TECHNOLOGY

< How Will Carmakers Adapt To Mileage Standards?

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MELISSA BLOCK, host:

Now that new efficiency standards are being imposed, what will automakers have to do to meet them? Aaron Bragman joins us to talk about that. He's an auto industry analyst with the economic forecasting firm IHS Global Insight. Thanks for being with us.

Mr. AARON BRAGMAN (Auto Industry Analyst, IHS Global Insight): Oh, my pleasure.

BLOCK: And let's sort of take a peek under the hood, Aaron. What would carmakers need to do to make engines more efficient, to meet these standards?

Mr. BRAGMAN: Well, we're going to be seeing a lot of technology changes. We're going to be seeing a lot more added to some of these engines. A good example, really, is what Ford is doing. Ford has just introduced a new engine called Eco Boost.

It's a smaller, turbo-charged, V6 engine that's going to go in their luxury vehicles and in some of their high-performance stuff, that replaces the bigger V8 engine. So you

get the power of the V8 that Americans want, but you get the fuel economy of a V6, which is what the government is requiring.

BLOCK: How does Eco Boost work? What does it boost?

Mr. BRAGMAN: It's a twin turbo-charged engine. So, it forces the air into the cylinders as opposed to just having a naturally aspirated engine, it's called. So you've got a higher compression, you can burn the fuel more completely, more powerfully, and you can create more power from a smaller engine.

Now this technology is going to be proliferated through a number of different vehicles - not just V6 engines but also four-cylinder engines. So, we're going to see the same kind of technology show up in the next-generation Ford Focus that's coming next year.

BLOCK: Other technology, engine technology, in particular, that would help them meet these goals?

Mr. BRAGMAN: Well, there's the option of diesel as well, which hasn't really caught on in North America, in most cases, because diesel fuel has been more expensive than gasoline. But the benefits in terms of fuel economy are pretty significant.

But we also have to understand that it's more than just the engine when it comes to fuel efficiency. There's also lightening the weight of the vehicle. There's also other efficiency that you can create in the rest of the drive train, like in the transmission, in the tires themselves, better rolling efficiency. So, there's a number of different areas that are going to be approached.

BLOCK: You talked about lightening the weight of a vehicle. I was reading about a concept car that VW came out with some years back that got 282 miles per gallon. And it did it in large part, I guess, by aerodynamic design and really shifting around materials - and also the look of the car, doing away, for example, with any outside mirrors because those create drag and reduce efficiency.

Mr. BRAGMAN: Aerodynamic efficiency is actually very important. When Chevrolet developed the Chevy Volt that's going to be coming late next year - what they call a range-extended electric vehicle, which means it's an electric car that has a gas engine on board. But when they did the concept car, it was very slab-sided, it was very creased, it was very angular and aggressive.

When they put the concept car in the wind tunnel, they realized that they would've gotten better numbers from its aerodynamic efficiency if they put it in backwards. So they had to redo the entire shell. They did it so that it's much more slippery now, and they're realizing that that aerodynamic efficiency has a much bigger impact on the car's overall efficiency than the actual weight of the vehicle.

BLOCK: If they're making cars that are lighter to try to meet these standards as well, make them more efficient, there are concerns, then, about safety. What about that, how do the carmakers balance safety standards with these fuel efficiency standards?

Mr. BRAGMAN: Well, that's a really big challenge right now because the thing that Americans have always demanded is increasing safety standards. And as you increase those safety standards, you're adding more stuff to the car. You're either adding air bags, you're adding door beams, you're adding - what recently just passed was a stronger roof-crush standard. Now they have to make the roof stronger for a rollover protection.

All of that adds weight to the car. And that weight goes against lightening the car and then making it more fuel efficient. So, that balance has to be struck. And there's ways you can do that, either through optimization of the actual materials or lightweight materials. But the lightweight materials are expensive, and those are going to come at a cost to the consumer.

BLOCK: But do those prices eventually come down - I mean, as they're used more, and they become more accepted?

