

Contestant Name: _____

Practicum Score: _____

School: _____

2026 Kansas State Agriculture Technical and Mechanical Systems Machinery and Equipment Practicum Activity – 100 points

Instructions: Place all answers on this page. Follow all instructions carefully and completely in order to obtain full points for this activity.

Section 1 – Parts Identification

Identify the part by placing the letter of the correct term for either the tool or the part identified in the blank to the left. Make sure that your letters are legible. Use pages from the owner's manual to help identify each part. (3 points each)

Parts List (not all will be used)

- | | | |
|--------------------------------|----------------------------|--------------------------------|
| A. 540 RPM PTO | I. Main drive roller chain | Q. Top front tailgate idler |
| B. Pickup drive chain | J. Gearbox | R. Warning reflector |
| C. Floor roll drive chain | K. Pickup | S. Tailgate lift cylinder |
| D. Starter roll drive chain | L. SMV emblem | T. Tailgate lockout valve |
| E. Stationary roll drive chain | M. Back wrap roll | U. Bale density control valve |
| F. Sledge roll drive chain | N. Front serpentine roll | V. Belt tension serpentine arm |
| G. Windguard | O. Stripper roll | W. Bale shape sensor |
| H. Bale-forming belts | P. 1,000 RPM PTO | X. This part is not listed |

- | | | | | | |
|-------------|-------------|-------------|--------------|--------------|--------------|
| <u>P</u> 1. | <u>F</u> 4. | <u>J</u> 7. | <u>L</u> 10. | <u>S</u> 13. | <u>K</u> 16. |
| <u>T</u> 2. | <u>I</u> 5. | <u>H</u> 8. | <u>B</u> 11. | <u>V</u> 14. | <u>U</u> 17. |
| <u>X</u> 3. | <u>G</u> 6. | <u>C</u> 9. | <u>E</u> 12. | <u>W</u> 15. | <u>D</u> 18. |

3 pts ea.

Section 2 – Safety

Answer the following questions about round baler safety. You may use the information from the Repair manual to help. (3 points each)

25% 19. The baler should not be operated on any side slope that is greater than ___%.

B, C 20. When determining the amount of clearance needed for avoiding high voltage power lines, the following conditions should be met: (list all that apply)

- Bale chamber should be $\frac{1}{2}$ of the way full
- The tailgate should be raised
- Baler should be equipped with the spare net roll storage box
- Baler should have the twine installed

B 21. How should you check for a suspected leak of hydraulic fluid under pressure?

- Carefully use your hand with a glove to check for a leak
- Use a piece of cardboard or paper to check for the leak
- Use soapy water with a spray bottle to check
- Look closely, but be sure to have safety glasses on

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- D 22. Which of the following safety precautions should be observed before performing any lubrication or maintenance task.
- Turn off tractor engine and remove the key
 - Disengage PTO drive
 - Engage tractor parking break
 - All of the above precautions should be observed

- A 23. Which of the following is NOT a consideration or guideline to follow when the tailgate is raised and attempting to work inside the bale chamber?
- If the tailgate lock is engaged, the tailgate will still fall if all hydraulic pressure is lost
 - Be aware, the tailgate may close faster than you can move away
 - Stand clear of the tailgate before disengaging the lockout valve
 - A raised tailgate is a potential crush hazard for a person working on the baler

Section 3 – Maintenance & Adjustment

Answer the following questions about round baler maintenance and adjustment. Use the provided repair manual pages as needed.

24. How often should the PTO shaft be greased? How much grease? (general range) (5 pts)

(3pts) Every 50 hours 3 to 5 pumps (2pts)

25. How should the gearbox oil level be checked? (5 points)

Remove a port plug on the left side of the gear box.

26. An operator has decided that the bales are not heavy enough. What should they adjust to increase the density of the bales? HOW? (5 points)

Locate bale density control valve, loosen lock nut, turn knob clock wise to increase hydraulic pressure and bale density

27. How often should the roller chain be oiled? (5 points)

10 hours

28. Find the labeled floor chain tensioner and inspect the tension. Is the tension correct? YES NO

If not, describe how to adjust it to make it correct. If correct, indicate no adjustment needed. (5 pts)

- "window" on it side

29. What does this symbol mean? How often should this service be performed (most common interval) (3 points)



*Grease fitting indicator
generally 10 hrs or 50 hrs*

30. Inspect the roller wind guard. Is it set correctly for a high volume windrow? (3 pts) YES NO