



**Mahatma Gandhi Mission's
College of Engineering and Technology
Noida, U.P., India**

**Report on Practical Industrial Training
Carried out at**

**Sikka Hyundai
(Sikka Automobile Pvt. Ltd.)**



From 1st July, 2016 to 28th July, 2016

Academic Year 2016-2017

Submitted by:

**Name: GOPAL MISHRA
Class: BT-ME
Univ. Roll No: 1309540023**

Submitted to:

**Mechanical Engineering Department,
MGM's COET, Noida
U.P.**

**Mahatma Gandhi Mission's
College of Engineering and Technology
Noida, U.P., India**

Department of Mechanical Engineering

CERTIFICATE

This is to certify that Mr. GOPAL MISHRA of B. Tech. Mechanical Engineering, Class BT-ME Roll No.1309540023 has completed his Industrial Training during the academic year 2016-2017 from 1st July, 2016 to 28th July, 2016 at Sikka Hyundai (Sikka Automobile Pvt. Ltd.) B-88/1, Mayapuri Industrial Area, Phase 1, New Delhi – 110064, India.

Training Coordinator

Head of the Department

Acknowledgment

First I would like to thank Mr. Rakesh Bhauguna (GM of company), Mr. Naveen (service manager), Mr. Jaspreet singh (work shop in charge), Sikka Hyundai, Mayapuri, New Delhi for giving me the opportunity to do an internship within the organization. For me it was a unique experience to be in this work shop. It also helped me to get back my interest in mechanical engineering and to have new plans for my future career.

I would like to thank all the people also that works in the organization. With their patience and openness they created an enjoyable working environment. Furthermore I want to thank all the engineers and students, with whom I did the internship. We experienced great things together and they taught us many more things regarding automobile.

At last I would like to thank Mr. Ramesh Swami (Technician), Mr. Manish (Technician) and Mr. Ghyanshyam Kumar (floor in charge) who told me all about the organization and Quick services and also about the major-minor problem observed in the car.

ABSTRACT

As I am very fond of automobile engineering. It was a great opportunity for me to do four weeks internship in Sikka Hyundai, Mayapuri, New Delhi. The internship was concentrated on the car services. At the beginning of the internship I had several queries in my mind regarding the different technologies used in Hyundai and what skills are needed in organization. During my internship several queries are cleared by doing some activities. The objective of this internship is to gather information about the quick services and the major-minor problem that can be observed in day to day life. In the workshop, I have learnt the rules and safety instruction which helps me in understanding while working on cars. So, this internship was a great experience. I found out how much I am strong in automobile field. I gained new knowledge and skills and met many new people. I achieved many of my learning goals. I got insight into the work of an organization. The financing is an important factor and forces to be flexible in attitude and approach. I learned more about the problems which I have face while working on the cars. Working together with the different background peoples and by education these threats have to be approached to succeed in my internship the sharing of knowledge, ideas and opinions is of importance. There is still a lot of discover and other methods can be improved. At last this internship has given me new insights and motivation to pursue a career in mechanical engineering.

CONTENTS

	Pages
Training certificate.....	I
Certificate.....	II
Acknowledgement.....	III
Abstract.....	IV
Content.....	V-VI
List of figure.....	VII-VIII
CHAPTER 1: INTRODUCTION.....	1-3
1.1 Company overview.....	1
1.2 Some of their other unique features are.....	2
1.3 Company face.....	3
CHAPTER 2: WORKSHOP & SHOWROOM.....	4-6
2.1 Workshop.....	4
2.2.1 Features of workshop.....	5
2.2 Showroom.....	6
CHAPTER 3: WORKING IN WORKSHOP.....	7-15
3.1 Body shop.....	8
3.2.1 Denting.....	9

3.2 Paint shop.....	10
3.3 Service shop.....	11
3.3.1 Free service.....	14
3.3.2 Paid service.....	14
3.3.3 Running repair service.....	14
3.3.4 Quick service.....	14
3.4 Washing.....	14
CHAPTER 4: WORKING IN DURING SERVICE IN WORKSHOP.....	16-23
4.1 Replacement of the oil filter cartridge.....	16
4.2 Air filter.....	16
4.3 A/C filter.....	17
4.4 Engine oil.....	17
4.5 Clutch plate.....	18
4.6 Brake.....	19
4.6.1 Brake pad.....	20
4.7 Wheel alignment and balancing.....	22
4.8 Final inspection.....	23
CONCLUSION.....	24
REFERENCES.....	25

