

**2013 Cowboy Classic
Agricultural Technology and Mechanical Systems
Energy Systems – Small Gas Engine Skill**

You are the manager of the parts department at your local green house. As manager you deal with all repairs, orders, or parts needed for the small machinery that is used in the Green House. These machines function on Briggs and Stratton L-Head engines and monthly maintenance is necessary in order to ensure optimum performance. As part of your regular monthly maintenance practice, you currently have an engine disassembled and have identified some areas of concern. In order to return this engine to service, you must correctly identify those parts needing to be replaced prior to making your part order for this month. Additionally, you will also need to evaluate some common areas on the engine to make sure those parts are in working order and do not need to be replaced. **In order to obtain the proper specifications from the repair manual you must first identify the Model, Type, and Code of your engine.**

Model: _____ Type: _____ Code: _____

1. Correctly match the parts identified that need replaced by placing the correct number of the part from the list below.

- | | | | | |
|----------|----------|----------|----------|-----------|
| 1. _____ | 3. _____ | 5. _____ | 7. _____ | 9. _____ |
| 2. _____ | 4. _____ | 6. _____ | 8. _____ | 10. _____ |

A. Spark Plug	D. Flywheel Brake	G. Ignition Armature	J. Cam Gear	M. Carburetor
B. Exhaust valve	E. Mechanical Governor	H. Flywheel	K. Governor Shaft Bushing	N. Piston Compression Ring
C. Connecting Rod	F. Crankshaft	I. Cam Shaft	L. Exhaust Muffler	O. Piston Oil Ring

2. According to the Briggs and Stratton “L” Head repair manual, the spark plug gap for this engine is .030 (.76mm). Which of the four provided spark plugs fall outside of that gap specification?

Circle the correct answer(s).

- | | | | |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
|---|---|---|---|

3. Using the engine provided, check the piston ring end gap to determine if the ring needs to be rejected.

Refer to manual for specifications.

Ring Measurement - _____ Reject? **(Circle)** Yes No

Criterion	Points Possible	Points Earned
Matching	20	
Questions (2 & 3)	8	
Safety	2	