

## FOREWORD

Thank you for buying an **EICHER** Vehicle.

This owner's handbook comprises of 6 sections.

- The first section contains salient features of your **EICHER** vehicle.
- The second section contains the details of free service scheme offered by EML, warranty terms and conditions, service recommendations and inspection/maintenance schedule.
- The third section contains the procedures for correct operation and simple maintenance of the vehicle.
- The fourth section contains CMVR Guidelines
- The fifth section contains Guidelines for 'U' Bolt & Stiffner mounting
- The sixth section contains a list of our Authorised Representatives & Service Centres Nationwide.

To keep the vehicle in top operating condition at all times and use it for an extended period of time, make sure that this handbook is read through, carefully.

Keep this handbook as well as the 'Service Coupons' in your vehicle for ready reference.

Should any questions arise concerning the contents of the handbook, please contact our Authorised Representative for clarifications.

Note : The explanations and photographs may contain some differences from your vehicle because of change in specifications incorporated from time to time as a result of continuous innovation and research.

## Pollution control - You too can help .....



Dear Customer,

You would be well aware that environmental pollution is one of the most serious problems facing humanity today. Air pollution owing to emissions from automobiles is a major component of the same. The emission consists of toxic gases such as Carbon monoxide, Carbon dioxide, Nitrogen oxides and Hydrocarbons. These have very bad effects on human health, such as headaches, dizziness, eye irritation, brain damages, oxygen starvation and lung diseases too.

At **EICHER MOTORS**, our Research & Development has always aimed at bringing out significant product improvements in order to meet the user and environmental requirements. The Engine which powers your vehicle is very eco-friendly, fuel efficient and meets the present emission norms. In fact, every vehicle produced by us is checked and certified as "NON POLLUTING VEHICLE" as per norms prescribed by Government of India.

While we, at manufacturing and testing have taken due care in preventing emissions, as a vehicle owner and user, you would be required to help in addressing this social concern by maintaining the vehicle in good operating condition.

The following tips would be of immense use to you to derive the best out of your vehicle, at the same time serving a cause for the environment.

- Keep your Air Filter clean (Refer page 3-81)
- Electronic ejectors / small plays must be in good condition.
- Proper tuning of engine
- Correct fuel supply
- Use genuine parts only (page 2-8)
- Use recommended engine oils & lubricants only (page 2-10)
- Strict adherence to recommended maintenance schedule (page 2-11 to 2-15)

ALWAYS ENSURE THAT YOUR VEHICLE IS SERVICED AT OUR AUTHORISED REPRESENTATIVES ONLY.

*Let us together fight pollution.*

**THANK YOU**

SECTION - 1

**SALIENT FEATURES**  
**OF EICHER**

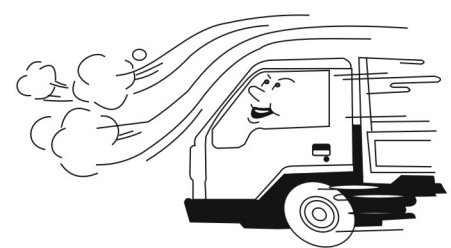
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**1** Fresh, attractive new cab styling



**2** Aerodynamic design resulting in sharply enhanced fuel economy

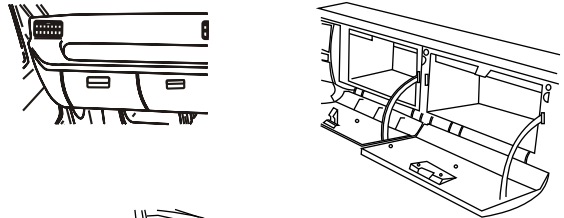


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# 3

## Spacious, conveniently appointed interior

- Large glove box, Instrument panel tray
- Easier entry and exit

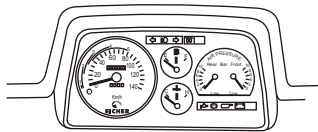


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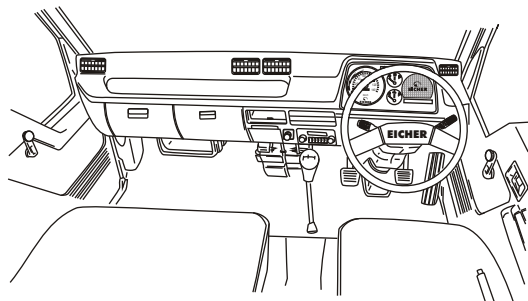
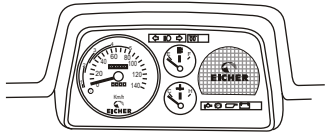
# 4

## Ergonomic design and easy handling to prevent driver fatigue

For Air brake model



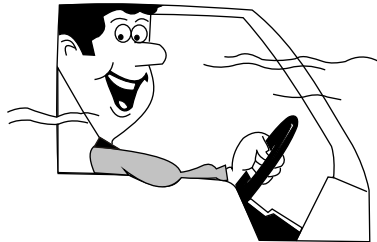
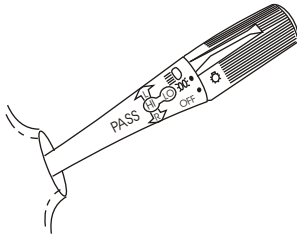
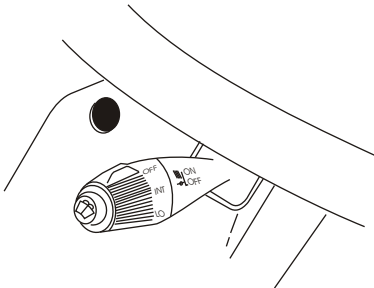
For Hydraulic brake model



- Easy view meters  
Thanks to our human engineering study, moderate bright orange - transparent illuminated instrument panel give best visibility at night and day.
- Full function checklamp system  
The easy - to - read check lamp panel includes a complete range of pilot and warning lamps which permit quick checks on all vehicle operating conditions.

Ergonomic design and easy handling to prevent driver fatigue (Contd..)

- Multi - use lever



Frequently used switches (turn signals, passing lights, head lights) are all integrated into a single lever conveniently located on the steering coloum for fast and effortless operation.

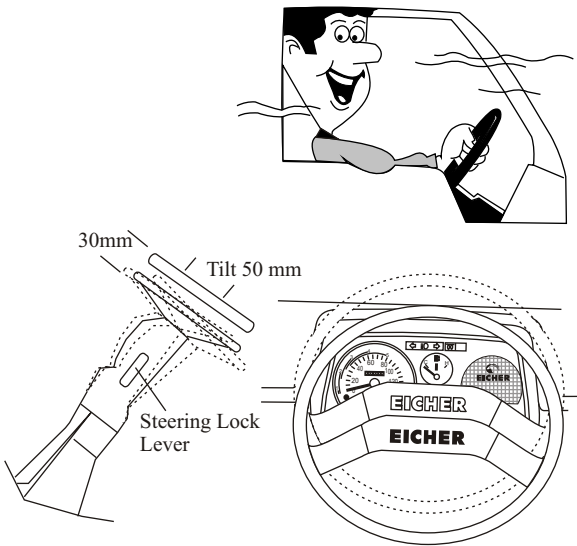
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Ergonomic design and easy handling to prevent driver fatigue (Contd..)

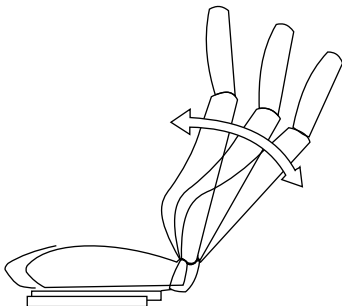
- Tilt & telescopic steering

The 2 spoke type steering wheel has height adjustments by Tilt and Telescopic mechanism which provides the ideal driving position for any driver.



- Adjustable seat

The longer 140mm fore-and-aft seat adjustment ensures the ideal driving position for the driver.



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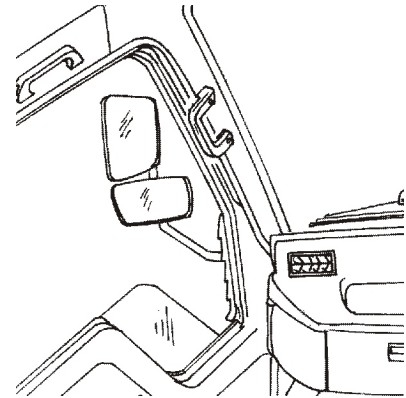
# 5

## Panoramic visibility and full complement of safety features



- **Deep-cut safety door windows for improved visibility**

They vastly improve lateral downward visibility which prevents accidents with motorcycles, bicycles and/or pedestrians at corners and results in a brighter and more airy interior with the glasses lowered.



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# 6

## Innovative, high-performance aggregates

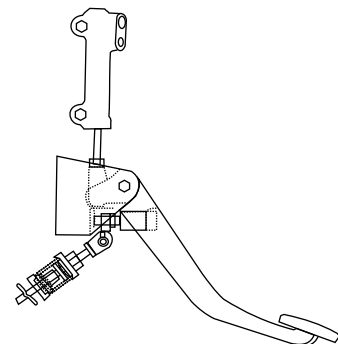
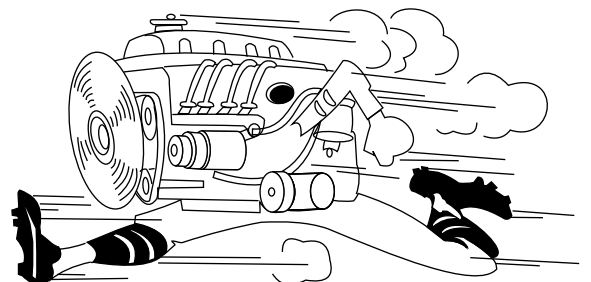
- **Engine**

The **EICHER** is Powered 61Kw at 3200 rpm with E483 NA and 70 Kw at 3200 rpm with E483 TCI and fuel efficient engine producing a maximum torque of 206 N m at 1920 rpm with E483 NA, 285 Nm at 1400 rpm with E483 TCI and 260Nm at 1500 rpm with E483EDC Engine

- **Clutch**

The 275 x 175mm clutch disc transmits higher torque and is designed for longer life.

A special toggle spring is provided in the clutch pedal to prevent clutch wear against careless footrest pressure.

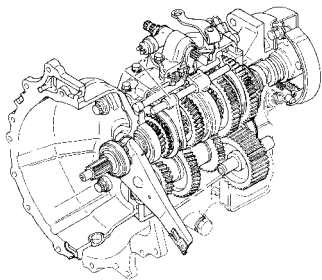


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**Innovative, high-performance aggregates (Contd..)**

- **Gear Box**

The gear box is capable of transmitting torque of - higher than that developed by the engine which means better reliability and longer life.

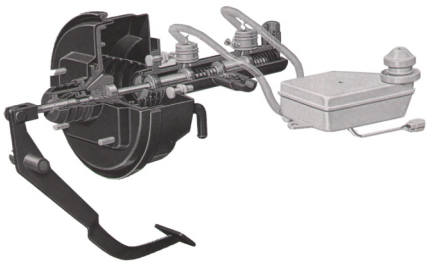


- **Brake (Hydraulic)**

A dual-circuit hydraulic brake system control the front and rear wheels independently and ensures a fail-safe brake system

A large-caliber master vac. is provided which acts with great force even with light pedal action.

A warning lamp is also provided to warn the driver of a shortage of brake fluid.

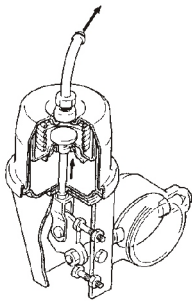


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**Innovative, high-performance aggregates (Contd..)**

- **Exhaust Brake**

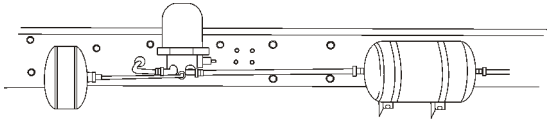
A Unique fully automatic exhaust brake system in addition to normal brake ensures safe driving and longer life of the brake liners



- **Brake (Air)**

A dual circuit full air brake system control the front and rear wheels independently and ensure a fail-safe brake system.

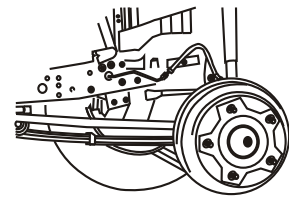
A compact air dryer prevents corroison thus enhancing the life of braking components. Warning lamp and buzzer is also provided to warn the driver in case of any leakage in the system.



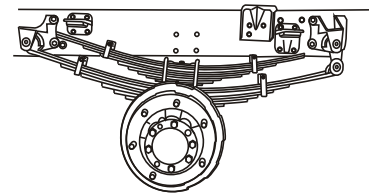
Innovative, high-performance aggregates (Contd..)

● Suspension

1200mm long-span leaf springs for front suspension ensure better riding comfort



High-rigidity rear suspension springs prevent rolling, increase durability and enhance the **EICHER's** ability to glide over rough roads.

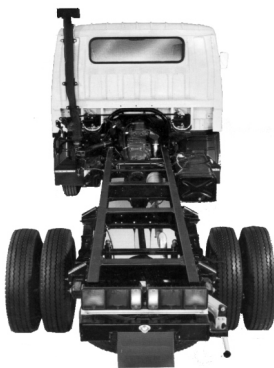


● Chassis

The unique ladder type reinforced "C" channel chassis increases the load bearing strength while fully retaining flexibility to absorb shocks.

All Models except 11.10

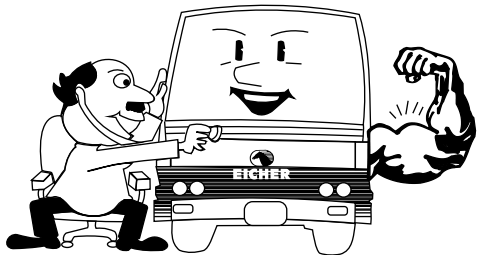
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7

Enhanced durability and greater reliability for longer service life



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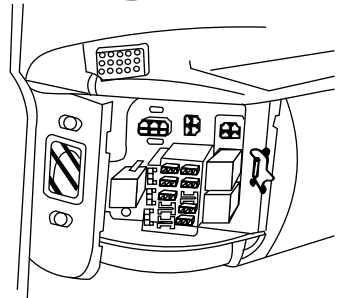
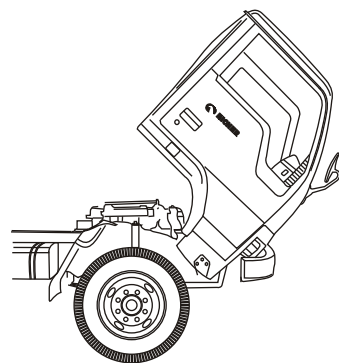
Easier inspection and maintenance



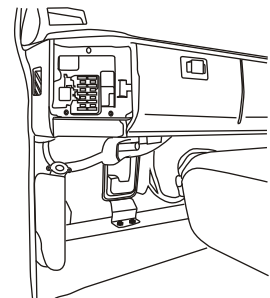
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Easier inspection and maintenance (Contd..)

- **Tilt Cabin**  
The tilt cabin makes the inspection and maintenance jobs not only easier but also safer to perform.
- **Integrated fuse and relay unit**  
The fuse box and realy box are located as a single unit to the left of the glove box.

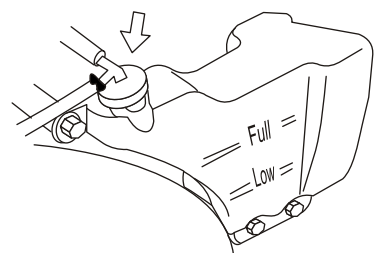
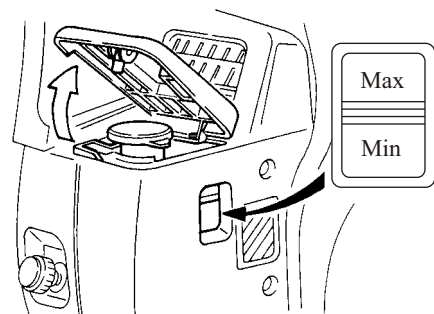


For BS III



Easier inspection and maintenance (Contd..)

- **Brake & Clutch Fluid Reservoir tank**  
The brake fluid reservoir tank is conviniently located to one side of the instrument panel - making it easier to check on the brake fluid reserve.
- **Radiator cooling condenser tank**  
The closed loop cooling system with condenser tank enables easier checking and convenient topping up of coolant.





9

Wide range of models



# SECTION - 2

## INSPECTION AND MAINTENANCE SCHEDULES

2-1

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### MEMORANDUM OF REGISTRATION (FOR OWNER’S USE)

Name : \_\_\_\_\_  
Address : \_\_\_\_\_  
Pin \_\_\_\_\_ Tel. no. \_\_\_\_\_

Chassis No. \_\_\_\_\_ Model \_\_\_\_\_  
Engine No. \_\_\_\_\_ Veh. Reg.No \_\_\_\_\_  
Alternator No. \_\_\_\_\_ Starter No. \_\_\_\_\_  
Battery make \_\_\_\_\_ Battery No. \_\_\_\_\_  
Gear box No. \_\_\_\_\_ FIP No. \_\_\_\_\_  
Front Axle No. \_\_\_\_\_ Rear Axle No. \_\_\_\_\_  
Bus body No. \_\_\_\_\_ Veh. Key No. \_\_\_\_\_  
(in case of company built buses)  
Date of vehicle installation \_\_\_\_\_ Cargo body No. \_\_\_\_\_

Authorised Representative :

Name \_\_\_\_\_  
Address \_\_\_\_\_  
Pin \_\_\_\_\_ Tel. no. \_\_\_\_\_  
AR’s sign & seal \_\_\_\_\_

**Note** : AR to fill all the above details before handing over the vehicle to the customer

### IMPORTANT

**EICHER MOTORS** offers you a unique SERVICE SCHEME covering Labour with the purchase of your **EICHER** vehicle! This scheme covers the first 5000, 15000 & 25000 kms. of your **EICHER** vehicle!

EML offers THREE YEARS WARRANTY ON ENGINE & GEARBOX & ONE YEAR WARRANTY FOR REST OF THE AGGREGATES OF THE VEHICLE IRRESPECTIVE OF KILOMETERAGE!  
(Refer page 2-5 for details)  
All you have to do is to take your **EICHER** vehicle to your nearest authorised Service Centre when your vehicle is due for routine service and ask for SERVICE.

Note:

- For the vehicles supplied to defence indentors, Civil indentors and certain specific customers, the above Service scheme will not be applicable. The service scheme in such case will be governed by the terms & conditions of the respective contracts under which the vehicles are supplied.
- Be sure to carry this booklet with you for the service

VEHICLE INSTALLATION AND WARRANTY REGISTRATION CERTIFICATE



HEAD - CUSTOMER SERVICE  
**EICHER MOTORS**  
22/2, YESHWANT NIWAS ROAD INDORE - 452 003

Owner's Name	AR's Name			
Owner's Address	Location			
	Record of Vehicles Owned by Customer			
	Make of Vehicle			
	Model			
	No. of vehicles Owned			
	Chassis Number	Engine Number	Model No.	
	Installation Date		Repeat buyer	Yes No
	ODO Reading			
Owner's Contact Address	Please tick			
	Route Type	Ownership Type	Funding Type	
City	RT1 City to City	<input type="checkbox"/> OT1 Single Truck Owner	<input type="checkbox"/> F01 Centurion Bank	<input type="checkbox"/>
District	RT2 With in City	<input type="checkbox"/> OT2 1~5 nosTruck Owner	<input type="checkbox"/> F02 Cholamandalam	<input type="checkbox"/>
State	RT3 State to State	<input type="checkbox"/> OT3 >10 Truck Fleet Owner	<input type="checkbox"/> F03 Citicorp	<input type="checkbox"/>
Pin Code	Road Type	Purpose of use	<input type="checkbox"/> F04 Cooperative Bank	<input type="checkbox"/>
STD Code Tel. No.	RD1 Normal	<input type="checkbox"/> PU1 Goods Transportation	(Pls. Specify)	<input type="checkbox"/>
Fax	RD2 Hilly	<input type="checkbox"/> PU2 Passenger Transportation	<input type="checkbox"/> F05 ICICI	<input type="checkbox"/>
E mail	RD1 Kuchha	<input type="checkbox"/> PU3 Other Application	<input type="checkbox"/> F06 Kotak Mahindra	<input type="checkbox"/>
	Customer Type	Pls. Specify	Finance	<input type="checkbox"/>
	CT1 Private	<input type="checkbox"/> Drive Type	<input type="checkbox"/> F07 Nationalised Bank	<input type="checkbox"/>
	CT2 Government	<input type="checkbox"/> DT1 Owner Driven	(Pls. Specify)	<input type="checkbox"/>
	CT3 Corporate	<input type="checkbox"/> DT2 Driver	<input type="checkbox"/> F09 Self Financed	<input type="checkbox"/>
			<input type="checkbox"/> F10 Sundaram Finance	<input type="checkbox"/>
			<input type="checkbox"/> F11 Others	<input type="checkbox"/>
			(Pls. Specify)	

+ + +

LOAD TYPE

LT1 Beverages	Coffee	<input type="checkbox"/>	LT19 Food grains	Rice	<input type="checkbox"/>	LT37 Processed Food	<input type="checkbox"/>
LT2 Beverages	Liquor	<input type="checkbox"/>	LT20 Food grains	Sugar	<input type="checkbox"/>	LT38 Sand	<input type="checkbox"/>
LT3 Beverages	Others	<input type="checkbox"/>	LT21 Food grains	Wheat	<input type="checkbox"/>	LT39 Soft Drink	<input type="checkbox"/>
LT4 Beverages	Tea	<input type="checkbox"/>	LT22 Logistics		<input type="checkbox"/>	LT40 Textiles	<input type="checkbox"/>
LT5 Chemical		<input type="checkbox"/>	LT23 LPG Cylinders		<input type="checkbox"/>	LT41 Others (pls. specify)	<input type="checkbox"/>
LT6 Cigarettes		<input type="checkbox"/>	LT24 Marine Products	Fish	<input type="checkbox"/>		
LT7 Coal		<input type="checkbox"/>	LT25 Marine Products	Others	<input type="checkbox"/>		
LT8 Construction Material	Bricks	<input type="checkbox"/>	LT26 Market Load		<input type="checkbox"/>		
LT9 Construction Material	Cement	<input type="checkbox"/>	LT27 Metals	Iron	<input type="checkbox"/>		
LT10 Courier/Parcel		<input type="checkbox"/>	LT28 Metals	Non-	<input type="checkbox"/>		
LT11 Dye Stuff		<input type="checkbox"/>		Ferrous	<input type="checkbox"/>		
LT12 Edible Oil		<input type="checkbox"/>	LT29 Metals	Steel	<input type="checkbox"/>		
LT13 Electrical Goods		<input type="checkbox"/>	LT30 Milk		<input type="checkbox"/>		
LT14 Farm Products	Eggs	<input type="checkbox"/>	LT31 Mineral Water		<input type="checkbox"/>		
LT15 Farm Products	Poultry	<input type="checkbox"/>	LT32 Movers & Products		<input type="checkbox"/>		
LT16 Farm Products	Vegetable	<input type="checkbox"/>	LT33 Paper Products		<input type="checkbox"/>		
	Fruits	<input type="checkbox"/>	LT34 Petrochemical Products		<input type="checkbox"/>		
LT17 Food grains	Others	<input type="checkbox"/>	LT35 Pharmaceutical Products		<input type="checkbox"/>		
LT18 Food grains	Pulses	<input type="checkbox"/>	LT36 Plastic Products		<input type="checkbox"/>		

To be filled for CBC & CWC models only

Intended Application	Bus / Truck / Others .....
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I have checked the vehicle bearing above chassis and engine nos. and found it in complete and good condition to my satisfaction.  
Your Authorised Representative has explained to me the following :  
-Salient features of **EICHER** vehicle.  
- Operation & maintenance of **EICHER** (along with demonstration)  
- My responsibilities for pre operational checks and periodic maintenance.  
- The terms and conditions of warranty as applicable to my **EICHER** vehicle.  
I acknowledge that I have read through **EICHER's** warranty and understood the following :  
(a) Terms and conditions of warranty  
(b) Importance of pre operational checks and routine maintenance of **EICHER** vehicle.  
(c) Completeness of vehicle.

AUTHORISED DISTRIBUTOR'S SIGNATURE & SEAL : OWNER'S SIGNATURE & DATE :

CONTENTS

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WARRANTY :

**EICHER MOTORS** warrants each **EICHER** vehicle and its aggregates and components thereof, supplied by **EICHER MOTORS** to be free from defects in material and workmanship under normal use subject to the following conditions :

- Warranty shall be in force until the expiry of a period of 36 months from the date of installation for engine and gear box and 12 months from the date of installation for rest of the aggregates of the vehicle irrespective of kilometrage covered during this period. Date of installation is as entered in the Warranty Registration & Installation Certificate.
- Warranty shall be applicable to the first registered owner only.
- During the period of warranty, **EICHER MOTORS ’s** obligation shall be limited to repairing or replacing free of charge such part or parts of the supplied **EICHER** vehicle, which, on examination shall be deemed defective in the opinion of **EICHER MOTORS** or its Authorised Representative. Such defective part or parts which have been replaced shall become the property of **EICHER MOTORS**
- Parts not manufactured by **EICHER MOTORS** but supplied by other firms, such as tyres, tubes and batteries shall be governed by the warranty terms and conditions offered by these firms. Warranty of these items are to be referred to the respective manufacturer through our Authorised Representative.
- Warranty shall not apply to :
  - Normal ageing, deterioration or rusting of plated parts, paint coat, rubber parts, upholstery, soft trim etc.
  - Parts replaced as a result of normal wear & tear such as bulbs, fuses, motor brushes, clutch facing, brake lining, fuel filter, oil filter etc.
  - Normal periodic replacement parts and routine maintenance services.

- Damage due to lack of proper maintenance as described in the owner’s handbook. Damage due to services not carried out by authorised service centres.
- Damage due to use of parts other than **EICHER** genuine parts.
- Damage due to the use of lubricants/oils/grease, etc. other than that specified herein after or otherwise approved by **EICHER MOTORS**
- Damage due to unauthorised alterations on the vehicle, misuse, overloading, involvement in races, rallies and places not meant for vehicular traffic.
- Incidental or consequential damages such as loss of use of the vehicle, loss of time, inconvenience or damage to personal property, commercial loss such as loss of revenue, etc during the period when the vehicle is undergoing service/warranty repairs.
- Damage due to traffic accident, fire, floods, earthquakes, chemical pollution and other such natural calamities.
- Irregularities not recognised as affecting quality or function of the vehicle or its constituent parts such as slight noise, vibrations, oil ooze, etc.
- This warranty is expressly in lieu of all other warranties expressed or implied and all other obligations or liabilities on its part.
- EICHER MOTORS** reserves the right to make changes in design of the vehicle without any obligation to install these changes on all previously supplied vehicles
- EICHER MOTORS’s** decision on all warranty claims shall be final and binding.
- Please note that for availing warranty the vehicle has to be maintained at our Authorised Representative point only.
- For obtaining warranty services, the owner must return the vehicle to the Authorised Representative at his place of business where such services will be performed without any charge for parts or labour.

**SPARES WARRANTY :**

**EICHER MOTORS** warrants each **Eicher** Genuine spare parts bt **EICHER MOTORS** to be free from defects in material and membership under use subject to the following conditions :

- a) Warranty shall be in force until the expiry of a period of six months or 20,000km. whichever is earlier, from the date of fitment on the vehicles as entered in the job card / repair order of the vehicle.
- b) Warranty shall be applicable only for cases where parts are fitted at any of **EICHER AUTHORISED SERVICE POINT** and subsequent servicing of vehicle after fitment of any such part(s), is done at **EICHER AUTHORISED SERVICE POINT** only at regular intervals.
- c) Warranty is applicable to **EICHER GENUINE SPARE PARTS** only.
- d) Replacement of **EICHER GENUINE SPARE PARTS** as applicable under spares warranty shall be carried out on free of charge basis. Such defective parts which have been replaced shall become property of **EICHER MOTORS**
- e) Spares warranty shall not apply to :
  - 1. Normal ageing deterioration or rusting of plated parts, paint coat, rubber parts, upholstery, soft trim etc.
  - 2. Parts replaced as a result of normal wear such as bulbs, fuses, motor brushes, clutch facing, brake lining, fuel filter, oil filter etc.
  - 3. Damage due to lack of proper maintenance as described in the Operator's Manual or services not carried out at **EICHER AUTHORISED SERVICE POINT**.

- 4. Damage due to use of parts other than **EICHER GENUINE SPARE PARTS**.
- 5. Damage due to lack lubricants/oils/grease etc. other than specified in the Operator's manual or otherwise approved by **EICHER MOTORS**
- 6. Damage due to unauthorised alterations in the vehicle, misuse, overloading, involvement in races, rallies and places not meant for vehicular traffic.
- 7. Incidental or consequential damages such as loss of use of the vehicle, loss of time, inconvenience or damage to personal property, commercial loss such as loss of revenue, etc. during the period of spares warranty.
- 8. Damage due to traffic accident, fire floods, earthquakes, chemical pollution and other such natural calamities.
- 9. Irregularities not recongnised as affecting quality of function of the vehicle or its consitituent parts such as slight noise, vibrations, oil ooze etc.
- 10. Proprietary parts which are not manufactured by **EICHER MOTORS** but supplied by other firms such as tyres, tubes and batteries shall be governed by the warranty terms and conditions offered by these firms. Warranty of these items are to be referred to the respective manufacturer through our authorised representative

- f) **EICHER MOTORS's** decision on all warranty claims shall be final and binding.
- g) `For obtaining spares warranty services, the owner must the vehicle to any of our **EICHER's AUTHORISED SERVICE POINT** bring alongwith Operator's Manual the copy of bill through which the spares has been purchased, where such services will be performed without any charge for parts or labour.

2-6

**SERVICE RECOMMENDATIONS**

**Pre-operational / Periodic Inspections**

**I. Pre-operational checks**

These checks are mentioned in the maintenance schedule of this book (Pg-2-13). Make it a habit to perform these inspections daily before using your Vehicle. These simple easy checks will provide you trouble free service and ensure that the vehicle gives you the very best in performance, that it is designed for. By performing these simple daily checks your EICHER vehicle will always be in top condition all the time, as it is meant to be.

**II. Periodical Inspection (New Vehicle)**

New vehicle inspection is particularly important to maintain your vehicle in top condition to give you high performance, and prolongs the life of your EICHER Vehicle. These inspection and service is a must on completion of the first 5000 Kms, of your EICHER Vehicle. These service is available at your nearest Authorised Service Centres.

**III Periodic Service**

Periodic service is essential for all vehicles to ensure safety, reliability and efficiency. Further it reduces breakdowns. These services are at every 5,000 Kms interval after the new vehicle inspection and service of 5000 Kms.

**Note:**

All services must be availed at your nearest *Authorised Service Centres*. For detailed procedures, refer to your OPERATOR’S MANUAL.

During all services, insist on use of recommended oils and greases only.

EICHER Genuine Parts

Spare Parts

- Always use **EICHER** “ GENUINE PARTS ”
- All **EICHER GENUINE SPARES** come in special packaging. Please look for the following identification on the packaging for genuine spares.



Photo of Raju with Genuine Parts & Eicher Logo In Hologram is the proof of EICHER Genuine Spare. Please note.

- Every part supplied by **EICHER MOTORS** is thoroughly tested and certified for assured quality.
- Rubber parts deteriorate with time and usually become hard and loose their effectiveness. Therefore, for safety, critical parts are required to be replaced periodically. Refer recommended parts change (p 2-9). Have these parts replaced at your nearest Authorised Service Centre.

Note : a) Any trouble arising in the vehicle due to use of parts other than **EICHER “ GENUINE PARTS ”** may not be warranted.  
b) To guard against spurious spares, packaging is subject to change without notice.

+ + +

PERIODICAL REPLACEMENT PARTS

Parts to be replaced periodically	Time of replacement		
	Every Year	Every 2 years	Every 4 years
1 Brake master cylinder piston cup and dust seal	○		
2 Wheel cylinder piston cup and dust seal	○		
3 Brake booster packing, cup and rubber parts	○		
4 Exhaust brake vacuum chamber diaphragm	○		
5 Brake hose		○	
6 Vacuum hose		○	
7 Oil hose of the engine lubricating system		○	
8 Fuel hose in engine compartment		○	
9 Brake fluid reservoir tank tube			○
10 Fuel hose out of engine compartment			○
11 Air brake rubber parts & hoses		○	
12 Air compressor inlet pipe	○		
13 Air compressor outlet pipe	○		
14 Brake chamber diaphragm kit	○		
15 Dual brake valve seals & ‘O’ rings	○		
16 Graduated hand control valve seals and ‘O’ rings	○		
17 Air dryer ‘O’ rings	○		
18 Spring brake actuator ram seals	○		
19 Coolant hose of compressor	○		
20 Clutch fluid resorvoir tank tube			○
21 Fuel hose out of engine compartment			○

OILS & LUBRICANTS - RECOMMENDATIONS

LUBRICANTS	ENGINE OIL			TRANS.	STEERING OIL	DIFFERENTIAL OIL	CLUTCH/ BRAKE FLUID	CHASSIS GREASE	WHEEL BRG GREASE
SPECIFICATION	API-CC OR MIL-L-2104B	API-CD OR MIL-L-2104C	API SG CF4	API-GL4 OR GL5 SAE	DEXRON II D/F OR ATF TYPE 'A'	API-GL5 SAE 140	SAE J1703 DOT3	LITHUM BASE NLGI 2	LITHUM BASE NLGI 3
INDIAN OIL CORPORATION	Servo Super Multigrade20W40			Servo Gear 90	Servo gear Trans. Fluid type A	HP Servo Gear Super 140	Servo Brake Fluid Super HD	Servo Grease MP	Servo Gem RR3
BHARAT PETROLEUM	Bharat Actuma Mak Multigrade 20W40			Bharat Spirol 90EP	Bharat Auto. Trans. Fluid Type A	Bharat Spirol HD140	Bharat Heavy Duty Brake Fluid	Bharat Univex A	
HINDUSTAN PETROLEUM	HP Super Engine Oil Multigrade 20W40			HP gear oil EP 90	HP Auto. Trans. Fluid type A	HP Gear oil XP 140	Hp Super Duty Brake Fluid	HP Multipurpose Grease	
CASTROL INDIA LTD.	Castrol CRB 20W40			Castrol Hypoy C80W/90	Castrol TQAuto Trans. Fluid Type A	Hypoy B 140		Castrol all Purpose Grease	Castrol AP3 Grease
ELF LUBRICANTS INDIA LTD.	Super HDB Ultra 20W40								
TIDE WATER OIL CO. INDIA LTD.	Veedol HDC 20W40	Veedol HDC 30		Veedol Multigear F90		Veedol Multigear HD140			
BHARAT SHELL INDIA LTD.		EICHER GenuineOil SHELL RIMULA D 20W 40							
VALVOLINE CUMMINS LTD		All fleet Multi 20W 40							
GULF OIL INDIA LTD	Gulf XHD 40								
BRAKES INDIA LTD.							TVS Girling Brake Fluid		
MEGUIN OIL INDIA			Meguín Diesel Special 15W40						

- \*

5,000 Kms in case of hilly operation. Both Main oil filter element and by pass oil filter to be replaced whenever oil is changed.
- \*\*

In case of manual steering, only topping up required - Refer lubrication schedule (Page 2-11)
- \*\*\*

Air cleaner oil should be same as engine oil & to be replaced at every 5000 Kms. In case of dusty operation, replacement interval should be 3000 kms or less
- Do not mixup different brands or grades while topping up.
- If brand or grade is to be changed flush out existing oil & clean with the type of oil to be used.
- Temperature range for use of engine oil SAE 30 is -5°C to 40°C, SAE 40 is 40°C & Above
- For Tipper, Hydraulic fluid to be used is INDAL 32 of Indian oil corporation or equivalent.

LUBRICATION SCHEDULE

SL. No.	Place of Inspection & Maintenance			Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
					PDI	05	15	25	35	45	55	65	75	85	95	105
1	Engine oil contamination & level			●												
	Engine oil replacement	Normal	Eicher Genuine oil			●		●		●		●		●		●
			Other recomd. Oils			●	●	●	●	●	●	●	●	●	●	
		Hill	Eicher Genuine oil			●	●	●	●	●	●	●	●	●	●	
			Other recomd. Oils			●	Every 5000 kms thereafter									
2	Air cleaner oil level (Wet type)			●												
	Air cleaner cleaning and oil replacement (Wet type)*				Every 5000 kms											
3	Transmission oil level				Every 15,000 kms											
	Transmission oil replacement					●			●			●			●	
4	Differential oil level				Every 15,000 kms											
	Differential oil replacement					●			●			●			●	
5	Steering gear oil level (Manual) **								●						●	
	Power steering oil level				Every 5000 kms.											
	Power steering oil Replacement									●						
6	Brake reservoir tank fluid level check			●												
	Brake fluid replacement						●	30000 kms. thereafter								
7	Greasing of joints & bearings:					Every 5000 kms.										
	Propeller shaft U-joints															
	Steering linkages															
	Front & Rear spring pins															
	King pins															
	'S' Cam shaft front & rear															
	Slack adjuster front & rear															

LUBRICATION SCHEDULE

SL. No.	Place of Inspection & Maintenance	Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
			PDI	05	15	25	35	45	55	65	75	85	95	105
8	Steering shaft lubrication				●		●		●		●		●	
9	Replacement of wheel bearing grease						●			●			●	
10	Lubrication of chassis					●			●			●		
	Accelerator cable ball end													
	Parking brake rachet bar													
	Gear shift lever pin													
	Brake shoe back plate													
11	Lubrication of body				●				●			●		
	Door hinge													
	Door lock													

- “EICHER Genuine Engine” oil is specially manufactured and supplied by Bharat Shell India Ltd. for EICHER vehicles.
- In case of hilly operations replace engine oil at every 5000 kms. replace both mail oil filter element and by pass filter whenever engine oil is replaced
- \* In case of dusty operation, replacement interval should be every 3000 kms or less as required
- \*\* In case of manual steering only topping up is required.

INSPECTION & MAINTENANCE SCHEDULE

SL. No.	Place of Inspection & Maintenance			Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
					PDI	05	15	25	35	45	55	65	75	85	95	105
1	Oil filter replacement	Main	Normal			●		●		●		●		●		●
		Bypass				●		●		●		●		●		●
	Oil filter replacement	Main	Hill			●	●	●	●	●	●	●	●	●	●	●
		Bypass				●	Every 5000 kms thereafter									
2	Fuel filter replacement		Stage I			●	●	●	●	●	●	●	●	●	●	●
	Fuel filter replacement		Stage II				●		●		●		●		●	
3	Restriction indicator inspection			●												
4	Air cleaner element (primary) cleaning				When red band on restriction indicator appears											
	Air cleaner element (primary) replacement				Replace after two cleaning intervals of primary cartridge											
	Air cleaner safety cartridge (secondary) replacement *				Replace after two years or at the time of 3 <sup>rd</sup> replacement of primary cartridge whichever is earlier											
5	Cracks / damage on V-belt			●												
	V-belt tension				Every 5000 kms.											
6	Fuel feed pump gauze filter Cleaning					●		●					●			
7	Engine operating condition															
	Starting performance					●	●	●	●	●	●	●	●	●	●	●
	Abnormal noise															
8	Retightening of :															
	Cylinder head bolts				●						●					
	Manifold nuts				●				●						●	
	Engine support bolts				●					●					●	
9	Valve clearance				●	●	●	●	●	●	●	●	●	●	●	●
10	Fuel injection pressure and spray pattern of injection nozzles							●			●			●		
11	Fuel injection timing							●			●			●		



INSPECTION & MAINTENANCE SCHEDULE

SL. No.	Place of Inspection & Maintenance	Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
			PDI	05	15	25	35	45	55	65	75	85	95	105
12	Engine compression pressure							●					●	
13	Discharge of water from water separator	●	●	Every 5000 kms.										
14	Coolant level	●												
	Coolant replacement **										●			
15	Radiator cap condition		●		●		●		●		●		●	
16	Check for tightness of radiator hoses		●	Every 5000 kms.										
17	Check for condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)		●	Every 5000 kms.										
18	Turbocharger:													
	Axial play of turbine shaft							●						
	Smooth rotation of turbine wheel							●						
19	Propeller shaft bolts retightening		●		●		●		●		●		●	
20	Clutch pedal play				●		●		●		●		●	
21	Differential													
	Check & adjust backlash of crown wheel & pinion								●					
	Check & adjust pinion height													
22	Check steering system			●	●	●	●	●	●	●	●	●	●	●
23	Front wheel alignment			Every 25000 kms.										
24	Power steering oil filter replacement								●					
25	Check front & rear suspension			●	●	●	●	●	●	●	●	●	●	●
26	Front & Rear suspension 'U' bolt retightening			●	●	●	●	●	●	●	●	●	●	●
27	Check master vac. valve function				●		●		●		●		●	
28	Check service brake operation		●	Every 5000 kms.										
29	Check brake drum and lining					●			●			●		
30	Check parking brake operation		●	Every 5000 kms.										

INSPECTION & MAINTENANCE SCHEDULE

SL. No.	Place of Inspection & Maintenance	Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
			PDI	05	15	25	35	45	55	65	75	85	95	105
31	<b>Air compressor</b>													
	Clean compressor fins from oil, sludge & dust		●		●		●		●		●		●	
	Check for oil leak through lubricating pipes	●												
	Check for compressor inlet hose deterioration		●		●		●		●		●		●	
	Check and remove excessive carbon deposit from reed valves							●					●	
	Check and clean carbon deposit in inlet & delivery pipe												●	
	Retightening of:													
	Compressor Cyl. head bolts													
	Compressor end cover bolts		●						●					
	Compressor mounting bolts													
	Cracks / damage on compressor V-belts	●												
	Compressor V-belt tension		●	●	●	●	●	●	●	●	●	●	●	●
32	<b>Air reservoir</b>													
	Drain condensate				●	●	●	●	●	●	●	●	●	●
	Check drain plug & replace if required				●	●	●	●	●	●	●	●	●	●
	Check for leakage through safety valve							●					●	
33	<b>Dual brake valve</b>													
	Lubricate mounting plate & plunger with engine oil		●	●	●	●	●	●	●	●	●	●	●	●
	Check boot for deterioration							●					●	
	Check ON / OFF leakage							●					●	
34	<b>System protection valve</b>													
35	Check for internal leakage							●					●	
	<b>Hand Control valve</b>													
	Check rubber condition													

INSPECTION & MAINTENANCE SCHEDULE

SL. No.	Place of Inspection & Maintenance	Dly. Chk	Maintenance Schedule (Odo. reading x 1000 Kms.)											
			PDI	05	15	25	35	45	55	65	75	85	95	105
	Check for proper locking Check for leakage							●					●	
36	<b>Brake actuators &amp; Brake chambers</b>													
	Tighten mounting bolts		●	●	●	●	●	●	●	●	●	●	●	●
37	Front & Rear wheel nut retightening		●	●	●	●	●	●	●	●	●	●	●	●
38	Check wheel and tyres	●	●	●	●	●	●	●	●	●	●	●	●	●
	Check air pressure of the tyres	●												
	Tyre rotation			●	●	●	●	●	●	●	●	●	●	●
39	Front and rear wheel bearing play and damage				●			●			●			●
40	Battery electrolyte level ***			●	●	●	●	●	●	●	●	●	●	●
41	Switch function	●	●	●	●	●	●	●	●	●	●	●	●	●
42	Lamp & instrument function		●	●	●	●	●	●	●	●	●	●	●	●
43	Retightening bolts of chassis and cargo body		●		●		●		●		●		●	
44	Door lock function	●												
45	Rear view mirror looseness & reflecting condition	●												
46	Water, oil and fuel leaks	●	●	●	●	●	●	●	●	●	●	●	●	●
47	Check defects found out in previous operation	●												

- \* Secondary filter should be cleaned
- \*\* 75000 kms. or one year. Whichever is earlier
- \*\*\* Not required in case of“MAINTENANCE FREE” Batteries

PRE-DELIVERY INSPECTION  
CHECKS TO BE CARRIED DURING PDI

CABIN EXTERIOR

- ☐ Check distortion and damage of body panels.
- ☐ Check painting, rusting and flaws on body panels
- ☐ Check all doors, hood and other parts for proper spacing at top and bottom, front and rear.
- ☐ Check for all doors and mirrors installed properly.
- ☐ Check for security of the cab mounting.