Fig. No.	Name of figure	Page no.
Fig. 1.1	Front view of Sikka Hyundai	3
Fig. 2.1	Workshop area	4
Fig. 2.2	Lifting m/c in workshop	5
Fig. 2.3	Reception area	6
Fig. 2.4	Showcase and dealing room	6
Fig. 3.1	Service adviser room	8
Fig. 3.2	Damage car body	11
Fig. 3.3	Body shop	9
Fig. 3.4	Denting shop	10
Fig. 3.5	Painted parts	10
Fig. 3.6	Paint shop	11
Fig. 3.7	Opening of engine	12
Fig. 3.8	Separating of gear box from engine	12
Fig. 3.9	Repairing gear box	13
Fig. 3.10	Repairing A/C system	13
Fig. 3.11	Washing shop	15
Fig. 3.12	Automatic washing shop	15
Fig. 4.1	Inserting new air filter	16
Fig. 4.2	Left side new A/c filter other side polluted A/c filter	17
Fig. 4.3	Filling engine oil in engine	18

Fig. 4.4	Clutch plate	19
Fig. 4.5	Brake wheel	19
Fig. 4.6	Disc brake assembly	20
Fig. 4.7	Disc brake pad	21
Fig. 4.8	Wheel alignment	22
Fig. 4.9	Wheel balancing	22
Fig. 4.10	I am doing final inspections	23
Fig. 4.11	Checking all spare parts are tight or not	23

CHAPTER 1

INTRODUCTION

1.1 Company Overview

Sikka Automobile Pvt. Ltd. Is a subsidiary of Sikka Group and was founded and appointed as a authorized sailing and dealer of Hyundai Motor India Limited (HMIL) for its Personal & Prosper channel in January 2012. The Group was established in the year 1986 and was founded by Sh. Gurinder Singh Sikka, Chairman / Managing Director. We have constantly grown with time and our boundaries expanded by encompassing a lot of expertise, partners and sister concerns and today our boundaries are literally boundless.

We are engaged in diverse fields like:

- Real Estate Developments,
- Automobiles, Hospitality,
- Education,
- Outdoor Advertising
- Media Business.

Delivering quality service to all our customers and ensuring utmost customer satisfactions have been the founding values of our automotive businesses and we relentlessly strive to maintain them which make us the best at what we do. All our sales and service outlets are manned by 100% Hyundai trained personnel to ensure that we offer only the best quality service at all times. We make buying and selling cars profusely satisfying, hassle-free and simple by offering dedicated test drives of vehicles, attractive finance deals with all nationalized & leading private sector banks, exchange offers that guarantee the best prices for old cars, and near-cashless facility for smooth insurance claims.

They are pleased to offer host of services to our valued customers are;

- Free Pick up and drop by our trained drivers
- Free Wheel Alignment once in a Year
- Free Check-up Camp to the corporates at your premises on request
- Car serviced and returned the same day if received before 13:00 hrs.
- Quick repair of minor dents on the same day if car received before 10:00 hrs.
- Genuine Honda spares & accessories are used.
- Exchange / Loyalty offers on New Car purchase.
- Evaluation offers at your door Step of your existing car.
- Tire / Batteries (all brands) available at best price.

1.2 Some of their other unique features are:

- 10,000 sq. feet air conditioned Ares for new car display.
- Parking inside showroom premises.
- Test drive for all variants available.
- Pick & Drop Facility within 15 kms of a particular branch.
- Special Hyundai Trained technician and Staff.
- State-of-the-art workshop with latest / modern infrastructure, tools & equipments.
- Flawless accidental repair of all makes.
- Direct settlement facility with most Insurance Companies.
- Dedicated Customer Care desk.

- Wi-Fi enabled Customer Lounges.
- Full range of genuine Hyundai accessories on display.
- Trained staff ready to assist.

