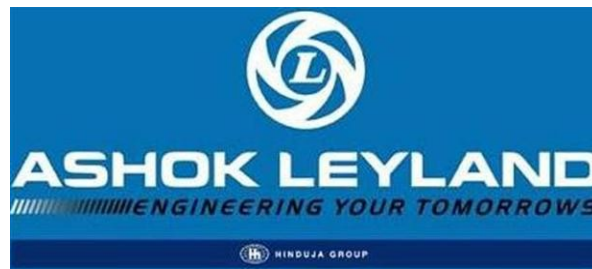


A SUMMER TRAINING REPORT



**ASHOK LEYLAND LTD.,
ALWAR.**

(FROM MAY 21, 2012 TO JULY 05, 2012)

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Acknowledgement

As a part of our degree course in engineering I underwent practical training from MAY15, 2012 to JUNE15, 2012 at Ashok Leyland, MIA Alwar (Rajasthan). I am extremely grateful to **Mr. A. K. Chopra** (G.M. Ashok Leyland Alwar), Mr. **Ramesh Kumar Yadav** (Div. Manager HR, Ashok Leyland Alwar), for giving me this opportunity to undergo the industrial training at their reputed premises.

I also pay thanks to my project guide Mr. **SANTOSH KUMAR**(*Manager,central quality*) Sir and Mr. **MOHAMMED SHAHID**(*Senior officer,central quality*) Sir for his guidance, supervision and criticism throughout my training. It is just his guidance because of which I was able to know every aspects of the equipments used here.

I shall fall in my duty if I do not acknowledge my sincere gratitude to Prof. **RAKESH KUMAR SINGH** Sir (HOD, Mechanical Engineering Department) for giving me this opportunity.

Finally it is indeed a great pleasure & privilege to express my thanks to colleagues, my friends and my family members for their all types of help and suggestions.

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HISTORY

1948 The birth of Ashok Motors Founded by Raghunandan Saran, Ashok Motors was set up in collaboration with Austin Motor Company, England and incorporated on September 7th for the assembly of Austin cars.

1954 Ashok Motors becomes Ashok Leyland Named after Raghunandan's son, Ashok, the company was renamed 'Ashok Leyland' with equity participation from Leyland Motors, Ltd.

1955 India's first double-decker arrives 'Titan' - The first Indian-made double decker with 50% indigenous

1967 A revolution in steering For the first time, power steering was featured on commercial vehicles s components was launched

1972 Production target upped to 10,000 vehicles a year The license to manufacture 10,000 vehicles a year was granted

1974 Turnover tops Rs. 1,000 million Ashok Leyland's turnover for the first time crossed Rs. 1,000 million

1976 The Viking appears The 'Viking', the first ever bus with an alternator and a unique front overhang that facilitated front entry hit the Indian roads.

1978 A Cheetah bounds into the frame India's first rear-engine bus – 'Cheetah' was introduced with mixed reactions from drivers. While it cut off much of the heat, their complaint was that they "could not hear the engine!"

1980 Hosur plant starts operations The Company's second plant – Hosur 1 – was inaugurated by M. G. Ramachandran, the then Chief Minister of Tamil Nadu

1980 Two major new truck introductions India's first 13-ton truck – 'Tusker' with a 125 hp engine was launched followed by the country's first multi-axle truck – 'Taurus'.

1982 Manufacturing footprint expands northwards Two new manufacturing facilities at Bhandara (Maharashtra) and Alwar (Rajasthan) were inaugurated in March and August respectively.

1993 First Indian auto company to receive ISO 9002 certification This was followed two years later with the ISO 9001 Certification.

1996 Hosur Plant II inaugurated The second plant at Hosur was inaugurated by the then Prime Minister, Deve Gowda, in December.

1997 India's first CNG bus launched As a major step in developing alternate fuel for mass transportation, India's first CNG-powered bus was handed over to the BEST (Brihan Mumbai Electricity Supply and Transport), Mumbai .

2007 Joint Venture forged with Nissan Motor Company, Japan For manufacture and marketing of Light Commercial Vehicles

2010 India's first Hybrid CNG Plug-in Bus Showcased at Auto Expo 2010 and later did service during the Commonwealth Games moving VIPs and media at Pragati Maidan, New Delhi.

2012 Jan Bus World's first single step entry, front engine, fully flat floor bus unveiled by Union Minister Shri Kamal Nath.

Ashok Leyland products



Buses

From 18 seaters to 80 seaters, our buses move some 70 million people every day. Know more about them [here](#).



Trucks

We have a comprehensive range of trucks for a variety of applications: long-hauls, distribution, construction or mining. Find more [here](#).



Light Vehicles

[DOST, the first LCV from the Ashok Leyland Nissan JV, rolls out to the product here.](#)



Defence

[We offer end-to-end solutions to meet the logistics' requirements of the armed forces with our platforms Stallion, RHINO and FOX.](#)



Power Solutions

[Under the brand name, Leypower, we offer complete power solutions for a variety of applications. Leypower symbolizes "power uninterrupted".](#)

AUTOMOTIVE PRODUCTS OF ASHOK LEYLAND

School bus	- LYNX bom
Bus (MDV)	- Viking, Cheetah, Viking super, Falcon
Rear-engine bus	- Panther, crusier, enviro
Luxury bus	- Luxura, Foton
CNG bus	- Viking, Viking super lynx,4.2 & 4.9
Multi-axle vehicle	- Taurus 6x4, Taurus 6x2, tusker super 6x2, 2516,2514,2214
Haulage	- Comet ,Comet gold, Bison, Tusker super Cargo 1512,1614,Beaver, Hippo
Tipper	- Comet, Bison, Taurus, Cargo 759, 909Cargo1614,Hipper-tipper 2516
Dumper	- ALRD20 Dumper
Tractor	- Comet, Tusker turbo, Beaver, Hippo, Rhino 4018, 4912
CV/ICV	- Cargo759, Cargo909, Cargo 100.12
Water tender	- 16KL
Fire fighter	- Comet gold 4x2, RIV 4x4, CFT 6x6
Defense	- Stallion 4x4, YAK 4x4, HMTV 6x6, rat 6x6 LRV 4x4,TFF 4x2

WORK SHOPS

- **SHOP-1** – Chassis assembly takes place in the line by old assembly method and the PDI (pre delivery inspection) is carried.
- **SHOP-2** – Chassis assembly takes place on conveyor line which is newly installed in the plant.
- **SHOP-5** – Bus body manufacturing takes place on the conveyor line which is newly installed in the plant.
- **SHOP-7** – Pre inspection delivery of chassis takes place in this shop which is newly installed in the plant.

ASHOK LEYLAND ,ALWAR

Ashok Leyland ,Alwar plant is one of the production unit of Ashok Leyland Ltd. Alwar city situated in west north in Rajasthan and is very near to Delhi ,The capital of India. Alwar comes in NCR (National capital region) also it is located at M.I.A (Matasya industrial area) Alwar.

