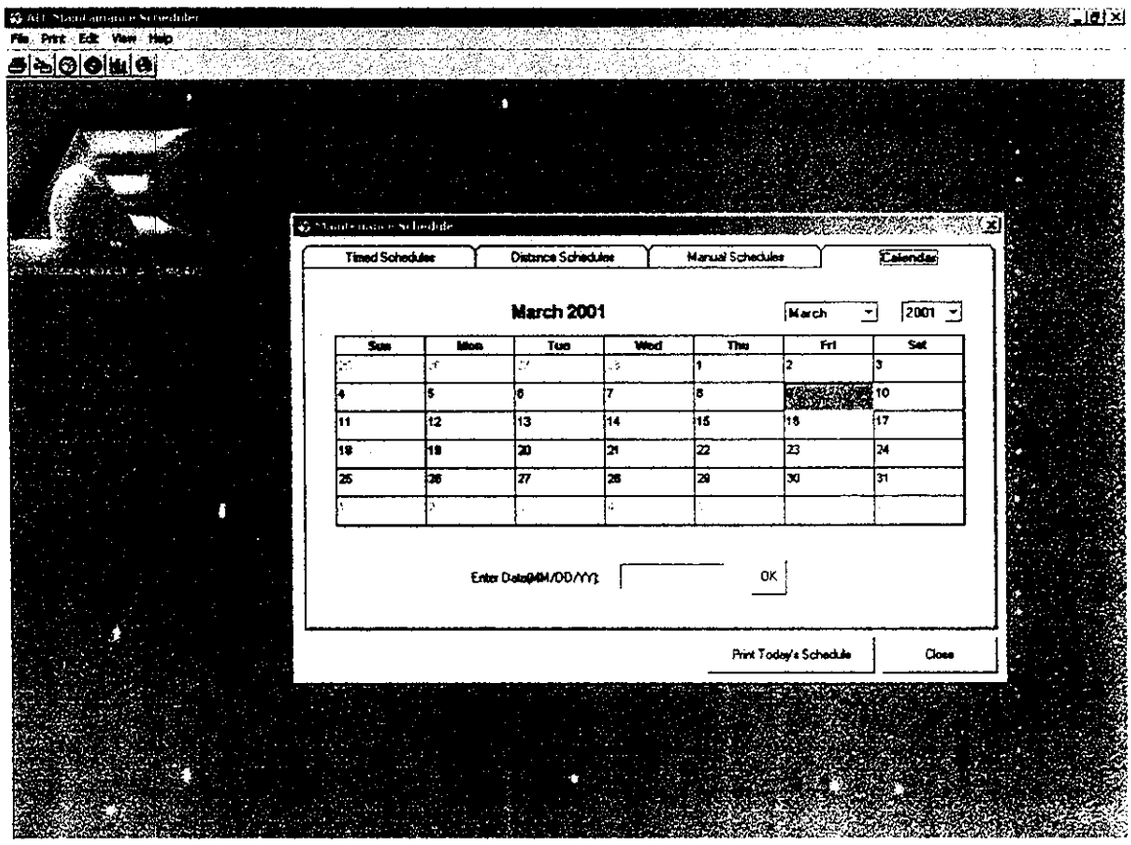

Tyre Change
Vehicle ID:
AEC1
Position of replacement:
FL
Tyre brand:
GOODYEAR
Serial No:
7
Ok
Cancel
Note:Input only original serial number of the tyre which is given by the manufacturer/dealer.
Note:Tyre change is recomended only after Kms run update(Update Information).

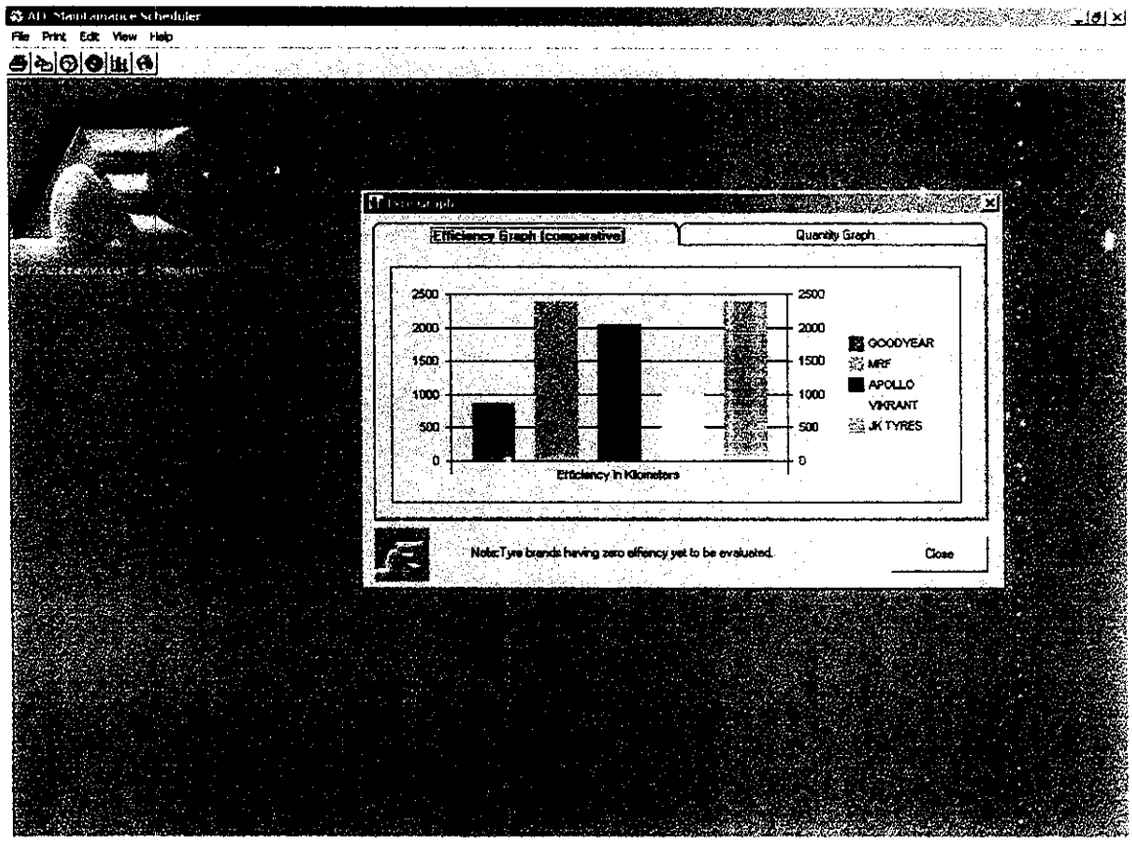

Default Data Manager
Timed Schedules
Distance Schedules
Lubricants
Tyre Brands
Timed Schedules
Part and Maintenance Type
HYDRAULIC TIPPING SYSTEM OVERHAULING
Maintenance Due in Months
72

