

RFID Revs Up Honda Italia's Motorcycle Production

The company plans to use the technology to track inventory, automate parts replenishment and ensure that the correct components are paired with the right chassis.

By Beth Bacheldor

Jan. 12, 2007—[Honda Italia Industriale](#), the Italian subsidiary of [Honda Motor Co.](#), is initiating an RFID pilot designed to improve production of some of its larger motorcycles, including the Hornet 600 and CBF1000 bikes.

During the pilot, passive high-frequency (HF) tags will be affixed to the motorcycles' chassis and certain components, such as tachometers and engines. RFID interrogators will collect data from the tags as the chassis and parts move down the assembly line and are put together.

Some of Honda's other subsidiaries are also testing RFID. [Honda of the UK Manufacturing Ltd.](#), which produces the popular Honda Civic and CR-V automobiles, is beginning to implement RFID in tracking car parts traversing the division's supply chain (see [Honda UK to Track Components Through the Supply Chain](#)).

Honda Italia wants to improve assembly processes and production times at its plant in the city of Atessa, by tracking inventory and automating parts replenishment on the assembly line. It also hopes to improve product quality by making sure the correct components are paired with the right chassis during production, says Nicola Marrone, Honda Italia's project executive.

Honda Italia is working with [IBM](#), which helped the manufacturer conduct a feasibility study last year and began designing the pilot in November 2006. Now, according to Gaetano Sodo, the IBM Global Business Services partner responsible for supply chain management services, IBM is working with Honda Italia to install the interrogators and other hardware, affix the tags and develop Java-based applications built on the IBM WebSphere Application Server. It is also helping to integrate them with Honda Italia's existing information technology systems.

Warehouse workers will use an RFID encoder-printer to encode the passive 13.56 MHz tags, which support the [ISO 15693](#) standard and offer 1,024 bits of memory. Tags affixed to a chassis will contain such data as a vehicle identification number, frame number and engine number, as well as codes for model, type, options and color. Tags attached to components will be encoded with a unique ID number, part number, lot number and other data.

During assembly, employees follow bills of material indicating which chassis goes with which components. They can use handheld interrogators to read the RFID tags, thereby ensuring the accuracy of the assembly. "You have to use different configurations for different markets, and if you don't pay attention, you could come up with the wrong configuration," Sodo says. "For example, you could use a tachometer that is in kilometers

rather than miles."

The antennas of fixed interrogators will be wired to Feig Electronic multiplexers that communicate with the WebSphere Application Server via a Wi-Fi network. The interrogators will track the movement of the chassis and critical components during assembly, and also record events that would trigger messages to the warehouse information system to automatically commence replenishment—for example, if a component deemed no good were scrapped and moved off the assembly line.

RELATED_ARTICLES "We have the opportunity to advise and alert the warehouse when the components are needed," says Sodo.

Employees will be trained on the RFID hardware and software in April and May, with the implementation expected to go live in June. The pilot is slated to run for about eight months. After the pilot is completed, Honda Italia hopes to expand the RFID system to other production lines, including scooter production, starting with the SH150i and SH125i and the bigger SH300i.

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