This plant was established in 1982 and has completed his 25 years successfully. This plant is known for his high productivity. It is basically an assembly plant where the chassis is assembled.

Ashok Leyland, Alwar is world's largest CNG vehicle's producing plant. CNG (compressed natural gas) is used as an alternate fuel to diesel and is very less polluting. The pollution of CNG vehicles is less than even EURO-IV vehicles which is known for its lesser pollution value.

The total covered area of Alwar plant is 352 acres. And fencing is done around 161 acres of area. The plant comprises of 4 shops called shop-I, shop-II, shop-V and shop-VII. The plant has three gates; One main gate one for entering the goods carries and the third for the products going out of the plant for sale.

There is an administrative office, one P&A department block, department-offices, a medical centre, a canteen, a news paper reading room and library, a training centre and systems department, RSO yard and the construction is going on for new stores.

INTRODUCTION OF ASHOK LEYLAND ALWAR PLANT

1. The plant is inaugurated on 22-08-1982.
2. The total land area is 352.09 acres.
3. Fenced area is 161.52 acres .

SHOPS

- 4 shops 140x100 – 14000 sq mt each
- Shop office area
274.5 sq meters in each shop.

Shop no – 1 : Assembly activity

Shop no – 2 : Chassis assembly shop

Shop no – 5 : Bus body manufacturing shop

Shop no – 7 : Pre delivery inspection (PDI)

TRAINING CENTRE

Work shop area

1350 sq meter being used by service promotion for training and display models.

MAIN ADMN. BLOCK

Office space of 297 sq meters

Manufacturing manager's office

Purchase department

Systems department

Reception and office service

Finance department

PERSONNEL AND ADMN. BLOCK

Total space- 428 sq meters

Personnel department

Medical centre__

ASHOK LEYLAND POLICIES

QUALITY POLICIES

It is the objective of Ashok Leyland's quality policy to achieve customer satisfaction by meeting the customer expectations in relation to the product and services offered by the company.

Towards this objective, the quality policy of Ashok Leyland is;

- To make continuous improvements in the products manufactured by the company.
- Give uninterrupted quality services offered to the customer
- To enhance employee potential to contribute to quality by improving the knowledge and skills of the employee as appropriate to their functions.
- To induce in vendors, commitment to continue improvement to meet quality standards.
- To make good relation with the customer by providing regular service to vehicle by their service centre.
- Get feedback from the customer to improve the quality of product and customer satisfaction.
- Increasing the research and development centre to achieving quality standards and quality goal of the organization.

ENVIRONMENTAL POLICY:

Any type of activity that is performed or any type of product that is manufactured has an effect on the surrounding or environment.

At Ashok Leyland are committed to preserving the environment through a comprehensive environmental policy and a proactive approach in planning and executing our manufacturing and service activities.

We are concerned about the earth our children will inherit. That's why we make sure our vehicles consume less fuel and pollute less. This concern is reflected in the manufacturing systems, the various processes, energy conservation measure and conscious greening indicatives of the company.

A system is employed to control or minimize the adverse impact on the environment is environment management system (EMS).

Objective of Ashok Leyland environment policy are:

- ✓ To adhere to all applicable environment legislations and regulations.
- ✓ To adopt pollution preventive techniques in design & manufacturing of our products.
- ✓ To conserve all such resources such as power, oil, gas, water, compressed air etc. and optimizes their uses through scientific methods.
- ✓ To provide a clean working environment to our employees, contractors, and neighbors.
- ✓ Commit to comply with all relevant legal and other requirements.
- ✓ Continuously strive to minimize waste generation by all possible ways and to reuse and recycle same through a time bound action plan.

SAFETY AND HEALTH POLICY:

Ashok Leyland affirms that all its employees irrespective of the cadre or rank need to be safe guarded against any person injures or damage to the properties during working period. That the management recognize the principle that accident prevention contributes in the long run to all process and development of the organization.

Towards this objective, Ashok Leyland is committed to:

- ❖ Implementing all practical safety measures like safe working and environmental condition.
- ❖ Carrying out a systematic critical appraisal of all potential hazards involving personal, plant service and operating methods.
- ❖ Following strictly safety rules and regulation incorporated in the factories act and rules.
- ❖ Maintaining safe and health education program for employee with specific emphasis on creating safety and health awareness.
- ❖ Welcoming useful and constructive suggestions and ideas in regard to safety and health.

ASHOK LEYLAND DEPARTMENTS

PRODUCTION DEPARTMENT:

This department handles all the plan work for production. This department is responsible for all the production and its process going at assembly line and also the PDI (pre delivery inspection)

They deal with all the workers to get the work output from them for production. They decide which model is to be assembled according to the availability of material and demand of production.

PERSONNEL AND ADMINISTRATION DEPARTMENT:

This department has to perform the no. of functions such as all kind of recruitments like executives, managers and workers. They conduct various types of tests and interviews for vacancy lying in the organization or at demand of managers.

They also take care of medical facility, canteen facility, library and security too. They are also responsible for the discipline in the plant. Mainly they deal with all the personal behaviors of employees. They arrange seminars and other motivating events for the employees. They also conduct cultural events and get together, in which they include the family members of the employees for giving a change from routine work.

They also record all individual working record in organization. They deal the relations with other organizations and institutes.

This department is known as human resource department in other organization.

QUALITY CONTROL DEPARTMENT:

This department is responsible for the quality of products and parts whatever they sell or purchase. The quality checking is done in three processes, which are given as follows:

1. Incoming material inspection
2. In – process inspection
3. Final inspection

There is a GR & D (goods receipt and dispatch) section, which receives goods, and QC department inspect them and ensure the quality as per the recommended standards and then send them to store.

For in – process inspection they use one chassis card in which the worker check whether all things has been done which he had to do and then do his signature in the card. This is known as self – certification.

When the chassis become off track to the assembly line then the chassis goes for a road test. The defects and shortcomings in the chassis are noted such as noise, smoke, driving control etc. then an inspection of chassis takes place at PDI and then all the defects are noted and are rectified. After that the chassis is passed to sales department by QC department.

PPC DEPARTMENT:

Production planning and control department is known as PPC department. This department control GR & D section and storerooms. They receive the goods coming from the factories. Then according to the vouchers, counting of parts is done. They prepare a daily report of goods receive and send it to finance department for further procedure.

They allot part number for the parts and parts are arranged according to the part number in the store – room. They keep all the records of store – room. Monthly counting of parts is also done.

PPC department does whole of the material – planning for production. Also they make available all the material required for the production at the time of production at all the stages. Two bin – system is being used here for the supply of material at all the stages. This is like there will be two bins at a stage and, as one becomes empty that will be replaced by a bin full of the material.

UNIT PLANNING DEPARTMENT:

This department basically does the planning work. They are given the project of some new units to be prepared in the plant for which they plan the appropriate place for installation of the new unit, the approximate duration of completion of project, cost – estimation and benefits of the installation of new unit.