Mr. BRAGMAN: A little bit. But we're still looking at materials that are simply more

expensive: carbon fiber versus just straight aluminum or straight steel. And some of the other technologies we're going to see add cost to the vehicle as well. We're definitely going to be seeing prices increase to the consumer.

BLOCK: Aaron Bragman, thanks so much.

Mr. BRAGMAN: My pleasure.

BLOCK: Aaron Bragman, is an industry analyst with IHS Global Insight, outside Detroit.

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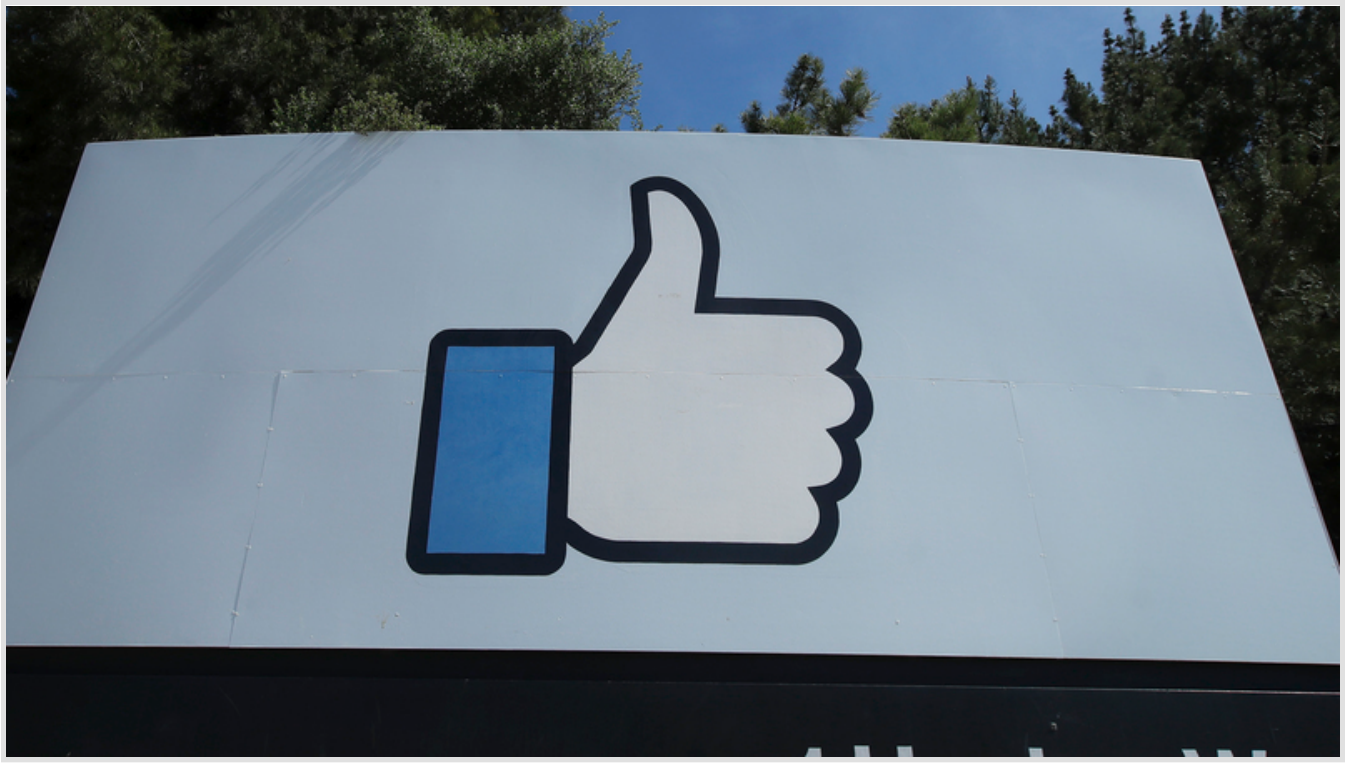

