



ASHOK LEYLAND

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INDUSTRIAL ENGINES

Operator Manual



INDIA GROUP

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FOREWORD

Dear Customer,

Congratulations! We welcome you to the family of Ashok Leyland.

This User Guide has been prepared to acquaint you with the operation and maintenance of Industrial and Harvester Engines. Care has been taken to include as much useful information as possible. Operators are requested to get familiarised with this guide, before operating the engine.

Every reasonable effort has been made to ensure that this manual is accurate. Neither Ashok Leyland nor any of AL Dealer shall in any circumstances, be held liable for any inaccuracy or the consequences thereof.

In accordance with Ashok Leyland Limited (the Company's) policy of continuous product improvements, the company reserves the right to change the procedures, material, specifications, dimensions or design referred to in this manual, at any time and without prior notice.

Operators are strongly advised to get the service and repairs done at the workshops of Ashok Leyland authorised Dealers/Service Centers and use only Leyparts. This would ensure smooth implementation of warranty supports extended.

We welcome your suggestions and feed back on the contents of this manual. Should you require any clarifications concerning the contents of this manual, please write to:



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POWER SOLUTIONS BUSINESS

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1. Model Coverage



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MODEL COVERAGE : H3 SERIES - INDUSTRIAL ENGINE (NON EMISSION)

MODEL	H3CNR15	H3CTICOR28	H3CTICOR25
Type	Diesel, 4 stroke, 3 cylinder in-line, overhead valve & water cooled		
Aspiration	Natural	TCK	
BHP (Gross)	35	65	90
RPM	1500	1500 & 2800	2500
Bore X Stroke (mm)	104 x 113		
Displacement (Lts)	7.88		
Compression Ratio	17.5 : 1	16.2 : 1	
Lub Oil Sump Capacity (Lts)	9		
Starting System Voltage - V(DC)	12		
Direction of Rotation	Anticlockwise from rear		
Firing Order	1 - 2 - 3		



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MODEL COVERAGE : H3 - INDUSTRIAL ENGINE - BS III CEV (US EPA TIER 3)

MODEL	H3CT1C3B
Type	Diesel, 4 stroke, 5 cylinder in-line, overhead valve & water cooled
Aspiration	TDC
BHP (Gross)	65
RPM	2300 & 2600
Bore X Stroke (mm)	104 x 113
Displacement (Ltr)	2.88
Compression Ratio	16.2 : 1
Oil Sump Capacity (Ltr)	9
Starting System Voltage - V (DC)	12 / 24
Direction of Rotation	Anticlockwise from rear
Firing Order	1 - 2 - 3



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MODEL COVERAGE : H4 SERIES (NON EMISSION) - INDUSTRIAL / AGRICULTURE ENGINE

MODEL	ALL/W04D	ALL/W04CT	ALL/W04CTI
Type	Diesel, 4 stroke, 4 cylinder in-line, overhead valve, water cooled		
Aspiration	Natural	Turbocharged	TCC
Engine Max (PS)	42.4 - 85	47.4 - 116	131.8
Engine rpm	1500 - 2600	1200 - 2600	2400
Bore & Stroke (mm)	Ø104 x 118	Ø104 x 113	Ø104 x 113
Displacement (litres)	4.009	3.84	3.84
Compression ratio	17.9 : 1	17.5 : 1	17.5 : 1
Engine oil capacity - Sump (litres)	7.5		
Electrical system	12 / 24V		
Direction of rotation	Anti-clockwise from rear		
Firing order	1-3-4-2		



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MODEL COVERAGE : H4 SERIES (B50H) - INDUSTRIAL / HARVESTER

MODEL	ALH4CTIC3	ALH4CTIC3
Type	Diesel, 4 stroke, 4 cylinder in-line, overhead valve, water cooled	
Aspiration	TCIC	TCIC
BHP (Gross)	76	101
APM	2200	2200
Bore & Stroke (mm)	Ø104 x 113	Ø104 x 113
Displacement (litres)	3.84	3.84
Compression Ratio	16.5 : 1	17.5 : 1
Lub Oil Sump Capacity (Lts)	9.5	9.5
Starting System Voltage - V (DC)	12 /24 V	12V/24V
Direction of Rotation	Anti-clockwise from rear	
Firing order	1-3-4-2	



MODEL COVERAGE : HA80TI SERIES - INDUSTRIAL ENGINE (NON EMISSION)

MODEL	ALL/WO80TI				
Type	Diesel, 4 stroke, 6 cylinder in-line, overhead valve, water cooled				
Aspiration	Turbocharged & Intercooled				
BHP (Gross)	160-170	180	188	205	220
RPM	2100-2200	2400	1800	2500	2200
Bore X Stroke (mm)	Ø104 x 113				
Displacement (Ltr)	5.76				
Compression Ratio	17.5:1				
Lub oil Sump Capacity (Ltr)	16				
Starting System Voltage VDC	24V				
Direction of Rotation	Anti-clockwise from rear				
Firing Order	1-4-2-6-3-5				



MODEL COVERAGE : HSETIC3 SERIES - INDUSTRIAL / HARVESTER ENGINE (BS III)

MODEL	HSETIC3RD	HSETIC3RU	HSETIC3RS
Type	Diesel, 4 stroke, 6 cylinder in-line, overhead valve, water cooled		
Aspiration	Turbocharged & Intercooled		
BHP (Gross)	101	133	160
RPM	2300	2300-2400	2200-2300
Bore X Stroke (mm)	Ø104 x 113		
Displacement (Ltr)	5.76		
Compression Ratio	17.5:1		
Oil Sump Capacity (Ltr)	16		
Starting System Voltage Vdc	12V / 24V		
Direction of Rotation	Anti-clockwise from rear		
Firing Order	1-4-2-6-3-5		



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2. Preservation and Pre-recommissioning Procedure



PRESERVATION AND PRE-COMMISSIONING PROCEDURE

STORAGE OF ENGINES AT NORMAL AMBIENT TEMPERATURE

Whenever engines are in storage, proper care should be taken as detailed below:

If stored for a short period: (below 6 months)

(a) The engine should be thoroughly washed, to remove any deposits of mud which may be salt-laden.

(b) The engine should be stored in a covered area, on plain hard surface.

(c) Disconnect battery terminals.

(d) Once a week the engine should be started and run for a few minutes with coolant and lub oil system filled as per recommended lub oil & engine coolant.

If stored for longer periods: (more than 6 months)

a) The batteries should be removed and prepared for storage in a dry place. Top up with distilled water and charge fully before storage. Check and charge at regular intervals during storage.

b) Remove the injectors and spray 20 cc of engine inhibiting oil (Shell Disa oil SAE 10, Castrol storage oil 30, Serno preserve 30) through injector hole. Crank the engine for about 30 seconds. Then fit back the injectors.

c) Spray liberally anti-corrosive oil over rocker levers, push rods, R/P plunger springs and tappets.

d) Drain the lubricating system and replenish the same with engine inhibiting oil.

e) It is advisable to drain the cooling system. A board is to be hung on the engine indicating that cooling system has been drained out to avoid accidental starting of the engine.

f) It is advisable to drain the fuel tank as well as the fuel filters to avoid formation of gum deposits and the possibility of difficult starting later.

g) Completely seal with masking tape the engine intake, exhaust tail pipe, breather pipe, fuel feed pump inlet and the vent hole of the fuel tank.

PRE-COMMISSIONING HINTS

De-preservation procedure

1. De-preserve the engine as per procedure given below:

1.1 Clean all external parts thoroughly. Direct the jet of air to remove all dust.

1.2 Uncover all openings and appropriate connections should be made.

- Remove the tapes from fuel inlet to the feed pump of the fuel injection pump.

- Remove the tape from the outlet of the breather pipe.

1.3 Remove fuel filters and fit new ones. Please refer to Service Manual for procedure.

1.4 Remove injectors and check for correct opening pressure and left as follows:

- Loosen high pressure pipe connections at pump and injector end and remove. Also remove the injector leak off pipe.

- Extract the injector. Plug the inlet and leak off opening with protection caps. Wipe off dirt and loosen carbon from injector with a cloth.

- Connect the injector to the nozzle tester. Operate the hand lever of the tester for about 10-12 strokes. The nozzle should spray in a well atomized form.

- For checking the opening pressure depress the hand lever until the nozzle ejects the test oil and the pressure.



gauge reading suddenly drops. Note down the reading at this stage. If the reading differs from the prescribed value adjust by changing the total thickness of the shim.

- While refitting the injector, check and clean the nozzle bore in the engine. Replace the injector sealing washer. Tighten the nozzle clamp to the recommended torque of 4.20 to 4.80 kgm. Flush the high pressure pipes thoroughly and connect to injector. Connect the leak off pipes to the injector.
 - Drain engine inhibiting oil from oil sump and fill with recommended lub oil.
 - Fill the coolant system with recommended engine coolant.
 - Flush the diesel tank and remove vent hole mask. Fill the diesel tank with fuel.
- Now the engine is ready for installation.**

2. If the engine is stored beyond one year, re-preservation and repacking must be carried out

1. If the period of preservation exceeds one year then re-preservation must be carried out during the 12th month.

The date of re-preservation must be entered in a label attached to the engine. Cancel the label showing the first preservation. This must be repeated every 12 months, if the period of storage exceeds a period of one year.

- 2.1 The engine must be prepared for represervation.
- 2.2 Clean all external parts, thoroughly. Direct the jet of air to remove all dust.
- 2.3 Uncover all openings and appropriate connections should be made.
 - Remove the tapes from fuel inlet to the feed pump of the fuel injector pump and outlet of the breather.
- 2.4 Remove fuel filters and fit new ones. Please refer to Service Manual for the procedure.
- 2.5 Remove injectors and check for correct opening pressure and refit.
 - Loosen high pressure pipe connections at pump and injector end, and remove. Also remove the injector leak off pipe.
 - Using special tool, extract the injector. Plug the inlet and leak off opening with protection caps. Wipe off dirt and loosen carbon from injector with a cloth.

■ Connect the injector to the nozzle tester. Connect the pressure gauge to the nozzle tester to the injectors. Operate the hand lever of the tester for about 10-12 strokes. The Nozzle should spray in a well atomised form.

■ For checking the opening pressure depress the hand lever until the nozzle ejects the test oil and pressure gauge reading suddenly drops. Note down the reading at this stage. If the reading differs from the prescribed value adjust by changing the total thickness of the shims.

■ While refitting the injector, check and clean the bore in the engine. Replace the injector sealing washer. Tighten the nozzle clamp to the recommended torque of 4.20-4.80 kgm. Flush the high pressure pipes thoroughly and connect to injector. Connect the leak off pipes to the injector.

3. Run the engine for 15 minutes with the following rust preventive agents:

- a) Fill water jacket with water containing 1% shell borcut cutting compound or any water soluble cutting compound.
- b) Connect fuel feed pump to a mixture of diesel and 10% flushing oil such as lubrex or equivalent.



- c) Fill engine sump with Servo Preserve SAE - 40 or equivalent.

- d) After 15 minutes disconnect the fuel line and allow the engine to run so that the fuel in the filter and pump are exhausted.

3.1. Stop engine and remove

- a) Air cleaner and cylinder head cover
- b) Injectors
- c) Fuel pump inspection cover

Crank engine with starter motor.

During cranking spray 10 cc of rust preventive oil (Servo Preserve SAE - 40) into each injector hole in the cylinder head and 20 cc through the inlet manifold.

Stop cranking after spraying oil into the cylinders and manifold.

Spray oil (Servo Preserve (SAE 40) on

- a) Rocker assembly
- b) Fuel pump plunger springs and tappets.

3.2. Replace all components and seal all openings:

- a) Air cleaner
- b) Coolant - inlet and outlet
- c) Fuel inlet

- d) Breather

3.3. Drain

- a) Coolant from water jacket
- b) Oil from FIP
- c) Attach a label showing 'NO OIL & COOLANT' and date of preservation.

4. Repacking

Cover the engine with polythene sheet and place inside the packing case. Close the case and keep in an area free of moisture.

5. To start the engine after a long storage:

- a) After a long storage the engine must be checked and gaskets and seals (removed and fitted back during representation) must be replaced
- b) Flush the cooling system completely. Refill the cooling system with recommended coolant.
- c) Remove masking tapes from the engine intake, the exhaust manifold and the vent hole of the fuel tank.
- d) Drain the oil from the engine sump. Fill the sump with the recommended engine oil to the required level and replace fuel oil filter.

- e) Replace the fuel filter elements.

- f) Flush out fuel tank and fill the diesel.

- g) Check the injectors thoroughly for correct spray characteristics and pressure setting.

- h) Check the complete electrical charging circuit. Clean starter solenoid point and battery terminals. Also check starter motor and alternator bushes for proper contact with the commutator.

- i) Replace air system and cooling system hoses.

- j) Start the engine and observe for engine noise.

- k) Monitor engine coolant temp, Oil pressure.

- l) Check for oil, coolant & air leak and for any abnormal noise.

- m) If everything is alright, put the engine on load and observe engine parameters and performance.



3. Operating procedure

The following subjects are discussed in this section

- Before starting the engine
- Frost precautions
- Do's and don'ts

**BEFORE STARTING THE ENGINE**

- (a) The radiator is full of coolant.
- (b) There is sufficient fuel in the tank.
- (c) Engine oil level is correct (dipstick).

TOPPING UP THE ENGINE OIL

The engine oil level should be maintained near to H 'mark' in dipstick.

While checking the oil level, shut down the engine. Wait for few minutes. Withdraw the dipstick from its holder, clean and refit. Withdraw again and note the level. Top up as required with the clean recommended grade of engine oil.

FIRST PRECAUTIONS

If anti-freeze solution is not in use and the engine has to be left in the open with temperatures close to freezing point, the cooling system must be completely drained by opening the two drain points which are situated as follows:

1. Drain Plug fitted at the rear right hand side of the cylinder block.
2. Drain tap fitted on the radiator.

Drain tap/plug should be tested at frequent intervals by inserting a length of wire to ensure that they are clear. This should be done as soon as they are opened, so that an obstruction freed by the wire may be flushed out by the water.

After draining, place a notice on the engine to the effect that the cooling system is empty and the drain taps are open.



Engines with anti-freeze mixture in their cooling systems, need not drain the cooling system.

ENGINE ANTI-CORROSION OIL

Useful for engines stored for long periods.

- (1) Shell Envis oil, SAE 10.

PRECAUTIONS-SUB-ZERO TEMPERATURE**OPERATION**

Cold start aid is not fitted in the engine. It can be made available as optional fitment. The following instruction has to be followed if the engine is subjected to operate in sub-zero temperatures.



1. Up to 0°C the engine does not require any special starting aids.
2. Below 0°C and upto -15°C cold start aid "Thermostart" has to be fitted depending on ambient temperature.

0°C to -7°C Excess fuel

-7°C to -15°C Thermostart to be fitted in the intake manifold.

