

# Japan: Carmakers Struggle To Grasp Damage To Supply Chains

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TOKYO (Nikkei)—The aftershocks of the March 11 earthquake and tsunami are spreading to automakers around the world, with disruptions in Japanese autoparts production having broken key links in their supply chains.

A modern automobile typically has a total of 20,000 to 30,000 types of materials and parts. Supply chains gather them from complex networks of manufacturers for delivery to auto plants.

According to Toyota Motor Corp. (7203), 500 types of parts made by 200 or so factories may be facing supply problems.

But Toyota and most other automakers can keep track of only their own suppliers and these suppliers' immediate subcontractors at best.

Getting a full picture of the supply network is an extremely difficult task because some items, such as seats, are made from parts and materials supplied by multiple manufacturers. And these manufacturers themselves often have subcontractors, which in turn have subcontractors of their own.

"We did not know we had been procuring resin additives and paint pigments from companies in the Tohoku region until the disaster hit," reports an executive at a major autoparts manufacturer.

"Automakers are now checking what parts they are short of by actually building cars using their parts in stock," a Nissan Motor Co. (7201) executive says.

Toyota, Honda Motor Co. (7267) and many other major automakers manufacture key components, such as engines, on their own. But for parts and materials procured from outside, they are rushing to find alternative sources if normal supply channels have been disrupted by the disaster.

Key parts are not easy to change, however, because they require thorough safety testing. And with such components as automotive microcontrollers, in which Renesas Electronics Corp. (6723) has 30% of the global market, sourcing from other companies would be difficult because each is often developed specifically for a particular vehicle model.

In the U.S., one month's worth of parts inventories is said to be the norm. Some thus predict that auto plants there may have to halt production as early as mid-April should supply disruptions from Japan continue.

But in fact, Toyota, General Motors Co. and three other major automakers have already slowed down their U.S. production.

In South Korea, Renault Samsung Motors increased production cuts to 20% this month because of difficulties in procuring transmissions and engine components from Japan.

Some in the industry see the impact of the supply chain disruptions worsening around June because parts inventories will likely be exhausted by then.

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\* The Nikkei April 6 morning edition, Wednesday, April 6, 2011:

<http://e.nikkei.com/e/fr/tnks/Nni20110405D05JFF01.htm>