



Title of unit:	Hydraulic Systems on Heavy Vehicles		
Prerequisites:	No preskills required		
Work tasks that the learner should be able to do after completing this unit:	The student should be able to do basic check on the most common sensors and actuators in a hydraulic system		
Learning outcomes:	<i>Knowledge</i>	<i>Skills</i>	<i>Competences</i>
	Knows the most common symbols as used in a hydraulic system diagram.	Reads, follows and understands a hydraulic system diagram.	Measures hydraulic pressures to check correct operation / adjustments.
	Describes function of each component of a hydraulic system.	Carries out the needed periodical maintenance.	Interprets outcomes of measurements and judge them on correctness.
	Describes performance of most important components of a hydraulic system.	Makes adjustments for correct operation or customer wishes.	Is able to do adjustments according to manufactures specifications
	Knows what periodical maintenance is required on a hydraulic system	Is able to interview and fill in a symptom report.	Is able to do a function test on a sensor in a vehicle
	Knows what adjustments on a hydraulic system are possible.		Is able to, and in autonomy, carry out a complete fault tracing using all known skills, knowledges and competences in this unit
	Knows why the adjustments on a hydraulic system are important.		
	Knows where to make the adjustments on a hydraulic system		
	Recognizes components by view and connections.		
Reference to national qualification:	Sweden – Fordon och Transportprogrammet (SeQF 4) France – BTS Après-Vente des Véhicules Automobiles - Option Véhicules Industriels - Classe Europe (poids lourds, camions) Turkey – Engine Vehicle technology Vocational School Turkey The Netherlands – Bedrijfsautotechnicus Finland - Vehicle Sector, competence area in Vehicle Technology, Vehicle Mechanic (EQF 4)		
Reference to EQF/NQF:	The unit is too small to refer to an EQF level. Because it refers to an NQF this is an indirect reference to the EQF to which the regarding NQF belongs.		
ECVET points	N/A		
Assessment:	Students will be assessed based on their knowledge's, skills and competences given in this unit. The student will be assessed both continually and in a practical fault tracing situation.		

	<p>The student will work on a vehicle (ex. wheel loader, timber truck, truck with crane), with specific tasks, e.g. to identify components, to explain system layouts and function of the hydraulic system, explain safety precautions and solve a hidden/unknown fault.</p>
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The student will solve the tasks by combining his/her skills, knowledges and competences. The student will solve the task/problem in a logical order by interviewing the customer and by looking for guidance in manuals. The student should carry out proper tests and verify that he/she has found the right fault by using the right tools and equipment when doing measurements in the system/on the component.

The assessment will be overseen by an assessor / (teacher) who has the proper technical skills.

The student will as a complement, create a report, step by step, explaining his/her actions.

There will be a hand out to the assessor where he/she can follow the work and make notes.