CABIN INTERIOR

- ☐ Check seats, interior trims and head lining are installed properly.
- ☐ Check seats, interior trims and head lining for damage and abrasion.
- ☐ Check painting, rusting and flaws.
- ☐ Check for drip and seepage of adhesive.
- ☐ **Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles**

LOCK OPERATION OF REAR GATE AND SIDE GATE (TRUCK APPLICATION)

- ☐ Check to see if the rear gate and side gate hooks properly lock.

OPERATION OF DOORS, LOCKS AND WINDOWS

- ☐ Check door operation for closing and opening.
- ☐ Check operation of the door lock from both inside and outside the vehicle.
- ☐ Check the windows for ease of operation and tight fit against weather strip.

OPERATION OF LAMPS AND SWITCHES

- ☐ Check operation of all lamps and switches.

● Headlamps

● Turn signal and hazard warning.

● Tail, clearance lamps, stop, backup and licence plate lamps.

● Other warning lamps and switches.

OPERATION OF WINDSHIELD WIPER AND WASHER

- ☐ Check operation of the wiper in all ranges.
- ☐ Check the washer for operation and the nozzle for clogging.
- ☐ Check the water level in the washer tank.

OPERATION OF HORN ELECTRICAL EQUIPMENT

- ☐ Check the operation of horn.

REFLECTION OF MIRRORS

- ☐ Check the mirrors for reflection and stain.

BRAKE & CLUTCH RESERVOIR TANK FLUID LEVEL

- ☐ Check the fluid level in the reservoir tank. The fluid level should be between the Min. and Max. levels.

If the level is too low, check for fluid leaks.

ENGINE COMPARTMENT

(IN ENGINE OFF CONDITION)

RADIATOR COOLANT LEVEL

- ☐ Check the coolant level in the reservoir tank. If the level is too low, check for coolant leaks.

ENGINE OIL LEVEL

- ☐ Check the oil level. The oil should be in the specified range.

*Note: when the check is made, the front wheels should be placed in straight-ahead position.*

POWER STEERING OIL LEVEL (VEHICLES WITH POWER STEERING)

- ☐ Check the oil level in the oil tank

*Note: when the check is made, the front wheels should be placed in straight-ahead position.*

FUEL LEAKS FROM FUEL SYSTEM

- ☐ Check the fuel system for leakage from Fuel feed pump, Fuel filter, Injection pump, Injection nozzle, Piping.

AIR INTAKE LINE

- ☐ Check tightness of Turbocharger / Intercooler air hoses.
- ☐ Check tightness of Turbocharger / Intercooler air pipes.
- ☐ Check tightness of Intercooler mounting bolts.

EXHAUST MANIFOLD TIGHTNESS

- ☐ Check that the exhaust manifold is correctly tightened. If the mounting nuts are loose, tighten them to specification.
- ☐ Check the tightness of turbocharger mounting bolts
- ☐ Check for oil leakage at turbocharger in and out

**PRE-DELIVERY INSPECTION (Contd..)**  
**CHECKS TO BE CARRIED DURING PDI**

- ☐ Check tightness of oil supply pipe bolts.
- ☐ Check leakage of wastegate hose.
- INSTALLED CONDITION OF ELECTRICAL EQUIPMENT**
- ☐ Check that the starter and alternator are installed properly.
- ☐ Check the wiring connections for tightness. If the wiring is in contact with other parts, correct it by proper clamping.
- DRY TYPE AIR CLEANER**
- ☐ Check the indicator for choking. Clean the elements if found choked.
- WET TYPE AIR CLEANER**
- ☐ Check air cleaner oil level.
- ENGINE COMPARTMENT**
- (IN ENGINE OPERATING CONDITION)**
- ENGINE STARTING PERFORMANCE**
- ☐ Check to see if the engine starts smoothly.
- ☐ Check operation of the key switch and starter.
- COOLANT, AIR AND OIL LEAKS FROM CYLINDER HEAD AND ROCKER CASE**
- ☐ Check for coolant and air leaks from the cylinder head.
- ☐ Check for oil leaks from the rocker case or cylinder head cover.
- OPERATION OF ACCELERATOR LINKAGE**
- ☐ Check the accelerator pedal for sticking, binding and full return.
- ☐ Check for abnormal engine noise.
- EXHAUST GAS CONDITION AND NOISE**
- ☐ After the engine has warmed up, check that black smoking is not emitted at idling, medium and high speeds.
- ☐ Check for abnormal noise.
- UNDER VEHICLE**
- ENGINE OIL LEAKS FROM OIL PAN AND OIL COOLER**
- ☐ Check for oil leaks from the engine oil pan, oil cooler and oil filter mounting area.
- ENGINE SUPPORT BOLTS TIGHTNESS**
- ☐ Check that the engine mounting bolts are tightened to specifications.

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**PRE-DELIVERY INSPECTION (Contd..)**  
**CHECKS TO BE CARRIED DURING PDI**

- TYRE (INCLUDING SPARE TYRE)**
- ☐ Check the tyre pressures while the tyres are cold.
- ☐ Check for stone, pebbles and other foreign objects caught in the tread grooves, remove them.
- ☐ Check that the spare tyre is installed properly.
- ☐ Front and Rear wheel nuts tightness
- ☐ Check the exhaust pipe and muffler installation and connection for looseness.
- ROAD TEST**
- ENGINE STOPPING CONDITION**
- ☐ Turn the starter switch to “ACC” and check stopping of engine smoothly.
- SERVICE BRAKE OPERATION**
- ☐ Inspect pedal play and stroke.
- ☐ Check that brake operation is smooth and positive.
- ☐ Check vacuum leakage from vacuum pipes
- ☐ Check oil leakage from supply pipe of compressor.
- ☐ Check water leakage at inlet / outlet hoses of compressor.
- PARKING BRAKE OPERATION**
- ☐ Inspect the operation of graduated hand control valve, braking effect, return and buzzer.
- ☐ Check for wind-off nut of spring brake actuator.
- ☐ Inspect the operation of parking brake lever, braking effect, return and indicator
- ☐ Check for parking brake lever locking operation
- CLUTCH OPERATION**
- ☐ Check the operation of clutch in all driving ranges.
- ☐ Check clutch pedal play.
- TRANSMISSION OPERATION**
- ☐ Check the operation of transmission and gearshift lever in all ranges.
- ☐ Check the control linkage for looseness.

- ☐ Tighten them to specifications as specified in Operators Manual.
- FLUID LEAKS FROM CLUTCH & BRAKE LINES**
- ☐ Check that the pipes and hoses are not in contact with other parts.
- AIR LEAKS FROM BRAKE LINES**
- ☐ Check the brake pipe lines for leakage
- ☐ Check the pipes and hoses are not in contact with other parts.
- OIL LEVEL IN STEERING GEAR BOX, TRANSMISSION AND REAR AXLE HOUSING**
- ☐ Remove the inspection plug (filler plug) and check that the oil is at the brim.
  - Steering gear box
  - Transmission
  - Axle housing

**FLUID LEAKS FROM SHOCK ABSORBER**

- ☐ Check the shock absorbers for fluid leaks.

**FUEL LEAKS FROM FUEL TANK**

- ☐ Check for fuel leaks from the drain plug of the fuel tank and the pipe connections.

**SUSPENSION SHACKLE PIN LOCK BOLTS AND U-BOLT NUTS TIGHTNESS**

- ☐ Check that the shackle pin lock bolts and U-bolt nuts are correctly tightened.

**PROPELLER SHAFT FLANGE YOKE BOLTS TIGHTNESS**

- ☐ Check the flange yoke bolts for tightness.

**DIFFERENTIAL CARRIER ATTACHING BOLTS TIGHTNESS**

- ☐ Check the bolts attaching differential carrier to axle housing for tightness.

**ELECTRICAL CONNECTIONS AND ROUTING**

- ☐ Check the battery cable and other electrical connections for tightness.

**BODY MOUNTING BOLTS AND NUTS TIGHTNESS**

- ☐ Check the body mounting bolts and nuts for tightness.

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**STEERING WHEEL PLAY AND OPERATION**

- ☐ Place the steering wheel in straight-ahead position and check for the play.
- ☐ Check the steering wheel for ease of operation, stability and returnability.

**GAUGES AND WARNING LAMPS FUNCTION**

- ☐ Inspect that all gauges and warning lamps are functioning properly. Speedometer, Air pressure gauge, Fuel gauge, Water Temperature gauge and warning lamps.

**NOISE**

- ☐ Check for noise in each of the brakes, clutch, engine, transmission, steering system, propeller shaft, differential and others.

**FINAL STEPS**

**VEHICLE WASHING**

- ☐ Clean the vehicle exterior and interior. Then wash the body exterior with water.
- ☐ Lubricate all greasing points.

**JACK AND TOOL SET**

- ☐ Verify that the jack and tool sets are on the vehicle.

**INSTALLATION OF LICENCE PLATES**

- ☐ Install the licence plates.

**ACCESSORIES**

- ☐ Head lamp bulbs – two  
Warning triangle – one (two in case of 10.90 Model)  
First Aid kit – one  
Chock - one (two in case of 10.90 Model)

**Note: Ensure cabin tilt mechanism is locked after PDI.**

EICHER MOTORS

Details of 5,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 5,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

5,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil
- ☐ Replace air cleaner oil
- ☐ Replace transmission oil
- ☐ Replace differential oil
- ☐ Check power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element and bypass filter
- ☐ Replace fuel filter-Stage I
- ☐ Check and adjust V-belt tension
- ☐ Clean fuel feed pump gauze filter
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Discharge water from water separator
- ☐ Check tightness of radiator hoses

- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)
- ☐ Check steering system
- ☐ Check front & rear suspension
- ☐ Check front & Rear suspension 'U' bolt
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Check front & rear wheel nuts
- ☐ Check wheel and tyres
- ☐ Carry out tyre rotation
- ☐ Check battery electrolyte level
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Check water, oil and fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 15,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 15,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

15,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil (incase of hilly operation & if Eicher genuine oil is not used)
- ☐ Replace air cleaner oil
- ☐ Check transmission oil level
- ☐ Check differential oil level
- ☐ Check power steering oil level
- ☐ Lubricate Propeller shaft U-joints
- ☐ Lubricate Steering linkages
- ☐ Lubricate Front & Rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft lubrication
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element and bypass filter (incase of hilly operation or if Eicher Genuine oil is not used)
- ☐ Replace fuel filter-Stage I & II
- ☐ Check & adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Discharge water from water separator
- ☐ Check radiator cap condition
- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)
- ☐ Tighten propeller shaft bolts

- ☐ Check clutch pedal play
- ☐ Check steering system
- ☐ Check front & rear suspension
- ☐ Tighten front & rear suspension 'U' bolt
- ☐ Check master vac. valve function
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Tighten front & rear wheel nuts
- ☐ Check wheel and tyres
- ☐ Carry out tyre rotation
- ☐ Check battery electrolyte level
- ☐ Check front and rear wheel bearing play and damage
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Retighten bolts of chassis and cargo body
- ☐ Check water, oil and fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 25,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 25,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

25,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil
- ☐ Replace air cleaner oil
- ☐ Check transmission oil level
- ☐ Check differential oil level
- ☐ Check power steering oil level
- ☐ Replace brake fluid
- ☐ Lubricate Propeller shaft U-joints
- ☐ Lubricate Steering linkages
- ☐ Lubricate Front & Rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft lubrication
- ☐ Lubricate accelerator cable ball end
- ☐ Lubricate gearshift lever pin
- ☐ Lubricate parking brake rachet bar
- ☐ Lubricate brake shoe back plate
- ☐ Lubricate door hinge
- ☐ Lubricate door lock
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element and bypass filter
- ☐ Replace fuel filter Stage I
- ☐ Check V-belt tension
- ☐ Clean fuel filter pump gauze filter
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Check fuel injection pressure and spray pattern of injection nozzle
- ☐ Check fuel injection timing
- ☐ Discharge water from water separator

- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)
- ☐ Check steering system
- ☐ Check & adjust front wheel alignment
- ☐ Check front & rear suspension
- ☐ Tighten front & rear suspension 'U' bolt
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Check brake drum & lining condition
- ☐ Tighten front & rear wheel nuts
- ☐ Check wheels & tyres
- ☐ Carry out tyre rotation
- ☐ Check battery electrolyte level
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Check water, oil & fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 35,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 35,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

35,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil (incase of hilly operation & if Eicher genuine oil is not used)
- ☐ Replace air cleaner oil
- ☐ Change transmission oil
- ☐ Change differential oil
- ☐ Check power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft
- ☐ Replace wheel-bearing grease
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter (incase of hilly operation or if Eicher Genuine oil is not used)
- ☐ Replace fuel filter-Stage I & II
- ☐ Check & adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Retighten exhaust manifold nuts
- ☐ Check & adjust valve clearance
- ☐ Discharge water from water separator
- ☐ Check radiator cap condition
- ☐ Check tightness of radiator hoses

- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)
- ☐ Tighten propeller shaft bolts
- ☐ Check clutch pedal play
- ☐ Check steering system
- ☐ Check front & rear suspension
- ☐ Tighten front & rear suspension 'U' bolt
- ☐ Check master vac. valve function
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Tighten front & rear wheel nuts
- ☐ Check wheels and tyres
- ☐ Carry out tyre rotation
- ☐ Check battery electrolyte level
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Retighten bolts of chassis and cargo body
- ☐ Check water, oil and fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.



EICHER MOTORS

Details of 45,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 45,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

45,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Engine oil replacement
- ☐ Replace air cleaner oil
- ☐ Check steering gear oil level (manual)
- ☐ Check power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft lubrication
- ☐ Replace wheel-bearing grease
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element and bypass filter
- ☐ Replace fuel filter Stage I
- ☐ Check V-belt tension
- ☐ Check engine-operating condition
- ☐ Tighten engine support bolts
- ☐ Check & adjust valve clearance
- ☐ Check engine compression pressure
- ☐ Discharge water from water separator
- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)

- ☐ Check steering system
- ☐ Check front & rear suspension
- ☐ Tighten front & rear suspension 'U' bolt
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Check brake drum & lining condition
- ☐ Check & remove excessive carbon deposit from reed valves of air compressor
- ☐ Tighten front & rear wheel nuts
- ☐ Check wheels & tyres
- ☐ Carry out tyre rotation
- ☐ Check front & rear wheel bearing play & damage
- ☐ Check battery electrolyte level
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Check water, oil & fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 55,000 km service :

Servicing AR’s Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 55,000 km Service has been carried out to my fullest satisfaction.

AR’s signature & seal    Owner’s signature & Date.

Job Card No. :

55,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil (incase of hilly operation & if Eicher genuine oil is not used)
- ☐ Replace air cleaner oil
- ☐ Check transmission oil level
- ☐ Check differential oil level
- ☐ Replace power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft
- ☐ Lubricate accelerator cable ball end
- ☐ Lubricate gearshift lever pin
- ☐ Lubricate parking brake rachet bar
- ☐ Lubricate brake shoe back plate
- ☐ Lubricate door hinge
- ☐ Lubricate door locks
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter (incase of hilly operation or if Eicher Genuine oil is not used)
- ☐ Replace fuel filter-Stage I & II
- ☐ Check & adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Retighten cylinder head bolts
- ☐ Check & adjust valve clearance
- ☐ Check fuel injection pressure & spray pattern of injection nozzles
- ☐ Check fuel injection timing
- ☐ Discharge water from water separator
- ☐ Replace coolant
- ☐ Check radiator cap condition

- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)
- ☐ Tighten propeller shaft bolts
- ☐ Check clutch pedal play
- ☐ Check & adjust backlash of crown wheel & pinion and adjust pinion height
- ☐ Check steering system
- ☐ Check & adjust front wheel alignment (if not done at 50000 kms.)
- ☐ Replace power steering oil filter
- ☐ Check front & rear suspension
- ☐ Tighten front & rear suspension 'U' bolt
- ☐ Check dual brake valve function
- ☐ Check service brake operation
- ☐ Check parking brake operation
- ☐ Check and adjust compressor V-belt tension
- ☐ Lubricate mounting plate & plunger of dual brake valve with engine oil
- ☐ Tighten mounting bolts of Brake actuators & Brake chambers
- ☐ Tighten front & rear wheel nuts
- ☐ Check wheels and tyres
- ☐ Carry out tyre rotation
- ☐ Check battery electrolyte level
- ☐ Check switch function
- ☐ Check lamp & instrument function
- ☐ Retighten bolts of chassis and cargo body
- ☐ Check water, oil and fuel leaks
- ☐ Clean dust & oil sludge from compressor fins.
- ☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 65,000 km service :

Servicing AR's Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no. \_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 65,000 km Service has been carried out to my fullest satisfaction.

AR's signature & seal    Owner's signature & Date.

Job Card No. :

65,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil
- ☐ Replace air cleaner oil
- ☐ Replace transmission oil
- ☐ Replace differential oil
- ☐ Check power steering oil level
- ☐ Replace brake fluid (if not replaced at 60000 kms.)
- ☐ Lubricate propeller shaft U-joints
- ☐ Replace wheel-bearing grease
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)☐ Check steering system☐ Check front & rear suspension☐ Tighten front & rear suspension 'U' bolt☐ Check service brake operation☐ Check parking brake operation☐ Check and adjust compressor V-belt tension☐ Lubricate mounting plate & plunger of dual brake valve with engine oil☐ Tighten mounting bolts of Brake actuators & Brake chambers☐ Tighten front & rear wheel nuts☐ Check wheels & tyres☐ Carry out tyre rotation☐ Check battery electrolyte level☐ Check switch function☐ Check lamp & instrument function☐ Check water, oil & fuel leaks☐ Clean dust & oil sludge from compressor fins.☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter
- ☐ Replace fuel filter Stage I
- ☐ Check V-belt tension
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Discharge water from water separator
- ☐ Check tightness of radiator hoses

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 75,000 km service :

Servicing AR's Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no. \_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 75,000 km Service has been carried out to my fullest satisfaction.

AR's signature & seal    Owner's signature & Date.

Job Card No. :

75,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil (incase of hilly operation & if Eicher genuine oil is not used)
- ☐ Replace air cleaner oil
- ☐ Check transmission oil level
- ☐ Check differential oil level
- ☐ Replace power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

☐ Tighten propeller shaft bolts☐ Check clutch pedal play☐ Check steering system☐ Check & adjust front wheel alignment☐ Check front & rear suspension\☐ Tighten front & rear suspension 'U' bolt☐ Check dual brake valve function☐ Check service brake operation☐ Check parking brake operation☐ Check and adjust compressor V-belt tension☐ Lubricate mounting plate & plunger of dual brake valve with engine oil☐ Tighten mounting bolts of Brake actuators & Brake chambers☐ Tighten front & rear wheel nuts☐ Check wheels and tyres☐ Carry out tyre rotation☐ Check battery electrolyte level☐ Check switch function☐ Check lamp & instrument function☐ Retighten bolts of chassis and cargo body☐ Check water, oil and fuel leaks☐ Clean dust & oil sludge from compressor fins.☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter (incase of hilly operation or if Eicher Genuine oil is not used)
- ☐ Replace fuel filter-Stage I & II
- ☐ Check & adjust V-belt tension
- ☐ Clean fuel feed pump gauze filter
- ☐ Check engine-operating condition
- ☐ Discharge water from water separator
- ☐ Check radiator cap condition
- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 85,000 km service :

Servicing AR's Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 85,000 km Service has been carried out to my fullest satisfaction.

AR's signature & seal    Owner's signature & Date.

Job Card No. :

85,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil
- ☐ Replace air cleaner oil
- ☐ Check transmission oil level
- ☐ Check differential oil level
- ☐ Check power steering oil level
- ☐ Lubricate Propeller shaft U-joints
- ☐ Lubricate Steering linkages
- ☐ Lubricate Front & Rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate accelerator cable ball end
- ☐ Lubricate gearshift lever pin
- ☐ Lubricate parking brake rachet bar
- ☐ Lubricate brake shoe back plate
- ☐ Lubricate door hinge
- ☐ Lubricate door locks
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

☐ Check tightness of radiator hoses☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)☐ Check steering system☐ Check front & rear suspension☐ Tighten front & rear suspension 'U' bolt☐ Check service brake operation☐ Check parking brake operation☐ Check and adjust compressor V-belt tension☐ Lubricate mounting plate & plunger of dual brake valve with engine oil☐ Tighten mounting bolts of Brake actuators & Brake chambers☐ Check brake drum & lining☐ Tighten front & rear wheel nuts☐ Check wheels and tyres☐ Carry out tyre rotation☐ Check battery electrolyte level☐ Check switch function☐ Check lamp & instrument function☐ Check water, oil and fuel leaks☐ Clean dust & oil sludge from compressor fins.☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter
- ☐ Replace fuel filter-Stage I
- ☐ Check & adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Check fuel injection pressure & spray pattern of injection nozzles
- ☐ Check fuel injection timing
- ☐ Discharge water from water separator

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

EICHER MOTORS

Details of 95,000 km service :

Servicing AR's Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 95,000 km Service has been carried out to my fullest satisfaction.

AR's signature & seal    Owner's signature & Date.

Job Card No. :

95,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil (incase of hilly operation & if Eicher genuine oil is not used)
- ☐ Replace air cleaner oil
- ☐ Replace transmission oil
- ☐ Replace differential oil
- ☐ Check steering gear oil level (manual)
- ☐ Check power steering oil level
- ☐ Replace brake fluid (if not replaced at 90000 kms.)
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate Steering linkages
- ☐ Replace wheel-bearing grease
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate steering shaft
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

☐ Check tightness of radiator hoses☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)☐ Tighten propeller shaft bolts☐ Check clutch pedal play☐ Check steering system☐ Check front & rear suspension☐ Tighten front & rear suspension 'U' bolt☐ Check master vac. valve function☐ Check service brake operation☐ Check parking brake operation☐ Check and adjust compressor V-belt tension☐ Lubricate mounting plate & plunger of dual brake valve with engine oil☐ Tighten mounting bolts of Brake actuators & Brake chambers☐ Tighten front & rear wheel nuts☐ Check wheels & tyres☐ Carry out tyre rotation☐ Check battery electrolyte level☐ Check switch function☐ Check lamp & instrument function☐ Retighten bolts of chassis and cargo body☐ Check water, oil and fuel leaks☐ Clean dust & oil sludge from compressor fins.☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Inspection and Maintenance

- ☐ Replace oil filter element & bypass filter (incase of hilly operation or if Eicher Genuine oil is not used)
- ☐ Replace fuel filter-Stage I & II
- ☐ Check & adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Tighten exhaust manifold nuts
- ☐ Tighten engine support bolts
- ☐ Check & adjust valve clearance
- ☐ Check engine compression pressure
- ☐ Discharge water from water separator
- ☐ Check radiator cap condition

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.



EICHER MOTORS

Details of 1,05,000 km service :

Servicing AR's Name :\_\_\_\_\_

Address :\_\_\_\_\_

Pin \_\_\_\_\_ Tel no.\_\_\_\_\_

Total running (odometer reading)

Coupon no. \_\_\_\_\_

Date of service \_\_\_\_\_

I hereby declare that the 1,05,000 km Service has been carried out to my fullest satisfaction.

AR's signature & seal    Owner's signature & Date.

Job Card No. :

1,05,000 KM PERIODIC SERVICE

Chassis No.

Engine No.

Date

SERVICE OPERATIONS

Lubrication

- ☐ Replace engine oil
- ☐ Replace air cleaner oil
- ☐ Replace transmission oil
- ☐ Replace differential oil
- ☐ Check power steering oil level
- ☐ Lubricate propeller shaft U-joints
- ☐ Lubricate steering linkages
- ☐ Lubricate front & rear spring pins
- ☐ Lubricate Kingpins
- ☐ Lubricate front & rear slack adjuster
- ☐ Lubricate front & rear 'S' cam shaft

☐ Check steering system☐ Check & adjust front wheel alignment (if not done at 100000 kms.)☐ Check front & rear suspension☐ Check front & Rear suspension 'U' bolt☐ Check service brake operation☐ Check parking brake operation☐ Check and adjust compressor V-belt tension☐ Lubricate mounting plate & plunger of dual brake valve with engine oil

Inspection and Maintenance

- ☐ Replace oil filter element and bypass filter
- ☐ Replace fuel filter-Stage I
- ☐ Check and adjust V-belt tension
- ☐ Check engine-operating condition
- ☐ Check & adjust valve clearance
- ☐ Discharge water from water separator
- ☐ Check tightness of radiator hoses
- ☐ Check condition of all rubber hoses (e.g. air intake, alternator, turbocharger, Intercooler, etc.)

☐ Tighten mounting bolts of Brake actuators & Brake chambers☐ Check front & rear wheel nuts☐ Check wheel and tyres☐ Carry out tyre rotation☐ Check front & rear wheel bearing play and damage☐ Check battery electrolyte level☐ Check switch function☐ Check lamp & instrument function☐ Check water, oil and fuel leaks☐ Clean dust & oil sludge from compressor fins.☐ Connect Palm top and read error if any rectifying and read error to cross check for BS-III vehicles

Remarks :

AR to tear this portion and staple with Job Card for carrying out the service accordingly.  
Note : Please record all values / observations on the job card.

SERVICE & MAINTENANCE RECORD

(Owners must ensure that this record is maintained & made available to EML Dealer/Service Representative, whenever asked for. **Deficiency/Non-availability may lead to rejection of warranty claims.**)

SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

+ + +

SERVICE & MAINTENANCE RECORD

(Owners must ensure that this record is maintained & made available to EML Dealer/Service Representative, whenever asked for. **Deficiency/Non-availability may lead to rejection of warranty claims.**)

SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

SERVICE & MAINTENANCE RECORD

(Owners must ensure that this record is maintained & made available to EML Dealer/Service Representative, whenever asked for. **Deficiency/Non-availability may lead to rejection of warranty claims.**)

SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
21							
22							
23							
24							
25							
26							
27							
28							
29							
30							

+ + +

SERVICE & MAINTENANCE RECORD

(Owners must ensure that this record is maintained & made available to EML Dealer/Service Representative, whenever asked for. **Deficiency/Non-availability may lead to rejection of warranty claims.**)

SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

SERVICE & MAINTENANCE RECORD

(Owners must ensure that this record is maintained & made available to EML Dealer/Service Representative, whenever asked for. **Deficiency/Non-availability may lead to rejection of warranty claims.**)

SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
41							
42							
43							
44							
45							
46							
47							
48							
49							
50							

+ + +

SERVICE & MAINTENANCE RECORD

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SL. No.	Recommended Kms.	Date of Service	Actual Kms.	Serviced by (Name of Authorised) Service Centre, Location	Job No.	Remarks	Signature of Works Manager
51							
52							
53							
54							
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60							

# SECTION - 3

## GETTING TO KNOW YOUR EICHER VEHICLE

3-1

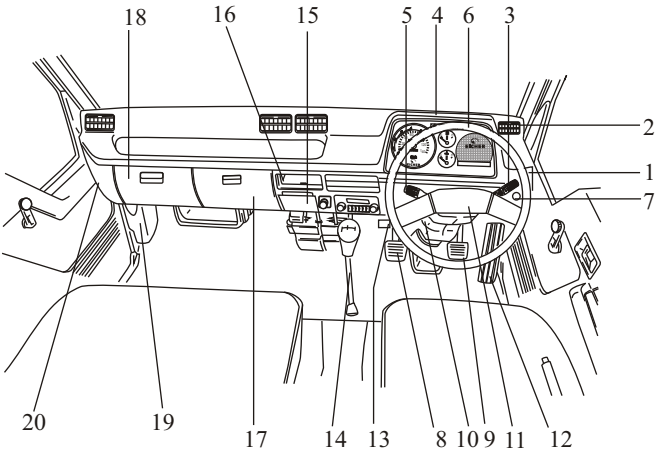
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### CONTENTS

- Instruments and Controls	3-3
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INSTRUMENTS AND CONTROLS

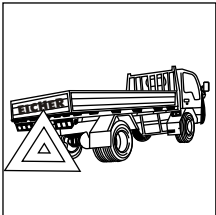
- 1. Brake fluid reservoir tank----- 3-59
- 2. Side ventilator----- 3-34
- 3. Lighting switch, turn signal, dimmer,  
passing and lane change switch----- 3-28
- 4. Meter----- 3-30
- 5. Wiper & Washer----- 3-29
- 6. Steering wheel----- 3-20
- 7. Throttle button----- -
- 8. Clutch pedal----- -
- 9. Brake pedal----- -
- 10. Telescopic tilt steering wheel  
lock lever----- 3-20
- 11. Starter switch----- 3-20
- 12. Accelerator pedal----- -
- 13. Parking brake lever----- 3-27
- 14. Gearshift lever----- 3-24
- 15. Ash tray----- 3-35
- 16. Pocket----- -
- 17. Center console----- 3-36
- 18. Glove box----- 3-36
- 19. Window washer tank----- 3-36
- 20. Fuse box----- 3-95



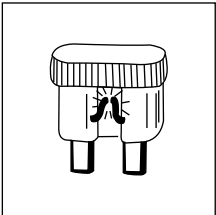
3-3

MINIMUM ESSENTIALS FOR THE DRIVER

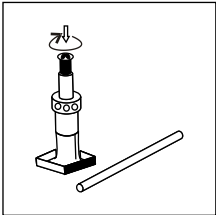
● Quick look up (Pg 3-40)



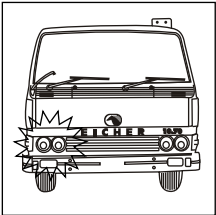
● When a fuse is blown (Pg 3-95)



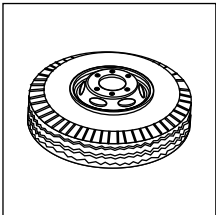
● Tools and Jack (Pg 3-39)



● Replacing lamps (Pg 3-94)



● Fixing a flat tyre (Pg 3-72)



MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

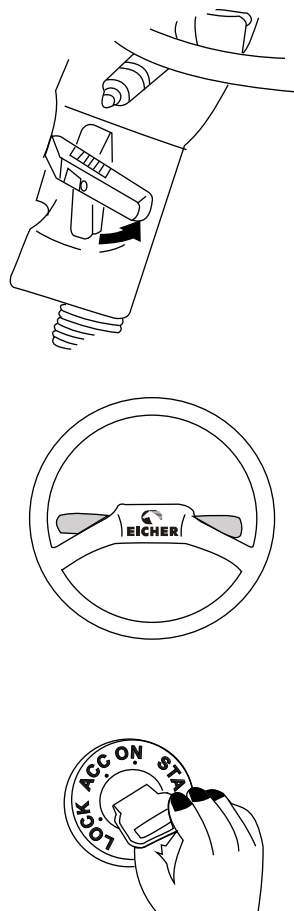
- **Doors and windows (Pg 3-15)**  
Make sure your doors are locked while the vehicle is in motion
- **Adjusting the seat (Pg 3-16)**
  - Are the pedals within easy reach for full depressing strokes ?
  - Is the steering wheel in the optimum driving position ?
- **Fastening seat belts**  
  
For safety it is mandatory that you as well as the co-driver fasten seat belts before driving.
- **Tilting the cab (Pg 3-16)**  
The cab can be tilted forward easily and safely. It makes your engine service job a lot easier.
- **Adjusting mirrors (Pg 3-37)**  
Before getting the vehicle started, adjust rearview mirrors so that you can see into the rear and sides.



3-5

MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

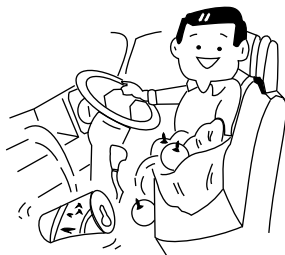
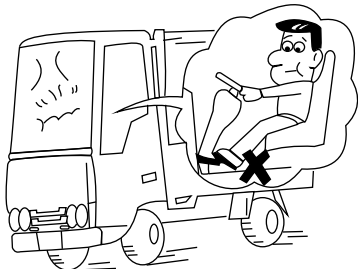
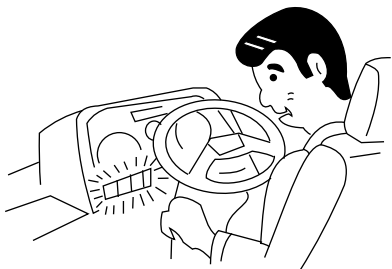
- **Adjusting the steering wheel position (Pg 3-20)**  
  
The telescopic tilt steering wheel allows you to change its position, horizontally and vertically, to suit your stature.  
Adjust the wheel to the best driving position before starting the vehicle.
- **Multipurpose levers (Pg 3-28)**  
The steering column is mounted with two multipurpose levers. The right lever switch control lightning and the left lever controls the wipers, washers and hazard warning lights.
- **Starting the engine (Pg 3-20)**
  - Before starting the engine, be sure to apply the parking brake
  - Make sure that the gearshift lever is in neutral.



3-6

MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

- **Check for warning lamps (Pg 3-32)**
  - All warning lamps come on when the starter switch is placed in ON position before starting the engine.
  - Your vehicle is in good condition if all lamps go off soon after the engine has started.
  - The warning lamp for parking brake goes off when the parking brake lever is released.
  - The warning lamp and buzzer for parking brake goes off when the parking brake lever is released.
  - The low pressure indicators & buzzers come on only if the pressure drops beyond the specified value & goes off after the engine starts and the required pressure is built up into the system.
- **Do not keep your foot on clutch pedal when not operating it.**
  - Use of clutch in half-engaged position will not only result in loss of power but will also reduce the life of the clutch. .
  - If you feel higher resistance when you start depressing the clutch pedal it means the clutch disc has reached the limit of its service life. Have the clutch disc replaced at your nearest Eicher Authorized Service point.
- **Make sure that the cab interior is clear of obstructions.**
  - Personal effects and other articles near the driver’s seat can be dangerous.
  - These may fall down onto the floor and get under the brake pedal thereby hindering normal operation.



3-7

MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

- **Be sure the area around your vehicle is clear.**

Inflammable foreign material getting entangled in the exhaust pipe can be dangerous
- **Ensure that the cargo is securely loaded in position**

For Safe Driving

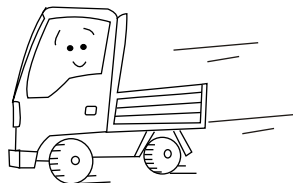
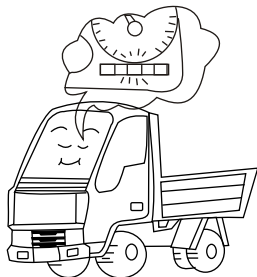
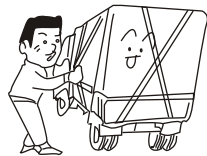
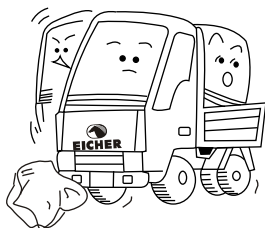
- **Warning lamps (Pg 3-32)**

Should a warning lamp come on, immediately pull your vehicle into a safe location.

It is dangerous to keep your vehicle going with any of the warning lamps staying lit.
- **Starting switch (Pg 3-20)**

Never turn off the starter switch while the vehicle is in motion. If the starter switch is placed in the ACC or LOCK position while you are on the road,

  - Extremely poor braking action will result.
  - If the key is in the LOCK position, it can come off thereby locking the steering wheel & making it impossible to steer the vehicle.
  - The warning lamps will become inoperative, thereby making driving extremely dangerous



3-8



MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

- **Observe the following precautions when allowing children into your vehicle**
  - Never allow them to tamper with the steering wheel, gearshift lever, controls and other switches.
  - Close the door and lock it in position.
  - Never let them open or close the doors.
  - When you leave your vehicle, never leave them behind in the vehicle.
- **Use of cellular phones**

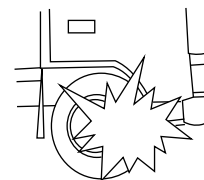
It is strictly prohibited use of cellular phones during driving the vehicles. Should you need to use cellular phone, pull up your vehicle to a safe location.



Some tips for better driving technique

- **On long downhill roads**
  - Use the same gear which is used when coming uphill.
  - Automatic exhaust brake system provides assistance in speed control. However, use service brakes properly to keep the speed within limits.
  - Limit for each gear are shown on the speedometer
  - Non-adherence may lead to engine over-running & severe damage. (Also refer page 3-24)
- **Flat tyre**

When you get a flat tyre while driving at high speeds grip the steering wheel and depress the brake pedal gently until your vehicle slows down.  
If you brake suddenly, you will loose directional control.



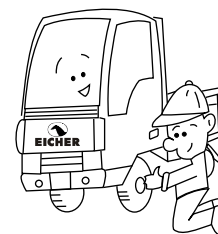
3-9

MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

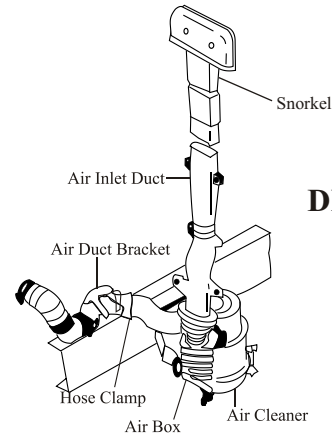
- **While Washing**

Be sure to switch off the engine before washing. This is essential to ensure that water is not sucked inside the engine which may lead to seizure of the engine.
- **After washing**

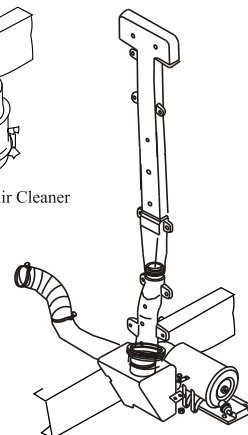
After washing your vehicle or moving out of puddled road, lightly depress the brake pedal to test the brake. Brakes may not be very effective after the vehicle has been washed or driven on puddled road due to entry of water into the brake assembly. In such a case, dry the brake linings by driving at slow speeds for a while with light foot pressure on brake pedal, while making sure that you are clear of vehicles ahead and behind.
- **While crossing puddled road, be sure that water level does not reach the air box hole in the air cleaner. If it happens, it may lead to engine seizure (hydrostatic lock). To avoid this, remove the hose clamp & detach the hose of the air cleaner & fill it with fresh engine oil as per recommendation in wet type air cleaner & remove the hose clamp & dismantle the air cleaner & replace air cleaner element & safety cartridge dry type air cleaner. Also check the differential oil for any signs of water entry. In case the oil is found contaminated, same should be replaced with recommended grade of fresh oil immediately.**



WET TYPE



DRY TYPE



To ensure best performance for a long time

To ensure comfortable drives at all times, perform the following inspections.

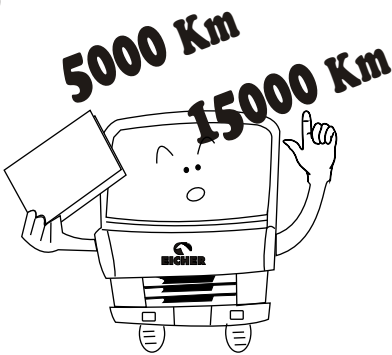
- **Daily inspection (Pg 3-56)**

Before a day’s operation, make the daily inspection to prevent troubles from developing into a serious breakdown.

MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

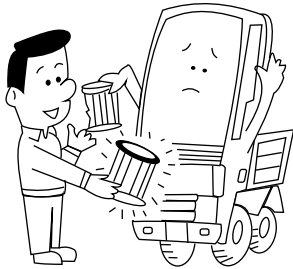
• Periodic inspection

- Be sure to have your vehicle inspected at regular intervals according to the instructions given in the service schedule
- Take your vehicle to your nearest authorized service station for inspection as specified in the service booklet.
  - In addition, inspections must be made for lubricants and elements according to specific distances driven.



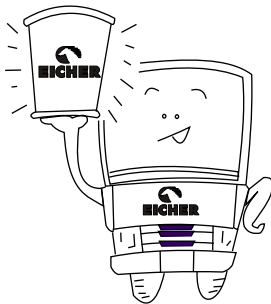
• Parts requiring periodic replacement

Make sure that these parts are replaced at the specified intervals for safe driving.



• Replacement parts and accessories

Use genuine **EICHER** parts and accessories. They are your reliable partners offering the quality guaranteed by **EICHER MOTORS**. Get them at your nearest Eicher Authorised Service Station.



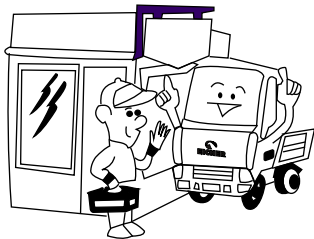
MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

Inspection and adjustments

- For inspection and adjustment not covered in “Simple servicing” of this manual, contact your local authorized service station.

CAUTION !

Your vehicle has been factory-adjusted to the best operating performance. Never attempt to make further adjustments, or to remove or remodel parts.

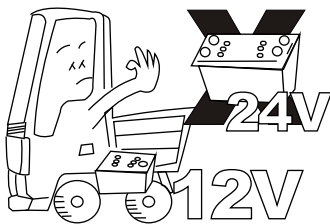


• Condition of Battery

Check the battery condition regularly and keep the battery in a healthy condition.

• Jump start (Pg 3-42)

When making a jump start, make sure that the helper battery is of the same voltage rating as the discharged or weak battery. For details, see “Run-down battery” on pages 3-42.

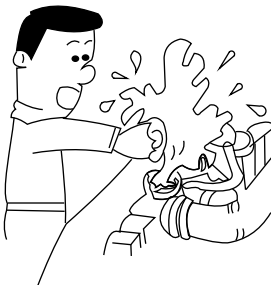


• Vehicle jack up point (Pg 3-73)

When using a jack, ensure that it is set properly in position. For jack up points, see Page 3-73

CAUTION !