3. Battery should be kept in fully charged condition (Rating to suit the temperature).
4. Select the oil grade from recommended lubrication chart to suit the ambient temperature.
5. Use the correct grade of fuel as recommended for the prevailing ambient temperature.
5. Injectors must be maintained in good condition.
7. Engine timing should be as recommended. Never adjust by advancing or retarding the injection timing.

DO'S AND DON'T'S

Do's

- Periodically check and ensure that the radiator cowl is intact, and replace a defective thermostat or a missing header tank filler cap immediately as otherwise the efficiency of cooling system would be affected and this will damage the engine.
- Check radiator stay bracket mounting bolts for tightness. Check the silent block bush in stay rod and replace if found defective.
- To obtain a trouble free and enhanced engine life, maintain the air cleaner as per recommended maintenance procedure.
- After starting the engine, check for proper functioning of all instrument gauges.
- For coolant topping up, use only premixed coolant (GULF LEYPOWER COOL 40)
- Do not dilute with plain or demineralised water for top up.

- Fill up diesel tank at the end of each working day to reduce water condensation in the tanks.
- Always use clean diesel. Before filling the diesel to tank filter diesel with fine cloth.
- Keep the suction pipe atleast 1" from the bottom so that water can settle down and can be drained periodically.
- Never use kerosene / fuel additives. This will cause permanent wear of FIP components and injectors and ultimately result in major expenditure of engine over haul.
- Use only LEYPARTS for engine maintenance and repair.
- Use always recommended lub oil and Coolant as per AL recommendation.
- Use always genuine fuel filters, oil filters, lub oil and replace them as recommended.
- Disconnect alternator / battery electrical connection while carrying out welding work.
- Maintain electrolyte level in the battery using distilled water.
- Drain water separator as & when required.



Don'ts

- Do not operate starter for more than 10 seconds at a time and wait for 30 to 60 seconds before trying again.
- Do not add cold water to a hot engine as this can lead to crack in crankcase and other associated parts.
- Fuel pump setting should not be tampered with.
- Do not run the engine with leakages of air, fuel, oil and water.
- Do not switch off ignition key switch when the engine is in running condition, this will cause white smoke and sever damage to engine.
- Do not start the engine with oil level below L mark on the dipstick.
- Do not start the engine with less coolant in the radiator.



4. Maintenance instructions

Your engine has been designed to ensure ease of access to mechanical components.

This will enable you to carry out a number of simple maintenance tasks.

Therefore, keep to instructions provided on the following pages and you will be able to perform the basic maintenance work yourself.

USED ENGINE OILS

WARNING: Prolonged and repeated contact may cause serious skin disorders, including dermatitis and cancer.

- Avoid excessive contact, wash thoroughly after contact.
- Keep out of reach of children.

**FUEL SYSTEM**

Fuel additives should not be used.

Use good quality diesel.

Keep fuel clean and prevent water from entering the fuel system.

When filling the fuel tank in the rain or snow care should be taken not to allow water in the fuel tank. Do not forget to close the fuel tank cap securely.

FUEL TANK

Remove the fuel tank. Thoroughly clean the inside surface and strainer once in every 6 months.

FEED PUMP

Plunger type - mounted on Fuel Injection Pump. Plunger is operated by the integral cam as a part of FIP Cam Shaft.

Maintenance

Filter inserts must be replaced at regular intervals.

Filter Element Filter Changed Period

Every 600 hours of operations.

Renew Fuel Filter Element

- Unscrew centre bolt and withdraw the bowl and filter insert. Install new sealing ring and ensure it correctly located.
- Clean the bowl free of sediments. Replace a genuine filter insert and refit the bowl. Bleed the fuel system.

**Fuel Filter cum Water separator - (Fleet guard)**

Fuel filtering system consists of a strainer (Fitted before feed pump) and fuel filter cum water separator (Fitted on pressure side before inj).

For easy identification, fuel inlet and outlet ports are embossed clearly on the filterhead.

Further, as a fool proof, the fuel inlet port is provided with M14 size and fuel outlet port is provided with M12 size threads.

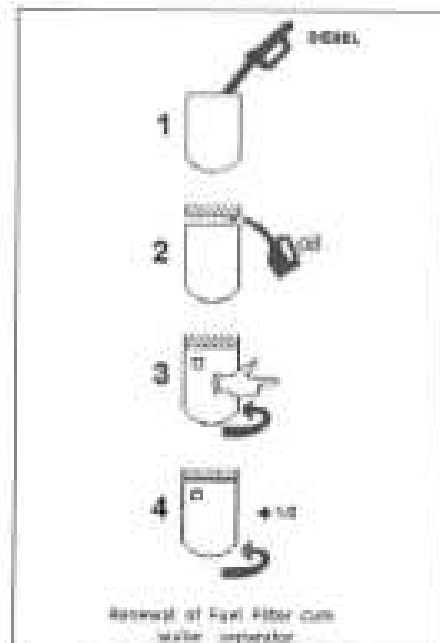
Maintenance

Under normal operating conditions, fuel filter cum water separator to be replaced at every 600 hours of operation and mud strainer to be replaced at every 1500 hours of operation.

Renewal procedure for Fuel Filter cum Water separator:

- Remove old spinon fuelfilter using appropriate filter wrench and discard.
- Clean filter head base and ensure that all the unwanted material is completely removed.
- Check the filter mounting head for tightness.
- Apply a thin coat of clean engine oil to the rubber ring surface of the new filter. Press the rubber ring firmly into the retaining groove in the filter. Do Not Use Grease.
- Carefully read the installation instructions printed on the peripheral of the filter, before fitment.
- Pre-fill the new filter with clean fuel.
- Mark a reference point on the filter and filter head to identify the point. Ensure that the rubber sealing ring first makes contact with the sealing surface of the head.

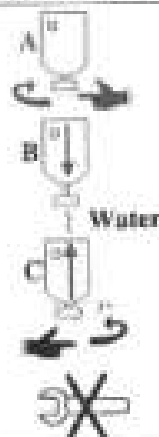
- Screw on the filter fully in and rotate 1 / 2 turn further.
- Start the engine and ensure no fuel leakage around the sealing rubber ring and filter assembly.



**Procedure for draining water**

Drain water from the unit as per the instructions provided on the component.

- Rotate the drain cock anti-clockwise (as shown in the instructions printed on the outside of the filter)
- Drain the water till the fuel starts to flow.
- Rotate the drain cock clockwise the number of turns as indicated by the installation instructions printed on the side of the filter canister.



Draining Water
from Water
Separator

- Start the engine and check for fuel leakage around the sealing gasket and filter assembly.
- Never use a spanner for rotating the drain cock.



Drain water daily. Drain cock should be hand tightened fully. Never use any spanner.

Fuel add/dies should not be used. Use good quality diesel. Use always low sulphur diesel fuel (85 II Fuel) as specified in annexure - IV of CMF rules-115(14).

Keep fuel clean and prevent water from entering the fuel system.

When filling the fuel tank in the rain or snow care should be taken not to allow water in the fuel tank. Do not forget to close the fuel tank cap securely.

Since nozzle tip is very sensitive, do not use emery sheet or any hard material to clean the tip of nozzles.

Bleeding Procedure for Fuel System

- Ensure that diesel is available in the tank. Almost leakage if there is any. And ensure there is no blockage in the filter/ pipe lines.
- The suction strainer in fuel tank is clean.
- Diesel filters and their seals are in good condition.
- The filter in the banjo bolt on feed pump suction pipe is clean.
- Pump the plunger on lift pump and ensure that air free diesel flow occurs at the filter bleeding screw.
- Crank the engine few times by loosening the high pressure injector pipes at the injector end and retighten after clear delivery takes place.
- Start the engine.
- Even after priming if diesel does not appear at the outlet, remove the feed pump assembly. Check and rectify the defects.



Use always genuine fuel filter supplied by Ashok Leyland.



ENGINE SYSTEMS

1. LUBRICATION SYSTEM

Use of recommended lubricants and following appropriate draining procedures at correct intervals as per the maintenance schedule is very important for the maintenance of the engine.

For severe and adverse operating conditions, the regular maintenance intervals should be shortened suitably.

Engine Oil

For engine Lubricants and brands of Lubricants, Refer Recommended Lubricants Chart.



Engine oil additives should not be used.

Oil Pump

Type : Forced feed pressure lubrication

Oil Pump : Gear pump

Min. Allowable oil pressure at idling : 2 kg/cm² (80°C)

Max. oil pressure at full load

: 4.5-4.8 kg/cm² (Hot Engine)

Oil Filter

: Full Flow - element type and bypass element type.

Oil level

Before checking the oil level, ensure that the engine is in off condition.

Also allow 10 minutes for warm oil to settle down in the sump. Withdraw the dipstick from the tube located on the LH side of engine. With a clear lint free rag wipe the dipstick scale and re insert fully.



Withdraw the dipstick and note the level on the scale and top up as necessary with new oil to recommended specification.

Oil and filter change

To drain the oil-

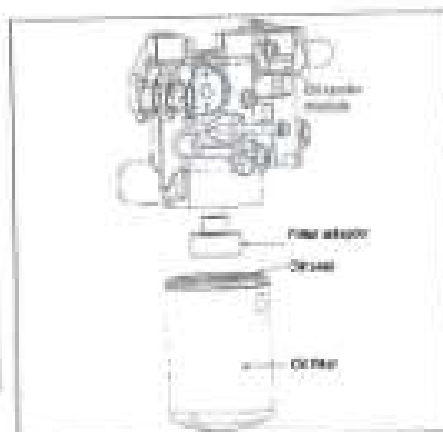
Ensure that the engine is in off condition, and the engine is warm. Draining of oil should be done within 10 minutes, from shutdown. After positioning a suitable drain tray under the sump remove the drain plug and drain the oil.



When completely drained install the drain plug with new washers and tighten securely.

Spin on type filter element



**Renewal procedure for spin on oil filter**

Remove the old filter using a filter wrench. Clean filter base (adaptor) and ensure that the all old washers are removed.

Check the filter mounting adaptor for tightness. Apply thread seal.

Apply thin coat of clean engine oil to the washer sealing surface of the new filter. Do not use grease.

Carefully read the installation instructions printed on the outside of the filter to determine the number of turns the filter must be rotated past washer contact for proper installation and washer compression.

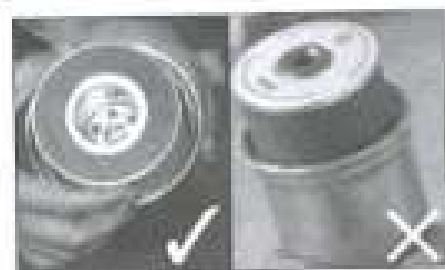
Pre-fill the new filter with clean engine oil.

Spin on the new filter until the washer makes contact with the sealing surface on the filter head.

Mark a reference point on the filter and head to identify the point that the sealing washer first makes contact with the sealing surface of the head.

Rotate the filter by 3/4th number of turns past washer contact.

Start the engine and check for oil leakage around the sealing washer and filter assembly.

CARTRIDGE TYPE FILTER

Using suitable spanner loosen centre bolt of filter bowl and withdraw the bowl assembly. Discard the used filter element and sealing 'O' rings at centre bolt and bowl fitting face. Fit a new oil filter element after placing the spring and the plate washer in position. Fit filter bowl with filter element to the filter head by centre bolt. Ensure that oil filter is not fitted in the inverted position.

Open oil filter cap. Refill the engine with the correct quantity of the specified grade of engine oil. Check the oil level on the dipstick and run the engine for a short time. Allow 5 - 10 minutes for the oil to settle down. This is essential when the oil filter has been changed and engine oil top.



2. COOLING SYSTEM

The proper selection and use of coolant are very important to prevent corrosion of the cooling system and clogging of the radiator. Replace coolant as per the maintenance schedule.

RECOMMENDED COOLANT

Use GULF LEYPOWER COOL 40.

(pre mixed Coolant). No addition of water is required.

For coolant change interval, refer Maintenance Schedule. The coolants are available in convenient pack sizes of 1, 3, 20, 50 ltr & also as 210 lt barrel.



For topping up use only GULF LEYPOWER COOL 40 directly. Do not dilute with plain or demineralised water for top up.

Water Pump

NEPTUNE engines are fitted with *Volute Pump (Double Thermostat Impeller type)

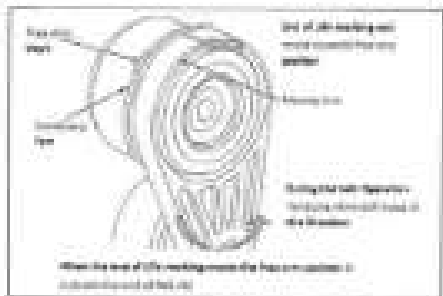
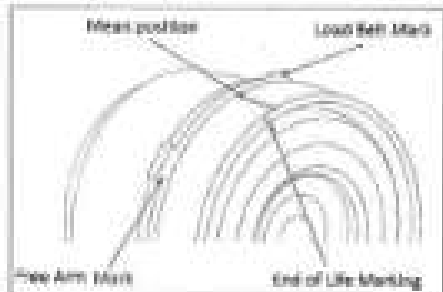
Removal and Refitment of Fan Belt



- Loosen the adapter connecting the fan with the fan shaft.
- Push the fan towards radiator.
- Move the auto belt tensioner arm in clock wise direction using a "T" handle.
- Slip out the belt connecting the Damper, Alternator and water pump.
- Remove the belt through the gap between the fan shaft and fan.
- Follow the procedure in the reverse order to install a new belt.
- Check proper seating of fan belt on the pulleys.

End of life Marking (Auto Tensioner)

Auto tensioner in the belt system maintains the fan belt tension automatically and no maintenance / check required. When the belt stretches beyond the limit, a mark on the auto tensioner indicates the end of life of belt. Belt has to be replaced as per procedure indicated.





Charge air cooler and Radiator core cleaning and fin repair

When dust, debris, etc. are stuck up on the radiator or charge air cooler core, the passage of cooling air is impaired. Hence such matter should be removed completely by washing with water. Deformed fins also can impair cooling and these should be repaired.

Replace cooling system rubber hoses. Check hoses for cracks, swelling or deterioration and replace if necessary.

Charging Coolant in Radiator

1. Do not loosen the drain plugs while the engine is still hot. If you do so, hot water can come out resulting in personal injury.
2. Stop the engine. Loosen the radiator drain plug to drain the coolant. Drainage will improve if you remove the cap from radiator.
3. Drain the complete system and tighten the radiator drain plug.
4. Slowly load coolant into the radiator through the filler until the radiator is full. When supplying coolant from a pail, pour it slowly to prevent air from mixing with the coolant.

5. When the level of the coolant reaches the filler neck, squeeze the upper radiator hose two or three times. This will cause air inside the hose to be expelled, and the level of the coolant will fall.
6. Properly close the radiator cap.
7. To ensure that the air in the engine and the piping is properly expelled, run the engine for 5 minutes on no load.
8. Stop the engine and after the engine has cooled down sufficiently, check the coolant in the radiator. Add coolant to make-up for any drop in the coolant level.

