

Reference

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Appendix I

Vehicle Log book

ශ්‍රී ලංකා රාජ්‍ය මාරුන් දෙපාර්තමේන්තුව

පොත් 267
General 267
(Booklet F' cap 4 to)
11/55

දෙපාර්තමේන්තුව

Department

වාහනය පිළිබඳ ලොග් සටහන් පොත
VEHICLE LOG BOOK

දෙපාර්තමේන්තු අංකය

Departmental Number



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ලියාපදිංචි කිරීමේ අංකය

Registration Number

දැවෙන ඉන්ධන ප්‍රමාණය / FUEL CONSUMPTION

Authorised M. P. G. බර සවරා } බර නොසවරා }
 With Load Without Load

පරීක්ෂාකර බැලූ දිනය Tested on	M. P. G.		දෝෂයක් හිඹුණි නම් එය ඉවත කිරීමට ගැනුණු පියවර Action taken to remedy defect, if any	පරීක්ෂා කළේ: විද්‍යාඥයාගේ අත්සන Signature of Testing Officer
	බර සවරා With Load	බර නොසවරා Without Load		



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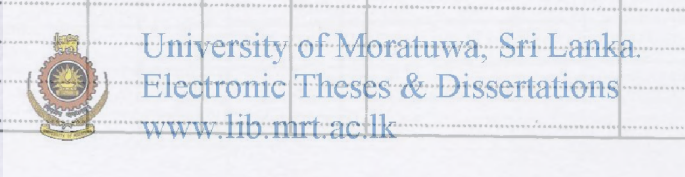
සරවිස් කිරීම

(මාසයට වරක් බැඳින් හෝ තැනැත්ම දාහෙන් දාහට හෝ සරවිස් කළ යුතුය)

SERVICING


(Servicing to be done monthly or at every 1,000 miles)

දිනය Date	මීටරයේ වැටී ඇති තැනැපුම් ගණන Meter Reading	හෙල් මාරු කිරීම, ඇන්ජීම, හිටරය, වීපරාන්තලය Oil Changes, Engine, Gear, Differential	හාර නිලධාරී යාගේ හෙට් අක්කන Initials of O. I. C.	දිනය Date	මීටරයේ වැටී ඇති තැනැපුම් ගණන Meter Reading	හෙල් මාරු කිරීම, ඇන්ජීම, හිටරය, වීපරාන්තලය Oil Changes, Engine, Gear, Differential	හාර නිලධාරී යාගේ හෙට් අක්කන Initials of O. I. C.



දිනය Date				දිනය Date				ඕටර් අංකය හා දිනය Order No. and Date
ඉන්ධන තට්ටුවේ ප්‍රමාණය Fuel Position -				දැමුණ ගැලෝන් In tank Gallons				
ගන්නා Drawn				පාවිච්චි කළ Consumed				
ප්‍රවේශ වීමේ ප්‍රමාණය Balance				ඉන්ධන ස්‍රෝතය Engine Oil -				
ගන්නා පින්ට්ස් Drawn Pints				පවතුන්ගේ අකුරු Initials of O.I.C.				

වෙනත් සිය යුතු අදහස්
REMARKS



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Appendix II

International Standard Preventive maintenance schedule for efficient fleet management

UNTAES TRANSPORT SECTION

WORK ORDER No: _____

VCH No: _____ Kms: _____

LOCATION: _____ DATE IN: _____ DATE OUT: _____

A - MAINTENANCE (EVERY 5,000 KMS)

- CHECK & RECTIFY AS REQUIRED
- CHANGE ENGINE OIL AND OIL FILTER
- BATTERY & CLEAN TERMINALS
- ALL HOSES & TUBES
- OIL & FUEL LEAKAGE
- RADIATOR, COOLERS & CONDENSER
- ALL BELTS, PULLEY & BEARINGS
- OIL FLUID LEVELS-BRAKES, CLUTCH
- GEAR BOX, RESERVOIR & AXLES
- LIGHTS, INSTRUMENTS & WIRE CONNECTIONS
- ALL STEERING, SUSPENSION & SHOCK JOINTS AND GREASE AS REQUIRED
- EXHAUST SYSTEM & MOUNTINGS
- WIPER BLADES AND WIPER RUBBERS
- WATER, FUEL & STEERING PUMPS
- BODY, SEATBELTS, SEATS & FUEL TANK
- WPF, WASHER, AIR CON, HEATER, DEFROSTER
- CHECK FOR WATER IN FUEL (DIESEL)
- TYRES AND AIR PRESSURE
- TOOLS & EQUIPMENT
- OTHER ACCESSORIES
- ROAD TEST CHECKING-ENGINE, CLUTCH, GEAR
- SHIFTING OF GEARS (GEAR BOX) STEERING, BRAKES
- MIRRORS & UNUSUAL NOISES
- CHECK PARKING BRAKE (HAND BRAKE)

B - MAINTENANCE

- CHANGE ENGINE OIL FILTER
- FREE PLAY - CLUTCH & BRAKE PEDALS
- CHECK FUEL FILTERS
- CLEAN AIR FILTER ELEMENT

C - MAINTENANCE (EVERY 20,000 KMS)