1.3 Company Face



Fig. 1.1 Front view of Sikka Hyundai

CHAPTER 2

WORKSHOP & SHOWROOM

2.1 Workshop

I have done my internship in the workshop of Sikka Hyundai. There, I have work under a mentor who tells me about the organization and the work procedure, quick repairs, how to solve major-minor problem generally observed in the cars. These are the some pictures of the workshop where I have done my internship.



Fig. 2.1 Workshop area

2.2.1 Features of workshop

- Equipped with hi tech lift machined for lifting the car to repair top bottom parts
- All the technicians have their own equipment's and machinery
- They have a very large floor area for working their
- Time to time sweepers clean the workshop to maintain the good working environment
- All the major & minor faults would be find by manually or through software (G-scan)
- Final inspection can be done by the experts team



Fig. 2.2 Lifting m/c in workshop

2.2 Showroom

They have a very beautiful furnishing having a large floor area for displaying the top model cars of Hyundai. The showroom is fully air conditioned and very good in looking. All the time at least 4 to 5 person are stand there to asset the customer very kindly and friendly.



Fig. 2.3 Reception area



Fig. 2.4 Showcase & Dealing room

CHAPTER 3

Working in workshop

While working in the workshop I have seen and learnt about how a workshop running at full speed and achieve target as much faster as they can, so they meet the customer requirement and satisfaction.

There are four departments in workshop as follows:

1. Body shop
2. Painting shop
3. Service shop
4. Washing

When a car enters the workshop, firstly they made a repair order for the customer in which the customer tells the problem what he is facing with the car, or it may be its general repairs. Then the service adviser inspect the car and he told the technician what he find at first stage then the technician fully examine the whole car & each n every parts of the car and then he noted down in the job card. Generally the company provide 4 free general services, in which the mechanic or technician checks the engine oil, lubricating oil, water, air filter, A/C filter and other electronic controls. And if he detects any problem which might reduce the car efficiency he will notify to the service advisor and then service advisor calls to the customer and tell him about the defects and then if the customer is ready to repair it then the service adviser tell to the mechanic and then mechanic repair the problem so the car run effortlessly.

Defected cars are selected on the basis of their faults and then send to it their specified category of shop such as if any car having damage related to tits body then it send to the body shop or if any engine, brake, wheel alignment then it send to the service shop.



Fig. 3.1 Service adviser room

3.1 Body shop

In the body shop of Sikka Hyundai those cars having some damage on its body are repaired. Dents, breaking of body parts, etc. are some common problems which comes to the body shop.



Fig. 3.2 Damage car body



Fig. 3.3 Body shop

3.1.1 Denting

Denting is a process in which the body of the car is not repair or replaced in these a selected portion or we can say it a defected part of body of the car on which dents, marks, scratches, stains, are to be repaired by some devices and equipments.



Fig. 3.4 Denting shop

3.2 Paint shop

Paint shop is the kind of parlor for cars, the aesthetic look of the cars are prepared here in this paint shop. Priming, painting, etc. are some processes perform in this shop.



Fig. 3.5 Painted parts



Fig. 3.6 Paint shop

3.3 Service shop

In service shop, as name shows in this shop the general service or repairing is done like regular service or any problem related to internal mechanisms, engines, etc. changing of engine oil, brake oil, clutch oil , gear oil, changing of air filter, etc. comes under this shop.

In this shop four types of services are to be done they are as follows:

1. Free services
2. Paid services
3. Running repair services
4. Quick Services

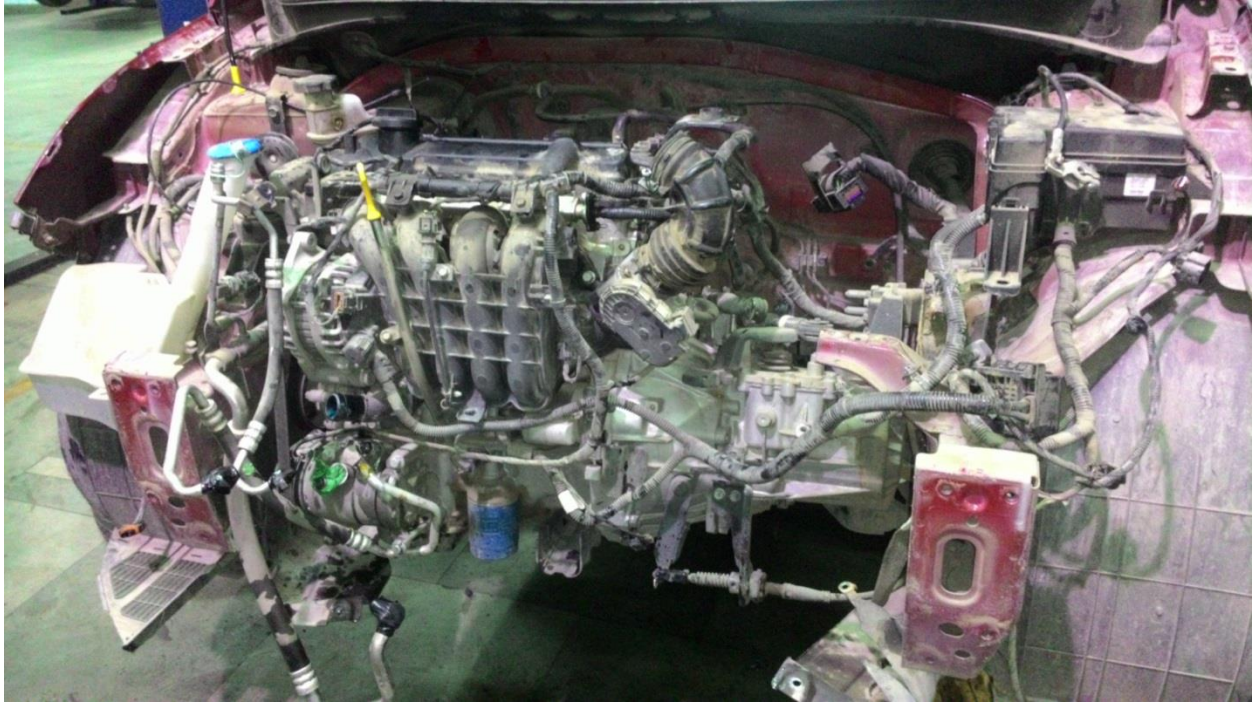


Fig. 3.7 Opening of engine



Fig. 3.8 Separating gear box from engine

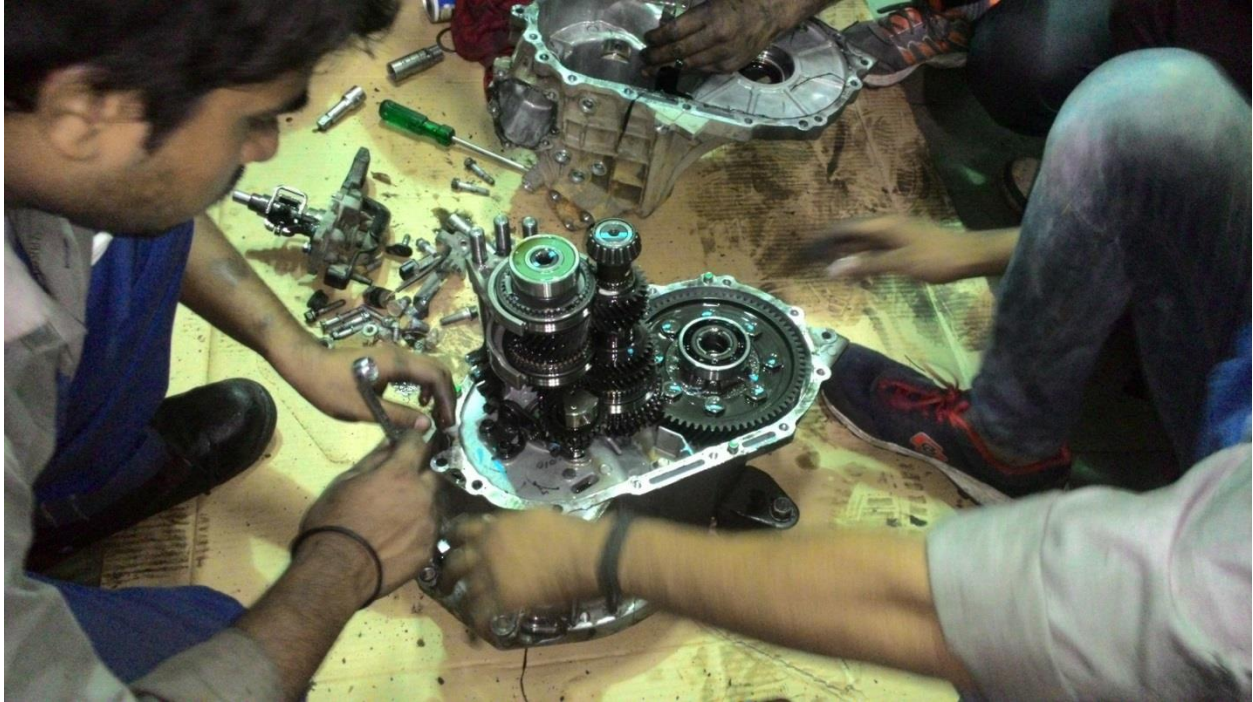


Fig. 3.9 Repairing gear box

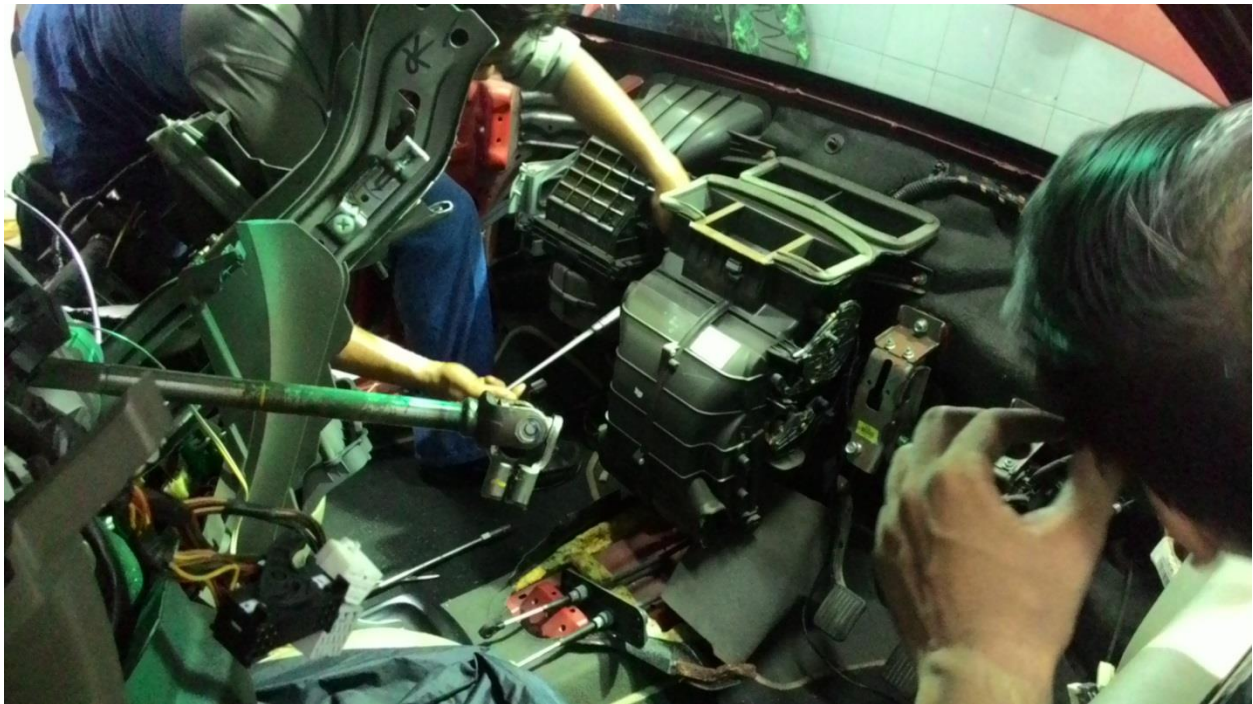


Fig. 3.10 Repairing A/C system

3.3.1 Free services

Under this type of service category only those types of customer's cars are to be repaired which are within period of company's warranty. When any customer buys a new car the company provided them first 3 to 4 services are free that means customer did not need to be pay for his first four services. Only those parts to be repaired which are in fall under warranty period otherwise it will be go in paid service.