Radiator stay Rod & Cowl arrangement

Do not run the engine without radiator cowl. Ensure that the radiator cowl mounting and fan blade clearance are in proper order.

Check radiator stay bracket mounting bolts for tightness. Also check the silent block bush in stay rod and replace if found defective.

Check radiator mounting bracket bolts for tightness and the condition of the rubber pads and replace if found defective.

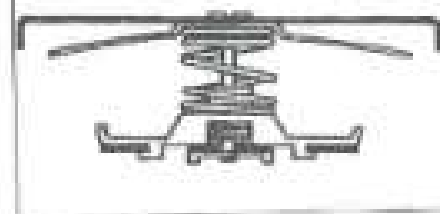


Improper radiator mounting can result in radiator hose failures as well as core cracks at dip soldered joints of top and bottom tanks.

Radiator Cap

The presence of the radiator cap prevents loss of coolant, entry of foreign particles and raises boiling point of coolant. The absence can lead to engine overheating and reduction in engine life.

RADIATOR PRESSURE CAP



Water Pump (H Series)

"H" Series engines are fitted with "integral shaft and bearing" type water pumps with prepacked grease. No further greasing required.



Adjustment of the driving belt tension of water pump (Poly V belt arrangement)



Installation Procedure

1. Loosen the necessary fasteners, slacken the pulleys & remove the old belt.
2. Check pulley grooves for wear / damage and replace the pulley if required.
3. Clean the pulley grooves for debris and ensure not to apply oil or grease on the pulley grooves at the time of fitment.
4. Check alignment of the pulleys.



Misalignment of pulleys will produce noise and shorten the belt life.

5. Mount the belt over pulleys and ensure that the belt ribs are seated in the respective pulley grooves.
6. Tension the belt and tighten all the fasteners.
7. Run the engine for 3 to 5 minutes with the applied tension to allow the belt to seat in the respective pulley grooves properly. Reset tension.
8. Apply initial belt tension of 700N by adjusting the alternator position.
9. To ensure the applied tension, measure it in the middle of span between waterpump pulley and alternator using electronic type tension gauge.

Belt Tension Measurement Procedure

- Hold the sensing head steadily across the belt span within 5 -30 mm distance above the top surface of the belt.

- Tap the belt gently near the mid span using a rod or with similar tool to cause the belt span to vibrate.
- Check the required tension display on the LCD panel on the tension meter.
- If a reading is not obtained check that the sensing head and ensure that it is positioned properly.
- Repeat the same procedure to recheck.

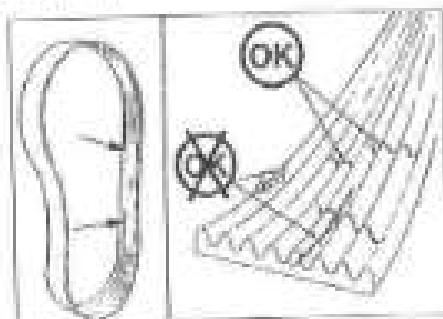
DO's:

- Check belt tension at regular intervals and adjust as needed.
- Check for any abnormal wear and damage in pulleys / Belt.
- Check for pulley alignment.
- Make belts free of fluffs and dirt.

**DON'T'S:**

- Don't over tension the belt.
- Don't apply oil/grease or paint on pulley grooves.
- Don't fit the belt improperly aligned.
- Don't use worn out belts.
- Don't pry the belt using sharp tools.

4

Visually inspect the belt:

Replace the belt if it is frayed or pieces of material missing or longitudinal cracks intersect with transverse cracks.

REMOVAL AND REFITMENT OF FAN BELT (COGGED BELT)

- Dismount the radiator side stay and loosen radiator bottom mounting to sway out a little to clear the cover covering the fan.
- Loosen alternator link bracket and loosen the fan belt fully. Inspect the pulleys for damage and wear.
- Replace the new fan belt and redo the above in reverse.
- For marine application - PTO to be loosened to insert water pump belt.

ADJUSTMENT OF THE DRIVING BELT TENSION OF WATER PUMP

Loosen the alternator link bracket and swing the alternator away from engine to increase the fan belt tension. 1" to 1 1/2" deflection on longest side of fan belt is the limit.

3. AIR INTAKE SYSTEM

Maintenance of Air cleaner plays a major role in engine performance and life. Poor air cleaner maintenance will result in complaints like excess liner water, high engine oil consumption, excess blow by and engine not taking load.

Maintenance and Servicing of Dry type Air cleaner

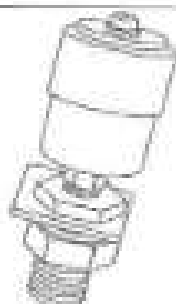
Following maintenance recommendations need to be strictly followed



- Remove dust deposit weekly by squeezing the dust evacuator valve.
- Replace dust evacuator valve immediately if it is torn, cracked, remains open or missing.
- Never operate the engine, if the restriction indicator is either broken or missing.



Do not clean the air filter primary & secondary elements.

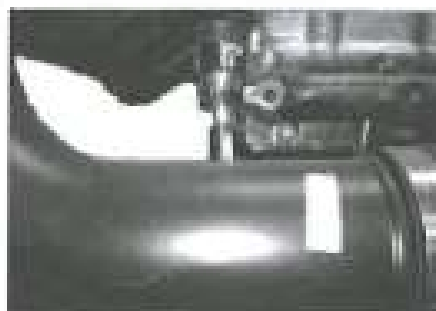


- Replace primary filter element as soon as vacuum indicator shows red band.
- Replace the secondary filter element at the time of every third replacement of the primary filter element.



For opening or closing of the air cleaner, instructions given on the sticker (pasted on air cleaner) need to be followed.

Vacuum Indicator



Replace the Secondary / Safety air cleaner element after 3rd replacement of Primary air cleaner element, or after 2 years of duration whichever is earlier.



Air Cleaner element should not be cleaned.



Engine should not be run without air filter element, which can lead to early failure of engine.



4. TURBOCHARGER

INITIAL RUNNING

Keep the engine at idling rpm for minimum 2 minutes before applying / before shutting off, to obtain maximum life from the turbocharger. Do not run the engine at full load with oil pressure less than 1.5 kg/cm².

Check all air ducts and gaskets for leak. Repair any leaks before proceeding. Inlet of air compressor must be free from dust and contamination.

MAINTENANCE

1. Turbocharger and boost pressure control valve do not require any maintenance.
2. Adhere strictly to the periodic engine oil change as recommended in the maintenance schedule.
3. Maintenance work has to be carried out regularly on the oil filter and air filter system, as recommended in maintenance schedule.
4. Checks 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 has occurred.

5. When carrying out maintenance work on the engine, the piping leading from or to the turbocharger must be removed, and the pipe openings on the turbocharger to be closed.

6. Prior to fixing turbocharger to the engine, fill the central housing with clean engine oil and ensure that, all pipes are thoroughly cleaned before connecting to the turbocharger.

Disassembly, servicing or overhauling of turbochargers should be carried out only through Ashok Leyland authorised dealers.

DO'S

- Use of specified grade of engine oil and oil filter and periodic change as recommended in maintenance schedule.
- Regular maintenance of air filter element according to maintenance schedule.
- Check for oil pressure at engine idling condition minimum oil pressure should be 1.5 kg/cm².
- Idle the engine for 2 minutes after starting the engine.
- Idle the engine for 2 minutes before switching off the engine.

- Regularly check the oil feed and return pipes for leaks, air intake system pipes and hoses for leakage, blockage and exhaust piping connections for leakage, blockage.
- Check the fuel injection system for its proper functioning.
- Close all the turbocharger openings with protective plugs when it is not in use.
- Contact Ashok Leyland dealer / authorised centres for turbocharger complaints / service.

DON'TS

- Don't run the engine with low oil pressure.
- Don't put the engine under full load immediately after starting.
- Don't switch off the engine under full load.
- Don't run the engine with leaky, restricted oil feed and drain pipes.



- Don't run the engine with blocked, punctured, aged, deformed hose / pipe connections from the air cleaner to the turbocharger, turbocharger to charge air cooler and charge air cooler to the inlet manifold.
- Don't run the engine with leaky connections, blocked and deformed connections to the turbocharger turbine inlet and from turbine outlet.
- Don't tamper the fuel injection system
- Don't dismantle the turbocharger, contact Ashok Leyland dealer / authorised service centre.



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5. Electronic Diesel Control for Neptune Engines

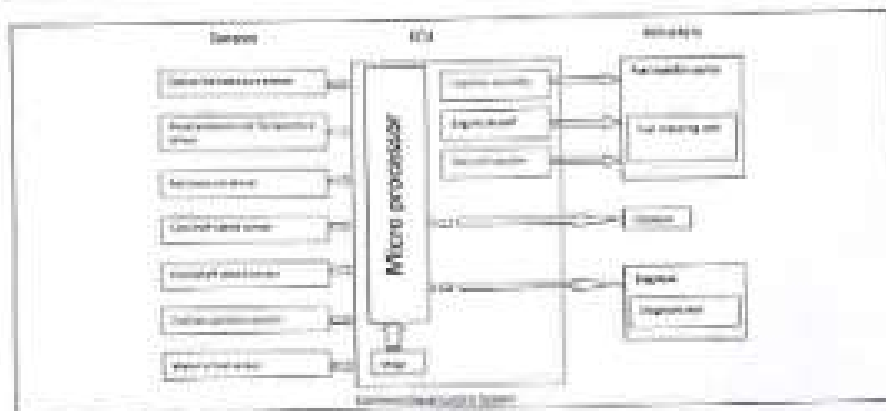
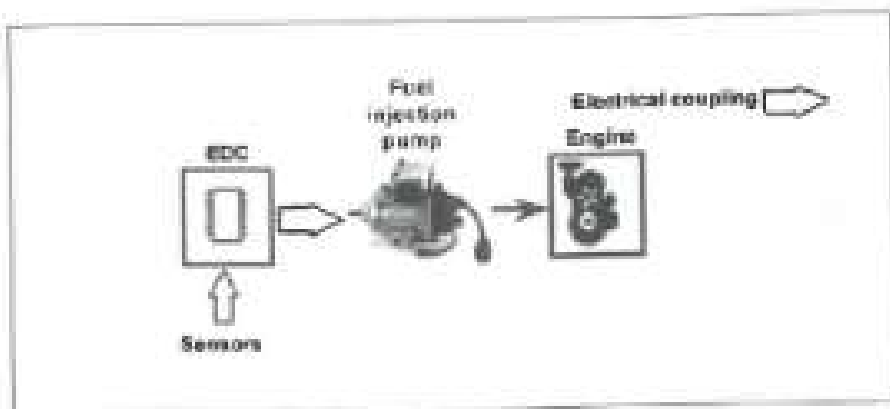


ELECTRONIC DIESEL CONTROL EDCL7 (CRS NEPTUNE Engine)

Modern engine development is driven by legislative emission requirements and growing engine electronic architecture in the market. Following are the legislation and market driven needs.

1. High fuel injection pressure.
2. Fuel injection independent of pressure generation and engine speed.
3. Multiple injections (Main, Pilot & Post Injection)
4. Flexible in fuel quantity, injection timing and fuel injection pressure independent of engine speed.
5. Environmental (Ambient, Coolant temperature etc.) / Altitude dependent fuel quantity adjustment.

The EDC (Electronic diesel control) system is capable of meeting the demands outlined above.





The injected fuel quantity is based on

1. The engine response desired by the load demand communicated through the help of ECU.
2. The engine operating conditions.
3. The engine operating coolant temperature.
4. Boost pressure.
5. Engine speed.

EDC system is also capable of data exchange with other electronic systems such as Automatic transmission through CAN (Control Area Network).

Major components of EDC system

Electronic Diesel Control system comprises of the following.

- Electronic Control Unit (ECU).
- Common rail CR3 (CP3.3) pump Fuel injection pump.
- Solenoid type Injector for all cylinders.
- Coolant temperature sensor.

- Boost pressure & temperature sensor.
 - Camshaft speed sensor.
 - Crank shaft speed sensor.
 - Rail pressure sensor.
 - Water in fuel sensor.
 - Oil pressure and temperature sensor.
 - DC-DC converter (power source) and Wiring harness.
 - In EDC system, the injected fuel quantity is based on the following.
 - The engine response desired by the load demand, communicated through the ECU.
 - The engine operating temperature.
 - Boost pressure and temperature.
 - Engine speed Atmospheric pressure.
- Proper functionality of EDC components.

EDC system is subdivided into

1. Sensors

Detect the engine operating conditions and the load demand. They convert physical variables into electrical signals.

2. Electronic Control Unit (ECU)

Processes the information received from the sensors. It controls the actuators through electrical output signals. It also provides interfaces with other systems like diagnostic tool.

3. Actuators

Convert the electrical signal from the ECU into physical variable.

CONTROLS

Open and Closed Loop Electronic Control.

Open Loop control

The actuators are operated by the ECU output signals which the ECU has calculated using the input variables, stipulated data, characteristic maps, and algorithms. The final results are not checked.



Close Loop Control

The actual value at the output is continually monitored against the desired value and as soon as a deviation is detected this is corrected by a change in the actuator control. The advantage of close loop control lies in the fact that disturbances from outside are detected and taken into account. In our system close loop control is used for rail pressure governing through activating metering unit.

Fuel - Injection Control

In order that the engine can run with optimum combustion under all operating conditions, the ECU calculates exactly the right injected fuel quantity at right time in different conditions. Here the values of various parameters are considered.

Starting Torque Requirement

The injected fuel quantity is calculated as a function of coolant temperature and cranking speed. This will generate from the moment the starting switch turned and until minimum engine speed is realized.

Engine Maximum Speed Control

This control ensures that the engine shall not to be rotated at excessive speeds. To avoid damage to the engine, the engine manufacturer stipulates a permissible maximum rotational speed that may only be exceeded for a very brief period. In our case Engine rated speed is 1500 rpm and Fuel Cut off speed is 1530 rpm. Maximum engine speed can be controlled through ECU.

Start Of Injection Control

Start of Injection has a critical effect on a power output, fuel consumption, noise, and emissions. The desired value for start of injection depends on engine speed and injected fuel quantity. With the use of injector emulsation, it is achieved.

Sensors, Actuators and ECU

Electronic Control Unit (ECU)

The ECU is the brain of the system that process the requirements through sensors and the fuel mappings already calibrated in the ECU and decides on the fuel delivery through injectors. It operates on 12V DC.

Common rail CR5 CR3.3 pump Fuel Injection pump.

This pump is mechanically driven and electronically controlled by ECU. Output signals from ECU triggers the governor thereby controls the fuel quantity of fuel injected and the start of injection.

Engine Coolant Temperature Sensor

It is a thermistor, mounted on coolant return line from cylinder block. It measures the engine coolant outlet temperature.

Engine Speed Crank Sensor

The Crank shaft speed sensor is mounted on the cylinder block. The sensor works on Magnetic Induction principle. The tooth space on the crankshaft trigger wheel causes a change in magnetic flux thereby generating output pulses, the frequency of which determines the speed.