Presently they are taking care of new rear axle assembly conveyor line project being installed in shop-2, paint booth for body painting of foton bus in shop-5.

PRODUCTION SERVICES DEPARTMENT:

This department is also known as maintenance department. They are responsible to provide the services required for the production and also for the maintenance of all the equipments being used. They rectify the problem occurred in the equipment at the time of break down of some equipment. For example the equipments are bolt – tightening machine, impact wrench, forklift, overhead crane, conveyor, compressor, generator and electricity, oil – filling machine, greasing machine, pneumatic devices, lightning devices and fans etc.

They do regular checking and maintenance. A formal calling system is being used. Whenever the maintenance is required at assembly line or some break down occurs in machine, a person press the button and the maintenance department will be informed by the system. Then the person from maintenance section will come at the location and will solve the problem.

They also take care of horticulture in the plant. This makes the beauty of the plant and makes the plant environment – friendly green plant.

They are responsible for those instrument and services provided by them to achieving the production.

PURCHASE DEPARTMENT:

Raw material is very important for the production. Purchase department purchases all the raw materials from various dealers and companies. They decide which material should be bought from which company.

They also look at the cost of material to be purchased and the transportation charges. It is better if the material is coming from a place nearer to the plant because the transportation cost will be reduced.

They also the firm to sell the scrap items of iron, wood etc. the tender will be given who ever will pay more.

They also hire the contractors from the market by tendering to manage many works in plant like material unloading, transportation, and construction.

FINANCE DEPARTMENT

This department takes care of all financial things of plant. They keep record of all the salaries and allowance of the employees, the money spent on purchasing the things for plant, the money earned by the sale of products and other financial activities. They prepare monthly and annual budget of the plant.

Also they monitor the attendance of employees by an electronic card punching attendance system. All the employees are provided with an electronic card, which is punched in the card-punching machine at the time of entering the plant and at the time of leaving the plant. The machine will note the time of punching and thus the department gets the data.

SALES AND MARKETING DEPARTMENT:

Products are made in the plant and they need to be sold for the customers. This department takes care of all the marketing activities. After the product is passed from QC department, sales and marketing department keeps all the products at R.S.O (regional sales office) with safety. The vehicle is kept in the RSO after fitting the heat guards, warning triangles, RUPD (rear under protection device) and canopy as per the government rule. Then at demand and requirement the products are sent to the dealers.

They look at the demand of product in the market and the customer's feedback about the product. They also provide the training for servicing of the product.

They send their report that in what amount market has demand to production department so that they can decide the amount of production that they can.

PDI (PRE DELIVERY INSPECTION):

It comes under the production department but it has its much utility that it has an important role in the production.

The vehicle coming from assembly line is not perfect in quality. It has many defects. So the chassis is inspected, faults are arrested in this section and all the defects and faults are noted. The chassis comes into PDI section after road – testing.

Then all the defects and faults found in the chassis are rectified using necessary tools and items. Then the chassis is painted in paint booth and if there is any dent on the chassis FES then it is removed. And finally passed to sales department. The chassis passed from PDI is fault free and perfect in quality. Painting of the chassis is also done under this department.

GR&D (Goods Receive and Dispatch) :

This department is providing for giving their services when the goods are received and dispatch in the plant as a material from out side and when it dispatch out side the plant.

This basically gives for their quality and amount assuring.

BUS-BODY ASSEMBLY IN SHOP-5

Bus body is manufactured in shop-5 in the plant.

CHASSIS ASSEMBLY **STAGES DESCRIPTION**

CHASSIS

ASSEMBLY

STAGES

- Frame assembly.
- Chassis coupling.
- Chassis torqueing.
- Bracket and steering gear box mounting.
- Silencer mounting.
- Air piping.
- Engine and radiator mounting.
- Tyres mounting, torqueing and oil filling.
- Front End Structure(FES) and battery mounting.
- Off track 1.
- Off track 2.

FRAME ASSEMBLY

- There are two side members (LH & RH) and cross members (there no. depend on type of vehicle).
- Both side members are bolted with cross members. ●
- Spring brackets are provided in front and rear end.
- Helper brackets are provided (model 1613, 3116). ●
- Front and Rear shockers bkt. are bolted.
- Brake elbow is provided. ●
- Reaming is done for finishing of holes for bolts.

CHASSIS COUPLING

- Front axle and rear axle dressing.
- Leaf springs are mounted on the axle (except some models).
- Front leaf is mounted on buffer pads with I bolts and rear leaf with U bolts. ●
- Front and rear shockers are assembled.
- Breather hose pipe is fitted in rear axle. ●
- Torsion bars fitment (in MYRA & DIMTS).
- Air balloz fitment in rear or front axles (HREC, MYRA,DIMTS).

CHASSIS TORQUING

- Front axle I-bolt torque(190-220lbft).
- Rear axle U-bolt torque(300-350lbft).
- Brake booster mtg. & setting.
- Silencer fitment.
- Tail pipe fitment.

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BRACKETING AND **STEERING GEAR BOX** **MOUNTING**

- Assembly of following brackets will take place:
- Air reservoir bkt.
- Engine mounting bkt.
- FES cab mtg. bkt.
- Bumper mtg. bkt.
- Fuel tank bkt.
- Clutch lever bkt.
- Silencer bkt.
- Cab mtg. laydown.

- Clutch pedal with lever is mounted.
- Steering gear box is mounted & drag link is connected between stg. & front axle.
- Brake boosters are mounted on rear axle.
- Diesel tank is mounted.
- Fuel filter along strainer is mounted.
- Tail light is mounted.
- Air reservoir are mounted.
- Silencer alongwith tail pipe is fitted.

SILENCER MTG.

- Purge tank, air dryer mtg.
- D.D.U unit is mounted.
- All wiring harness are mounted.
- Hose pipes are mounted.
- Relay valve & S.P valve are mounted.