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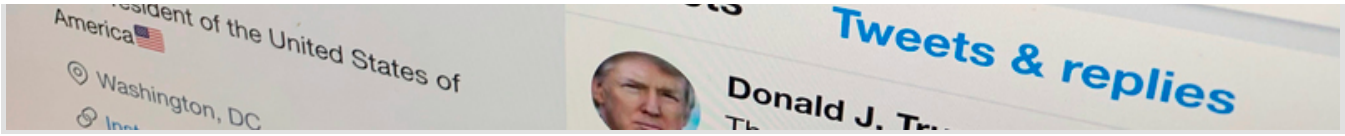

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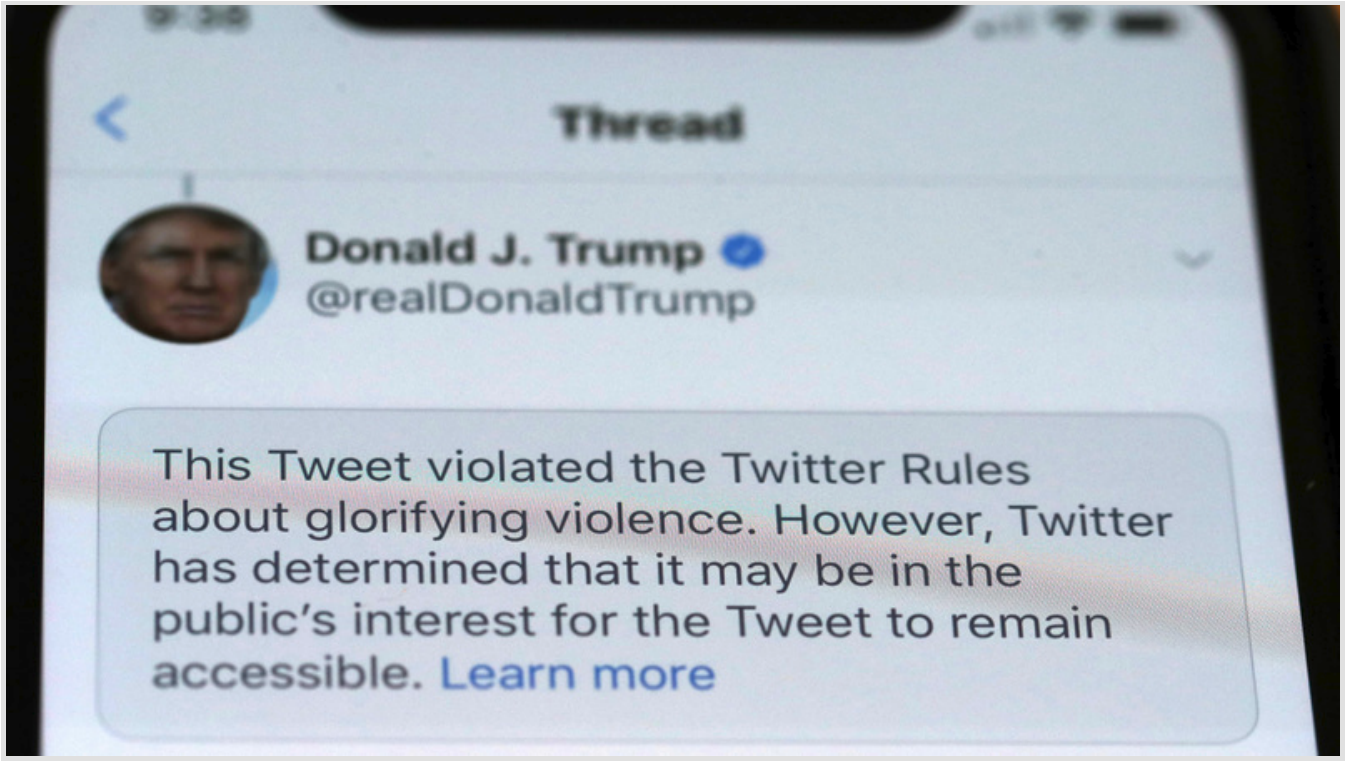

