

## **UNIT 3 : WHEEL ALIGNMENT**

### **1. CONDITIONS OF ACCESS TO THE UNIT:**

#### **TECHNICAL PRE-REQUISITES :**

**Before starting the training course, the student must be able to :**

- Complete basic maintenance on suspension and steering systems

#### **METHODOLOGY PRE-REQUISITES :**

**Before starting the training course, the student must be able to :**

- Choose the appropriate documents for the job to be done
- Use suspension and steering terminology

### **2. VALIDATION OF UNIT 3 :**

**Test:** practical assessment in a real situation allowing the acquisitions obtained during the training course to be assessed

**Objective of the assessment :** Assess the capacities of the candidate to establish a diagnostic on the wheel alignment using the appropriate information and testing method, and to repair the fault.

**Duration:** 2 hours 30 maximum

#### **Material Necessary:**

Written information about the problem

Vehicle presenting a malfunction on the wheel alignment.

All useful technical documents

Equipped work station

4-wheel alignment testing equipment

#### **NB**





The assessment is to be done by at least two instructors competent in the professional domain of automobile maintenance.

## UNIT 3 : WHEEL ALIGNMENT

KNOWLEDGE	SKILLS	COMPETENCE
<p><b><u>K1:</u></b> General description</p> <p>K1.1: Mathematic measures and values            K1.2: Trigonometry            K1.3: Mapping on a axis or a plane            K1.4: 2D and 3D geometry</p> <p><b><u>K2:</u></b> Wheel Alignment</p> <p>K2.1: Angles of wheel alignment            K2.2: Variation of the angles depending on the movement of the vehicle            K2.3: Testing conditions depending on manufacturers' recommendations            K2.4: Diagnostic angles :                - swivel axis inclination (SAI)                - king pin offset                - camber and caster                - over steer and under steer                - left and right offset                - rear and front offset            K2.5: Geometry of the vehicle            K2.6: Height of the vehicle            K2.7: Dish of the wheel</p>	<p><b><u>S1:</u></b> Explain the use of angles</p> <p><b><u>S2:</u></b> Put the vehicle into position and condition</p> <p><b><u>S3:</u></b> Establish a diagnostic procedure</p> <p><b><u>S4:</u></b> Check the geometry of the wheel alignment</p> <p><b><u>S5:</u></b> Establish the relationship between the behaviour of the vehicle and the wheel alignment</p> <p><b><u>S6:</u></b> Analyse the test report</p> <p><b><u>S7:</u></b> Adjust the geometry of the wheel alignment</p> <p><b><u>S8:</u></b> Identify the faulty parts</p>	<p><b><u>C1:</u></b> Complete a diagnostic and maintenance on the wheel alignment</p> <p>C1.1: Complete all of the preliminary test            C1.2: Check the geometry of the wheel alignment            C1.3: Analyse and justify orally the test bench report            C1.4: Adjust the wheel alignment            C1.5: Respect the methods and schedule</p> <p><b><u>C2:</u></b> Organise the work respecting health and safety rules</p>

### CREDIT POINTS



FINLAND 	FRANCE 	HUNGARY 	ROMANIA 
2	8	3	2