

**IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT OF FLORIDA  
TAMPA DIVISION**

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SOLOMON TECHNOLOGIES, INC.,	:	
	:	
Plaintiff,	:	
	:	
v.	:	Case No. 8:05-cv-01702-JDW-MAP
	:	
TOYOTA MOTOR CORPORATION,	:	
TOYOTA MOTOR MANUFACTURING	:	
NORTH AMERICA, and TOYOTA MOTOR	:	
SALES, U.S.A., INC.,	:	
	:	
Defendants.	:	
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**DECLARATION OF ROBERT ALEXANDER PESIRIDIS**

I, Robert Alexander Pesiridis, declare as follows:

1. I am the Chief Engineer in the Engineering Department of Solomon Technologies, Inc. (“Solomon”), where I have worked since June 2004. As the Chief Engineer, I have extensive knowledge, and am involved in all aspects, of Solomon’s technologies, including Solomon’s technologies regarding electric motor transmission devices.

2. I hold a Bachelors Degree in Electrical Engineering from the University of Colorado, where I also minored in Physics. I consider myself to be one of skill in the art of automotive engineering, particularly with respect to electric motor transmission devices.

3. As the Chief Engineer of Solomon, I am very familiar with Solomon’s patents, including United States Patent No. 5,067,932 (“the ‘932 patent”), entitled “Dual-Impact Infinite-Speed Integral Motor and Transmission Device.”

4. In connection with my work at Solomon, I have also studied, in great detail, the electric motor transmission devices in Toyota’s accused vehicles. As such, I am extremely

familiar with the structure and operation of those devices. In particular, Solomon has purchased (through public means) the electric motor transmission devices in some of Toyota's accused vehicles, including the Toyota Prius, and painstakingly dissected those devices in order to learn their exact structure and operation. I have personally been involved in such endeavors and have acquired a great deal of knowledge concerning Toyota's accused devices as a result.

5. Claim 7 of the '932 patent recites a "power conversion means." As one of skill in the art, I believe that the language in claim 7 more than sufficiently recites the structural components of the "power conversion means." In particular, claim 7 specifies that the "***power conversion means***" includes a "***mechanical power transmission unit***," which in turn has "***two inputs***" and "***an output***." It further specifies that the "power conversion means" includes two "respective ***integral combination[s]*** of ***a respective electric motor element*** and ***an element of [the mechanical power] transmission unit***." The "mechanical power transmission unit," "electric motor element[s]," "inputs" and "output" of the transmission unit, and the "integral combination[s]" are all structural elements of the "power conversion means."

6. Further, the structural relationship of those components are specified in claim 7—in particular, that each ***integral combination*** involves ***one of said two respective elements thereof being at least to a large extent within an envelope containing the other***," that each integral combination has "***a compact structure***," and that the two integral combinations are ***located closely adjacent each other***." As such, I believe that claim 7 recites plainly sufficient structure for the "power conversion means."

7. Turning to Figure 5 of the '932 patent, shown below, I believe that the sun gear extension, depicted as 46' in the figure, is a shaft and plainly functions as one.

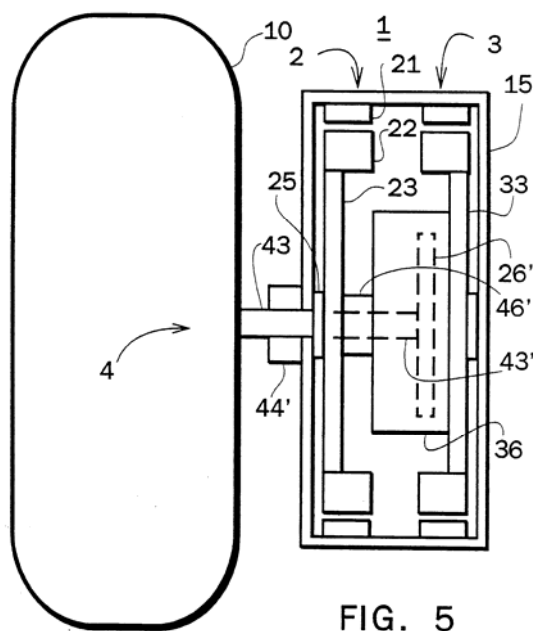
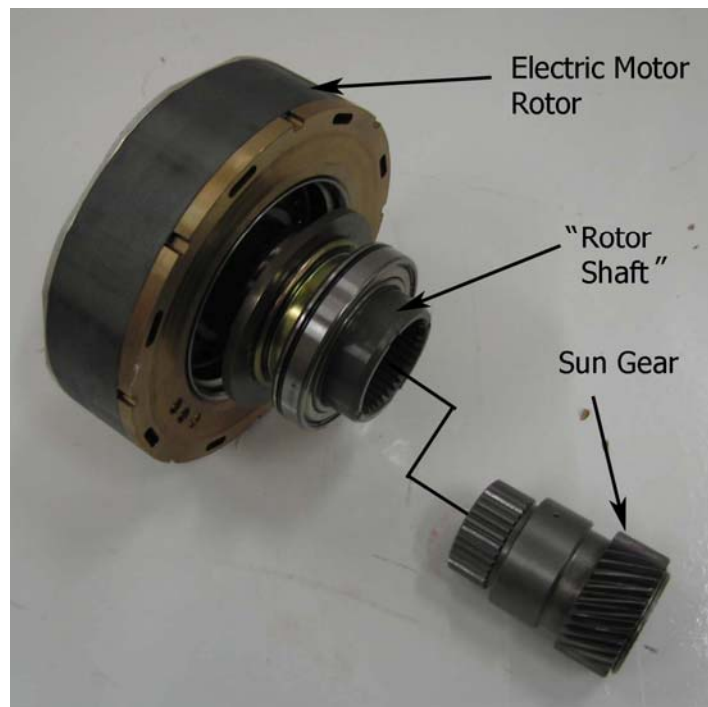


