

INDUSTRIAL VISIT REPORT

1.1 Introduction:

After completing this visit, the student will be able to understand

- To understand the garage ,service station and specialist repair shop setup and environment
- know the requirement of tools & equipment used in garage, service station and specialist repair shop & power tools
- Study the layout of garage, service station and specialist repair shop
- The servicing of the automobile has also changed greatly to keep in step with the engineering advances of the industry.
- The tools and equipments which the early mechanic used were poor compared to today's standard, and in many cases were made by the mechanic.

About Rushabh Honda:

- Rushabh Honda is one of the oldest Honda Dealers in Nashik. Rushabh Honda has its headquarters located in Mumbai Naka. They have service branch at Pathardi Phata .
- They provide both sales and servicing at Pathardi Phata. They are equipped with finest Honda Trained staff in Sales, Spare and Services areas. They are known for their friendly atmosphere and team work spirit delivering quality service for years. They strive towards excellence and were awarded for Best Runner up Dealer from the West Region. They try to get maximum out of every part of our firm and are awarded as best 1st Runner up Award for Annual Maintenance Contract, in the West Region, by Honda. They put efforts in providing hassle free experience and have various finance counters for immediate approvals.
- Rushabh Honda maintains its integrity by always maintaining standard Safety Norms. They have always believed in returning back to society in every possible way and bagged two times Safety Dealer Award from Honda.



The servicing of the automobile has also changed greatly to keep in step with the engineering advances of the industry.

Today's automotive mechanic is well trained and works in a clean, bright, well-ventilated, specially designed automotive service centre.

A thorough knowledge of the parts and understanding of the mechanisms are essential in order that faulty conditions in any part of automotive mechanism may be detected and corrected. As a result, the mechanic must possess the knowledge, skill, and experience in this field to be successful.

Service Station

A service station is a place where in addition to care of the motor vehicle like mechanical service and minor repairs, petrol is supplied, cars are lubricated, and cleaned, washed and other types of simpler services that are required daily are performed. In general it includes a number of sections like garage general it includes a number of sections like garage general service, mechanical service, major repair shop, tire shop, paint shop, body shop.

A service station in addition to the equipment available is garage is usually run in conjunction with a sales agency for a particular type of motor vehicle to provide comprehensive repair service for that particular vehicle.

The equipment available, in a general garage will be added with specialized equipment like lifting tackle, and different types of jigs, fixtures and tools specially designed for checking, adjusting and repair of particular type and make of the vehicle. A service station may consist of a machine shop having a lathe, drilling machine etc.

In case of big service station special types of machines like crank shaft grinding machine, valve reface, surface grinder, reborer and boring machine, and brake drum lathe also will be equipments.

Specialist repair shop

It is an engineering workshop where works not attended in service station will be attended. The specialist repair shops need experts in their particular line. They usually provide good service in attending to repairs at reasonable charges

(a) **Layout of modern service station :** The layout of service station is shown

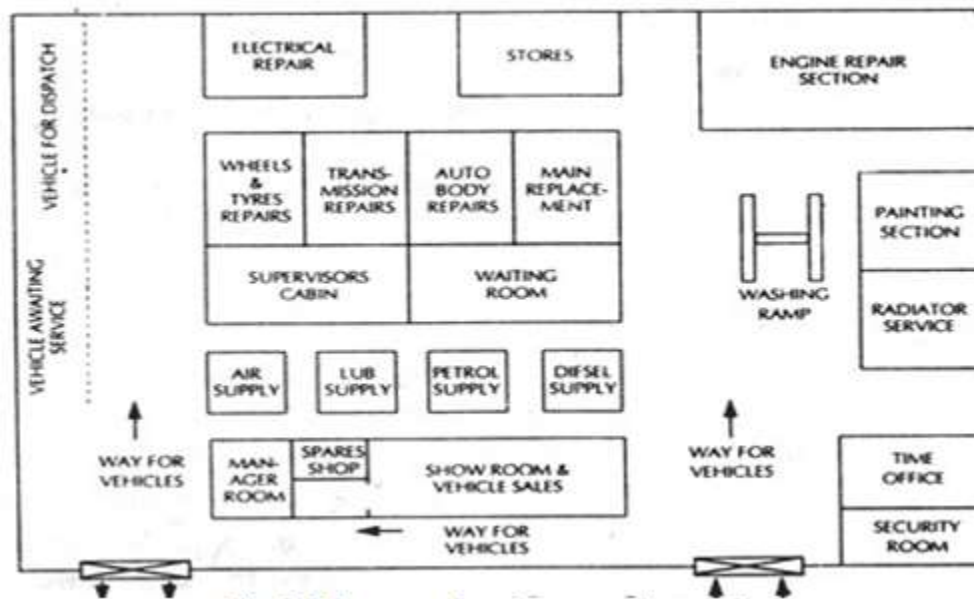


Fig.1.1 Layout of modern service station

Service station equipments

A large number of different types of equipments are required in a garage or service station for carrying out different types of repair works. Different types of equipments are required to cope up with the wide variety of work to be done can be classified as under.

