Hydrogen bus

could also heat its own garage

Dr. Helmut Buchner, Mercedes' hydrogen-project leader, displays model of hydride container that replaces gas tank on jitney behind him. Hydrogen-absorbent metals in the tubes can store hydrogen indefinitely with no risk of explosion. When released by heat, the hydrogen powers bus' converted engine.

Piping and valve arrangement used to evaluate different hydride combinations is inspected by author Scott. For experimental purposes, Mercedes test bus has four hydride-storage units. On production buses, single duplexed container would hold the two hydrides used.

Heating and cooling—free—are byproducts of the new hydrogen technology

By DAVID SCOTT

"We're ready now," Dr. Helmut Buchner of Mercedes-Benz told me. "We could save our city of Stuttgart over one million gallons of petroleum fuel a year by converting its fleet of 300 urban buses to run on hydrogen. Heating—and air conditioning—would be free spinoffs, consuming no extra energy."

Buchner and his team of researchers at Mercedes' Physical Research Department have already converted several vans and buses to run on this limitless non-fossil fuel. They've replaced the vehicles' gas tanks with containers of metal hydrides. These alloys soak up hydrogen like a sponge, then release the gas when heated (PS, March '75 and March '78).

I rode around the factory test track in a small, hydrogen-fueled city bus. Its standard 2.3-liter, four-cylinder gasoline engine had been only slightly modified—and I couldn't detect anything unusual. The engine ran sweetly and acceleration was brisk. But I could tell the difference after our drive, by sniffing the tailpipe. There were no telltale fumes, because hydrogen