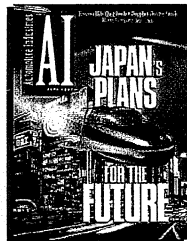


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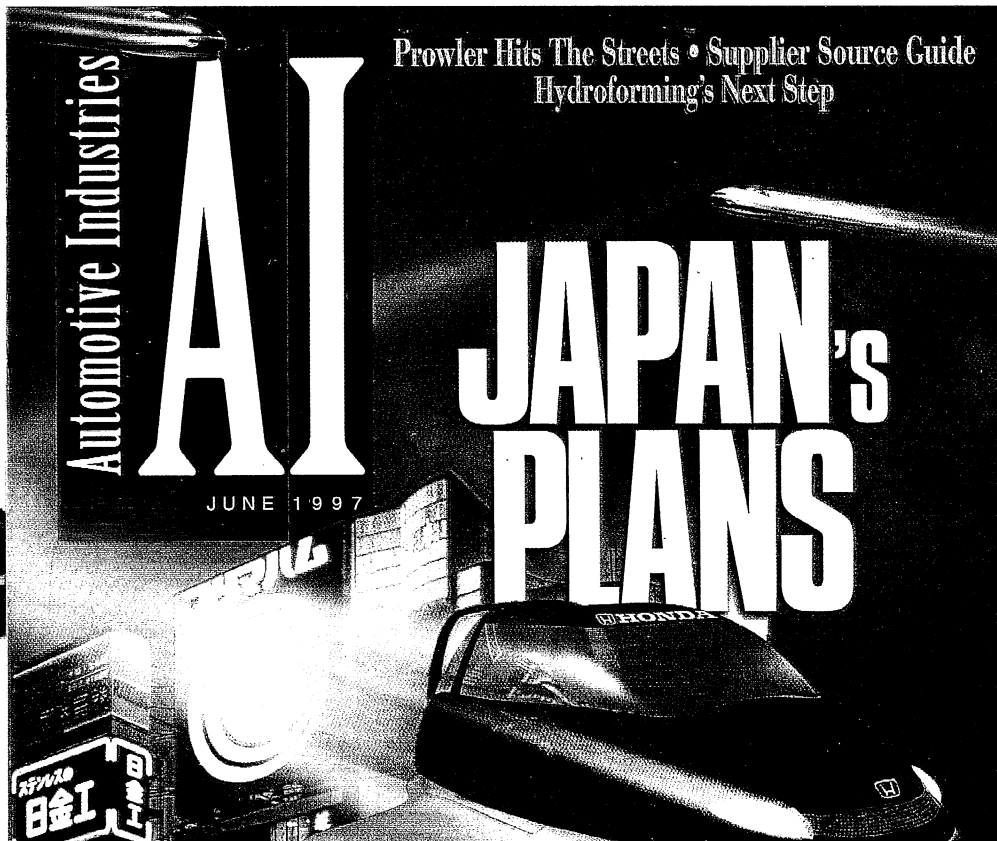
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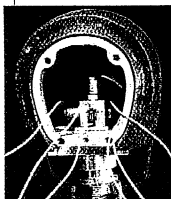
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## TESTING

**A** new sensor may add angular motion to NHTSA's head injury safety criteria. The current standard makes the automakers meet specific benchmarks for up/down, side/side and back/forth head movement in a crash.

Now, magnetohydrodynamic (MHD) sensors from ATA Sensors, a small company in Albuquerque, N.M., measure angular rate and acceleration. "They measure high shock and short duration movement," says Charles Pinney, general manager, ATA Sensors. That's the same kind of movement the human body is subject-



The Magneto-hydrodynamic (MHD) sensors, fitted into this crash dummy's head, measure the angular motion of a crash.

# NEW ANGLE ON AIRBAGS

New sensors may change NHTSA criteria *by Marjorie Sorge*

ed to when an airbag goes off. "As these types of sensors help us learn more about crashes, the standards could be adjusted," says NHTSA spokesman Tim Hurd.

Most airbag testing devices currently measure the linear motion of a crash dummy. Add to that the angular information and the automakers may be able to better figure out how to slow airbag deployment or make other changes to prevent serious injury.

When the sensors are hooked to the lower extremities they measure things like what happens when the floor panel area buckles. On the upper extremities

they might measure what happens if the driver has his/her arms crossed over the steering wheel and airbag goes off. Inside the head they know exactly what happens when a head snaps at an angle and pivots around the neck.

However, the MHD sensor has a low-frequency measurement limitation and, in its standard configuration, cannot measure a constant angular rate. An advanced sensor is under development to provide that continual data. ATA is a small company. Getting that sensor to market hinges on the ability to find outside funds. AI



# FOR THE FUTURE