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AIR PIPING

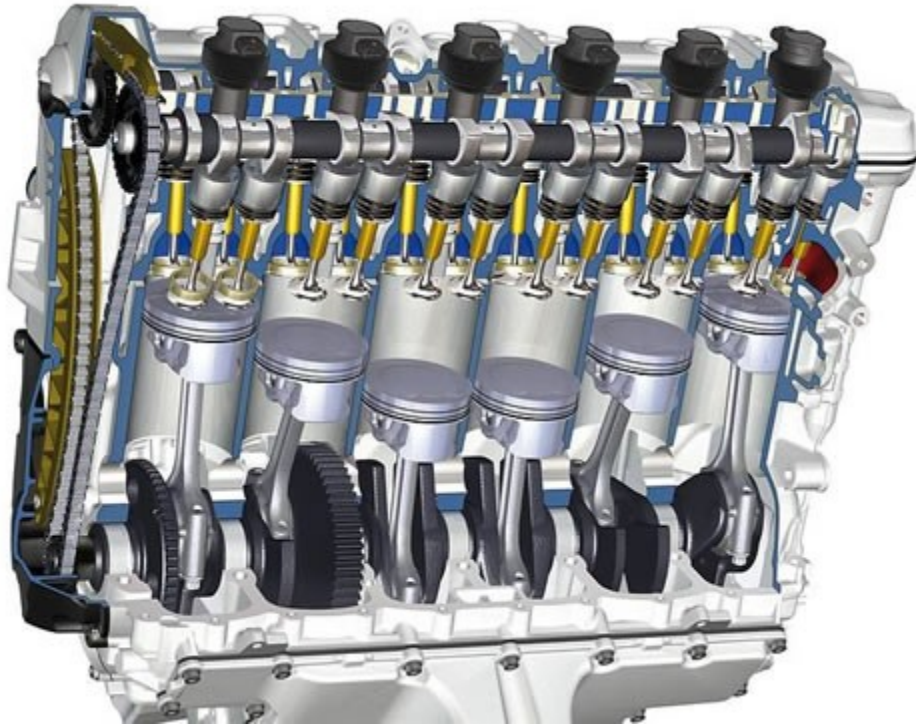
- Fitment & tightening of air compressor & DDU metallic pipe.
- Fitment of complete air piping(modular hose & loose kit).
- Tail cable fitment & clipping.
- Routing & connection of fuel inlet & return & return line.

ENGINE MTG.

- Engine along with gearbox dressed with it is mounted on cross member through bolts and nuts.
 - Fitment of water pump inlet & thermostat outlet hose.
 - CAC supporting bracket fitment.
 - Radiator fitment and tightening.
 - Fitment of three way pipe.
 - Fitment of CAC pipe hoses & clips.
 - Fitment & tightening of propeller shaft.
 - Tightening of exhaust pipe with with turbo charger outlet.
 - VIN plate punching through ERP & punching machine.
 - Fitment of bumpers.
 - Exhaust pipe fitment.
 - Fuel hose and return fitment with engine.
 - Fitment of propeller shaft.
-

TYRE MTG. AND **LUBRICATION**

- Tyre are mounted on the brake drums on both rear & front axle.
- Torque of 500N is given to tyres.
- Greasing on all greasing nipples.
- Filling engine oil(if required).
- Filling gear box oil.
- Filling coolant.
- Filling differential oil.
- Chassis priming is performed.



OFF TRACK-1

•
1.

- Fitment of FES including acceleration pedal, clutch pedal.
- Battery along with battery cover fitment.
- Head light fitment.
- Air cleaner mtg. & connection with engine.
- Compressor intake pipe fitment.
- Mechanical max cut(5 ½").
- Hydraulic max cut(3-5mm).
- Air hose connection & rear brake setting.
- Application of petroleum jelly on battery terminals.
- Electrical dash board fitment & tightening.

- Engine wiring completed.
- Gear lever fitment with rubber boot.

OFF TRACK-2

- __Hydraulic oil top up.
- __Sensor connection for oil.
- __Speedo cable connections.
- __Fitment of spare tyre.
- __Idle & full RPM setting.

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GEMBA

Gemba is a Japanese word meaning “Real Place” where the real action takes place .In the manufacturing industry, there are 3 major activities directly related to earning money, developing, producing and selling products.

GEMBA KAIZEN

Three ground rules for practicing kaizen in Gemba

1. House Keeping

2. Muda Elimination [Waste Elimination]

- ❖ Waste of over production
- ❖ Waste of inventory
- ❖ Waste of waiting
- ❖ Waste of Motion
- ❖ Waste of transportation
- ❖ Waste of Producing Rejects
- ❖ Waste of processing

3. Standardization.

GEMBA MISSION

N7i+1

New 7 initiatives

1. Increase in the number of GEMBA
2. 5s [SEIRI, SEITON, SEISO, SEIKETSU, SHITSUKE]
3. EEI (Effort and Ergonomy index)
4. CMI (Cost management initiative)
5. Inventory Initiative
6. Critical machine uptime
7. Quality
8. Safety

A PROJECT

ON

RESOLUTION OF
DMP CONCERN
AND
ZKM CONCERN

QUALITY:

It is the degree to which a set of inherent characteristics fulfills requirements.

The following are the various dimensions of quality.

- ❖ Performance
- ❖ Features
- ❖ Conformance
- ❖ Reliability
- ❖ Durability
- ❖ Service
- ❖ Response
- ❖ Aesthetics
- ❖ Reputation

TQM

It is defined as both a philosophy and a set of guiding principles that represent
The foundation of a continuously improving organization.

It is the application of quantitative methods and human resources to improve all
the processes with an organization and exceed customer needs now and in the future.

QUALITY POLICY

Ashok Leyland is committed to achieve customer satisfaction by anticipating and delivering
superior value to the customer in relation to their own business, through the products and
services offered by the company and comply with statutory requirements.

Towards this, the quality policy of Ashok Leyland is to make continuous
improvements in the processes that constitute the quality management system to

1. Superior products manufactured as also services offered by the company.
2. Maximum use of employees potential to contribute to quality and environment by progressive up gradation of their knowledge and skills as appropriate to their functions.
3. Seamless involvement from suppliers and dealers in the mission of the company to address customers changing needs and protection of the environment.

OBJECTIVES OF QC DEPARTMENT

1. Identity the quality level to meet drawing and specification requirements.
2. Establish necessary infrastructure and system to carryout quality planning, control and improvement activities.
3. Exercise necessary controls at all stages to ensure total conformance of product quality to design specifications.
4. Evaluate product quality in the light of performance and customer feedback to review and update quality level, infrastructure and systems.

SYSTEM OF ACCEPTING PRODUCTS

1. ZERO DEFECT SAMPLING PLAN:

Here, the defect level should be zero, then accept the product. If there is one defect also they will reject the product.

2. DOUBLE DEFECT SAMPLING PLAN:

Here, first one set of samples will be taken and if they find defect another set of samples will be taken if it goes beyond the fixed level then reject or else accept the products.

INSPECTION

It is also to eliminate, substantially reduce or automate the inspection activity. There are 4 phases of inspection.