- IN ADDITION TO A & B MAINTENANCE
- RENEW SPARK PLUGS, CONTACT POINTS & CONDENSER IF APPLICABLE
- REPLACE FUEL FILTERS
- CHECK IGN. TIMING
- CHECK CYLINDER COMPRESSION IF REQUIRED
- ADJUST VALVES & REPLACE GASKET IF REQUIRED
- TIGHTEN CARBURETOR SCREWS, BOLTS/NUTS & ADJUST IDLING IF APPLICABLE
- REPLACE AIR FILTER
- INSPECT BRAKE DISC PADS & LININGS
- ADJUST WHEEL BEARINGS AS REQUIRED
- CHECK TOE-IN & ROTATE TYRES AS REQUIRED
- CHANGE OIL FLUIDS-TRANSMISSION DIFF & ETC. AS RECOMMENDED BY MANUFACTURER
- CHECK AND REPLACE AS NECESSARY

D - MAINTENANCE

(Every 20,000 Kms) in addition to A, B & C maintenance

- CHECK CLUTCH PLATE - REPLACE IF NECESSARY
- CHECK BATTERY - REPLACE IF NECESSARY
- RENEW & REPACK WHEEL BEARINGS & UNIVERSAL JOINT BEARINGS
- OVERHAUL ALTERNATOR & STARTER
- REPLACE SUSPENSION AS REQUIRED
- REPAIR OPERATION
- RECONDITION FUEL INJECTORS (if required)
- CLEAN AND ADJUST CARR (if required)



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REPAIRS/RECONDITIONING

Km BETWEEN MAINTENANCE MAY BE REDUCED IF OPERATING CONDITIONS CALLS FOR IT

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

WORKSHOPS:

FINAL TEST BY: _____

RECEIVED IN GOOD ORDER BY: _____

DATE: _____

NAME: _____

SIG: _____

ID# _____


Maintenance Record Card

TOOLS & EQUIPMENT ISSUED

Tripticket Bag	Safety Belts
Veh. Documents	Fan Belt
UN Flag	Fire Exting
Blue Flag	Tool Bag
Jerry Can	Open Spanner
Spout/Funnel	Screw Driver
Tow Wire
Shackles
Jack with Base
Wheel Wrench
First-Aid Kit No.

MAINTENANCE RECORD CARD

UNPF


 The Driver of this vehicle is strictly forbidden to carry any passengers except those specifically authorized by the United Nations Protection Force.

**UNPROFOR
TRANSPORT SECTION**

LAST MAINTENANCE CARRIED OUT AT
 Km. Place
 Date Signature

NEXT MAINTENANCE
 A. B. C. D. DUE AT KM.

(Source: UNO)

Maintenance Record Card

* Only Personnel in possession of a valid «UNPROFOR Drivers Permit» are permitted to drive this vehicle.

* It is the responsibility of the UNPROFOR Staff Member to whom this vehicle is assigned to assure that the vehicle is brought to workshop for repair and maintenance as and when required and at least once a month.

Trip Tickets must be properly filled out at the end of each trip and should, when possible, be handed in WEEKLY to the MTO.

* The SPEED of this vehicle must never exceed _____ KPH. (Except in emergency).

*** In Case of Accident:**

1. Stop Vehicle immediately.
2. Assist any injured parties.
3. Do not move vehicle from the scene unless it is a danger to other traffic or on instructions from local police.
4. Notify local police and nearest UNPROFOR office.
5. Fill out Accident Report Form (placed in Trip Ticket Folder) in duplicate.

Vehicle Maintenance every 5000 Kms.			
MAINT.	DATE	KM.	GARAGE/MECH
A			
B			
A			
C			
A			
B			
A			
C			
A			
B			
A			
C			
A			
B			
A			
C			
A			
B			
A			
D			
REMARKS			
TYRE PRESSURE:	LBS.	KGS.	
FRONT:			
REAR:			

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(Source: UNO)



Manufacturers recommended maintenance schedule

Maintenance item	Service to be performed	Service required at indicated distance (x1,000 Km)					Remarks
		20	40	60	80	100	
8. Fuel filter	Replace fuel filter		○		○		
9. Distributor cap, rotor and spark advancer (for breaker point-less-type distributor only)	Check the condition of distributor cap rotor and spark advancer		○		○		
10. Ignition cables	Check ignition cables for damage	○	○	○	○	○	
11. Timing belt	Replace timing belt					○	
12. Crankcase emission control system	Check operation of crankcase emission control system	○	○	○	○	○	
13. Fuel vapor hoses and crankcase ventilation hoses	Check fuel vapor hoses and crankcase ventilation hoses	○	○	○	○	○	
14. Exhaust gas recirculation system	Check exhaust gas recirculation system	○	○	○	○	○	
15. Choke mechanism and linkage	Check choke mechanism and linkage		○		○		
16. Road test		○	○	○	○	○	

E11



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Recommended Maintenance Schedule (For Singapore only)
This maintenance schedule is applied to vehicles for only Singapore conforming to the Singapore Regulation regarding the exhaust emissions.