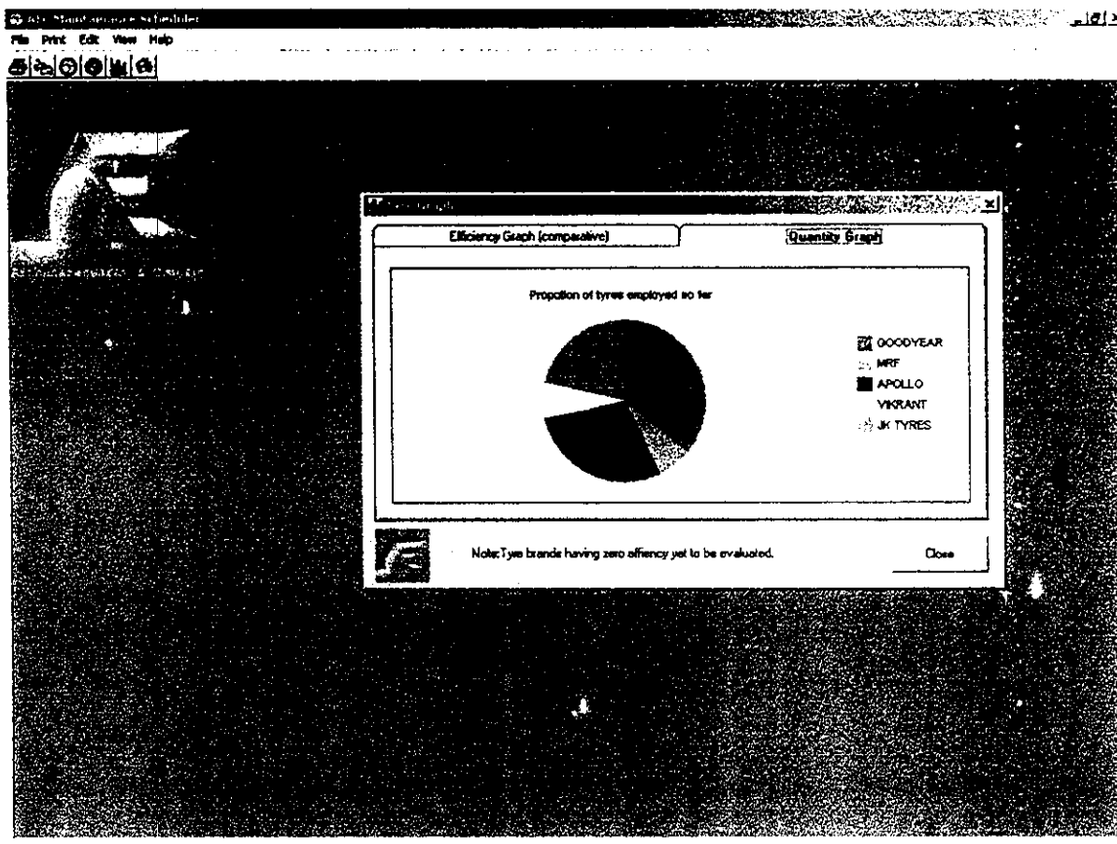

File Print Edit View Help
Address:
http://www.aectransports.com/
Web page unavailable offline
Internet Explorer is unable to display this page when you are not connected to the Internet.
Please try the following:
1. To make this page available offline, connect to the Internet, click the Favorites menu, click Add to Favorites, and then select the Make available offline check box.
2. On the Tools menu, click Synchronize.
3. When you work offline, select the page from your Favorites list.
Internet Explorer

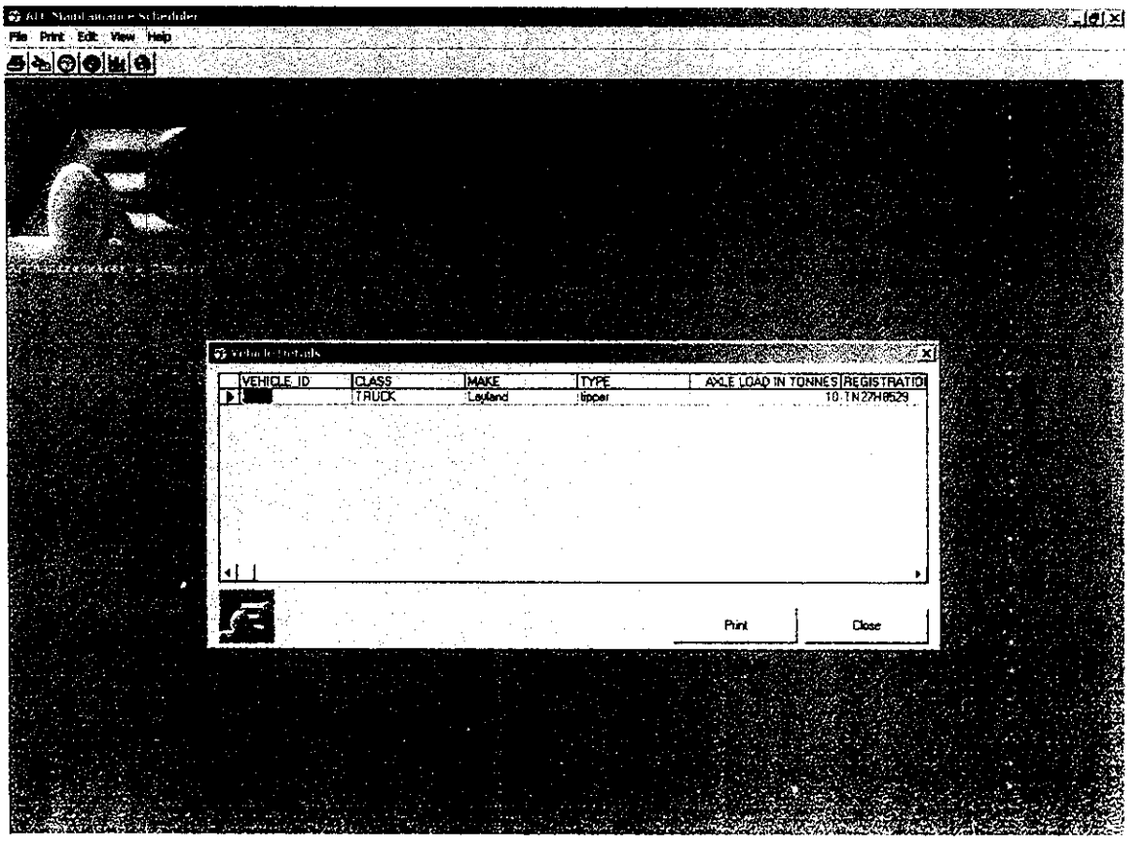

File Print Edit View Help
Recomended Lubricants
Recomended Lubricants
SLNO: PART OF LUBRICATION LUBRICANT SPECIFICATION LUBRICANT MAKE
1 ENGINE SAE GRADE 40 IOC/HP
2 GEAR BOX SAE GRADE 90 IOC/HP
3 STARTER MOTOR SUPER 20 IOC/HP
4 WATER PUMP MP GRAEASE HP
5 CLUCH MOLEX GREASE IOC
6 STEARING GEAR SAE GRADE 140 IOC/HP
7 SINK GEAR BOX TRANSMISSION FLUID A IOC/HP
8 WHEEL BEARINGS MP GREASE 2 HP
9 CHASSIS MP GREASE 2 HP
10 LEAF SPRINGS GRAPHITE GREASE HP
11 BREAK-HYDRAULIC TVS HEAVY DUTY BRAKE AND CLUCH BRAKES INDIA
12 BRAKE-PNEUMATIC MP GRAESE HP
13 HYDRAULIC TIPPING SYSTEM SYSTEM GRADE 46 IOC/HP
14 HYDRAULIC JACK SYSTEM 68/SAE GRADE 30 IOC/HP
15 KING PIN BUSHINGS SAE GRADE 140 IOC/HP
16 BUSHING COMPONENTS MP GREASE HP
Close