- ❖ 100% inspection

- ❖ Sampling
- ❖ Audit
- ❖ Identity check

ZERO K.M. AUDIT CHECKLIST

S.NO	ISSUE	DEFECT (DEFINITION/LOCATION)
1	Rad.overflow hose	: Overflow hose Missing
2	Model Sticker missing	: Model Sticker missing
3	Speedo cable	: Speedo cable Connected
4	Power stg oil leak	: Reservoir cap joint Reservoir suction hose connection Reservoir return hose connection Stg box adopter joint Pump outlet hose-pipe joining Steering pump inlet pipe and hose joint Relay ram joint Power steering pipe adaptor joint Suction pipe connections Power Steering pump banjo
5	Rear Axle oil leak	: Filler plug Breather adaptor Drain plug Axle shaft joint Breather adaptor
6	OPG Adaptor leak	: OPG switch Oil Filter
7	Clutch oil leak	: Clutch Booster inlet Master cylinder outlet banjo Reservoir end clip joint Clutch reservoir cap joint Master cylinder outlet adaptor
8	Air leak	: Compressor outlet adaptor Joint E2 valve BS 3 brake switch Air tank Drain plug Relay valve inlet E2 valve hose connection air leak E2 valve LP switch joint leak Front brake hose adaptor Palm coupling

- Air compressor inlet hose
 - Clutch booster hose joint
 - Rear T piece inlet joint
 - Air compressor inlet adaptor
 - AIR TANK adaptor
 - RH modulator valve inlet hose
 - 2nd rear axle RH brake hose joint
 - Compressor outlet hose joint
-
- | | | |
|----|-------------------------|--|
| 9 | Head lamp not working | : Not working |
| 10 | Tail lamp not working | : LH Reverse Light
LH parking
LH Brake Light
LH indicator
RH Reverse
RH parking
RH Brake light
RH indicator
Hazard |
| 11 | Lamp FDI not working | : RH FDI
Flasher
LH FDI
Combination switch
Hazard
BOTH FDI
Wire cut |
| 12 | Horn not working | : Horn
Wiring harness |
| 13 | Wiper Motor not working | : Wiper Motor
Wiper
Linkage
WIPER SWITCH
Fuse box
Wiring harness
Motor
Fouling
Relay not seated properly |
| 14 | RPM Meter not working | : Max RPM not OK
Not working
Idling not OK |

15	Bonnet lock not working	: Not working due to misalignment Bonnet lock fouling with Battery carrier in Lock jammed Bonnet not sealing properly
16	Gear shift lever Gaiter	: Gaiter damage
17	Glove box lock broken	: Magnet broken Cover came out
18	SUPD damage	: Damage and rusted
19	FES rust	: Handling damage
20	RUPD rust	: Weld beeding and bracket area rusted Mounting area Rust on tube Bracket edges and outer surface damaged Rear side edge Rear front surface Mounting bracket Mounting flange Outer surface
21	Grill Front rust	: Rusting
22	Bumper Goods rust	: Rusting and Fading
23	Mudguard rust	: Color faded Paint scratches RH rusted LH rusted
24	GS lever rust	: Knob thread area Lever GS Knuckle Flange rusted
25	FDI Lens crack	: BOTH side RH FDI LH FDI
26	Tail light lens crack	: RH tail lamp LH tail lamp Tail lamp cover nil Both side

- | | | |
|----|-----------------------|--|
| 27 | Acc. Linkage | : Air intake pipe
Return spring
Battery cable
Pedal
Wiring |
| 28 | Bumper cargo rust | : Rusted |
| 29 | Door lock defective | : Door lock setting not OK/ineffective
Remote lock broken
Remote lock stuck up |
| 30 | Grill lock defective | : Grill lock not locking
Grill lock stopper getting locked |
| 31 | Door Assembly scratch | : Door damage
Embellisher and Fender scratch |

- | | | |
|----|-----------------------|---|
| 32 | Engine oil leak | : Rocker cover cap leak
Turbo Oil inlet pipe
FW Hsg oil seal
Rocker cover mtg
Oil cooler Bowl mtg
FIP Lube oil banjo
OPG adaptor mtg block
Cam Shaft rear dummy plate-Mtg
Sump mtg
Sump drain plug |
| 33 | Radiator coolant leak | : Radiator DAT cap
Thermostat outlet Hose connection
Radiator outlet Hose connection
Make up line Hose
Thermostat mounting face
Water pump inlet hose to pipe joint
Radiator core
DAT Hose adopter at Thermostat end
Temperature switch
Coolant elbow Drain cock
Thermostat cover mtg
Thermostat hsg. Mounting face
Water pump mtg face
Coolant elbow mtg face
Cylinder Head Gasket mtg |
| 34 | Diesel leak | : Fuel filter inlet bango
Drain plug area
FUEL TANK NECK
Fuel Return hose clip
Leak off pipe banjo leak
Injector adaptor leak
Leak off pipe hose crack
Leak off pipe hose leak
Fuel hose banjo leak |
| 35 | Gear box oil leak | : Drain plug
Elbow Joint
Gear box packing plate
Dummy plug near DP
Filler plug
RH Side plug
Reverse switch mtg |

Additional specific checkpoints for ZKM :-

- | | | |
|---|-----------------------|---|
| 1 | Oil level | : Engine oil
Gear box oil
Power steering oil
Rear axle oil
Clutch oil |
| 2 | Coolant level | : Coolant level at DAT mounting |
| 3 | Tyres size and make | : Front tyre one make, Rear and Spares
tyres one Make |
| 4 | Ignition key | : Availability |
| 5 | Loose kit | : General/CSR |
| 6 | Gear shift engagement | : Hard/Fouling |

ZERO K.M. AUDIT REPORT FOR CHASSIS

S.N O.	ISSUE	DEFECT (DEFINITION/LOCATION)	PSV4/18 5 D8315	PSV4/185 D8286
1	Rad.overflow hose	: Overflow hose Missing	OK	OK
2	Model Sticker missing	: Model Sticker missing	OK	OK
3	Speedo cable	: Speedo cable Connected	OK	OK
4	Power stg oil leak	: Reservoir cap joint	OK	OK
		Reservoir suction hose connection	OK	OK
		Reservoir return hose connection	OK	OK
		Stg box adopter joint	OK	OK
		Pump outlet hose-pipe joining	OK	OK
		Steering pump inlet pipe and hose joint	OK	OK
		Relay ram joint	OK	OK
		Power steering pipe adaptor joint	OK	OK
		Suction pipe connections	OK	OK
		Power Steering pump banjo	OK	OK
5	Rear Axle oil leak	: Filler plug	OK	OK
		Breather adaptor	OK	OK
		Drain plug	OK	OK
		Axle shaft joint	OK	OK
		Breather adaptor	OK	OK
6	OPG Adaptor leak	: OPG switch	OK	OK
		Oil Filter	OK	OK
7	Clutch oil leak	: Clutch Booster inlet	OK	OK
		Master cylinder outlet banjo	OK	OK
		Reservoir end clip joint	OK	OK
		Clutch reservoir cap joint	OK	OK
		Master cylinder outlet adaptor	OK	OK
8	Air leak	: Compressor outlet adaptor Joint	OK	OK
		E2 valve BS 3 brake switch	OK	OK
		Air tank Drain plug	OK	OK
		Relay valve inlet	OK	OK
		E2 valve hose connection air leak	OK	OK
		E2 valve LP switch joint leak	OK	OK
		Front brake hose adaptor	OK	OK
		Palm coupling	OK	OK

