

Practice for Maintenance:Part4

Automobile Syllabus Number

1K311

Special Subjects
Elective 3 credit

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1. Course Description

Students will learn the following contents by using the equipment and parts of the car:

- (1) Structure and function of electronic control engine.
- (2) Maintenance of head gasket replacement and timing belt replacement.
- (3) Inspection and adjustment of electronic control engine (using external diagnostic machine).

Although this lesson is mainly a practical form, exercises and tasks are carried out in pairs or group work, and everyone will discuss their answers.

In this lesson, you will acquire knowledge, techniques and attitudes about the degree granting policy DP 4 and DP 5.

2. Course Objectives

Students understand the fundamental structure and function necessary for maintenance of the electronically controlled engine of the automobile, and can implement the basic force of maintenance and replace the head gasket and change the timing belt. Also learn how to control electronic control engine using oscilloscope, oscillator and external diagnostic machine.

3. Grading Policy

We will evaluate the class attitude based on the penalty reduction method 50% regular test and 50% problem report. The lesson attitude is to defend the "knowledge of practical work" which will be explain and distribute at the time of the first class. In the assignment report, we use a ballpoint pen horizontally in A4 size paper, and summarize contents / tasks etc. for each practical training. Students need to fill out the student ID number and name on the cover and submit it during regular examination day. In addition, we will return and explain the assignment report.

4. Textbook and Reference

Textbook

Supervised by Ministry of Land, Infrastructure and Transport Third grade automobile gasoline engine Japan Automobile Maintenance Promotion Federation, ISBN codes not stated
Supervised by Ministry of Land, Infrastructure and Transport Second grade gasoline car engine version Japan Automobile Maintenance Promotion Federation, ISBN codes not stated
Teaching materials used: training vehicle, external diagnostic machine, board on lift, etc.

5. Requirements(Assignments)

- (1) Students are required to attend all classes. Late arrival, early leave and absence are monitored.
- (2) Students also need to prepare report paper, notes etc. on your own.
- (3) In this lesson, please wear uniforms, hats and safety shoes of the same specifications purchased in advance and students are allow to use their own tools.
- (4) Practice for Automobile Maintenance 4 is a compulsory subject of the AUTO MOBIL TECHNIQUE course · [AT course] ◆.
- (5) One lesson in three periods (90 minutes x 3).

6. Note

7. Schedule

- [1] Handling precautions on vehicles, about safety, Handling of board on lift, General discussion
Preliminary course: to read through pages 7 to 17 of the textbook second class gasoline car engine comprehension about the range of practical training
Review: To understand the contents of the practical range again based on the teaching materials
- [2] Disassembly of electronic control engine (radiator, electric parts, etc.)
Preparation: Textbook third grade automobile gasoline · engine P 59-67 Please read through page and understand the practical range
Review: To understand the contents of the practical range again based on the teaching materials
- [3] Disassembly of electronic control engine (timing belts etc.)
Preparation: Textbook Grade 3 Grade Automobile Gasoline Engine P 32 - 33 through reading through pages and understanding the practical range
Review: To understand the contents of the practical range again based on the teaching materials
- [4] Disassembly of electronically controlled engine (Head gasket and others)
Preparation: Textbook third grade automobile gasoline engine P 22 read through to understand the range of practical training
Review: To understand the contents of the practical range again based on the teaching materials
- [5] Inspection, measurement, cleaning, cleaning work of each part of electronic control engine
Preparation: Textbook third grade automobile gasoline · engine P 35-37 Please read through page and understand the practical range
Review: To understand the contents of the practical range again based on the teaching materials
- [6] Assembling of electronic control engine (head gasket, etc.)
Preliminary course: to read through the P22 page of the textbook second grade gasoline car engine comprehension about practical range
Review: To understand the contents of the practical range again based on the teaching materials

- [7] Assembling of electronic control engine (timing belts etc)
 Preparation: Textbook third grade automobile gasoline · engine P 31-32 Please read through
 page and understand the practical range
 Review: To understand the contents of the practical range again based on the teaching materials

- [8] Assembling of electronic control engine (radiator, electric parts, etc.)
 Preparation: Textbook third grade automobile gasoline · engine P 59-67 Please read through
 page and understand the practical range
 Review: To understand the contents of the practical range again based on the teaching materials
- [9] Inspection and adjustment after assembly (compression, ignition timing, CO, HC measurement)
 Preparation: Textbook Grade 3 Grade Automobile Gasoline Engine P to read pages 128 to 133
 and understand the range of practical training
 Review: To understand the contents of the practical range again based on the teaching materials

- [10] Test run (real run or 4 wheel chassis dynamometer), basic of electronic circuit
 Preparation: Textbook third grade automobile gasoline · engine P115 ~ 133 Please read through
 page and understand the practical range
 Review: To understand the contents of the practical range again based on the teaching materials

- [11] Inspection and troubleshooting of engine electrical system
 Preliminary course: to read through the pages of pages 153 to 162 of the textbook second grade
 gasoline car engine comprehension about the range of practical training
 Review: To understand the contents of the practical range again based on the teaching materials

- [12] On the basis of engine electronic control using external diagnostic equipment
 Preliminary course: to read through the pages of pages 141 to 152 of the textbook second grade
 gasoline car engine comprehension about the range of practical training
 Review: To understand the contents of the practical range again based on the teaching materials

- [13] On the functions of sensors and actuators of electronically controlled engines
 Preliminary course: Textbook second class Gasoline car engine edition P105 ~ 135 Please read
 through page and understand the range of practical training
 Review: To understand the contents of the practical range again based on the teaching materials

- [14] About oscilloscope, various control using external diagnostic machine
 Preliminary course: Textbook second class Gasoline car engine edition P105 ~ 135 Please read
 through page and understand the range of practical training
 Review: To understand the contents of the practical range again based on the teaching materials

- [15] Test, summary