3.3.2 Paid services

In these type of service customer have to pay for his cars services whenever he visit for getting service. In this category warranty period cover cars are not to be included for repairing, but in some rushes cases it can be repaired if some might faults are to be solve.

3.3.3 Running repair

In these the running cars to be repaired that means they come & order for repair and then go in a same day after the service done which are to be listed in job card.

3.3.4 Quick services

In Quick Service Station, the car comes for general repair like to check engine oil, lubricating oil, water level in battery and wind shield cleaning reservoir, air filter, A/C filter and other electronic controls and if require top-up it.

According to the repair oder the store keeper gives the parts, which are to be used to repair the car and placed in it carefully. It is a quick and short period of time service.

3.4 Washing

In washing the final cleaning is done with water and car washing shampoo. An automatic machine first washes the car then the whole washes are done by washers (manpower). Sometimes it is done first then after service accordingly customer's requirement.



Fig. 3.11 Washing shop



Fig. 3.12 Automatic washing machine

CHAPTER 4

WORKING IN DURING SERVICES IN WORKSHOP

4.1 Replacement of the oil filter cartridge

The oil filter cartridge is present at the bottom of the car which can be open with the ratchet. After opening it the used engine oil is taken out and after that the new cartridge is put in with a new washer. New washer is used to get proper fitting so that the oil should not leak.

4.2 Air filter

A particulate air filter is a device composed of fibrous materials which removes solid particulates such as dust, pollen, mold, and bacteria from the air. A chemical air filter consists of an absorbent or catalyst for the removal of airborne molecular contaminants such as volatile organic compounds or ozone. Air filters are used in applications where air quality is important, notably in building ventilation systems and in engines.



Fig. 4.1 Inserting new air filter

4.3 A/C filter

A particulate a/c filter is a device composed of fibrous materials which removes solid particulates such as dust, pollen, mold, and bacteria from the a/c of car to release filtered cooled air inside the car. A chemical air filter consists of an absorbent or catalyst for the removal of airborne molecular contaminants such as volatile organic compounds or ozone. A/c filters are used in applications where air quality is important, notably in building ventilation systems and in vehicle cabinet.



Fig. 4.2 Left side new a/c filter other side polluted a/c filter

4.4 Engine oil

Motor oil, engine oil, or engine lubricant is any of various well-developed lubricants (comprising oil enhanced with additives, for example, in many cases, extreme pressure additives) that are used for lubrication of internal combustion engines. The main function of these lubricants is to reduce wear on moving parts; they also clean, inhibit corrosion, improve sealing, and cool the engine by carrying heat away from moving parts.



Fig. 4.3 Filling engine oil in engine

4.5 Clutch plate

A clutch is a mechanical device that engages and disengages the power transmission, especially from driving shaft to driven shaft. Clutches are used whenever the transmission of power or motion must be controlled either in amount or over time. The vast majority of clutches ultimately rely on frictional forces for their operation. The purpose of friction clutches is to connect a moving member to another that is moving at a different speed or stationary, often to synchronize the speeds, and/or to transmit power. Usually, as little slippage (difference in speeds) as possible between the two members is desired.



Fig. 4.4 Clutch plate

4.6 Brake

A brake is a mechanical device which inhibits motion, slowing or stopping a moving object or preventing its motion. Most brakes commonly use friction between two surfaces pressed together to convert the kinetic energy of the moving object into heat, though other methods of energy conversion may be employed. The brake disc (or rotor in American English) is usually made of cast iron, but may in some cases be made of composites such as reinforced carbon–carbon or ceramic matrix composites. This is connected to the wheel and/or the axle. To retard the wheel, friction material in the form of brake pads, mounted on a device called a brake caliper, is forced mechanically, hydraulically, pneumatically, or electromagnetically against both sides of the disc. Friction causes the disc and attached wheel to slow or stop.



