

Small Engine Repair Instructional Scenario

Mystery Mower

Duty Area: Understanding Engine Nomenclature and Selecting Repair Parts

A neighbor gave Mary his push mower because he was moving to another town. He told her that it needed servicing for the upcoming season and that she should take it to a local small engine shop. He didn't have any of the manuals, and Mary could not find any model or serial numbers on the engine or on the machine.

At the repair shop, Mary was told that, since the machine didn't have any identifying numbers, it would be very difficult to find the correct parts needed to service it. The parts manager said it would end up being quite expensive. The extra time needed to try to find the correct and matching parts would result in a higher bill for hours of labor.

Big Question:

What consequences could result from not having the model or serial numbers for the engine/machine being serviced?

Focused Questions:

- Without correct engine/machine numbers, what options does Mary have for the mower?
- How might the service manager help Mary over the long term to have her mower serviced once the machine is better identified?
- How might customers like Mary be better informed of the importance of engine and machine numbers?

Project-Based Assessment:

Students will demonstrate their knowledge of engine and machine nomenclature through a part lookup exercise. The exercise will involve having an available engine with students finding and recording its model numbers and other related identifying information. The numbers will then be used to find, confirm, and record the names and part numbers to be used for various service and repair needs.

Example:

1. Use the repair manual to obtain information related to the model, type, and code numbers.
2. On the engine, find the model, type, and code numbers. For many of today's engines, it will have a serial number that begins with an eight-digit code number made up of the two-digit year, two-digit month, and two-digit day of manufacture, followed by a one-digit assembly line number and a one-digit manufacturing plant number. This will be followed by other catalog/inventory numbers. The model number will contain the six-digit model number and four-digit type, a hyphen, and a two-digit/alphanumeric trim number as in this example:

Model: 13R232, Type: 0022-F1, Code:22030413

3. Refer to the picture below. On the base of the engine block, the model, type, and code numbers have been laser-etched by the manufacturer. The white label contains the serial number as described above, as well as the model number that contains the type and trim numbers.
4. The QR code gives students access to various manuals for the engine.



5. Use the model, type, and trim numbers to determine the factory name and part number for an engine air filter and, if available, the pre-cleaner. Go to ereplacementparts.com and search for *13R232-0022-F1*.
6. Click on the blue *View Diagram and Parts List* box, and then enter *filter* in the search box for that page. The screen should show *Filter-A/C Cartridge* with the part number *595435*.

Resources:

[Locating B & S Engine Model, Type and Code numbers](#)

Part lookup websites

www.ereplacementparts.com

www.jackssmallengines.com

www.briggsandstratton.com/parts