Special equipments for service station

1. Compressed air plant
2. Car washing machine
3. Lifting tackles
 - (a) Hydraulic jack
 - (b) Car lift
 - (c) Axle stands

- (d) Jib crane
 - (e) A chain hoist
 - 4. Chassis dynamometer
- 5. Wheel balancer
- 6. Tire remover
- 7. Brake drum lathe
- 8. Brake shoe lining riveting machine
- 9. Spark plug tester
- 10. High pressure grease gun
- 11. Wheel alignment gauges
- 12. Degreasing plant

Special equipments for engine repair:

- 1. Crankshaft grinding machine
- 2. Cylinder head surface grinding machine
- 3. Line boring machine
- 4. Connecting rod big end bearing boring machine
- 5. Camshaft grinding machine
- 6. Valve refacer machine
- 7. Hydraulic press
- 8. Cylinder boring machine
- 9. Cylinder honing machine
- 10. Connecting rod rebabbiting jig

Special equipments for compression engines

- 1. Bench nozzle testing and cleaning equipment
- 2. Fuel injector tester
- 3. Fuel pump tester
- 4. Nozzle and needle grinding and lapping machines.

Power tools : Power tools are increasingly used in modern automated auto workshops. They are operated by pneumatic, electric, hydraulic powers. Their use envisage quicker, effortless and efficient service.

Pneumatic Nut and Bolt Tightener : It tightens and loosens the nuts and bolts in no time.

This is a portable machine whose working end can be changed to suit different sizes of bolts and nuts.

Valve Refacer : It is used to recondition the worn and valve faces. On employing an attachment, it can be used to grind valve stem, tappet and the rocker arm.

Portable Drilling Machine : This is an electrically powered machine which is used to make holes whenever required. It can be taken conveniently to any area of repair since it is handy, compact and portable.

Drill Stand : It is used to mount the drill machine. The job to be drilled can be placed and clamped on its base. The height of the drill machine can be adjusted suitably to accommodate jobs of different heights. For this purpose the grooves are cut on its vertical stand. The height adjustment is done by means of a lever and mechanical linkage.

Polisher and Sander : This is an electrically powered machine used to rub the burrs from the surfaces of components, and then polish it to super finishing accuracy. The sanding is accomplished by means of emery paper or emery cloth of coarse grade while the fine grade is used for polishing.

Portable Grinder : This is used to grind the rough surfaces, unwanted projections, protruding corners etc. being sturdy and handy, it can be taken to any remote, restricted and less accessible areas for repairing.

2.1 Car Washing Machine

Regular chassis washing of both cars and commercial vehicles to remove grease, oil, mud and other corrosive deposits is most essential. This type of cleaning is a time representative of preventive maintenance. This is easily done by a spray of water with a solvent, at high pressure (above 25 kg/cm^2).

Car washer consists of a pump which is driven by an electric motor. The pump sucks water from a well or from a water tank filled beneath it and delivers to the nozzle through a pipe of hoses with high pressure. There are two types of car washers as follows.

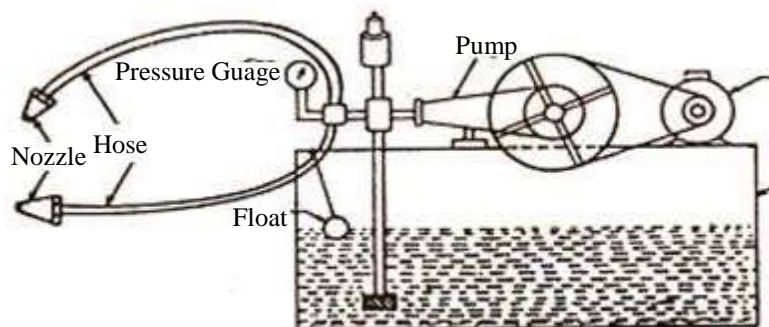


Fig 2.1 Car Washing Motor

That provided with single hose which can be used to wash only one vehicle at a time

1. That provided with twin hoses which can be used to wash two vehicles at a time. The nozzles are adjustable, so that the delivery of water can be regulated at variable force from fine spray to solid jet.

Automatic Washing-

The automatic car wash machine has a three horse power pumping station which pumps up to 100ltrs of water per minute through 15 numbers of nozzles, 12 of which spray as a pre-wash arch which washes tires, wheels and rocker panels and rest three nozzles sprays on back top brush. The machine dispenses a specially formulated foaming, high pressure chemical during a pre-wash pass which is applied along with high pressure wash.

The high pressure spray automatically adjusts to the vehicle's dimensions by the use of P L C based control panel and lastly, high pressure air blowers maintain the best air-steam helps to dry the complete vehicle surfaces.

Industrial Visit Photos:





