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## Engine Woes to Ding Rolls Earnings

By JONATHAN BUCK And DANIEL MICHAELS

**Rolls-Royce Group PLC** warned that its earnings growth would slow as a result of the need to replace a component in its Trent 900 jet engines that was tied to an engine failure last week on an Airbus A380 superjumbo plane.

The incident, new details of which are emerging, has been embarrassing for Rolls-Royce and costly for its shareholders, even prompting a rare mea culpa from the company.

"We regret the disruption we have caused," Chief Executive John Rose said on Friday.

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Airbus, a unit of **European Aeronautics Defence & Space Co.** that builds the A380, separately on Friday said the Trent 900 troubles could cause some disruptions to its superjumbo deliveries next year. The shifts could be limited to changes in the order that planes are completed and may not result in a lower number of total deliveries in 2011, Airbus Chief Executive Tom Enders said.

Rolls-Royce said its initial findings into a Nov. 4 engine fire on a plane operated by **Qantas Airways Ltd.** concluded that the issue was specific to the Trent 900 engine and was confined to a particular component in the turbine area.

The company said it now expects profit growth for the year to be slightly lower than a previous forecast of a between 4% and 5% gain as a result of the investigation and time-consuming repairs involved. It didn't provide a new figure.

The earnings impact of the Trent 900 problems may include reimbursing some of the airlines' costs in addition to its own costs for the investigation and repairs. Qantas grounded its fleet of six Airbus A380s, all of which used the Trent engine, following the in-flight engine blowout.

Rolls-Royce said some costs are offset by better



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Rolls-Royce said identifying and repairing a faulty Trent 900 engine part linked to an in-flight fire and engine break-up would reduce earnings this year. Above, a Trent engine at a development facility in Derby, England.

results its marine and defense businesses. Most of the costs related to the Trent 900 incident will be

expensed this year, it added.

"We expect continued underlying profit growth in 2010," Mr. Rose added.

Investors cheered the disclosure of a repair and its limited impact on earnings. Rolls-Royce shares closed Friday on the London Stock Exchange up 4.6%, at 611 pence (\$9.81).

The repairs are intended to avoid future incidents that led to the in-flight breakup of the intermediate pressure turbine disk on a Trent 900 engine on the Qantas flight. The component to be replaced is a tube located in the turbine module that supplies oil, according to three people familiar with the repair. Vibrations under certain conditions are believed to cause oil to leak, one of these people said. Replacing the tube requires removing the entire intermediate pressure turbine unit, known as Module 51, another person said.

Rolls-Royce said it continued to work closely with investigating authorities and said its process of inspections would continue and would be supplemented by the module replacement.

"These measures, undertaken in collaboration with Airbus, our Trent 900 customers and the regulators, have regrettably led to some reduction in aircraft availability," Rolls-Royce said in a statement. "This program will enable our customers progressively to bring the whole fleet back into service."

Replacing the module is fairly time-consuming, so Rolls-Royce and its customers may remove engines with the faulty part, place good engines onto the planes and do the repairs to the engines off-wing, another person familiar with the plans said. The process could take several weeks to complete, this person said.

Singapore Airlines Ltd. said Friday that it had resumed flying one of three A380s on which it this week replaced its Trent 900s and a second would return to service on Saturday. Deutsche Lufthansa AG of Germany, the only other carrier using Trent 900s, has not reported any service disruptions due to the fixes.

The repairs are in response to the destructive failure of one engine on a Qantas flight carrying 466 passengers and crew from Singapore to Sydney on Nov. 4.

In the cockpit were five pilots, three more than required, including a senior training captain and another captain who was observing the flight, according to people familiar with the events. The crew struggled with a cascade of system failures caused by shrapnel-like pieces spewed out of the disintegrating portion of the engine.

As previously reported, the incident also damaged the other engine on the left side of the plane, which couldn't be shut down for about an hour after landing. According to pilots familiar with the details, that damaged engine could have posed a fire hazard during the emergency approach and landing. Qantas suspended its A380 fleet from service after the incident, in which nobody was hurt.

The damage, these people said, significantly complicated the tasks of dumping fuel, and then configuring the huge, four-engine aircraft and its flight-control system to return to Singapore for an emergency landing.

Fuel tanks on the plane's left side had multiple leaks and the system to transfer fuel among various tanks on the plane wasn't functioning properly. That made it harder and more time-consuming to jettison fuel, these people said, and made the jet unbalanced because the tanks on the right side contained more fuel.

The A380 also suffered damage to its left wing, as well as to some of the movable panels attached to the front and the top of the wing used to slow down during approach and landing. In addition, according to these people, the engine breakup seriously damaged one of the plane's hydraulic systems, put a generator out of commission and degraded its anti-skid braking capability.

The double-decker A380 is the world's biggest passenger plane, capable of carrying about 500 passengers. It entered service in 2007; there are 39 in operation world-wide, 21 of which are equipped with Rolls-Royce engines.

Airbus has orders for 234 more A380 aircraft, 90 of which will take the Rolls-Royce Trent 900, according to Ascend Worldwide Ltd. Engine Alliance, a joint venture between General Electric Co. and United Technologies Corp.'s Pratt & Whitney unit, will provide engines for 134 and the supplier for the remaining 10 hasn't been determined.

[Air France-KLM SA](#) and Dubai-based Emirates Airlines, the other two current operators of A380s, use Engine Alliance jets. On Friday, Airbus said that a Japanese carrier, Skymark Airlines Inc., announced plans to buy four A380s, although a firm contract has not been signed and an engine choice has not been announced.

Rolls-Royce and regulators at the European Aviation Safety Agency Wednesday issued enhanced inspection procedures intended to return all A380s powered by Rolls engines to normal service. Those procedures include more-frequent and detailed engine checks than previously required, including more-thorough checks of engine parts and performance after each flight.

—Andy Pasztor and David Pearson contributed to this article.

**Write to Jonathan Buck at [Jonathan.Buck@dowjones.com](mailto:Jonathan.Buck@dowjones.com) and Daniel Michaels at [daniel.michaels@wsj.com](mailto:daniel.michaels@wsj.com)**

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