Never under any circumstances remove the radiator cap when it is hot. The gush of steam and coolant that will spurt out can cause serious injury to you.



MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

- **When Loading cargo**
  - Ensure that the maximum cargo carrying capacity is not exceeded
  - Ensure that your cargo is evenly distributed
  - When loading long objects, minimize protrusion from the rear end of the body.
  - Place a sheet over the cargo and fasten ropes securely.
  - Avoid loading to an excessive height.

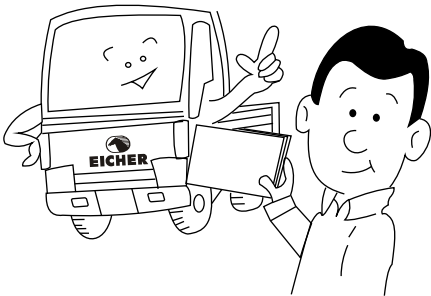


- **About warranty**

**Troubles and accidents caused by careless handling or abuse of the vehicle beyond the limits of its specifications are out of the scope of warranty**

Make sure that daily inspection and maintenance are not neglected.

Should trouble occur, consult your local authorised representative. For further details refer to our warranty policies in section-2 of this handbook.



MINIMUM ESSENTIALS FOR THE DRIVER (Contd..)

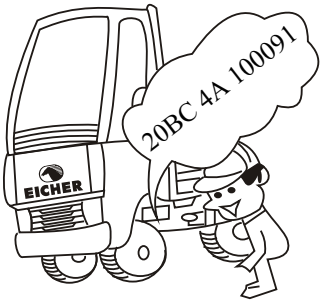
- **Chassis and engine numbers**

When ordering parts, specify these numbers to ensure correct order processing.

- **Chassis number**

Example:20BC 4A 100091

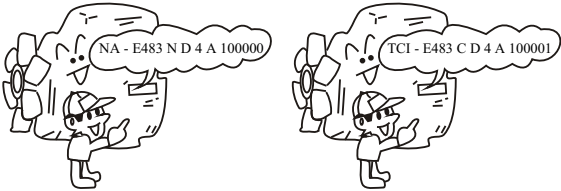
Stamped on the left side of the frame, at the position shown in illustration.



- **Engine number**

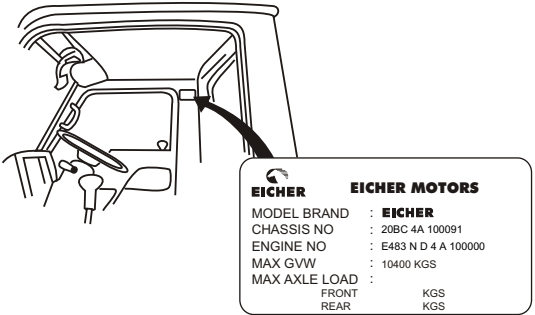
Example: E483 N D 4 A 100000

Stamped on the crankcase, at the position shown in illustration.



- **Name plate**

Attached inside the cab showing the vehicle model and chassis number.



# OPENING AND CLOSING OF DOORS

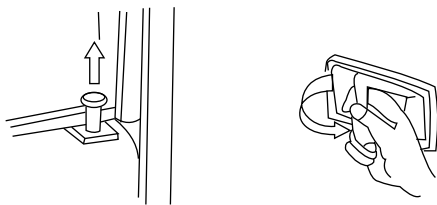
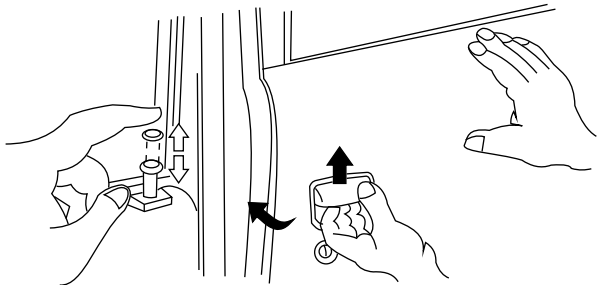
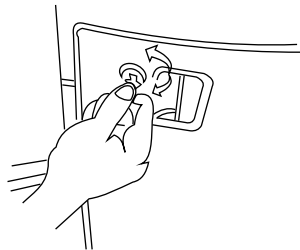
- **Locking, opening and closing of doors From outside.**
  - Locking and unlocking with key.  
Insert the key and turn towards the front of the vehicle to lock, or towards the rear to unlock.
  - Locking without key.  
With the lock button pushed in, and the outer handle pulled up, close the door.

## From Inside

- Locking  
Push the lock button in and the door is locked.
- With the lock button pulled up, pull the inner handle, and the door opens.

## CAUTION!

- When you leave your vehicle, stop the engine and lock the doors.
  - Before opening the door from inside, ensure that the rear area of your vehicle is clear.
  - A door left slightly open is very dangerous. Ensure that the door is fully closed.
- **Make sure that you have removed the key before leaving your vehicle.**

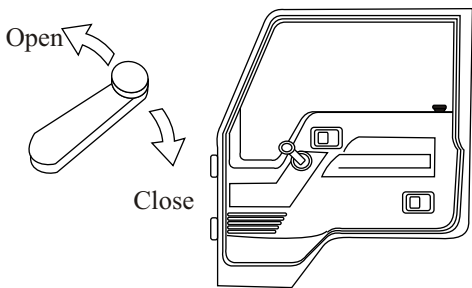


3-15

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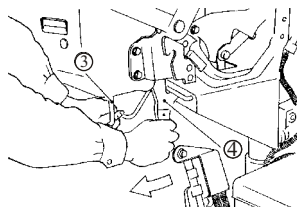
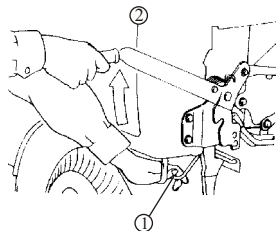
# OPENING AND CLOSING OF DOORS (Contd..)

- **Opening and closing door glasses**
  - To open or close the door glass, turn the regulator handle.



## TILTING THE CAB

- **Raising the cab (Best done at your Authorised Service Centre)**
  1. With the lever 1 pulled, raise the handle 2.
  2. Hold the grip 3 and, while pressing it down, pull the hook 4.  
This causes the cab to go up. While holding the cab by hand to prevent abrupt motion, let it go up slowly.
  3. As the cab goes up all the way, it is held in position by the cab stay 5.
  4. Insert the safety pin 6.



## CAUTION!

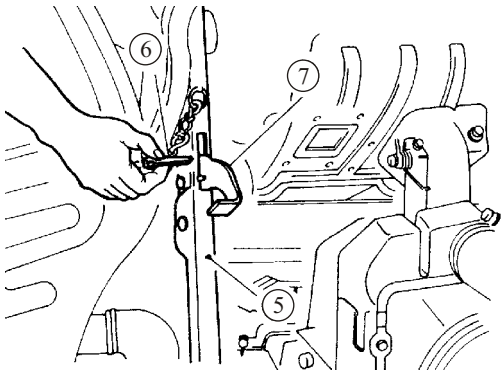
To ensure safety, make sure the safety pin is inserted.  
Do not tilt the cab while holding the handle 2.

3-16

**TILTING THE CAB (Contd..)**

- **Lowering the cab**
- 1. With the grip held by hand and safety pin removed from the cab stay, push up the lever 7 to fold the cab stay 5 and slowly lower the cab. The hook engages as the cab is lowered in position.
- 2. Push the handle slowly back until it is locked in its original position, Check to ensure that it has been locked in position.

Note: If the handle is not locked, tilt back and relock the handle.



**CAUTION !**

**PRECAUTIONS FOR TILTING THE CAB**

- Select a flat, level ground.
- Apply parking brake and chock up the wheels.
- Ensure that the engine is stationary.
- Keep the gearshift lever in neutral.
- Clear personal effects and other articles from the seat and floor. They can slide & break the windshield when the cab is tilted.

3-17

**TILTING THE CAB (Contd...)**

- Make sure that the doors are in closed position.
- Ensure a clearance of 1 meter or more in front of the cab.
- Before lowering the cab, make sure that there is no waste cloth or tools left behind in the engine compartment.
- Unless absolutely necessary DO NOT tilt the cab. Better leave this to your Authorised Service Centre.

**ENGINE INSPECTION PORT**

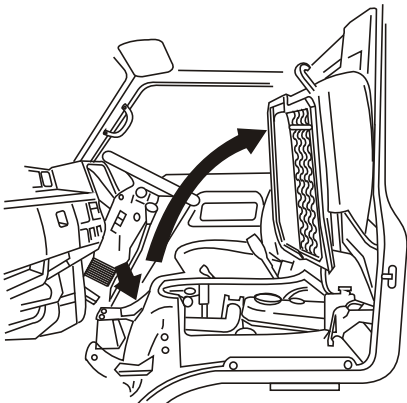
● **Accessing the engine**

The engine inspection port is located under the assistant’s seat. To inspect the engine, release the clamp and raise the front end of the seat. Support the seat in folded position with the help of the belt provided.

To hold the raised assistant seat a support belt is provided. After swinging up the assistant’s seat hold it by putting the support belt end on the clamping hook of the seat.

**CAUTION !**

When closing the port ensure that the clamps are engaged properly.



**FUEL TANK COCK**

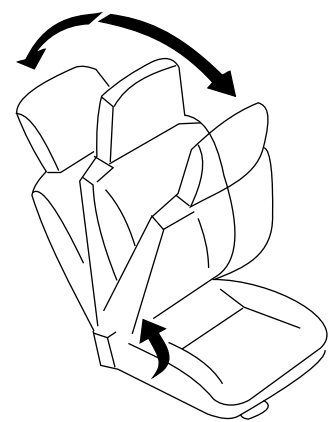
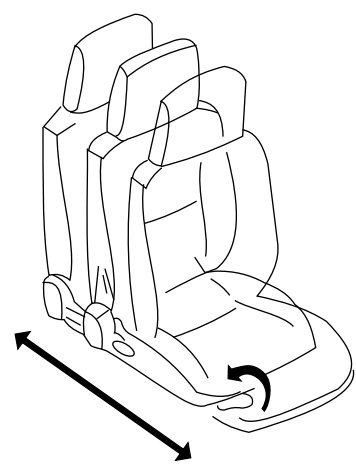
- To remove the cap, turn it counter clockwise.



3-18

BEFORE STARTING THE ENGINE

- **Adjusting the driver’s seat**  
When adjusting the seat, make sure the following conditions are met to ensure best possible driving position.
  - Pedals are within easy reach for their entire stroke.
  - The steering wheel and controls / switches are within easy reach for sure operation.
  - During adjustment, keep your back fully resting on the setback.
- **Fore-aft positions**  
Adjust the seat to the position by operating the adjusting lever. After positioning the seat in the fore-aft-direction, gently lock the seat to ensure that it has been locked in position.
- **Reclining**  
After the adjustment gently lock the seat back to ensure that it has been locked in position.
- **Folding down the seatback**  
The seatback folds down to facilitate accessing the vehicle-borne tools which are placed just behind the driver’s seat.



3-19

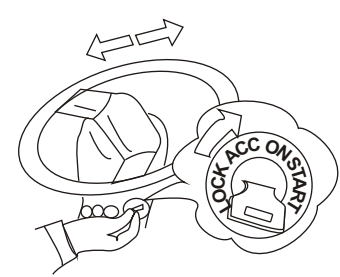
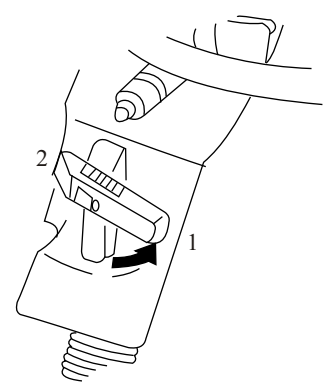
BEFORE STARTING THE ENGINE (Contd...)

- **Adjusting the telescopic tilt steering wheel**  
Position the steering wheel by moving it in the up-and-down and fore-and-aft directions. Ensure the best possible driving position, together with the adjustment of the driver’s seat.  
Turn the lever counterclockwise (1), and the steering wheel becomes loose. After adjustment, tighten the lever securely in position (2) to prevent it from becoming loose during driving.

**CAUTION !**  
Never attempt to adjust the steering wheel while the vehicle is in motion.

STARTERSWITCH

- **Starter switch positions**  
**LOCK** In this position the key can be inserted and removed. Remove the key and turn the steering wheel until it locks in position.  
Turn the key from LOCK to ACC to unlock the steering wheel. If key is hard to turn to ACC, lightly turn the steering wheel so as to turn the key with ease.



3-20



## BEFORE STARTING THE ENGINE (Contd...)

- ACC** When the key is placed to this position, the engine will shutdown. With the engine shutdown and the key in ACC position, the electrical system for accessories is switched on.
- ON** Keep the key in this position during operation.
- START** Place the key in this position to start the engine. After the engine has started, release the key and it will return to ON position on its own.



### CAUTION!

Never under any circumstances place the key in any position other than ON while you are on road. If it is placed in ACC position, the engine stops and the brake booster becomes inoperative resulting in extremely poor braking performance.

In addition, with the key in ACC position, while the vehicle is in motion, all warning lamps, instruments, and exhaust brake also become inoperative, which is extremely dangerous. This can also lead to troubles in the electrical system.

If the key is moved to the LOCK position with the vehicle in motion, the steering wheel will lock and you may lose directional control.

3-21

## STARTING AND STOPPING THE ENGINE

### ● Starting the engine

Place the gearshift lever in neutral and apply parking brake.

1. Place the starter switch in 'On' position.
2. Turn the starter switch to 'START' position to start the engine.
3. Keep the accelerator pedal depressed until the engine turns over and starts.
4. Engine should not be put under full acceleration immediately after start. It is recommended running the engine at idling speed for a short time (min. 3 minutes). Warm up the engine under medium speed.
5. If the engine does not start, wait for a while (about one minute) and start from the beginning. Do not operate the starter continuously for more than 30 seconds.
6. When attempting to start the engine after the vehicle has been parked for a long period or after the engine oil or oil filter element has been replaced, crank the engine first. See Page 3-23 for engine cranking procedure.
7. If the engine does not start, check the solenoid switch for the actuation of plunger. if plunger does not function, disassemble the switch, remove the plunger and fit back the switch ensuring proper tightening.

### ● Stopping the engine

After running the engine at idling speed for a while place the starter switch in the ACC position to stop the engine. If the engine does not stop when the starter switch is placed in ACC position, turn the stop lever 1 of the fuel injection pump in the direction of the arrow. Release the lever after the engine has completely stopped. An elongated cable is suspected, so take your vehicle to the nearest authorised service station for inspection and adjustment.

### CAUTION!

- Do not accelerate the engine with throttle wire, always accelerate by depressing pedal.
- To ensure utmost safety, apply the parking brake lever and choke up the wheels.
- Engine should not be put under full acceleration immediately after start. It is recommended, running the engine at idling speed for a short time (min. 3 minutes). Warm up the engine under medium speed.
- Engine should not be stopped immediately after vehicle operation, it is recommended for a short idling time before switching off (min. 3 minutes).

3-22

STARTING AND STOPPING THE ENGINE (Contd...)

CAUTION!

- If the engine is slightly overheating as after ascending a slope or after high speed operation, keep the engine running at idling speed for a while to cool the engine before stopping it.  
Stopping the engine while it is running at high speed could cause failure of the governor.
- Starting and stopping the engine for inspection
  1. Place the starter switch in “ON” position.
  2. Make sure that the gearshift lever is in neutral.
  3. Turn the starter switch to “START” position to start the engine.
  4. To stop the engine, place the starter switch in “ACC” position or pull the stop lever of the fuel injection pump.

CAUTION!

- Do not accelerate the engine with throttle wire, always accelerate by depressing pedal.
- To ensure utmost safety, apply the parking brake lever and choke up the wheels.
- Engine should not be put under full acceleration immediately after start. It is recommended, running the engine at idling speed for a short time (min. 3 minutes). Warm up the engine under medium speed.
- Engine should not be stopped immediately after vehicle operation, it is recommended for a short idling time before switching off (min. 3 minutes).
- Cranking the engine  
After the vehicle has been parked for a long period or the engine oil and oil filter element have been replaced, use the following procedure to crank the engine before starting.  
Crank the engine for 15 seconds with the accelerator pedal released and starter switch in “START” position.  
The engine may start but, do not depress the accelerator pedal for around 3 minutes.



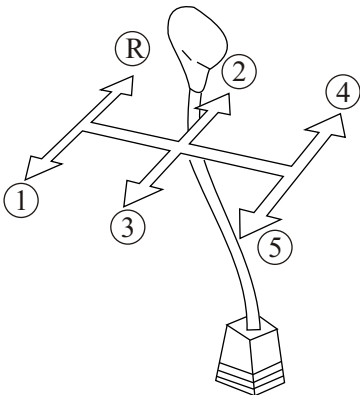
STARTING AND STOPPING THE ENGINE (Contd...)

CAUTION!

- Cranking is necessary to let the engine oil circulate through the engine parts.

BASIC DRIVING CONTROLS

- Gearshift lever
  - On uphill  
Make it a rule to downshift as soon as possible before an excessive load is applied to the engine.
  - On downhill  
Shift into a gear which you use for uphill and use engine braking to keep a safe speed. Take care not to overuse the foot brake.



CAUTION!



- Observe following precautions to prevent engine overrun.
- Sufficiently slow down your vehicle before shifting down through gears. Sticker as shown in the sketch is provided on the Right hand side roof rail above the driver seat.
  - The engine overrun refers to a condition of the engine when it runs at speeds higher than its maximum rpm. The engine can be severely damaged by overrunning.

**CAUTION  
FOR SAFETY OF ENGINE**

1. On down hill operation never exceed speed indicated in the speed range band on speedometer.

2. On plains never down shift gears at speeds indicated below.

SPEED	GEARS
ABOVE 80 KMS	5TH -X@4 TH
ABOVE 60 KMS	5TH -X@3RD
ABOVE 50 KMS	4TH -X@3RD
ABOVE 35 KMS	4TH -X@2ND



3-24



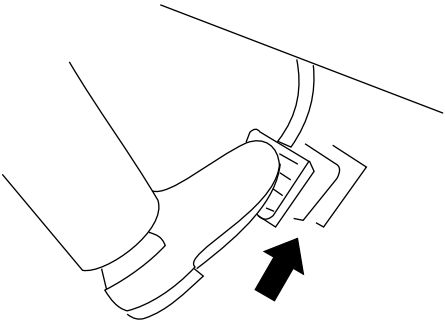
# BASIC DRIVING CONTROLS

- **Using the brakes**

- To ensure stable braking performance, depress the brake pedal gently two to three times well in advance.
- On a steep or long downhill road, test the brakes in advance to ensure that you have sure braking performance.

**CAUTION !**

- Excessive use of brakes will result in overheated brake drums and linings, causing brake fading (which reduces brake effectiveness) and vapor lock incase the brake fluid vaporizes, thereby impending normal braking action.
- When road surface is slippery with rain or snow, avoid abrupt braking, as slipping could occur.
- When a puncture or burst occurs during operation hold the steering wheel firmly and apply brakes gradually combined use of engine brake and service brake to slow down the vehicle. Sudden braking is dangerous as the vehicle will pull to one side.



3-25

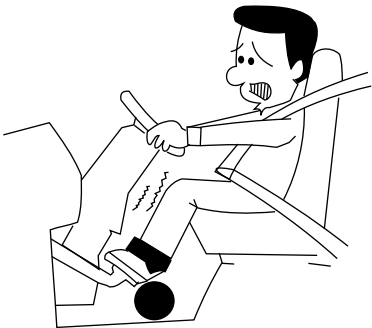
# BASIC DRIVING CONTROLS (Cont'd.)

- **Using the clutch**

- When shifting gears depress the clutch pedal all the way.
- Do not keep your foot on the clutch pedal when not operating it. This puts the clutch in a half engaged position, which not only results in loss of power but also reduces the life of the clutch.
- A change in clutch pedal resistance can be sensed when the clutch disc reaches the limit of its service life. If a higher resistance than usual is sensed while begining to depress the clutch, the clutch disc is worn to limit and calls for replacement.

**CAUTION !**

- A higher clutch pedal resistance will be felt only at the begining of depression. The resistance will return to normal when the pedal is further depressed.
- Avoid engaging the clutch abruptly as this stresses the parts unduly, shortening clutch life.














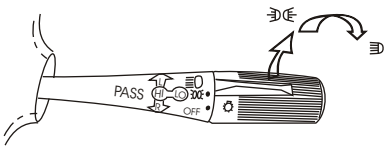
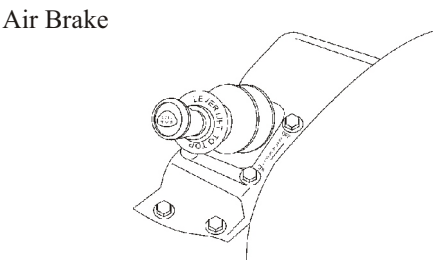
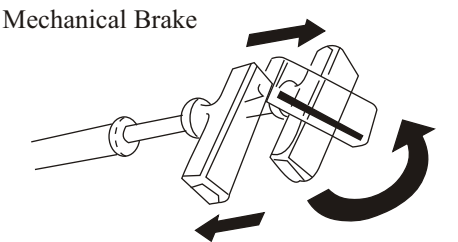
3-26

BASIC DRIVING CONTROLS (Cont'd.)

- **Parking brake lever (Mechanical Brake)**
  1. When you park your vehicle, pull the parking brake lever fully.
  2. To release the brake, turn the lever counterclockwise and gently release it back into its original position.
- **Parking brake lever (Air Brake)**
  1. When you park your vehicle, turn the parking brake lever fully to ON position.
  2. To release the brake, lift the spring loaded sleeve and gently release it back to OFF position.

- CAUTION !**
- When the lever is pulled the parking brake indicator lamp comes on. Make sure that the lever is released (lamp is off) before you move the vehicle.
  - The parking brake lever must be released gently. Harsh and sudden release can result in failure of the mechanism.
- **Lighting switch**  
Turning the lever causes the following lamps to turn "on".

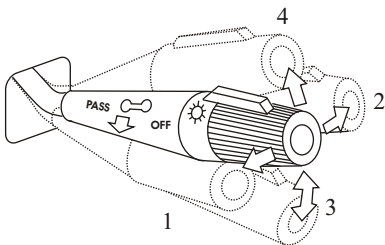
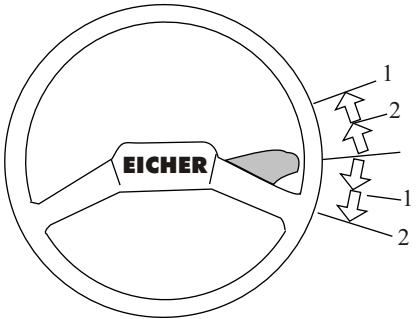
Lamp name \ Lever position		
Tail lamp		
License lamp		
Clearance plate		
Meter illumination		
Head lamps		



SWITCHES AND CONTROLS

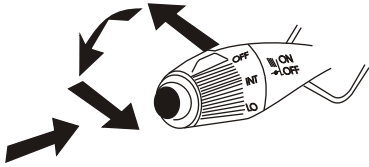
- CAUTION!**
- Lamps left ON will result in run-down battery, making it difficult to start the engine. Ensure that lights are turned OFF when not required.
- **Turn signal, dimmer, passing, and lane change switches.**
  - **Turn signal switch**  
Move the lever forward or backward, and the turn signal lamps will flash. With the lever in the position 2, returning the steering wheel to its normal position brings the lever automatically back to its original position. If it does not return back, say, on a mild curve, return the lever back to position by hand.  
If the lever is kept in position (1) by hand, the turn signal lamps will stay flashing, Turn signal lamp switch is turned off when the lever is released. The position (1) can be used for lane changing which involves a small steering angle.
  - **Dimmer Switch**  
With the headlamps in ON Position, if the lever, is pushed down, the headlamps will switch to upper beam. If the lever is brought to neutral position the headlamps will be in low beam.  
When the lever is taken up, the upper beam (passing) will light, regardless of the lighting switch, and will go out as soon as the lever is released.

1-Passing, 2-Upperbeam, 3-Right Turn, 4-Left Turn.



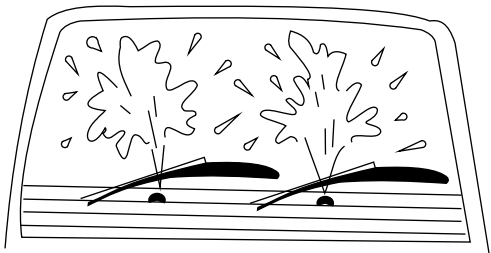
SWITCHES AND CONTROLS (Contd...)

- **Wiper & washer switch**
  - **Wiper switch**  
Turning the lever operates the wipers.  
INT (turned one step) : Wipers operate once in every 4 to 6 seconds.  
LO (turned two steps) : Wipers operate at low speed.  
HI (turned three steps) : Wipers operate at high speed.
  - **Washer switch**  
Pushing the center of the lever causes washer fluid to spray over the windshield.



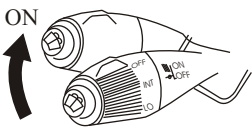
CAUTION!

1. If the wipers are operated over dry windshield which is contaminated with dust and dirt, damage to the glass could result. Make sure that the washer fluid is sprayed before operating the wipers.
2. If the washer is operated continuously for more than 60 seconds or when there is no washer fluid in the tank, the motor could burn out.
3. If wipers do not operate when the lever is turned, immediately turn off the switch and identify the cause of trouble. If the switch is left on, it could cause the motor to burn out.

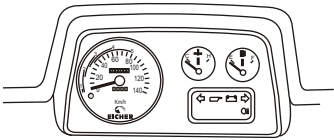


SWITCHES AND CONTROLS (Cont'd.)

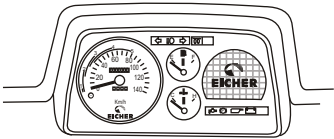
- **Hazard warning switch**  
Use this switch when the vehicle is parked on the road in case of emergency.  
When the left hand multifunction lever is moved up, all turn signal lamps will start flashing. Lift the lever and release it to switch off the lamps.



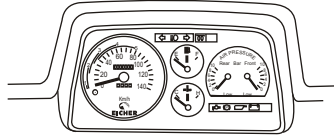
10.50/10.59



For Hydraulic brake model



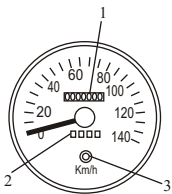
For Air brake model



MAKING FRIENDS WITH THE DASHBOARD

Arrangements of meters and indicator lamps

- **Speedometer**  
Indicates the vehicle speed.
- **Odometer (1)**  
Indicates the total distance driven in kms.
- **Trip meter (2)**  
Used to note the distance driven during trips or between fuel fillups. Pressing the knob (3) resets the zero position.



MAKING FRIENDS WITH THE DASHBOARD

- **Fuel gauge**  
Indicates the fuel quantity in the fuel tank. The pointer continues indicating the fuel level even when the starter switch is placed in the OFF position.

CAUTION !

1. Develop a habit of refueling as soon as the pointer nears E.
2. Before getting your vehicle started, make sure that the fuel is sufficient for the trip you are undertaking.

- **Water Temperature gauge**  
Indicates the temperature of engine coolant.
  1. It operates when the starter switch is in ON position.
  2. The pointer should register below the red zone (85°C) during driving.

CAUTION !

When the pointer is in the red zone, it indicates that the engine is overheating. Immediately pull your vehicle to a safe location and take corrective action. See page 3-108 for actions to be taken in case of engine overheating.

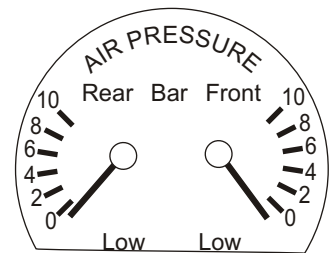
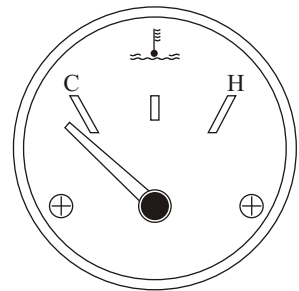
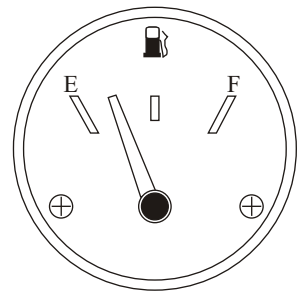
- **Air pressure gauges**  
Separate gauges provided for front & rear wheels which indicates the air pressure.
  1. Available in respective circuits. It operates when the starter switch is in ON position.
  2. The pointer should register between 7 & 8 bar for graduations.

CAUTION !:

Pressure gauges shows full reading when sensor connection on service air tanks are loose

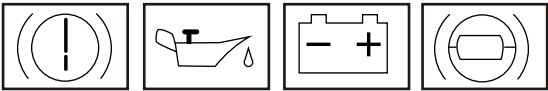
Air pressure gauge needles may fluctuate if the battery is weak / loose terminals / disconnected battery cables & faulty alternators.

Low pressure indicator (Red LED) These come ON when the sytem /pressure drops below 4.5 bar. It operates when starter switch is in ON position.




MAKING FRIENDS WITH THE DASHBOARD  
(Cont'd.)

- **Warning lamps**  
These lamps are provided to warn the driver about any failure or unusual condition in different systems. If any warning lamp comes on while driving immediately pull your vehicle to a safe location & check for probable causes and take corrective action. Let us go through each and every lamp individually.





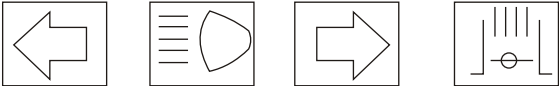
- ① - **Brake**  
Lights when the parking brake lever is pulled. If it lights when the parking brake lever is released or during vehicle operation, the brake fluid level is low. Since fluid leakage is suspected, stop the vehicle immediately and take corrective action.

-  - **Oil Pressure**  
Lights when the engine oil pressure falls abnormally or the oil filter element is clogged. If the lamp lights during operation, stop the engine & check the engine oil level immediately. If the oil level is O.K. the oil filter element is clogged or the oil system is defective. Replace the element or have the oil system checked.





MAKING FRIENDS WITH THE DASHBOARD

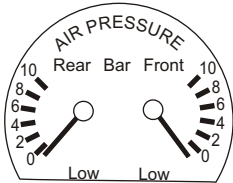
(Cont'd)

-  - **Charge**  
Lights when a fault occurs in the charging system, Check for improper V-belt tension or broken belt. When engine speed is low, the lamp may light. If it goes off as the engine speed is raised the system is performing well. Otherwise, get your charging system checked thoroughly.
-  - **Vacuum (except 10.50 & 10.59)**  
Lights when the vacuum pressure for the brake booster drops below the safe limit. Since it results in an extremely poor braking performance, stop the vehicle immediately and get the vehicle attended by your local authorised service station.



● Indicator lamps

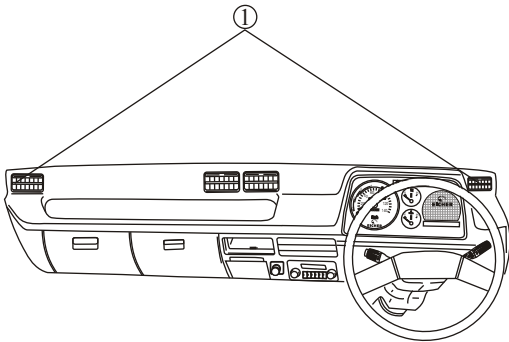
-  - **Turn**  
Flashes in unision with the turn signal lamps when the turn signal switch or hazard warning switch is set to ON. If it continues to light, the turn Signal lamp bulb is defective.
-  - **Beam**  
Lights when the headlamps are on upper beam or when the passing switch lever is raised.
-  - **Low pressure indicators**  
Low pressure indicators glows whenever system pressure goes below safe operating pressure of 4.5 bar.
-  - **Exhaust Brake (except 10.50 & 10.59)**  
Lights when the exhaust brake is in action.



VENTILATION

● Ventilators

Fresh outside air is let in during operation by adjusting the ventilator grill. The direction of air flow can he changed by shifting the louvre (1). To shut of the air turn louvre (1) up or down.



ENJOYING THE AMENITIES

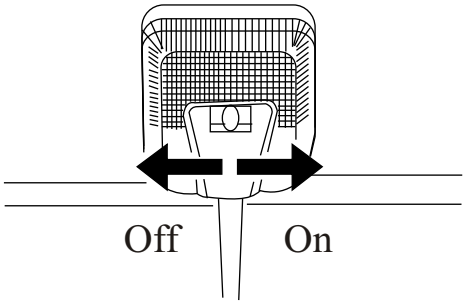
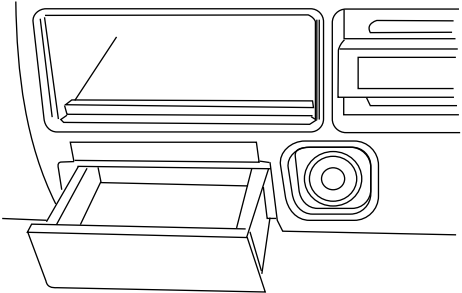
- **Ash tray**  
To remove the ash tray for cleaning, push its front end down and pull the tray out.

**CAUTION!**

- Make sure that the cigarette light is put out so as to prevent risk of fire.
- Close the tray after use. Do not put paper or other readily inflammable material into the ash tray.

- **Room lamp**  
**OFF**     The lamp goes off  
**ON**     The lamp lights.

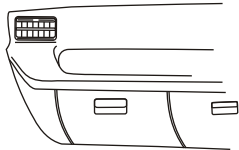
**CAUTION!**  
Be sure to put off your room lamp when you leave the vehicle.



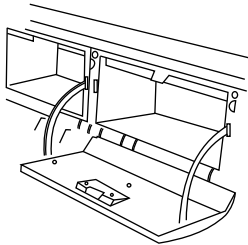
3-35

ENJOYING THE AMENITIES (Cont'd.)

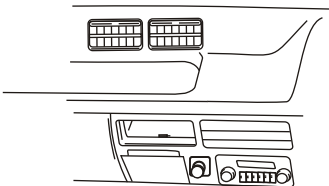
- **Glove Box**



- **Centre Console**



- **Parcel Tray**



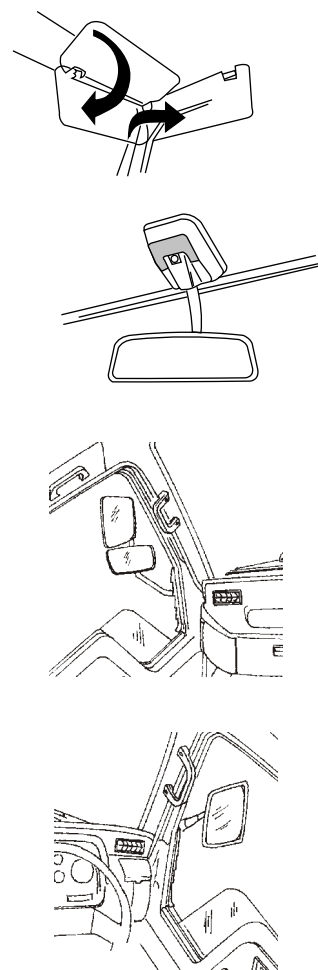
3-36

ENJOYING THE AMENITIES (Cont’d.)

- **Sun visor**  
Use the sun visor to prevent sun glare. Remove the inboard end and turn the visor to your side, and it serves as a side visor.
- **Inside rearview mirror**  
With the seat position properly adjusted, sit in the right position and adjust the mirror so as to gain the maximum rearward visibility.

**CAUTION !**  
From a safety viewpoint, the inside rearview mirror is designed to drop off its position upon strong impact. Use care not to give it strong shock.

- **Side view mirrors**  
Adjust the seat, sit in the right position and adjust the side view mirrors for maximum visibility.



IN EMERGENCIES

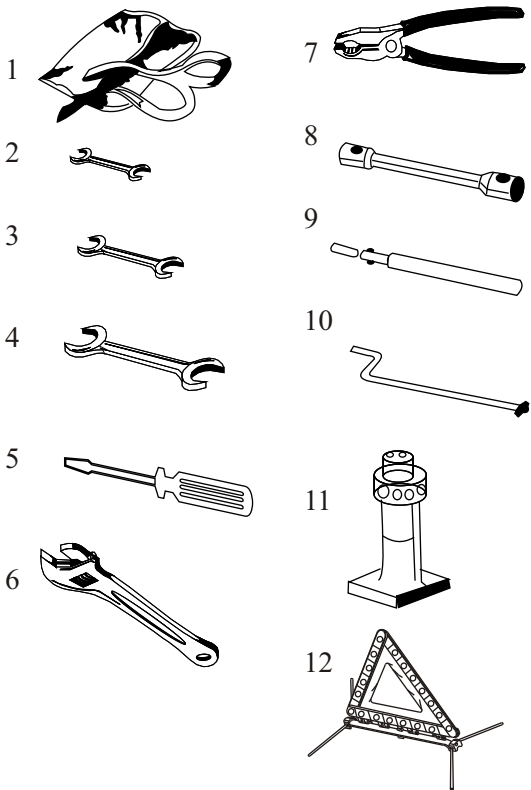
Always be prepared for emergencies. Know where the tools are and what kind of tools you have. Also check for proper operation of the jack.

	(Pg. No)
- Location of vehicle-borne tools	3-40
- Should trouble occur	3-40
- Engine stalls while the vehicle is in motion	3-41
- You feel a bump at the underbody	3-41
- Engine stalls and does not start	3-42
- Run-down battery	3-42
- Overheating	3-44
- Towing	3-45
- Running out of fuel	3-46
- Brake failure	3-47
- Getting stuck in mud	3-47

IN EMERGENCIES

Tools supplied along with the vehicle

- 1. Tool Bag
- 2. Spanner 10 x 12 mm.
- 3. Spanner 14 x 17 mm
- 4. Spanner 19 x 22 mm.
- 5. Screwdriver
- 6. Adjustable angle wrench
- 7. Pliers
- 8. Wheel nut wrench
- 9. Wrench handle
- 10. Spare tyre cranking handle .
- 11. Mechanical jack.
- 12. Warning Triangle

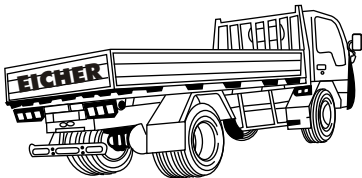
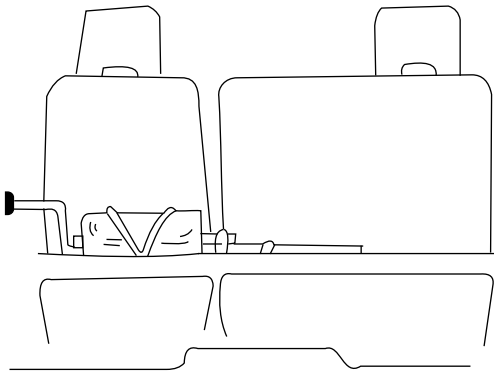


3-39

IN EMERGENCIES (Cont’d.)

- **Location of vehicle-borne tools**  
The vehicle-borne tools are stored behind the driver’s seat, whereas the jack is bolted with the LH side long member of the vehicle.
- **Should trouble occur**
  1. Pull your vehicle to the roadside first.
  2. Warn other drivers about the failure of your vehicle by using the hazard warning lamps.
  3. Also apply chocks to the wheels so as to take care of any possibility of parking brake failure.

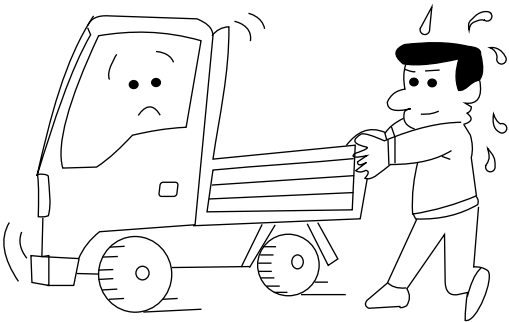
**CAUTION !**  
If the trouble is so minor that you can fix it yourself take remedial action while paying attention to the traffic.  
  
If the repair work involves technique beyond your capability, call the nearest authorised service station for help.



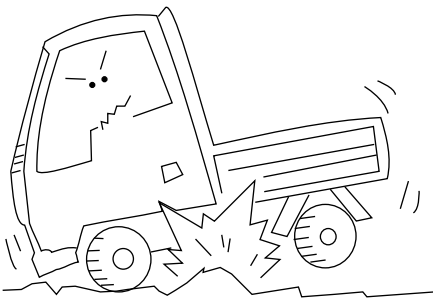


IN EMERGENCIES (Cont’d.)

- **Engine stalls while the vehicle is in motion.**  
The brake booster may become inoperative due to engine stalling. Depress the brake pedal hard to bring your vehicle to a stop at a safe place.  
Contact the nearest authorised service station for help.



- **You feel a bump at the underbody**  
Immediately stop your vehicle and check for brake fluid leaks and damages on body. If the underbody is seriously damaged, ask the nearest authorised service station for inspection.



3-41

IN EMERGENCIES (Cont’d)

- **Engine stalls and does not start**
  - 1.If there are people around, ask them to push your vehicle to a safe place.
  2. Contact the nearest authorised service station for help.
- Check for sufficient quantity of diesel in the fuel tank.
- Check the voltage between the FIP solenoid switch terminals. It should be the same as that of the battery voltage.
- Check battery voltage.

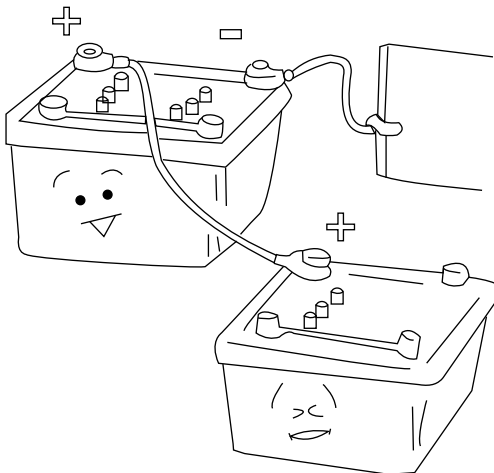
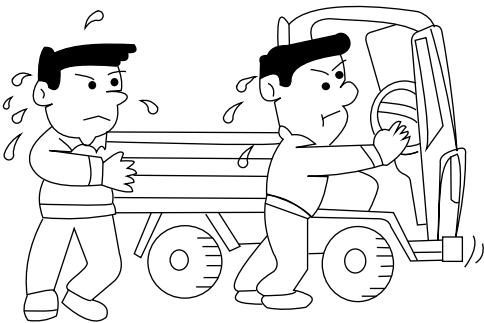
**Note :**

Do not crank the engine repeatedly if engine is not starting. It will damage the Fuel Injection Pump.

This is applicable only in the case of solenoid operated fuel stop mechanism.

If air is present in the fuel lines, bleed the system as per service procedure given.

- **Run-down battery**  
If you have booster cables, your engine can be started by using a charged or helper battery in another vehicle.



3-42

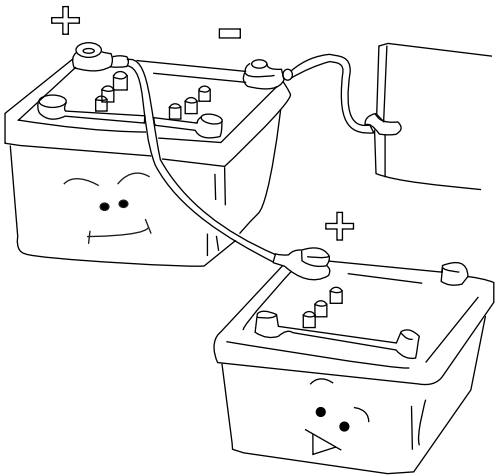
IN EMERGENCIES (Cont’d.)

Procedure.

- 1. Stop the engine of the helper vehicle
- 2. Connect the booster cables in the sequence shown. Make sure that the positive and negative terminals are connected to the right positions.
- 3. Ensure that the booster cables are connected securely and properly.
- 4. Start the helper engine and keep the speed slightly higher than idle.
- 5. After your engine has started, remove the booster cables by reversing the order of installation.
- 6. Have your battery fully charged at the nearest service station.

CAUTION !

- 1. Make sure that the helper battery is of the same voltage rating as the discharged or weak battery.
- 2. Never connect the positive to negative terminals.
- 3. Never disconnect cables from the battery terminals with the engine running. If disconnected, a failure in electrical system will result. .
- 4. Avoid starting by towing or pushing wherever possible. It can be dangerous.
- 5. Check fan belt for looseness and damage. Adjust or replace if necessary.
- 6. If the battery fluid and fan belt seen intact, have your vehicle checked at the nearest authorised service station.



IN EMERGENCIES (Contd...)

● Overheating

If the water temperature gauge pointer nears the red zone, stop the vehicle as soon as possible and take the following actions:

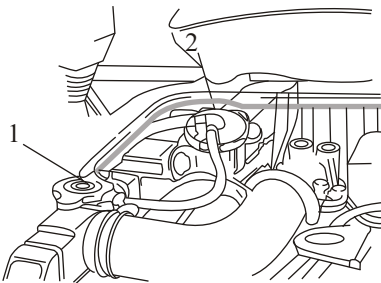
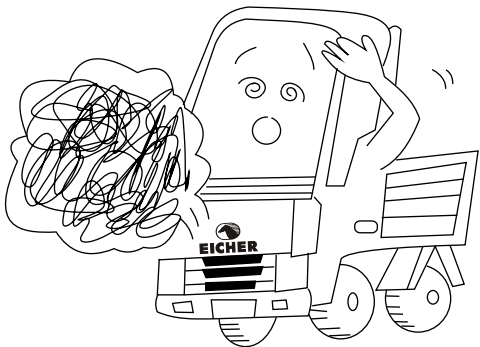
- 1. Pull up your vehicle to a safe location.
- 2. Keep engine running at idle until the engine cools down.
- 3. Stop the engine as the pointer nears down to the middle.
- 4. Allow the engine to cool down for some more time. Then, remove the radiator cap (1) and add water up to the trim.

Also pour water into the reservoir tank (2) upto the full mark. Pour water gradually.

- 5. Check the fan belt. If the belt is broken or worn out excessively replace it.

Precaution!

- 1. Run the engine while adding water in radiator if engine is hot.
- 2. Ensure radiator cap is fitted back properly.
- 3. Ensure that the radiator cap is examined by Authorised Workshop at the earliest after over-heating is noticed. It must be replaced if required.



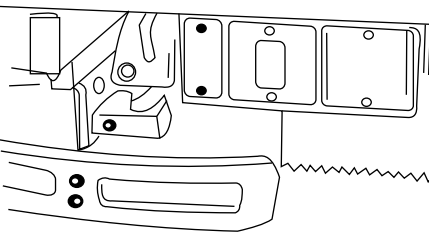
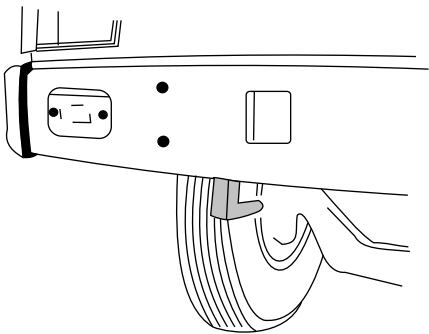
**IN EMERGENCIES (Contd...)**

● **Towing**

Towing hooks are provided in front and rear for fastening tow rope.

**CAUTION !**

1. When your vehicle is being towed, observe following precautions
  - Keep the gearshift lever in neutral.
  - Place the starter switch in ACC or ON position.
  - Keep your vehicle speed below 30 km/h.
  - Wherever possible keep your engine running while you are being towed. If your engine is stationary, poor braking performance will result.
2. If your trip involves a long downhill road, brakes can overheat resulting in failure. Ask for a towing van.
3. If the trouble is in transmission or differential, get a towing van to tow your vehicle with the rear wheels off the ground.
4. Never attempt to tow a failed vehicle heavier than the dead weight of your vehicle or a vehicle which has landed in a ditch on the roadside. Oblique towing should also be avoided. It can break the towrope and may also damage the hooks.



**IN EMERGENCIES (Cont'd.)**

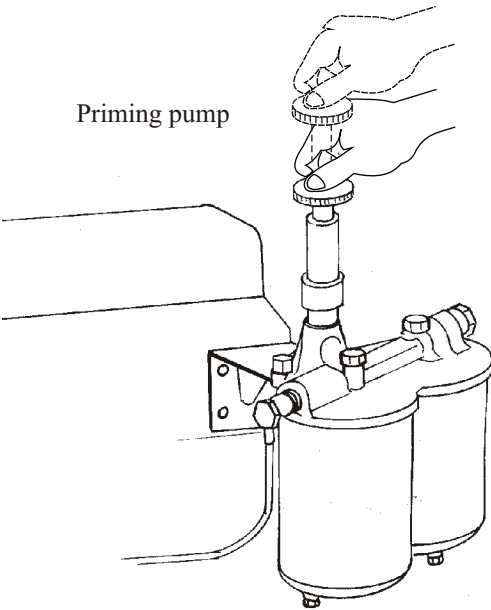
● **Running out of fuel**

When you have run out of fuel, air enters the fuel system and you cannot start the engine simply by refueling. Bleed the system as follows:

1. Loosen the priming pump of the dual filter by turning anticlockwise.
2. Operate the priming pump up & down by hand until the hand primer becomes hard
3. When the hand primer becomes hard, with the priming pump held down, turn it clockwise until it is securely held in position. The air in the fuel injection pump will get bled automatically when the engine is started.
4. Run the engine & check for fuel leaks.

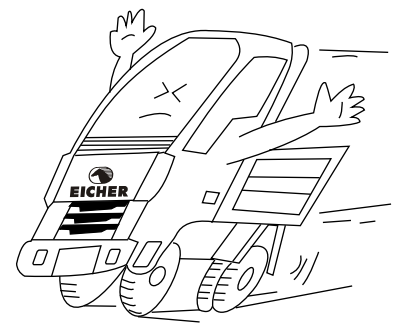
**CAUTION!**

Wipe/ clean if any split diesel fuel, as it could start a fire.  
Do not remove any other component while bleeding the system.



IN EMERGENCIES (Contd...)

- **Brake failure**  
Should the brakes fail, shift down to 1st gear in order (5th, 4th, 3rd, 2nd, 1st ) and pull the parking brake lever to bring the vehicle to a stop.  
Do not pull the parking brake lever all the way during high speed operation, as there is a danger of overturning.



- **Getting stuck in mud**  
If your vehicle is stuck in mud, do not accelerate excessively, as this will make the hole deeper and thereby make it harder to get out of it.  
  
Put gravel under the wheels to prevent slipping of tires and move your vehicle back and forth by alternatively shifting gears into 1st and reverse.



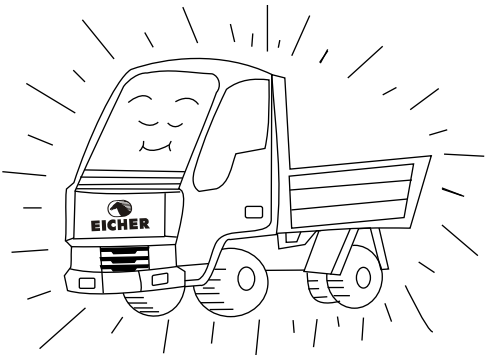
3-47

DRIVING IT ECONOMICALLY

Drive at moderate speeds and always care for your vehicle, that’s the knack for economical driving.

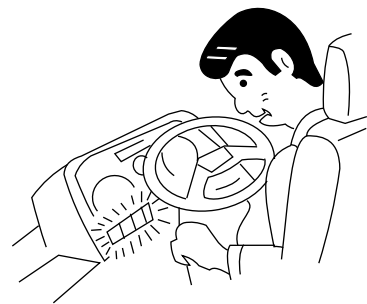
- **Running - in period**  
Running in period for the new vehicle is the first 1,000 kms. The way the vehicle is handled during this period determines its future life and overall performance. Keep moderate speeds during breaking operation by observing the following maximum speeds set for each gear position.

1st	2nd	3rd	4th	5th
10km/h	20km/h	35km/h	50km/h	60km/h



DRIVING IT ECONOMICALLY (Contd...)

- **In addition observe the following points.**
  - After the first 5000 kms be sure to take your vehicle to an Authorized Service Shop for inspection.
  - Continue warm-up operation until the pointer of the temperature gauge begins to move.
  - Avoid racing the engine
  - Avoid abrupt fast starts, sudden acceleration and brake application except when unavoidable.
  - During the initial running-in period the oils and fluids are contaminated rapidly. Make sure that the engine oil, transmission fluid and the differential gear oil are replaced after first 5000 kms.



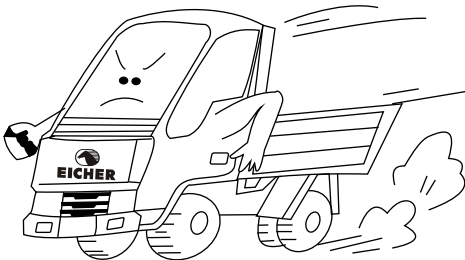
DRIVING IT ECONOMICALLY (Contd...)

- **Driving economically**

Drive your vehicle properly to extend its life and to save fuel and oil.  
Make sure that the daily pre-operational checks and periodic inspections are not neglected.  
For daily inspection procedure, see page 3-55
- **Do not Neglect Warm-up operation.**

If the engine is operated before it is hot, a large amount of fuel will be consumed. Also avoid racing the engine or high speed operation before the engine is hot. Get your vehicle started as soon as the water temperature gauge starts deflecting
- **Do not race the engine**

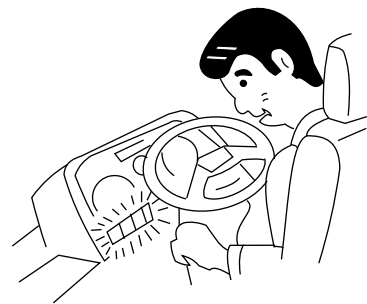
Avoid quick starts, sudden acceleration and overloading. These not only cause consumption of a large amount of fuel, seizure of turbocharger but also adversely affects the vehicle.



**NOTE:**  
Keep the engine in start condition for minimum 3 minutes.

DRIVING IT ECONOMICALLY (Contd...)

- **Use the clutch effectively to extend its life.**
  1. Depress the clutch pedal fully before shifting gears. If your pedal effort is not sufficient, it could cause damage to the clutch and transmission gears.
  2. Keep your foot off the clutch pedal while the vehicle is in motion.
  3. When starting your vehicle in motion, use the 1st gear. Starting with the gearshift lever in 2nd could cause clutch slipping and thereby wear the clutch rapidly.
- **When shifting to a higher speed try to make an early shift without accelerating the engine to the maximum speed.**
  - Avoid high speed operation in low speed gear. Use proper gear suitable for the operating speed.
  - After the vehicle has attained the required speed, keep the accelerator pedal at the same position as far as possible.



3-51

OPERATING IN COLD AREAS

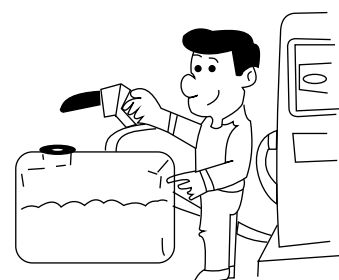
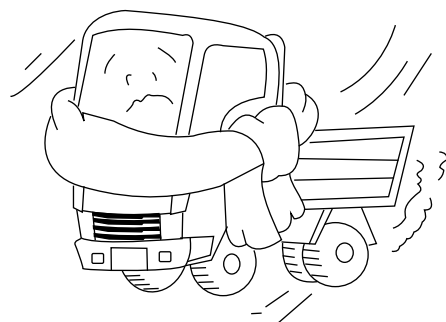
- **Operating in Cold Areas**

The following precautions should be taken while handling the vehicle in cold areas.

  1. Adding antifreeze to the coolant is essential. Also get your nearest authorized service shop to measure the specific gravity of coolant so as to determine whether the percentage of antifreeze in the coolant is adequate.
  2. Check the battery fluid for proper level and specific gravity\*
  3. Change the engine oil with the one suitable for ambient temperature.
- **Fuel**

While operating in cold areas ensure that your fuel tank is atleast half-full.  
By ensuring this, possibility of fuel freezing is reduced.

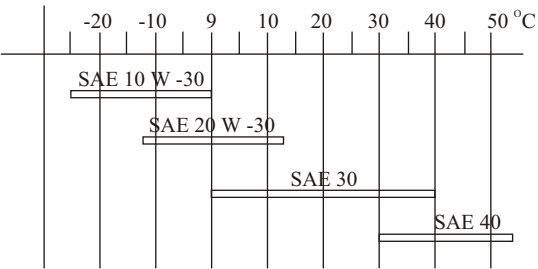
\* Not Required in case of "Maintenance Free" Battery



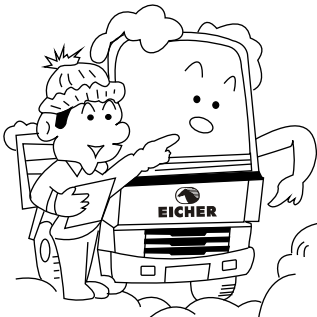
3-52

OPERATING IN COLD AREAS (Contd...)

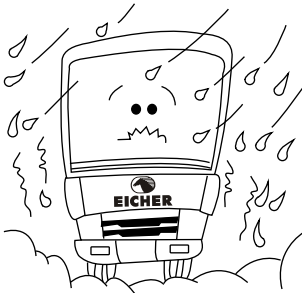
- **Engine Oil**  
Engine oils with different viscosity numbers are used with different operating conditions. Use this table showing different viscosity numbers according to outside temperatures.



- **Inspection before operation (Daily inspection)**  
Add the following check items to the daily inspection in cold weather.
  1. Remove snow and ice from wheels, inside the fenders, and underbody with care not to damage parts.
  2. When starting the engine, check the accelerator pedal for smooth operation.
  3. Ensure that the wiper blades are not frozen to the wind shield.

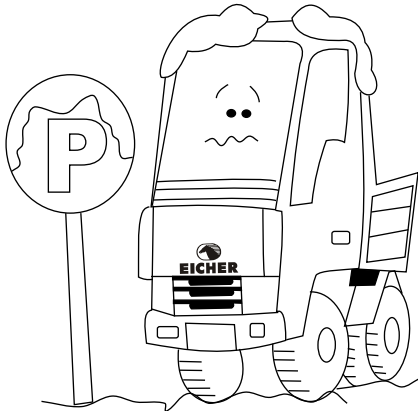


- **Special handling precautions**  
**Doors freezing up**  
Incase door freezing occurs, do not try to open the doors by force, this could separate and crack rubbers around the doors. Instead, pour hot water to remove the ice. Be sure to remove water later and apply silicone oil to prevent freeze up.

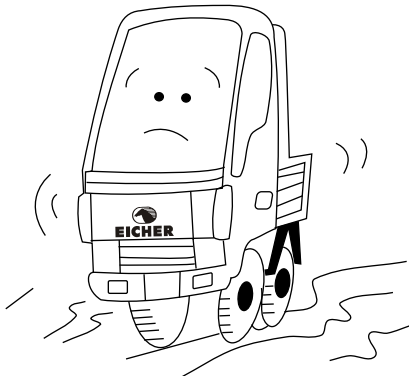


OPERATING IN COLD AREAS (Contd...)

- **Parking**  
If the atmospheric temperature is too low do not apply parking brake. If left applied, the brake system may freeze up. Instead, place the gearshift lever in 1st or reverse position & apply chocks to the wheels.



- **Braking performance**  
With the vehicle in motion, check for braking performance by depressing the brake pedal for tests when you are clear of other traffic. If the braking performance is poor, keep low speeds and depress the pedal several times until good braking action is regained.





DAILY INSPECTION

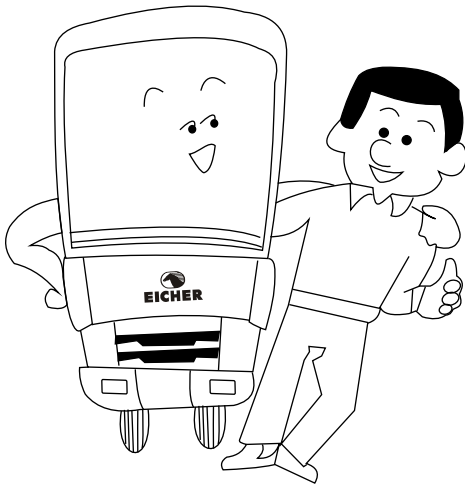
For comfortable and safe driving your vehicle must be kept in top operating condition at all times.

To ensure this, carry out the daily inspection recommended here.

These are just a series of simple inspections performed, while sitting behind the steering wheel and while walking around the vehicle before a day’s operations.

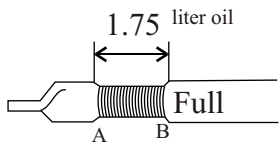
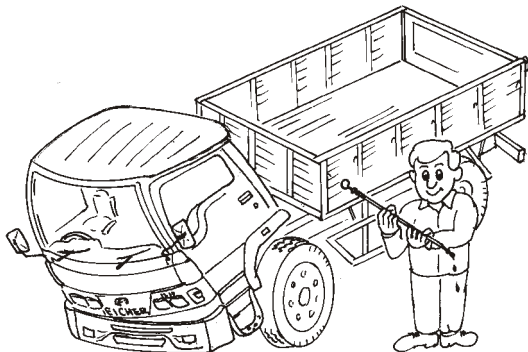
If anything wrong is noticed during this inspection, call your nearest authorized service station.

- **Behind the wheel**
  - Steering wheel play
  - Parking brake lever stroke
  - Brake fluid level
  - Brake pedal operation
  - Engine operating state
  - Operation of gauges and warning/indicator lamps
  - Rearview mirror
  - Function check of switches
  - Wiper operation
  - Door lock



DAILY INSPECTION (Contd...)

- **Looking into the engine compartment**
  - Coolant level
  - Engine oil level
  - V-belt tension
- **Color of exhaust gases**
- **Around the vehicle**
  - Checking lamps
  - Tyre inflation pressure
  - Depth of tyre treads, foreign objects, cracks
  - Broken chassis spring
  - Removing condensate from water separator
  - Licence plate and reflector stains & damage
  - Rear body cargo loading state
  - Water and oil leaks



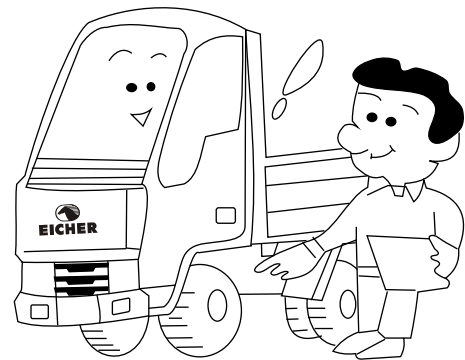
DAILY INSPECTION

- While driving at crawling speed
  - Steering wheel
  - Brakes

CAUTION!

When checking the engine compartment.

- Make sure that the engine is stationary.
  - Use care to prevent injury by sharp body edges.
  - Ensure that the engine is cool before touching, by hand.
  - Make sure that no waste cloth or tools are left behind in the engine compartment when you have completed the inspection procedure.
- Remedial actions on old problems
- Check the troubles and failures noted on the preceding day or during your previous trip. Rectify the defects.



DAILY INSPECTION (Contd...)

- Behind the wheel
  - Steering wheel play

Place the steering wheel with front wheels in straight ahead position on the wheel rim and lightly turn the wheel to check for free play. The steering wheel rim should move less than 50 mm before the front wheels begin to move.

Move the wheel up and down, fore and aft, and to the right and left to check for looseness.

If the wheel is excessively loose, adjustment or repair is required.

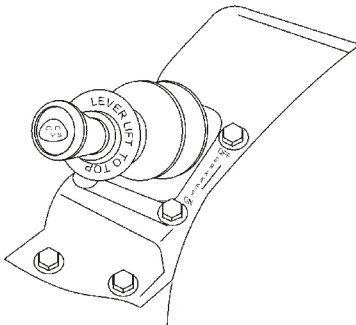
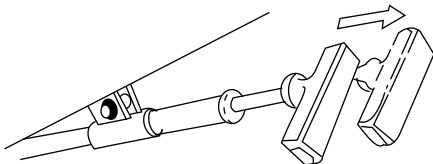
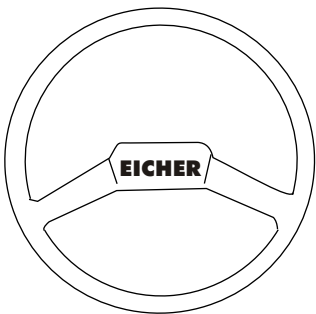
- Parking brake lever stroke (Mechanical Brake)

The stroke must be 80 to 120 mm when pulled with a force of 30 kg. If the stroke is out of the specification, get it adjusted at an authorised service station.

Also check to ensure that when the lever is pulled and held, the lever is securely locked in position.

- Parking brake lever operation (Air Brake)

Apply the parking brake & ensure smooth & complete operation of the spring brake actuator push rod.



DAILY INSPECTION (Contd...)

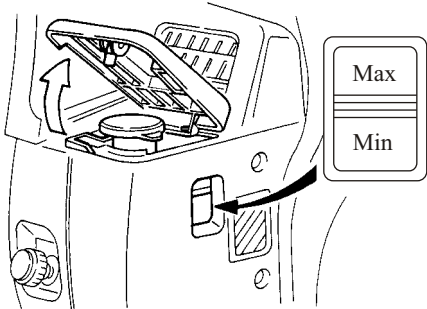
● Brake fluid level

The brake fluid level in the brake reservoir tank should be between MAX and MIN lines. If the level is below MIN, raise the cover and remove the cap from the tank, and add brake fluid up to the MAX line.

Make sure that the MAX line is not exceeded.

CAUTION !

- Use care not to spill the brake fluid while replenishing.
- The fluid, if spilt on body and resin parts, must be wiped off immediately so as to avoid any chances of discoloration and crack formation
- Do not use a mixture of different brands of brake fluid because mixing changes the properties of the fluid. Make sure that brake fluid under no circumstances is mixed with mineral oils such as engine oil.
- Make sure that the oil tank is protected from contamination. If there are foreign objects deposited in the tank, the tank requires inspection and cleaning.
- If the brake fluid level is excessively low, leakage is suspected. Get the vehicle inspected and repaired by an authorised service centre.



DAILY INSPECTION (Contd...)

● Brake pedal operation

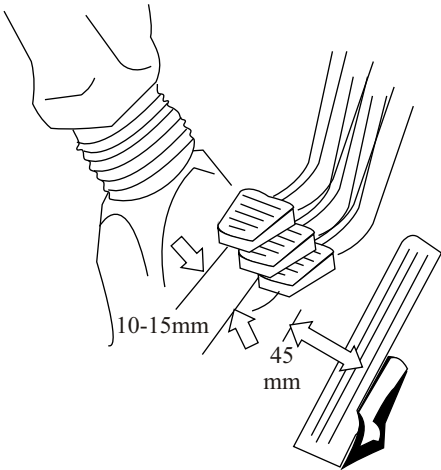
- Push the brake pedal by finger to ensure that there is a play of 10 to 15 mm. After starting the engine depress the pedal with a force of about 50 kg and check for clearance between the pedal and floor-board. This clearance should be 45 mm or more. If the clearance is smaller than that, or pedal action is spongy, chances are that the brake fluid leaks or there is air in the system. This may result in poor braking performance or vehicle pulling to one side. The system requires inspection and repair.

CAUTION !

After full application of brake pedal the angle between the pushrod and the slack adjuster should not be less than 90°. If it is less than 90° then take the vehicle to the nearest authorised service centre for necessary brake adjustment

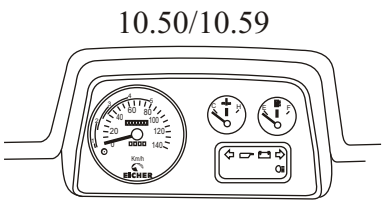
● Engine operating state

Check engine start up and check for abnormal noise.

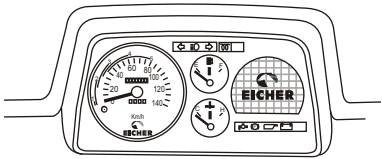


DAILY INSPECTION (Contd...)

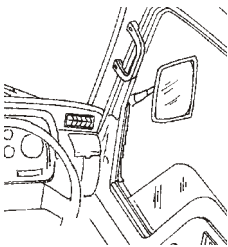
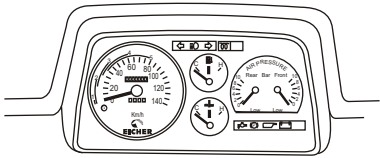
- **Operation of gauges and warning/indicator lamps**  
Does the fuel gauge register the level enough for the trip being undertaken?  
Does the water temperature gauge give a rising indication as the engine warms up?  
Check the warning and indicator lamp by the following procedure:  
  1. Check if the warning lamp comes on when the vacuum in the brake system is disturbed by depressing the brake pedal several times.
  2. With the starter switch in ON position and the engine stationary check if warning lamps are lit.  
Start the engine and these lamps should go OFF
  3. Other indicator lamps are operational if they come on when the respective switches and levers are operated.  
After inspection, set all switches and levers to OFF
- **Rearview mirror**  
Take the correct position on the driver’s seat and adjust the mirror to obtain the best visibility. Wipe off dirt from the mirror surface.



For Hydraulic brake model



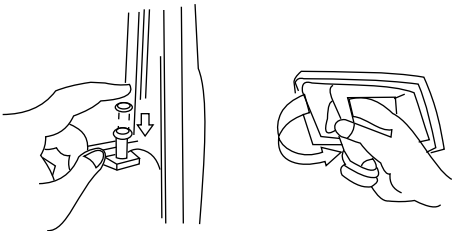
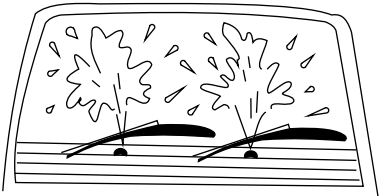
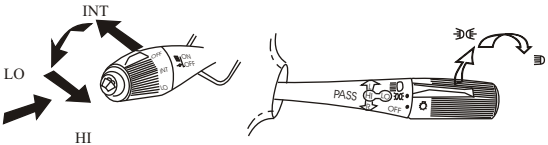
For Air brake model



3-61

DAILY INSPECTION (Contd...)

- **Functional check of switches**  
Operate each switch and ensure it operates normally.
- **Wiper Operation**
  - Push in the knob to check if the window washer fluid is sprayed in the correct direction.
  - Turn the lever to check wiper operation.  
Be sure to spray washer fluid before operating the wiper.
- **Door lock**  
Push the inner lock knob and operate the inner handle to make sure that the door does not open.
- **Horn**  
Press the horn button to make sure that the horn sounds.



3-62

DAILY INSPECTION (Contd...)

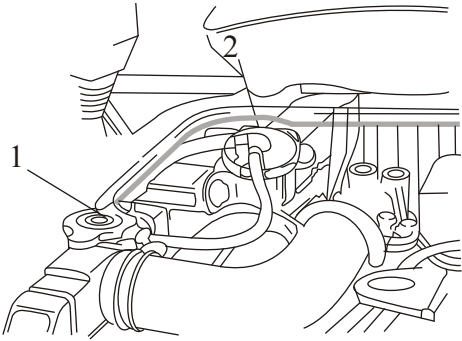
● Looking into the engine compartment

● Coolant level

The coolant level is OK if it exceeds the LOW level mark. If coolant level is lower than that, remove the cap (2) from the reservoir tank and add coolant up to the FULL level.

CAUTION !

Do not remove the radiator cap (1) except when replacing the coolant.  
Do not use hard water from well and river, as it causes scale and adds dust.

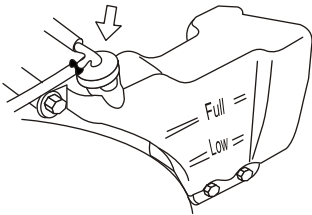


● Engine oil level

Withdraw the oil level gauge (dipstick) and wipe away the oil from the tip of the gauge and reinsert it all the way. Slowly withdraw the level gauge once again and check the position of oil on the gauge. The oil level on the gauge should be within the range shown in the illustration.

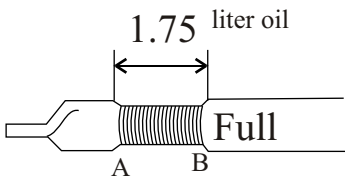
CAUTION !

- Check the oil level before starting the engine with the vehicle on a level surface.



DAILY INSPECTION (Contd...)

- When the oil level is to be checked after operation, allow more than 30 minutes after shut down.
- Clean the filler port and its vicinity to prevent entry of dust when oil is added.
- When the oil level is to be checked after addition of oil, allow more than six minutes. If the level is checked immediately after addition of oil, a wrong reading will be reflected.
- Wipe away all oil spilt at the time of addition.
- Select the proper type of oil considering the ambient temperature. This should be on the basis of the tables shown on page no 3-53.

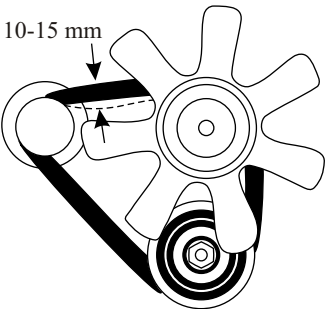


CAUTION !

Do not mix different grade oil while topping up.

● V-belt tension and damage

Check for the deflection of the V-belt when it is pressed at its center with a force of about 10 Kg. The V-belt should deflect by about 10 to 15 mm.  
If the deflection does not lie within the specified range it calls for adjustment. Insufficient tension will result in undercharging or overheating whereas, excessive tension could cause damage to alternator or V-belt itself.



DAILY INSPECTION (Contd...)

- **Adjustment of V-belt tension by alternator**  
Slightly back off the mounting bolts at the top and bottom of the alternator (indicated by arrows) and move the alternator to adjust tension. Tighten the bolts after adjustment.
- **Adjustment of V-belt tension by compressor**  
Tighten or loosen the adjusting bolt of the compressor to tighten or loosen the v-belt respectively as required.

CAUTION !

To ensure safety, disconnect the negative cable from the battery before adjustment.

Colour of exhaust gases.

Check for colour of exhaust gases after the engine has been warmed up.  
The colour of exhaust indicates the condition of the engine.

Colour of exhaust:

Colour less or faint blue  
Black

Engine condition

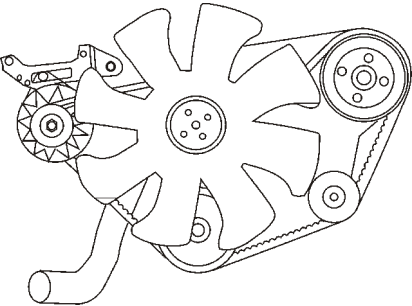
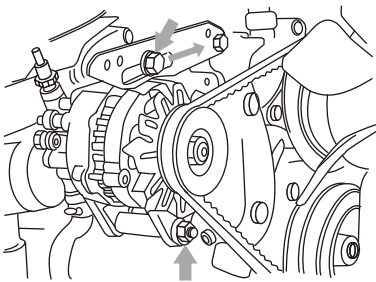
Good  
Wrong, indicating incomplete combustion

White

Wrong, indicating combustion of engine oil with fuel.

CAUTION !

When the atmospheric temperature is low, the exhaust gases will appear white because of the low temperature. Use care not to confuse it with white exhaust gas.



3-65

DAILY INSPECTION (Contd...)

Around the vehicle

- **Checking lamps**  
Operate each switch to make sure that the corresponding lamp comes on or flashes :

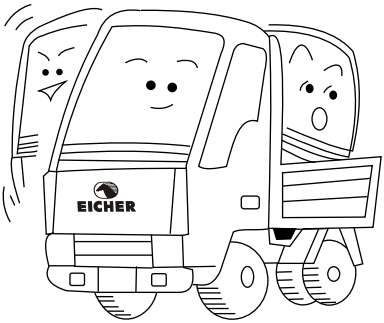
Headlamps  
Parking lamps  
Turn signal lamp  
Clearance lamps  
Tail lamps  
Licence plate lamps  
Meter illumination  
Hazard Warning lamps  
Room lamp

Note :

When the turn signal lamps flash, the indicator lamp in the meter also flashes.

Depress the brake pedal to check that the stop lamps come on. Place the gearshift lever in “R” position to ensure that the backup lamps come on.

Check lens of each lamp for contamination, damage and water entry



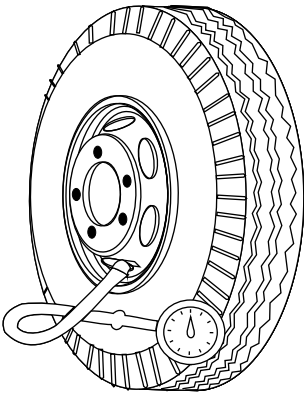
3-66

DAILY INSPECTION (Contd...)

● Tyre inflation pressure

Check the inflation pressure when the tyres are cold before a trip.

Model	Front PSI (Kgf/cm <sup>2</sup> )	Rear PSI (Kgf/cm <sup>2</sup> )
10.50	60	105
10.59	60	95
10.60 G	60	60
10.70	75	75
10.75	60	100
10.80	105	105
10.90	110	110
10.95	70	85
11.10	85	100



CAUTION !

On rear tyres, make sure that there is no difference in inflation pressure between the inside and outside tyre. This will result in faster wear on the tyre with higher inflation pressure.  
Do not use both the radial and bias-ply tyres on a vehicle.  
Make sure that the air valves are capped.

DAILY INSPECTION (Contd...)

Depth of tyre treads, foreign objects, cracks

Check to ensure that the tyre treads have a depth of more than 1.6 mm.  
Check also for stones, nails and other foreign objects embedded in the tyres and also check for cracks and abnormal wear.

\* Worn tyres could cause slipping and burst.

● Broken chassis spring

Check leaf springs for breakage. Check also the vehicle position for unusual tilt.

● Removing condensate from water separator

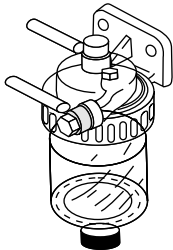
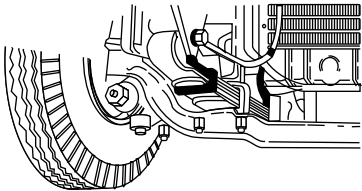
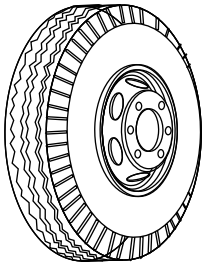
For the proper functioning of the fuel injection Pump and to get longlasting performance from the same, the Fuel should be free from water content. Please check the water separator daily for water content and drain if required when the water level ring reaches the mark.

CAUTION !

- Do not disconnect the water separator from the fuel system
- Drain water from water separator daily
- Ref Daily inspection for draining procedure

Spare tyre installed state

Check the spare tyre carrier for damage and check that the spare tyre is fixed securely.





## DAILY INSPECTION (Contd...)

- **Licence plate and reflector stains and damage**  
Check for stains and damage and check installed state.
- **Rear Body cargo loading state**  
Check that cargo is loaded uniformly and check that cargo is secured by canvas or rope when necessary.
- **Water and oil leaks**  
Check the underbody for possible leaks of water and oil.
- **While driving at crawling speed**  
Drive the vehicle at 20 km/h or lower speeds on a safe road to check for the following
  - **Steering wheel**  
Check if you feel steering shock or loose directional control.  
Check also for hard steering.
  - **Brakes**  
Make sure that you have good braking performance.  
Ensure also that the vehicle does not pull to one side during braking.



3-69

## SIMPLE SERVICING

The following pages cover simple maintenance and servicing procedures that you can perform yourself.

After the service job, make sure that waste cloth or tools are not left behind on or around the engine. Inflammable objects left in the engine compartment could start a fire.

### Observe following precautions when performing the service job.

- Select a safe location for the job.
- Remember, safety must come first.
- Use the right tools.
- Make sure that the engine is stationary.
- Take necessary measure to prevent the vehicle from moving during the work. Use parking brake lever and chocks for wheels.

3-70

SIMPLE SERVICING (Contd...)

	Pg. No.
1. When a tyre blows out	
a) Spare tyre	3-72
b) Jack-up points	3-73
c) Replacing tyres	3-74
d) Tyre rotation	3-78
2. Inspecting and topping up the battery	3-79
3. Cleaning battery terminals	3-80
4. Cleaning and replacing air cleaner element	3-80
5. Replacing oil filter element	3-82
6. Replacing fuel filter element	3-83
7. Checking & replacing transmission gear oil	3-86
8. Checking & replacing rear axle gear oil	3-87
9. Replacing engine oil	3-88
10. Replacing coolant	3-90
11. Replacing lamp bulbs	3-93
12. Blown fuse	3-95
13. Caring for your vehicle	3-98

SIMPLE SERVICING (Contd...)

● When a tyre blows out

1. Spare tyre

Remove the spare tyre upper bolt & bracket from spare tyre carrier bracket.

Insert the spare tyre cranking handle into the hole in the spare tyre carrier and turn handle counterclockwise, and the spare tyre comes down.

To install, place the tyre with the convex side of disc wheel upward, mount the hanger (1) in the disc wheel hole, and turn the cranking handle clockwise to wind up the chain. After the tyre has been brought up a little make sure that the hanger fit into the disc wheel hole and the chain is not twisted.

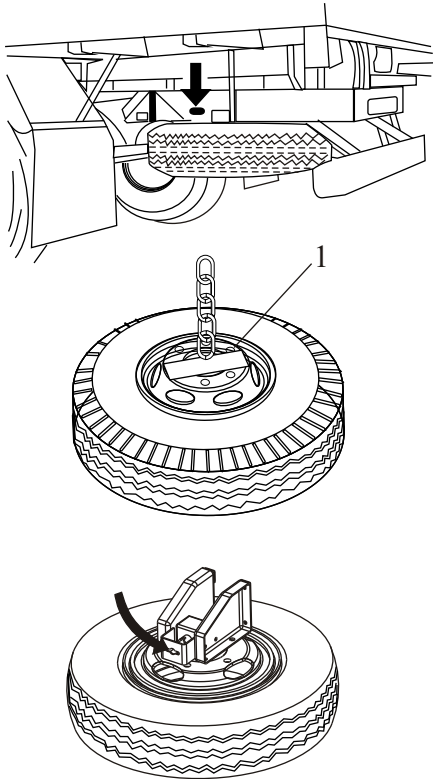
After the tyre has been fully raised, tighten by hand to about 30 kgf & remove the cranking handle taking care not to turn the handle in the reverse direction. Check to ensure that the tyre is secured in position firmly.

Fix the upper spare tyre bracket & bolt along with spare tyre carrier.

If spare tyre (LUG) has to be used in front, it should be replaced by the repaired rib tyre at the front at the earliest occasion to avoid relatively inferior steering performance.

CAUTION !

If you cannot mount the removed tyre in position (spare tyre hanger), load it on the cargo deck or in cabin and ask your nearest authorised service centre for inspection and correction



SIMPLE SERVICING (Contd...)

● Jack-up Points

The jack-up points are as follows:

Front wheels-Under leaf springs

Rear wheels-Under rear axle housing

To raise

If the jack-up point is too high, extend the jack by turning the jack head counter-clockwise. Having located the jack head use the wrench handle provided for turning the jack nut by fixing the handle on the holes provided on the periphery of the jack nut.

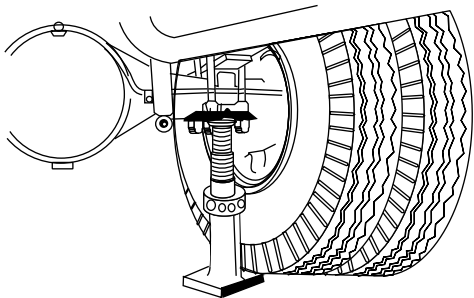
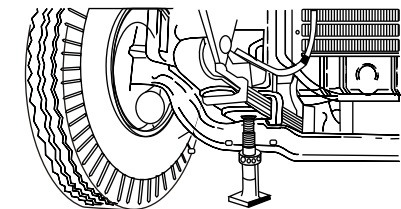
To lower

Turn the jack nut in opposite direction with the help of wrench handle.

CAUTION !

Use only the jack provided for the vehicle

Use the jack only when replacing tyres.



SIMPLE SERVICING (Contd...)

Use the jack on a flat, solid ground, Avoid extending more than necessary.

Strictly observe the specified jack-up point. The vehicle must not be raised with the jack installed at any other position.

Apply chocks to the wheels

If the jack gets out of position, it could be extremely dangerous. When you are using the jack, never get under the vehicle or shake the vehicle when it is jacked up.

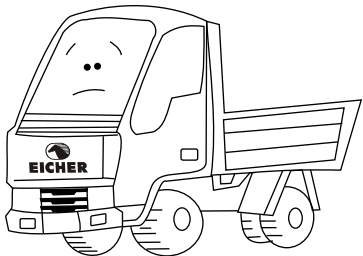
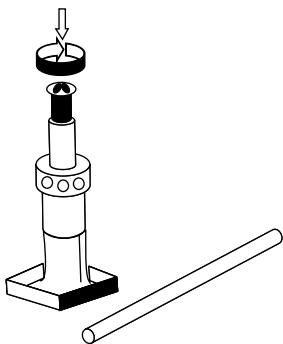
If the vehicle needs to be raised on the jack for long, use wooden blocks or square bars to support the vehicle.

● Replacing tyres

Preparation

1. Pull up your vehicle to road side to prevent hindrance to other traffic on road and use a red flag or hazard warning lamp to warn drivers of other vehicles behind you.
2. Pull the parking brake lever all the way.
3. Take out the tools, jack and spare tyre.
4. Apply chocks before and behind the tyre diagonally opposite to the one to be replaced.