Engine Speed Cam Sensor

The Cam shaft sensor is mounted on the cylinder head. The sensor works on Magnetic induction principle. The tooth space on the camshaft trigger wheel causes a change in magnetic flux thereby generating output pulses, the frequency of which determines the position.

Back up for Crank Sensor

The crankshaft position signal combined with camshaft position signal indicates the cylinder that is on compression and the ECU can determine from its programming the engine firing order.

If either crank or cam sensor will malfunction the cam or crank sensor will aid to start the engine.

Engine Boost Pressure & Temperature Sensor

Engine Boost Pressure sensor is mounted on the intake manifold to measure the absolute intake manifold pressure & temperature.

Common Rail System

Accumulator of high pressure fuel around 1800 bar in the system.

The rail volume dampens the pressure oscillates generated during pumping and after needle closing.

Function as a fuel distribution point to different pointers.

Advantages

Separation of pressure generation and injection allowing flexibility in controlling both the injection rates and timing. Fuel pressure doesn't depend on the engine speed and load conditions.

High injection pressures and good spray preparations are possible at even at low engines speeds and loads. Capability to deliver stable, small post injections can be used for decreased NOx emissions and noise.

Option for post injections may be used together with such emission control technologies as particulate filters, lean NOx, catalysts, or NOx adsorbents. Fuel pump operates with low drive torque.

Rail pressure sensor

The rail pressure sensor sensing the pressure maintain common rail and sends the signal to

ECU to and ECU sends the signal to metering unit to regulate volume of fuel in common rail. Stainless steel sensing element with metal thin film strain gauges.

Digital circuit concept with analogue output signal.

Metering Unit

Metering unit function is controlled by a electro magnet principle of having solenoid, present inside. As the declaration came from the ECU via Rail pressure sensor, the ECU sends the signal to regulate the fuel flow. The Rail pressure sensor and Metering unit are inter related to maintain the fuel pressure in Common rail.

Injectors

Injectors functions are controlled by a electro magnet principle of having solenoid situated at top side. When the solenoid coil is energised, it lifts the plunger and allows the high pressure fuel from high pressure connector to injector inlet and the fuel fills inside the stem of injector and finally it delivers to the combustion chamber.



Water in Fuel Sensor

Water in fuel sensor located at the Bottom of Prefilter. When the water in fuel got settled at bowl, the sensing lead senses the presence of water. Please refer the water draining procedure follows below.

EDC failure reaction functions

Various reaction in engine behaviour indicates the possible malfunctioning or failure in the EDC Sensors and actuators or in the wiring harness.

The table shown indicates the details of sensor failure and its effect on the engine.

Do's and Don'ts

- Electrical tapping not allowed. Tapping should not be taken as this can severely affect the performance of the ECU and Sensors (additional current drawn by the new load will drain the battery faster / damage the DC/DC Converter).
- Diagnostic connector should not be left hanging loose and should be handled with care. The protective cap is to be removed only at the time of connecting diagnostic tester.
- Reverse polarity protection : Care needs to be taken while removing and connecting the battery connection during Sensor assembly.
- Check the battery condition regularly and keep the battery in a healthy condition.
- Ensure proper connectivity of ECU/ Sensor connectors with Wiring Harness and maintain harness clamps.
- No intermittent connector in the EDC wiring system should be practiced (this is not relevant from the service point of view as the harness would have already been made and put on the engine and there will be no question of intermittent connector).
- Keep the ignition switch 'OFF' while removing & fitting of the battery connections in the engine.
- Correct Tightening torques should be used for mounting the ECU.
- Do not relocate the ECU from the given location.
- ECU must be connected or disconnected to the wiring harness only when the ignition switch is in OFF position.

- No undue pressure to be applied on the ECU during service.
- Do not let dirt or dust get inside the actuator / sensors or EDC components. Cover them properly.
- When disconnecting the connectors, try to pull them out in a straight line, disengaging the lock by holding the housing.
- Do not try to disconnect connectors by gripping the wires or twisting them, as this could bend the contacts.



6. Maintenance Schedule

SCOPE AND PROCEDURES OF REGULAR MAINTENANCE

The operations described here as "Regular Maintenance" involve such service operations as inspection, lubrication, adjustment, and replacement which should be carried out at specified intervals. The importance of these regular service operations need not be emphasized further for they have a close bearing on the performance and service life of your engine.

The periods under which the various items are listed are intended to apply to engine engaged on normal operating conditions. More frequent attention will be necessary to engine working under adverse conditions. The regular maintenance periods, therefore, should be altered to suit the local conditions.



CHECK LIST				REMARKS
	Daily	First 50 hours only	Every 250 hours	
1. Check level and top up				
a) Oil in engine	✓	✓		
b) Coolant in radiator	✓	✓		
c) Electrolyte in battery		✓		
2. Check tightness of				
a) Battery terminals & apply petroleum jelly		✓	✓	
b) Fan belt and tighten if necessary		✓	✓	
c) Hose connections in cooling systems		✓	✓	
d) Hose clamp of charge air cooler / turbocharger		✓	✓	
e) Fuel piping connections		✓	✓	
f) Exhaust piping connections		✓	✓	
g) Engine mountings		✓	✓	



CHECK LIST	Daily	First 50 hours only	Every 250 hours	REMARKS
h) Engine to drive unit coupling		✓	✓	
i) Electrical connections at instrument panel		✓	✓	
j) Radiator mtg. stay & gap between fan and cowl		✓	✓	
k) Injection pump mounting		✓	✓	
l) Cylinder head nuts				First 250 Hours and thereafter every 2500 Hours
3. Run the engine, check and record				
a) Oil pressure	✓	✓		
b) Battery charging	✓	✓		
c) Idling RPM	✓	✓	✓	
d) Maximum RPM	✓	✓	✓	
e) Maximum operating temperature	✓	✓	✓	
4. Check leakage from				
a) Fuel piping & injector high pressure lines		✓	✓	
b) Exhaust manifold, flange & connections				



CHECK LIST	Daily	First 50 hours only	Every 250 hours	REMARKS
c) Engine oil filter and other areas		✓	✓	
d) Coolant hoses		✓	✓	
e) Gear box and PTO (for marine application)		✓	✓	
5. Check proper engagement (for marine application)				
a) Gear box	✓	✓		
b) Power Take Off	✓	✓		
6. Check proper routing to avoid any kink formation				
a) RPM cable		✓	✓	
b) Capillary tube to temperature gauge		✓	✓	
7. Check condition of				
a) Zinc anode (for marine oil cooler application)			✓	
b) Alignment of engine to driven unit		✓	✓	
c) Check water pump. Recondition if necessary				Every 1250 Hours
8. Lubricate				
a) Throttle linkages		✓	✓	
b) Clutch engaging sleeves (for marine application)		✓	✓	



CHECK LIST	Daily	First 50 hours only	Every 250 hours	REMARKS
9. Clean				
a) Fuel feed pump strainer		✓	✓	
b) Fuel filter bowl, drain till clear fuel appears and then bleed the system		✓		
c) Strainer in fuel tank			✓	
d) Engine breather				Every 1500 Hours
10. Replace/Fill				
a) Replace engine oil and oil filter at scheduled hours				
b) Change gear box oil			✓	
c) Fuel filter and seal ring			✓	
d) Coolant				Every 5000 Hours or 24 months
e) Cooling system hoses and rubber pads for radiator mounting and stay rods				Every 2000 Hours or one year whichever is earlier based on condition.



CHECK LIST	Daily	First 50 hours only	Every 250 hours	REMARKS
g) Fuel hoses				Every 2000 Hours or one year whichever is earlier/Based on condition.
h) Air filter element - dry type air cleaner				Whenever vacuum indicator shows red band (or) 1000 hrs whichever is earlier
11. Check & reset				
a) Injection pump timing		✓		
b) Adjust valve clearance				During every oil change
c) Injector opening pressure				Every 3500 hours.
d) Recalibrate Fuel Injection Pump				Every 3500 hours/ Based on condition.
12. Check charge air cooler				
a) For any blockage of fins and clean the cooler if necessary			✓	
b) Hoses for any damage			✓	



RECOMMENDED LUB OIL, OIL DRAIN & FILTERS CHANGE INTERVAL

Application	Engine Model	Recommended Lub Oil	Oil drain & Filters Change Interval
Industrial / Harvester	H3 (Emission & Non emission)	Gulf LEYPOWER XLL Diesel engine Oil	250 hours or 6 months whichever is earlier
Industrial / Harvester	H4-BSB CEV (10L/76HP)-Non-EGR	Gulf LEYPOWER XLL Diesel engine Oil	500 hours (or) 6 months whichever is earlier
Industrial / Harvester	H5DTI (Non-Emission)	Gulf LEYPOWER XLL Diesel engine Oil	
Industrial / Harvester	H5ETC3	Gulf LEYPOWER XLL Diesel engine Oil	

**INDUSTRIAL / AGRICULTURE ENGINES**

Type of Service	HE - Emission (BSM - CEV) & Non Emission Engines	
	Gulf LEYPOWER XLL Diesel Engine Oil	
	Hours	Duration
1st Service	0 -50 hours	0 - 30 days
2nd Free Service	225 - 250 Hours	Max within 180 days
3rd Free Service	475 - 500 Hours	Max within 180 from previous oil change

Important Note:

Ashokleyland reserves right to change the above schedule, Procedure at any time without any prior notice.

Kindly check AL authorized Dealer / Company Executives for any Clarification.

**INDUSTRIAL / AGRICULTURE ENGINES**

Type of Service	HM/Non Emission Engines	
	Gulf LEPPOWER Diesel Engine Oil	
	Hours	Duration
1st Free Service	0 - 50 hours	0 - 30 days
2nd Free Service	225 - 250 Hours	Max within 180 days
3rd Free Service	475 - 500 Hours	Max within 180 days from previous oil change

Important Note:

Ashokleyland reserves the right to change the above schedule, Procedure at any time and without any prior notice.

Kindly check with authorised AL Dealer / Company Executives for any Clarifications.

**INDUSTRIAL / AGRICULTURE ENGINES**

Type of Service	INDUSTRIAL / AGRICULTURE -HEETICS	
	Gulf LEYPOWER XL Diesel Engine Oil	
	Hours	Duration
1st Free Service	0 - 50 hours	0 - 30 days
2nd Free Service	475 - 500 Hours	Max within 180 days
3rd Free Service	975 - 1000 Hours	Max within 180 days from previous oil change

Important Note:

Ashokleyland reserves the right to change the above schedule, Procedure at any time and without any prior notice.
Kindly check with authorized AL Dealer / Company Executives for any Clarifications.



ASHOK LEYLAND

7. Warranty Policy



ASHOK LEYLAND

INDUSTRIAL/AGRICULTURAL ENGINES

Engine No. ASHOK LEYLAND LIMITED

Model WARRANTY

Date of AL INVOICE:..... FOR INDUSTRIAL/AGRI APPLICATION ENGINES ONLY

This warranty policy covers all Industrial / Agriculture Engines Manufactured by Ashok Leyland sold on or after December 1, 2018 and in use in India will be free from any defect in material and workmanship under normal use and preventive maintenance service for a period listed below from the date of sale. The Published Warranty of Ashok Leyland is subject to change by Ashok Leyland at any time without notice.

Warranty Period: Warranty is for 24 months from the date of AL Invoice from the Factory or 5000 hours of Operation, whichever occurs first.

The warranty on the proprietary items / components and spares thereof is applicable as per terms and conditions Of respective suppliers. Some of them are given below:

- Fuel Injection pump and injectors
- Starter Motor
- Battery Charging Alternator
- Raw water pump
- Heat Exchanger / Oil cooler

Our obligation under this warranty being limited to replacing or repairing by our authorized Service Dealers, at the sole discretion of Ashok Leyland, any part or parts, which our examination shall disclose to our satisfaction, to have been thus defective in material or workmanship within the specified warranty period. For Parts / Engine supplied by way of replacement or repair either under this warranty or voluntarily at special rates or free of charge, only the unexpired portion of the period of warranty is applicable to the Engine concerned.



THERE ARE NO WARRANTIES EXPRESS OR IMPLIED, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE REGARDING OUR ENGINE EXCEPT THE WARRANTY AGAINST DEFECT IN WORKMANSHIP AND MATERIAL SPECIFIED HEREIN. WE NEITHER ASSUME NOR AUTHORIZE ANY PERSON TO ASSUME ANY OTHER LIABILITY IN CONNECTION WITH THE SALE OF ENGINE. ASHOK LEYLAND SHALL NOT BE RESPONSIBLE OR LIABLE FOR ANY EXPENSES THAT MAY BE INCURRED TOWARDS REMOVAL / RELOCATION / INSTALLATION OF ENGINE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HERE-OF. ASHOK LEYLAND SHALL IN NO EVENT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES.

This Warranty does not apply to (Limitation and exclusions):

1. Engine that shall have been subjected to over speeding, over loading, misuse negligence or accident.
2. Damage resulting from improper shutdown.
3. Engine that shall have been repaired or altered outside of our factory or by anyone who is not authorized by us in such a way that, in our sole judgment its performance and reliability are adversely affected.
4. Engine or any part, component or accessory of the Engine improperly applied or installed.
5. Failure in any way resulting from use of parts, components or accessories not manufactured or approved by Ashok Leyland.
6. Normal Maintenance services including, but not limited to engine tune up and the repair or replacement of filters, Engine Oil, and other normal maintenance spares.
7. Any damage due to idle storage of Engine beyond period of 6 months without treatment for long storage.
8. Any damage due to use of lubricant, fuel or coolant not recommended / approved by Ashok Leyland.
9. For BS III Engine, Use diesel specification as per IS 1460 & sulphur content of diesel shall not be more than 350 PPM. Recommended lubricating oil is API CI 4 + 15W – 40 oil.
10. Ashok Leyland shall not be responsible for failure of product due to improper ventilation, deficiency in design of accessories other than Ashok Leyland / scope, judged solely at the discretion of Ashok Leyland.



11. Engine which has not undergone the mandatory free & paid service of engine through authorized dealers of Ashok Leyland within the warranty period.
12. Failure / damage to engine due to wrong electrical wiring connections and substandard electrical fittings and materials.
13. All rubber hoses / components & gaskets, & Proprietary articles not manufactured by the company (AL) and spare / Replacement parts thereof.
14. Any Failure due to natural Calamities such as but not limited to Flood, Earth quake, Riot, War, Fire, landslides, Cyclone & Lightning etc.

Any improper installation or application, or any substitution of parts, component or accessories not manufactured or approved by us shall void all warranties, express or implied. The warranty does not include for normal wear and tear. Ashok Leyland is not liable for loss of time to the user while the Engine or other equipment is out of commission, nor for any labour or other expense, liquidated or unliquidated damages or loss occasioned, or claimed to be occasioned by such defective parts, component or accessories.

