Students please affix one of your self adhesive identification labels to this space. Do not obscure other parts of this page with the label. If you do not have a self adhesive identification label, please complete the following information. Write your name as it appears on your badge. **Your Name:** _____ **Participation Number:** [ ][ ][■][0][3][ ][ ][■][0][ ] Two letter state abbreviation. → State code (0301, 0302, …… to 0350) Team member number (01, 02, 03, or 04)	**Students please do not write or mark within this box.** *Judges, after this skill sheet has been scored and double checked, write the total score for this activity in the blank below.* **Skill Activity Score:** _____ **Judges Initials:** _____

2009 National FFA Agricultural Mechanics Career Development Event

Machine and Equipment Systems Skill Sheet

There are multiple parts to this activity!

Please read and follow directions carefully! Use your time wisely!

GENERAL INFORMATION/DIRECTIONS:

For this skill activity assume that you are the manager of a farming operation that plans to supplement the farms income by providing deer hunting opportunities to a hunting club in the fall. In order for the venture to be successful, it will be necessary to establish food plots to attract game and provide them with supplemental nourishment for optimum growth and antler development.

The overall food plot operation will encompass approximately 15 acres that will be broken up into 1 to 2 acre plots located in clearings found in wooded areas on the farm. You will be using your John Deere Gator to work the ground, spread the fertilizer, and seed the plots due to their remote location, size, and irregular shapes. You will need to apply 250 lbs. of 12-12-12 fertilizer per acre, plus an additional 20% due to the irregular shape of the food plots. The cargo bed mounted fertilizer spreader weighs 175 lbs. and assumes the individual operating the Gator weighs 200 lbs.

Before the planting can begin, you will need to perform the following tasks: determine how much fertilizer is require for the total acreage, how many trips the Gator will need to make to accomplish that task, and complete your 200 hour or one year maintenance check by performing a check on the drive belt to make sure that it is not out of specs.

PROCEDURES:

1. Because you are working around machinery, safety glasses must be worn at all times.

(Station No. _____) Utility Vehicle Model __TX 4 X 2__ Identification No. _MO4X2XD050???_
(Last 3 digits unique to machine)

2. How many pounds of fertilizer will you need to purchase? __4500__ lbs.
   250 lbs. X 15 acres = 3750 lbs. + (3750 lbs. X 20%) = 4500 lbs.

3. According to the operator's manual, what is the maximum cargo box load capacity? Ref. Page 6.21 Operators Manual __600___ lbs.

4. What is the vehicles maximum load capacity? __425___ lbs.
   (Vehicle Load Capacity = GVWR – GVW)
   GVWR = 1920 lbs. GVW = A + B + C + D + E (from handout)
   VLC = 1920 lbs. – (200 lbs. + 1120 lbs. + 0 + 175 lbs. + 0) = 425 lbs.

5. How many trips are required to apply the fertilizer? __11___ trips

4500 lbs / 425 lbs. = 10.588 trips or 11 trips or 10.588

6. Using the operator's manual and information provided, determine the following:

A. What is the minimum recommended drive belt width? ____1.1____ inches

B. What is the width of your drive belt? _1 1/8" – 1 3/8"_ inches

C. If you have to replace the drive belt what is its part number? __JDM 150046____

Skill Activity Score Sheet

Question Number	**Possible**	**Score**
1. Utility vehicle model number: (1)	2	_____
2. Utility vehicle product identification number: (1)	2	_____
3. Pounds of fertilizer required for food plots: (2)	3	_____
4. Maximum load capacity: (3)	2	_____
5. Maximum vehicles load capacity: (4)	4	_____
6. Number of trips to apply fertilizer: (5)	3	_____
7. Student followed drive belt check procedures: (6)	4	_____
8. Recommended drive belt width: (6.A)	2	_____
9. Measured width of drive belt: (6.B)	3	_____
10. Drive belt part number: (6. C)	2	_____
11. Safety and work habits:	3	_____

TOTAL POINTS: (Double check point total and enter on front) 30 _____