( e.g.: Chock the left front wheel to replace the right rear tyre)



SIMPLE SERVICING (Contd...)

Jacking up

- 1. Set the jack at the jack-up point. See “Jack-up points”.
- 2. Slightly back off wheel nuts with the wheel nut wrench. Do not remove them completely.
- 3. Raise the vehicle on the jack until the tyre is just off ground. Ensure that the vehicle “is securely” held on the jack.

CAUTION !

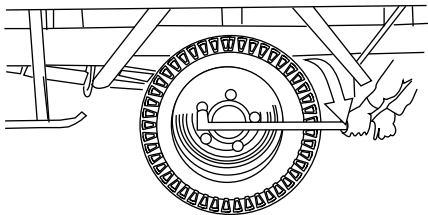
- 1. Ensure that the wrench handle is fully inserted into the wheel nut wrench and that the wheel nut wrench is installed on to the nut all the way so that it does not slip while working.

Double Nut Type

- 2. Note that the wheel nuts (2) (with marking R) on the right hand tyres have right-hand threads & wheel nuts ( 1 ) (with marking L) on the left tyres have left-hand threads. To loosen the nuts, turn counterclockwise for the right-hand side and clockwise for the left-hand side.

Single Nut Type

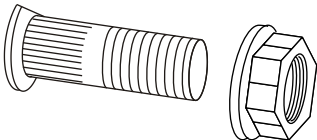
- 3. Loosen the nut anticlockwise direction to remove the wheel



Double Nut Type



Single Nut Type



SIMPLE SERVICING (Contd...)

● Removing the tyre

- 1. With the wheel nuts removed, remove the tyre.
- 2. On a double-tyre vehicle, first remove the outside tyre, then temporarily lower the vehicle. Using the opposite end (square hole) of the wheel nut wrench, loosen the inner wheel nuts to remove the inner in the same way.

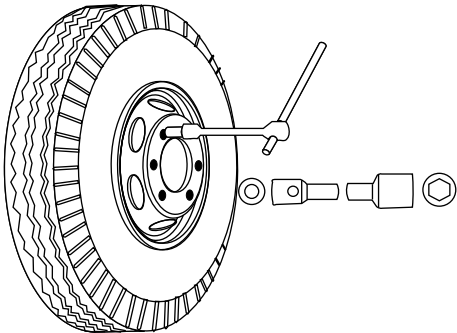
● Installing the tyre (Double Nut Type)

- 1. Dual tyres should be installed as follows:  
After the inside tyre ( 1 ) has been completely mounted with the inner wheel nuts (3) jack up the vehicle again and install the outside tyre ( 2 ).
- 2. Even when only the outside tyre ( 2 ) is to be replaced, make sure that the inner wheel nuts ( 3 ) are tightened to specified torque before installation of outside tyre (2).  
When the outside tyre ( 2 ) is installed make sure that the air plug is at a different position from that of the inside tyre.
- 3. Clean the tyre mounting surface of the brake drum and the inside of disc wheel before installation of a tyre.

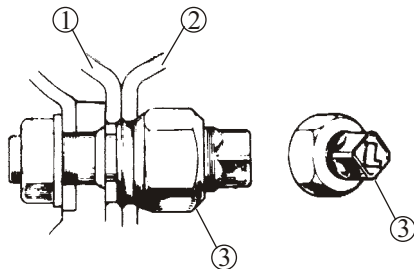
\* Take care not to damage the threaded portions of wheel nuts.

● Installing the tyre (Single Nut Type)

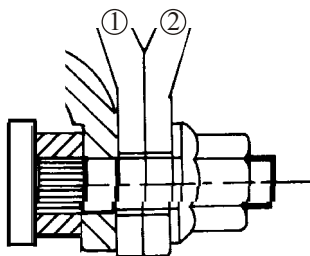
- 1. Dual tyres should be installed as follows:  
After the inside tyre ( 1 ) has been completely mounted inner install the outside tyre ( 2 ).
- 2. When the outside tyre ( 2 ) is installed make sure that the air plug is at a different position from that of the inside tyre.
- 3. Clean the tyre mounting surface of the brake drum and the inside of disc wheel before installation of a tyre.  
\* Take care not to damage the threaded portions of wheel nuts.
- 4. Tighten the wheel nuts in clockwise direction in the specified sequence as below.



Double Nut Type



Single Nut Type

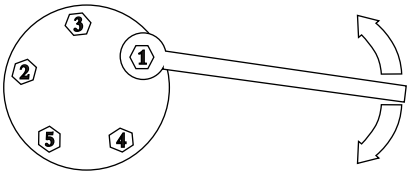


SIMPLE SERVICING (Contd...)

- 4 Partially tighten the wheel nuts with the taper portion facing the disc wheel. At the same time, align each bolt with the bolt hole in the disc wheel so as to prevent eccentricity.
- 5. Lower the jack
- 6. Tighten the wheel nuts in two to three stages in the sequence shown. In the final step, tighten the wheel nuts to the specified torque. (45~55Kgm)

CAUTION!

- Make sure the wheel nut wrench is inserted all the way into the wheel nuts. If the wrench does not fit deep enough it could result in accident due to slippage.
- As an additional precaution when you apply your body weight to tighten the wheel nuts, hold on to the vehicle body for support and take care that you do not fall down.
- 7. Store the tools and removed tyre and remove the chocks.
- 8. After a short trip, check for loose wheel nuts. Also adjust tyre inflation pressure as early as possible.



3-77

SIMPLE SERVICING (Contd...)

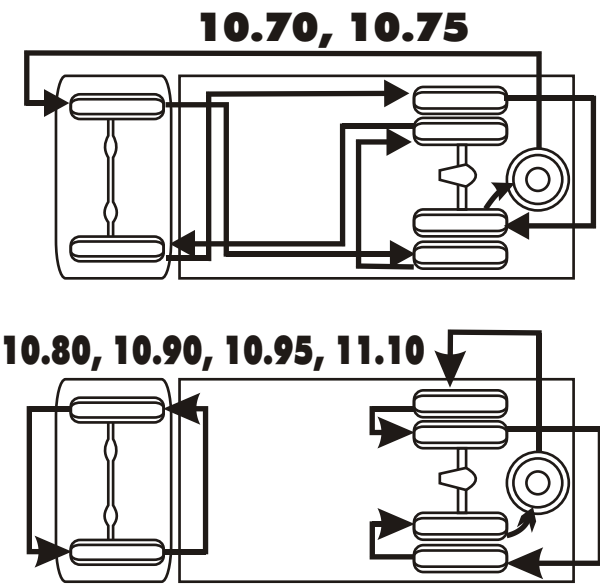
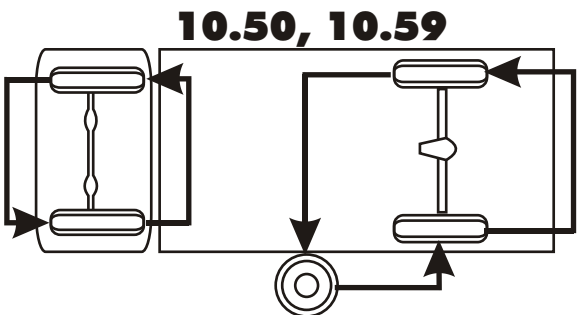
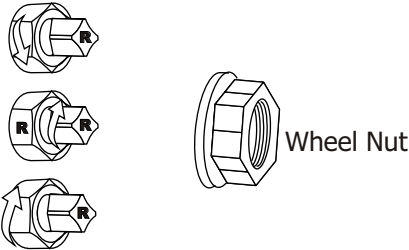
- **Retightening wheel nuts (Double Nut Type)**  
Retighten the wheel nuts at regular intervals to the specified torque.  
See page 3-77 for proper tightening procedure. Wheel nuts on dual tyre should be tightened in the following sequence.  
1. Loosen the outer wheel nuts (1).  
2. Tighten the inner wheel nuts (2) to the specified torque.\*  
3. Tighten the outer wheel nuts (1) to the specified torque.\*

\* Specified torque = 45~55 Kgm

- **Retightening wheel nuts (Single Nut Type)**  
Retighten the wheel nuts at regular intervals to the specified torque.  
See page 3-77 for proper tightening procedure.  
\* Specified torque = 35~45 Kgf·m

- **Tyre Rotation**  
Due to use of rib tyres in the front and higher PR lug tyres in the rear and spare wheel, tyre rotation pattern is recommended as shown on the right.

(Double Nut Type) (Single Nut Type)



3-78

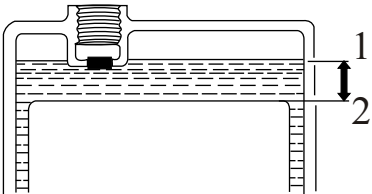
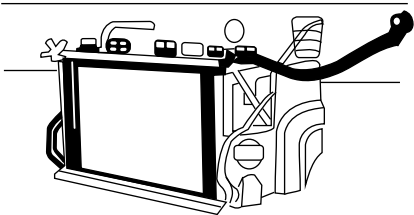
SIMPLE SERVICING (Contd...)

- **Inspecting and topping up the battery.**  
The battery fluid level should be between the UPPER (1) and LOWER (2) levels or 10 to 15 mm above the plates. If the level is low, remove the caps and add distilled water upto the UPPER level or 15 mm above the plates. There are six caps installed on a battery.

CAUTION !

1. The battery generates hydrogen gas, therefore, any fire or sparks in the vicinity of the battery should be avoided.
2. When a metal tool is used near the battery, disconnect the cable from the (-ve) terminal before hand for the sake of safety.
3. In case of skin contact with the battery fluid, wash the fluid away, immediately. If the fluid gets in the eyes, thoroughly wash away with a large amount of clean water and get medical attention immediately.
4. After addition of distilled water, operate the vehicle to charge the battery, as there is danger of freezing when the atmospheric temperature low.
5. If there is a loose terminal, tighten it firmly. If there is white powder on the terminals, wash away with hot water and then apply a thin coat of petroleum jelly.
6. When the battery needs charging, disconnect the battery cable from the (+ ve) terminal, remove all the caps, and charge the battery in a well-ventilated place.

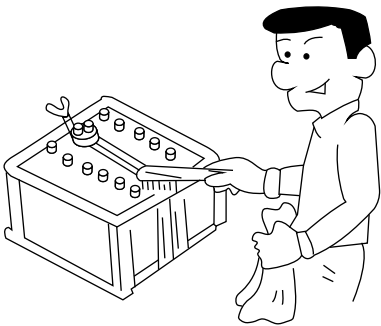
Note : Keep the ignition switch "off" while removing Battery terminal



3-79

SIMPLE SERVICING (Contd...)

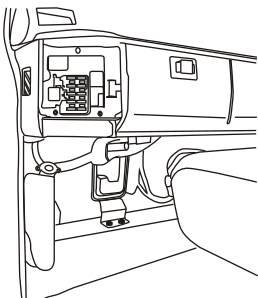
- **Cleaning battery terminals**  
Clean battery terminals if corroded, if white powder builds up at the terminals, use hot water to wash it off. If the corrosion is very heavy, use wire brush and sand paper for cleaning.  
Apply petroleum jelly to the terminals after cleaning.  
\* Be sure to close all filler ports while cleaning so as to prevent entry of foreign matter into the cells.



- **Cleaning of air cleaner element**

Cleaning intervals	5,000 Kms.
--------------------	------------

Note : ECU must be connected or disconnected to the wiring harness only when ignition switch is in "off" condition.



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SIMPLE SERVICING (Contd...)

Procedure for cleaning of wet type air cleaner:

- 1. Loosen the three wing nuts ( 1 ) and remove the oil pan ( 2 ).
- 2. Remove the wing nut (4) holding the element (3) and withdraw the element (3).
- 3. Soak the element in diesel and clean dust, oil etc.. After cleaning blow air against the steel wool to remove dust as well as oil.  
The oil should be replaced and the inside of the oil pan cleaned when the element is cleaned.
- 4. After the oil pan has been cleaned, supply engine oil up to the level mark.
- 5. Install by reversing the order of removal.

CAUTION !

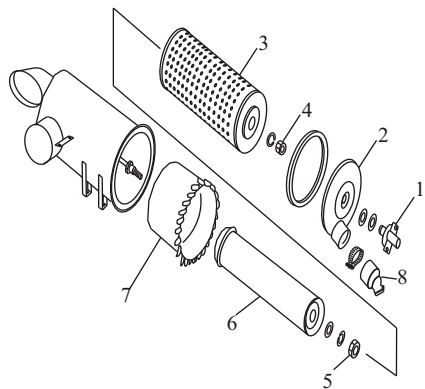
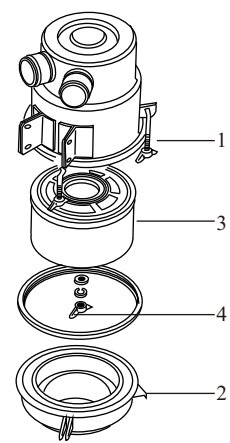
The element may be washed and reused as many times as you want but a damaged or clogged element should be immediately replaced.

Procedure for cleaning of dry type air cleaner:

- 1. Loosen the wing nut (1) and remove the cover (2).
- 2. Remove the element (3) by removing the nut )4)
- 3. Remove the nut (5) holding the safety cartridge (6)
- 4. Remove the safety cartridge (6)
- 5. Remove the cyclone (7)
- 6. Clean both air cleaner element (3) & safety cartridge (6) y blowing te air inside out
- 7. By squeezing and manipulating action remove dust deposit evacuator cap (8).
- 8. After cleaning the air cleaner assemble all the parts by reversing the order removal

CAUTION !

Both the element & safety cartridge should be cleaned when red band on restriction indicator appears. Air cleaner element (primary) should be replaced after two cleaning intervals of primary cartridge & Air cleaner safety cartridge (secondary) should be replaced after two years or at the time of 3<sup>rd</sup> replacement of primary cartridge whichever is earlier.



SIMPLE SERVICING (Contd...)

Replacing oil filter element

- **Main oil Filter** : First replacement at 5,000 then every 20,000 kms.
  - **Bypass oil Filter** : First replacement at 5,000 then every 20,000 kms.
- If the oil pressure warning lamp goes on, the oil filter element may be clogged.

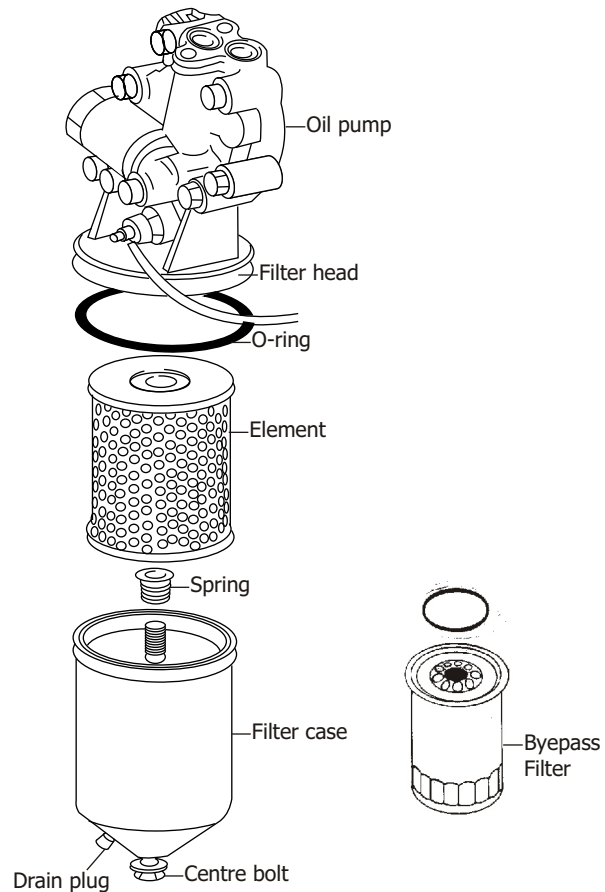
CAUTION !

The element cannot be cleaned and reused. Always replace the element with new one if it has become clogged.

Replacement procedure:

- 1. Place a suitable container under the drain plug and remove the plug to drain engine oil from inside the filter. After draining tighten the drain plug.
- 2. Loosen the Centre bolt and remove the filter case containing the element
- 3. Wash all the parts, except the element and reassemble the filter.
  - Replace O-rings and element with new ones. Coat O-rings with engine oil before installation. Make sure they are not twisted.
  - First insert the centre bolt on the filter case then put the spring and element on the centre bolt. Make sure that the spring is installed with its seat towards the element.
  - Install the O-ring on the filter case and secure the centre bolt to the filter head.

Tightening torque: 3.0 to 3.5 kg fm.





**SIMPLE SERVICING** (Contd...)

- 4. Replenish the engine oil.  
If only the oil filter has been replaced, add oil  
( approx. 1.5 ... liters.).
- 5. Wipe any spilt oil.
- 6. Run the engine at idle to check for oil leaks. As a final check, check level.
- 7. Using filter wrench (special tool) loosen the bypass filter. Replace the bypass filter with a new one.

**Replacing fuel filter element**

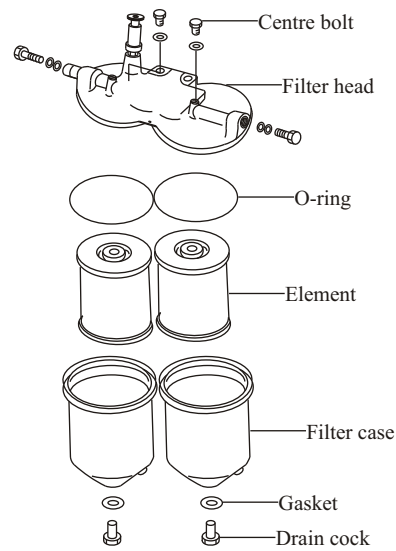
- Stage I - Every 10,000 kms.
- Stage II - Every 20,000 kms.

**CAUTION !**

The element cannot be cleaned and reused. Be sure to replace it with a new one.

**Replacement procedure:**

- 1. Connect vinyl pipe to the drain cock and put a suitable container under it.
- 2. Loosen the air plug and then loosen the drain cock to drain fuel in the fuel filter. Tighten the drain cock.
- 3. Loosen the center bolt and remove the element together with filter case.



**SIMPLE SERVICING** (Contd...)

- 4. Other than the element, wash parts in petrol and reassemble them as they were before.
  - Replace the O-ring and gasket of the element with new ones.  
When fitting the O-ring make sure it is not twisted.
  - Insert the centre bolt into the filter case and fit the spring washer and element onto the centre bolt in the order shown.
- 5. Operate the fuel feed pump to feed fuel. Bleed air from the fuel system using the procedure outlined on page 3-46.
- 6. Wipe out any spilt fuel.
- 7. Start the engine and check for fuel leaks.

**CAUTION !**

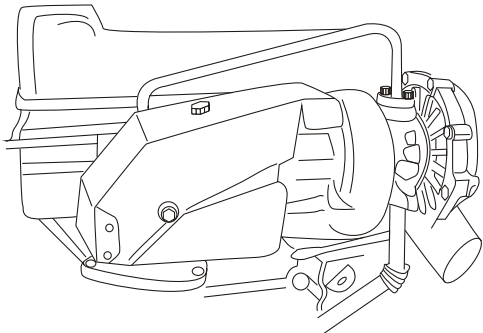
Wipe clean any spilt diesel fuel, as it could start a fire.

MAINTENANCE RECOMMENDATIONS FOR TURBOCHARGER

Turbochargers and boost pressure control valves do not require any maintenance.  
Engine oil has to be changed regularly as recommended.  
Regular replacement of oil filters & air filter has to be carried out as per recommendation.  
Checks have to be made on the oil, air and exhaust piping, as well as, on all other connections and seals, to ensure that they are tight and no damage is seen.  
When carrying out maintenance work on the engine (e.g. adjusting engine valves), openings in pipe and turbocharger should be closed.  
When fitting the turbocharger to the engine, fill the central housing with clean oil and ensure that all piping to the turbocharger is cleaned thoroughly before fitment.

DO'S AND DON'TS FOR SATISFACTORY FUNCTIONING OF TURBOCHARGER

- DO'S**
- Regular change of engine oil/oil filters as per recommendation.
  - Regular change/cleaning of air filter element as per recommendation.
  - Check for oil pressure at engine idling condition. Minimum oil pressure to be as per recommendation.
  - Idle the engine for 3 minutes after starting the engine.
  - Idle the engine for 3 minutes before switching off the engine.
  - Regularly check all air, oil and exhaust connections for leaks and abnormal dust / oil / carbon build up.



DON'TS

- Don't run the engine with low oil pressure. switch off the engine when the oil pressure-warning lamp starts glowing. Contact nearest Eicher Authorised Service Center.
- Don't put the engine under full acceleration immediately after starting.
- Don't switch off the engine under full acceleration.
- Don't run with damaged / faulty connections from the air cleaner to the turbocharger / turbocharger to the inlet manifold.
- Don't run with damaged / faulty connections to the turbocharger turbine inlet and from turbine outlet.
- Don't lift the turbocharger by holding the waste gate actuator control rod.

3-85

SIMPLE SERVICING (Contd...)

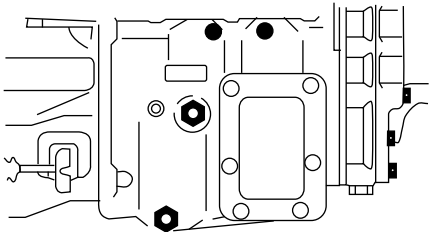
- **Checking and replacing transmission gear oil**

Checking interval	15,000 kms.
Replacing interval	After initial 5000 kms. Thereafter, every 30,000 kms.

- **Inspection and Replenishment**  
Remove Inspection plug and check to see that oil is full to the brim. If it is not so, top up gear oil up to the mouth of the Inspection plug hole and check for leakages.  
**Replacement**
  - While the oil is still hot after driving, remove drain plug and drain the gear oil.
  - The drain plug has a magnet. Fit the plug securely after removing iron particles.
  - Pour gear oil until it overflows from the Inspection plug hole.

CAUTION

Do not check or replace transmission gear oil immediately after driving.  
  
Park the vehicle on a level ground while checking oil level.



SIMPLE SERVICING (Contd...)

● Checking and replacing Rear axle gear oil

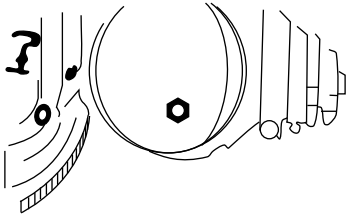
Checking intervals	15,000 kms.
Replacing intervals	After initial 5000 kms. Thereafter, every 30,000 kms.

● Inspection and Replenishment

Remove Inspection plug and check to see that oil is full to the brim. If it is not so, top up differential oil until it overflows from the Inspection plug hole.

● Replacement

- While the oil is still hot after driving, remove drain plug and drain the differential oil.
- After fitting the drain plug securely, remove the inspection plug and pour differential oil until it overflows from the plug hole.



CAUTION !

Do not check or replace differential oil immediately after driving.

Park the vehicle on a level ground while checking oil level.

SIMPLE SERVICING (Contd...)

● Replacing engine oil

Every 20,000 kms with Eicher Genuine Engine oil. Every 10000 kms with other recommended engine oils.

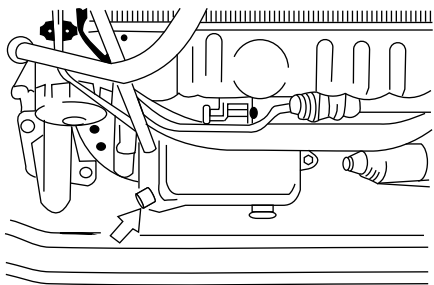
Please refer Page No 2-10 for recommended grades of oils.

Total capacity: 11 liters (This also includes oil in the oil filter).

To prolong the life of your vehicle, make sure that an oil of proper viscosity suitable to the ambient temperature is added. For details refer (Pg 3-53).

The procedure for oil change is as follows:

1. Park the vehicle on a level ground.
2. Place an oil receiver or can under the oil pan.
3. With the engine warmed up stop the engine and remove the drain plug from the oil pan to discharge the oil.
4. Securely mount the drain plug and pour in engine oil through the oil filler of the rocker cover on the top of the engine.
5. Run the engine gently for a few minutes and check for oil leaks. In about 30 minutes after the engine has been stopped, check the oil level with oil level gauge. If the oil level is checked immediately after shutdown of the engine, the level will show a lower oil level.



SIMPLE SERVICING (Contd...)

CAUTION !

- When the temperature of the engine is high take care to prevent burns.
- Make sure that all spilt oil is thoroughly cleaned.
- High speed and high load operations deteriorate engine oil faster. In such application, oil needs to be changed earlier than specified.

Replacing coolant

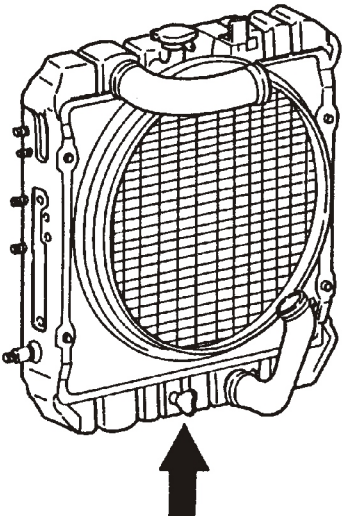
Replacement intervals	Every 75,000 kms. or one year
Coolant	Soft water mixed with antifreeze/ antitrust.

Coolant Capacity 14 litres  
(including 1 litre in reservoir tank).  
Recommended coolant: Golden cruiser 1200  
( 15 % by volume ).

SIMPLE SERVICING (Contd...)

CAUTION !

- Clean the cooling system and replace the coolant at the specified intervals.
- Procedure for replacing coolant
    1. After the radiator cap has been removed, loosen the drain plugs at the bottom of radiator and at the engine to discharge the coolant.
    2. With drain plugs refitted, pour in soft water (preferably hot water) from the radiator filler port.Start the engine and let it run at high idle until the coolant temperature becomes 85° C or higher. Keep running the engine for another ten minutes, and then discharge the water. Repeat this procedure until the drained water runs completely clean.
    3. Pour the required amount of antifreeze/antirust into the radiator and add soft water to the brim of the radiator cap.



## SIMPLE SERVICING (Contd...)

4. With the radiator cap removed, run the engine for a while to bleed air from the cooling system.
5. Stop the engine and check for the coolant level. If the level is low, add coolant to the brim of the radiator cap.
6. Reinstall the radiator cap in position.
7. Pour the required amount of antifreeze into the reservoir tank and add soft water to the FULL mark and replace the cap in position.

### CAUTION!

If the radiator gets clogged or coolant is seriously contaminated, get your vehicle inspected.

## CHECKING AND REPLACING POWER STEERING OIL.

- **Inspection and replenishment**  
(Applicable for vehicles fitted with power steering)

With the front wheels placed in straight ahead position, stop the engine. Remove the oil filler cap along with the oil level gauge from the reservoir. Wipe clean the oil level gauge. Reinsert the oil level gauge all the way inside the reservoir and tighten the cap. Remove the cap, slowly withdraw the oil level gauge once again. Check the oil level mark on the gauge.

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## SIMPLE SERVICING (Contd...)

The oil level should be between MAX. and MIN. level marks as, indicated on the oil level gauge. If the level is low, add Automatic Transmission Fluid (DEXRON II D/F) up to the MAX. level mark.

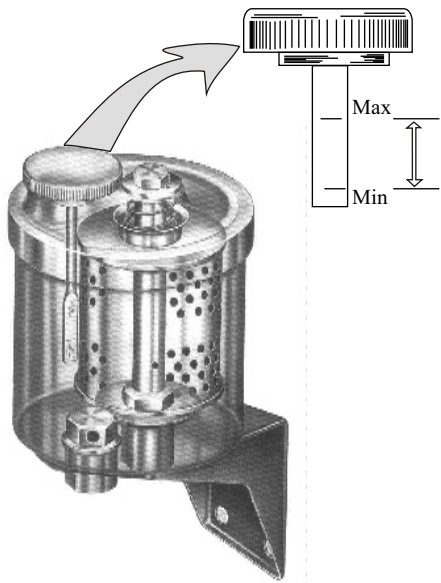
Check the oil level with the vehicle on flat, level ground.

### CAUTION!

- Oil level should not go below the MIN. level mark. If the oil level is low, hard steering or unusual noise will result. For oil change, take your vehicle to the nearest Authorised Service Centre.

- **Replacement**

Ask your nearest Authorised Service Representative to replace power steering oil.



3-92

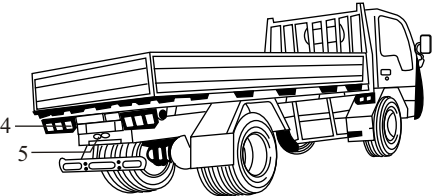
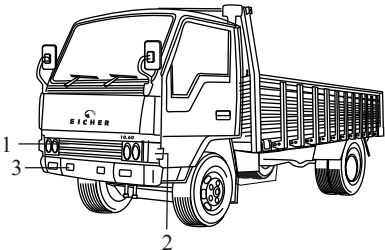
SIMPLE SERVICING (Contd...)

● Replacing lamp bulbs

Make sure that the lamp bulbs are replaced with those of the specified voltage and wattage.  
Before replacement, ensure that the starter switch is in “LOCK” and all other switches are in “OFF” positions.

● Lamp bulb details

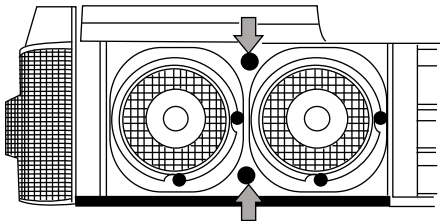
	Lamp name	Bulb wattage		
		Model	10.50, 10.59	10.70, 10.75, 10.80, 10.90, 10.95
1.	Head lamps	Inner type	45/40W	55/60W
		Outer Type		55/60W
2.	Front and side turn signal lamps		21W	
3.	Clearance lamps		5W	
4.	Rear turn signal, stop tail & backup lamps	Rear turn signal lamps	21W	
		Stop & tail lamps	21/5W	
		Back up lamps	21W	
5.	Number Plate Lamp		10W	
6.	Room lamp		8 W	



SIMPLE SERVICING (Contd...)

● Headlamps

- 1. Remove the decoration plate.
- 2. With the attaching screws loosened remove the lamp unit.
- 3. Remove the rubber cover, bulb retaining ring and bulb. Replace the bulb.
- 4. Reinstall lamp unit ‘TOP’ mark facing upwards.

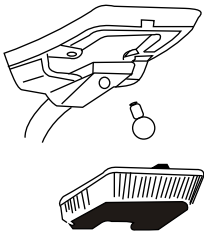
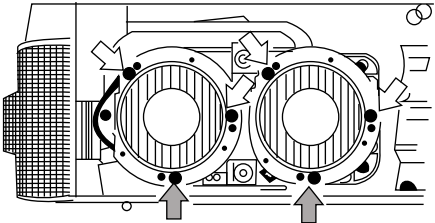


CAUTION!

If you replace headlamps yourself, take your vehicle to the nearest authorised service centre for focus setting.

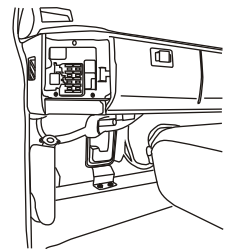
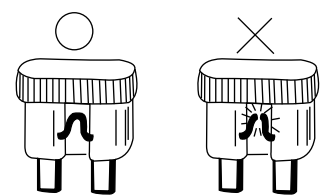
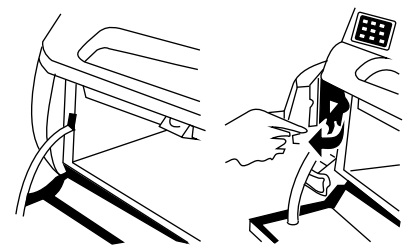
● Room lamp

Insert a screwdriver into the groove on top of the lens and pry it to detach the lens. To remove the bulb, turn it counterclockwise while pushing it in. To reinstall, turn the bulb clockwise.



SIMPLE SERVICING (Contd...)

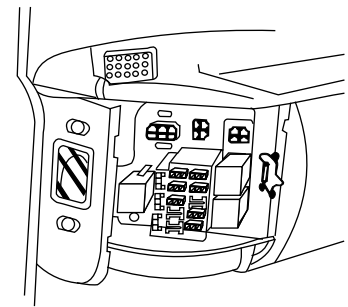
- **Other Lamps**  
For replacement of bulbs of warning lamps, indicator lamps and other lamps, replace the bulb after removing the lens.
- **Blown fuse**  
If a lamp does not come on or an electrical device is inoperative, the fuse has probably blown. Know the location of the fuse box and the names of circuits protected by each fuse so that you can fix a blown fuse yourself, page No 3-96.
- **Replacing a blown fuse**  
The fuse box is located at the left-most end of the instrument panel.  
Opening the glove box will help make the removal of the fuse box cover easier.  
To replace the fuse, proceed as follows:
  1. Place the starter switch in LOCK position.
  2. Remove the blown fuse.
  3. The fuse shown in the illustration is blown. Replace it with a spare fuse.



SIMPLE SERVICING (Contd...)

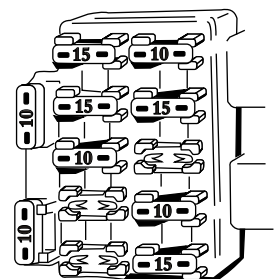
● **Fuse details**

No.	Capacity	Devices protected
1.	10A	Left headlamp
2.	15A	Horn, stop lamp
3.	10A	Right headlamp
4.	15A	Tail lamp, license lamp, clearance lamp
5.	15A	Room lamp
6.	15A	Turn signal lamp, backup lamp
7.	10A	Wiper, windshield washer, exhaust brake



**CAUTION !**

- Make sure that a blown fuse is replaced with a good one of the same capacity.
- When the cause of blown fuse cannot be identified or when the fuse blows frequently, get your vehicle inspected at the nearest authorised service center.





SIMPLE SERVICING (Contd...)

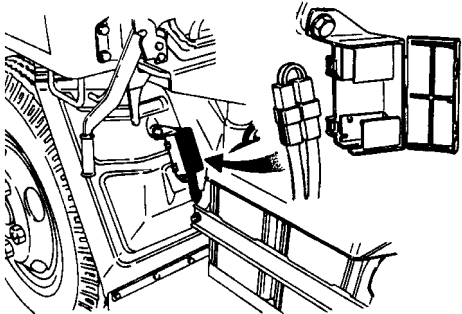
Replacing fusible link

For additional protection the vehicle has a fusible link in the power circuit that functions also as a fuse. A blown fusible link can be easily identified; its insulation cover is bubbled or burnt because of the heat. If the cover stretches when pulled between fingers, it means that the link is blown.

If the fusible link is blown, isolate and repair the cause before attempting replacement.

CAUTION !

- Before replacing a blown fusible link, make sure that the negative battery cable is disconnected from the battery so as to ensure safety.
- Use genuine fusible links for replacement.



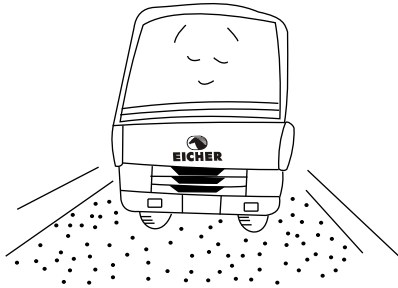
SIMPLE SERVICING (Contd...)

Caring for your vehicle

- Be sure to wash your vehicle when :
- Your vehicle has traveled a coastal area.



- You have driven on road which are muddy



SIMPLE SERVICING (Contd...)

- Coal tar, soot, sap, and bird droppings are deposited on your vehicle.
  - Your vehicle is fouled with dust and mud.
1. Wash the underbody and the inside of the fender by increasing the pressure of water.
  2. Completely shut all portions and clean deposits with a sponge.
  3. Use car shampoo if the body is seriously dirty.
  4. After deposits and dust have been thoroughly washed away, wipe with soft cloth etc., in such a way so that no spots are left behind.



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SIMPLE SERVICING (Contd...)

CAUTION !

- Take care not to splash water over the electrical parts in the engine compartment.
- When washing the underbody, be careful not to get hurt by sharp edges of metal parts.
- In cold areas, carefully wipe off moisture from doors and key slots after the vehicle has been washed. Key slots and rubbers can freeze up if there is water left on them.
- Do not wash plastic and resin parts in thinner or gasoline as discoloration or cracks will result.

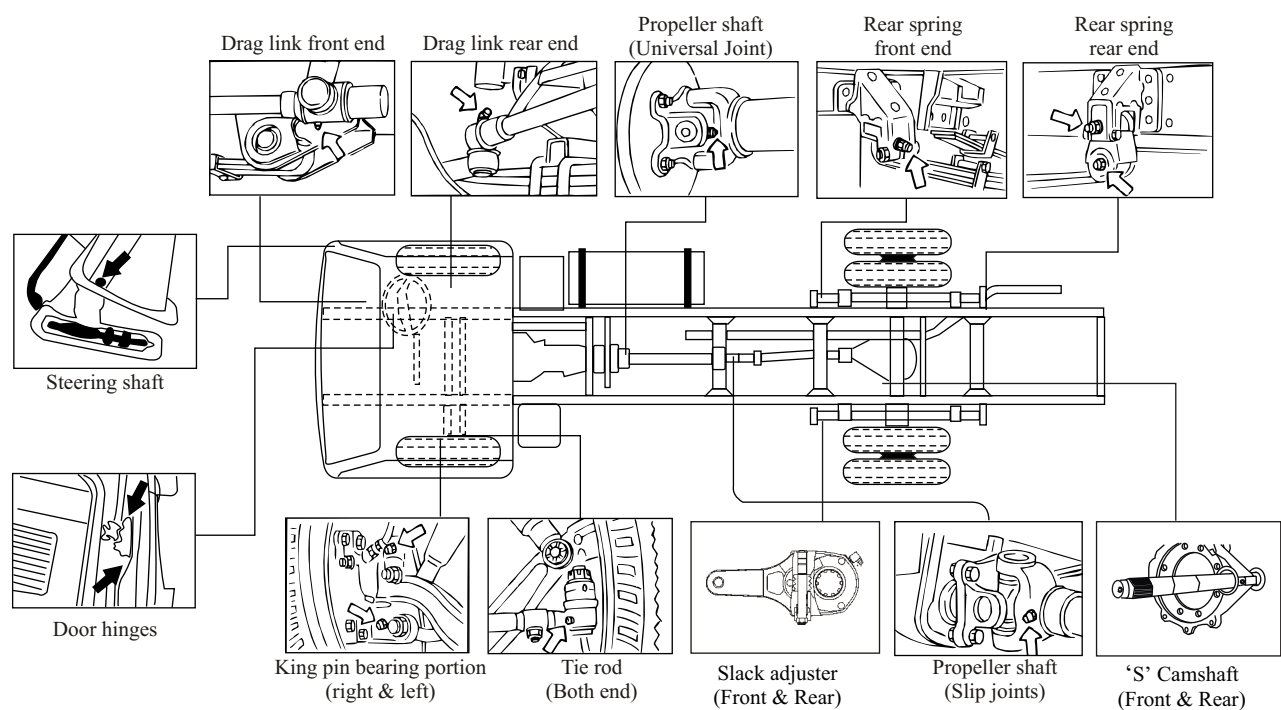
● Waxing

Wax the vehicle once a month or when the coating does not repel water well. Do the waxing in shade after the vehicle body temperature has fallen below your body temperature.



3-100

GREASING POINTS



SPECIFICATIONS

MODEL		10.50	10.59	10.75				10.80				10.90				10.95				11.10	
Wheel base		C	E	E	C	E	F	H	C	E	F	H	E	F	H	*K	E	F	H	G	H
Pay Load (FSD)	(Kg)	2995	2895	3680	4810	4700	4595	⇐	5610	5500	5395	5910	5815	5720	5620	5530	6595	6500	6400	6498	6980
Pay Load (HSD)	(Kg)	2885	2730	3580	4635	4475	4310	⇐	5367	5207	5062	5504	5590	5455	5355	5205	6550	6235	6135	6566	6770
DIMENTIONS AND WEIGHTS																					
Overall length (FSD)	(mm)	4875	5490	⇐	5130	6030	6645	7080	5130	6030	6645	7080	6030	6545	7080	8276	6030	6545	7080	—	7693
Overall width (FSD)	(mm)	2146	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	2270
Overall Height (FSD)	(mm)	2340	⇐	2360	2340	⇐	⇐	3100	2340	⇐	⇐	3100	2340	⇐	⇐	⇐	2360	⇐	⇐	2370	⇐
Overall length (HSD)	(mm)	4875	5490	⇐	5130	6030	6645	7080	5130	6030	6645	7080	6030	6520	7080	8275	6030	6520	7080	—	7693
Overall width (HSD)	(mm)	2146	⇐	2150	2146	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	2266
Overall Height (HSD)	(mm)	2678	⇐	⇐	2680	2678	2340	3365	2680	2678	2340	3365	2678	⇐	⇐	⇐	2790	2873	⇐	2370	⇐
Wheel base	(mm)	2750	3350	⇐	2750	3350	3760	4050	2750	3350	3760	4050	3350	3760	4050	4800	3350	3760	4050	3800	4300
Track - Hydraulic brake Front	(mm)	1615	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	—	—	—	—	—
Track - Hydraulic brake Rear	(mm)	1595	⇐	1495	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	—	—	—	—	—
Track - Air Brakes Front	(mm)	—	—	—	1645	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	1800	⇐
Track - Air Brakes Rear	(mm)	—	—	—	1525	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	1680	⇐
Ground Clearance	(mm)	210	⇐	230	210	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	230	⇐	⇐	220	⇐
Cargo Deck (FSD)	:Inside length (mm)	2530	3750	⇐	3658	4298	4938	4938	3658	4298	4938	5334	4298	4938	5334	6523	4298	4938	5334	5242	5791
	:Inside Width (mm)	2012	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	2134	2134
	:Inside Height (mm)	580	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐
Cargo Deck (HSD)	:Inside length (mm)	2530	3750	⇐	3658	4298	4938	4938	3658	4298	4938	5334	4298	4938	5334	6523	—	—	—	5242	⇐
	:Inside Width (mm)	2012	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	—	—	2134	⇐
	:Inside Height (mm)	1585	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	⇐	—	—	—	1585	⇐
ULW (FSD)	(Kg)	2405	2505	2570	2640	2750	2855	2340	2640	2750	2855	2340	2905	3000	3100	3190	2905	3000	3100	—	3520
ULW (HSD)	(Kg)	2575	2670	⇐	2815	2975	3120	2678	2815	2975	3120	2678	3130	3265	3365	3515	2950	3265	3365	—	3370
GVW (FSD)	(Kg)	5400	⇐	6250	7450	⇐	⇐	⇐	8250	⇐	⇐	⇐	8720	⇐	⇐	⇐	9500	⇐	⇐	10500	⇐
GVW (HSD)	(Kg)	5400	⇐	6250	7450	⇐	⇐	⇐	8250	⇐	⇐	⇐	8720	⇐	⇐	⇐	9500	⇐	⇐	10500	⇐

Note \* Supply condition : Cowl & chassis. Other dimensions are for Cab and FSD  
Specifications are subject to change, without notice.