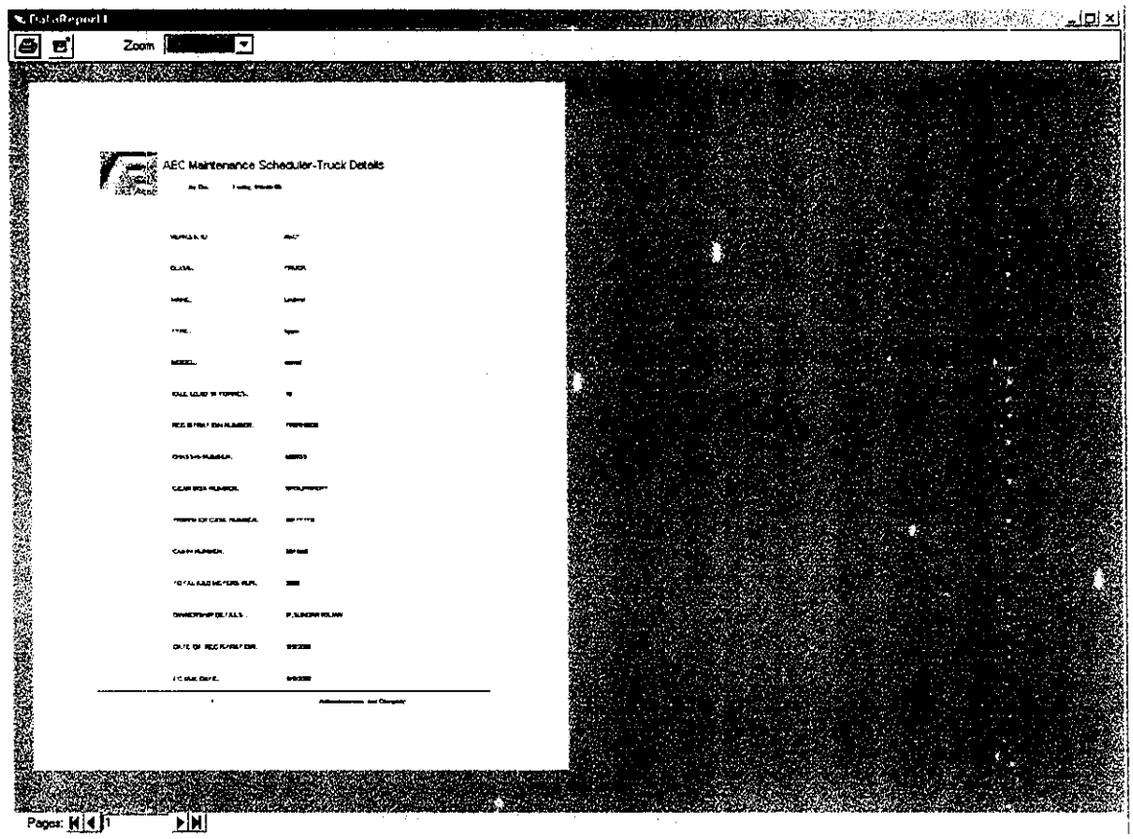

File Print Edit View Help
Timed Schedules
Distance Schedules
Manual Schedules
Calendar
VEHICLE ID
PART & MAINTENANCE TYPE
LAST MAINTENANCE
MAINTENANCE DU
AEC1 HYDRAULIC TIPPING SYSTEM OIL CHANG 3/9/2001 2/27/2003
AEC1 BREAK SYSTEM OVERHAULING 3/9/2001 3/4/2002
AEC1 ROAD SPRING RECAMBERING 3/9/2001 2/27/2003
AEC1 PAINTING,TINKERING AND RE-ENFORCIN 3/9/2001 3/4/2002
AEC1 ELECTRICAL SYSTEM CHECKUP AND REC 3/9/2001 3/4/2002
AEC1 ALTERNATER CHECKUP AND SERVICE 3/9/2001 3/4/2002
AEC1 STARTER MOTOR CHECKUP AND SERVIC 3/9/2001 3/4/2002
AEC1 STEERING BOX OVERHAULING 3/9/2001 2/27/2003
AEC1 AIR COMPRESSOR OVERHAULING 3/9/2001 2/27/2003
AEC1 RADIATOR SERVICE 3/9/2001 3/4/2002
AEC1 SPRING BUSHES CHECKUP AND CHANGE 3/9/2001 9/5/2001
AEC1 BATTERY CHECKUP AND OVERHAULING 3/9/2001 2/27/2003
AEC1 HYDRAULIC TIPPING SYSTEM OVERHAUL 3/9/2001 2/6/2007
Print Today's Schedule
Close

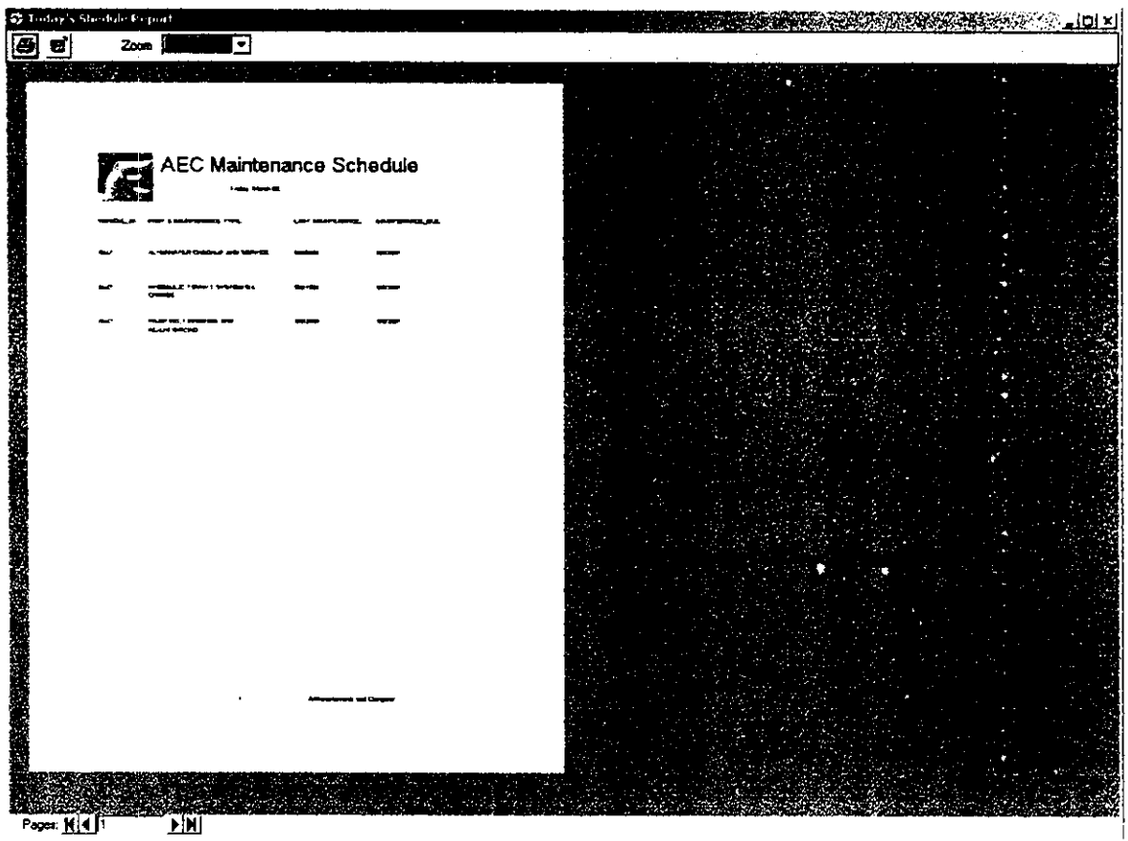

File Print Edit View Help
Timed Schedules
Distance Schedules
Manual Schedules
Calendar
March 2001
March
2001
Sun
Mon
Tue
Wed
Thu
Fri
Sat
Enter Date(MM/DD/YY):
OK
Print Today's Schedule
Close


File Print Edit View Help
Efficiency Graph (comparative)
Quantity Graph
2500
2000
1500
1000
500
0
GOODYEAR
MRF
APOLLO
VIKRANT
JK TYRES
Efficiency in Kilometers
Note:Tyre brands having zero effiency yet to be evaluated.
Close


File Print Edit View Help
Efficiency Graph (comparative)
Quantity Graph
Propotion of tyres employed so far
GOODYEAR
MRF
APOLLO
VIKRANT
JK TYRES
Note:Tyre brands having zero effiency yet to be evaluated.
Close


File Print Edit View Help
VEHICLE_ID
CLASS
MAKE
TYPE
AXLE LOAD IN TONNES
REGISTRATIO
TRUCK
Leyland
tipper
10
TN27H8529
Print
Close


DataReport1
Zoom
AEC Maintenance Scheduler-Truck Details
Pages:


Zoom
AEC Maintenance Schedule
Pages:

Reports

AEC Maintenance Schedule

Friday, March 09,

VEHICLE_ID:	PART & MAINTENANCE TYPE:	LAST MAINTENANCE:	MAINTENANCE_DUE:
AEC1	ALTERNATER CHECKUP AND SERVICE	6/5/2000	3/9/2001
AEC1	HYDRAULIC TIPPING SYSTEM OIL CHANGE	3/9/1999	3/9/2001
AEC1	PAINTING,TINKERING AND RE-ENFORCING	9/6/2000	3/9/2001

AEC Maintenance Scheduler-Truck Details

As On: Friday, March 09,

VEHICLE ID:	**AEC1**
CLASS:	TRUCK
MAKE:	Leyland
TYPE:	tipper
MODEL:	comet
AXLE LOAD IN TONNES:	10
REGISTRATION NUMBER:	TN27H8529
CHASSIS NUMBER:	5996SS
GEAR BOX NUMBER:	9POUYNND77
TRANSFER CASE NUMBER:	9611Y1Y6
CABIN NUMBER:	584I552
TOTAL KILOMETERS RUN:	11000
OWNERSHIP DETAILS :	P.SUNDAR RAJAN
DATE OF REGISTRATION:	3/9/2000
FC DUE DATE:	3/9/2002