Fig. 4.5 Brake wheel

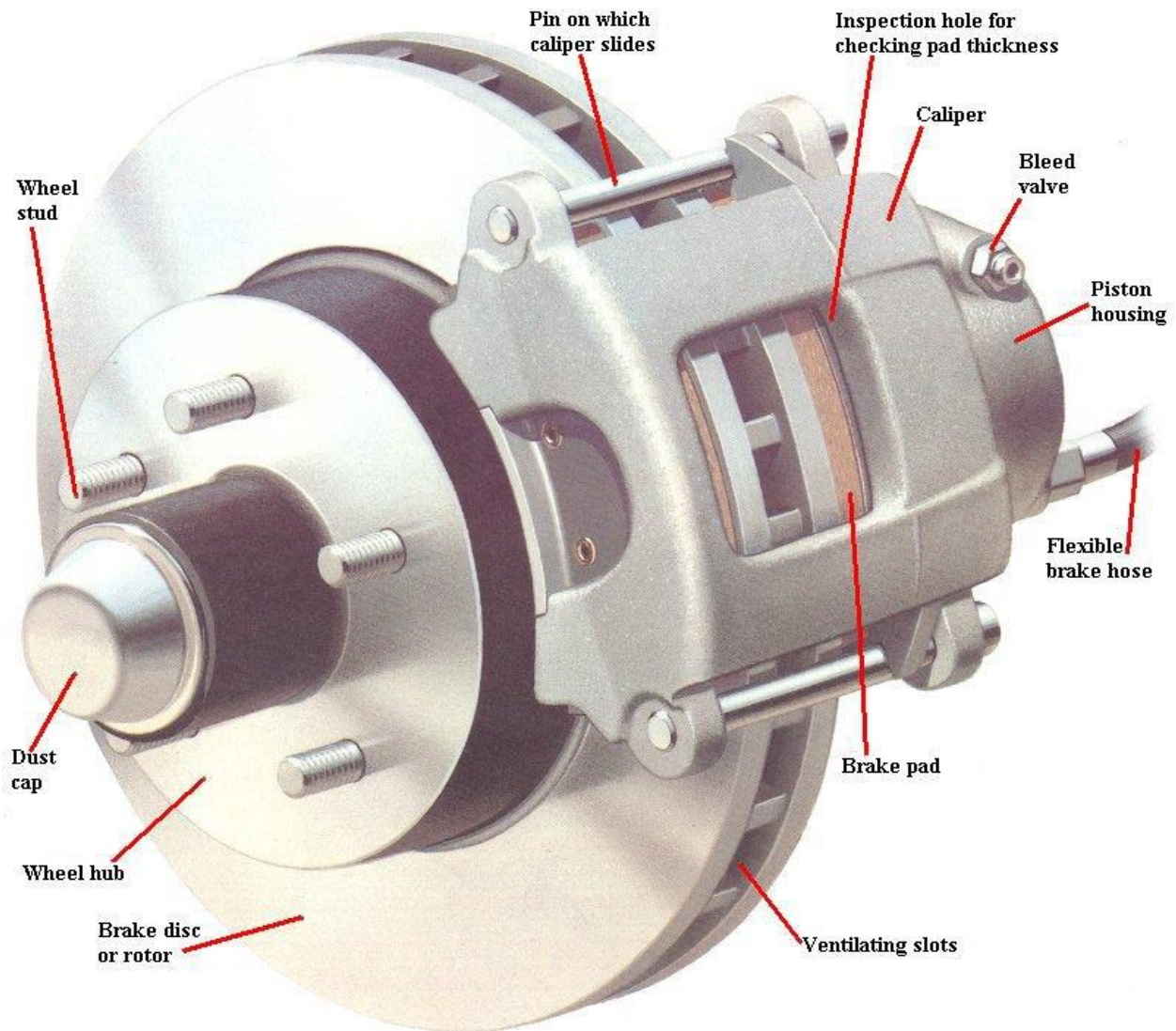


Fig. 4.6 Disc brake assembly

4.6.1 Brake pad

Brake pads are a component of disc brakes used in automotive and other applications. Brake pads are steel backing plates with friction material bound to the surface that faces the disk brake rotor.