		Air compressor inlet hose	OK	OK
		Clutch booster hose joint	OK	OK
		Rear T piece inlet joint	OK	OK
		Air compressor inlet adaptor	OK	OK
		AIR TANK adaptor	OK	OK
		RH modulator valve inlet hose	OK	OK
		2 nd rear axle RH brake hose joint		
		Compressor outlet hose joint		
9	Head lamp not working	: Not working	OK	OK
10	Tail lamp not working	: LH Reverse Light	NOT OK	OK
		LH parking	OK	OK
		LH Brake Light	OK	OK
		LH indicator	OK	OK
		RH Reverse	OK	OK
		RH parking	OK	OK
		RH Brake light	OK	OK
		RH indicator	OK	OK
		Hazard	OK	OK
			OK	OK
11	Lamp FDI not working	: RH FDI	OK	OK
		Flasher	OK	OK
		LH FDI	OK	OK
		Combination switch	OK	OK
		Hazard	OK	OK
		BOTH FDI	OK	OK
		Wire cut	OK	OK
12	Horn not working	: Horn	OK	OK
		Wiring harness	OK	OK
13	Wiper Motor not working	: Wiper Motor	N/A	N/A
		Wiper		
		Linkage		
		WIPER SWITCH		
		Fuse box		
		Wiring harness		
		Motor		
		Fouling		
		Relay not seated properly		
14	RPM Meter not working	: Max RPM not OK	OK	OK
		Not working		

Idling not OK

15	Bonnet lock not working	: Not working due to misalignment Bonnet lock fouling with Battery carrier in Lock jammed Bonnet not sealing properly	OK OK NOT OK NOT OK	NOT OK OK NOT OK
16	Gear shift lever Gaiter	: Gaiter damage	RUSTED	OK
17	Glove box lock broken	: Magnet broken Cover came out	N/A	N/A
18	SUPD damage	: Damage and rusted	N/A	N/A
19	FES rust	: Handling damage	RUSTED AND SCARCTH ES	RUSTED
20	RUPD rust	: Weld beeding and bracket area rusted Mounting area Rust on tube Bracket edges and outer surface damaged Rear side edge Rear front surface Mounting bracket Mounting flange Outer surface	OK	OK
21	Grill Front rust	: Rusting	OK	OK
22	Bumper Goods rust	: Rusting and Fading	OK	RUSTED
23	Mudguard rust	: Color faded Paint scratches RH rusted LH rusted	N/A	N/A
24	GS lever rust	: Knob thread area Lever GS Knuckle Flange rusted	OK OK OK OK	OK OK OK OK
25	FDI Lens crack	: BOTH side RH FDI	OK OK	OK OK

		LH FDI	OK	OK
26	Tail light lens crack	: RH tail lamp	OK	OK
		LH tail lamp	OK	OK
		Tail lamp cover nil	OK	OK
		Both side	OK	OK
27	Acc. Linkage	: Air intake pipe	OK	OK
		Return spring	OK	OK
		Battery cable	OK	OK
		Pedal	OK	OK
		Wiring	OK	OK
28	Bumper cargo rust	: Rusted	OK	OK
29	Door lock defective	: Door lock setting not OK/ineffective	N/A	N/A
		Remote lock broken		
		Remote lock stuck up		
30	Grill lock defective	: Grill lock not locking	OK	OK
		Grill lock stopper getting locked	OK	OK
31	Door Assembly scratch	: Door damage	N/A	N/A
		Embellisher and Fender scratch		

32	Engine oil leak	: Rocker cover cap leak Turbo Oil inlet pipe FW Hsg oil seal Rocker cover mtg Oil cooler Bowl mtg FIP Lube oil banjo OPG adaptor mtg block Cam Shaft rear dummy plate-Mtg Sump mtg Sump drain plug	OK	OK
33	Radiator coolant leak	: Radiator DAT cap Thermostat outlet Hose connection Radiator outlet Hose connection Make up line Hose Thermostat mounting face Water pump inlet hose to pipe joint Radiator core DAT Hose adopter at Thermostat end Temperature switch Coolant elbow Drain cock Thermostat cover mtg Thermostat hsg. Mounting face Water pump mtg face Coolant elbow mtg face Cylinder Head Gasket mtg	OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK	OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK OK
34	Diesel leak	: Fuel filter inlet bango Drain plug area FUEL TANK NECK Fuel Return hose clip Leak off pipe banjo leak Injector adaptor leak Leak off pipe hose crack Leak off pipe hose leak Fuel hose banjo leak	OK OK OK OK OK OK OK OK OK OK	OK OK OK OK OK OK OK OK OK OK

35	Gear box oil leak	: Drain plug	OK	OK
		Elbow Joint	OK	OK
		Gear box packing plate	OK	OK
		Dummy plug near DP	OK	OK
		Filler plug	OK	OK
		RH Side plug	OK	OK
		Reverse switch mtg	OK	OK

Additional specific checkpoints for ZKM :-

1	Oil level	: Engine oil	OK	OK
		Gear box oil	OK	OK
		Power steering oil	OK	OK
		Rear axle oil	OK	OK
		Clutch oil	OK	OK
2	Coolant level	: Coolant level at DAT mounting	OK	OK
3	Tyres size and make	: Front tyre one make, Rear and Spares tyres one Make	OK	OK
4	Ignition key	: Availability	OK	OK
5	Loose kit	: General/CSR	N/A	N/A
6	Gear shift engagement	: Hard/Fouling	OK	OK

NOTE:-

OK:- NO DEFECT

N/A:- NOT AVILABLE

BUS CHASSIS



Viking BS3 (EDC)

<u>Engine: H Series -</u>	6 cylinder turbocharged intercooled
<u>Maximum Power:</u>	183 HP (135 kw) @ 2500 rpm
<u>Maximum Torque:</u>	550 NM (56 mkg) @ 2100 rpm
<u>Gearbox:</u>	6 speed overdrive synchromesh / 5 speed synchromesh
<u>Clutch:</u>	353 mm Dia Single Plate Dry Type
<u>Rear Axle:</u>	Fully floating, single reduction hypoid axle
<u>Front Suspension:</u>	Shackle ended leaf spring / rubber ended leaf spring
<u>Rear Suspension:</u>	Shackle ended leaf / rubber ended leaf spring
<u>Steering:</u>	Integral Power Steering
<u>Brakes:</u>	Full Air Brakes
<u>Wheelbase:</u>	5639 mm (Variants - 5334 / 4902 / 3912 mm)
<u>Overall Length:</u>	10859 mm
<u>Tyres:</u>	9.00 x 20 / 10.00 x 20 / 10R20
<u>Max Speed:</u>	80 kmph
<u>GVW:</u>	16200 kgs with 10.00 x 20 Tyres



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Cheetah bs3(il mech)

<u>Engine:</u>	H series - 6 cylinder BS3 turbocharged
<u>Maximum Power:</u>	160 HP (118 kw) @ 2400 rpm
<u>Maximum Torque:</u>	550 NM (56 mkg) @ 1500 - 1700 rpm
<u>Gearbox:</u>	6 speed overdrive Synchromesh / 5 speed Synchromesh
<u>Clutch:</u>	353 mm Dia single plate dry type
<u>Rear Axle:</u>	Fully floating, single reduction hypoid axle
<u>Front Suspension:</u>	Shackle ended leaf spring
<u>Rear Suspension:</u>	Shackle ended leaf spring
<u>Steering:</u>	Integral Power Steering
<u>Brakes:</u>	Full air brakes
<u>Wheelbase:</u>	5334 mm, variants : 5156 / 4470 / 5870 mm
<u>Overall Length:</u>	10550 mm
<u>Tyre:</u>	9.00 x 20 / 10 x 20 / 10R20
<u>Max Speed:</u>	80 kmph
<u>GVW:</u>	16200 kgs with 10 x 20 tyres