Maintenance item	Service to be performed		Service required at indicated distance (x1,000 Km)					Remarks
			20	40	60	80	100	
1. Engine oil	Change engine oil (petrol-powered vehicles without turbocharger)	Normal usage	Every 10,000 Km or every 6 months					N/A classification "For service SD" or higher
		Severe usage	Every 5,000 Km					
	Change engine oil (petrol-powered vehicles with turbocharger)		Every 5,000 Km or every 6 months					N/A classification "For service SD" or higher
	Replace engine oil filter (petrol-powered vehicles without turbocharger)	Normal usage	Every 10,000 Km or every year					
		Severe usage	Every 5,000 Km					
2. Engine oil filter	Replace engine oil filter (petrol-powered vehicles with turbocharger)	Normal usage	Every 10,000 Km or every year					
		Severe usage	Every 5,000 Km					
3. Air cleaner element	Replace air cleaner element	Normal usage		○		○		
		Severe usage	○	○	○	○	○	
4. Valve clearance	Check valve clearance		○	○	○	○		
5. Spark plug	Replace spark plug			○		○		
6. Engine idling speed and CO concentration	Check engine idling speed and CO concentration		○	○	○	○		
7. Ignition timing	Check ignition timing		○	○	○	○		

E10

(Source: Mitsubishi Motors Corporation – Japan)

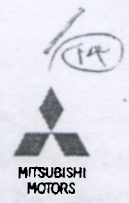
APPENDIX III

Value of a brand new L200 4D56 double cab in year 1995



United Motors Lanka Ltd

P.O. Box: 697, 100, Hyde Park Corner, Colombo 7, Sri Lanka.
Telephone : 2432462/3, 2448112/4, 2423716-9 Fax : 2448113 e-mail : umil@umin.com



20th Dec 2005
web site : www.unitedmotors.lk

Commissioner General
Department of Agrarian Development
Colombo 07

Dear Sir,

CONFIRMATION OF C I F VALUE ON
01 UNIT MITSUBISHI L 200 DOUBLE CAB IMPORTED IN 1995
ENGINE NO: 4D56- GS4628
CHASSIS NO: CHNV340SP02199

With reference to your letter dated 24th Nov 2005, with regard to the above vehicle, we give below the approximate valuation of the above vehicle.

	<u>Rs.</u>
CIF	516,303.00
DUTY	102,904.00
TT	154,357.00
D/L	34,730.00
EX-DUTY	41,612.00
LOCAL CHARGES	12,500.00
OTHER CHARGES	420.00
PORT CHARGES	650.00
TOTAL COST	<u>863,476.00</u>



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Thanking You
Yours Faithfully

UNITED MOTORS LANKA LTD

Sunil de Silva
AGM (LOGISTICS)

Chairman : M.J.C. Amarasinghe, Chief Executive Officer/Executive Director : C. Yatawara
Directors : Mrs. I.S. Ivasanetha, T.M.R.B. Tennekoon, Mrs. S.M. Christyatom, A. Herath, Y. Sasara



UNITED MOTORS LANKA LIMITED

145, Majeed Place, Orugodawatta.
Tel : 2531382-4, 5333307 Fax : 2531829

Min. of Resettlement and Disaster Relief Services
Name of Customer: **DEFECT REPORT**

Ref. Job No. _____
Registration No. **W.P.J.R-2880**
Chassis No. **MBJNK24050309**

Vehicle Model **L200** KM Reading : _____

1. Engine Engine needs replacement (GRND NEW) Including Engine Block, Cylinder Head, Injector Pump, Alternator, T-belts V-belts, Injectors, Flywheel, any, Engine Sump, Oil Pump Assy, Heater Plugs, Water pump, Oil filter, Housing etc.	6. Steering 7. Brakes 8. Cooling System 9. Electrical
5. Front Axle / Suspension	10. Other Repair Cost will be approximately - 4000000/-

UNITED MOTORS LANKA PLC.
No. 145, MAJEED PLACE,
ORUGODAWATTE,
TEL: 2531382-4, 2572486, 2339317

Please contact our Service Advisor **Michael** for further information.

Tel: **0777 256 288** Date: _____ Signature: _____

FAX 04 11 2531829 UNITED MOTORS WORK SHOP

APPENDIX IV

Government fuel order

රජයේ ඇණවුම්
ආණ්ඩුසේවක සේවා
GOVERNMENT ORDER

කොට/General/General 221
 (Orig. R2/L. Blue, Dup. R 2/Pink, Trip. L 2/White S., T. & K.) 0/63

අංකය/Order No. Z 440126

(සුප්‍රියම්, භූමිකෘම, කටහලු, දැන්කාල් ලීනිස් සහල්)
 (Petrol, Kerosene, Diesel, Furaxo Gu, Lubricants)

(4 වැනි කොටුවේ වෙනත් නිෂ්පාදිතයන් සඳහා ලබා ගත හැකි අනෙක් සියලුම ප්‍රායෝගිකයන් වනාන්තරයන් නම් කළා හැටියට පුලුවන්)

(4 වැනි කොටුවේ වෙනත් නිෂ්පාදිතයන් සඳහා ලබා ගත හැකි අනෙක් සියලුම ප්‍රායෝගිකයන් වනාන්තරයන් නම් කළා හැටියට පුලුවන්)

(1) ඇණවුම් කළුපුත් වන්නාද ?
 (අ.ප.ස.ව.ය. චලිත ප්‍රාග්ධන නිෂ්පාදිතයන් නම් සහ ලිපිනය)
 (අ.ප.ස.ව.ය. චලිත ප්‍රාග්ධන නිෂ්පාදිතයන්)
 (Order on Name and Address of CPC Dealer/Agent)

(2) සිකුන් කරන්නන් කාටද ?
 (අ.ප.ස.ව.ය. චලිත ප්‍රාග්ධන නිෂ්පාදිතයන් නම් සහ ලිපිනය)
 (අ.ප.ස.ව.ය. චලිත ප්‍රාග්ධන නිෂ්පාදිතයන්)
 (Name of Supplier)