Engine Inspection

Three Free Services for Engines are provided by Ashok Leyland as per warranty clause and terms mentioned above and will be carried out by Ashok Leyland's authorized dealers / service providers only. The owner of Engine would be well advised to avail all Free service to ensure trouble-free performance of the Engine.

Free service inspection is provided to review maintenance procedures and make necessary adjustments, if required and clarify queries, if any, which the owner may have with regard to the operation of Engine.

It is the responsibility of the owner to get these free services done as per schedule given below.



INDUSTRIAL / AGRICULTURE ENGINES

Type of Service	H4 / Non Emission		H4 BSIII / H6 Non Emission/ H6ETIC3	
	Gulf LEYPOWER XLL Diesel Engine Oil		Gulf LEYPOWER XLL Diesel Engine Oil	
	Hours	Duration	Hours	Duration
1st Free Service	0 - 50 Hours	0 - 30 Days	0 - 50 Hours	0 - 30 Days
2nd Free Service	225 - 250 Hours	Max Within 180 Days	475 - 500 Hours	Max Within 180 Days
3rd Free Service	475 - 500 Hours	Max Within 180 Days from the Previous Oil Change	975 - 1000 Hours	Max Within 180 Days from the Previous Oil Change

All spares including consumables required during free service are to be arranged by the owner duly procured from authorized AL Dealer.

The review of maintenance procedures and necessary adjustments, if any, are essential to ensure long life and efficiency of the Engine. In the event free service inspection are not availed by the owner, Ashok Leyland will not extend warranty to the Engine.

Conditions Precedent to Warranty:

Ashok Leyland recommends the owner to familiarize himself / herself with the operator manual and warranty document. The warranty is explicitly subjected to certain conditions precedent, being met by purchaser / owner to the satisfaction of Ashok Leyland, without which the warranty claims, if any, would result in inordinate delays for settlement and sometimes even rejection. These are summarized here for the benefit of the owner of Engine.

The warranty is subject to fulfillment inter alia of the following obligations by the purchaser / owner of the Engine.

- Proper Installation of Engine. The sole responsibility of installation lies with the owner / purchaser.
- Normal use and preventive maintenance are carried out as recommended in the Operator's Manual supplied along with the Engine.



- iii) In case any defects are noticed, it would be a worthwhile effort on the owner's part to satisfy him in the first instance that the defect could be reasonably deemed to be of workmanship or material and that the Engine was never subjected to conditions in respect of which the warranty has been expressly negated.
- iv) Any part claimed to be defective should be returned to Ashok Leyland factory / Authorized Agency with the two -way transportation charges pre paid, if such part is replaced by Ashok Leyland under warranty, the part returned by the owner shall automatically become property of Ashok Leyland.
- v) Any attempt to tamper with, or interchange any parts between Engines and/or other Engine shall void the warranty. Most of the precision parts such as the nozzles, fuel pumps are specially calibrated to suit Rating/ Model requirements and Ashok Leyland has a record of each Engine and parts utilized thereon duly coded.
- vi) Repair / replacement shall be carried out as reasonably practicable, subject to the availability of necessary parts / assembly, materials and labour.

The owner has the responsibility to get the engines serviced periodically through Ashok Leyland's Authorized Dealer / Service Provider vide Paid service mode, after completion of free services provided by Ashok Leyland. As a reward for doing periodic maintenance as specified in the Operator's Manual, the owner may avail one loyalty oil change service each through Ashok Leyland Authorized Dealer / Service Provider, only on completion of third oil change service and fifth oil change service respectively, but within the warranty period.

General Warranty Practices:

Ashok Leyland makes NO warranties express or implied relating to the sale of genuine replacement parts.

The benefits of this warranty is provided to the first user of the Engine only and cannot be transferred.

7 Ashok Leyland gives no guarantee as to performance, unless by separate agreement in writing.



ASHOK LEYLAND

Any claim or obligation in connection with the first sale of Engine shall be subject to the jurisdiction of Courts in Chennai only.

This is to certify that..... Engine Model.

Bearing Engine Noand Registered

as the property of.....

is covered by the provision of warranty as defined above.

For & on behalf of Power Solutions Business Group of

ASHOK LEYLAND LIMITED

Chennai

Chennai - 600 032.



ASHOK LEYLAND



ASHOK LEYLAND

8. Free Service Coupons



ASHOK LEYLAND

47453

Name and Address of the Dealer:

Name and Address of the Owner:

Model:

Engine No.:

DOI:

Application:

Equipment No.:

Date Of Service Order:

Hours Run:

**ASHOK LEYLAND**No. 1, Sardar Patel Road, Guindy,
Chennai - 600 032, Tamilnadu, IndiaS. No. **47453****INDUSTRIAL / AGRICULTURE ENGINE
FIRST FREE SERVICE**

Customer Name:

Address:

Name and Address of the Dealer:

Engine Model: Engine No.: Date of Sale:

Job Card No.: Date:

Date of Commissioning: Hour Meter Reading:

Signature of Dealer:

This is to certify that Commissioning has been satisfactory and understood the warranty terms.

Signature of the Customer:

Signature of Ashok Leyland Service Engineer:

Date of commissioning:

Hour meter reading:

Customer Signature with date:

Dealer Signature with date:

Engine Model:

Engine No:

Application:

Equipment No:

Check following (Please attach separate sheet for any remarks / discrepancy other than below)

1. Check take off of Engine, Air cleaner (for oil bath type)
FF (in case of non - pressure type)
2. Check Radiator coolant level.
3. Recommended Coolant used yes / No
4. HF Lubrication.
5. HF connection & timing.
6. All pipes condition.
7. Tightness of clamps.
8. Airtight leakage if any.
9. Throttle linkage lubrication.
10. Mounting tightness - Engine / Radiator /
Air cleaner / Silencer bracket.
11. Clean / Change air cleaner element for dry type.
12. Fan belt for correct tension.
13. Check fan assembly to adaptor tightness.
14. Drain water separator if necessary.
15. Radiator cap condition.
16. Starter Motor / Alternator condition.
17. Battery Condition V Specific Gravity

Engine Parameter

Oil Pressure at idling kg/cm²

Oil Pressure at full load / full RPM kg/cm²

Water Temperature at full load - °C

ALL FILTERS / LUBRICANTS MUST BE TO AL SPECIFICATIONS
AND CUSTOMER TO BEAR COSTS OF CONSUMABLES.

All services to be carried out by the authorised AL Dealer only.

47453

Name and Address of the Dealer

Name and Address of the Owner

Model

Engine No.

Date

Equipment No.

Date of Service Done

Hours Run



ASHOK LEYLAND

No. 1, Sardar Patel Road, Guindy,
Chennai - 600 032, Tamilnadu, India

S. No. **47453**

**INDUSTRIAL / AGRICULTURE ENGINE
SECOND FREE SERVICE**

Customer Name:

Address:

Name and Address of the Dealer:

Engine Model: Engine No. Date of Sale:

Job Card No.: Date:

Date of Commissioning: Hour Meter Reading:

Signature of Dealer:

This is to certify that Commissioning has been satisfactory and understood the warranty terms.

Signature of the Customer:

Signature of Ashok Leyland Service Engineer:

Date of commissioning:

Hour meter reading:

Customer Signature with date:

Dealer Signature with date:

Engine No.:

Equipment No.:

Engine Model:

Application:

Check following (Please attach separate sheet for any remarks / discrepancy other than below)

1. Check lube oil of Engine.
2. Change Lube Oil Filter & Fuel Filter.
3. Check Radiator Coolant level.
4. Recommended Coolant used yes / No.
5. All hoses condition & tightness of clamps.
6. Arrest leakages if any.
7. Throttle linkage Lubrication.
8. Mounting tightness - Engine / Radiator / Air cleaner / Silencer bracket.
9. Change air cleaner element for red band indicator.
10. Fan belt for correct tension.
11. Check fan assembly to adaptor tightness.
12. Drain water separator if necessary.
13. Radiator cap condition.
14. Starter Motor / Alternator condition.
15. Battery Condition V Specific Gravity.
16. Check tappet clearance and adjust if necessary.

Engine Parameter:

Oil Pressure at idling kg/cm²

Oil Pressure at full load / full RPM kg/cm²

Water temperature at full load °C

ALL FILTERS / LUBRICANTS MUST BE TO AL SPECIFICATIONS
AND CUSTOMER TO BEAR COSTS OF CONSUMABLES.

All services to be carried out by the authorized AL Dealer only.

Name and Address of the Dealer:

Name and Address of the Owner:

Model: Engine No.:

DOE: Application:

Equipment No.:

Date of Service Done:

Hour Meter

47453



ASHOK LEYLAND

No. 1, Sardar Patel Road, Guindy,
Chennai - 600 032, Tamilnadu, India

S. No. 47453

**INDUSTRIAL / AGRICULTURE ENGINE
THIRD FREE SERVICE**

Customer Name:

Address:

Name and Address of the Dealer:

Engine Model: Engine No.: Date of Sale:

Job Card No.: Date:

Date of Commissioning: Hour Meter Reading:

Signature of Dealer:

This is to certify that Commissioning has been satisfactory and understood the warranty terms.

Signature of the Customer:

Signature of Ashok Leyland Service Engineer:

Date of commissioning

Hour meter reading

Experiments: Significant results with data:

Dealer Signature with date

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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Abstract

Age Group	Total (%)	Male (%)	Female (%)	Male (%)	Female (%)
18-24	~85	~80	~80	~80	~80
25-34	~75	~70	~70	~70	~70
35-44	~65	~60	~60	~60	~60
45-54	~55	~50	~50	~50	~50
55-64	~45	~40	~40	~40	~40
65+	~35	~30	~30	~30	~30

Check following (Please attach separate sheet for any remarks / discrepancy other than below)

1. Check tube oil of Engine.
2. Change Lube Oil Filter & Fuel Filter.
3. Level of Coolant in Radiator.
4. Recommended Coolant used per / lit.
5. All hoses condition & Tightness of clamps.
6. Amps / Volts / hrs.
7. Throttle linkage lubrication.
8. Mounting tightness - Engine / Radiator / Air cleaner / Mower bracket.
9. Change air cleaner element for red band indicates.
10. Fan belt for correct tension.
11. Check fan assembly to radiator tightness.
12. Drain water separator if necessary.
13. Radiator cap condition.
14. Starter Motor / Alternator condition.
15. Check & Reset injector pressure if necessary.
16. Check Tappet clearance and adjust if necessary.
17. Lubricate water pump.
18. Radiator gap between cover and fan tip gap 10mm.
19. Battery Condition : V Specific Gravity

Initial Assessment

134 Pressure at killing _____ kg/cm²

Oil Pressure at Full Load / Full RPM _____ Bar/psi

Water Temperature at Full Load 60

ALL FILTERS / LUBRICANTS MUST BE TO ALL SPECIFICATIONS
AND CUSTOMER TO BEAR COSTS OF CONSUMABLES

All versions to be printed out by the author(s) & Reader only



ASHOK LEYLAND

9. Dealer network

- Ashok Leyland office addresses
- Industrial Engine Dealers



REGISTERED, CORPORATE AND MARKETING OFFICES

No.1, Sardar Patel Road, Guindy, Chennai - 600 032.

Ph : 044-2220 6000, Fax : 044-2220 6001

REGIONAL OFFICES / AREA OFFICES

Ahmedabad	M/s. Ashok Leyland Ltd., 403, 4th Floor, Tower A, Mondel Heights, Safar II, SG Highway, Ahmedabad - 380 054.
Bangalore	M/s. Ashok Leyland Ltd., Suraj Minar, No. 100/1-1, Second Floor, Bull Temple Road, Basavanagudi, Bangalore - 560 019.
Bhubaneswar	M/s. Ashok Leyland Ltd., Anaj Building, 1st Floor, Plot No. 29, Satya Nagar, Bhubaneswar - 751 007.
Bikaner	M/s. Ashok Leyland Ltd., 3rd Floor, Plot No. 8, Panchsheel circle, Sardar gate, Bikaner - 334 001.
Chandigarh	M/s. Ashok Leyland Ltd., S.C.O. 812, 2nd Floor, Chandigarh Kalka Road, Marimara, Chandigarh - 160 101.
Chennai	M/s. Ashok Leyland Ltd., Registered Office, No. 1, Sardar Patel Road, Guindy, Chennai - 600 032.
Cochin	M/s. Ashok Leyland Ltd., No. 25/500 E, Kallappuram Centre, Disappaly - Pookattupudi Road, Unchikuzha Thirukolva, Changanpuzha Nagar Post, Cochin - 682 033.
Gurgaon	M/s. Ashok Leyland Ltd., Unit No. 703-704 7th Floor, Signature Tower - A South City I, Sector 28, Gurgaon, Haryana - 122 001.
Guwahati	M/s. Ashok Leyland Ltd., Ashwini Bhawan, House No. 34, 2nd Floor, Dr. RP Road, Dispur East Gate, Guwahati - 781 006.
Hosur	M/s. Ashok Leyland Ltd., No. 175, Hosur SACOT Industrial Complex, Rajaji Nagar, Hosur - 535 126.
Hydrabad	M/s. Ashok Leyland Ltd., Office, 2nd Floor, Poochi Aashiyana, Srus Park, Hitech - 580 021.
Indore	M/s. Ashok Leyland Ltd., 601, HIR Business Park, Near Mangal City Mall, Vijay Nagar, AB Road, Indore - 462 010.
Jaipur	Ashok Leyland Ltd., Regional Office (RO) Jaipur, Office No. 185, 5th Floor, Jaipur Centre, B2 Bypass, Tonk Road, Jaipur - 302 018.
Jodhpur	M/s. Ashok Leyland Ltd., 2nd floor, Moolchand building, Cyber Park, Near Sonni dairy, Jodhpur - 342 003.
Karnal	M/s. Ashok Leyland Ltd., SCO No. 34, II Floor, SEC-12, City Center, Karnal - 132 001. (Haryana)
Kolkata	M/s. Ashok Leyland Ltd., 8th Floor Airport Mall, 8/4, UDA, Rajdanga Main Road, Kolkata - 700 307.
Lucknow	M/s. Ashok Leyland Ltd., 4th Floor, Space No. 491, Shalimar Titanium, Plot No. TC/G-1/1, Vishnu Khurd, Gomti Nagar, Lucknow - 226 001.



