

MODULE MEC1150: RIDE & CONTROL SYSTEMS**Level:** Introductory**Theme:** Suspension and Structural Systems**Prerequisite:** None**Module Description:** Students develop a basic knowledge of ride and control systems associated with vehicles.**Module Parameters:** Access to floor jack, safety stands, suspension/steering system 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 use of tools, and follow established lab procedures 	<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"> following established shop/lab routines use of floor jack and safety stands. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Ride and Control Systems, Part 1, MEC1150-1</i></p> <p><i>Standard</i> <i>Performance rating of 2 on each criteria</i></p>	10
<ul style="list-style-type: none"> describe the purpose, operation and interdependent nature of ride and control systems 	<ul style="list-style-type: none"> report showing purpose and operation of suspension, steering and braking system used on land vehicles report showing how hydraulics, pneumatics and electrical are applied to ride and control systems. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Ride and Control Systems, Part 2, MEC1150-1</i></p> <p><i>Standard</i> <i>Performance rating of 1 or more on each criteria</i></p>	30
<ul style="list-style-type: none"> inspect and service ride and control systems 	<ul style="list-style-type: none"> observed performance in inspecting/servicing suspension, steering and brake systems including the following: <ul style="list-style-type: none"> labelling and checking parts subject to wear inspecting and repacking a wheel bearing identifying tire wear problems. <p><i>Assessment Tool</i> <i>Task Assessment Checklist: Ride and Control Systems, Part 3, MEC1150-1</i></p> <p><i>Standard</i> <i>Performance rating of 1 or more on each criteria</i></p>	60

MODULE MEC1150: RIDE & CONTROL SYSTEMS (continued)

Module Learner Expectations	Assessment Criteria and Conditions	Suggested Emphasis
<p><i>The student will:</i></p> <ul style="list-style-type: none"> demonstrate basic competencies. 	<p><i>Assessment of student achievement should be based on:</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>Integrated throughout</p>

Concept	Specific Learner Expectations	Notes
<p>Health/Safety Hazards</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> demonstrate knowledge of and follow established safety procedures. 	
<p>Identification/Function</p>	<ul style="list-style-type: none"> locate and identify the components that are used to provide: <ul style="list-style-type: none"> stopping action directional control rolling action stabilization cushioning other describe methods of directional control on land, sea and air vehicles/crafts describe the method of steering used by most wheeled vehicles explain the purpose of the parts of a conventional steering system; e.g., steering gear, tie rod end, idler arm, pitman arm and steering knuckle list the parts of a steering system that are subject to wearing or bending. 	

MODULE MEC1150: RIDE & CONTROL SYSTEMS (continued)

Concept	Specific Learner Expectations	Notes
<p>Identification/ Function (continued)</p>	<p><i>The student should:</i></p> <ul style="list-style-type: none"> • identify and describe the action of the following types of braking systems and possible application: <ul style="list-style-type: none"> – mechanical – hydraulic – electric – air – other • explain the difference between the braking action of a disc and drum brake • determine how tires and tracks vary according to: <ul style="list-style-type: none"> – road or terrain use – seasonal use – methods of construction • show how to examine the wear pattern on a tire to determine whether it has been: <ul style="list-style-type: none"> – over or under inflated – improperly aligned – subject to suspension faults – balanced improperly. 	<p>Examine the construction of highway and off-highway tires.</p>
<p>Identify/Service</p>	<ul style="list-style-type: none"> • check and complete a tire repair • complete a tire balance • identify tire wear problems • inspect and repack wheel bearing • list and identify the parts of a braking system that are subject to wearing, seizing or leaking. 	