(3) ගාස්තුව අය කිරීමේදී ?
 (වැඩිදුරටත් දන්වා දීමට බලපැවැත්වූ පුද්ගලයන්ට පමණක් සීමා කළ යුතුය)
 (අය කිරීමට බලපැවැත්වූ පුද්ගලයන්ගේ නම සහ ලිපිනය)
 (Name and Address of Paying Authority)

(4) නිෂ්පාදිතයන් නම
 (අණවුම් ලබා ගන්නා ප්‍රමාණය) (ලැබූ ප්‍රමාණය)
 (Quantity Ordered (in Gallons)) (Quantity Supplied (in Gallons))

අණවුම් ලබා ගන්නා ප්‍රමාණය (ලැබූ ප්‍රමාණය)	ලබා ගන්නා ප්‍රමාණය (ලැබූ ප්‍රමාණය)
අංකය/Quantity	මාතிரා/In words
200	200
2	2
2	2

(5) සලසුලු/ලබන්නාගේ සහතිකය
 (අණවුම් ලබා ගන්නා ප්‍රමාණය සහ නම)
 (Authorized Recipient)

(6) ඇණවුම් කරන්නාගේ සහතිකය
 (අණවුම් කරන්නාගේ නම සහ ලිපිනය)
 (Signature of Ordering Authority)

(7) චලිත ප්‍රාග්ධන නිෂ්පාදිතයන්
 (අණවුම් ලබා ගන්නා ප්‍රමාණය සහ නම)
 (Signature of Dealer/Agent)

(8) "සලසුලු" නම් කොටුවේ දැක්වූ ඇති නිෂ්පාදිතයන් වනාන්තරයන්/අංක 57-105 දරන වාහනයේ වැඩියට හිමිකරු ලෙසට ලබා ගත යුතුය.
 (Product indicated in "Quantity Supplied" once received by me/into tank of Vehicle No. 57-105 in bulk)

ලබන්නාගේ සහතිකය/අණවුම් ලබන්නාගේ සහතිකය
 Signature of Recipient

නම/Name: 111



APPENDIX V

Questionnaire

Questionnaire for Vehicle Fleet Survey

Name of the Department: Department of Agrarian Development

1) What is your fleet size? 113

2) Please classify your fleet according to age

Type of Vehicle	Age <5 years No of units	Age <10 years No of units	Age <15 years No of units	Age <20years No of units
Cars	01	02	03	04
Jeeps	02	03	10	15
Double Cabs	03	05	16	20
Lorries	01	04	07	09
Others	01	01	04	02

3) Average annual usage (miles traveled) in year 2008 per vehicle

Type of Vehicle	Age <5 years (Km)	Age <10 years (Km)	Age <15 years (Km)	Age <20years (Km)
Cars	20,603.5	18,663	9,683	6,205
Jeeps	27,853	20,273	15,123	11,123
Double Cabs	26,265	35,176	15,125	11,685
Lorries	18,643.3	14,997	12,873	9723
Others	24,256.04	20,635.2	16,123	10,756

4) Fuel Consumption & Cost in year 2008 per vehicle

4.1) Age below 5 years



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Type of Vehicle	Average Km per liter
Cars	10
Jeeps	9.4
Double Cabs	9.5
Lorries	4.6
Others	8

4.2) Age below 10 years

Type of Vehicle	Average Km per liter
Cars	8.3
Jeeps	7.5
Double Cabs	7.4
Lorries	3.6
Others	7

4.3) Age below 15 years

Type of Vehicle	Average Km per liter
Cars	7.1
Jeeps	6.7
Double Cabs	6
Lorries	2.8
Others	6.2



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4.4) Age below 20 years

Type of Vehicle	Average Km per liter
Cars	7.8
Jeeps	5.9
Double Cabs	5.1
Lorries	2.1
Others	5.2

5) Average annual major repair cost with ageing in year 2008 per vehicle

Type of Vehicle	<5 years Rs. million	<10 years Rs. million	<15 years Rs. million	<20years Rs. million
Cars	60,923.14	75,867	125,130	137,125
Jeeps	63,293	97,478	155,656	175,626
Double Cabs	62,506	66,265	131,300	243,126
Lorries	97,253.10	107,813	153,453	185,254
Others	47,856.43	63126,19	87,256	110,126

6) Average down time per vehicle

Type of Vehicle	<5 years (No of days)	<10 years (No of days)	<15 years (No of days)	<20 years (No of days)
Cars	06	11	26	40
Jeeps	09	15	28	42
Double Cabs	05	13	26	42
Lorries	15	23	31	58
Others	10	27	33	49

7) Do you implement a vehicle replacement policy?

Yes No

If its yes what is your replacement method?

Year	Km

8) Do you maintain preventive maintenance program?

Yes No

If its yes what type of maintenance do you apply?

You may select more than one answer



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1) Maintenance in every 5000Km

2) Maintenance in every 10000Km

3) Maintenance in every 20000Km

4) Maintenance in every 80000Km

9) Please answer the questions by simply ticking in the appropriate box. Use the following criteria to rank availability of vehicles related to its age.

Criteria	Very Poor	Poor	Good	Very Good
Weightage	1	2	3	4

What is the availability of the vehicles according to age?

1 2 3 4

9.1) Vehicle age below 5 year s

 4

9.2) Vehicle age below 10 years

 3

9.3) Vehicle age below 15 years

 2

9.4) Vehicle age below 20 years

1



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10) Do you have a maintenance data base system?

Yes No

If your answer is no how you do keep records regarding maintenance and cost?