SPECIFICATIONS (Contd...)

MODEL	10.50		10.59	10.75				10.80				10.90				10.95			11.10	
Wheel base	C	E	E	C	E	F	H	C	E	F	H	E	F	H	*K	E	F	H	G	H
Max. Gradiability E483 NA (%)	28	⇐	27	25.5	⇐	⇐	27.5					21.5	⇐	⇐	⇐	18	⇐	⇐	17	⇐
Max. Gradiability E483 TCI (%)	37	⇐	31	29	⇐	⇐	⇐	29.5	⇐	⇐	⇐	24	⇐	⇐	⇐	21	⇐	⇐	17	⇐
Max. Gradiability E483 EDC (%)	25.5	⇐	⇐	⇐	⇐	⇐	⇐	29.5	⇐	⇐	⇐	25.4	⇐	⇐	⇐	⇐	⇐	⇐	17	⇐
ENGINE																				
Model	BS I	E483 NA																		
Type	BS I	Diesel 4 cyl. Direct Injection																		
Cooling system	BS I	Water cooled																		
Displacement (cc)	BS I (mm)	3298																		
Max Power Kw/ rpm(DIN)	BS I	61/3200																		
Max Torque Nm/rpm (DIN)	BS I	206/1920																		
Model	BS I I	E483 TCI																		
Type	BS I I	Diesel 4 cyl. Direct Injection Turbo charged																		
Cooling system	BS I I	Water cooled																		
Displacement	BS I I	3298																		
Max Power Kw/ rpm(DIN)	BS I I	70/3200																		
Max Torque Nm/rpm (DIN)	BS I I	285/1400																		
Model	BS I I I	E483 EDC																		
Type	BS I I I	Diesel, 4 Cylinder, Direct injection, Turbo charged , Electronically controlled																		
Cooling system	BS I I I	Water cooled																		
Displacement	BS I I I	3298																		
Max Power Kw/ rpm(DIN)	BS I I I	68/2800																		
Max Torque Nm/rpm (DIN)	BS I I I	260/1500																		
ELECTRIC SYSTEM																				
Battery	12V - 70 Amp hr																			
Alternator	12v - 50A																			

Note: Specifications are subject to change.

SPECIFICATIONS (Contd...)

LUBRICANT & COOLANT CAPACITY		
Engine		11 litres
Transmission		3.4 litres
Differential		
Steering gear	Overhang type	4 litres
	Straddle Mtg. type	4.5 litres
	Manual steering	0.8 litres
	Power steering	2.0 litres
Air Cleaner		1.5 litres (E483 NA)
Fuel tank	10.50 / 10.59	: 60 litres
	10.90/10.95/11.10	: 100 litres
		190 litres
Coolant Recommended coolant :		14 litres
Golden Cruiser 1200 (15 % by volume)		
Brake oil ( Dry filling)		0.5 litres
Hub greasing	Front	340 gms (each hub)
	Rear	270 gms (each hub)
DRIVE TRAIN		
Clutch		Single dry plate diaTelragm hydraulic assisted
Transmission		5 forward synchromesh; 1 Reverse
Final drive		Hypoid gears
CHASSIS & SUSPENSION		
Frame	LCV	Ladder type ‘C’ Channel
	MCV	Ladder type straight chassis
Suspension (Front)		Semi elliptical leaf spring with double acting shock absorbers.
Suspension (Rear)		Semi elliptical leaf spring & helper leaf spring with double acting shock absorbers.

Note: Specifications are subject to change.

SPECIFICATIONS (Contd...)

STEERING		
Type	Manual	Recirculating ball nut Variable gear ratio 26.5-30.5
	Power Steering	Integral ball & nut Gear ratio 18.8:1
BRAKES		
System		Dual circuit hydraulic vacuum assisted Front - 2 leading, Rear- Dual 2 leading shoes 10.90 : Double Diaphragm Master V ac Dia : 9” 10.50, 10.70, 10.75 : Single Diaphragm Master V ac Dia : 10.5” 10.75, 10.90, 10.95, 11.10 : Dual circuit full air brakes Front - 2 leading, Rear (For air brakes vehicle)

Note : Specifications are subject to change without notice.

SERVICE DATA

Inspection Item		Specification
Steering wheel play (with front wheels in straight ahead position, on the wheel rim)		0 to 50 mm
Brake pedal	Play	10 to 50 mm
	Stroke margin	45mm or more (aprox.50-kg pedal pressure)
Clutch pedal	Play	10 to 15 mm
	Clearance from floorboard when depressed	35mm or more
Parking brake lever stroke		80 to 120mm (30-kg operating force)
Depth of tread groove		1.6 mm or more
Battery fluid level *		Approx. 10mm above plates
Engine idle speed		600 to 650rpm
Fan belt tension (deflection when depressed with a 10-kg force at the center)		10 to 15mm
Coolant		14 lit

\* Not required for “Maintenance Free” battery

**TROUBLE SHOOTING AND CORRECTION**

Should trouble occur, take corrective action according to the following table. If it is not possible for you to correct the defect,take your vehicle to the nearest authorised service centre for inspection and repair.

Defect	Probable Cause	Corrective action
1. Engine does not start when starting switch is turned on	- Run down battery	Recharge or replace
- Starter does not rotate or rotates at slow speed	- Disconnected, loose or corroded battery terminal - Disconnected earth - High engine oil viscosity	Clean the terminals and securely mount them Connect securely Replace oil with proper viscosity
- Starter turns but engine does not start	- Low/no fuel - Water in fuel - Air in the fuel system - Diesel filter clogged - Air cleaner element clogged - No current / Defectivesolenoid switch	Replenish Replace Bleed the system Replace Clean Rectify / Replace

**TROUBLE SHOOTING AND CORRECTION (Contd...)**

Defect	Probable Cause	Corrective action
2. Engine Stalls when speed is reduced	- Idling speed too low - Engine too cold - Diesel filter clogged - Air cleaner element clogged	Adjust by throttle button Allow engine to warm up fully Replace Clean
3. Engine does not stop	- Defective starting switch or cable	Stop the engine by operating the fuel injection pumps stop lever. Replace defective parts
4. Loss of power	- Parking brake not released - Diesel filter clogged - Air cleaner element clogged	Release Replace Clean
5. Black exhaust smoke	- Improper fuel - Air cleaner element clogged - Overload	Replace Clean Avoid overloading
6. Engine overheating	- Low coolant level  - Defective radiator cap - Broken or loose fan belt - Rust or scale in radiator	Replenish, Check for water leaks and proper installation of radiator cap. Replace Correct Clean radiator and replace coolant
7. Excess fuel consumption	- Fuel leaks - Air cleaner element clogged - Improper tyre inflation pressure	Correct Clean Correct
8. Excess engine oil consumption	- Improper engine oil - High oil level - Oil leaks - Insufficient warm up	Replace Correct Correct Allow engine to warm up fully

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
TURBO CHARGER 9. Engine lacks power	<ul style="list-style-type: none"><li>- Valve defective</li><li>- Dirty air cleaner</li><li>- Restricted air duct from compressor to intake manifold</li><li>- Restricted air duct from air cleaner to Turbocharger</li><li>- Air leak in feed from compressor to intake manifold</li><li>- Air leak between intake manifold and engine</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Restricted exhaust system exhaust brake valve operation.</li><li>- Exhaust manifold cracked, gaskets blown or missing</li><li>- Gas leak at turbine inlet / exhaust manifold joint</li><li>- Fuel system / injection feed system defective or incorrectly adjusted</li><li>- Engine valve timing incorrect Adjust</li><li>- Worn engine piston rings or liners</li></ul>	<p>Check &amp; Replace Clean Rectify</p> <p>Rectify</p> <p>Check and replace hoses if puncture Tighten clamps.Check Turbocharger for leakage Retighten manifold nuts</p> <p>Clean</p> <p>Check muffler for choking. Check</p> <p>Replace</p> <p>Retighten mounting nuts</p> <p>Repair</p> <p>Rectify</p>

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Boost pressure control swing valve / poppet valve doesn't close</li><li>- Pipe assembly to swing valve / poppet valve defective</li><li>- Turbocharger bearing defective</li><li>- Foreign body damage on compressor or turbine</li><li>- Turbine housing / flap damaged</li><li>- Insufficient oil supply of turbocharger</li></ul>	<p>Replace Overhaul at Authorised Service Center Overhaul at Authorised Service Center Overhaul at Authorised Service Center Overhaul at Authorised Service Center Overhaul at Authorised Service Center Find out the cause of entry of foreign particles &amp; rectify the same Overhaul the Turbocharger at Authorised Service Center Find out the cause of entry of foreign particles &amp; rectify the same Overhaul the Turbocharger at Authorised Service Center. Clean</p>
Black smoke	<ul style="list-style-type: none"><li>- Dirty air cleaner</li><li>- Restricted air duct from compresso to intake manifold</li><li>- Restricted air duct from air cleaner to Turbocharger</li><li>- Air leak in feed from compressor to intake manifold</li></ul>	<p>Clean Rectify</p> <p>Rectify</p> <p>Check and replace hoses if punctured . Tighten clamps . Check Turbocharger for leakage</p>



TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Air leak between intake manifold and engine</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Restricted exhaust system</li><li>- Exhaust manifold cracked, gaskets blown or missing</li><li>- Gas leak at turbine inlet / exhaust manifold joint</li><li>- Fuel system / injection feed system defective or incorrectly adjusted</li><li>- Engine valve timing incorrect</li><li>- Worn engine piston rings or liners</li><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Boost pressure control swing valve / poppet valve doesn't close</li><li>- Turbocharger bearing defective</li><li>- Foreign body damage on compressor or turbine</li></ul>	<p>Retighten manifold nuts</p> <p>Clean</p> <p>Check muffler for choking. Check exhaust brake valve Operation Replace</p> <p>Retighten mounting nuts</p> <p>Repair</p> <p>Adjust</p> <p>Rectify</p> <p>Repaire</p> <p>Overhaul at Authorised Service Center</p> <p>Overhaul the Turbocharger at Authorised Service Center</p> <p>Overhaul the Turbocharger at Authorised Service Center</p> <p>Find out the cause of entry of forgein particles &amp; rectify the same</p> <p>Overhaul the Turbocharger a Authorised Service Center</p>

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Turbine housing / flap damaged</li></ul>	<p>Find out the cause of entry of foreign particles &amp; rectify the same Overhaul the Turbocharger at Authorised Service Center</p>
	<ul style="list-style-type: none"><li>-Insufficient oil supply of turbocharger</li></ul>	<p>Check &amp; rectify</p>
Blue smoke	<ul style="list-style-type: none"><li>- Dirty air cleaner</li><li>- Restricted compressor intake duct</li><li>- Air leak in feed from compressor to intake manifold</li><li>- Air leak between intake manifold and engine</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Restricted turbocharger oil drain line</li><li>- Restricted engine crankcase breather / leaking or distorted</li><li>- Turbocharger bearing housing sludged or coked</li><li>- Worn engine piston rings or liners</li><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Turbocharger Piston ring sealing defective</li><li>- Turbocharger bearing defective</li></ul>	<p>Clean</p> <p>Rectify</p> <p>Check and replace hoses if punctured . Tighten claps. Check Turbocharger for leakage</p> <p>Clean</p> <p>Rectify. Check quality of oil &amp; Rectify Rectify</p> <p>Overhaul Turbochager at Authorised Service Center</p> <p>Rectify</p> <p>Replace</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p>

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
Turbocharger noisy	<ul style="list-style-type: none"><li>- Restricted compressor intake duct</li><li>- Restricted air duct from compressor to intake manifold</li><li>- Restricted air duct from compressor to intake manifold</li><li>- Air leak in feed from air cleaner to compressor</li><li>- Air leak in feed from compressor to intake manifold</li><li>- Air leak between intake manifold and engine</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Exhaust manifold cracked, gaskets blown or missing</li><li>- Gas leak at turbine inlet / exhaust manifold joint</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Turbocharger bearing defective</li><li>- Foreign body damage on compressor or turbine</li><li>- Turbine housing / flap damaged</li></ul>	<p>Rectify</p> <p>Rectify</p> <p>Rectify</p> <p>Rectify</p> <p>Check and replace hoses if punctured . Tighten clamp Check Turbocharger for leakage</p> <p>Retighten manifold nuts</p> <p>Clean</p> <p>Replace</p> <p>Rectify</p> <p>Overhaul Turbocharger at at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Find out the cause of entry</p>

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TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Insufficient oil supply of turbocharger</li></ul>	<p>of foreign particles &amp; rectify the same .Overhaul Turbocharger at Authorised Service Center</p> <p>Check &amp; rectify</p>
Oil leak from rutbine seal	<ul style="list-style-type: none"><li>- Restricted turbocharger oil drain line of oil &amp; rectify</li><li>- Restricted engine crankcase breather / leaking or distorted</li><li>- Turbocharger bearing housing sludged or coked</li><li>- Worn engine piston rings or liners</li><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Piston ring sealing defective</li><li>- Turbocharger bearing defective</li></ul>	<p>Rectify Check quality</p> <p>Check &amp; rectify</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Rectify</p> <p>Replace</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p> <p>Overhaul Turbocharger at Authorised Service Center</p>
Oil leak from compressor seal	<ul style="list-style-type: none"><li>- Dirty air cleaner</li><li>- Restricted compressor intake duct</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Restricted turbocharger oil drain line</li><li>- Restricted engine crankcase breather</li></ul>	<p>Clean</p> <p>Rectify</p> <p>Clean</p> <p>Check reason for chocking &amp; rectify</p> <p>Check &amp; rectify</p>

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Turbocharger bearing housing sludged or coked</li><li>- Worn engine piston rings or liners</li><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Piston ring sealing defective</li><li>- Turbocharger bearing defective</li></ul>	Overhaul Turbocharger at Authorised Service Center Rectify Replace Overhaul at Authorised Service Center Overhaul at Authorised Service Center Overhaul at Authorised Service Center
High engine oil consupution	<ul style="list-style-type: none"><li>- Dirty air cleaner</li><li>- Restricted compressor intake duct</li><li>- Air leak in feed from compressor to intake manifold</li><li>- Air leak between intake manifold and engine</li><li>- Foreign object in exhaust manifold (from engine)</li><li>- Restricted turbocharger oil drain line</li><li>- Restricted engine crankcase breather / leaking or distorted</li><li>- Turbocharger bearing housing sludged or coked</li></ul>	Clean air cleaner element & cartridge at every 5000Km. Rectify Check and replace hoses if punctured . Tighten clamps. Check Turbocharger for leakage Retighten manifold nuts  Retighten manifold nuts  Clean Check reason for choking & rectify  Overhaul Turbocharger at Authorised Service Center

TROUBLE SHOOTING AND CORRECTION (Contd...)

Defect	Probable Cause	Corrective action
	<ul style="list-style-type: none"><li>- Burnt valves and / or pistons</li><li>- Excessive dirt build up on compressor wheel and / or diffuser vanes</li><li>- Piston ring sealing defective</li><li>- Turbocharger bearing defective</li></ul>	Rectify Replace  Overhaul Turbocharger at Authorised Service Center Overhaul Turbocharger at Authorised Service Center
10. Vehicle vibrate during operation	<ul style="list-style-type: none"><li>- Badly worn tyres</li><li>- Loose wheel nuts</li><li>- Vibration occurs immediately after operation</li></ul>	Replace Retighten Flat spot phenomenon which returns to normal when tyres warm up.
11. Clutch hard to disengage	<ul style="list-style-type: none"><li>- Low clutch fluid</li></ul>	Replenish
12. Hard steering	<ul style="list-style-type: none"><li>- Worn tyres</li><li>- Flat or burst tyre</li><li>- Low tyre inflation pressure</li><li>- Lack of grease in kingpin and steering linkage</li></ul>	Replace Replace/Repair Correct Lubricate
13. Steering wheel shimmy	<ul style="list-style-type: none"><li>- Loose wheel nuts</li><li>- Unequal tyre inflation pressure</li><li>- Unequal worn tyres</li></ul>	Retighten Adjust Replace
14. Vehicle pulls to one side while	<ul style="list-style-type: none"><li>- Left and right tyres of different size</li><li>- Steering</li><li>- Unequal tyre inflation pressure</li><li>- Loose wheelnuts</li><li>- Load on one side</li><li>- Broken spring leaf</li></ul>	Correct  Adjust Retighten Correct Replace

**TROUBLE SHOOTING AND CORRECTION (Contd...)**

Defect	Probable Cause	Corrective action
15. Excessive noise	<ul style="list-style-type: none"><li>- Foreign substance embedded in tyres</li><li>- Unevenly worn tyres</li><li>- Lack of lubrication in moving parts</li><li>- Loose wheel nuts</li><li>- Loose or worn ‘V’ belt</li><li>- Broken chasis spring</li></ul>	Remove Replace Lubricate Retighten Correct/replace Replace
16. Poor braking action	<ul style="list-style-type: none"><li>- Over inflated tyre</li><li>- Ingress of water into brake assembly</li><li>- Excessive use of brakes</li></ul>	Correct Dry the brakes Stop the vehicle and apply brake
17. Vehicle pulls to one side when braking	<ul style="list-style-type: none"><li>- Unequal tyre inflation pressure</li><li>- Wear on one side of tyre</li><li>- Loose wheelnuts</li><li>- Load on one side</li></ul>	Adjust Replace Retighten Correct
18. Battery runs down frequently	<ul style="list-style-type: none"><li>- Disconnected, loose or corroded terminal.</li><li>- Low battery fluid level</li><li>- Loose or slipping ‘V’ belt</li><li>- Battery out of life</li><li>- Lamps or switches left in ON position</li></ul>	Correct  Correct Correct Replace Switch off wherever not required
18. Lamps do not light	<ul style="list-style-type: none"><li>- Defective bulb</li><li>- Fuse blown out</li> <li>- Incomplete earthing</li></ul>	Replace Replace if defect repeats, get the vehicle examined by the Authorised service center Correct

# SECTION - 4

## CMVR GUIDELINES

4-1

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### BODY BUILDING INSTRUCTIONS.

- **GENERAL**  
The robust frame design of EICHER vehicles is ladder type with reinforced cross members, the strength and flexibility of frame structure ensures uniform distribution of load through out the frame. At the time of body building it is vital to maintain some flexibility between body structure and frame to prevent it from severe damages. Also the standard practice of maintaining working gaps between chassis and body parts should be followed. Any modification to a system on the chassis should only be made on advice from Eicher motors limited.
  - **BODY POSITIONING**  
Consideration and pre-calculations to be done while designing body in terms of weight to ensure rated axle weights. A care should be taken to position center of gravity of body, which should inline on the centerline of the chassis for optimum axle loading and operational stability. It can be achieved by proper positioning of the body and its parts on the chassis.
  - **PRECAUTIONS DURING BODY BUILDING**
- MAINTENANCE AND SERVICE.**
- The servicing and maintenance of various aggregates should not be impaired by improper bodybuilding and easy access should be provided for the followings:-
- Removal of air cleaner, filters and its elements.
  - Checking and topping up of different lubricants and oils.
  - Greasing of various points like spraying eye bush, propeller shaft and u joints.
  - Access to brake pipes and hoses.
  - Battery and electrical terminals etc.

● **GENERAL CAUTIONS**

To ensure vehicle safety and reliability and maintenance, do not perform any of the following modifications and alterations to the chassis while bodybuilding: -

- Do not weld or drill frame.
- Do not modify any part related to the axle steering, brake or propeller shaft.
- Do not modify brake lines (pipes, hoses, tubes and valves)
- Make effort to minimize the weight of the body and body mounting parts so that it will not jeopardize the strength or rigidity of the frame.
- Be sure to install a sub frame on the chassis frame, to evenly distribute the load on the frame.
- Do not modify engine cooling system components, such as blocking the air intakes in the front bumper, or removing the radiator seal rubber as this activities may result in engine performance or in damage
- Always observe applicable laws for the body construction and customization (e.g. std no 29 for external body projections of CMVR).
- Do not use spring assembly as an earthing terminal while welding or to check the continuity of welding currents on the spring. This welding spatter may cause the spring leaf breakage on the later stage.
- Always prefer to place seasoned saal wood (as per IS-399-1963) between the sub-frame and chassis to enable absorbing shock loads on the chassis. Also maintain a taper cut at the front of the log to reduce stress concentration on chassis.
- Do not cut any part of the cab or weld any thing to the cab.

**SAFETY STANDARDS (No. 29)**

[Central Motor Vehicle (Amendment) Rules, 1993, Notification S.O. No.201(E) dtd. 26.3.1993, item No. 19. of Min. of Surface Transport].

The External Projection on all Motor Vehicles other than Three Wheelers of Engine Capacity less than 500cc and Motorcycles

**1. Scope**

This standard specifies the requirement and test for the external projection of the vehicle.

**2.0 Purpose**

The purpose of this standard is to reduce the risk of seriousness of body injury to a person hit by the body work or crushing against it in the event of a collision. Also there is a likelihood of injury to the passenger if some parts are projected out more than specified. This can happen while taking turn at the corner.

**3.0 Application**

This standard applies to all class of vehicle on the road except for three wheeled vehicles of engine capacity less than 500cc and two wheelers.

**4.0 Definition**

**4.1 Vehicle :** Means any motor vehicle designed for use on the road having 2 and more wheels and a maximum designed speed exceeding 25 km/h powered by an engine.

**4.2 External surface :** Means the outside of the vehicle including the bonnet, the lid of the luggage compartment, the doors, the wings, the roof, the lighting and light-signalling devices and the visible strengthening components.

**4.3 Floor line :** The procedure to be followed to find out the floor line is as follows -

- (1) A Cone is selected (the height of which shall be convenient to handle) which has its side at an angle of 15 deg. to the vehicle vertical.
- (2) The vehicle of which floor line is to be established shall be laden to its rated GVW.

**SAFETY STANDARDS (No. 29)**

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**3.0 Application**

This standard applies to all class of vehicle on the road except for three wheeled vehicles of engine capacity less than 500cc and two wheelers.

**4.0 Definition**

- 4.1 Vehicle :** Means any motor vehicle designed for use on the road having 2 and morewheels and a maximum designed speed exceeding 25 km/h powered by an engine.
- 4.2 External surface :** Means the outside of the vehicle including the bonnet, the lid of the luggage compartment, the doors, the wings, the roof, the lighting and light-signalling devices and the visible strengthening components.
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  - (1) A Cone is selected (the height of which shall be convenient to handle) which has its side at an angle of 15 deg. to the vehicle vertical.
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  - (1) A Cone is selected (the height of which shall be convenient to handle) which has its side at an angle of 15 deg. to the vehicle vertical.
  - (2) The vehicle of which floor line is to be established shall he laden to its rated GVW.

4-7

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- (3) Now, the Cone, in its vertical position, shall be brought near the lowest possible position of the laden vehicle's external surface.
  - (4) Now, the cone shall be moved round the vehicle so that the cone comes in contact with its lowest point.
  - (5) These points of contact are then geometrically traced to find the floor line.
  - (6) In determining the floor line, no account shall be taken of the following :-
    - (a) Exhaust pipes
    - (b) Wheels
    - (c) Functional mechanical features attached to the under body such as jacking points, suspension mountings
    - (d) Attachments for use in towing or in case of breakdown.
- In the spaces at the outside of wheel arches an imaginary surface extending as if continuous, the adjacent external surface without change of position shall be assumed.
- (7) The front bumpers shall be taken into account in determining the floor line. Depending on the type of vehicles, the trace of the floor line will be at either the outer edge of the bumper or at the body panel below the bumper.
  - (8) where two or more points of contact are observed at the same time, the lowest point of contact shall be used to determine the floor line.
- 4.4 Radius of curvature : Means the radius of the arc of a circle which comes closest to the rounded form of the component under consideration.

5. Design Requirement :

- 5.1 The provisions of this standard shall not apply to those parts of the external surface which, with the vehicle in the laden condition, with all doors, windows and access lids etc., in the closed position, are either :-
  - at a height of more than 2m; or
  - below the floor line; or

4-8

APPENDIX

- 1. The height 'H' of a projection is determined graphically by reference to the circumference of a 165 mm diameter circle, internally tangential to the external outline of the external surface at the section to be checked.
- 2. H is the maximum value of the distance, measured along a straight line passing through the centre of the 165 mm diameter circle, between the circumference of the aforesaid circle and the external contour of the projection (see fig. 1).
- 3. In case where it is not possible for a 100 mm diameter circle to contact externally part of the external outline of the external surface at the section under consideration, the surface outline in this area will be assumed to be that formed by the circumference of the 100 mm diameter circle between its tangent points with the external outline (see fig.2).
- 4. Drawings of the necessary sections through the external surface shall be provided by the manufacturer to allow the height of the projections referred above to be measured.

4-9

SPRAY SUPPURATION SYSTEM

Spray suppuration system intended to reduce the pulverization of water thrown upwards by the tyres of a vehicle in motion. The spray-suppression system is made up of a mudguard, rain flaps and valances equipped with a spray-suppression device.

Mudguard

'Mudguard' means a rigid or semi-rigid component intended to trap the water thrown up by tyres in motion and to direct it towards the ground.

Rain flap

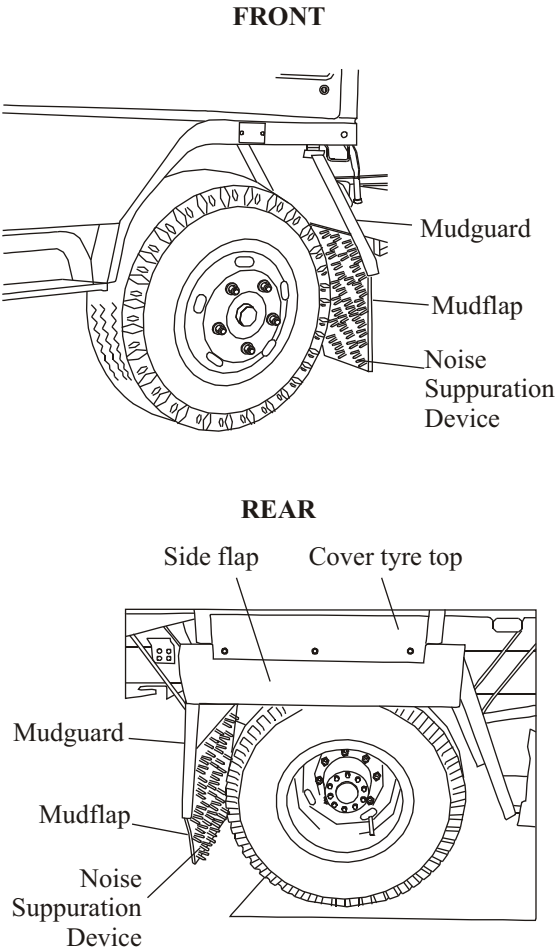
A flexible component mounted vertically behind the wheel, on the lower part of the chassis or the loading surface, or on the mudguard. The rain flap shall also reduce the risk of small objects, in particular pebbles, being picked up from the ground by the tyres and thrown upwards or side wards towards other road users.

Spray-suppression device

This is a component forming part of the mudguard and / or valance and /or rain flap which absorbs the energy of water spray, thus reducing pulverized water spray.

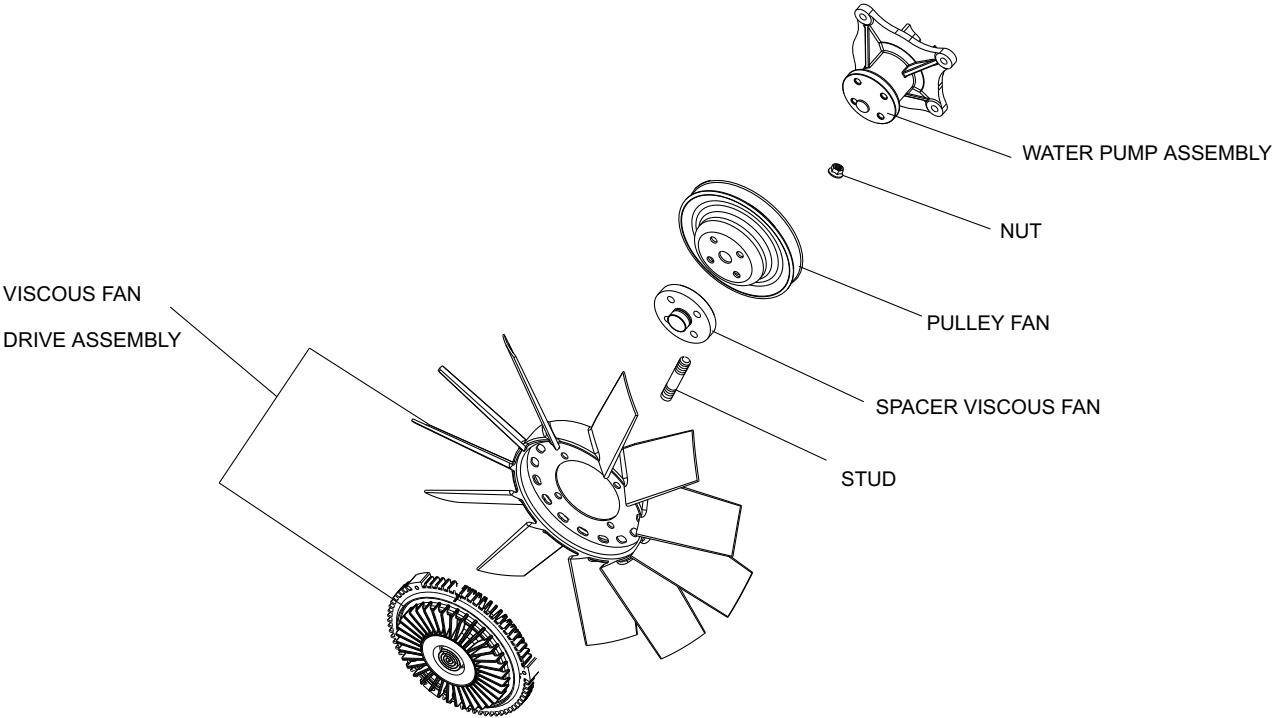
Outer valance

Component located approximately within a vertical plane that is parallel to the longitudinal plane of the vehicle. It may form part of a mudguard or of the vehicle bodywork.



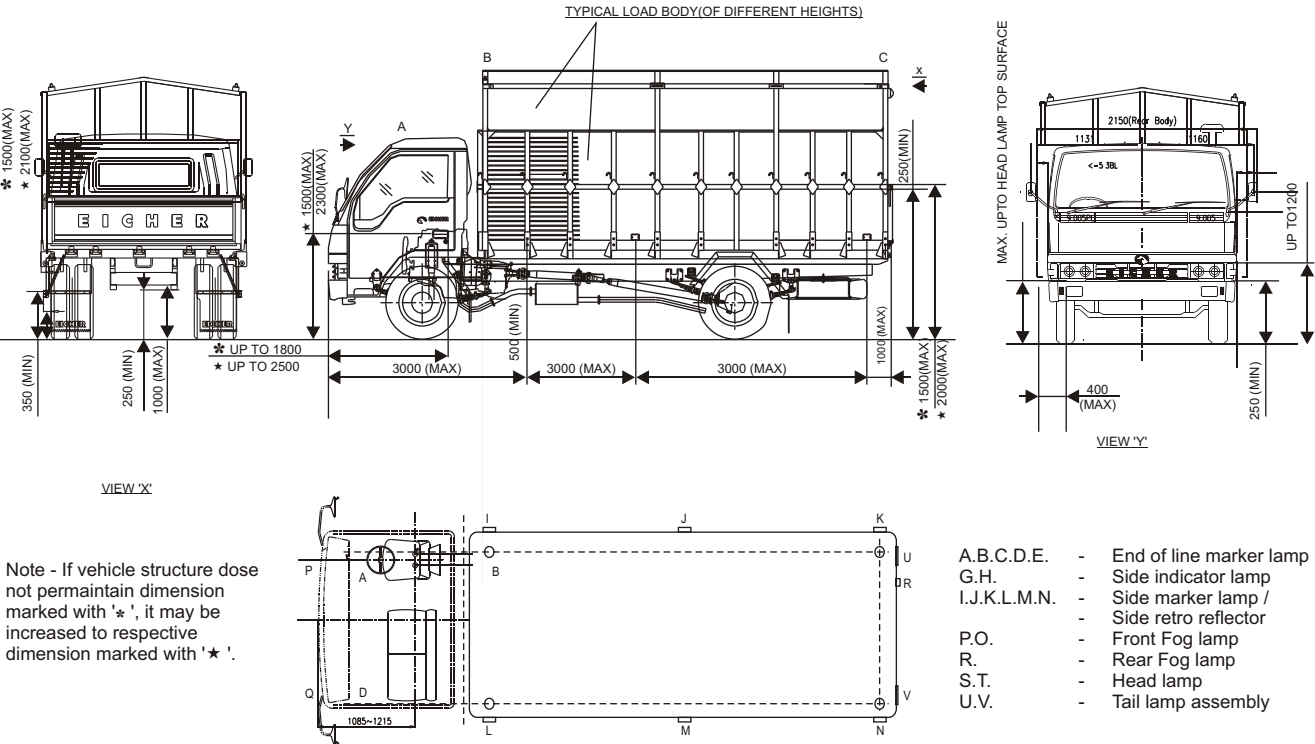
VISCOUS FAN DRIVE

It is a mechanical device to engage and disengage the cooling fan to optimize engine cooling. Viscous fan assembly is rotating only when it reached to particular temperature , resulting rotation of fan only 5 to 10 % of the total running. There is no noise of fan until it doesn't reach the desired temperature.



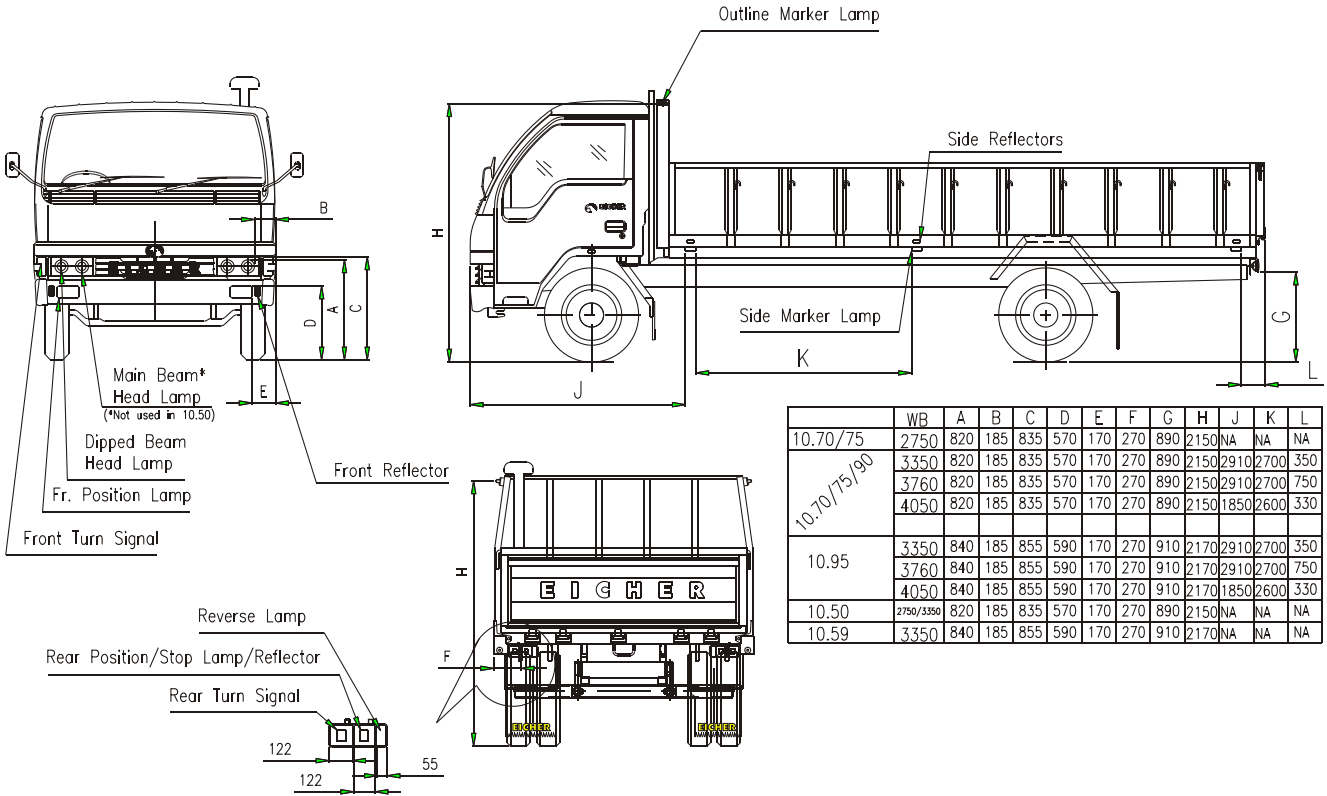
4-11

GUIDE LINES TO BODY BUILDERS FOR FITMENT OF END OUTLINE MARKER LAMPS SIDE MARKER LAMPS / SIDE RETRO REFLECTORS, SIDE INDICATOR LAMPS, FRONT & REAR FOG LAMPS, HEAD LAMPS & TAIL LAMP ASSEMBLIES ON LCVs / MCVs

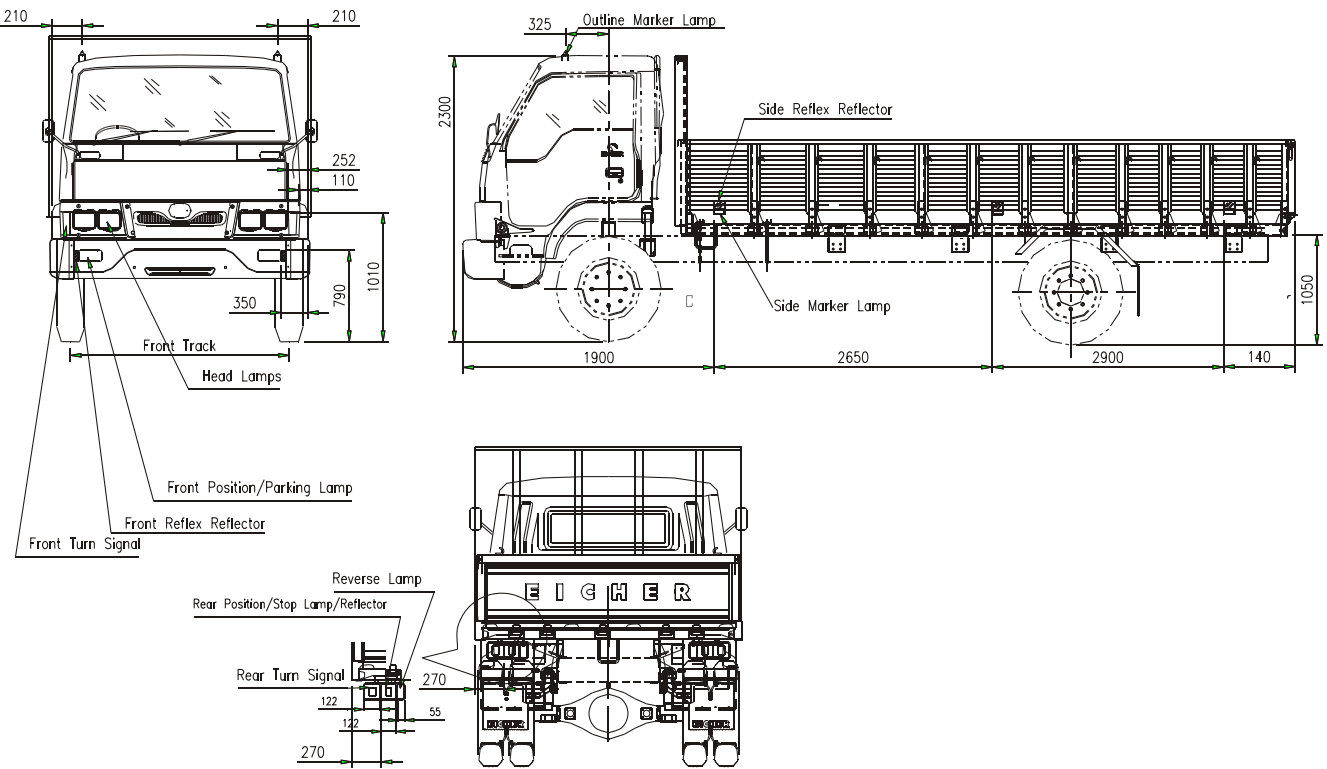


1) This is a typical truck with load body. The fitment requirment for the various lamps are applicable for bus body applications also.  
2) Refer attached notes.