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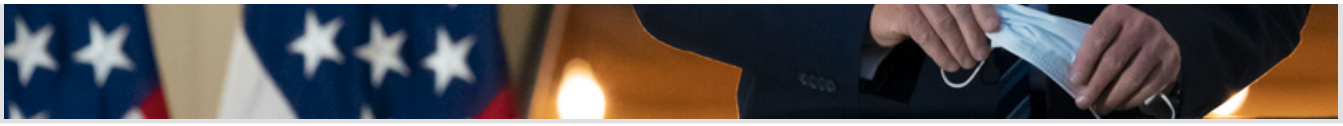

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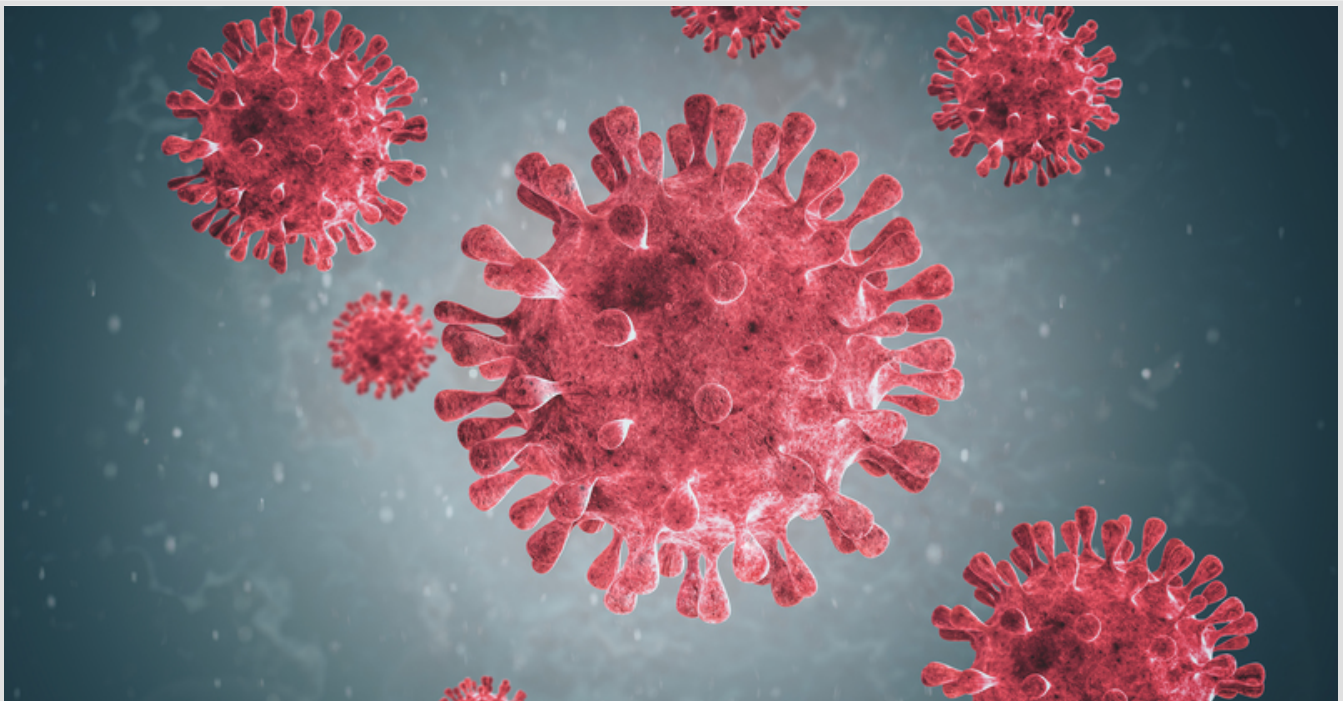