Manually

11) Do you have proper maintenance schedule?

Yes No

12) What type of intelligence equipment does your organization use to improve fleet management efficiency? You may select more than one answer.

1) Car log system No

2) Car navigation system No

3) GSM No

If you don't possess an intelligence system what's the method you use to improve fleet management efficiency?

Running charts and log books, Fuel records



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13) What is the percentage of vehicles pass the emission test?

Type of Vehicle	Age <5 years No of units	Age <10 years No of units	Age <15 years No of units	Age <20years No of units
Cars	90	82	45	22
Jeeps	90	82	45	22
Double Cabs	90	82	45	22
Lorries	90	82	45	22
Others	90	82	45	22



14) Please tick in the appropriate box to indicate to what extent that given statement are valid

Criterion	Very Low	Low	Medium	High	Very High
Weightage	1	2	3	4	5

14.1) Strength of purchasing new vehicles

14.2) Adequacy of financial facilities for vehicle rehabilitation

14.3) Adequacy for repair & maintenance Facilities

14.4) Availability of spare parts for aging vehicles

14.5) Technical efficiency of aging vehicle after rehabilitation



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15) Please answer the questions by simply ticking the appropriate box. Follow the criteria to rank the driver's skill

Criterion	Very Low	Low	Medium	High	Very High
Weightage	1	2	3	4	5

15.1) Knowledge of automobile technology 1

15.2) Ability to identify defects while in operation 2

15.3) Ability to identify the causes of defects 1

15.4) Knowledge of preventive maintenance 1

15.5) Ability to identify original parts 2



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APPENDIX VI

Summary of Data Collection

Data presenting order of departments

- 1) Department of Wild Life
- 2) Ministry of Public Administration and Home Affairs
- 3) Sri Lanka Customs
- 4) Postal Department
- 5) Ministry of Land and Land Development
- 6) Authority of Samurdhi
- 7) Ministry of Irrigation and Water Management
- 8) Forest Department
- 9) Department of Inland Revenue
- 10) Department of Education
- 11) Department of Agriculture
- 12) Department of Archaeology
- 13) Peoples Bank
- 14) Agriculture Insurance Board
- 15) Ministry of Labor
- 16) Ministry of Petroleum and Resource Development
- 17) Ministry of Provincial Council and Local Government
- 18) Presidents Secretariat
- 19) Survey Department
- 20) Department of Agrarian Development



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Data of no. of vehicles in all sample departments according to age

Department	0-5 years				
	Cars	Jeeps	Double Cabs	Lorries	others
1	2	3	3	1	2
2	10	3	3	1	1
3	20	2	10	1	3
4	5	3	2	2	10
5	0	6	6	0	0
6	0	0	3	0	0
7	1	3	0	0	1
8	6	6	8	3	7
9	5	2	1	0	0
10	5	3	2	0	10
11	2	8	5	2	3
12	1	2	4	0	0
13	18	5	3	0	12
14	2	2	1	0	2
15	3	3	2	0	1
16	7	4	0	0	1
17	2	1	1	0	0
18	42	24	20	0	2
19	5	2	3	2	2
20	1	2	3	1	1
Total	137	84	80	13	58

Department	5-10 years				
	Cars	Jeeps	Double Cabs	Lorries	others
1	2	8	8	3	2
2	8	2	2	1	2
3	10	4	5	2	0
4	6	2	2	3	15
5	3	1	0	0	0
6	2	3	11	3	0
7	5	8	0	0	0
8	9	12	15	7	6
9	5	3	2	0	0
10	8	4	5	0	4
11	18	13	15	2	7
12	2	2	2	0	0
13	16	15	2	0	2
14	2	1	2	0	5
15	7	3	2	0	0
16	5	0	2	0	0
17	5	0	0	0	2
18	14	20	11	0	3
19	10	3	2	2	3
20	2	3	5	4	1
Total	139	107	93	27	52



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Department	5-10 years				
	Cars	Jeeps	Double Cabs	Lorries	others
1	2	8	8	3	2
2	8	2	2	1	2
3	10	4	5	2	0
4	6	2	2	3	15
5	3	1	0	0	0
6	2	3	11	3	0
7	5	8	0	0	0
8	9	12	15	7	6
9	5	3	2	0	0
10	8	4	5	0	4
11	18	13	15	2	7
12	2	2	2	0	0
13	16	15	2	0	2
14	2	1	2	0	5
15	7	3	2	0	0
16	5	0	2	0	0
17	5	0	0	0	2
18	14	20	11	0	3
19	10	3	2	2	3
20	2	3	5	4	1
Total	139	107	93	27	52



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Department	10-15 years				
	Cars	Jeeps	Double Cabs	Lorries	others
1	3	15	2	3	3
2	8	1	7	2	0
3	2	1	3	0	0
4	3	5	3	5	7
5	4	5	0	0	0
6	4	2	16	0	0
7	6	2	3	0	0
8	9	10	13	7	7
9	30	7	2	0	5
10	10	3	5	0	11
11	20	30	35	6	9
12	2	3	4	1	0
13	4	4	2	2	16
14	2	7	3	0	7
15	7	2	4	0	0
16	0	0	0	0	0
17	8	0	16	0	1
18	16	12	9	0	1
19	3	40	30	5	5
20	3	10	16	7	4
Total	162	195	173	38	76