ENGINE NUMBER: 69300

Source Code

```
'Default Data Manager
Dim sl As Double
Public Sub updating()
If Text1(1).Text = "" Or Text1(2).Text = "" Or Text1(3).Text = "" Then
i = MsgBox("Check for Null or Invalid Date.", vbOKOnly, "Error")
Exit Sub
End If
lubes.Recordset.Fields("SLNO") = sl + 1
lubes.Recordset.Fields("PART OF LUBRICATION") = Text1(1).Text
lubes.Recordset.Fields("LUBRICANT SPECIFICATION") = Text1(3).Text
lubes.Recordset.Fields("LUBRICANT MAKE") = Text1(2).Text
lubes.Recordset.update
Text1(1).Text = ""
Text1(2).Text = ""
Text1(3).Text = ""
Text1(1).Enabled = False
Text1(2).Enabled = False
Text1(3).Enabled = False
update.Enabled = False
newb.Enabled = True
cancel.Enabled = False
End Sub

Public Sub updating2()
If Text2.Text = "" Or Text3.Text = "" Then
i = MsgBox("Check for Null or Invalid Date.", vbOKOnly, "Error")
Exit Sub
End If
tyrebrand.Recordset.Fields("MANUFACTURERNAME") = Text2.Text
tyrebrand.Recordset.Fields("DEALERNAME") = Text3.Text
tyrebrand.Recordset.update
Text2.Text = ""
Text3.Text = ""
Text2.Enabled = False
Text3.Enabled = False
update2.Enabled = False
newbrand.Enabled = True
cancel2.Enabled = False
End Sub


Private Sub cancel_Click()
k = MsgBox("     Do you want to save and cancel?", vbYesNo, "Cancel")
If k = 7 Then
update.Enabled = False
newb.Enabled = True
```

```
cancel.Enabled = False
Exit Sub
Else
If k = 6 Then Call updating
End If
End Sub

Private Sub newb_Click()
lubes.Recordset.MoveLast
sl = lubes.Recordset.Fields("SLNO")
update.Enabled = True
cancel.Enabled = True
Text1(1).Enabled = True
Text1(2).Enabled = True
Text1(3).Enabled = True
lubes.Recordset.AddNew
newb.Enabled = False
End Sub



Private Sub update_Click()
Call updating
End Sub

Private Sub update2_Click()
Call updating2
End Sub
Private Sub cancel2_Click()
k = MsgBox("      Do you want to save and cancel?", vbYesNo, "Cancel")
If k = 7 Then
update2.Enabled = False
newbrand.Enabled = True
cancel2.Enabled = False
Exit Sub
Else
If k = 6 Then Call updating
End If
End Sub
Private Sub newbrand_Click()
update2.Enabled = True
cancel2.Enabled = True
Text2.Enabled = True
Text3.Enabled = True
tyrebrand.Recordset.AddNew
newbrand.Enabled = False
```

```
End Sub


'About Form
Option Explicit

' Reg Key Security Options...
Const READ_CONTROL = &H20000
Const KEY_QUERY_VALUE = &H1
Const KEY_SET_VALUE = &H2
Const KEY_CREATE_SUB_KEY = &H4
Const KEY_ENUMERATE_SUB_KEYS = &H8
Const KEY_NOTIFY = &H10
Const KEY_CREATE_LINK = &H20
Const KEY_ALL_ACCESS = KEY_QUERY_VALUE + KEY_SET_VALUE + _
                KEY_CREATE_SUB_KEY + KEY_ENUMERATE_SUB_KEYS + _
                KEY_NOTIFY + KEY_CREATE_LINK + READ_CONTROL

' Reg Key ROOT Types...
Const HKEY_LOCAL_MACHINE = &H80000002
Const ERROR_SUCCESS = 0
Const REG_SZ = 1                    ' Unicode nul terminated string
Const REG_DWORD = 4                 ' 32-bit number

Const gREGKEYSYSINFOLOC = "SOFTWARE\Microsoft\Shared Tools Location"
Const gREGVALSYSINFOLOC = "MSINFO"
Const gREGKEYSYSINFO = "SOFTWARE\Microsoft\Shared Tools\MSINFO"
Const gREGVALSYSINFO = "PATH"

Private Declare Function RegOpenKeyEx Lib "advapi32" Alias "RegOpenKeyExA"
(ByVal hKey As Long, ByVal lpSubKey As String, ByVal ulOptions As Long, ByVal
samDesired As Long, ByRef phkResult As Long) As Long
Private Declare Function RegQueryValueEx Lib "advapi32" Alias "RegQueryValueExA"
(ByVal hKey As Long, ByVal lpValueName As String, ByVal lpReserved As Long,
ByRef lpType As Long, ByVal lpData As String, ByRef lpcbData As Long) As Long
Private Declare Function RegCloseKey Lib "advapi32" (ByVal hKey As Long) As Long


Private Sub cmdSysInfo_Click()
  Call StartSysInfo
End Sub

Private Sub cmdOK_Click()
  Unload Me
End Sub
```

```
Public Sub StartSysInfo()
  On Error GoTo SysInfoErr

  Dim rc As Long
  Dim SysInfoPath As String

  ' Try To Get System Info Program Path\Name From Registry...
  If GetKeyValue(HKEY_LOCAL_MACHINE, gREGKEYSYSINFO,
gREGVALSYSINFO, SysInfoPath) Then
  ' Try To Get System Info Program Path Only From Registry...
  ElseIf GetKeyValue(HKEY_LOCAL_MACHINE, gREGKEYSYSINFOLOC,
gREGVALSYSINFOLOC, SysInfoPath) Then
    ' Validate Existance Of Known 32 Bit File Version
    If (Dir(SysInfoPath & "\MSINFO32.EXE") <> "") Then
      SysInfoPath = SysInfoPath & "\MSINFO32.EXE"

    ' Error - File Can Not Be Found...
    Else
      GoTo SysInfoErr
    End If
  ' Error - Registry Entry Can Not Be Found...
  Else
    GoTo SysInfoErr
  End If

  Call Shell(SysInfoPath, vbNormalFocus)

  Exit Sub
SysInfoErr:
  MsgBox "System Information Is Unavailable At This Time", vbOKOnly
End Sub

Public Function GetKeyValue(KeyRoot As Long, KeyName As String, SubKeyRef As
String, ByRef KeyVal As String) As Boolean
  Dim i As Long                          ' Loop Counter
  Dim rc As Long                         ' Return Code
  Dim hKey As Long                       ' Handle To An Open Registry Key
  Dim hDepth As Long                     '
  Dim KeyValType As Long                 ' Data Type Of A Registry Key
  Dim tmpVal As String                   ' Tempory Storage For A Registry Key
Value
  Dim KeyValSize As Long                 ' Size Of Registry Key Variable
  '------------------------------------------------------------
  ' Open RegKey Under KeyRoot {HKEY_LOCAL_MACHINE...}
```

```
    '------------------------------------------------------------
    rc = RegOpenKeyEx(KeyRoot, KeyName, 0, KEY_ALL_ACCESS, hKey) ' Open
Registry Key

    If (rc <> ERROR_SUCCESS) Then GoTo GetKeyError        ' Handle Error...

    tmpVal = String$(1024, 0)                    ' Allocate Variable Space
    KeyValSize = 1024                            ' Mark Variable Size

    '------------------------------------------------------------
    ' Retrieve Registry Key Value...
    '------------------------------------------------------------
    rc = RegQueryValueEx(hKey, SubKeyRef, 0, _
                 KeyValType, tmpVal, KeyValSize)    ' Get/Create Key Value

    If (rc <> ERROR_SUCCESS) Then GoTo GetKeyError        ' Handle Errors

    If (Asc(Mid(tmpVal, KeyValSize, 1)) = 0) Then         ' Win95 Adds Null Terminated
String...
       tmpVal = Left(tmpVal, KeyValSize - 1)            ' Null Found, Extract From String
    Else                                        ' WinNT Does NOT Null Terminate String...
       tmpVal = Left(tmpVal, KeyValSize)                ' Null Not Found, Extract String
Only
    End If
    '------------------------------------------------------------
    ' Determine Key Value Type For Conversion...
    '------------------------------------------------------------
    Select Case KeyValType                          ' Search Data Types...
    Case REG_SZ                                  ' String Registry Key Data Type
       KeyVal = tmpVal                           ' Copy String Value
    Case REG_DWORD                                  ' Double Word Registry Key Data Type
       For i = Len(tmpVal) To 1 Step -1              ' Convert Each Bit
          KeyVal = KeyVal + Hex(Asc(Mid(tmpVal, i, 1)))  ' Build Value Char. By Char.
       Next
       KeyVal = Format$("&h" + KeyVal)                ' Convert Double Word To String
    End Select

    GetKeyValue = True                           ' Return Success
    rc = RegCloseKey(hKey)                          ' Close Registry Key
    Exit Function                               ' Exit

GetKeyError:     ' Cleanup After An Error Has Occured...
    KeyVal = ""                                 ' Set Return Val To Empty String
    GetKeyValue = False                             ' Return Failure
    rc = RegCloseKey(hKey)                          ' Close Registry Key
End Function
```

```
'Browser
Public StartingAddress As String
Dim mbDontNavigateNow As Boolean

Private Sub Form_Load()
   StartingAddress = "http://www.aectransports.com"
   On Error Resume Next
   Me.Show
   tbToolBar.Refresh
   Form_Resize


   cboAddress.Move 50, lblAddress.Top + lblAddress.Height + 15


   If Len(StartingAddress) > 0 Then
      cboAddress.Text = StartingAddress
      cboAddress.AddItem cboAddress.Text
      'try to navigate to the starting address
      timTimer.Enabled = True
      brwWebBrowser.Navigate StartingAddress
   End If


End Sub



Private Sub brwWebBrowser_DownloadComplete()
   On Error Resume Next
   Me.Caption = brwWebBrowser.LocationName
End Sub


Private Sub brwWebBrowser_NavigateComplete2(ByVal pDisp As Object, URL As
Variant)
   On Error Resume Next
   Dim i As Integer
   Dim bFound As Boolean
   Me.Caption = brwWebBrowser.LocationName
   For i = 0 To cboAddress.ListCount - 1
      If cboAddress.List(i) = brwWebBrowser.LocationURL Then
         bFound = True
         Exit For
      End If
   Next i
```

```
    mbDontNavigateNow = True
    If bFound Then
        cboAddress.RemoveItem i
    End If
    cboAddress.AddItem brwWebBrowser.LocationURL, 0
    cboAddress.ListIndex = 0
    mbDontNavigateNow = False
End Sub


Private Sub cboAddress_Click()
    If mbDontNavigateNow Then Exit Sub
    timTimer.Enabled = True
    brwWebBrowser.Navigate cboAddress.Text
End Sub


Private Sub cboAddress_KeyPress(KeyAscii As Integer)
    On Error Resume Next
    If KeyAscii = vbKeyReturn Then
        cboAddress_Click
    End If
End Sub


Private Sub Form_Resize()
    On Error Resume Next
    cboAddress.Width = Me.ScaleWidth - 100
    brwWebBrowser.Width = Me.ScaleWidth - 100
    brwWebBrowser.Height = Me.ScaleHeight - (picAddress.Top + picAddress.Height) -
100
End Sub


Private Sub timTimer_Timer()
    If brwWebBrowser.Busy = False Then
        timTimer.Enabled = False
        Me.Caption = brwWebBrowser.LocationName
    Else
        Me.Caption = "Working..."
    End If
End Sub


Private Sub tbToolBar_ButtonClick(ByVal Button As Button)
    On Error Resume Next
```

```
  timTimer.Enabled = True


  Select Case Button.Key
    Case "Back"
      brwWebBrowser.GoBack
    Case "Forward"
      brwWebBrowser.GoForward
    Case "Refresh"
      brwWebBrowser.Refresh
    Case "Home"
      brwWebBrowser.GoHome
    Case "Search"
      brwWebBrowser.GoSearch
    Case "Stop"
      timTimer.Enabled = False
      brwWebBrowser.Stop
      Me.Caption = brwWebBrowser.LocationName
  End Select


End Sub


'Manual Scheduling

Sub clearall()
txtpart.Text = ""
txttype.Text = ""
txttype.Text = ""
txtdue.Text = ""
viddb.Enabled = False
txtpart.Enabled = False
txttype.Enabled = False
btnadd.Enabled = True
End Sub
Private Sub btnadd_Click()
btnadd.Enabled = False
viddb.Enabled = True
txtpart.Enabled = True
txttype.Enabled = True
txtdue.Enabled = True
btnupdate.Enabled = True
btncancel.Enabled = True
```

```
End Sub

Private Sub btncancel_Click()
Call clearall
btnupdate.Enabled = False
btncancel.Enabled = False
End Sub

Private Sub btnupdate_Click()
If viddb.Text = "" Or txtpart.Text = "" Or txttype.Text = "" Or txtdue.Text = "" Then
h = MsgBox("Check for NULL or Invalid data", vbOKOnly, "Error")
Exit Sub
End If
manmaintdata.Recordset.AddNew
manmaintdata.Recordset.Fields("VEHICLE_ID") = viddb.Text
manmaintdata.Recordset.Fields("PART") = txtpart.Text
manmaintdata.Recordset.Fields("TYPE OF MAINTENANCE") = txttype.Text
manmaintdata.Recordset.Fields("DUE_DATE") = txtdue.Text
manmaintdata.Recordset.update
Call clearall
btnupdate.Enabled = False
btncancel.Enabled = False
End Sub


Private Sub Command4_Click()
frmtyrechange.Show (vbModal)
End Sub
```

