



2005 State Competition
FFA Agricultural Mechanics Contest
University of Missouri
50 points

Name _____
Contestant Number _____
Chapter _____

Agricultural Machinery

Skid Steer

1. What is the product identification number of this skid steer?
 - a. 317
 - b. RW7510H072153
 - c. 4JDXL03495283
 - d. T00317A106174

2. What is the purpose of the item labeled B?
 - a. Operate bucket
 - b. Hydraulic couplers for attachments
 - c. Relieve Pressure on hydraulic system
 - d. Drain Coolant

3. According to the manual, how fast should the engine run during the warm-up period?
 - a. $\frac{1}{4}$ throttle
 - b. $\frac{1}{3}$ throttle
 - c. $\frac{1}{2}$ throttle
 - d. $\frac{2}{3}$ throttle

4. Where is the boom lock located on this machine?
 - a. Behind the seat
 - b. Near the boom lift cylinders
 - c. In the engine compartment
 - d. Beside the engine speed control lever

5. What type of boom and bucket controls does this machine have?
 - a. Hand controls
 - b. Foot controls
 - c. Hand and foot controls
 - d. Console controls

6. What type of oil is used for the chain case in temperatures between 0⁰ F and 122⁰ F?
 - a. Hy-Guard
 - b. Low Viscosity Hy-Guard
 - c. Plus 50
 - d. SAE 30

Identify items 7 through 10 tagged on the skid steer as shown in the manual.

7. Latch handles
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5

8. Auxiliary hydraulic override switch
 - a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. 5

9. Fuel water canister
 - a. 6
 - b. 7
 - c. 8
 - d. 9
 - e. 10

10. Coolant recovery tank
 - a. 6
 - b. 7
 - c. 8
 - d. 9
 - e. 10

11. How often should the hydraulic oil tank breather element be replaced?
 - a. 200 hours
 - b. 300 hours
 - c. 400 hours
 - d. 500 hours

Identify the following items tagged 1 through 8 with the description:

12. Field Cultivator sweep
 - a. 1
 - b. 3
 - c. 5
 - d. 7

13. Left-hand row crop cultivator sweep
 - a. 1
 - b. 3
 - c. 6
 - d. 8

14. Ripper point
- a. 2
 - b. 4
 - c. 6
 - d. 8
15. Chisel Plow sweep
- a. 2
 - b. 4
 - c. 5
 - d. 7

Grain Vac

16. Joe Farmer is transporting this grain vac completely empty, realizing that his weight of implement to weight of towing machine is 1 to 1 at what speed is he able to transport this implement safely?
- a. 30 mph
 - b. 20 mph
 - c. 10 mph
 - d. Do not tow
17. What is the minimum tractor PTO horse power required to operate this unit?
- a. 80 horse tractor @ 540 rpm
 - b. 110 horse tractor @ 540 rpm
 - c. 80 horse tractor @ 1000 rpm
 - d. 110 horse tractor @ 1000 rpm
18. What are the correct hydraulic system requirements for this unit?
- a. 8gpm @ 1500psi
 - b. 10gpm @ 1800psi
 - c. 6gpm @ 1800psi
 - d. None of the above
19. Joe Farmer is preparing to use his grain vac to move a large quantity of canola, what is the airlock speed he would need to use to insure maximum performance?
- a. 35-55rpm
 - b. 50-60rpm
 - c. 60-80rpm
 - d. 45-60rpm
20. What are the three points of lubrication for this unit for a daily service?
- a. PTO, Input pulley shaft, Boom Grease Nipples
 - b. PTO, Input pulley shaft, Boom Grease Nipples, Wheel Bearings
 - c. PTO, Boom Grease Nipples, Wheel Bearings
 - d. PTO, Boom Grease Nipples

Parts ID Grain Vac

Determine the name of the parts labeled, as shown in the manual, and record your answer in the blank provided.

Questions 21 thru 25 Gain Vac parts ID

21. Pin weldment boom hinge

- a. 1
- b. 3
- c. 5
- d. 9
- e. 10

22. Knob for control valve

- a. 2
- b. 5
- c. 6
- d. 8
- e. 10

23. Hydraulic motor, white

- a. 4
- b. 5
- c. 7
- d. 9
- e. 10

24. Knob for flow control valve

- a. 6
- b. 7
- c. 8
- d. 9
- e. 10

25. Sheave

- a. 1
- b. 2
- c. 3
- d. 4
- e. 5