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Department	15-20 years				
	Cars	Jeeps	Double Cabs	Lorries	others
1	1	18	5	5	7
2	8	1	2	0	0
3	0	1	0	0	0
4	3	2	2	7	11
5	0	2	3	0	0
6	0	0	0	0	0
7	7	2	0	0	0
8	6	20	18	8	8
9	3	0	2	1	0
10	2	2	10	5	10
11	30	40	20	5	10
12	1	4	2	2	2
13	0	0	0	0	0
14	8	5	0	0	10
15	3	5	0	0	1
16	0	0	0	0	0
17	0	4	0	0	0
18	20	7	5	0	0
19	2	40	32	5	0
20	4	15	20	9	2
Total	91	169	131	47	61



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Average per vehicle downtime data in all sample departments according to age in year 2008

0-5 years					
Department	Down time per vehicle according to vehicle types (days)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	4	5	5	8	2
2	5	6	5	8	9
3	6	4	7	5	5
4	8	6	7	10	11
5	0	6	6	0	0
6	0	0	8	0	0
7	4	8	0	0	5
8	6	5	6	8	8
9	5	6	5	0	0
10	4	5	5	0	6
11	2	3	5	8	6
12	2	4	6	0	0
13	3	5	5	0	5
14	4	5	4	0	3
15	2	3	2	0	4
16	4	4	0	0	7
17	2	4	3	0	0
18	6	7	6	0	8
19	4	5	6	10	9
20	6	9	5	15	10

5-10 years

Department	Down time per vehicle according to vehicle types (days)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	9	14	18	9	15
2	19	12	11	10	27
3	15	14	15	16	0
4	13	10	12	19	20
5	16	10	0	0	0
6	12	13	15	14	0
7	15	18	0	0	0
8	10	15	16	20	15
9	15	18	18	0	0
10	15	18	16	0	16
11	15	15	16	19	16
12	10	14	12	0	0
13	14	15	11	0	13
14	16	18	18	0	15
15	10	12	14	0	0
16	0	0	18	0	0
17	16	0	0	0	27
18	18	17	17	0	19
19	15	17	16	20	21
20	11	15	13	23	27



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10-15 years

Department	Down time per vehicle according to vehicle types (days)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	20	35	28	30	30
2	28	20	30	30	0
3	30	28	30	0	0
4	24	27	26	28	30
5	28	30	0	0	0
6	27	22	30	0	0
7	28	25	26	0	0
8	22	25	28	30	21
9	25	28	27	0	40
10	26	27	28	0	36
11	28	27	34	39	30
12	25	26	24	32	0
13	28	30	24	38	30
14	27	30	29	0	32
15	30	28	29	0	0
16	0	0	0	0	0
17	8	0	39	0	35
18	28	35	30	0	29
19	35	38	36	39	31
20	26	28	26	31	33



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15-20 years

Department	Down time per vehicle according to vehicle types (days)				
	Cars	Jeeps	Double Cabs	Lorries	Others
1	63	50	48	58	45
2	50	45	50	0	0
3	0	60	0	0	0
4	50	45	45	55	50
5	0	50	45	0	0
6	0	0	0	0	0
7	45	40	0	0	0
8	42	50	45	65	49
9	45	0	55	67	0
10	45	45	50	60	50
11	43	51	53	67	55
12	49	53	51	75	50
13	40	45	55	68	48
14	46	50	50	0	44
15	45	45	44	0	46
16	0	0	0	0	0
17	0	50	0	0	0
18	45	48	50	0	0
19	60	55	54	75	0
20	40	42	42	58	49




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Average per vehicle usage data of in all sample departments according to age in year 2008

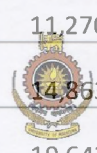
0-5 years						
Department	Average usage per vehicle (Km)					
	Cars	Jeeps	Double Cabs	Lorries	others	
1	21,665	25,344	33,336	21,863	17,963	
2	18,254	28,663	25,925	18,264	16,886	
3	21,683	36,587	29,956	24,100	30,365	
4	26,463	48,654	35,988	18,575	36,175	
5	0	40,275	35,875	0	0	
6	0	0	36,264	0	0	
7	29,958	59,872	0	0	47,963	
8	23,676	40,154	59,265	19,263	47,859	
9	27,872	47,106	54,356	0	0	
10	29,695	58,996	47,987	0	46,125	
11	27,276	32,975	30,365	21,628	20,863	
12	30,156	48,258	42,143	0	0	
13	32,975	57,463	47,956	0	48,586	
14	29,663	47,785	36,175	0	16,853	
15	17,952	29,663	23,256	0	36,254	
16	36,163	47,875	0	0	17,856	
17	36,365	42,155	38,463	0	0	
18	36,252	60,256	48,385	0	17,623	
19	30,636	48,223	42,063	36,726	23,156	
20	20,604	71,853	26,265	18,643	24,256	

5-10 years					
Department	Average usage per vehicle (Km)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	17,161	18,465	16,764	15,850	16,375
2	16,533	23,165	22,743	15,623	7,223
3	18,756	33,624	26,724	18,963	0
4	24,155	35,943	28,822	14,482	30,890
5	18,121	32,763	0	0	0
6	21,609	54,175	30,685	26,464	0
7	20,165	35,997	0	0	0
8	17,453	23,269	35,175	14,427	45,712
9	23,956	41,935	38,126	0	0
10	24,106	53,992	35,885	0	35,875
11	22,563	27,675	38,758	18,765	17,657
12	26,233	42,363	30,365	0	0
13	26,572	54,165	35,835	0	42,163
14	26,416	35,853	35,085	0	14,958
15	16,875	23,207	38,174	0	0
16	0	0	37,873	0	0
17	33,625	0	0	0	17,823
18	33,678	54,163	35,106	0	15,166
19	24,267	42,156	38,023	30,125	20,873
20	18,663	20,273	35,176	14,977	20,635