FIG. 5

In particular, as evident from the figure, the sun gear extension 46' connects the first electric motor (which includes field elements 21, armature elements 22 and disk 23) to the sun gear (not shown in the figure, as the sun gear is inside the ring gear 36). In operation, the sun gear extension transfers (or receives) mechanical power from the sun gear to the electric motor assembly. This is exactly what the "rotor shaft" in Toyota's accused vehicles do.

8. In particular, as shown in the following picture, Toyota's accused vehicles use "shafts" in the same manner as the Figure 5 embodiment of the '932 patent. In particular, just like the Figure 5 embodiment uses a sun gear extension 46' to connect the first electric motor assembly to the sun gear, Toyota's accused vehicles use a so-called "rotor shaft" to connect the first electric motor assembly to the sun gear. To the extent that the sun gear extension 46' can be considered a part of the transmission unit (see Fig. 5, above), so too can Toyota's "rotor shaft" be considered a part of the electric motor assembly, as evident in the picture below.

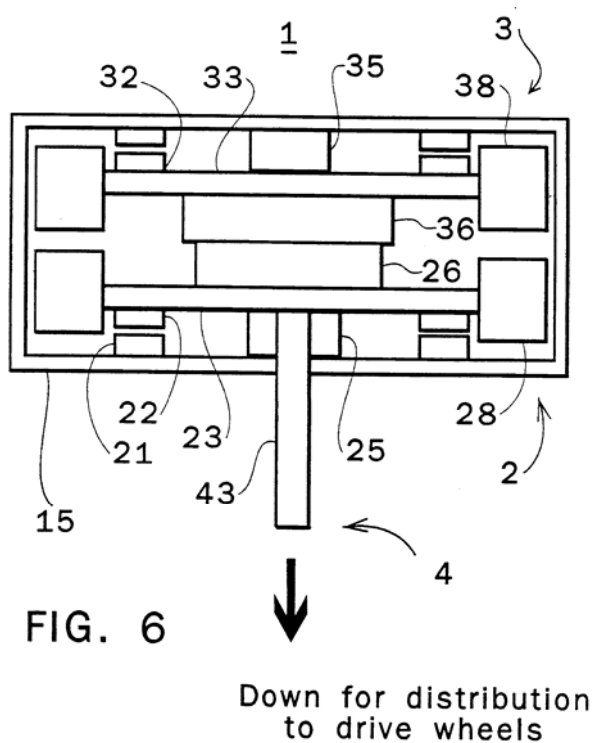


(Note: This picture is of a rotor assembly and sun gear found in the accused transaxle of the 2001 Toyota Prius. Solomon purchased the transaxle through public means).

9. Further, I believe that the electric motor transmission devices in Toyota's accused vehicles operate (in one mode of operation) in the same manner as that set forth in the '932 patent. In particular, in the Figure 5 embodiment, rotational inputs are provided by the ring gear 36 and sun gear (not shown in Figure 5), with a rotational output being provided by the planetary gear carrier 26'. This is exactly how Toyota's accused vehicles operate in one mode of operation. While in Figure 5 of the '932 patent, the output of the planetary gear set is connected to a wheel 10 (via wheel shaft 43), the output may be connected to any device, such as a shaft to start an engine, which is what Toyota does in its accused vehicles.

10. Figure 6 of the '932 patent shows another embodiment of Solomon's invention. It includes a flywheel for power storage and delivery in a conventional vehicle. (Col. 9, ll. 14-16).

As shown below, parts of the transmission unit, including ring gear 36 and planetary gear carrier 26 are shown in the figure.




Unlike the Figure 5 embodiment, in the Figure 6 embodiment, the armature elements of the motor 32 and 22 are located on the top or bottom side of disks 33 and 23, rather than around the periphery of the disks.

11. Notably, in the Figure 6 embodiment, above, heavy, cylindrical peripheral masses are used to increase the rotational moments of inertia. (Col. 9, 35-40). Those masses are plainly not electric motor elements. Because those masses are not electric motor elements, the imaginary space defined by the rotation of the motor elements 32 and 22 would *not* contain transmission elements 36 and 26.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge, information and belief.

Executed on August 17, 2009

  
Robert Alexander Pesiridis