'New Truck Tyre

```
Private Sub cmdtyre_Click()
tempid.Text = frmtrkman.txtnewtrk(0).Text
tempdate.Text = frmtrkman.txtnewtrk(7).Text
tempkms.Text = frmtrkman.txtnewtrk(13).Text
For i = 0 To 5
j = i
DataTyinfo.Recordset.AddNew
DataTyinfo.Recordset.Fields("SL NO:") = Text1(i).Text
DataTyinfo.Recordset.Fields("DATE OF PURCHASE") = tempdate.Text
DataTyinfo.Recordset.Fields("MAKE") = DBCombo1(i).Text
DataTyinfo.Recordset.Fields("FITTED TO (VEHICLE ID)") = tempid.Text
DataTyinfo.Recordset.Fields("FITKMS") = tempkms.Text
```

```
Select Case i
Case 0
DataTyinfo.Recordset.Fields("POSITION") = "FR"
Case 1
DataTyinfo.Recordset.Fields("POSITION") = "FL"
Case 2
DataTyinfo.Recordset.Fields("POSITION") = "RRO"
Case 3
DataTyinfo.Recordset.Fields("POSITION") = "RRI"
Case 4
DataTyinfo.Recordset.Fields("POSITION") = "RL0"
Case 5
DataTyinfo.Recordset.Fields("POSITION") = "RLI"
End Select
On Error GoTo z
DataTyinfo.Recordset.update
Next i
GoTo o
z: l = MsgBox("        Please Check the Tyre details for NULL or Invalid Data.",
vbOKOnly, "Error")
  If l = 1 Then
  For d = 0 To j - 1
  DataTyinfo.Recordset.MoveLast
  DataTyinfo.Recordset.Delete
  DataTyinfo.Recordset.MoveLast
  Next d
  End If
  Exit Sub
o:
DataTyCard.Recordset.AddNew
DataTyCard.Recordset.Fields("VEHICLE_ID") = tempid.Text
DataTyCard.Recordset.Fields("FR") = Text1(0).Text
DataTyCard.Recordset.Fields("FL") = Text1(1).Text
DataTyCard.Recordset.Fields("RRO") = Text1(2).Text
DataTyCard.Recordset.Fields("RRI") = Text1(3).Text
DataTyCard.Recordset.Fields("RLO") = Text1(4).Text
DataTyCard.Recordset.Fields("RLI") = Text1(5).Text
On Error GoTo x
DataTyCard.Recordset.update
Unload Me
frmtrkman.Enabled = True
GoTo y
x:
h = MsgBox("        Please Check the Tyre details for NULL or Invalid Data.",
vbOKOnly, "Error")
If h = 1 Then Exit Sub
```

```
y:
End Sub

Private Sub Form_Load()
frmtrkman.Enabled = False
End Sub
```

