

Hunting and Surging

Duty Area: Troubleshooting Fuel System Problems

The engine on Zach's push lawn mower is hunting and surging (speeding up and slowing down). The problem occurred intermittently at first, but now the engine is constantly hunting and surging. It runs relatively normally when idling or not under a load, but it is especially bad when under a heavy load. It is getting to the point where the hunting and surging is so bad that it causes the engine to shut off when under a heavy load, and the problem is getting worse.

Big Question:

How can you determine whether the hunting and surging is caused by a carburetor issue or by the governor system?

Focused Questions:

- What are the possible causes for an engine to hunt and surge?
- What is the purpose of the governor system?
- What is the purpose of the governor spring?

Project-Based Assessment:

Have students practice troubleshooting engines—some with governor problems, others with carburetor problems—to determine whether the issue is with the governor system or with the carburetor.