LYNX4.9

<u>Engine</u> :	H Series 4CTI BS3 electronically controlled
<u>Maximum Power</u> :	120 hp (88 kw) @ 2400 rpm
<u>Maximum Torque</u> :	41 mkg (400 nm) @ 1600 rpm
<u>Gearbox</u>	5 speed Synchromesh gearbox
<u>Clutch</u> :	330 dia single plate diaphragm type with clutch booster
<u>Rear Axle</u> :	Fully floating, hypoid gear
<u>Front Suspension</u> :	Shackle suspension
<u>Rear Suspension</u> :	Shackle suspension
<u>Steering</u> :	Integral Power Steering
<u>Brakes</u> :	Full air brakes
<u>Wheelbase</u> :	4900 mm; variants - 4200, 3900 mm
<u>Overall Length</u> :	9334 mm
<u>Tyres</u> :	8.25 x 20
<u>GVW</u> :	11000 kg



ULE Diesel BS4

<u>Engine:</u>	H Series - 6 cylinder BS4 CRS engine with SCR
<u>Maximum Power:</u>	225 hp (165 kw) @ 2500 rpm
<u>Maximum Torque:</u>	82 mkg (800 nm) @ 1400 - 1900 rpm
<u>Gearbox:</u>	Automatic transmission
<u>Clutch:</u>	NA
<u>Rear Axle:</u>	Fully floating, hypoid gear
<u>Rear Suspension:</u>	Air suspension
<u>Steering:</u>	Integral Power Steering
<u>Brakes:</u>	Full Air Brakes
<u>Wheelbase:</u>	6320 mm
<u>Overall Length:</u>	12000 mm
<u>Tyres:</u>	11R22.5 - 16 PR tubeless radials
<u>GVW:</u>	16200 kg



ULE CNG BS4

<u>Engine:</u> Cummins -	6 cylinder CNG BS4
<u>Maximum Power:</u>	230 hp (172 kw) @ 2800 rpm
<u>Maximum Torque:</u>	69 mkg (678 nm) @ 1600 rpm
<u>Gearbox:</u>	Automatic Transmission
<u>Clutch:</u>	NA
<u>Rear Axle:</u>	Fully floating, hypoid gear
<u>Rear Suspension:</u>	Air suspension
<u>Steering:</u>	Integral Power Steering
<u>Brakes:</u>	Full air brakes
<u>Wheelbase:</u>	6320 mm
<u>Overall Length:</u>	12000 mm
<u>Tyres:</u>	11R22.5 - 16 PR tubeless radials
<u>GVW:</u>	16200 kg



FE SLF CNG BS4

<u>Engine:</u>	"H" Series - 6 CYL. CNG BS4
<u>Maximum Power:</u>	124 hp (92 kw) @ 2400 rpm
<u>Maximum Torque:</u>	42.8 mkg (416 nm) @ 1200 rpm
<u>Gearbox:</u>	5 Speed Synchromesh
<u>Clutch:</u>	353 mm dia single plate dry type
<u>Front Suspension:</u>	Rubber ended suspension
<u>Rear Suspension:</u>	air suspension
<u>Steering:</u>	Integral Power steering
<u>Brakes:</u>	Full air brakes
<u>Wheelbase:</u>	5639 mm
<u>Overall Length:</u>	10931 mm
<u>Tyres:</u>	10R20 - 16 PR
<u>GVW:</u>	16200 kg



RE SLF BS4

<u>Engine:</u>	H Series - 6 cylinder BS3 CRS engine with SCR
<u>Maximum Power:</u>	225 hp (165 kw) @ 2500 rpm
<u>Maximum Torque:</u>	82 mkg (800 nm) @ 1400 - 1900 rpm
<u>Gearbox:</u>	5 speed synchromesh gearbox
<u>Clutch:</u>	381 mm dia single plate
<u>Rear Axle:</u>	Fully floating, hypoid gear
<u>Rear Suspension:</u>	Air suspension
<u>Steering:</u>	Integral Power Steering
<u>Brakes:</u>	Full air brakes
<u>Wheelbase:</u>	6200 mm
<u>Overall Length:</u>	12000 mm
<u>Tyres:</u>	10R20 - 16 PR
<u>GVW:</u>	16200 kg

TRUCKS CHASSIS



3116 XL

<u>Engine:</u>	H Series 6ETI3K turbocharged intercooled with Inline FIP
<u>Power:</u>	160 hp @ 2400 rpm
<u>Torque:</u>	550 Nm @ 1500 - 1700 rpm
<u>Clutch:</u>	Single plate dry plate, with clutch booster, 380 mm facing dia
<u>Transmission:</u>	ZF 6S850 FGR 8.51:1
<u>Suspension:</u>	Semi elliptical laminated multileaf
<u>Cabin:</u>	Factory built G45 Cowl
<u>Tyre:</u>	10.00 x 20 - 16 PR Nylon - ply (radial ply optional)
<u>Max speed:</u>	74.2 kmph
<u>Gradeability:</u>	15.34%
<u>GVW:</u>	31000 kgs
<u>Wheelbase:</u>	5700 mm
<u>Loading span:</u>	30.5 ft



U-4023 TT

<u>Engine:</u>	H series CRS BS III
<u>Power:</u>	225 hp @ 2500 rpm
<u>Torque:</u>	800 nm @ 1400-1900 rpm
<u>Clutch:</u>	380 mm dia disc with organic lining actuated with clutch boosters
<u>Transmission:</u>	6 speed synchromesh GB (6S580); First Gear Ratio 6.72:1
<u>Suspension:</u>	Front : Parabolic suspension Rear : Semi elliptic multileaf
<u>Cabin:</u>	Factory Built G91 sleeper cab
<u>Tyre:</u>	11.00 x 20 - 16 PR cross ply; radial tyres optional
<u>Max speed:</u>	91 kmph
<u>Gradeability:</u>	14.70%
<u>GVW:</u>	40200 kgs (with tri axle trailer)
<u>Wheelbase:</u>	3300 mm



2516T il

Engine:	H series HA6ETI3K - BS3 turbocharged intercooled
Power:	160 hp @ 2400 rpm
Torque:	550 nm @ 1500 - 1700 rpm
Clutch:	Axial type 381 mm dia with organic lining and actuated by clutch booster
Transmission:	6 speed GB - First Gear Ratio (FGR) - 8.51:1
Suspension:	Semi Elliptical multileaf
Cabin:	G45 FES and cabin
Tyre:	10.00 x 20 - 16 PR nylon ply
Max speed:	70 kmph
Gradeability:	20%
GVW:	25000 kgs
Wheelbase:	3810 mm