Brake pads are designed for high friction with brake pad material embedded in the disc in the process of bedding while wearing evenly. Friction can be divided into two parts. They are: adhesive and abrasive.

Depending on the properties of the material of both the pad and the disc and the configuration and the usage, pad and disc wear rates will vary considerably. The properties that determine material wear involve trade-offs between performance and longevity.

The brake pads must usually be replaced regularly (depending on pad material, and drive style), and some are equipped with a mechanism that alerts drivers that replacement is needed, such as a thin piece of soft metal that rubs against the disc when the pads are too thin causing the brakes to squeal, a soft metal tab embedded in the pad material that closes an electric circuit and lights a warning light when the brake pad gets thin, or an electronic sensor.

Generally road-going vehicles have two brake pads per caliper, while up to six are installed on each racing caliper, with varying frictional properties in a staggered pattern for optimum performance.

Early brake pads (and linings) contained asbestos, producing dust which should not be inhaled. Although newer pads can be made of ceramics, Kevlar, and other plastics, but again inhalation of brake dust should still be avoided regardless of material.



Fig. 4.7 Disc brake pad

4.7 Wheel alignment & balancing

Wheel alignment and Wheel Balancing are totally two different things. Wheel alignment consists of adjusting the angles of the wheels so that they are perpendicular to the ground and parallel to each other. The purpose of these adjustments is maximum tire life and a vehicle that tracks straight and true when driving along a straight and level road. Wheel Balancing, on the other hand allows the tires and wheels to spin without causing any vibrations. This is accomplished by checking for any heavy spots on the wheel-tire combination and compensating for it by placing a measured lead weight on the opposite site of the wheel from where the heavy spot is.



Fig. 4.8 Wheel alignment



Fig. 4.9 Wheel balancing

4.8 Final Inspection

In final inspection, the last inspection is done so, that there should not be any single problem left in the car before handle to the customer.

This work station is just for the zero error service. This increases the customer satisfaction and hence increases the standard of the workshop as well as the service which is providing.



Fig. 4.10 I am doing final inspection



Fig. 4.11 Checking all spare parts are tight or not

CONCLUSION

It was a great internship in Sikka Hyundai full of knowledge. I really enjoyed the training period. I have learnt about different services and the major minor defects generally seen in the car and how to solve them.

Most of the time I used to do the free services and some repair also like I have change the brake pads, tiers, replacing the engine oil, coolant and many other things, I also learned how to drive car with ease, and how to check all the sensors are working or not if not so, then I have made a note for that in repair order.

I also seen that how an organization work under extreme pressure and how to handle it like when so many cars have to repair in the limited time it is really a very big task, I have also worked with GM and completed a small project there.

Overall it was a good experience and it increases my interest in the Automobile engineering, now i am planning to enhance my skills in this field.

REFERENCES

- ❖ [www.sikka.hyundai.com/home/about us./gallery../service request...](http://www.sikka.hyundai.com/home/about-us/gallery/service-request)
- ❖ [www.wikipedia.org.in/Hyundai motor India ltd../abbot..](http://www.wikipedia.org.in/Hyundai%20motor%20India%20ltd./abbot..)
- ❖ <http://www.whiterockvw.com/essential-summer-car-maintenance-tips>
- ❖ <http://motorbash.com/eight-years-counting-hyundai-india-is-the-top-exporter-of-the-year/>
- ❖ [http://www.carparts.com/parts faults<wheel balance and alignment](http://www.carparts.com/parts-faults/wheel-balance-and-alignment)
- ❖ http://www.business-standard.com/article/management/hyundai-s-price-jolt-for-maruti-114031201116_1.html
- ❖ [https://mobiloil.com/en/article/car.../learn...oil.../synthetic-oil-vs-conventional-oil](https://mobiloil.com/en/article/car/learn-synthetic-oil-vs-conventional-oil)