

MODULE MEC2120: HYDRAULIC ACCESSORIES**Level:** Intermediate**Theme:** Guidance and Control Systems**Prerequisite:** MEC1110 Pneumatics & Hydraulics**Module Description:** Students develop a basic knowledge of hydraulic components, applications and servicing techniques.**Module Parameters:** Access to basic hand tools hydraulic systems and related resources.**Curriculum and Assessment Standards**

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> demonstrate safe work practices when working with hydraulic systems 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> observed performance related to: <ul style="list-style-type: none"> hazards associated with pressurized hydraulic equipment safe use of tools, equipment and materials safe use of personal protective equipment correct use of equipment and supplies used on vehicles. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Hydraulic Accessories, Part 1, MEC2120-1</i></p> <p><i>Standard</i> <i>Performance rating of 2 on each criteria</i></p>	10
<ul style="list-style-type: none"> describe functions of hydraulic components in a hydraulic system 	<ul style="list-style-type: none"> observed performance related to: <ul style="list-style-type: none"> the identification and description of hydraulic components appropriate use of hydraulic resources. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Hydraulic Accessories, Part 2, MEC2120-1</i></p> <p><i>Standard</i> <i>Performance rating of 2 on each criteria</i></p>	15
<ul style="list-style-type: none"> interpret parts and service manuals to provide appropriate maintenance and service procedures on a hydraulic system 	<ul style="list-style-type: none"> observed performance related to: <ul style="list-style-type: none"> listing appropriate servicing procedures and techniques on hydraulic components developing a service schedule for a given application interpreting parts and service manuals. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Hydraulic Accessories, Part 3, MEC2120-1</i></p> <p><i>Standard</i> <i>Performance rating of 2 on each criteria</i></p>	50

MODULE MEC2120: HYDRAULIC ACCESSORIES (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> • service hydraulic components • demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</i></p> <ul style="list-style-type: none"> • servicing individual components on a given a hydraulic system. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Hydraulic Accessories, Part 4, MEC2120-1</i></p> <p><i>Standard</i> <i>Performance rating of 2 on each criteria</i></p> <ul style="list-style-type: none"> • observations of individual effort and interpersonal exploration during the learning process. <p><i>Assessment Tool</i> <i>Basic Competencies Reference Guide and any assessment tools noted above</i></p>	<p>25</p> <p>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
Health/Safety Hazards	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • demonstrate knowledge of and follow lab safety procedures • explain hazards associated with pressure and heat build-up hydraulic systems. 	
Identify/Analyze	<ul style="list-style-type: none"> • describe the properties of hydraulic fluids in relation to: <ul style="list-style-type: none"> – viscosity – lubricating ability – resistance to oxidation – corrosion prevention • identify the common types of connecting lines/hoses, fitting and seals • describe the internal parts of a reservoir and state the purpose of filters, strainers and breathers • describe the construction and operation of: <ul style="list-style-type: none"> – cylinder – gear and vane motors 	

MODULE MEC2120: HYDRAULIC ACCESSORIES (continued)

Concept	Specific Learner Expectations	Notes
Identify/Analyze (continued)	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • describe the function of: <ul style="list-style-type: none"> – check and pressure control valves – two- and four-way valves • describe the construction and operation of gear, vane and piston pumps • explain why and when accumulators are used in a hydraulic system. 	
Inspect/Service	<ul style="list-style-type: none"> • demonstrate how to: <ul style="list-style-type: none"> – check fluid levels in reservoirs – clean strainers – replace system filters with the approved parts – check seals for leaks and replace – replace a defective hose, line and fitting – replace the hydraulic fluid in a system. 	
Careers	<ul style="list-style-type: none"> • identify further education, working conditions and career opportunities. 	