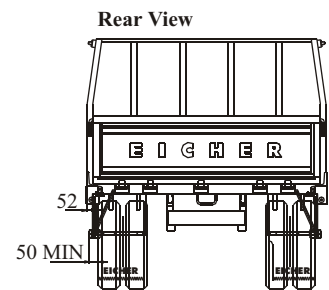
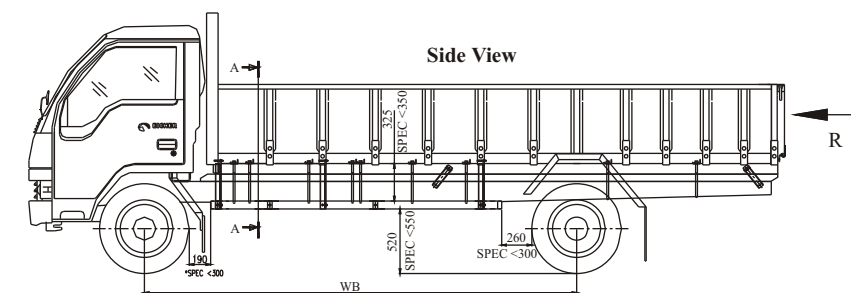
LIGHTING INSTALLATION GUIDE LINES FOR LCVS



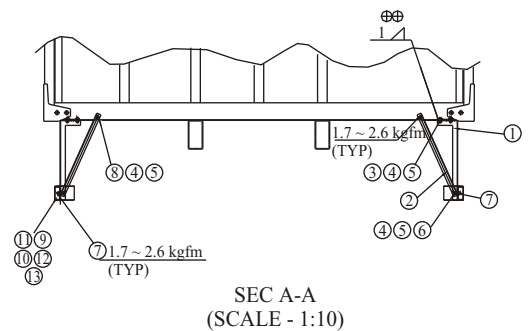
LIGHTING INSTALLATION GUIDE LINES FOR MCV



## Rear View

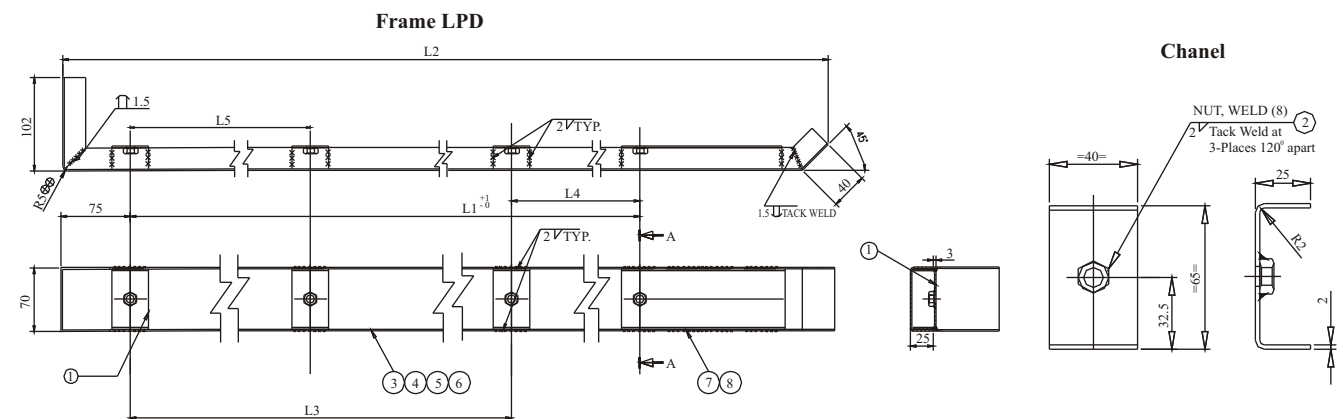


SYM.	PART NO.	DESCRIPTION	QTY.					
			LPD INST. (H-W/B)	LPD INST. (F-W/B)	LPD INST. (E-W/B)	LPD INST. (C-W/B)	LPD INST. (H-W/B) MCV	LPD INST. (C-W/B) MCV
1	IB009934	BRACKET, MTG. LPD LCV	8	8	8	6		
2	IB009925	ANGLE, SUPPORT	8	8	8	6		
	IB009932	ANGLE, VERT LPD (40X22)					2	2
3	IB009878	PLATE BOLT	8	8	8	6		
4	IB001474	NUT, SELF LOCK (8) M8 X 1.25	30	30	30	24		
5	MF450005	PLAIN WASHER (8)	30	30	30	24		
6	MF140225	BOLT FLANGE (M8 X 1.25 X 20)	8	8	8	6		
7	MF140221	BOLT FLANGE (8X12)	8	8	8	6		
8	MF140239	BOLT, FLANGE (8X70) M8 X 1.25 X 70	8	8	8	6		
9	IB009939	FRAME LPD LCV C-W/B				2		
10	IB 009940	FRAME LPD LCV E-W/B			2			
11	IB 009941	FRAME LPD LCV F-W/B		2				
12	IB009941	FRAME LPD LCV H-W/B	2					
13	IB 009927	FRAME LPD MCV H-W/B					2	
14	IB 009944	FRAME LPD MCV G-W/B						2



Note : Sectional details overleaf

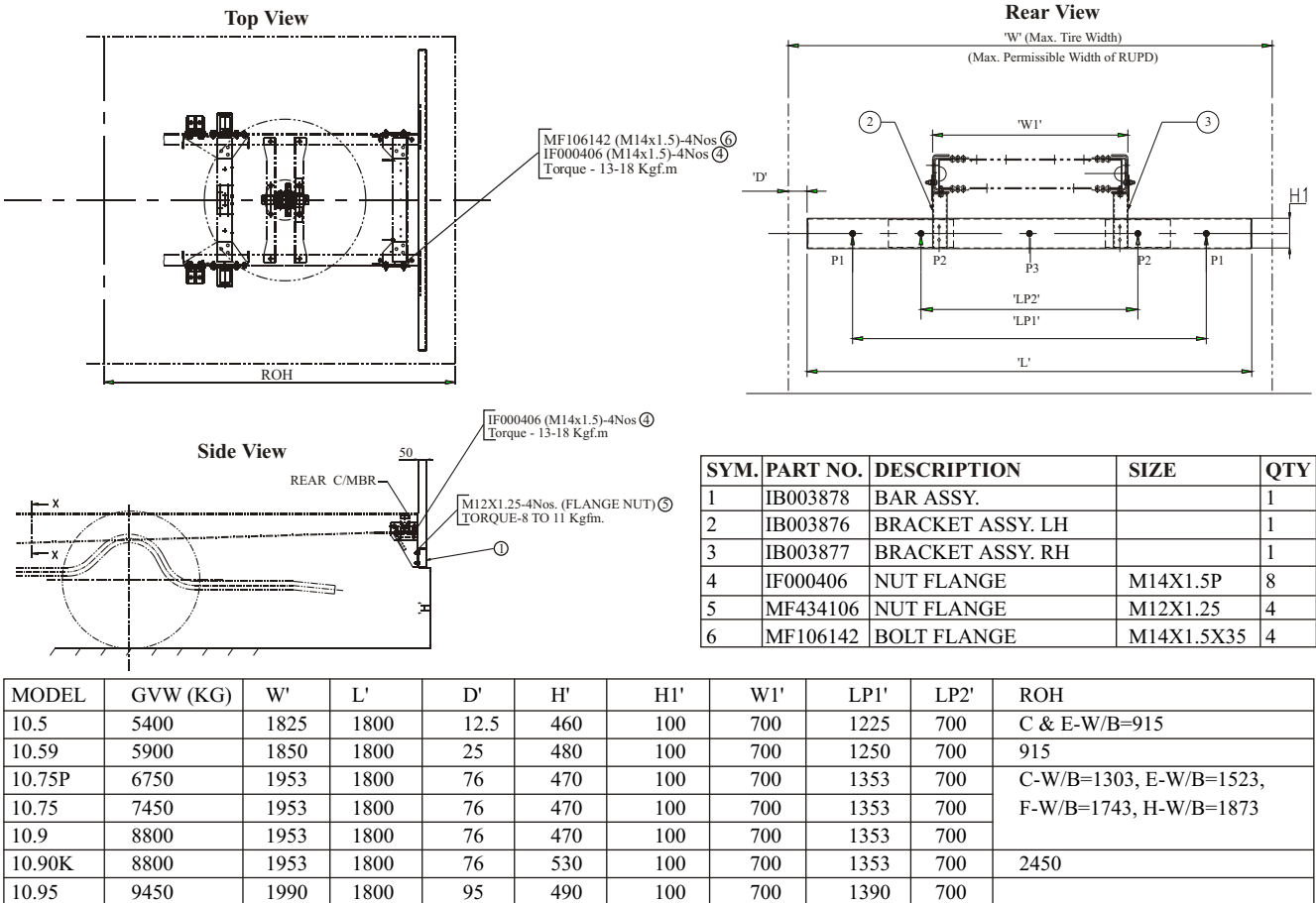
### Frame LPD



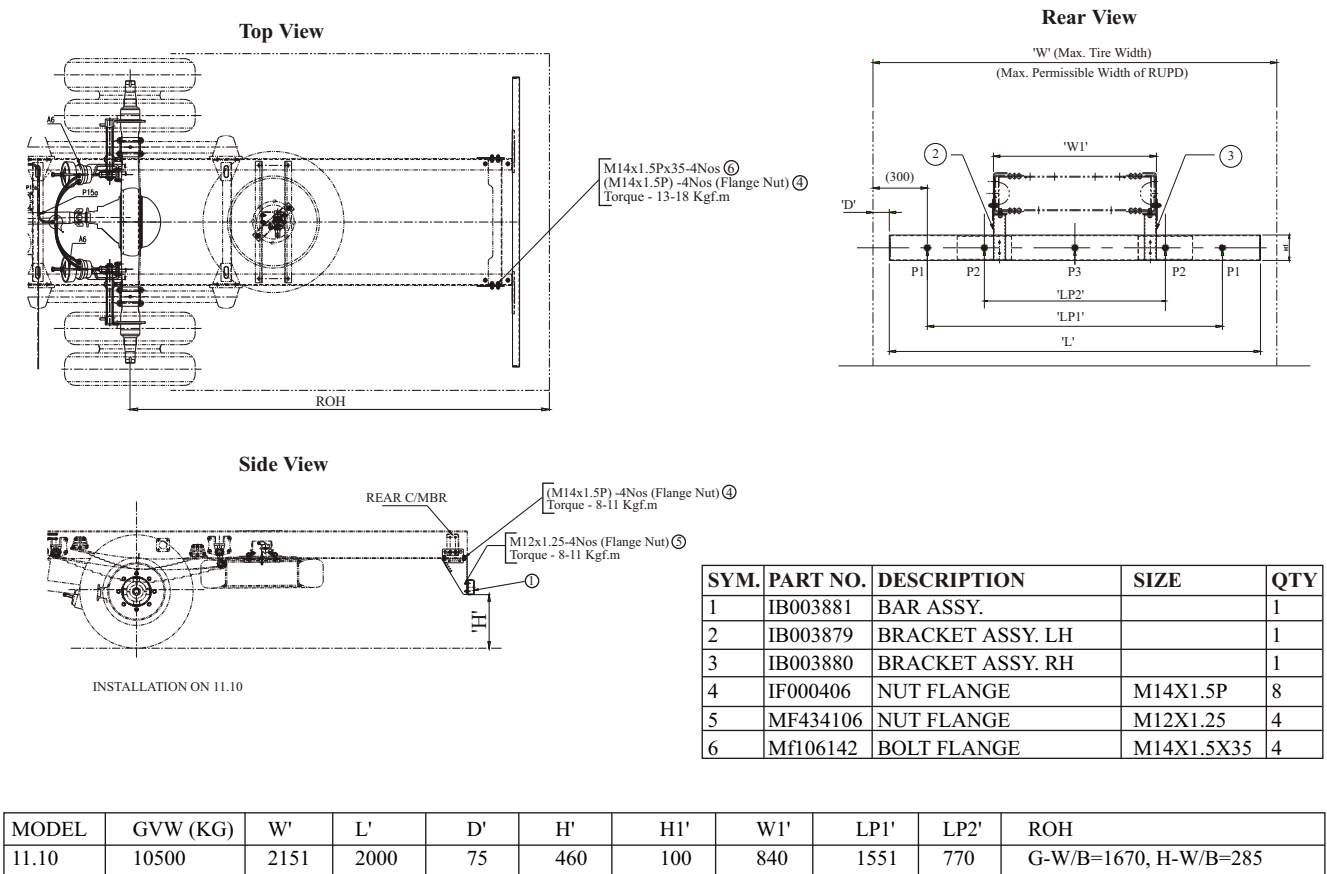
PART NO.	L1	L2	L3	L4	L5
IB 009942	2530	2856	1331	1199	391
IB 009941	2256	2533	1338	918	420
IB 009940	1847	2077	1379	468	453
IB 009939	1303	1532	-	-	453

S.NO.	PART NO.	DESCRIPTION	MATERIAL	SIZE	FRA1 IB 00	FRA1 IB 00	FRA1 IB 00	FRA1 IB 00	FRA1 IB 00	FRA1 (MC)	FRA1 (MC)
1	IB 009943	BRKT, REINF LPD (65 X 25)	GRILL IS : 10748-1995	65X25X2X40	3	3	3	3			
	IB 009933	BRKT, REINF LPD	GRILL IS : 10748-1995	46X40X25X2					6	6	
2	MS440114	NUT, WELD (M8) 8T		(M8 X 1.25P)	4	4	4	4			
	MS440114	NUT, WELD (M8) 8T		(M8 X 1.25P)					8	8	
3	IB009935	CHANNEL, HORZ LPD (70X25) C-W/B	GRILL IS : 10748-1995	70X25X1.6X1670				1			
4	IB009936	CHANNEL, HORZ LPD (70X25) E-W/B	GRILL IS : 10748-1995	70X25X1.6X2215			1				
5	IB009837	CHANNEL, HORZ LPD (70X25) F-W/B	GRILL IS : 10748-1995	70X25X1.6X2670		1					
	IB009931	CHANNEL, HORZ LPD	GRILL IS : 10748-1995	50X25X1.6X2950					2		
	IB009930	CHANNEL, HORZ LPD	GRILL IS : 10748-1995	50X25X1.6X2950						2	
6	IB009938	CHANNEL, HORZ LPD (70X25) H-W/B	GRILL IS : 10748-1995	70X25X1.6X2995	1						
	IB009945	CHANNEL, REINF LPD MCV	GRILL IS : 10748-1995	250X46X25X2			1	1	2	2	
7	IB009991	CHANNEL REINFORCEMENT	GRILL IS : 10748-1995	66X25X2X140				1			
8	IB009992	CHANNEL REINFORCEMENT	GRILL IS : 10748-1995	66X25X200	1	1					

GUIDELINES FOR REAR UNDER RUN PROTECTION DEVICE INSTALLATION ON LCV



GUIDELINES FOR REAR UNDER RUN PROTECTION DEVICE INSTALLATION ON MCV



SECTION - 5

GUIDE LINES FOR

'U' BOLT & STIFFNER MOUNTING

&

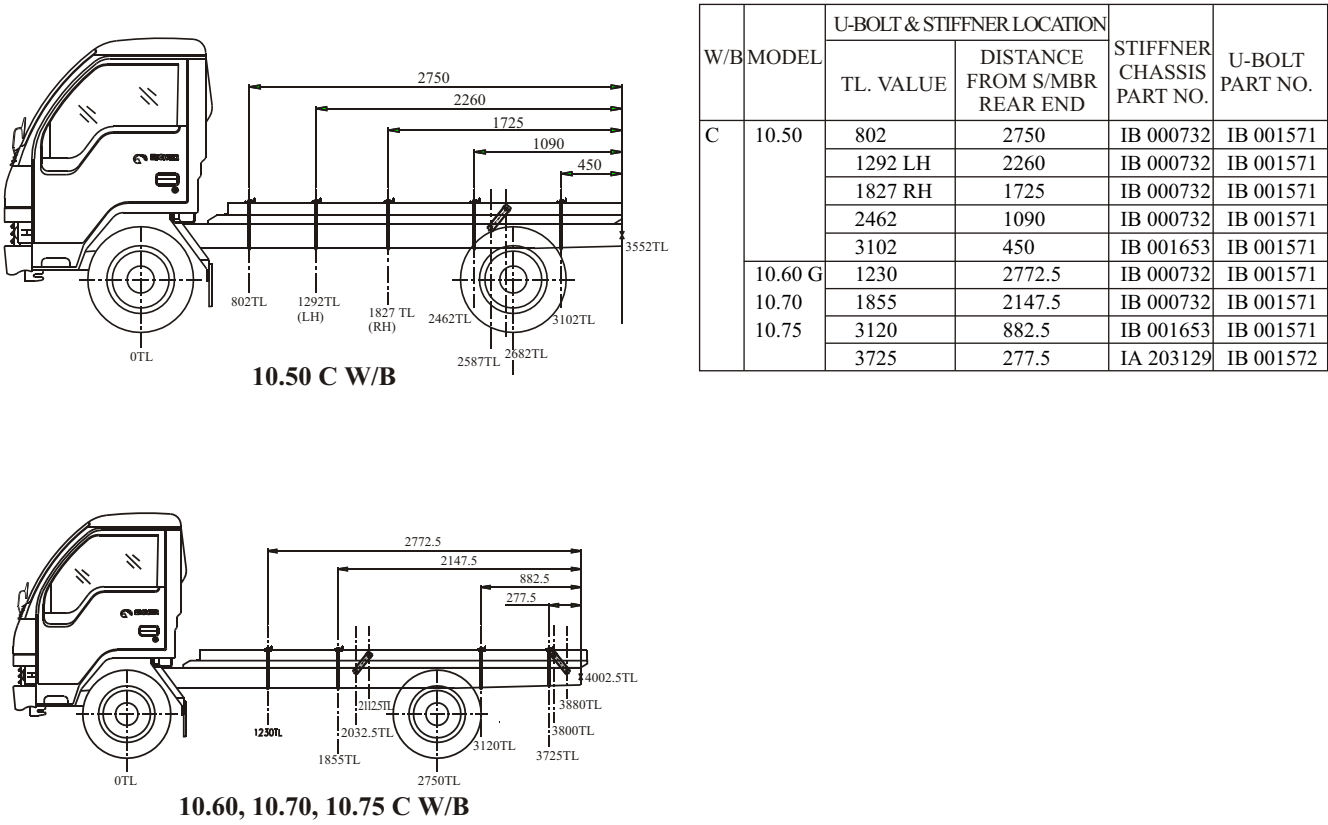
POINTS TO BE FOLLOWED WHILE

BODY BUILDING

5-1

+ + +

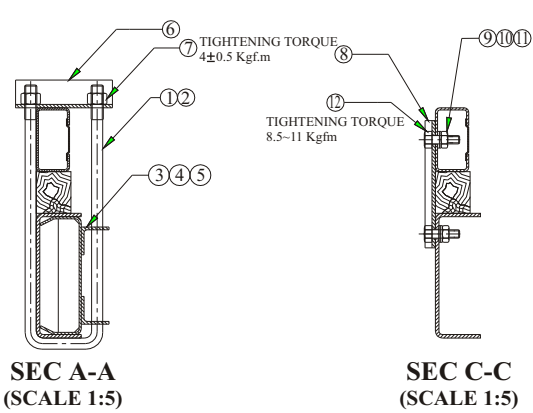
GUIDELINES FOR ‘U’ BOLT & STIFFNER MOUNTING ON ‘C’ WHEEL BASE - LCV



5-2

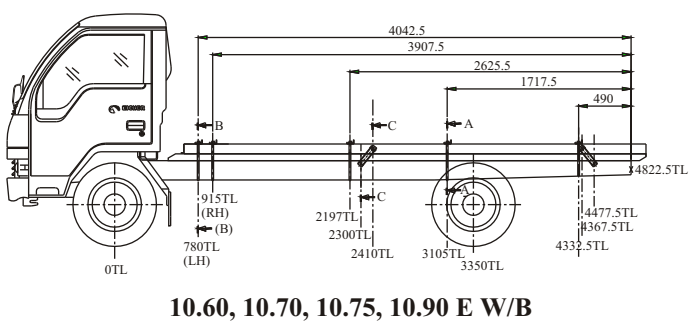


GUIDELINES FOR ‘U’ BOLT & STIFFNER MOUNTING ON ‘C’ WHEEL BASE - LCV



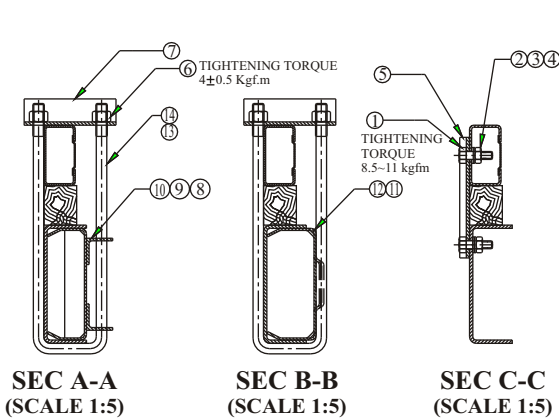
SYM.	PART NO.	DESCRIPTION	QTY.	
			10.50 C WB	10.60, 10.70 10.75 C WB
1	IB 001571	U-BOLT (365L)	6	8
2	IB 001572	U-BOLT (350L)	2	
3	IB 000732	STIFFNER, CHASSIS (170)	4	5
4	IB 001653	STIFFNER, CHASSIS (167)	2	2
5	IA 203129	STIFFNER, CHASSIS (150)	2	
6	IB 001575	PLATE, SHOE	8	8
7	IB 001477	NUT NYLOC (14)	16	16
8	IB 001641	STAY	4	2
9	IB 001247	NUT, HEX (12)	8	4
10	IB 001207	WASHER SRPING (12)	8	4
11	IB 01227	WAHSER PLAIN (12)	8	4
12	IB 00092	BOLT, HEX (12 x40)	8	4

GUIDELINES FOR ‘U’ BOLT & STIFFNER MOUNTING ON ‘E’ WHEEL BASE - LCV



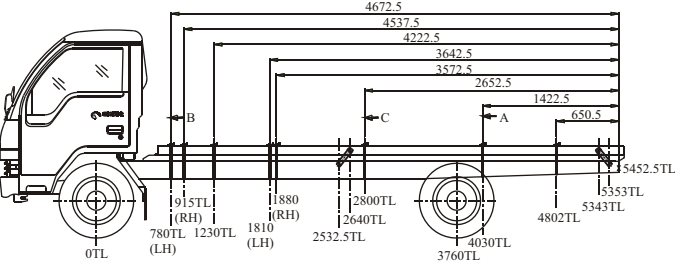
10.60, 10.70, 10.75, 10.90 E W/B

W/B	MODEL	U-BOLT & STIFFNER LOCATION		STIFFNER CHASSIS PART NO.	U-BOLT PART NO.
		TL. VALUE	DISTANCE FROM S/MBR REAR END		
E	10.60 G	780 LH	4042.5	IB 000678	IB 001571
		915 RH	3907.5	IB 000687	IB 001571
	10.70	2197	2625.5	IB 000732	IB 001571
		3105	1717.5	IB 001653	IB 001571
	10.75	4332.5	490.0	IB 001556	IB 001574
		780 LH	4042.5	IB 000678	IB 001571
		915 RH	3907.5	IB 000678	IB 001571
		2197	2625.5	IB 000732	IB 001571
	10.90	3105	1717.5	IB 001653	IB 001571
		4332.5	490.0	IB 001556	IB 001574



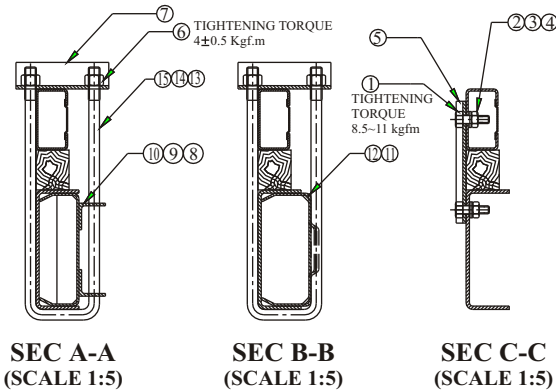
SYM.	PART NO.	DESCRIPTION	QTY.	
			10.60 G, 10.70, 10.75	10.90
1	IB 000902	BOLT, HEX (12 x40)	8	8
2	IB 001227	WAHSER PLAIN (12)	8	8
3	IB 001207	WASHER SRPING (12)	8	8
4	IB 001247	NUT, HEX (12)	8	8
5	IB 001641	STAY	4	4
6	IB 001477	NUT NYLOC (14)	16	16
7	IB 001575	PLATE, SHOE	8	8
8	IB 001556	STIFFNER, CHASSIS (132)	2	2
9	IB 001653	STIFFNER, CHASSIS (167)	2	2
10	IB 000732	STIFFNER, CHASSIS (170)	2	2
11	IB 000678	STIFFNER, CHASSIS (163)	2	1
12	IB 000687	STIFFNER, CHASSIS (170)		1
13	IB 001574	U-BOLT (330L)	2	2
14	IB 001571	U-BOLT (365L)	6	6

GUIDELINES FOR ‘U’ BOLT & STIFFNER MOUNTING ON ‘F ’ WHEEL BASE - LCV



10.60, 10.70, 10.75, 10.90 F W/B

W/B	MODEL	U-BOLT & STIFFNER LOCATION		STIFFNER CHASSIS PART NO.	U-BOLT PART NO.
		TL. VALUE	DISTANCE FROM S/MBR REAR END		
F	10.60 G	780 LH	4672.5	IB 000678	IB 001571
	10.70	915 RH	4537.5	IB 000687	IB 001571
	10.75	1230	4222.5	IB 000732	IB 001571
	10.90	1810	3642.5	IB 000732	IB 001571
		1880	3572.5	IB 000732	IB 001571
		2800	2652.5	IB 000732	IB 001571
		4030	1422.5	9219596	IB 001574
		4802	650.5	9219614	IB 001573



			QTY.	
			10.90 F W/B	10.60, 10.70 F W/B
SYM.	PART NO.	DESCRIPTION		
1	IB 00092	BOLT, HEX (12 x40)	8	8
2	IB 001227	WAHSER PLAIN (12)	8	8
3	IB 001207	WASHER SRPING (12)	8	8
4	IB 001247	NUT, HEX (12)	8	8
5	IB 001641	STAY	4	4
6	IB 001477	NUT NYLOC (14)	24	24
7	IB 001575	PLATE, SHOE	12	12
8	9219814	STIFFNER, CHASSIS (118)	2	2
9	9219596	STIFFNER, CHASSIS (140)	2	2
10	IB 000732	STIFFNER, CHASSIS (170)	6	6
11	IB 000678	STIFFNER, CHASSIS (163)	2	1
12	IB 000687	STIFFNER, CHASSIS (170)		1
13	IB 001573	U-BOLT (315L)		2
14	IB 001574	U-BOLT (330L)		6
15	IB 001571	U-BOLT (365L)	12	8

HINTS DURING THE BODY BUILDING PHASE :

Extreme care while assembling the body on the chassis with respect to the ECU should be employed.

- 1.1. The ECU should be disconnected from the harness and a dummy cap should be put on the ECU connector. There should be no ingress of water through the wiring harness on the ECU.
- 1.2. The ECU as such should be covered in a box so that if any washing is done, the ECU will be protected.
- 1.3. Maximum cleanliness in the work area and the tools should be employed . Check to see if the ECU has become dirty during the body building phase.
- 1.4. For connecting and disconnecting the ECU from the wiring harness, only the specified force in the TCS should be applied.
- 1.5. ECUs must be connected or disconnected to the wiring harness only when the ignition is OFF.
- 1.6. No undue pressure should be applied on the ECU during the assembly process.

SECTION - 6

LIST OF AUTHORISED REPRESENTATIVE &  
SERVICE CENTERS

(PLEASE CONTACT REGIONAL OFFICES FOR UPDATED LIST)

6-1

AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
ANDMAN			
Portblair SPD S 6038	<b>S.S. Motors</b> Junglighat, Porblair, Andaman-744 103 <b>Sonu Agarwal</b>	Phone : 244409, 237422 sonupb2001@yahoo.co.in	
ANDHRA PRADESH			
Ananthpur EASC S 6035	<b>Sri Sai Lakshmi Agencies</b> 8/7, M.R.S.M. Complex, N.H. 7, By-Pass Road, Ananthapur-515 001 <b>B. Partha Saradhi / J. Damodar Naidu</b> M 9849021333 / M 9866110044	Phone : 08554-271009 sailakshmi_atp@yahoo.com	Phone : 08554-271009 <b>Srinivasulu</b> M 9849592016 sailakshmi_atp@yahoo.com
Chittoor AR S 6007	<b>Hitech Motors</b> Bangalore By pass Road, Near Iruvaram Check Post, Chittoor - 517128 <b>Chandrea Sekhar</b> M 9849492620	Phone : 08572-242735, 242736 hitechmotors_tpt@rediffmail.com	<b>Tulasi Ram</b> M 9849492623 hitechmotors_tpt@rediffmail.com
Cuddapah EASC S 6032	<b>Standard Automotives</b> Plot No.14, Beside Sri Durga Devi Temple N.H.18 Road, Cuddapah <b>Syed F. Bhasha</b> M 94402 80745	Phone : 08562-274728 standardauto_cdp@yahoo.com	Phone : 08562-274728 <b>Chand Basha</b> M 98494 40708 standardauto_cdp@yahoo.com
Hyderabad SPD S 6030	<b>M/s LPF Systems (P) Ltd.</b> Survey No. 180, Syed Brigadier Road Tadbund, Secundarabad <b>Venu Vinod</b> M 98490 32009	Phone : 040-55782320, 55782321 E-mail: lpfyste@sancharnet.in	<b>Mallikarjun</b> M 98481 20924
Hyderabad AR V 6001	<b>Talwar Auto Garages Pvt. Ltd.</b> 6 - 3 - 658, Concorde Apartment Opp. Eram Manzil, Somajigudda, Hyderabad - 500 082 <b>Sunil Talwar</b> M 98480 30700	Phone : 040-23390917, 23397777 Fax : 040 - 23302264 eichertalwar@rediffmail.com	C-51,Industrial Estate, Bala Nagar, Opp. IDPL Research Hyderabad-500 037, Dt. Rangareddy Phone 040-23770210, 23774318 Fax : 040-23773478 <b>Karunaker Rao</b> M 98481 37106 tag_workshop@rediffmail.com

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AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Karimangar AR BR V 6001	<b>Talwar Auto Garages (P) Ltd.</b> D. No. 8-5-379, Survey No. 416, Kothi Rampur, Hyderabad Main Road, Karimanagar-505 001 <b>Sunil Talwar</b>	Phone : 08782-2260777	<b>Vipin Kumar</b> M 98481-85511
Kurnool EASC S 6031	<b>M/s Shivani Automobiles</b> Plot No.127, Nehru Auto Nagar, N.H.7 Kurnool - 3 <b>K. Veerabhadrappa</b> M 98854 67369	Phone : 08518 - 252729 shivaniautomobiles@rediffmail.com	Phone : 08518 - 252729 <b>K. Veerabhadrappa</b> M 98854 67369 shivaniautomobiles@rediffmail.com
Mehdipatnam AR BR S 6001	<b>Talwar Auto Garages Pvt. Ltd</b> 9-4-81 Nanal Nagar, Langar House Road Adjacent to Andhra Floor Mills Mehdipatnam- 500 008 <b>Sunil Talwar</b> M 98481 70730	Phone : 040 - 23526605, 23522543 Fax 23526605 tagmp@rediffmail.com	Phone : 040 - 23526605, 23522543 Fax 23526605 <b>V S N Murthy</b> M 98481 70730 tagmp@rediffmail.com
Ongole EASC S 6028	<b>Shankar Auto Stores</b> SBT Building, Beside Throvagunta Company, N.H.5 Road, Ongole, Dt. Prakasam - 523 002 <b>Shiva Mohan Reddy</b> M 98481 25025	Phone : 08592-246655/56	Beside NS Canal, NH-5, Throvagunta-523 002 Phone : 08592-246655/56 <b>Chandrasekhar</b> M 98483 04275
Rajahmundry AR V 6005	<b>Srinivasa Automobile</b> Door No. 41-2-196, Tadithota, Rajahmundry - 533103 <b>B Pullam Raju</b> M 98481 69292	Phone : 0883 - 2438162 Fax 0883-2467117 rmy_srmvsrjy@sancharnet.in	Phone : 0883-2468858, 2428162 <b>K. Shankar</b> M 98495 63553 rmy_srmvsrjy@sancharnet.in
Srikakulam EASC S 6029	<b>Jeelani Automobiles</b> Kotha Road Junction, Near Telephone Tower, N.H.5 Road, Srikakulam <b>A.K.M. Jeelani</b> M 0891-3102352	Phone : 08942 - 278917	Phone : 08942 - 278917 M 98482 74432
Tirupati AR V 6007	<b>Hitech Motors</b> Near Vertha, Renigunta Road, Tirupati <b>Jagannath Reddy</b> M 98495 39616	Phone : 0877-2239616 hitechmotors_tpt@rediffmail.com	Phone : 0877-2239616 <b>Madhusudan</b> M 98494 92625 hitechmotors_tpt@rediffmail.com

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AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Vijaywada AR V6060	<b>Ramcor</b> Door No. 33-21-33, Sitaram Puram, Eluru Road, Vijayawada-520 002 <b>K.V.S. Prakash Rao</b> M 98490 86242	Phone : 0866-2431334, 2431333 vdwramcor@sancharnet.in	D.No. 48-16-17, Mahanadu Road, Autongar, Vijayawada-520 007. Phone: 0866-5578855 <b>Ramu</b> M 9866111075
Vishaka- patnam AR V 6006	<b>Srinivasa Automobiles (Vishaka) Pvt. Ltd.</b> A - 6, APIE, Autonagar, Dt. Vishakapatnam - 530 012 <b>Pullam Raju</b> M 98481 69292	Phone : 0891-2515376, 2515677 Fax 0891 - 2511182 srinivasaauto_visakha@yahoo.com	Phone : 0891-2511839, 2515676-77 <b>R.C.V.R. Krishna</b> M 98495 63773 srinivasaauto_visakha@yahoo.com
Warrangal AR BR V 6001	<b>Talwar Auto Garages Pvt Limited</b> 1-1-1/1, Chaitanyapuri, Opposite R.E.C. Petrol Pump, Hanamkonda, Dt. Warrangal-506 004 <b>Sunil Talwar</b>	Phone : 0870-2431043, 2446401 Fax 0870-2431043	Phone : 0870-2431043, 2446401 <b>P. Sirish Reddy</b> M 98480 72073
<b>ASSAM</b>			
Dibrugarh SPD S 2022	<b>Kamal &amp; Co.</b> Khemka Market, Dibrugarh 786 001 <b>Kamal Surekha</b>	Phone : 0373-2244713, 2324471, 2322871	
Guwahati AR S 2031	<b>Goodwill Motors</b> 1, KKB Road, Chenikutni, Guwahati - 781 003 <b>S.K. Barua , Sanjoy Barua</b> M 98640 10047, 94350-19993	0361-2544219, 2663044 Fax 2639115, 2669073 goodwill_motors@rediffmail.com	Heliped Road, Beltola NH-37 Bypass, Guwahati 781 029 Phone : 0361-2302822 <b>Manash Nair</b> M 94350 41469 goodwill_workshop@rediffmail.com
Rangapara EASC S 2026	<b>Sahil Automobiles</b> M. G. Road, Rangpara, Dt. Sonitpur <b>Rajesh Patodia</b> M 94350-80554	Phone : 03714-250310, 250067 Fax 250017 sahilauto@rediffmail.com sahilauto2004@yahoo.com	G.N.B. Road, P.O. Rangapara, Dist. Sonitpur, Assam Phone : 07314-250200, 251126

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AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
BHUTAN			
Phuentsholing AR/SPD V 2006	State Trading Corp. of Bhutan P.O.Box No-76, Phuentsholing, Bhutan <b>Dorjee Namgyea</b> 009755-252286 (R)	Phone : 009755-252745 252514, 253616 Fax 009755-252619 stcbl@druknet.bt	<b>Sanghey Rabten</b>
Phuentsholing EASC S 2021	<b>Rabten Engg. Workshop</b> P.O. Box No-258, Phuentsholing <b>Sonam Tobgay</b> Phone : 009755-252047(R)	Phone : 009755-252238, 252669 Fax 009755-252908 rew2@druknet.bt	<b>B. Das</b> <b>Damber Shrestha</b>
BIHAR			
Patna EASC S 7003	<b>United Motors World</b> Lohiya Marg, Jagdapath, Near Nitibag Colony Baily Road, Patna-14 <b>Surendra Kumar Roy</b> M 98352 75728 2522575 (R)	Phone : 0612-2590507 sonu_singh98@yahoo.com	<b>S. Kumar</b> Phone : 0612-2590507 sonu_singh98@yahoo.com
CHANDIGARH			
Chandigarh SPD S 1088	<b>Jaeco Motors (P) Ltd.</b> SCF-344-345, New Motor Complex, Manimanjara - 160 101 <b>Pradeep Chowdhury</b> M 98151 71285	Phone : 0172-2732933, 2733570 Fax : 0172-2734843	<b>B. B. Garg</b> M 98151 71286
Chandigarh AR V 1008	<b>Modern Motors</b> 122, Industrial Area Phase 1, Chandigarh-124 001 <b>Madhu Sudan Vij</b> M 98140 88400	Phone : 0172-2656633, 2740000 Fax 2653444 mmotors@glide.net.in	
CHHATTISGARH			
Raipur AR V 5025	<b>Dynamic Motors</b> Near MP Dhaba, GE Road, Tatibandh, Raipur <b>Ashwini Mahendru</b> M 98261-42028	Phone : 0771-5076096, 2573041 dynamotors@yahoo.com	<b>Mr. Anant Agrawal</b> M 94252-36028 Phone : 0771-5076096

AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
DELHI			
Delhi AR S 1079	<b>R.S. Ajit Singh &amp; Co. (Automotive) Pvt. Ltd.</b> C-91/10, Wazirpur Industrial Area , Ring Road, Delhi - 52 <b>B.S. Khurana</b> M 98110 51063	Phone : 011-27373341, 4700 27375188, 27376324 Fax 011-27371916 rsas@mantraonline.com	93, Sarai Peepalthalla, Near Azadpur, Fruit Mandi, G.T. Karnal Road, New Delhi-110 033 Phone : 011-27639402 / 542, 27638483 <b>Yogesh Tomar</b> M 98110 94035
Delhi AR V1004	<b>Sincere Marketing Services Pvt. Ltd.</b> E-5 Masjid Moth, Outer Ring Road, Greater Kailash - 3, New Delhi - 48. <b>Anil Dhingra</b> M 98101 17191	Phone 011-29222799 / 467 Fax 011- 29212347 sincere@vsnl.com	
Delhi SPD S 1072	<b>Swarna Motors</b> 3691/1, Gupta Tractor Market, Mori Gate, Delhi - 110006, <b>Sunil Kapoor</b> M 98103 74244	Phone : 011-23970524, 23990873 27134244 Fax 23912439 swarnamotors@sify.com	<b>Pradeep Bajaj</b>
GOA			
Madagaon SPD S 3022	<b>V.S. Dempo &amp; Company Ltd.</b> Eicher Genuine Spares Shop, Ashok Building Station Road, Margaon	0832-715177	<b>Felis Barreto</b>
Panjim AR V 3008	<b>Dempo Mktg. Co. Pvt. Ltd.</b> Dempo House, Automobile Divn. Campal, Panjim, Goa - 403 001 <b>Subhash V. Dempo</b> M 98221 29012 <b>Dhilip Mondkar</b>	Phone : 0832-2422794, 2226281-86 Fax : 0832-2225098 dmkt@dempcos.com	NH-17, Parxet, Gurim, Bardez, Goa Phone : 0832 - 22260771, 2261116 Fax 2261116 <b>Thomas Fernandes</b> M 98221 04552 dmkd@dempcos.com dempoeicher@rediffmail.com
GUJARAT			
Ahmedabad AR V 3001	<b>Aarohi Motors Pvt. Ltd.</b> 1, Laxmi Estate, N.h. No. 8, Narol, Ahmedabad-382 405 <b>Shah Shashank J</b> M 98792 11522	Phone : 079 - 25716761, 25710836 Fax 079-25713412 aarohi@icenet.net.in	Tulshi Avenue, Behind Tulshi Hotel Aslali, Ahmedabad Uttam Leauva M 98253 29300 Phone 027182-262913, 261895

AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Ahmedabad EASC / SPD S 3044	<b>Apco Motors India Pvt. Ltd.</b> Apco House, 1st Floor, Opp. Dinbal Tower, Mirzapur, Dt. Ahmedabad <b>Mehul Dholakiya</b> M 98240 23890	Phone : 079-25506868, 25509246 Fax 079-2506793 apco_motors@hotmail.com	Block No. 451, Near Kenal Sarkhej Bawla Road, PO Sanathal, Sanand, Dt. Ahmedabad Phone : 02717-250946, 251462 Fax 251463 <b>Majbut Singh Gohil</b>
Anand AR S 3002	<b>Aarohi Motors Pvt. Ltd.</b> N.H. 08, Opp. J.K. Park, Near Gin Compound, Vaghashi, Dt. Anand 388011, <b>Hitesh Patel</b> M 98792 12288	Phone : 02692-255349, 255530 Fax 255689 aarohianand@icenet.net	Phone : 02692-255349 Fax 255689 <b>Hitesh Patel</b> M 98792 12288 aarohianand@icenet.net
Ankleshwar AR BR S 3003	<b>V. G . Automobiles</b> Opp. Varsha Hotel, Rajpipla Chowkdi, NH 8, Ankleshwar <b>Piyush Patel / Daval Shah</b> M 98250-32468	Phone : 02646-233456	
Baroda EASC S 3033	<b>Madhav Motors</b> 10, Anand Indl. Complex, Opp. Yamuna mill, Dabhoi Road, Pratap Nagar-390 004 <b>J.P. Dharamdas Patel</b>	Phone : 0265-2570332, 2502087 Fax 2527089	<b>J. D. Patel</b>
Baroda AR S 3003	<b>V.G. Automobiles</b> Opp. SRP Group No. 9, Makarpura Road, Baroda 390010 Piyush Patel M 98240 10952	Phone : 0265-2642432, 2647654 vgauto@eth.net	<b>Parag K. Shah</b> Phone : 0265-2642432, 2647654
Navsari SPD S 3006	<b>Aradhana Automobiles</b> Adarsh Nagar Society, Kabilporem, Navsari-390 424 <b>Bharat K. Patel</b> M 98241 14447	Phone : 02637-258419 Fax 258419 aradhna_navsari@yahoo.com	<b>A.R. Mehta</b> Phone : 02637-258419
Rajkot AR V 3007	<b>Navnit Motors Pvt. Ltd.</b> Gondal-Ahmedabad Bye Pass Circle, Gondal Road, National Highway No 8-B, Vavadi, Rajkot-360004 <b>Vijay Kachalia</b> M 98211 06000	Phone : 0281-2375313, 14 2375315, 16 Fax : 2375311 nmplrajkot@navnitmotors.com	Phone : 0281-2375313, 14, 15, 16 Fax : 2375311 <b>Viren V. Marvania</b> M 98243 29072 nmplrajkot@navnitmotors.com

AUTHORISED REPRESENTATIVES & SERVICE CENTERS

City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Surat AR V 3004	<b>Trishul Motors</b> Opp. Sadhna Society, Mini Bazar, Varachha Road, Surat 395 006 <b>Bharat K. Patel</b> M 98241 14447	Phone : 0261-2547961 Fax 0261-2552884 trishul_vehicles@hotmail.com	<b>N. Surendran</b> Phone : 0261-2551504 trishul_workshop@hotmail.com
Vapi SPD S 3005	<b>Ashish Automobiles</b> B/2, Advance Complex, Kaparli Road, NH-8, Near Hotel Green View <b>Bharat K. Patel</b> M 98241 14447	Phone : 0260-2421934 Fax : 2421934	<b>Suresh Rathore</b>
HARYANA			
Ambala AR BR V 1091	<b>Modern Automobiles</b> Adjoining Model Town Crossing, Near Hotel Amarpali, GT Road, Ambala, Haryana. <b>Madhu Sudan Vij</b> M 98140 88400	Phone : 0171-2521881 Fax 2520255 modernamb@glide.net.in	<b>Satish K. Vij</b> Phone : 0171-2521881 Fax 2520255 modernamb@glide.net.in
Faridabad AR V 1007	<b>Shree Motors Pvt. Ltd.</b> 1A-240-243, Neelam Bata Road, N.I.T. Faridabad, Haryana -121001. <b>S. B. Mittal</b> M 98107 44169	Phone : 0129-2419546, 5029547 Fax 0129-5029547 shreemotorsltd@rediffmail.com	Plot No. 1, Northern India Complex, 20 / 3, Mathura Road, Faridabad Phone : 0129 - 5066678 <b>Vimal Singh</b> M 98112 67624 shreeworkshop@rediffmail.com
Gurgaon AR BR S 1006	<b>Sincere Marketing Service Pvt Ltd.</b> 38 Km Stone, Village - Khandsa, Delhi Jaipur Highway, Gurgaon. <b>Anil Dhingra</b> M 98101 17191	Phone : 0124-2372852, 2215620 Fax 011- 26472467 sincere@vsnl.com	<b>Gyan P. Saxena</b> Phone : 0124-2372852, 2215620 Fax 011- 26472467 sincere@vsnl.com
Hisar AR S 1096	<b>Mohan Trucks, Mohan Tractors Pvt. Ltd.</b> 9th Km Milestone, Delhi - Hisar Road, Near Janak Tubes, Haryana. <b>Gopal Mittal</b> M 98110 64515	Phone : 01662 - 322449, 220133 Fax 220133 mohantrucks@rediffmail.com	<b>Major D. P. Kadyan</b> M 98963 52013 mohantrucks@rediffmail.com
Karnal AR V 1092	<b>Bansal Motors</b> G.T. Road, Near Namaste Chowk, Karnal - 132 001 <b>R.L. Bansal</b> M 98963 28130	Phone : 0184-2221400 / 1200 Fax 2221001  bansalmotors@sify.com	21/3, HIDC, G.T. Road, Karnal - 132 001 Phone : 0184-2221428 <b>Om Paul Kamboj</b> M 98963 27130 bansalmotors@sify.com