AREA OFFICES

Madurai	M/s. Ashok Leyland Ltd., Regional Office, No.345 Claret Plaza, Melakkal Main Road, Arappalayam Village, Kochadai, Madurai - 625 036.
Mumbai	M/s. Ashok Leyland Ltd., 907 & 908 Cybra One, Sector-30 Vashi, Navi Mumbai - 400 703.
Nagpur	Ashok Leyland Ltd., Plot No.257, Second Floor Radhachinath Tagore Marg, Chell Line, Nagpur - 440 001.
Palna	M/s. Ashok Leyland Ltd., 15th Floor West No-5 Legend Plaza, Main Acharya Dighe Road, Opp- Indusind Bank, Palna - 800 034.
Pune	M/s. Ashok Leyland Ltd., Pride Portal, Ground Floor S/A 103, Bakerbendi, Off. Senapati Bapat Road, Shivajinagar, Pune - 411 015.
Rajpur	M/s. Ashok Leyland Ltd., Jeet Tower, Opposite Rafikumar College, D T Road, Rajpur (CG) - 492 013.
Rajkot	M/s. Ashok Leyland Ltd., No. 427, Arvind Complex, Opps. Nakshatra - V, Fardar Chowk, Rajkot - 360 005.
Secunderabad	M/s. Ashok Leyland Ltd., 3rd Floor, Shruspath Chambers, No. 31, Saradhi Devi Road, Secunderabad - 500 003.
Udaipur	Ashok Leyland Ltd., Office No. 503, 1st Floor, Manglam Fun Square, Durga Nursery Road, Udaipur - 313 001.
Uttarakhand	M/s. Ashok Leyland Ltd., Plot No 1, Sector 12, HE Parknagar, Uttarakhand - 263 153.
Vijayawada	M/s. Ashokleyland Ltd., 1st Floor, Sreepra Towers, 40-1-5/1A & 1B, M.G Road, Vijayawada - 520 030.



ASHOK LEYLAND

STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CRL NO
ANDAMAN	Pandian Enterprises, P.O.Box no - 88, 8th / 72, Supply Line, Aberdeen Road, Port Blair - 744 101.	Entire Andaman & Nicobar Islands	93292 - 238808	Mr. A/Venka Pandian Mr. Vitoru soma_pandian@yahoo.co.in	Proprietor Sales Manager	991251712
ARUNACHAL PRADESH	Coastal Power Solutions, 88/73, Auro Nagar, D-Block, Cajamela Pol in Station Road, Eastchamela Colony, Cojywala Vishnupattanam - 520 013.	East Godavari, Vishakhapatnam, Vijayawada, Srisakulam,	9133334131	Mr. Srinivas coastalpowersolutions@gmail.com	Proprietor	9133334131 9133334131
	Dr. Jayashree Power Solutions, Block A, 1st Floor, SDA-21/A-12 RA Gardens, Vishakhanda Colony, Auto Nagar, Vijayawada - 520 007.	Erithra, Guntur & West Godavari	759945199	Mr. Rajagopal Reddy wtjagopreddy@gmail.com services.ashokleyland@gmail.com	Partner	8498617199
	Royaloxema Power Solutions Plot No. A, Room No., Near Vatavathi Vinayagar Temple, Kadapa - 520 001.	Kadapa, Ramoli, Ananthapur & Chittoor	08493420994	Mr. Adapambudu ayashankar rps.kadapa@gmail.com	Franchisee	05403521384 05404824588
	Royaloxema Power Solutions, No. 1/523, Above Kalpana Post Food Centre, AK Top Line, Near DP Meeting Hall, Velam Road, Chittoor - 518 001.		08464600001 08403423334	Mr. A. Kumar Mr. Adapambudu Iyya Shankar rps.kadapa@gmail.com	Proprietor	08464624581 054098624588
	BMW Power Solutions Plot No. 15, Auto Nagar, Thiruvengoda, Dargah, Prakasham - 523 262.	Prakasham & Nellore	+91- 9100805240	Mr. Sumanth Raju santh.suresh@rediffmail.com sumanth.suresh@rediffmail.com	Proprietor	9100900240
ASSAM	S/P Motors, Chirapatty Road, Shanti Complex, Top 3 Jharkh Motors, Tinsukia - 786 125.	Tezpur, Dibrugarh, Shivasgar, East Kamachal Pradesh, North Lakhimpur, Guwahati, Bongaigaon, Goalpara, Kokraj, Kokrajpur, Karbi, Chirang, Barua, (Blutor), Nagpur, Tezpur, Nimgola, Dima, Lakhimpur, West Kamachal Pradesh, Sonitpur, Dima, Jyura & Nimgola	03782 38238 03742 24300	Mr. TC. Paul Mr. Chiranjeev Bhattacharjee waterasp@yahoo.com	Franchisee Officer in-charge	9818 87468 94751 35047
	S/P Motors, House No. 300, 2nd Merang Road, Gauhati - 781 034.		9435135247	Mr. TC. Paul Mr. Chiranjeev Bhattacharjee waterasp@yahoo.com	Franchisee Officer in-charge	9435135247



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
ASSAM	Deepen Conplex, Mithyakhuri Road, Jorhat - 785 001.	Jorhat, Golaghat, Karbiang & Dima Hasar	-	Mr. Ashu Chandra Paul deepenconplex@gmail.com	Proprietor	9436002804
	Supreme Earth Movers, VIP Road, Pongpur, Sivasagar - 786 019 Cachar, Assam.	Ukhris, Malakandi, Karimganj (Karimganj) in Assam & Pongpur in Meghalay	-	Mr. Sanku Ray supremearthmovers@gmail.com	Proprietor	9435373378
BIHAR	Narayn Sales & Services 2nd Floor, Garia Market, Opp. Chandan Hara, Kankarbagh Main Road, Patna - 800 020.	Purnia, Ara, Buxar, Jehanabad, Munger, Bhagalpur, Bagmati, Bharti, Khagaria, Bhoj, Sheikhpura, Sahib, Kishanganj, Madhepura, Purnia, Supaul, Seemantpur, Seemantpur East & West Champaran, Muzaffarpur, Sitamarhi, Darbhanga, Madhubani, Lohit, Sheikhpura, Gopalganj, Sheikhpura.	8432-830014	Mr. Hare Ram Yadav haremram@yahoo.com	Proprietor	9907003902 9907003523 9907003920
	Shan Enterprises, Head Office: Gitanjali Bhawan, Arka Singh Marg, Near Vihar Vihar, Gaya-824 001.					
	Shan Enterprises, Branch : Near Rajarajmohini, Patna, Bihar, India, Patna - 824 105.	Shalva, Gaya, Nawada Sheikhpura, Lohitpur, Jami, Sarsan, Sahib, Nalanda, Patna & Arka	7333001041 0994560099 7333001044	Mr. Sanku Bhatti shankubhatti@yahoo.com	Proprietor	9805776794 7357001441 9900140498 7357001444
CHATTISGARH	Elko Engineer Shop No. 21 & 22, Thakur Complex, Opp. Toyota Showroom, Ring Road No.1, Sonoma, Raipur, Chattisgarh - 492 001.	Rajni, Durg, Rajnagar, Kaveri, Dhantoli, Maheshpur, Bhoj, Nal, Dantewada, Nandgaon, Bemetla, Raipur, Gopalganj, Bhoj, Bhoj & Khandagiri	9877547792	Mr. Ashu Yadav Mr. Ashu Lal Agrawal elko.raipur@gmail.com	Coordinator Proprietor	9889843204 9977537792
	Harish Mechanical Services, No. 26A, Industrial Area, Kharmona Road, Near Ashwini, Bhoj - 495070	Bhoj, Bhoj, Raipur, Gopalganj, Bhoj, Bhoj & Chandra	-	Mr. Satish Dikay & Mr. Harish Pandey harishintercity@gmail.com	Coordinator Manager	9813004571



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UNIT	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO.
GDR	VUX Enterprises, Laxmi Homes Mansion, Puz De Gaudade, Pajbond, Mangan, Gola - 800 800.	Enlita Gola	0911-2803002 2803003	Mr. Camile Silva Mr. Sandip Pajal vuxengg@gmail.com	Marketing Manager Service Manager	9822888400 9822888994
Gujarat	GM Industrial Services, Puz Tri Export Nagar Main Road Bh. Sast. Haruman Mondir, Rajkot - Ahmedabad National High Way 8B, Rajkot - 360 000 Rajkot.	Rajkot, Jamnagar, Bhavnagar, Jamnagar, Suratgarh, Porbandar, Somnath, Dahanu, Morbi & On. Bhavnagar District	0281-3290707 2388284 (Fax)	Mr. Mahesh Vekariya Mr. Sanjay Vekariya mahesh@vmsindia.in sanjay@vmsindia.in	Partner Branch manager	9827888038 9827888038
	Rajkumar Automobiles, M.A.17, Jangadh Complex, Near Jangadh Hotel, S/S Shreeji Motors, Poladpur, Mehsana - 384 002.	Mehsana, Banaskantha, Sabar Kantha, Patan, Ahmedabad, Anand, Palanpur, Bhuj, Surendranagar, & Gandhinagar	-	Mr. Ramesh rajkumarautomobiles mehsana - @ashok.com	Business Partner	9825178373
	Rajkumar Automobiles, Plot 67/68, Gujarat Industrial Estate, Near Steel Corridor, Haddigan Circle, SP Ring Road, Ahmedabad - 382 440.					
	Neelkanti Automobiles, Plot No. 308, Sector 1-A, Opposite Rawat S/O 4th Near Mehta Enterprises Gandhinagar - 370 201.	Kutch	02894 207710	Mr. Vinod Shrivastava Rajkot neelkantiservice1@ gmail.com	Proprietor	9825110200
	Surya Enterprises 213, 2nd Floor, 3th Chandani, Gola 800 Bani, Nr. S. Vasti Gujarat.	Unjod, Navsari, Dang, Dahanu Nagar Naval & Dahanu	0260-4504258	Mr. Omish. K. Gujarati suryaenterprisesind@gmail. com	Proprietor	9824158705



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
GUJARAT	RAMP Sales & Service Plot No.48, GIDC, Sanat-Ojwad Road, Opp.Cymodo Chemical Company, Ojwad - 384 540.	Bharuch, GODBHA, Narmada, Surat, Tapi, Anand, Panchmahal, Vadodara, Dahod, Chhota, Gajapur & Mahisagar		Mr. Rahul Vyas Mr. Rajiv Shah rahul@ramptechnomation.com rumpcservice.ahd@gmail.com	Proprietor	9825028428 9896043144
	RAMP Sales & Service Plot4, Sardar Complex, Near Rajpur Gas Circle, Arjan Road, Surat-395 006					
	RAMP Sales & Service Shop No.4, Shyam Villa Commercial Complex, Opp.ARG Enclave, Dahel Road, Road, Bharuch					
	RAMP Sales & Service Baffery Township Road, Koyali Vadodara - 390 006					
KARNATAKA	Kamboj Diesel Power Service, New Auto Market Shop No.423, 3rd Floor, Hosa - 125 001.	Jind, Bhawan, Channarayana, Gera & Panchkula	9412249680 9402445680	Mr. Tej Prat Singh Kamboj kambojleyland@gmail.com kambojtdn@gmail.com	Proprietor	9233145480 9407494804
	Kamboj Diesel Power Service, 300-44, New Ganga colony, Channarayana Road, Talana, Kanchanpur, Mysore - 125 125.					
	Kamboj Power Generator Service, Raju Ganesh Marg, Near Raj Palace, Mysore Road, Karnal, Mysore - 132 001.	Karnal, Ambala, Sahar, Taranagar & Kurushetra	9411168275	Mr. Tej Kamboj / kamboj@karnalgenam@gmail.com	Proprietor	9816279096
	Amrli Power & Compressor Care opp Sec-4 Sahar Road Kurushetra Power, Mysore - 125 016.	Mahendragiri, Karnal, Jhajhar & Meerut, Hosa	9812249680	Mr. Anil Pal Pal Singh Sika amrlikolka@yahoo.co.in	Proprietor	9812249680



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO
HARYANA	Aarti Power & Compressor Cam Bangla Road-97 Road, Panipat - 132 103.	Panipat, Sonapat, Rohtak	9562647508	Mr. Rajen Meel Singh aartipower@gmail.com	Proprietor	9088137932
	Generator Also E - 147 - 148 Sakar colony Bel 23, Faridkot Haryana - 121 065.	Gurgaon, Faridkot & Palwal	0123 - 233553	Mr. Sumit Sharma generatoralso@gmail.com	Proprietor	9818810020
JHARKHAND	Mahindra Motor Corp. pvt. National Highway, Jankeshwar, Aurangabad, Purnia (714) Jammu & Kashmir - 152 122.	Srinagar, Budge, Baranagar, Anandpur, Rangli, Loh, Purnima Tropura, Bandipora, Doda, Jammu, Srinagar & Ganderbal	01932 - 347131	Mr. Raj Chakrabarti mahindra-motor.ashokleyland@ gmail.com jammu. ashokleyland@gmail.com	Farmer	9906456136
	Twin Engineering Company Lt. Vti Sarkis Colony, Saharan - B Jammu &K - 188 034	Kathua, Samba, Rajouri, Poonch, Doda, Baramulla, Reasi, Kishtwar, Jammu & Udhampur	0191-2400183	Ms. Shigat Singh Khosla twinengineers@gmail.com	Proprietor	9419194780 9900319402
JHARKHAND	JG Services Sakin Road, Okhla Road, Bihar - 826 003.	Bokaro, Dhanbad, Chhota Nagpur, Giridih, Deoria, Hazaribagh, Koderma, Palamu, Sahibganj, East Singbhum, Jharkhand		Mr. A. S. Chahal Mr. Sachin Jha Mr. Rajat Jha Mr. Anand Chahal@gmail.com jasservice.jrc@gmail.com	Proprietor	9879888888 9238031662 9269031767
	JG Services, Heritage Garden Town H.B Road, Durgamch, Ranchi, Jharkhand - 834 003.	Chitro, Garhwa, Gumla, Khunti, Latehat Luhardaga, Palamu, Ramgarh, Ranchi, Serdaga, West Singhbhum, Seriketta (Jharkhand)		M. A. S. Chahal, Mr. Sachin Jha Mr. Anand Chahal anand.chahal@gmail.com jasservice.jrc@gmail.com	Proprietor	9879888888 9607121212 9633333176
KARNATAKA	Ananta Engineers, No 7, 11th Cross, Anandashah Man Road, Hegganahalli, Pannar 1st Stage Bangalore - 560 021.	Bangalore & Bangalore Rural, Chikballapur, Kolar, Tumkur & Ranga Rajar	080-28662049 28363151	Mr. Ravi Chandra ananta@ anantaeengineers.com	Proprietor	9888212911 9811375912 9448050500
	S.R. Servot, Shed No. 1/A, Plot No. 96, Roodipally Industrial Area, Mysore - 575 018.	Mysore, Mandya, Channarayana, Rangan, Kodagu, Hassan & Chikmagalur	7142770060	Mr. S. S. Jagannath Rajan sr@gmail.com	Proprietor	7340770060
	Devkar Power Services, White Dore, Dudheda Compound, Near Kotah Prayer hall, Hennagowda Road, Maddur - 575 151.	Dodballa, Karmada & Udupi	9506665717	Sobanranga Reddy devkarpowerservicesmaddur@ gmail.com	Branch Manager	9518887347 9518700866 7884607866