'Maintenance Scheduling

```
Dim nodeftime As Long
Dim novehicles As Long
Dim noschedules As Long
Dim noschedules1 As Long
Dim nodefkms As Long
Dim db As Database
Dim time1 As Recordset
Dim deftime As Recordset
Dim defkms As Recordset
Dim kms1 As Recordset
Dim vid As Recordset
Sub fcupdt()
vid.MoveFirst
Do While Not vid.EOF
If DateValue(vid.Fields("FC DUE DATE")) = DateValue(Date) Then
vid.Fields("FC DUE DATE") = DateAdd("yyyy", 1, Date)
End If
vid.MoveNext
Loop
vid.MoveFirst
End Sub
Sub timeshedsub()
For j = 1 To nodeftime
days = deftime.Fields("MAINTENANCE_DUE") * 30
time1.AddNew
time1.Fields("VEHICLE_ID") = vid.Fields("VEHICLE_ID")
time1.Fields("PART & MAINTENANCE TYPE") = deftime.Fields("PART &
MAINTENANCE TYPE")
If DateValue(vid.Fields("DATE OF REGISTRATION")) >= DateValue(Date) Then
time1.Fields("LAST MAINTENANCE") = vid.Fields("DATE OF REGISTRATION")
time1.Fields("MAINTENANCE_DUE") = DateValue(vid.Fields("DATE OF
REGISTRATION")) + days
Else
time1.Fields("LAST MAINTENANCE") = Date
time1.Fields("MAINTENANCE_DUE") = DateValue(Date) + days
End If
```

```
time1.update
deftime.MoveNext
Next j
deftime.MoveFirst
End Sub
Sub kmsschedsub()
For j = 1 To nodefkms
kms1.AddNew
kms1.Fields("VEHICLE_ID") = vid.Fields("VEHICLE_ID")
kms1.Fields("PART & MAINTENANCE TYPE") = defkms.Fields("PART &
MAINTENANCE TYPE")
kms1.Fields("LAST_MAINTENANCE") = vid.Fields("TOTAL_KILOMETERS_RUN")
kms1.Fields("MAINTENANCE_DUE") = vid.Fields("TOTAL_KILOMETERS_RUN")
+ defkms.Fields("MAINTENANCE_DUE_IN_KMS")
kms1.update
defkms.MoveNext
Next j
defkms.MoveFirst
End Sub
Sub timescheduler()
If Not vid.EOF Then
vid.MoveFirst
If Not time1.EOF Then
time1.MoveLast
noschedules = time1.RecordCount
Else
noschedules = 0
End If
vid.MoveLast
deftime.MoveLast
nodeftime = deftime.RecordCount
novehicles = vid.RecordCount
If Not time1.EOF Then time1.MoveFirst
vid.MoveFirst
deftime.MoveFirst
If noschedules = 0 Then
For i = 1 To novehicles
Call timeshedsub
vid.MoveNext
Next i
Else
For j = 1 To noschedules
If DateValue(Date) = DateValue(time1.Fields("MAINTENANCE_DUE")) + 1 Then
nextdue = DateValue(time1.Fields("MAINTENANCE_DUE")) -
DateValue(time1.Fields("LAST MAINTENANCE"))
time1.Edit
```

```
time1.Fields("LAST MAINTENANCE") = vid.Fields("TOTAL_KILOMETERS_RUN")
time1.Fields("MAINTENANCE_DUE") = time1.Fields("MAINTENANCE_DUE") +
nextdue
time1.update
End If
time1.MoveNext
Next j
If (novehicles * nodeftime) > noschedules Then
vid.MoveLast
temp = (novehicles * nodeftime - noschedules) / nodeftime
For i = 1 To temp
Call timeshedsub
vid.MovePrevious
Next i
End If
End If
Else
h = MsgBox("There are no Trucks to schedule maintenance.", vbOKOnly, "Message")
Exit Sub
End If
End Sub
Sub kmsscheduler()
vid.MoveFirst
If Not vid.EOF Then
If Not kms1.EOF Then
kms1.MoveLast
noschedules1 = kms1.RecordCount
Else
noschedules1 = 0
End If
vid.MoveLast
defkms.MoveLast
nodefkms = defkms.RecordCount
novehicles = vid.RecordCount
If Not kms1.EOF Then kms1.MoveFirst
vid.MoveFirst
defkms.MoveFirst
If noschedules = 0 Then
For i = 1 To novehicles
Call kmsschedsub
vid.MoveNext
Next i
Else
For j = 1 To noschedules1
vid.MoveFirst
Do While Not vid.EOF
```

```
If kms1.Fields("VEHICLE_ID") = vid.Fields("VEHICLE_ID") Then
nextkmsdue = vid.Fields("TOTAL_KILOMETERS_RUN")
Exit Do
End If
vid.MoveNext
Loop
If kms1.Fields("MAINTENANCE_DUE") <= nextkmsdue Then
nextkmsdue1 = kms1.Fields("MAINTENANCE_DUE") -
kms1.Fields("LAST_MAINTENANCE")
kms1.Edit
kms1.Fields("LAST_MAINTENANCE") = vid.Fields("TOTAL_KILOMETERS_RUN")
kms1.Fields("MAINTENANCE_DUE") = nextkmsdue + nextkmsdue1
kms1.update
End If
kms1.MoveNext
Next j
If (novehicles * nodefkms) > noschedules1 Then
vid.MoveLast
temp = (novehicles * nodefkms - noschedules1) / nodefkms
For i = 1 To temp
Call kmsschedsub
vid.MovePrevious
Next i
End If
End If
Else
h = MsgBox("There are no Trucks to schedule maintenance.", vbOKOnly, "Message")
Exit Sub
End If
End Sub
Private Sub btnclose_Click()
Unload Me
End Sub

Private Sub btnprint_Click()

shedulereport.Show
End Sub

Private Sub Form_Load()
Set db = OpenDatabase("C:\WINDOWS\AECMS\AECMS.mdb")
Set vid = db.OpenRecordset("VEHICLEID", dbOpenSnapshot)
Set time1 = db.OpenRecordset("SHEDMONTHS")
Set deftime = db.OpenRecordset("MAINTMONTHS")
Set kms1 = db.OpenRecordset("SHEDKMS")
Set defkms = db.OpenRecordset("MAINTKMS")
```

```
Call fcupdt
Call timescheduler
Call kmsscheduler
Calendar.Month = Month(Date)
Calendar.Year = Year(Date)
Calendar.Day = Day(Date)
End Sub

Private Sub viewdate_Click()
If Not Text1.Text = "" Then
On Error GoTo i
Calendar.Year = Year(Text1.Text)
On Error GoTo i
Calendar.Month = Month(Text1.Text)
On Error GoTo i
Calendar.Day = Day(Text1.Text)
Else
i:
h = MsgBox("Invalid Date Format", vbOKOnly, "Error")
Text1.Text = ""
Exit Sub
End If
End Sub
```

'Splash Screen

```
Option Explicit

Private Sub Form_KeyPress(KeyAscii As Integer)
   Unload Me
End Sub

Private Sub Frame1_Click()
   Unload Me
End Sub

Private Sub Timer1_Timer()

MDIMain.Show
Unload Me

frmTip.Show (vbModal)
End Sub
```

'Tip of the day

```
Option Explicit

' The in-memory database of tips.
Dim tips As New Collection

' Name of tips file
Const TIP_FILE = "TIPOFDAY.TXT"

' Index in collection of tip currently being displayed.
Dim CurrentTip As Long


Private Sub DoNextTip()

    ' Select a tip at random.
    CurrentTip = Int((tips.Count * Rnd) + 1)

    ' Or, you could cycle through the Tips in order

'   CurrentTip = CurrentTip + 1
'   If Tips.Count < CurrentTip Then
'       CurrentTip = 1
'   End If

    ' Show it.
    frmTip.DisplayCurrentTip

End Sub

Function LoadTips(sFile As String) As Boolean
    Dim NextTip As String   ' Each tip read in from file.
    Dim InFile As Integer   ' Descriptor for file.

    ' Obtain the next free file descriptor.
    InFile = FreeFile

    ' Make sure a file is specified.
    If sFile = "" Then
        LoadTips = False
        Exit Function
    End If

    ' Make sure the file exists before trying to open it.
```

```
  If Dir(sFile) = "" Then
     LoadTips = False
     Exit Function
  End If

  ' Read the collection from a text file.
  Open sFile For Input As InFile
  While Not EOF(InFile)
     Line Input #InFile, NextTip
     tips.Add NextTip
  Wend
  Close InFile

  ' Display a tip at random.
  DoNextTip

  LoadTips = True

End Function

Private Sub chkLoadTipsAtStartup_Click()
   ' save whether or not this form should be displayed at startup
   '  SaveSetting App.EXEName, "options", "Show Tips at Startup",
         chkLoadTipsAtStartup.Value
End Sub

Private Sub cmdNextTip_Click()
   DoNextTip
End Sub

Private Sub cmdOK_Click()
   Unload Me
End Sub

Private Sub Form_Load()
   Dim ShowAtStartup As Long
   ' See if we should be shown at startup
   ShowAtStartup = GetSetting(App.EXEName, "options", "Show Tips at Startup", 1)
   'If ShowAtStartup = 0 Then
    '   Unload Me
    '   Exit Sub
   'End If

   ' Set the checkbox, this will force the value to be written back out to the registry
   Me.chkLoadTipsAtStartup.Value = vbChecked
```

```
  ' Seed Rnd
  Randomize

  ' Read in the tips file and display a tip at random.
  If LoadTips(App.Path & "\" & TIP_FILE) = False Then
     lblTipText.Caption = "That the " & TIP_FILE & " file was not found? " & vbCrLf
        & vbCrLf & _
        "Create a text file named " & TIP_FILE & " using NotePad with 1 tip per line. " &
        _
        "Then place it in the same directory as the application. "
  End If


End Sub

Public Sub DisplayCurrentTip()
   If tips.Count > 0 Then
      lblTipText.Caption = tips.Item(CurrentTip)
   End If
End Sub
```

