

# How They Work

Despite all its fancy capabilities, the modern engine monitor isn't all that complicated, at least externally. The basic system consists of a series of probes—one kind for sensing exhaust gas temperatures (EGTs) and another for cylinder heads (CHTs)—which are installed in the engine compartment and linked to the instrument via a wiring harness. We can add on things like engine oil temperature, manifold pressure and fuel flow, each of which requires some kind of probe or sensor, along with its own set of wires.

The real magic is hidden inside the instrument, where the electrical signals produced by the probes are converted to values humans can understand, then presented on its screen. What and when the instrument does with those values can be customized to provide alarms to the pilot or merely stored in memory for later retrieval and analysis.



Top, Dynon's harness for its EMS D120 engine and systems monitor, bottom, looks more complicated than it really is. This is the six-cylinder version.