N7i

N7i introduced by Ashok Leyland

For further improvement in policies of the company Ashok Leyland introduced **new 7 initiatives (N7i)** in the company. By implementation of these initiatives in the plant from the **session April-08 to**

March-09 company achieve a **total benefit of 165.2 lacks** in the session.
The N7i's are:-

- 1) Increase no. of GEMBA's**
- 2) EEI roll-out of all GEMBA's**
- 3) CMI integration**
- 4) House keeping (5S)**
- 5) Inventory**
- 6) Identify critical machines**
- 7) Quality – GU wise 100 PPM level.**

1) Increase no. of GEMBA's

MISSION GEMBA:

-
ENHANCING EMPLOYEES FOR WORLD CLASS
GLOABALISED PERFORMANCE

VISION:

Achieving leadership in the domestic commercial vehicle markets and a significant presence in the world market by 2014 through transport solutions by enhancing the employ for their excellent work to promote them to do their best for the goal of organization.

It's a playful part of the company. It is totally based on the potential of the employee how can they do more, higher productivity can be generated, how efficiently and effectively do their job. If any employee renders his service for a new invention or a way by which the production, quality standards or any other standards can grow rapidly. Then the senior officers or respective head of mission Gemba awards the employee.

The main emphasis is on the increase of the potential of the employee. Motivate them through learning's, self-respect; honesty, hard-work etc. have to become the essential part of an employee working in the organization.

It creates a positive psychological effect in the mind of employee, if he perform just different job, respective with a aspect of development of the company, he is being awarded and the same employee works with a difference in the company with more advantageous style.

It gives an environment of a friendly and competitive school which helps employee and organization to achieving their ambitions.

GEMBA is a Japanese word, which means "SHOP FLOOR". It provides quality assurance, fastest delivery and the least cost to customer by

- Offering appropriate products and services.

- Adopting lean manufacturing systems and practices through employee empowerment and participation.
- Benchmarking products, processes and people against best in the industry.

In processing of this plan everyday all permanent workers, engineers, managers mount up on GEMBA floor and discuss their problem and solution with each other.

Every day for their improvement suggestion every guy is awarded a no. of marks according their performance and after a period the high scorer is nominated and awarded by mission GEMBA award.

Various aspects of the mission GEMBA are:-

- 1) Shop floor-led team initiative with focus on creating values through empowerment and improving resource utilization.
- 2) When a problem arise, go to GEMBA first, check the relative objects take temporary countermeasure on the spot. Find the root cause standardize to prevent recurrence.
- 3) Successful GEMBA requires a change in perception- a culture change from everyone in the organization. Everyone must be able to identify all the different kind of waste and work constantly towards eliminating it.
- 4) Employees have the and knowledge to change the work to make it more efficient and this create great satisfaction. In the information age GEMBA is anywhere where process are performed and information originates or knowledge is gained.
- 5) Take a trip to GEMBA today. Observe and study the real value work of the GEMBA it just may change your entire prospective of what you do.
- 6) Take up the improvement directly. All of us are involved in the process of change.
- 7) To adopt GEMBA means to be ever willing to change. For if you don't you surrender yourself and your market to those who do.

2) Effort and Egronomy index (EEi):-

Benefits:-

- Securing 2nd position in EEI tracker.
- Employee involvement increased from 33% to 99.5%

- Associates know the benefits of EEI and they take initiation in learning of EEI calculation. 30% associates are aware of doing calculations.
- Effort reduction in doing the work and associates are working with more enjoy.

3) Cost management initiative(CMI):-

Benefits:-

- Securing 3rd position in CMI tracker.
- Norms validated 100%
- Online integration and tracking implemented.
- Abnormal cost in consumables completely controlled.
- Abnormal cost in consumables consumption completely controlled.
- 30% tools codes standardized for all plants.

4) HOUSE KEEPING (5S):-

Many people think keeping should be done by house wife at home and cleaners at the work place. They do not realize that they too play an important role in keeping there houses / workplaces clean. More important, they do not know how much they can gain themselves by just practicing , good house keeping.

The “5-S” represents five Japanese words:-

- **Seiri :-** Take out unnecessary items and throw them away.
- **Seition :-** Arrange necessary items in a proper order so that they can be easily picked up for use
- **Seiso:-** Clean your workplace completely so that there is no dust anywhere.

- **Seiketsu** :- Maintenance a high standard of house keeping and work place organization at all times
- **Shitsuke** :- Train people to follow good house keeping disciplines independently.

Benefits:-

- Securing 3rd position in 5S tracker across all units.
- Scrap worth 5 crores sold.
- PAR EXCELLENT AWARD to 5S quality circle team.
- Introduction to internal and external signage in the factory.
- 5S layout preparation.
- 5s at home.

5) Inventory:-

Benefits:-

- Securing 3rd position in inventory tracker across all units
- Reduction of negative WIP from baseline of 42 lakes to 5 lacks.
- Reduction ISCM lead time 64hr. to 17hr. in feb. 2009.
- Reduction of obsolete item by 100%
- Reduction of non-moving item by 50%
- Celebration of suggestion day on standardization of chassis parts.

6) IDENTIFY CRITAL MACHINES:-

Benefits:-

- Securing 1st position in critical machines tracker across all units.
- OEE increased from 73% to 92%.
- Indianization of imported spares to reduce repair and maintenance cost.
- 7 point TPM implementation in critical machines.
- Zero accident achievement in critical machines

7) QUALITY:-

Benefits:-

- Securing 1st position in quality tracker.
- Self certification increased from 67% to 95%
- Process audit and product audit improves up to 87%
- DMP reduced from 188 points to 140 points.
- Top 5 vendors issues resolves up to 74% from previous status.

N7i- milestone in ashok leyland history:-

After the successfully implementation of N7i during the period of **April 08 – March 09** the company got very large amount of following tangible profits.

CFT	-	116.3 LACKS
SGA	-	29.3 LACKS
Quality circle	-	19.6 LACKS
Total savings	-	165.2 LACKS

During the current year company decided to add one more initiative “SAFTY” in N7i and now it will become **N7i+1** and after just its implementation it got great success that **May- 09 is zero accident month.**

CONCLUSION:

It was just like a dream come true for me to pursue training in **ASHOK LEYLAND**. It was really a learning experience for me to have a feel of different industrial aspects. In this period I have learnt those things, which I could not get from the books i.e. the practical experience under the guidance of learned professionals. My project was to study the **resolution of dmp concern and zkm concern in shop-2**. Mr. **Mohammed shahid** is my project guide, guided me throughout my training period and told me about all the technical aspects of machines used in shop-2. He not only guided me but also helped me in completing my report. He corrected me wherever I was wrong. All in all it was

really a great experience for me and I would like to thank all the people who made me to come here.