'Truck detail manager

```
Private Sub btnAdding_Click()
btnAdding.Enabled = False
For i = 0 To 15
txtnewtrk(i).Enabled = True
Next i
txtnewtrk(7).Text = Date
txtnewtrk(14).Text = DateAdd("yyyy", 1, Date)
txtnewtrk(0).Text = "AEC"
txtnewtrk(5).Text = "10"
txtnewtrk(13).Text = "0"
txtnewtrk(1).Text = "TRUCK"
cmdupdate.Enabled = False
cmdupdate.Enabled = False
data1trm.Recordset.AddNew
cmdupdate.Enabled = True
End Sub

Private Sub cmdCancel_Click()
If cmdupdate.Enabled = True Then
r = MsgBox("        Do You Want To Save and Exit?", vbYesNoCancel, "Exit")
If r = 7 Then
```

```
Unload Me
Else:
If r = 2 Then
Exit Sub
Else: data1trm.Recordset.Fields("VEHICLE_ID") = txtnewtrk(0).Text
    data1trm.Recordset.Fields("CLASS") = txtnewtrk(1).Text
    data1trm.Recordset.Fields("MAKE") = txtnewtrk(2).Text
    data1trm.Recordset.Fields("MODEL") = txtnewtrk(3).Text
    data1trm.Recordset.Fields("TYPE") = txtnewtrk(4).Text
    data1trm.Recordset.Fields("AXLE LOAD IN TONNES") = txtnewtrk(5).Text
    data1trm.Recordset.Fields("REGISTRATION NUMBER") = txtnewtrk(6).Text
    data1trm.Recordset.Fields("DATE OF REGISTRATION") =
                CDate(txtnewtrk(7).Text)
    data1trm.Recordset.Fields("CHASSIS NUMBER") = txtnewtrk(8).Text
    data1trm.Recordset.Fields("ENGINE NUMBER") = txtnewtrk(9).Text
    data1trm.Recordset.Fields("GEAR BOX NUMBER") = txtnewtrk(10).Text
    data1trm.Recordset.Fields("TRANSFER CASE NUMBER") = txtnewtrk(11).Text
    data1trm.Recordset.Fields("CABIN NUMBER") = txtnewtrk(12).Text
    data1trm.Recordset.Fields("TOTAL_KILOMETERS_RUN") = txtnewtrk(13).Text
    data1trm.Recordset.Fields("FC DUE DATE") = txtnewtrk(14).Text
    data1trm.Recordset.Fields("OWNERSHIP DETAILS ") = txtnewtrk(15).Text
    On Error GoTo y
    data1trm.Recordset.update
    frmnewtrktyre.Show
    GoTo z
y:  k = MsgBox("Please Check the data you entered for Invalid data or Null values.",
            vbOKOnly, "Error")
    If k = 1 Then
    Exit Sub
    End If
z:  For i = 0 To 15
    txtnewtrk(i).Text = ""
    txtnewtrk(i).Enabled = False
    Next i
    Unload Me
End If
End If
Else:
btnAdding.Enabled = True
Unload Me
End If
End Sub

Private Sub cmdremove_Click()
If DBremove(0).Text = "" Then
l = MsgBox("No Vehicle Selected.", vbOKOnly, "Error")
```

```
Exit Sub
End If
h = MsgBox("    Confirm Vehicle Removel.", vbOKCancel, "Remove")
If h = 1 Then
If data1trm.Recordset.RecordCount > 1 Or data1trm.Recordset.RecordCount = 0 Then
For k = 1 To 5
rmtrk(k).Refresh
Next k
rmtrk(0).Refresh
For i = 1 To 5
Do While Not rmtrk(i).Recordset.EOF
If rmtrk(i).Recordset.Fields("VEHICLE_ID") = DBremove(0).Text Then
rmtrk(i).Recordset.Delete
If Not rmtrk(i).Recordset.EOF Then rmtrk(i).Recordset.MoveNext
Else
rmtrk(i).Recordset.MoveNext
End If
Loop
Next i
Do While Not rmtrk(0).Recordset.EOF
If rmtrk(0).Recordset.Fields("FITTED TO (VEHICLE ID)") = DBremove(0).Text Then
rmtrk(0).Recordset.Delete
If Not rmtrk(0).Recordset.EOF Then rmtrk(0).Recordset.MoveNext
Else
rmtrk(0).Recordset.MoveNext
End If
Loop
DBremove(0).ReFill
DBremove(0).Text = ""
Else
d = MsgBox("Cannot Remove All Vehicles.", vbOKOnly, "Error")
Exit Sub
End If
Else
Exit Sub
End If
End Sub

Private Sub cmdupdate_Click()
data1trm.Recordset.Fields("VEHICLE_ID") = txtnewtrk(0).Text
data1trm.Recordset.Fields("CLASS") = txtnewtrk(1).Text
data1trm.Recordset.Fields("MAKE") = txtnewtrk(2).Text
data1trm.Recordset.Fields("MODEL") = txtnewtrk(3).Text
data1trm.Recordset.Fields("TYPE") = txtnewtrk(4).Text
data1trm.Recordset.Fields("AXLE LOAD IN TONNES") = txtnewtrk(5).Text
data1trm.Recordset.Fields("REGISTRATION NUMBER") = txtnewtrk(6).Text
```

```
data1trm.Recordset.Fields("DATE OF REGISTRATION") = txtnewtrk(7).Text
data1trm.Recordset.Fields("CHASSIS NUMBER") = txtnewtrk(8).Text
data1trm.Recordset.Fields("ENGINE NUMBER") = txtnewtrk(9).Text
data1trm.Recordset.Fields("GEAR BOX NUMBER") = txtnewtrk(10).Text
data1trm.Recordset.Fields("TRANSFER CASE NUMBER") = txtnewtrk(11).Text
data1trm.Recordset.Fields("CABIN NUMBER") = txtnewtrk(12).Text
data1trm.Recordset.Fields("TOTAL_KILOMETERS_RUN") = txtnewtrk(13).Text
data1trm.Recordset.Fields("FC DUE DATE") = txtnewtrk(14).Text
data1trm.Recordset.Fields("OWNERSHIP DETAILS ") = txtnewtrk(15).Text
On Error GoTo y
data1trm.Recordset.update
frmnewtrktyre.Show (vbModal)
GoTo z
y: k = MsgBox("Please Check the data you entered for Invalid data or Null values.",
                vbOKOnly, "Error")
If k = 1 Then
Exit Sub
End If
z:
For i = 0 To 15
txtnewtrk(i).Text = ""
txtnewtrk(i).Enabled = False
cmdupdate.Enabled = False
btnAdding.Enabled = True
Next i
data1trm.Refresh
End Sub



Private Sub data1trm_Error(DataErr As Integer, Response As Integer)
data1trm.Refresh
'h = MsgBox("Please Check for Invalid Data or NULL values.", vbOKOnly, "Error")
End Sub

Private Sub Form_Load()
cmdupdate.Enabled = False
For i = 0 To 15
txtnewtrk(i).Enabled = False
Next i
End Sub
```