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10-15 years

Department	Average usage per vehicle (Km)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	12,804	13,992	14,916	12,852	13,496
2	12,868	20,965	16,221	12,121	0
3	14,475	26,754	18,636	0	0
4	18,953	26,421	19,321	12,175	24,325
5	15,663	25,375	0	0	0
6	18,964	36,850	24,711	0	0
7	12,225	15,257	20,753	0	0
8	15,722	17,143	35,006	12,122	87,508
9	11,171	36,158	22,663	0	17,158
10	17,567	35,922	32,763	0	32,956
11	11,270	18,163	12,758	12,256	14,403
12	14,863	30,165	26,457	12,163	0
13	19,642	27,663	33,626	12,162	33,685
14	18,663	29,925	23,992	0	12,162
15	14,173	17,864	12,785	0	0
16	0	0	0	0	0
17	24,262	0	24,634	0	15,957
18	24,252	36,728	33,672	0	11,257
19	18,156	36,023	30,176	18,356	16,811
20	11,683	15,123	15,125	12,873	16,123


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15-20 years

Department	Average usage per vehicle (Km)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	10,088	10,265	11,532	9,645	11,653
2	7,262	16,992	14,765	0	0
3	0	14,383	0	0	0
4	5,960	17,575	120,217	9,675	10,875
5	0	18,375	15,243	0	0
6	0	0	0	0	0
7	6,324	12,121	0	0	0
8	9,623	11,525	15,075	9,628	10,803
9	7,935	0	18,756	8,992	0
10	12,266	23,887	20,563	9,675	11,176
11	7,263	8,156	7,956	8,950	11,802
12	9,620	18,254	14,275	9,636	9,653
13	10,656	16,103	21,675	8,775	11,257
14	9,563	23,782	17,872	0	9,711
15	10,185	9,123	8,957	0	10,175
16	0	0	0	0	0
17	0	14,465	0	0	0
18	17,428	24,758	18,321	0	0
19	9,623	24,055	18,026	9,627	0
20	6,205	11,123	11,685	9,723	10,756




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Average per vehicle major repair cost data in all sample departments according to age in year 2008

0-5 years					
Department	Average annual major repair cost per vehicle (Rs)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	50,765	66,053	65,856	110,337	72,856
2	43,125	60,256	59,853	96,255	87,953
3	55,252	63,660	62,285	89,457	110,565
4	51,125	75,863	73,945	115,263	65,576
5	0	78,256	77,282	0	0
6	0	0	80,656	0	0
7	75,163	79,865	0	0	89,226
8	53,125	76,076	71,763	115,663	65,207
9	67,278	73,882	72,899	0	0
10	75,235	77,953	75,120	0	857,570
11	75,256	76,283	80,866	117,563	45,114
12	57,565	71,570	65,248	0	0
13	45,286	64,563	57,256	0	67,287
14	49,132	73,956	110,852	0	49,256
15	56,758	62,625	60,454	0	101,296
16	65,278	956,871	0	0	76,723
17	73,126	109,206	247,213	0	0
18	97,372	87,086	103,258	0	75,356
19	73,250	75,627	85,682	115,703	87,250
20	60,923	63,293	62,506	186,433	24,256

5-10 years

Department	Average annual major repair cost per vehicle (Rs)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	65,564	125,785	78,763	135,953	77,963
2	54,823	123,482	84,902	125,886	99,823
3	67,587	135,575	85,758	125,256	0
4	87,783	119,285	88,245	127,263	75,572
5	108,725	165,758	0	0	0
6	90,263	130,121	82,857	159,256	0
7	105,626	115,364	0	0	0
8	95,662	127,032	825,675	117,163	79,175
9	75,683	132,506	85,892	0	0
10	110,672	135,275	96,300	0	110,672
11	91,806	134,922	80,423	125,861	62,163
12	95,153	101,356	76,322	0	0
13	77,356	99,535	75,726	0	101,673
14	142,032	164,933	85,683	0	61,387
15	101,656	197,258	73,320	0	0
16	0	0	170,223	0	0
17	118,255	0	0	0	123,827
18	125,843	122,763	78,893	0	87,251
19	113,325	125,853	77,226	147,263	92,156
20	18,663	20,273	66,265	18,643	24,256


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10-15 years

Department	Average annual major repair cost per vehicle (Rs)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	87,763	165,655	153,165	175,145	103,257
2	190,702	271,813	165,657	215,352	0
3	143,182	175,493	155,806	0	0
4	127,952	165,683	155,128	141,121	102,862
5	135,783	197,508	0	0	0
6	110,758	175,523	197,586	0	0
7	135,784	145,763	175,560	0	0
8	110,193	143,563	163,255	131,356	87,856
9	87,585	185,634	185,156	0	268,587
10	125,756	175,228	180,156	0	125,635
11	109,902	137,853	19,087	15,620	731,304
12	125,765	165,873	160,825	350,126	0
13	84,256	115,890	195,603	320,120	116,392
14	97,552	175,756	189,985	0	79,637
15	123,273	225,672	187,758	0	0
16	0	0	0	0	0
17	14,016	0	180,500	0	175,357
18	175,160	190,576	142,176	0	110,853
19	140,165	136,123	190,205	225,080	97,883
20	19,683	15,123	13,125	12,873	16,123



