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ONLY

## 2019 Competition

### Heavy Equipment Technology (#49)

**Steering, Braking, and Undercarriage**

**Task**

*(5 of 6)*

Competitor number \_\_\_\_\_

Start time \_\_\_\_\_

Judge's name \_\_\_\_\_

Finish time \_\_\_\_\_

### Competition Overview

**Time limit:** 2 hours

**Equipment:** Tracked machine

**Number of tasks:** 2

Task 1: Put the vehicle up on stands.

**Value 50 %**

Task 2: Change a roller on the undercarriage.

**Value 50 %**

#### General Instructions:

The judge has all the materials you will need.

If you are unsure about any procedure, you may ask your judge for clarification.

Marks may be deducted if the judge decides you should know the procedure.

Before you start, you must go through the following Hazard Assessment with your judge so that you will be able to work safely.

**Hazard Assessment:**

This Hazard Assessment is to discuss the following **5 hazards** and the counteractive measures you must take.

**Hazard 1:** Wheels , drive shafts and engine parts will be rotating during testing



- Keep hands clear of moving objects. (Fan, Pulleys and belts)
- Replace guards before operating the machine
- If the engine must be running communicate your procedure to the judge before proceeding

**Hazard 2:** Touching powertrain lubricating fluids may irritate skin.



- Latex gloves, barrier skin cream, and wiping cloths are available.

**Hazard 3:** You might slip off the machine while climbing into the operator compartment



- Face the vehicle and position your hands and feet appropriately.
- Use three points of contact at all times.

**Hazard 4:** Track tensioners have stored energy even with the key in the off position.



- Relieve trapped pressures and lock out the machine before performing service procedures

**Hazard 5:** Procedure may require the machine to be raised off the floor for power train testing..



- Confirm all blocking is in the correct position to support the machine before testing
- DO NOT enter the space under the machine if it is operating



Ask  
Information

*If you do not quite understand or are unsure about the hazards, please ask your judge for assistance.*

*No marks will be deducted for asking about hazards.*

I have read this hazards assessment and the judge has explained it to me.

I understand the hazards and I will take precautions to avoid them.

Competitor's name \_\_\_\_\_

Competitor's signature \_\_\_\_\_

Judge's name \_\_\_\_\_

Date \_\_\_\_\_

**Evaluation:**

Number of marks possible: **18.0**

<b>Skills evaluated</b>				
	<b>Task 1</b>	<b>Task 2</b>		
a. Use of safety equipment & safe and clean workspace				
b. Use and interpretation of service manuals & schematic diagrams				
c. Logical order of repair				
d. Proper use of tools				
e. Precise adjustment of components				
f. Accurate measurements				
g. Superior Workmanship				
h. Identification of faults, codes, or components				



Ask  
Information

*If you cannot proceed with a task, ask your judge for assistance.*

**Task 1 of 2: Put the vehicle up on stands.**

**Value 50 %**

1. Using the manufacturer's manuals safely, appropriately, and accurately:

Put the vehicle up on stands.

The judge will assist you in vehicle operation - you must communicate what you want the judge to do.

2. Briefly document the procedures and findings when performing this procedure.

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3. At the conclusion of this task, ask your judge to inspect your positioning of the vehicle on the stands.



Ask  
Information

*If you cannot proceed with a task, ask your judge for assistance.*

**Task 2 of 2:** Change a roller on the undercarriage.

**Value 50 %**

1. Using the manufacturer's manuals safely, appropriately, and accurately:

Determine which roller needs to be changed, and change a roller on the undercarriage.

The judge will assist you in any lifting, but you must communicate what you want the judge to do.

2. Briefly document your steps taken.

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3. At the conclusion of this task, inform the judge that you are done.



Ask  
Information

*If you cannot proceed with a task, ask your judge for assistance.*

