

Lifton challenges the WSJ editorial on Honda no longer using heavy rare earths



This morning *The Wall Street Journal* editorial page, no less, “reports” that Honda will no longer use “heavy” rare earths in its “hybrid” car engines after 2017.

What the WSJ editorial staff does not understand is that this is shilling for Honda and says **nothing** about the use of rare earths in general for EVs, electrified, not hybrid, vehicles. Honda is among the world’s largest manufacturers of internal combustion engines, which do not and have not ever used rare earths in their core construction. Honda does not want the electrification of cars, if it ever happens, to happen soon, because it has a **huge** investment in the design and manufacturing of internal combustion engines. Hybrid combinations of electric and internal combustion power trains, such as in Toyota’s class leading Prius, have long used nickel metal hydride (rare earth based) batteries in the electric power train and high efficiency heavy rare earth using electric drive motors. Honda has done the same thing, but Honda has invested little in securing a non Chinese supply of rare earths whereas Toyota, through its trading company, has invested between \$500,000,000 and one billion dollars so far to develop rare earth sources in India and Vietnam.

The craftily worded press release by Honda, which, of course, the WSJ has bought hook, line, and sinker, as a general statement talks about the tiny “hybrid” segment, which is at best a stop gap niche market. This is of course the best outcome for Honda, which wants to put the Chinese on notice that its control of a critical set of raw materials doesn’t

stop Honda. Just as King Canute of England put nature on notice that the fact that he couldn't order the tides to stop didn't mean he wouldn't keep trying. Of course any price pressure such publicity puts on rare earth prices doesn't bother Honda at all. I wonder if any WSJ reporter ever stopped to think about asking Honda when they would stop buying traction motors, starter motors, generators, and power steering parts that do not contain heavy rare earth modified permanent magnets, which purchases of course are the bulk of their uses of the rare earths.

The goal of electric drive motor research in the automotive sector is to reduce the costs of manufacturing such motors without losing efficiency or performance. The manufacturing of such motors does not stop until research reaches some target; it is an ongoing moving target. No one is replacing dysprosium/terbium modified rare earth permanent magnets in traction (drive) motors, but the amounts of these modifiers are always changing as new magnet processing technology and better understanding of the underlying science advances.

If Honda is truly eliminating heavy rare earths from its products then we can look ultimately to Chinese made competing products to be more efficient and better performing. This is the conclusion I derive from the WSJ's editorial (lack of) "analysis" of this press release.