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15-20 years

Department	Average annual major repair cost per vehicle (Rs)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	225,673	177,257	1,944,146	190,275	117,863
2	195,702	391,800	195,657	0	0
3	0	258,763	0	0	0
4	195,651	227,423	180,158	195,246	148,236
5	0	202,501	278,583	0	0
6	0	0	0	0	0
7	191,165	225,156	0	0	0
8	167,465	161,827	211,685	143,842	111,513
9	204,683	0	215,858	318,227	0
10	274,963	410,663	264,256	425,163	135,556
11	113,826	141,506	221,301	190,267	1,038,570
12	147,256	175,352	225,763	475,163	127,834
13	144,705	193,566	205,683	470,000	215,921
14	125,235	195,801	255,483	0	110,259
15	210,865	275,163	201,464	0	309,452
16	0	0	0	0	0
17	0	215,856	0	0	0
18	183,506	210,853	243,257	0	0
19	215,636	197,763	253,785	375,076	0
20	6,205	11,123	243,126	185,256	110,126


Average per vehicle fuel consumption data in all sample departments according to age in year 2008

0-5 years					
Department	Average fuel Consumption per vehicle (km/L)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	9.8	9.2	9.5	4.8	8.5
2	9.7	9.2	9.5	3.0	8.5
3	9.7	9.4	9.5	3.0	8.5
4	9.9	8.9	8.9	4.7	8.5
5	0	9.7	9.5	0	0
6	0	0	8.5	0	0
7	10.0	9.2	0.0	0	8.0
8	9.9	9.3	9.6	4.7	8.5
9	9.7	9.2	9.5	0	0.0
10	9.8	9.2	9.6	0	7.7
11	9.8	9.2	9.5	4.7	7.0
12	10.0	9.2	9.6	0	0
13	9.8	9.5	9.7	0	8.2
14	9.8	9.4	9.6	0	8.0
15	9.9	9.6	9.7	0	8.0
16	9.7	9.5	0	0	8.0
17	9.9	9.0	9.0	0	0.0
18	8.9	8.7	8.9	0	8.0
19	9.7	9.3	9.2	0.0	8.0
20	10.0	9.4	9.5	4.6	8.0



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5-10 years					
Department	Average fuel Consumption per vehicle (km/L)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	8.9	7.5	8.4	3.8	7.5
2	8.9	8.2	8.5	3.0	7.0
3	8.9	7.2	7.5	2.5	0
4	8.7	7.8	7.9	3.2	7.2
5	8.2	8.5	0	0	0
6	9.0	7.5	7.5	3.5	0
7	8.9	7.8	0	0	0
8	9.2	8.3	8.6	3.5	7.5
9	8.5	7.8	7.9	0	0
10	8.9	7.8	7.9	0	6.9
11	8.8	8.2	8.5	3.9	7.7
12	8.9	8.6	8.6	0	0
13	8.7	8.2	8.5	0	7.1
14	8.4	8.0	8.2	0	7.0
15	8.7	8.2	8.5	0	0.0
16	0.0	0	7.0	0	0.0
17	8.2	0	0	0	7.5
18	7.8	7.5	7.7	0	7.0
19	8.2	7.7	7.2	3.8	7.0
20	8.3	7.5	7.4	3.6	7.0


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10-15 years					
Department	Average fuel Consumption per vehicle (km/L)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	7.0	7.2	7.3	3.0	7.0
2	7.8	7.0	6.9	2.5	0
3	8.2	6.7	6.9	0	0
4	7.6	6.5	6.7	2.9	6.2
5	7.2	6.9	0	0	0
6	7.4	7.0	7.0	0	0
7	7.2	6.7	6.9	0	0
8	7.9	7.1	7.0	2.9	6.2
9	6.9	6.7	6.5	0	6.2
10	7.9	6.8	6.9	0	6.7
11	7.7	6.8	6.9	2.7	6.0
12	7.8	7.2	7.4	3.0	0
13	7.9	6.2	6.5	3.5	6.5
14	7.2	6.4	6.9	0	6.0
15	7.5	6.9	7.1	0	0
16	0	0	0	0	0
17	7.7	0	6.4	0	6.5
18	7.2	6.2	6.5	0	6.2
19	7.1	5.9	6.0	2.7	6.0
20	7.1	6.7	6.0	2.8	6.2




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15-20 years

Department	Average fuel Consumption per vehicle (km/L)				
	Cars	Jeeps	Double Cabs	Lorries	others
1	7.2	6.1	6.3	2.1	6.0
2	6.5	6.2	6.3	0	0
3	0.0	6.5	0	0	0
4	6.9	5.7	5.9	2.2	5.0
5	0	6.2	6.5	0	0
6	0	0	0	0	0
7	6.8	5.7	0	0	0
8	6.9	6.2	6.5	2.0	5.2
9	6.2	0	5.9	5.8	0
10	6.7	5.7	5.9	2.5	5.7
11	6.3	5.7	5.6	2.1	5.3
12	7.0	5.8	5.9	5.0	5.6
13	6.5	5.7	5.7	2.7	5.7
14	6.5	5.7	5.9	0	5.0
15	7.0	6.2	6.5	0	6.0
16	0	0	0	0	0
17	0	5.9	0	0	0
18	6.1	5.7	5.8	0	0
19	6.7	5.1	5.5	2.0	0
20	7.8	6.0	5.1	2.1	5.2


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