

Iowa FFA Agricultural Mechanics Career Development Event  
2006

State of Iowa  
DEPARTMENT OF EDUCATION  
Career Education Division  
Grimes State Office Building  
Des Moines, IA 50319

CONTESTANT NAME \_\_\_\_\_

CONTESTANT SCHOOL \_\_\_\_\_

**MACHINERY AND EQUIPMENT SYSTEMS**  
Problem Solving/Skill

**Instructions:**

You will have 15 minutes to do this exercise. Using the sections from the owner's manual, and your knowledge of tractors, answer the following questions.

I. What are the last five digits of: 2 pts.

- a) Tractor Product Identification Number \_\_\_\_\_
- b) Engine Serial Number \_\_\_\_\_

II. Identify by proper name the machine component or describe its function as specifically as possible 10 pts.

- | Name     | Name     |
|----------|----------|
| a) _____ | f) _____ |
| b) _____ | g) _____ |
| c) _____ | h) _____ |
| d) _____ | i) _____ |
| e) _____ | j) _____ |

III. After the break-in period, what are the service intervals (number of hours) for the following: 6 pts.

- Assume generic (not company) oil and oil filter and "normal" (not severe) operating conditions
- |                         |       |                        |       |
|-------------------------|-------|------------------------|-------|
| a) engine oil           | _____ | e) primary air cleaner | _____ |
| b) wheel lug nut torque | _____ | f) hydraulic oil       | _____ |
| c) fuel filter          | _____ | g) engine oil filter   | _____ |

IV. This tractor has an IVT transmission. What do the letters stand for? I \_\_\_\_\_ V \_\_\_\_\_ T \_\_\_\_\_ 2 pts.

- V. What is the average weight of the tractor? \_\_\_\_\_ lb 4 pts.  
 What is the engine size (displacement)? \_\_\_\_\_ cu. in.  
 What is the maximum pressure and output of the hydraulic system? \_\_\_\_\_ psi \_\_\_\_\_ gal/min

Evaluation Score Sheet

| <u>Items</u>                       |           | <u>Points</u>   |               |
|------------------------------------|-----------|-----------------|---------------|
|                                    |           | <u>Possible</u> | <u>Earned</u> |
| PIN, ESN.....                      | 2         | _____           | _____         |
| Part Identification/Function ..... |           | 10              | _____         |
| Service Intervals.....             |           | 6               | _____         |
| IVT .....                          |           | 2               | _____         |
| Specifications.....                |           | 4               | _____         |
| Safety .....                       |           | 1               | _____         |
| <b>Total</b>                       | <b>25</b> |                 | _____         |