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City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Panipat SPD S 1047	<b>Swarna Motors</b> 25 Subhash Colony, Near Tehsil, G.T Road, Panipat - 1 <b>Sunil Kapoor</b> M 98103 74244	Phone : 0180-2635140 skapoor@del3.vsnl.net.in	Mr. Sonu (W)
Rangapuri Work Shop	<b>Sincere Marketing Services Pvt. Ltd..</b> <b>Anil Dhingra</b>		K-628, Rangapuri, Near Radisson Hotel Rangapuri-37 Ph.: 011-30911561, 33111923 <b>Sunderashan / Gulshan Dhal</b> M 98116 34763 sincere@indiatimes.com
Rohtak AR V 1012	<b>P. L. Agencies Pvt. Ltd.</b> 51, Shamlal Motor Market, Hissar Road, Rohtak 124001 <b>Ravin Kumar Jain</b> M 94160 10777, M 98963 00713	01262-248005, 309842 Fax : 248005 plagencies@rediffmail.com	23, J.P. Nagar, Shamlal Motor Market, Hisar Road Rohtak 124001 <b>Sushil Kumar</b> M 94162 55671, M 98130 49842 plagencies@rediffmail.com

HIMACHAL PRADESH

Gaggal EASC S 1101	<b>Unique Motors</b> Pathankot Road, Sanoran, Gaggal, Dist. Kangra <b>Kulbhushan Rajoria</b> M 9417014693	Phone : 01892-233455 subhashrajoria@yahoo.com	<b>Vijay Kumar</b> M 9816368218
Mandi AR V 1009	<b>Behl Motors</b> Plot No. 6-7, Indl. Area, Phase III, Sauli Khad, Mandi-175001 <b>Somnath Behl</b> M 98160 36436 <b>Deepak Dhawan</b> M 98160 75919	Phone : 01905-235102, 237567 Fax 237567 behlmotor@rediffmail.com	<b>Bimalkant</b> Phone : 01905-235102 Fax 237567 behlmotor@rediffmail.com
Shimla AR V 1010	<b>Behl Motors</b> Opp. Himachal Filling Station, Sanjauli Dhalli Road, Shimla <b>Mr. Sanjeev Behl</b> M 98170 64300	Phone : 0177-2841930 Fax 2647610 bmotor@rediffmail.com	<b>Sanjeev Behl</b>

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Solan AR BR S 1055	<b>Behl Motors</b> Village Kailer, PO Saproon, Sabghtu Road, Solan <b>Sanjeev Behl</b> M 98170 64300	Phone : 01792 - 227435 bmotors@hotmail.com	<b>Vikas Handa</b> Phone : 01792 - 227435 bmotors@hotmail.com
Jammu AR V 1064	<b>Nav Bharat Motors</b> 8 Palace Road, Jammu <b>Ashok Sharma, Subhash Gandotra</b> M 94191 87381, M 94191 97373	Phone : 0191-2544148, 2532219 Fax 2662007	Sidara Bye Pass Road, Jammu Phone : 0191-2662007 <b>Motilal</b>
Ranchi AR V 2025	<b>Apee Automobile (P) Ltd</b> Near State Bank Indrapuri Branch Ratu Road, Ranchi, Jharkhand - 834001 <b>Sharad Poddar</b> M 94311 15969, 0651 3100326	Phone : 0651-2280284, 2284785 Fax 0651-2284785 apee91@yahoo.co.in ornate91@hotmail.com	<b>Anupam Dasgupta</b>

KARNATAKA

Bangalore AR V 6009	<b>Bangalore Mopeds Sales &amp; Service Pvt. Ltd.</b> 130, Lalbagh Road, Bangalore - 560 027 District : Bangalore, Karnataka <b>Ravi M. Reddy</b> M 98450 14414	Phone : 080 - 51146403-4 Fax 080 - 2290213 canter@bgl.vsnl.net.in	<b>Canter Automobile Service Pvt. Ltd.</b> No. 53/2, 53/3, 9th Mlle, MBT Compound, Hosur Road, Bommanahalli, Bangalore 560 068 Phone : 080-25720588, 51108287 <b>Vivek M. Reddy</b> M 98450 08806 <b>Sunil Paul S.</b> M 98452 23285 canterblr@yahoo.com
Bangalore EASC S 6027	<b>Sri Lakshmi Motors Service (P) Ltd.</b> No.21, 2nd Stage, Industrial Suburb, Yeshwantpur, Opp. CMTI Tumkur Road, Bangalore 560 022 <b>M. Shankar</b> M 98440 07641	Phone : 080 23574450 / 51 / 52 Fax 23574350 slm_eicher@vsnl.net Mr. Nagaraj (W)	Phone : 080 23574450 <b>Nagaraj</b> M 080 36970260

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City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Bangalore SPD S 6002	<b>Varsha Automotive Agency</b> No. 3, 2nd Main Road, Sudha Nagar, Lalbagh Rd. Cross, Bangalore 560 027. <b>K. Manjunatha Gupta</b> M 98440 80803	Phone : 080 22220420, 22242915 manjunathk@vsnl.net	
Belgaum AR V 6016	<b>Bharat Auto Enterprises</b> 371/1-2B, PB Road, Belgaum 560 016 <b>Dilip M. Patil</b> M 98454 70326	Phone : 0831-2489535, 3090725 Fax 2489535 bharateicher@rediffmail.com	Plot No. 16, Besides NH 4, Kamkaratti Village, P.B. Road., Belgaum Phone : 0831-3090726 Tele fax : 2489535 <b>Deepak Wadekar</b> M 98455 35153 bharateicher@rediffmail.com
Bijapur EASC S 6037	<b>Maruthi Automobiles</b> Plot No. 4-6, KSSIDC, Opp. IOC Depot, NH 13, Bijapur 586 101 <b>J.M. Badiger</b> M 94482 45535	Phone : 08352-244137, 212221	
Davangere AR BR S 6018	<b>Vijaya Motors Sales &amp; Service</b> No. 1947/1,2,3, PB Road, Opp. Hotel Pooja International, Davangere 577006 <b>K. Venkatesh</b> M 94480 70098	Phone : 08192-270098 Fax 270098 vijayadg@sancharnet.in	Phone : 08192-270098 Fax 270098 <b>Mr. R. S. Hosagoudar</b> M 94483 52848 vijayadg@sancharnet.in <b>Somashekar</b> Phone : 08172-256715
Hassan AR BR S 6011	<b>Ballal Motors Sales &amp; Service</b> Behind Venkateshwar Garage, Thanirhalla, Hassan-573 201 <b>Shivakumar</b> M 98454 58247	Phone : 08172-256715	
Hospet AR BR S 6015	<b>Nandi Automotives</b> T M A E Polytechnic Society's Compound Bellary Road, Hospet - 583201 <b>T.H.M. Gurumurthy, T.H.M. Mallinath</b> M 08394-381864	Phone : 08394-465270 Fax 465270 nandieicher@hotmail.com	Phone : 08394-465270 <b>Surya Prakash</b> M 94480 06422 nandieicher@hotmail.com
Hubli EASC S 6036	<b>M/s Manjunath Motors</b> Plot No. 120/1-2, Hubli Dharwad, Bypass Road Near Toll Naka, NH 4, Gabbar, Hubli 580 028 <b>Manjunath U. Kalol, Chandrakanth U. Kalol</b> M 0836-685035	Phone : 0836-2243005, 2272356	

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Kundapur AR BR S 6012	<b>Ballal Motor Sales &amp; Service</b> D. No. KGP 2/40, Halady Road, Koteshwara Kundapur - 576 222 <b>Surendra</b> M 98454 54487	M 98455 44907	<b>Anand</b> M 98455 44907
Kushalnagar AR BR S 6013	<b>Ballal Motor Sales &amp; Service</b> Opp. Somashwara Temple, Somawar Pet Road Kushal Nagar, Coorg <b>Dinesh</b>	Phone : 08276-272539	<b>Dinesh</b> Phone : 08276-272539
Mangalore AR BR V 6011	<b>Ballal Motors Sales &amp; Service</b> BMS Garage Building, Kadri, <b>Dilip Ballal</b> M 98451 96177	Phone : 0824-2215777, 2428330 Fax 2217667 ballamr@vsnl.net.in	Phone : 0824-2215777 Fax 2217667 <b>Janardhan Salian</b> M 98452 47477 ballamr@vsnl.net.in
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Shimoga AR V 6017	<b>Vijaya Motors Sales &amp; Service</b> Vijaya Complex, Bypass Road, Urgodur, Shimoga-577203 <b>Umesh Shenoy</b> M 94481 28577	Phone : 08182- 240534/242727 Fax 242747 vijayams@sancharnet.in	Phone : 08182- 240534 Fax 242747 <b>K. M. Radhakrishna</b> M 94481 41077 vijayams@sancharnet.in
KERALA			
Allapuzha AR S 4027	<b>P S N Automobiles P. Ltd</b> VII / 48 A, Punnapra North NH 47, Allapuzha <b>P. K. Ananthanarayanan</b> M 98460 31146 <b>Siju Alias</b> M 98954 24122	Phone : 0477 - 2288822, 2287928 psnalpy@eth.net	<b>R.A.P. Pillai</b> M 98950 60122 <b>Jimmy Joseph</b> M 98950 20288 Phone : 0477 - 2288822, 2287928 psnalpy@eth.net
Calicut AR V 4010	<b>Automotive Marketing P Ltd</b> 39/1405-A, Kannur Road, NH17, Pavangad, Puthiangadi (PO), Calicut - 637 021 <b>P. K. Ananthanarayanan</b> M 98460 31146	Phone : 0495-2390025-26, Fax 0495 - 2390025 ampl@eth.net Web site : www.psnmotors.com	<b>Jaikish K.</b> M 93874 25940 Phone : 0495-2390025-26 ampl@eth.net

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Cochin SPD V 4025	<b>Automotive Marketing P Ltd.</b> P O Box:2270,35/189 Palarivattom, NH-47 Cochin - 682025. <b>P.K. Ananthanarayanan, Mr. Anil Kumar</b> M 98460 31146, M 98470 47345	Phone : 0484-2343754, 2343661, 2348299, 2349520, 2342368 Fax : 2340898 amplcochin@eth.net	
Cochin AR V 4027	<b>P S N Automobiles P. Ltd</b> P O Box : 2270, 35 / 189, Palarivattom, NH - 47, Cochin - 682 025 <b>P.K. Ananthanarayanan</b> M 98460 31146	Phone : 0484 - 2343754 -55 Fax 2340898 psnsales@asianetindia.com Website : www.psnmotors.com	32 / 203, Sree Parvathi, Pookattupadi Road, Unchera Cochin - 682 024 Phone : 0484-2576527/41, 2577072 <b>Jimmy K Joseph</b> M 98950 20288 psn@eth.net
Kannur AR BR S 1040	<b>Automotive Marketing P Ltd</b> Melechowa, N H - 17, Chowa (PO), Kannur-670006, <b>Madhu T.V.</b> M 93880 12329	Phone : 0497 -2727053, 2729896 automotiveknr@eth.net	<b>T.V. Madhu</b> Phone : 0497 -2727053, 2729896 automotiveknr@eth.net
Kollam EASC S 4001	<b>Grand Motors Sales Corporation</b> Leyland Buildings, Kadapakkada Kollam - 691 008 <b>Stanley Babu</b> M 94470 62267	Phone : 0474 - 2740848 Fax 2740848 gmscklm@yahoo.com	Near Yatri Niwas, Asranmam, Kollam-691001 Phone : 0474 2761409, 3090642 Fax 2740848 <b>Abdul Jaleel</b> M 94470 62290 gmscklm@yahoo.com
Kottayam AR V 4034	<b>AVG Vehicles Sales &amp; Service P. Ltd</b> Post Box No : 1, Ancheril Buildings Baker Junction, Kottayam - 686 011 <b>George Idiculla</b> M 94470 11141	Phone : 0481 - 2560471/3291 Fax 2564658 avgvehicle@sify.com	AVG EICHER Workshop Gandhinagar, Kottayam - 686 006 Phone : 0481 - 2594734 <b>Ramesh Babu</b> M 94470 94734 avgeicherws@sify.com
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Palakkad AR BR S 4027	<b>M/s P S N Automobiles P. Ltd</b> 17/140, Parangattu Metro, Opp. Cosmopolitan Club, Kadankodu, Kunnathurmedu (PO) Palakkad - 678 013 <b>Jimmy Joseph</b> M 98950 20288	Phone : 0491 - 2525025, 2880888 psnplkd@eth.net	<b>Jimy Joseph</b> M 98950 20288 Phone : 0491 - 2525025, 2880888 psnplkd@eth.net
Thrissur AR BR S 4027	<b>P S N Automobiles P. Ltd</b> T C - 22 / 1034 / 1, NH - 47 - Bye Pass Nadathara, Thrissur <b>Jimmy Joseph</b> M 98950 20288	Phone : 0487 - 2371174, 2375894 psnautomobiles@eth.net	<b>Jimmy Joseph</b> M 98950 20288 Phone : 0487 - 2371174, 2375894 psnautomobiles@eth.net
Tiruvalla AR BR S 4001	<b>Grand Motors Sales Corporation</b> Renjith Buildings,Near R T O Office, M C Road, Tiruvalla, Thukalasserry Suresh Kumar M 94470 62270	Phone : 0469 - 2602941 gmsctvla@yahoo.com	Charivu Purayidom, Thukalasserry P.O., M.C. Road, Tiruvalla Phone : 0469-2602941, 2706146 <b>M. E. Kuriakose</b> M 94470 62274 grandmotors02@sify.com
Trivandrum AR V 4001	<b>Grand Motors Sales Corporation</b> TC 31/1398 (2) Bye-Pass Road, Chakkai, Tivandrum-695 024 <b>V. Ashok Kumar</b> M 98470-62266	Phone : 0471-2506622, 2506633 Fax : 0471-250662 grandmts@yahoo.com	Plot No : 73 / 84, Industrial Development Area, Opp. Kochuveli railway Station, Veli - 695 021 Phone : 0471 - 2501660, 2507651 Fax 2342971 <b>T S Santhosh</b> M 94470 62282
Wynad AR BR S 4010	<b>Automotive Marketing P Ltd</b> Dottappankulam, Calicut road, Sulthan Bathery Wynad-673592, <b>P.K. Ananthanarayan</b>	Phone : 04936-223030 amplbathery@eth.net	<b>Charles Mathew</b> Phone : 04936-223030 amplbathery@eth.net

MADHYA PRADESH

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Chhindwada EASC S 5011	<b>Vasant Works</b> Civil Lines, Nagpur Road, Chhindwada, <b>Vasant Chawak</b> M 0716 2203263	Phone : 07162 225350-225204 Fax 225204 vasantworks@hotmail.com	<b>Sandip Chawak</b> M 98261-36533 Phone : 07162-225351 vasantworks@hotmail.com
Gwalior AR S 5002	<b>Velocity Automobiles Pvt. Ltd.</b> Shivaji Marg, Near Chhapperwala pul, Lashakar, Gwalior-474 009 <b>A. Abhijeet Atray</b> M 98270 63643	Phone : 0751-2631015, 5012116 Fax 2331015 velocityautomobiles@rediffmail.com	2 A, Industrial Area, Maharajpur, Gwalior - 474 011 Phone : 0751-2369177, 5041206 <b>S.K. Bose</b> M 98262 36918 velocityauto@sify.com
Indore AR / SPD V 5005	<b>Patel Motors (Indore) Pvt. Ltd.</b> 13/19 Pipliya Kumar Chouraha, Ring Road, Indore - 452010 <b>Arvind Patel</b> M 98930-31399 <b>Pravin Patel</b> M 98933-32299	Phone : 0731-5033341-42 5033344-46 Fax : 5033341 patelmotors@mantrafreenet.com	<b>K.D.Nair</b> M 98266 42154 Phone : 0731-5033347, Fax : 5033341 pateleicherws@rediffmail.com
Jabalpur AR S 5027	<b>Dynamech Automobiles</b> 208, Rajul Arcade, Russel Chowk, Jabalpur <b>Alok Gupta</b> M 98272-37334	Phone : 0761-5039084 dynamech_automobiles@rediffmail.com	29, Industrial Area, Richhai, Jabalpur Phone : 0761-2332927 <b>Mahesh Dharmjan</b> M 98931 61013
Julwania EASC S 5015	<b>M/s Swastik Sales Agencies</b> A.B.Road, Julwania, Dt. Barwani Arun Sahu M 94250 89309	Phone : 07284 - 266235 Fax 266435 swastik97@rediffmail.com	<b>Mahesh Verma</b>
Rau EASC S 5023	<b>Triya Motors</b> Opposite Ram - Rahim Colony, Station Road, Rau, Dist.- Indore 453331 <b>Naresh Das</b> M 98262 82058	Phone : 0731- 2856116, 2857363 triyamotors2000@rediffmail.com	<b>Shailendra Singh</b> M 98263 47551 naresdas2001@rediffmail.com

MAHARASHTRA

Ahmednagar EASC S 3043	<b>Girija Motors</b> Pune Nagar, Highway Jedgaon Devi, Opp. Ambika Nagar Bus Stop, Ahmednagar-414 005 <b>Gajraj M. Rondhe</b>	0241-2551246  6-15	<b>S. Toshniwal</b>
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Akola AR S 5028	<b>Vidarbha Tractors</b> Murtizapur Road, NH 6, Akola, Vidarbha - 444001 <b>Shiv Shankar Khemka, Ajay Khemka</b> M 98225 31390	Phone : 0724-2458308, 2459443 2459874, Fax 2459443 vidarbha_tractors@hotmail.com	M 49, Akola Growth Centre, MIDC , Phase - IV , Akola. Phone : 0724-2458308, 2459874 Fax 2459443 <b>Hemant Kaseria</b> M 98503 88252 vidarbha_tractors@hotmail.com
Aurangabad AR V 3010	<b>Kailash Agencies Pvt. Ltd.</b> PB No. 7, Jalna Road, Opp. Akashwani Aurangabad 431 005. Mr. Prakash S. Bafna M 98231 89663	Phone : 0240-2352051 2350091, 2324692 Fax 0240 - 2333270 kapalabad@bom.vsnl.net.in	Plot A1/A2, MIDC Industrial Area, Near Lupin, Chikalthana, Aurangabad Phone : 0240-2482770/894, 24, 652, 489, 608 Fax : 2482529 <b>Prashant M. Sakhare</b> M 98232 29001 kaplws@eth.net
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Bhiwandi EASC S3009	<b>Navnit Motors Pvt. Ltd</b>		<b>Navnit Motors Pvt Ltd.</b> Opp. Gupta Compound Behind Navnit Warehouse, Dapoda Village, Bhiwandi, Dt. Thane <b>AKP Arjunan</b> M 9821911237 Phone : 05252-2276524, 276568 eicherservice@navnitmotors.com
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Kolhapur AR V 3013	<b>S.S. Mirje &amp; Co.</b> 1243/56, Udyam Chambers, Rajaram Road, Kolhapur 8 <b>Deepak Mirje</b> M 98231 63099	Phone : 0231-2656812, 2656491 Fax 0231 -2657214 klp_ssmiraje@sancharnet.in	11B/1, Nagaonphata, Pune - Bangalore Highway, NH 4, Opp. Kolhapur Steel, Shirol, Tal-Hatkanagale, Kolhapur-416 122 Phone : 0231 - 2469619 <b>Abhijeet Joshi</b> M 94225 82001
Mumbai AR V 3009	<b>Navnit Motors Pvt. Ltd.</b> Gokul Nagar, Mumbai-Agra Road, Thane (West) 400 601. <b>Vijay L. Kachalia</b> M 98211 06000	Phone : 022-25434430, 25435956 Fax 25331507 vijay@navnitmotors.com	
Mumbai AR S 3012	<b>Ratan Motors</b> Behind Lakme Factory, Govandi Station Road, Deonar, Mumbai 400 088 <b>B. S. Chandok</b> M 98210 56679	Phone : 022-55975353, 25287720 Fax 022 -25229779 ratanmotor@eth.net	Phone : 022- 25555365, 55975354 Fax 022-25558619 <b>Santosh Padhye</b> M 98209 02627 ratanservice1@rediffmail.com
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Nasik AR V 3039	<b>Pawar Automobiles</b> Plot No. 4, Hanuman Nagar, Opp. Rasbihari School, Mumbai - Agra Highway, Adgaon Naka, Nasik. <b>Mohan T. Pawar</b> M 98230 74094	Phone : 0253-2621831, 2511799 Fax 2621831 pawarautom@rediffmail.com	<b>Devendra Aherrao</b> Phone : 0253-3111744 pawarautom@rediffmail.com

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City / Status / Dealer Code	Dealership Name / Address / Contact Person / Contact No.	Show Room Phone / Fax / E-mail	Workshop Address / Phone / Fax / Works Manager / Mobile No. / E-mail
Pune AR V 3032	<b>Excel Motors</b> Mohit Plaza, Plot No. 43, Sahaney Sujan Park, Off. Kandhawa Road, Pune-411 040 <b>S.S. Asnani</b> M 98230 56830	Phone : 020- 6835385, 6833259 Fax : 6833259 excel@pn2.vsnl.net.in	Gate No. 33, Opp. Khondwa, Bk Exchange Khondwa, Pune-48 Phone : 020-6932429, 4001831 <b>Arvind Patil</b>
Pune AR S 3045	<b>Ratan Motors</b> Survey No. 55/1/1, Pune - Bangalore Highway, NH 4, Katrej-46 <b>B.S. Chandok</b> M 98210-56679	Phone : 020-26959114 Fax 26959114 ratanmotorspune@eth.net	Phone : 020-26959114 <b>Arvind Patil</b> M 020 31091365
Pune EASC S 3016	<b>Shree Automobiles</b> Survey No.81/8,Tathawade, Near Shirole Petrol Pump, Tal.Mulshi, Dist.Pune - 411 033 <b>A.V. Chalke</b> M 98230 57191, M 98231 72277	Phone : 020 - 22934060 / 22934010 Fax 020 - 22934010 sache@pn3.vsnl.net.in	<b>Kasuhik Datta</b> M 98231 72277
Pune SPD S 3047	<b>Parts Paradise</b> Head Office : 6-A, Tadiwala Road, Divadkar Apartments, Pune-411 001 <b>Jitesh Patodia</b> M 31005335	Phone : 20-26123874, 26125509	
ORISSA			
Bhubaneshwar AR V 2024	<b>Oricon Equipments Pvt. Ltd.</b> Plot No 6D, Sec. A, Zone B, Mancheswar Industrial Estate, Bhubanehswar 750010. <b>Tutul Das</b> M 98610 27777	Phone : 0674 - 2530844 Fax 2530999 oriconequipments@sancharnet.in	<b>K. N. Samal</b> M 93382 33979 Phone : 0674-2582657 Fax : 2585740 oriconequipments@sancharnet.in
Jeypore EASC S2035	<b>Bisswakarma Automotives</b> Bye Pass Road, Near NH 1B, NH 43, Jeypore, Orissa – 764001 <b>Manoranjn Chowdhury</b> M 9437207322	06854-231623 Fax: 231823 (PP) manoranjn.c@rediffmail.com	
Rourkella AR S2036	<b>Utkal Automotive Pvt. Ltd.</b> Post Box No. 50, Ring Road, Rourkella, Orissa - 769004 <b>Sunil Chowdhury</b> M 9437041810	Phone: 0661- 2600654 Fax:2600143 utkalrkl@rediffmail.com	<b>Samir Nayak</b>

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PUNJAB			
Bathinda AR S 1097	<b>Padam Motors Private Limited</b> 8th Milestone, Goniana Road, Village Gill Patti Near Govt. School, Bhatinda <b>Amarjeet Mehta</b> M 9814000909	Phone : 0164-2760153, 2760111 Fax 0164-2223122 PP pmotors@email.com padammluv@yahoo.com	8th Milestone, Goniana Road, Village Gill Patti Near Govt. School, Bhatinda <b>Roshan Lal</b> M 9814521482
Jalandhar AR BR S 1019	<b>Gagan Automobiles</b> Guru complex, Near I.O.C. Terminal, Bypass Road, P.O. Chogite, Jalandhar-144 004 <b>Deepak Prakash</b> M 94172 23353	Phone : 0181-2420902, 2421901, 3095904 Fax 2240283 (PP) gagan_jal1@rediffmail.com	<b>Vijay Kumar</b> M 98140 53053 Phone : 0181-2420902, 2421901
Ludhiana AR V 1016	<b>Uttam Sales &amp; Service</b> Ambala Bye Pass Road, Opp. Transport Nagar, Ludhiana. <b>Gurmeet Singh</b> M 9814153125	Phone : 0161-2667011 Fax 2669116 uttamsale@rediffmail.com	Opp. Airport, G.T. Road, Ludhiana Phone : 0161-2667011 Fax 2669116 <b>Mahinderpaul Sharma</b> uttamsale@rediffmail.com
Nawanshahr AR S 1094	<b>Parmar Enterprises</b> Banga Road, Near Focal Point , Nawanshahr-144 514 <b>Jaskarn Parmar, Harjasbir S. Parmar</b> M 98150-09754	Phone : 01823-225454, 309654 Fax 01823-225454 parmar_ent_nsr@yahoo.com parmar_ent_nsr@rediffmail.com	<b>Tekchand Gopal</b> M 9417194592 taktakchand@rediffmail.com
Pathankot AR V 1018	<b>Gagan Automobiles</b> Jalandhar- Jammu Bye Pass Road, Pathankot <b>C.S Lyallpuri, Gagandeep Singh</b> M 98140 53053, M 98145 09453	Phone : 0186-2241234, 3090404 Fax 2241234 gaganauto@glide.net.in	<b>Capt. Mohan Singh</b> M 98145 09453 Phone : 0186-2241234, 3090404 gaganauto@glide.net.in

RAJASTHAN

Alwar AR V 1053	<b>Shri Krishna Motor Company</b> Near Jhankar Hotel, Delhi Road, Alwar-301001 <b>Pramod Agarwal</b> M 98290 96610, 94142 15839	Phone : 0144-2372090 Fax 2372090, 2333499 skmcalw_jp1@sancharnet.in	<b>Jitendra Gupta</b> M 94142 16192, 94140 18403 skmcalw_jp1@sancharnet.in
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Bhilwara AR S 1095	<b>Ruchi Motors</b> Ambaji Textile Market, Shop No.-G 51,52, Ajmer Road, Bhilwara <b>Vikas Sharda</b> M 98292 46232	Phone : 01482-309270 Fax : 510270	Sharda Complex, Near Shahpura Circle, NH 79, Bhilwara <b>Nitesh Joshi</b> Phone : 01486-266870 <b>Vikas Sharda</b> M 98292-46232
Jodhpur AR V 1068	<b>Chandra Singh &amp; Sons</b> 28-29, Pratap Nagar, Jodhpur-04 <b>Lal Singh Kachwaha</b> M 98290-23989 Phone : 2545591 (R)	Phone : 0291-2745919, 5120549	A-40, II Phase, Basni Indl. Area, Jodhpur Phone : 0291-2745919, 5120549 chandra_jod@hotmail.com
Jaipur SPD S 5019	<b>Basant Motors</b> B-2, Near LIC Office, Transport Nagar, Jaipur-302 003 <b>Subodh Agrawal</b> M 94140 57807	Phone : 0141-2641228 basantmotors@rediffmail.com	
Jaipur SPD S 1093	<b>Tambi Automobiles</b> Tambi Tower, Sansar Chandra Road, Jaipur 302 001. <b>Mr. Satish Tambi</b> M 98290 52492	0141-2360981 tambispares@rediffmail.com	
Jaipur AR S 1087	<b>Tambi Motors</b> Tambi Tower, Sansar Chandra Road, Jaipur-302001 <b>Satish Tambi</b> M 98290 52492	Phone : 0141-2370189, 2204208 tambimotors@rediffmail.com	B-145, Road No. 9, Vishvakarma Industrial Area, Jaipur Phone : 0141-5178316 Fax 5072121 <b>Aditya Banerjee</b> tambimotors@rediffmail.com
Kota EASC S 1089	<b>Medatwal Motors</b> Chawani Chauraha, Jhalawar Road, NH 12, Kota-324007 <b>Dharmendra Gupta</b> M 9414188877	Phone : 0744-2364092 medatwalmotors@yahoo.com	<b>Anil Gupta</b>
Udaipur AR V 5003	<b>Modern Automobiles &amp; Mechanical Engineers</b> Opp. Suraj Pole, Udaipur 313 001 <b>M.P.S. Lekhari</b> M 98290 44125	Phone : 0294-3090899, 2421452 Fax 2421452 modautoudr@yahoo.com	Madri Eklingpura Road, NH-8, Manwakhera, Udaipur Phone : 0294-3090762 <b>Narayan Jannawat</b>



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TAMIL NADU			
Chennai AR / SPD V 4031	Hex Mobiles Pvt. Ltd. 192, Mount Road, Saidapet, Mount Road Chennai-600015 Franklin M 98841 00203 Sathi Prabhakar	Phone : 044 - 22351825 / 81 Fax : 044 - 52027508 hexmobile_tn@tochtelindia.net	New No. 4/121 (Old No. 61/4A) Goparasanallur, Poonamallee High Road, Chennai - 600 056 Phone : 044-26272776, 26274776 Fax : 044 - 26273776 D. Shankar M 98841 00202, 98841 00201 mobiles@vsnl.com
Chennai EASC S 4030	Shree Motors No. 55, G.N.T. Raod, ThandalKozhani, Village Puzhal, Chennai - 600066 P. Sundaramurthy M : 94440 44050	Phone : 044 - 55492678, 26322355	G. Subramanian M : 94440 74050
Chennai EASC S 4030	Shree Motors (Unit II) No.55, Thandalkazhari, Village, G.N.T. Rd, Pozhal, Chennai P. Sundaramurthy, Hrishikesh M : 94440 44050, 94440 54050	Phone : 044 - 55492678, 26322355, 25025209 shreemotors@eth.net	Phone : 044 - 55492678, 26322355, 25025209 G.S. Manian M : 94440 74050 shreemotors@eth.net
Chennai SPD S 4036	Susee Cars & Trucks P Ltd. New No. 43, North Usman Road, T.Nagar, Chennai - 600 017 Rajasekaran	Phone : 044-28341072, 52024008 Fax : 502024008 suseemds@yahoo.co.in	
Coimbatore AR V 4011	Anamallais Agencies (Stadium) Krishha Swamy Tower, 172 Dr. Rajendra Prasad Rd., Tata Bad, Coimbatore - 641 012 P.K. Doraisamy	Phone : 0422-2529700, 2526800 Fax : 0422 - 2526800 arc@md3.vsnl.net.in	SF No.634, Pollachi Main Road, Eachanari PO. Coimbatore - 641 021 Phone : 0422-2675500, 2676600 Fax : 0422-2611900 R. Rajamani M : 98422 51600 aaworkshop@eth.net
Erode AR BR V 4026	Anamallais Agencies (Stadium) 315/3, Chinnakadu Thottam, Veerappampalayam Bye pass Road Perundurai Road, Erode - 638 009 P.K. Duraisamy	Phone : 0424 - 2529700 Fax 2527400	Phone : 0424 - 2271640 Fax : 2272360, 2271040 V.N. Sivakumari anaerode@yahoo.co.in anaerode@rediffmail.com

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Karur AR V 4016	Jailaxmi Auto Works & Agencies Karur Salem New Bypass Raod, Roundana Lns, Post Karur - 639002 A. Subramani M : 98430 95814	Phone : 04324 - 225814 Fax : 04324-225814 jailaxmikarur@eth.net	Karur Salem Bypass Road Vennamalai Post, Karur Phone : 04324 - 222083 Fax : 225814 P. Anandhan M: 98430 57470 jailaxmikarur@eth.net
Madurai AR V 4012	Susee Cars & Trucks P Ltd. 117/3, Theni Road, Madurai - 625 00 (Next to Susee Petrol Bunk) S.Rajasekaran M : 98421 22144	Phone : 0452-2380438, 2380919 Fax :2380919, 2381011 mdu_suseecar@sancharnet.in suseedoak@hotmail.com	Phone : 0452-2380438, 2380919 Fax :2380919, 2381011 G.J. Raghavan M : 98423 06102 mdu_suseecar@sancharnet.in suseedoak@hotmail.com
Nagercoil AR BR S 4017	Susee Motors 90/A, Ethamoozhi Road, Nagercoil-629 002 Harry M : 98432 27307	Phone : 04652 - 2241793	Harri M : 98421-41793
Salem AR V 4028	Jailaxmi Auto Works & Agencies Pvt. Ltd. Pinangukarar Thottam, Salem Attur Bypass Road, Seelanaikanpati, Salem - 636 202 A. Subramani, Sivakumar M : 98430 27470, 98430 67470	Phone : 0427 - 2280504 / 805 jailaxmisalem@eth.net	Saravanan M 98430 77470 Phone : 0427 - 2280504 / 805 jailaxmisalem@eth.net
Tirunelveli AR V4039	Hari Bala Krishna Automobiles No. 156, Polepettai (West),Tuticorin - 628002 Tirunelveli C. Jeyaraj M 9443100999 / 9842996969	Phone : 0461 - 2345943 hbkttrans@yahooomail.com	Subramani
Trichy AR V 4029	Aarthi Motors Limited 2/15, Classic Towers Chennai Bypass Road, Senthaneer Puram, Trichy-620 014 Mr. E.A. Jeyapandian M 98424-71790	Phone : 0431-2301239, 2300688 amltry@eth.net	K.Pasupathy M 94437 09022 amltry@eth.net
Vellore EASC V 4018	Sai Auto No. 3047/2A1, Chennai Bangalore Highway, New Bye Pass Road, Vellore Jeya Seelan M 9842328112		

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Villupuram AR S 4038	<b>Sri Sabari Motors</b> SF. No. 27/4, Chennai Trunk Road, Opp. Warehouse, Villupuram - 605602 <b>M. Saravanan</b> , M 9345450159 <b>S. Govindarajulu</b> M 98423-35577	Phone : 04146-251521 srisabarimotors@yahoo.com	Phone : 04146-339433, 9345639433 srisabarimotors@yahoo.com
UTTAR PRADESH			
Agra AR S 1022	<b>Prem Auto Enterprises</b> Nangla Jawahar, Agra-Mathura Bye-Pass Road, Agra. <b>Paras Agrawal</b>	Phone : 0562-2522824, 2150612 Fax 2522824 prem12@sancharnet.in	4, Neeraj Nagar, (Near Asopa Hospital), Gailana Rd., Agra Phone : 0562-3093314 <b>Dinesh Chahar</b> M 3093314 prem12@sancharnet.in
Allahabad AR V 1023	<b>Khurana Auto Pvt. Ltd.</b> 23, P.D. Tandon Marg, Kanpur Road, Allahbad. <b>Harish Khurana</b> M 94152 35882, 0532-3153453	Phone : 2622972, Fax 2623276 kayauto@rediffmail.com	<b>Rajeev Tiwari</b> M 94153 51240 Phone : 0532 - 2420589 kayauto@rediffmail.com
Bareilly AR BR V 1025	<b>Bhargava Motors</b> Swaleh Nagar, Rampur Road, Bareilly <b>O.P. Bhargava</b> M 98370 45366	Phone : 05946-245340, 245133 Fax 245340	<b>Rakesh Pandey</b> M 98370 16608 Phone : 0581-2561074 Fax 2550125
Faizabad AR BR V 1049	<b>Narveda Motors Pvt. Ltd.</b> 9/3/124, Janana Hospital Road, Rekabgunj. Faizabad- 224 001 <b>Ved Prakash Gupta</b> M 94150 48050	05278-225251, 224837	Vill. Godhapur, In Front of HCl Godown, Faizabad Phone : 05278-224837 <b>Ram Tirath</b> M 98930 91654
Gorakhpur AR V 1030	<b>M/s. Green Field Auto Pvt. Ltd.</b> Golghar, Gorakhpur-273 001 <b>Bhupendra Vikram Singh</b> M 94152-10650	Phone : 0551-2201695 Fax 2209242 greenfieldauto@rediffmail.com	Barhi House Compound, Opp. Govt. Garden, Kasia Road, Gorakhpur Phone : 0551-2200118, 3091614 Fax 2209242 <b>S. Roy</b> M 0551-3115502
Lucknow SPD S 1074	<b>Beekay Distributors</b> B-8, Industrial Area, Nadargunj, Amousi, Lucknow <b>B. Mehdiratta</b> M 98390 16191	Phone : 0522-2438115, 2426040 Fax 2439198 bkd438115@sify.com	<b>Narendra Kumar</b> M 98394 48697 Phone : 0522-2436040 Fax 2439198 bkm436040@sify.com

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Lucknow EASC S 1045	<b>B.K. Motors</b> B-8, Industrial Area, Nadargunj, Amousi, Lucknow <b>B. Mehdiratta</b> M 98390 16191	Phone : 0522-2436040 Fax 2439198 bkm4360@sify.com	<b>Narendra Kumar</b> M 98394 48697 Phone : 0522-2436040 bkm436040@sify.com
Lucknow AR V 1049	<b>Narvada Motors Pvt. Ltd.</b> 13th, K.M., Near Sewa Hospital, Sitapur Rd. Lucknow <b>Vishal Gupta</b> M 94150 39135	Phone : 0522-2365222, 2360744 narveda@satyam.net.in	<b>Narender Singh</b> Phone : 0522-2365222, 2360744 vihalko@sify.com
Meerut AR V 1026	<b>Punjab Motors Works LCV Division</b> Delhi Road, Old Chungi, Meerut. <b>Rupinder Singh</b> M 98370 37466	Phone : 0121-2518112, 2511481 Fax 2520471 punjabmotorworks@cjnet4u.com	31, Hirara Godown, Baghpert Road. Meerut Phone : 0121-2520948 <b>Mr. S.S. Tomar</b> M 94121 04888 punjabmotorworks@cjnet4u.com
Noida AR V 1003	<b>Ajit Automotive Services Pvt. Ltd.</b> D-24, Sector 2, Gautam Buddh Nagar, Noida 201301. <b>Sanjay Mehra</b> M 98100 12307	Phone : 0120 - 2548593, 2554769 Fax 2548693 ajitautomotive@satyam.net.in	Phone : 2554769 M 98102 22105
Varanasi AR V 7001	<b>M.R. Airwheels Pvt. Ltd.</b> Plot No. 4, Haritionpur, Rohania, Varanasi <b>Ranjeet Jaiswal</b>	Phone : 0542 3104207 mrairwheels@rediffmail.com	Phone : 0542-2372635 (W)
UTTARANCHAL			
Dehradun AR V 1024	<b>Bhargava Motors</b> Jogiwala Haridwar Road, Dehradun <b>Pradeep Bhargava</b> M 98370 22043, M 94120 51756	Phone : 0135-2669746	<b>Nitin Bouhiyal (W)</b> M 94120 63667
Garhwal AR V 1028	<b>Sanjeev Motors</b> Naziabad Road, Kotdwar, Garhwal-346 149 <b>Bajrang Lal Garg</b> M 94121 81301	Phone : 01382 - 2222400	
Haldwani AR V 1024	<b>Bhargava Motors</b> Industrial Estate, Bareilly Road, Haldwani <b>O.P. Bhargava</b> M 98370 45366	Phone : 05946 -245340, 245339 Fax 245340 bhargavamotors@hotmail.com	<b>Mukesh Thakur</b> M 98373 18909 Phone : 05946-245133 bhargavamotors@yahoo.co.in



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Haldwani SPD S 7006	<b>Beekay Distributors</b> MP-A 20, Transport Nagar, Rampur Road Haldwani, Nainital <b>Girish Pandey</b>	Phone : 05946-312938	
WEST BENGAL			
Durgapur AR V 2030	<b>Jayshree Automobiles</b> Near Gandhi More, A.S.P. Road, Faridpur Durgapur-713 213 <b>Utpal Basu</b> M 94340 02677	0343-2547903, 2547951 Fax 0343-2547951 jayshreeautomobiles@yahoo.co.uk	Andal More, G.T. Road, NH-2 P.O. Andal, Dt - Burdwan Phone : 0341-2373122 Fax : 0341-2373122 <b>Rajtilak Seth</b> M 94332 36526 jayshreeautoeicher@sanchar.net.in
Howrah EASC S 2027 Kolkata SPD S 2019	<b>Bakultala Body Builders</b> 15A, Andul Road, Howrah - 711109 <b>Gurjeet Singh</b> M 98311 85824 <b>Bharadwaj Auto Distributor Pvt Ltd</b> 21, Bentinck Street, Kolkatta - 700001 <b>Ajay Bharadwaj</b> M 98310 28400	Phone : 033-26586065  Phone : 033-22485142, 22482165 22434448, Fax : 22486871 (PP) spares@badpl.com	
Kolkata AR S 2029	<b>Crystal Automobiles</b> 121, Chittaranjan Avenue Kolkata - 700073 <b>Naresh Aggrawal</b> M 98310 20330 <b>Ragesh Aggrawal</b> M 9831040277	Phone : 033-22217727-28, 22351768, Fax 22153770 crystalcal@vsnl.com	Alampur More, New Kolarah NH 6, Howrah - 711302 Phone : 033-26691909, 30960795 <b>Susanta Chakraborty</b> M 98312 88595
Kolkata AR S 2002	<b>Monaco Sales Pvt Ltd</b> 25/1, Chetla Central Road Kolkatta - 700027 <b>K.L.Dewan</b> M 98300 56514 <b>Monish Dewan</b> M 98310 42107	Phone : 033-24484361-2 Fax 033-24795992 manoco@cl2.vsnl.net.in	
Silliguri AR S 2027	<b>Allied Automotive Industries</b> Sevoke Road, 2nd Mile, Silliguri - 734401 <b>A.S.Mahalanobish</b> M 94340 74174	Phone : 2545227, 2543392 2544120, Fax 2543358 alliedauto@sify.com	<b>Manojit Mondal</b> M 98320 32330