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
KARNATAKA	Omkar Power Services, No.142-12B Shanki Mahal, Byaswadi nears Allaya Gajayri Das Temple Road, Car Stand Near SCM High School cross Road Mangalore - 575 001.	Balichina Kennedy & Udipi	0824-2429424 4294424	Mr. Thirina Prasad omkarpowermangalore@gmail.com	Proprietor	9938887137 7892600640
	Int Sol Engineering, D-305,2ndGate Industrial Estate, Gokul Road, Hubli - 580 025	Channarayana, Haveri, Gadag, Haveri, Uttar Kannada, Hali, Davangere, Chitradurga, Shimoga, Ballari, Bagalkot, Gulbarga, Koppal, Raichur, Bijapur & Yalgir	0836-2232600	Mr Sharadant Mysore Mr Rao rao.kubalali@gmail.com santoshali@gmail.com	Partners	9448257499 9448268233 9960320061
	Int Sol Engineering, Main Layout Plot No. 100, New Jyoti Road, Gulbarga - 585 142.					
KERALA	Qatar Sales & Services Pvt Ltd, Chikkar Road, Puthalam, Cochin - 682 012.	Alapuzha, Ernakulam, Kollam, Kottayam & Idukki	0484-2295811 4043000 2295813(F)	Mr Joseph Zacharias zyntia@qatarashok.in zyntia.mz@ashok.in	Franchisee	985432511
	Cochin Tech Innovations Pvt. Ltd. No. 65/2423-A, Ponnath Road, Berkhathimudi Road, Cochin - 682 017.	Thrissur, Palakkad & Malappuram	0484-4018811 09845064988	Mr. Anand Kumar P info@cochintech.com anish@cochintech.com	Proprietor	9995004988
	Elton Power Solutions, No.7/71A, Kundalathode, Kala Para(PO), Near Mangalapuram, Kuthuvada - 670 655.	Calicut, Kassar Kallangudi & Weyanad	9783067367	Mr. S. Vinod Kumar vinod@eltonpower.com	Proprietor	9783067367
	Delta Engineering Equipment Services, Kannal, PE 207/1919, 54 - Sreejith Nagar, Kannuram, Thrissur - 686 003.	Thrissur, Kollam & Pathanamthitta	0484 - 2307533 0471 - 8566771	Mr. GP Dackorish dackorish@yahoo.co.in	Partners	9447501833
MADHUPUR	Lamington Motors Pvt. Ltd, Thiruvallur, Nagercoil Bypass Road, Imphal, Manipal - 795138	All Districts of Manipal	9337433007	Mr. Manoj Singh / lamingtonmotorsvtl@gmail.com	Managing Director	9734158888



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO
MADHRA PRADESH	Elite engineers, NH-67, Minnau Road, Opposite BPO, Raigarh, Chhatis, Karni - 482 301.	Sagar, Raigarh, Chhindwara, Dham, Chikarapur, Thangaraj, Panna, Jabalpur, Kani, Sawa, Muzila, Belaghat, Bhandar, Shikhar, Umaria, Satna, Seoni & Sidhi	07622-266887	Mr. Ashwin Lal Agarwal E: agawad@rediffmail.com ash_lal@rediffmail.com	Proprietor	9977557750
	Elite engineers, 1/194 N. S. Road, Bhandar, Chhindwara (M.P.)		07622-266360			
	Elite Engineers Shop No. 3, Plot No. 16, Transport Nagar, Bhandar Road, Chhindwara - 481 001		07622-266351			
	Tajdar Engineering S-46 Sonjee Complex Jayachandpur, Jashpur Dist. Kor - 474 005.	Deolali, Mahara Bhandar, Satna, Bhandar, Shivpur, Guna & Ashok Nagar	0753-3448966	Mr. Sanjay Gupta tuckagupta@gmail.com	Proprietor	9425300990
	L.R. Engineering Services No. 332, S.B. Compound, Dausa Baka, Lamotte Nadi, Indore - 462 001.	Indore, Ujjain, Katiya, Nagda, Mandla, Rewari, Dewa, Shajapur Hunda, Dhar, Barhi Nima, West Nima Badiwadi, (Dah Hanvada)	0731-2803835	Mr. Lata Sharma l_r_engg@rediffmail.com	Proprietor	9752099941 9753081130
	Raj Automobile and Machinery No. 123, Shiv Nagar, Phase 3, 88 East Main Bridge Road, Near Maa Hospital, Bhandar, Bhandar - 482 007.	Shajapur, Nagda, Bhandar, Indore, Katiya, Kachhambadi, & Bhandar	9302493134	Mr. Ashok Raj raj_automobile_machinery@yahoo.com	Proprietor	9803408174
MAHARASHTRA	Goodall Power Generation Pvt. 112 Gate No. 487/1, Mouja Nalwadi, Chhatrapati Shivaji Maharaj Road, Near Kumbhari Bazar, Dehu Phata, Dist. Taluk, Pune - 412 105.	Pune	020 - 45108811	Mr. Vikas Bhandar Mr. Anil Gawade Mr. Anil Malviya vika@goodallpower.com anil@goodallpower.com anilm@goodallpower.com www.goodallpower.com	Manager After Sales Support Service coordination (Director)	9158853998 9158853997 9158853993
MIZORAM	West End India Power Service Services, Central OICA Building, 3rd Floor, Tukhachang, Aizawl, Mizoram.	Aizawl, Mizoram	0794720360	Mr. L. K. Sanyal Singhania / lksanyal@rediffmail.com	Proprietor	9881400664



ASHOK LEYLAND

CODE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO.
MAHARASHTRA	B.S. Diesel Services, Shande Plot Sajani, Ulmari Road, Nagpur - 440 034.	Contha, Shandao, Nagpur, Mandha, Amnawli, Akola, Washin, Hingoli, Randed, Yavatmal, Gadchiroli & Chandrapur	0713-2740016 0713-2741203	Mr. Jaiya M. V. N. K. S. Gadhale Mr. Manojkar Gadhale vishalshelke1984@gmail.com vishalshelke1984@gmail.com manojkarshelke@gmail.com	Manager Director Proprietor	9820358794 9820779681 9820172541
	G.S. Automobiles, 122/36, Shiksha Udyamnagar, Kolhapur - 416 006.	Kolhapur, Ratnagiri, Tergit, Satara, Sindhur, Satara & Sangli	0211-2660275	Mr. Anurag Bhatnagar Mr. Rajendra Deshpande deshpandee@gsa.com deshpandee@gsa.com	Manager Proprietor	9766619818 9960784094
	Green Power Solutions Plot No. 30-3C Sector 24, Tarapur, Navi Mumbai - 400 705.	Maharashtra, Gujarat, Delhi, Assam & Andhra Pradesh only for 160 Engines	021-2788009 2788009 (F)	Mr. Anurag Bhatnagar Mr. Prakash Shrivastava work@greenpower.com prakash@greenpower.com	Service Coordinator Director	9804666684 9820144453
	Pratik Enterprises, A2-A2/Shop No. 03, Chakraborty Park, Kaps Road, Bhamburda Road, Thane (West) Maharashtra - 400 087	Thane and Raigad	08802770867	Mr. Hader / Mr. Dinkar Desai services@pratikent.net	Partner	9805770867
	United Engineers Co., Plot No. 15/16, MIDC, Chikalthana, Aurangabad - 431 210.	Chikalthana, Latur, Beed, Parbhani, Maharashtra, Solapur, Jalgaon, Nashik, Aurangabad, Jalgaon, Dhule & Mumbai	0240-2487008	Mr. Pradeep Kulkarni Mr. Pradeep Kulkarni pradeepkulkarni@gmail.com pradeepkulkarni@gmail.com	Manager Service Partner	9820144453 9820250470
	CS Diesel Engineering Pvt. Ltd. No. 35, DRIID Laxmi Ind. Estate New Link Road, Andheri (W) Mumbai - 400 056.	Mumbai & Raigad	022-26300345	Mr. P. P. Sharma, Mr. Krishna Mr. Jyoti Shah pradeepkulkarni@gmail.com pradeepkulkarni@gmail.com pradeepkulkarni@gmail.com	Manager Coordinator Director	9805770867 9800118621 9800118621
MAHARASHTRA	Joshi Engineering Shop No. 215, Near to West Police Station, Durgam, Dhule, Maharashtra - 417 113.	Dhule, Maharashtra		Mr. Jyoti Engineering jyotiengineering21@gmail.com	Proprietor	9820144453



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UNIT	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
MTW & FLH	Premath Auto P Ltd, 42-43, Scheme Bajaj, New Delhi - 110 001.	Delhi Delhi	011-23753188 23229408	Mr. Mahesh Mahesh Mr. Omesh Sharma premathauto@yahoo.co.in	Director	9871890179 9810073335 9871890181
	Pranav Power Equipments, 111/1, Main ICN(C)/ Road, New Sana, New Delhi - 110 086.	Southwest Delhi Nagar & Ghazipur	8448833965	Mr. Anil Chhabra anil@pranavpower.in	Proprietor	9805092289
ODIWA	Diamond Engineering (P) Ltd, - Puri Road Bhadrachalam - 751 006 Orissa	Koraput, Rayagada, Nuapada, Buxerengapur, Malkangiri, Gajapati, Kalahandi, Bolangir, Boudh, Thakurani, Kandhamal & Sherdi	0674-2572450 2572455	Mr. Anam Agarwal anamagn@gmail.com Mr. Banshu diamondboudh@gmail.com	Partner (BGM - Service & Admin)	9818334444 977562006
	Diamond Engineering, C/O. Hotel Vasak, Main Road, Near SH, Korbi - 758 085	Rayachoti, Garjat		Mr. K.C. Das diamondboudh@gmail.com	Branch Manager	9773463009
	Diamond Engineering, Main Road, OOR Nagar, Boudh - 758 012.	Sundargarh, Sambalpur, Bargarh		Mr. S. Ghosh diamond boudh@gmail.com	Branch Manager	9773463006
	Diamond Engineering, Room No 8, 1st Floor, Rajaram Nivas, Sarbajit Road, Parangada - 768 203.	Parangada & Sonapat	-	Mr. S. Ghosh diamondboudh@gmail.com	Branch Manager	9773463006
	Orissa Diesel Engineering, Plot No. 853/1871, CTC - Puri Road, Machhindrapur - 751 006	Garjat, Jagatsinghpur, Gauda, Cuttack, Puri, Jajpur, Balasore, Khairah, Mayurbhanj, Rayagada, Boudh, Bargarh, Bhadrak, Angul, Bhadrak, Bargarh, Bargarh	0674-2572450	Mr. Subash Chandra Mr. Hiran Chandra Orissa.diesel@gmail.com	Partner	9918708899
	Orissa Diesel Engineering, Balda diya Boudh, Aola Road, Bargarh - 758 001	Garjat		Mr. Debajit Chandra orissadiesel.com	Partner	9874155555



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CEL. NO.
PUNJAB	Yashodha Motors Pvt. Ltd., Adjoining Nara Palace, Patkela Road, Nabha Dist. Patkela - 147 201.	Patkela, Sanghat, Mukkass, Marwa, Farkha, Ferozgarh, Bachinda, Samala, Jalandar, Gaurahala, Nawahar, Bero Nagar & Joo Nagar (Only for Harvester)	0175-3021574 3011304 (F)	Mr Gurdeep S. Bawa yashodha2@yahoo.co.in yashodha2@yahoo.com	Managing Director	9872424004
	Yashodha Automotives Adjoining Hira Palace, Patkela Road, Nabha, District, Patkela - 147 201.	Patkela, Sanghat, Makkass, Samala, Bachinda, Marwa, Farkha, Ferozgarh Sahib, Roopnagar & Mohali in Punjab Bhagpur, Khanna, Colla, Mard, Samla, Ginnar & Jolan in Himachal Pradesh, Ranikutta in Haryana, Chandiigarh	0167124004	Mr Gurdeep Bawa ymptkela@gmail.com ymptkela@yahoo.com	Proprietor	9872424004
	Yashodha Automotives Plot No.C-145, Phase7, Industrial Area, Mohali - 160 035.					
	Yashodha Automotives Sarana Nangal Village, Roop Dist - 140 114					
	Yashodha Automotives Village Nagul, PO Bang Dist. Solan - 175 212. (HP)					
	Yashodha Automotives Poonia Sahib, Vill.Tarawala, Near Truck Operator Union, Thia, Poonia Sahib Dist. Simran - 170 025 (HP).					
	Shri Laldev Engineers, Behraawal Road, Near Raju STD PCO Gurdaspur - 143 521.	Jalandhar, Asourthala, Anu Ram, Gurdaspur, Mohanpur, Nalharwal & Trumran in Punjab and Charkhi, Rohmgar, Ramga & Jola in Himachal Pradesh	01874-500071	Mr. Naldev singh@shreeashokleyland@gmail.com	Proprietor	9814646386
	Rohat Pate Private Limited, Near Rohat Bridge, Patkela Road, Nabha, Punjab - 147 201.	Entire Punjab State (Only Harvester Engine)	8254085443	ropl.punjabind@gmail.com	Managing Director	9668440000
	Rohat Pate Private Limited, No.3476/4, Shivaji Nagar, Opp Transport Nagar, Link Road Ludhiana - 141 038.	Ludhiana, Gurdaspur, Ferozpur, Barnaswala & Moha	9811620066	ropl.lithservice@gmail.com	Managing Director	9668440000



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO
RAJASTHAN	Gayatri Showals No. 2-39, Ashok Nagar, Near Kumbha Circle, 34 Regda Bikaner - 334 001.	Bikaner, Rajastan, Chittorgarh & Paliwalgarh	0642-244127	Mr. Ashok Kumar Audharya gayatricb@ashok.com	Partner	9413135127
	AR Power Solutions Shop No 88, Vithwarkarna Auto Market, Near Durg in Durg office Bikaner - 334 005.	Bikaner, Bikaner, Bikaner, Paliwalgarh	-	Mr. V. K. Agrawal arps244@gmail.com	Proprietor	9352628896
	SPS Tech Services, 34 Kanai Vilas, Near 300 Feet Copalpur by pass Road Near Bhakra Paliya, Jaipur - 302 220.	Jaipur, Pali, Jaipur, Paliwalgarh, Ajmer, Bikaner & Chittorgarh	8760000088	Mr. Sanjay Jain spstechservices@paliwalgarh.com	Proprietor	8760000088 9959160247
	Baker Gaswenter & Industrial Engin Re 38, Thakurpura Colony, 2nd Floor, 125, Surajpala, Udaipur - 333 001.	Udaipur, Bikaner, Sirohi, Durgamur	2542421513	Mr. Anil Mehta bakergaswenter@gmail.com bakeranil3@gmail.com	Proprietor	9880390330
	Global Power Sales & Service, Ashok Showals Road, In front of ONG Bank, Jaipur, Bikaner.	Bikaner, Bikaner, Bikaner, Bikaner & Chittorgarh	7340000967 9314073548	Mr. Naveen Jain gls.bikaner@ashok.com	Proprietor	9314073548
	Global Power Sales & Service, B-81, Ashok Showals, Amerdhan Nagar, Bikaner - 333 001.		7340010967 9314073548	Mr. Naveen Jain gls.bikaner@ashok.com	Proprietor	9314073548
	Global Power Sales & Service, New Kumbha Circle, 34 Regda, 0 Regda Colony, Bikaner - 333 001.		7340010967 9314073548 9158000000 9158000000	Mr. Dharmendra Sharma Mr. Naveen Singh gls.bikaner@ashok.com	Proprietor	9314073548
	Sankhya Technocrats 223A, Sector 1, Sun Housing Board, Jaipur - 302 001.	Jaipur, Pali, Jaipur, Bikaner & Chittorgarh	9974606801	Mr. Pankaj Singh sankhya@ashok.com	Proprietor	9974606801 9009991218
	Sankhya Technocrats, Shop No 2, Indira Nagar, Udaipur Road, Chittorgarh Nagar, Bikaner 334 001.	Jaipur, Pali, Bikaner, Jaipur & Chittorgarh	-	Mr. Pankaj Singh sankhya@ashok.com	Branch Manager	9009991218
	Modern Machinery Stores S.S. Road, Bikaner - 334 001.	Bikaner, Bikaner, Bikaner, Bikaner & Chittorgarh	-	Mr. Harish Sharma modernmachinery@gmail.com	Proprietor	9962770108 9962770108