'Tyre Change

```
Dim temp0 As String
Dim temp1 As Double
Dim temp2 As Double
Private Sub btncancel_Click()
Unload Me
End Sub
Private Sub btnok_Click()
If viddb.Text = "" Or branddb.Text = "" Or poscombo.Text = "" Or txtslno.Text = ""
Then
h = MsgBox("Check for NULL or Invalid data.", vbOKOnly, "Error")
Exit Sub
End If

Do While Not infodata.Recordset.EOF
If infodata.Recordset.Fields("SL NO:") = txtslno.Text Then
h = MsgBox("You have not entered the genuine serial number.Please enter an unique tyre
serial number.", vbOKOnly, "Error")
Exit Sub
End If
infodata.Recordset.MoveNext
Loop


Do While Not viddata.Recordset.EOF
If viddata.Recordset.Fields("VEHICLE_ID") = viddb.Text Then
temp1 = viddata.Recordset.Fields("TOTAL_KILOMETERS_RUN")
Exit Do
End If
viddata.Recordset.MoveNext
Loop


Do While Not chartdata.Recordset.EOF
If chartdata.Recordset.Fields("VEHICLE_ID") = viddb.Text Then
temp0 = chartdata.Recordset.Fields(poscombo.Text)
chartdata.Recordset.Edit
chartdata.Recordset.Fields(poscombo.Text) = txtslno.Text
chartdata.Recordset.update
End If
chartdata.Recordset.MoveNext
Loop
```

```
infodata.Recordset.MoveFirst


Do While Not infodata.Recordset.EOF
If infodata.Recordset.Fields("SL NO:") = temp0 Then
temp2 = temp1 - infodata.Recordset.Fields("FITKMS")
infodata.Recordset.Edit
infodata.Recordset.Fields("REMKMS") = temp1
infodata.Recordset.Fields("LIFE") = temp2
infodata.Recordset.update
End If
infodata.Recordset.MoveNext
Loop

infodata.Recordset.AddNew
infodata.Recordset.Fields("DATE OF PURCHASE") = Date
infodata.Recordset.Fields("MAKE") = branddb.Text
infodata.Recordset.Fields("FITTED TO (VEHICLE ID)") = viddb.Text
infodata.Recordset.Fields("FITKMS") = temp1
infodata.Recordset.Fields("POSITION") = poscombo.Text
infodata.Recordset.Fields("SL NO:") = txtslno.Text
infodata.Recordset.update
Unload Me


End Sub


'Tyre Efficiency Graph

Dim db As Database
Dim compname As Recordset
Dim info As Recordset
Dim vid As Recordset
Dim life As Double
Dim ave As Double
Sub effcol()
info.MoveLast
r = info.RecordCount
info.MoveFirst
efficgraph.ColumnLabel = compname.Fields("MANUFACTURERNAME")
For j = 1 To r
If compname.Fields("MANUFACTURERNAME") = info.Fields("MAKE") Then
If Not info.Fields("LIFE") = 0 Then
life = life + info.Fields("LIFE")
```

```
ave = ave + 1
End If
End If
info.MoveNext
Next j
If Not ave = 0 Or Not life = 0 Then
efficgraph.Data = life / ave
life = 0
ave = 0
End If
End Sub
Sub qtycol()
info.MoveLast
r = info.RecordCount
quantgraph.ColumnLabel = compname.Fields("MANUFACTURERNAME")
info.MoveFirst
For j = 1 To r
If compname.Fields("MANUFACTURERNAME") = info.Fields("MAKE") Then
qty = qty + 1
End If
info.MoveNext
Next j
quantgraph.Data = qty
qty = 0
End Sub
Sub efficencysub()
compname.MoveFirst
efficgraph.RandomFill = False
efficgraph.ColumnCount = compname.RecordCount
efficgraph.ColumnLabelCount = compname.RecordCount
efficgraph.ColumnLabelIndex = compname.RecordCount

For i = 1 To compname.RecordCount
efficgraph.Column = i
Call effcol
compname.MoveNext
Next i
End Sub
Sub quantitysub()
compname.MoveFirst
quantgraph.RandomFill = False
quantgraph.ColumnCount = compname.RecordCount
quantgraph.ColumnLabelCount = compname.RecordCount
quantgraph.ColumnLabelIndex = compname.RecordCount
For i = 1 To compname.RecordCount
quantgraph.Column = i
```

```
Call qtycol
compname.MoveNext
Next i
End Sub
Private Sub cmdclose_Click()
Unload Me
End Sub
Private Sub Form_Load()
Set db = OpenDatabase("C:\WINDOWS\AECMS\AECMS.mdb")
Set compname = db.OpenRecordset("TYREBRAND")
Set info = db.OpenRecordset("TYRETINFO")
Call efficencysub
Call quantitysub
End Sub
```

'Updating Trip meter

```
Dim a(500) As Double
Dim i As Integer
Dim j As Integer

Private Sub Command1_Click()
j = updata.Recordset.RecordCount
If i <= j - 1 Then
If Text1.Text = "" Then
h = MsgBox("Enter the valid data required.", vbOKOnly, "Error")
Exit Sub
End If
a(i) = CDbl(Text1.Text)
updata.Recordset.Edit
updata.Recordset.Fields("TOTAL_KILOMETERS_RUN") = a(i) +
updata.Recordset.Fields("TOTAL_KILOMETERS_RUN")
updata.Recordset.update
Text1.Text = ""
i = i + 1
updata.Recordset.MoveNext
If updata.Recordset.EOF = True Then
updata.Recordset.MoveFirst
Unload Me
Exit Sub
End If
If i = 0 Then
Command2.Enabled = False
Else
```

```
Command2.Enabled = True
End If
If i = j - 1 Then Command1.Caption = "Finish"
End If
End Sub
Private Sub Command2_Click()
If i = j - 1 Then Command1.Caption = "Next>>"
If i > 0 Then
updata.Recordset.MovePrevious
i = i - 1
Text1.Text = a(i)
updata.Recordset.Edit
updata.Recordset.Fields("TOTAL_KILOMETERS_RUN") =
updata.Recordset.Fields("TOTAL_KILOMETERS_RUN") - a(i)
updata.Recordset.update
End If
If i = 0 Then Command2.Enabled = False
End Sub

Private Sub Command3_Click()

Command3.Enabled = False
Command1.Enabled = True
Text1.Enabled = True
End Sub



'Vehicle Details

Private Sub Command1_Click()
Unload Me
End Sub

Private Sub Command2_Click()
Vehicledatareport.Show
End Sub

'view lubricants used
Private Sub prtreco_Click()
Unload Me
End Sub
```

'Main Screen (MDI)

```
Dim bd As Database
Dim vid As Recordset
Public h As Integer
Sub notrk()
h = 0
Set db = OpenDatabase("C:\WINDOWS\AECMS\AECMS.mdb")
Set vid = db.OpenRecordset("VEHICLEID", dbOpenSnapshot)
If vid.EOF Then
h = MsgBox("No Trucks In the database.", vbOKOnly, "Error")
End If
End Sub
Private Sub about_Click()
frmAbout.Show (vbModal)
End Sub
```

```
Private Sub ex_Click()
End
End Sub

Private Sub maintman_Click()
Call notrk
If h = 1 Then Exit Sub
frmmanshed.Show
End Sub

Private Sub maintshed_Click()
Call notrk
If h = 1 Then Exit Sub
frmschedule.Show
End Sub

Private Sub MDIForm_Unload(cancel As Integer)
Unload frmAbout
Unload frmTip
Unload frmnewtrktyre
Unload frmtrkman
Unload Defdatman
```

```
End Sub

Private Sub mdm_Click()
Me.WindowState = 2
Defdatman.Show (vbModal)
End Sub

Private Sub reclube_Click()
viewRecolube.Show
End Sub

Private Sub shed_Click()
shedulereport.PrintReport
End Sub

Private Sub tdm_Click()
Me.WindowState = 2
frmtrkman.Show (vbModal)
End Sub

Private Sub tips_Click()
frmTip.Show (vbModal)
End Sub

Private Sub Toolbar1_ButtonClick(ByVal Button As MSComctlLib.Button)
Select Case Button.Key
Case "Print"
shedulereport.Show
Case "shed"
Call notrk
If h = 1 Then Exit Sub
frmschedule.Show
Case "brow"
frmBrowser.Show
Case "updt"
Call notrk
If h = 1 Then Exit Sub
frmUpdtinfo.Show
Case "grap"
Call notrk
If h = 1 Then Exit Sub
frmtyregraph.Show
Case "tyre"
Call notrk
If h = 1 Then Exit Sub
frmtyrechange.Show (vbModal)
```

'Main Module(Basic Program)

```
Sub main()
Load frmSplash
frmSplash.Show
Load MDIMain
Load frmAbout
Load frmTip
Load frmtrkman
Load Defdatman
End Sub
```