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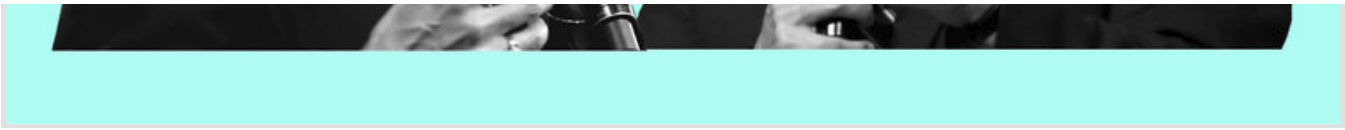

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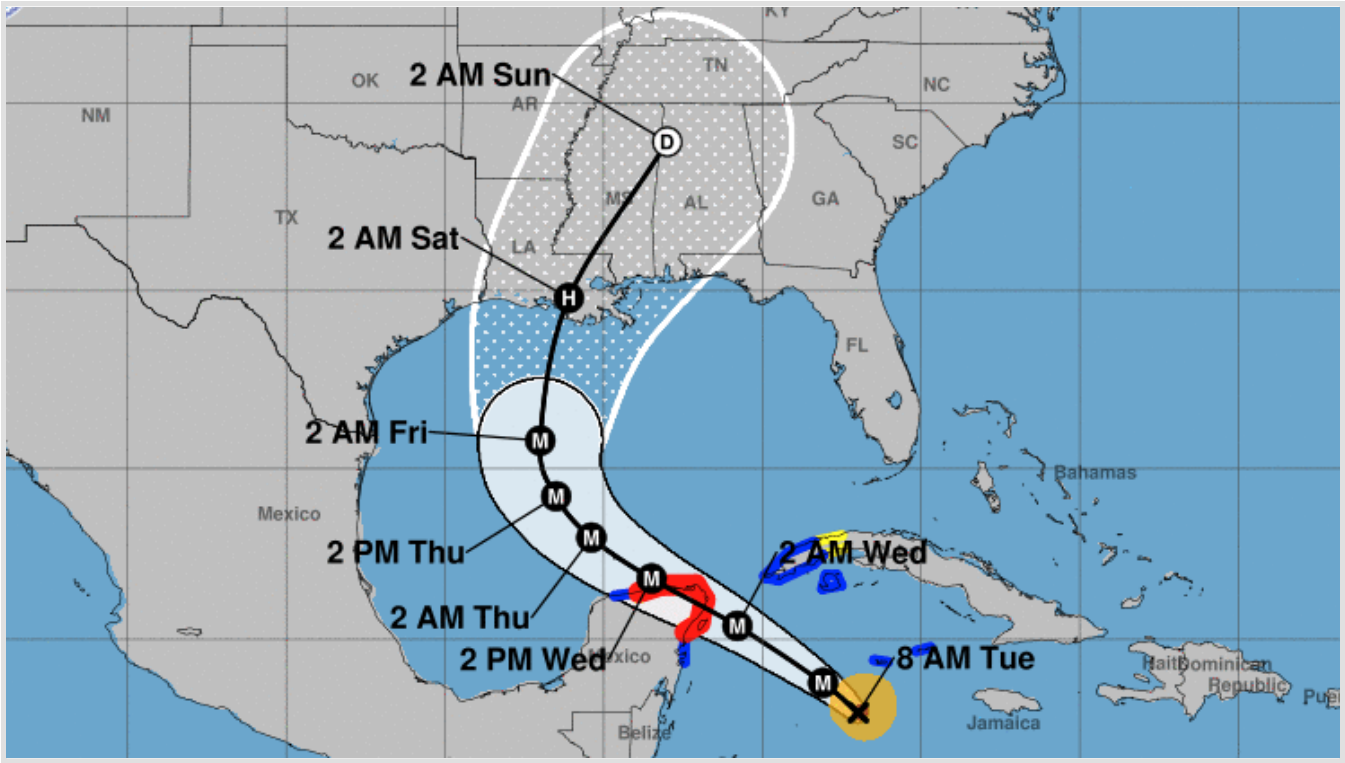

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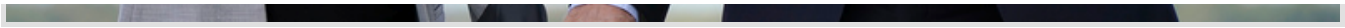

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