

Practice for Automobile Maintenance: Synthetic Part

Syllabus Number

1K313

Special Subjects

Elective 3 credit

AOKI, Akio

1. Course Description

The following contents will be learned.

- (1) Structure and functions of electrical devices, status confirmation of electrical devices by characteristic measurement
- (2) Concept and process of exploring failure cause in electric devices, electronic control devices, etc.
- (3) Maintenance of inspection items for regular maintenance and inspection, inspection equipment handling, and assessment and determination of inspection results

In this lesson, knowledge, techniques, and attitudes regarding DP 3, DP 4, and DP 5 will be acquired.

Lessons are primarily practice-style using exclusive automobiles as teaching materials.

2. Course Objectives

Students can apply the cause exploration process to concrete cases against faults that are related to basic functions and target functions of electrical components of automobiles.

In addition, it can be applied to concrete cases concerning regular inspection, maintenance, automobiles inspection, and related equipment handling.

3. Grading Policy

The grade evaluation is based on 50% of the reports and 50% of the exam results, but it will be evaluated by deducting the attitude in the lessons. The lessons attitude is to be able to observe the "safety instructions in the first lessons, and the instructions on clothes and other matters in the practical training". The report will be submitted in the specified date. The exam will be held in the 15th lessons and will be explained after the exam.

4. Textbook and Reference

Textbook

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Second grade gasoline car engine version Japan Automobile Service Promotion Association (JASPA)

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Third grade gasoline engine

Japan Automobile Service Promotion Association (JASPA)

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Second grade gasoline car second grade diesel car chassis Japan Automobile Service Promotion Association (JASPA)

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Third grade automobile chassis Japan Automobile Service Promotion Association (JASPA)

Reference

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Second grade diesel car engine version Japan Automobile Service Promotion Association (JASPA)

Textbook editorial committee of the Japan Automobile Service Promotion Association(Supervised by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Third grade automobile diesel engine Japan Automobile Service Promotion Association (JASPA)

Textbook editorial committee of the Japan Automobile maintenance colleges association(Recommended by the Ministry of Land, Infrastructure, Transport and Tourism Road Transport Bureau) Electric component structure Japan Automobile Maintenance Colleges Association(JAMCA)

5. Requirements(Assignments)

(1) As preparations for next lesson, please check the meaning of the proper noun and the contents of the relationship

shown in the contents of the lesson, and come to the class. (90 minutes)

(2) As a review, please prepare a report on the items instructed during the lesson, so that you can explain them in the next lesson. (90 minutes)

6. Note

◎ All the lessons must be attended. Late arrivals, early leavings, and absences are strictly checked.

◎ In this practical lesson, uniforms, working caps, safety shoes, and tools of the same specification are used for everyone who purchased in advance.

◎ Report paper for report submission will be prepared by yourself.

7. Schedule

- [1] Safety instructions , and the instructions on clothes and other matters in the practical training.
Practical work, inspection and performance examination, and inappropriate repairs, etc.
Explanation of inspection and examination of length, width, height, and minimum ground height, etc.
- [2] Gasoline engine, power train devices, brake devices, and steering devices, etc.

- [3] Locking device, shock absorbing device, etc.
- [4] Inspection of automobiles in inspection line.
- [5] Wiring diagram collection (equipment outline, circuit diagram, wiring diagram, index) and application of wiring drawing collection to stop lamp circuits.
- [6] The relation between stop lamp circuits and wiring in automobiles as teaching materials.
- [7] Measuring the normal voltage of stop lamp circuits.
- [8] Process of exploration of failure cause in electric circuits. Exploring the cause of failure in stop lamp circuits.
- [9] Application of wiring drawing collection to tail lamp circuits and clearance lamp circuits.
- [10] The relation between tail lamp circuits, clearance lamp circuits, and wiring in automobiles as teaching materials.
- [11] Measuring the normal voltage of tail lamp circuits and clearance lamp circuits.
- [12] Exploring the cause of failure in tail lamp circuits and clearance lamp circuits.
- [13] Process of exploration of failure cause in electronic control. Exploring the cause of failure in power systems.
- [14] Inspection of sensor system and exploring the cause of failure in sensor systems.
- [15] Final exam and summary