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO
TAMIL NADU	S.J. Gen Power 485/A-1, Dye gas Road, St Xavier's colony, Melapalayam Post, Thiruvallur - 627 002.	Thiruvallur, Tirukasi, Tuticorin, Villupuram & Kanyakumari	0411-2312270 2311371	Mr. K. Laxsh / Rajanathodi orgapower@gmail.com	Partners	8875470128 8875470137 8875470131
	S. R. Gen Power No.485/131, St. Xavier Kaverian, Kottai, Rajapet - 625 002.					
	Chakrapani Engineering Works, New No.134 (Old No.11) Moos street, 1st floor, Chennai - 600 001, (Behind jay lal beach)	Chennai, Tiruvallur, Villupuram, Thiruvannamalai & Pudukottai	044-25228853 25245542 25227898 (F) CC No. 7328748748	Mr. D Kuttaswami kuttaswami@gmail.com new.persubapartners@gmail.com newchho@gmail.com	Co - Owner	984387747 984345520 7126748740
	Chakrapani Engineering Works, No.15, Post No.34, Kuthavalam High Road, Korkusapeta, Ch - 71, Near Sathya Godown.		Customer Care Mobile No. 9940384555 9094941665 9796111758	Mr. D Kuttaswami kuttaswami@gmail.com newest.2018@gmail.com newchennai@gmail.com	Co - Owner	984387747
	Chakrapani Engineering Works, No. 6/398, Kuthavalam Colony Street, Melavakkam, Chennai - 600 005.			Mr. D Kuttaswami kuttaswami@gmail.com newest.2018@gmail.com	Co - Owner	984387747
	Chakrapani Engineering Works No 11 B, Netaji Road, Sheshaikam Village, Villupuram - 621 005.		0415-22812800 Customer Care No. 7328748748	Mr. B. Perumal-sewer@gmail.com	Technical Head	9943311212
	Chakrapani Engineering Works Door No.18, Peranjathi Annan Nagar, Kancheepuram Panchayat Arappaneri Chetty Kancheepuram - 621 502.		Customer Care No. 9450014395 984387747	Mr. G. Sharath seshan@gmail.com	Executive Branch Admin	9040514331



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CODE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
S&M, MADH	M.B. Engineers, S.B, Thiruvalluvar Street, Karamadhin Nagar, Navundampalayam, Coimbatore - 642 008.	Coimbatore & Rights	0422-3443888	Mr. G. Srikanth / Mr. Ashok gprbhar24@gmail.com ashok@mcengineering.co ashokn@mcengineering.co	Proprietor	9385166961 9364109013 9449176600
	Power Stroke Technology, New Ward No.44, Lakshmi Building, Old Ward No.8, No.22, Vinayagar Nagar, K.R. Nagar, Opp. District Court, Madurai - 625 025.	Madurai, Ramanthapuram & Sivaganga	0452-2538631 0452-2536213	Mr. Sankhi Kumar powerstrokeindia@gmail.com	Partner	9788961446 9843033623 7373751875
	S&M Spares & Service, NO.132/1, Fourth Street, Sundaramangalam Main Road, (Back Side of School Street), Little Bazar, Solani - 636 804.	Talim & Marudai	0422-3440888	Mr. Ashok / McEngineeringbyashok@ mcengineering.co.in srmspare@gmail.com	Proprietor / Manager	9344100007 9344100007
	Vaidhyan Power Solutions No.12/13, 11 Krishnapada East Marginal Street, Near New Bus Stand, Kumbakonam - 612 001.	Sivakasi, Thiruvannamalai, Nappetturam, Aruppukottai & Mayiladuthurai	0425-2463320	Mr. K. Murugesu Mts.Sunathi opnations@gmail.com	Managing Director	9847388777 9489918418
	Shree Power Enterprises Pvt. Ltd., No.2, SRA Nagar, Vithathuram Road, Valutharooddy, Vilupuram - 605 602	Cuddalore, Villupuram, Pondicherry, Perambalur, Villupuram Partial operation in Karthikeyam	-	Mr. N. Muthukumar Mr. S. Rajkumar Mr. S.J. Shankar shreepowervrm2018@gmail.com	Partners	7550222913 7550222908 7550222955
	Sree Programms Old No.132, New No.115, Highway-60/09, Subramanyapuram, Tiruchy - 620 620	Tiruchy, Kaveri District, Tiruchy & Pudukottai	0422-2332060	Mr. R. Shanmuga Sundaram Mr. R. Ravi Kumar sreeprogramms@gmail.com	Partners	9865071166 9865079487
	Sree Programms Atlas Complex, No.1, Kaveri Palani Bye-Pass, East Marudakudi, Newkangudi, Tiruchy - 624 006			Mr. R. Shanmuga Sundaram Mr. R. Ravi Kumar sreeprogramms@gmail.com	Partners	9865071166 9865079487



STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO
TAMIL NADU	Manuth Diesel - No.4/158, 1st Manuthi Nivas, Manuthi Nagar, Palladam Road, Villavayal, Tiruppur - 641 604	Tiruppur & Coode	0431-2713044 0434-4555344	Mr Senthil Kumar Mr Manikrishnan / Mr.J.kirubakaran manuthdiesel@spu@gnail.com manuthdieseldiesel@gmail.com manuthdiesel@gmail.com	Proprietor Manager	9841272887 9845548618 9887432887
	Manuth Diesel No.88, 52/3, Nellikudam, Near Star Street, Erode - 635001					
	DAM Spares & Services, No.88/24, Royal Tower, Sankari, Main Road, Jeyanthampalayam (PO), Tiruchengode - 637 208	Salem & Narasipati	0427-2448886	Mr. Ashok amrasmr@gmail.com	Branch Manager	9843300097
	Shree Power Enterprises, 1/89-A, Karmaraja nagar, Semmencheri, Kanchipuram Dist. - 600 115.	Cuddalore, Villupuram, Pondicherry, Perambalur, Kallakurichi and Ravelur operation in Kanchipuram	9842048446	Mr. S.Muthukumar muthukumar2008@gmail.com	Branch Manager	9842048446 9842048780 7590222311 9881025718
	RISE Power Solution LLP, No. 75/1, 2nd Floor, Periyar Nagar (opp. to Salem Bypass, Near Ring Road), Hosur - 635 108	Chennai & Aranthangi	94344-229621	Mr Antony Raj antony_rise@gmail.com antony@risepowersolution.com	Proprietor	9842048108 7597755831 7597755834
	RISE Power Solution Nattampakkam(Vill), Perambalur, (PO), Pochampatti(TD), Krishnagiri - 605 123.					
TAMILNADU	Gen Services, Plot No.21&22, Phase - A, (DM Seed Works, Hyderabad P.O. - 500 018.	Hyderabad, Rang Reddy, Medak, Mahabubnagar, Karim Nagar, Adilabad, Nirmalabad	048-07324402 9502254788	Mr. Jif Chary services@genetwale.com admiral@genetwale@gmail.com	Proprietor	9502208340 9502254543



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-Mail	DESIGNATION	CELL NO.
TELANGANA	Trive Automotive and Industrial Enterprises, B. No. 122, 5th Floor, Road No- 3, Srinagar, Hyderabad - 500088	Hyderabad, Nalgonda, Medak, Afzalnagar, Balim Nagar, Aulad, Haamabad (Only DG Set Supplied by OLUS / OEM/MCO)	040 - 48544883 8862718940	Mr. Kuntal Singh triveautomotivehyd@gmail.com	Proprietor	9846784940
	Gen Services, Shop No.5, Survey No.166/4, Block4, Kanungo Shopping Complex, Kanungo Nagar Khammam - 507386.	Khammam, Nalgonda & Warangal	0874/2185542 9502235729	service@genomexia.com suresh@genomexia.com/ adnan@genomexia@gmail.com	Proprietor	9562786542 9562246541
UTTAR PRADESH	Pranav Power Equipments, 17 Y N Wing (Pr Lawn Hotel), Alhabad, Pr - 211001.	Alhabad, Prayagrah, Chitrakoot, Kashimbi	0532 - 2488044	Mr. Anil Kumar shah pranavpowerin@gmail.com	Proprietor World Manager	9903230701 9510085304
	Chohan Motors & Traction (26.5 block, Chohan Nagar, Jai Deyal, Rampur - 208004 (U.P.)	Rampur, Fatehpur, Banda, Unnao, Kannauj, Farrukhabad, Gajpur, Azamgarh, Ballia & More	9910775546	Mr. Anshul Verma Mr. Anshuman Verma chohanmotors@gmail.com pranavchohan@gmail.com	Proprietor	9818382839 9819375566
	Sure Power Solutions, in front of Jay Burgs, Bhawan Kanta, Special Industrial Area, Lalpur Road, Bansi - 224135.	Lalitpur, Baraut, Jalaun, Mahoba & Rampur	788240123	Mr. Anshul Verma service surepowerin@gmail.com pranavchohan@gmail.com	Proprietor	9818382839
	Mount Automobiles (U.P.A), Azam Nagar, Mawana Road, Najibpur, Meerut - 250085.	Meerut, Muzaffar Nagar, Saharanpur, Muzaffar, Bulandshahr, Shamli & Noida	0521-2621100	Mr. Rajesh Mann mountautoexperts@gmail.com	Proprietor	9933014031 9634504888
	Mount Automobiles, Karanpuri Near Shakti Housing Scheme, Mandawari Road, Ghazi		0590301576	Mr. Bhawendra Singh mountautoexperts@gmail.com	Proprietor	9891881576
	AP Diesel H No.88/1612, 15th Road, near Subarnapur, Shreepur, Laxminagar Warangal - 521002.	Narasim, Bhadrachalam, Anaparthi, Atmakur, Chandrabail & Sreedhade		Mr. Ashish Patel apdiesel.com@gmail.com	Proprietor	9809900236



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
UTTAR PRADESH	Pulokhland Dwell, RD-4, Silver State, PNBRI Typers Road, Bareilly - 243 008.	Bareilly, Bareilly, Mirzapur, Ghazipur, Moradabad, JP Nagar & Lucknow/Khadi Dabur	-	Mr. OP Singh Partner Mr. Mousam Singh mshahidashokind@gmail.com	Partner	0541100377
				M.R.C. Doley	Service Manager	9807100505
	Shri Balaji Enterprises Mackhail Masali Chak, Gauripatti, Nainital, Tehsilad - 224 000.	Adirath, Ambedkarnagar, Balarampur, Patalpur, Gorak, Sonauli	-	Mr. E.N. Jagathi shri-balayint@gmail.com	Proprietor	989801123
	Shri Balaji Enterprises Charnala Bazar, Near Subash Singh Work shop, Gorakhpur - 273 001.	Basti, Gorakhpur, Kushinagar, Nuharnagar, Jankharnagar, Vastharnagar & Gorak	-	Mr. Gopendra Prasad ch-haralappa1@gmail.com	Manager	7706311006
	Shri Enterprises Pat No.133, Sec-1, Computer Nagar, Agra - 202 002.	Agra, Mathura, Firozabad, Aligarh, Mathura, Firoz, Firozpur, Mathura & Aunthia	8758114426	Mr. Yagendra Singh Mr. Karanbhai Kumar enterprisesmk mg1954@gmail.com m-enterprisesmkshah76@gmail.com	Proprietor	9750015001 9750015008
	Shri Enterprises Mathura Hotel, Lodhi Vihar, Social gate, Aligarh.					
UTTARANCHAL	CSK Hansaria Pvt. Ltd., LOA, C-115B, Sector - D, Kasper Road, Lucknow - 208 012	Lucknow, Bareilly, Ghazipur, Haridwar, Jampur, Aunthia & Roorkee	011-33849208	Mr. Anil Khanna hansariashok@ashokindia.co.in anil.khanna@ashokindia.co.in anilshah1981@ashokindia.co.in	Managing Director	7217892901 9004074440 9287621252 8805141110
	Part Automobiles, Ganga Road, Bareilly Road, Haridwar - 200 114	Almora, Udham Singhpur, Bahawal, Pithampur, Bagdwar, Chitwan & Firozpur	-	Mr. Mohit Paul partautomobiles@yahoo.com	Proprietor	0987039914
				Mr. Sanjay Kumar	Service Manager	09719742466



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STATE	DEALER ADDRESS	TERRITORY	TELEPHONE / FAX	CONTACT PERSON / E-MAIL	DESIGNATION	CELL NO.
UTTARAKHAND	Power Saver Plot No. 188, Near RTD Check Post, Mohanmala, Dehradun - 248 001.	Dehradun, Haridwar, Rudrapur, Champot, Tehri, Uttarkashi & Pant Garwal	0135 - 2842909	Mr. Gyan Kumar Mr. D.S. Choudhan power@saveldr@gmail.com	Proprietor	9956999525
				Mr. D.S. Choudhan	Service Manager	9956999525
WEST BENGAL	Amaze Power MCC House 23 R.R. Mukherjee Road, 3rd Floor, Kolkata - 700 001.	Eastern West Bengal and Shikim	-	Mr. Partha Sarathy Sanyal parthasarathy.sanyal@amaze-power.in	Partnership	9148754885 9874596150
	Amaze Power Newbaldhrai by-pass road, Newbaldhrai Bunkan - 711 184.			Mr. Partha Sarathy Sanyal parthasarathy.sanyal@amaze-power.in	Partnership	9148754885 9874596150
	Amaze Power Pokop Market, 2nd Mile, Sevoke Road, Siliguri - 734 001.					
	Amaze Power Rabindra Sarani, Opp. West Point Pump, Malda - 732 102.					
	Amaze Power 41A/40A, Bahora Nagar Canal Dist Purba Midnapur Dist - 721 401.					
	Amaze Power 904 Barabhar Bazar, Sandipur More, Rampurhat, Birbhum - 731 234.					
	Amaze Power Belvedere Mill Premises, Gokulnagar 42, PWV Road South Garhial, Raichak - 711 511.					



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