

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MARYLAND
BALTIMORE DIVISION**

**PAICE LLC and THE ABELL FOUNDATION,
INC.,**

Plaintiffs,

v.

FORD MOTOR COMPANY,

Defendant.

C.A. No. _____

JURY TRIAL DEMANDED

COMPLAINT

Plaintiffs Paice LLC (“Paice”) and The Abell Foundation, Inc. (“Abell”) (collectively referred to as the “Plaintiffs”) file this Complaint for patent infringement against Defendant Ford Motor Company (“Ford”) requesting damages and other relief based upon their personal knowledge as to their own facts and circumstances, and based upon information and belief as to the facts and circumstances of others.

OVERVIEW

1. This is an action by Paice, a small Maryland-based company that invented groundbreaking hybrid vehicle technology, and Abell, a Baltimore-based charitable organization dedicated to fighting urban poverty and finding solutions to intractable problems confronting Maryland residents. Consistent with its mission, Abell has invested millions of dollars to support Paice's efforts to develop and promote its innovative hybrid electric technology that improves fuel efficiency and lowers emissions, while maintaining superior driving performance. Paice and Abell are co-owners of multiple foundational patents related to hybrid technology -- patents recognized in an independent 2009 study as the most dominant hybrid vehicle patents in the

world. Paice and Abell are forced to bring this action against Ford, one of the largest automobile companies in the world, as a result of Ford's knowing and ongoing infringement of these patents.

2. As detailed below, between 1999 and 2004 Paice had over 100 meetings and interactions with Ford providing Ford's representatives with detailed information about the hybrid technology that Paice had developed. Through this process, Ford executives requested and Paice provided detailed modeling and component design work on hybrid versions of Ford's vehicles. For more than five years, Paice answered inquiries from multiple departments within Ford, believing in good faith that a business relationship between Paice and Ford would be mutually beneficial and advance the acceptance of Paice's technology.

3. After years of Ford learning the details of Paice's hybrid drivetrain technology, Ford elected not to enter into a business relationship with Paice. Instead, Ford took Paice's patented technology for itself without compensation to Paice and is using Paice's technology in the Fusion Hybrid, Fusion Plug-in Hybrid, C-MAX Hybrid, C-MAX Plug-in Hybrid and Lincoln MKZ Hybrid, in knowing disregard of Paice's patents. Paice believes that Ford has further used Paice's technology in its joint projects with Toyota Motor Company, another well-known manufacturer of hybrid vehicles that a jury has already determined infringed Paice's patent rights and that ultimately took a global license for all of Paice's patents. Ford itself took a license in 2010 for one of Paice's early patents that has now expired. The parties, however, were not able to resolve Ford's infringement of the patents at issue in this suit, and instead entered into an arbitration agreement that gave Ford the unilateral right to select arbitration in lieu of litigation. Ford, however, has decided not to arbitrate, forcing Paice to litigate its patents against a large and powerful corporation.

4. Abell has provided financial support for Paice's work for over 15 years. Paice pioneered the development of hybrid technology in this country and spent years teaching hybrid powertrain technology to Ford. Ford infringes Paice's patents and must compensate Paice for its use of Paice's technology in hybrid vehicles, and Ford should be enjoined from further use of Paice's technology.

THE PARTIES

5. Paice LLC is a Delaware limited liability company with a principal place of business at 111 South Calvert Street, Suite 2310, Baltimore, Maryland. Originally established in 1992 by Paice inventor, Dr. Alex J. Severinsky, Paice has been developing and promoting innovative hybrid electric vehicle technology that improves fuel efficiency and lowers emissions, while maintaining superior driving performance. In 1992, Paice was accepted into the University of Maryland's incubator program, which was created to foster growth of promising start-up companies in the Maryland community.

6. The Abell Foundation, Inc. is a Maryland corporation with a place of business at 111 South Calvert Street, Suite 2300, Baltimore, Maryland. Abell is a non-profit charitable organization dedicated to fighting urban poverty and finding solutions to intractable problems confronting Maryland residents. Over the past 60 years, Abell has contributed more than \$250 million to support worthwhile causes across Maryland. It traditionally focuses on caring for the underserved and underprivileged through education, healthcare, and human services initiatives. In addition, Abell is dedicated to promoting national social objectives, such as increasing energy efficiency and producing alternative energy, and invests in companies with innovative technologies in these areas. Abell's charitable model is unique in that it occasionally invests in promising local companies—including those focused on environmental issues—with the goal of

creating jobs and reinvesting any earnings back into the communities it serves. In 1998, Abell was introduced to Paice through former U.S. Senator Joseph Tydings and the University of Maryland's Technology Advancement Program. The University of Maryland's Technology Advancement Program was modeled after highly successful programs at Stanford University, Harvard University, MIT, Caltech and other highly regarded institutions of higher learning. Senator Tydings served three terms on the Board of Regents of the University of Maryland and the University System of Maryland, where he was actively involved in the support of the University's incubator program from its start. Recognizing the future promise and benefits of Paice's technology, Abell has invested millions of dollars in support of Paice's innovative technology and is a partial equity owner of Paice.

7. On information and belief, Ford is a Delaware Corporation with a place of business at 1 American Road, Dearborn, MI 48126.

JURISDICTION AND VENUE

8. This is a civil action for patent infringement arising under the Patent Laws of the United States, Title 35 of the United States Code. Subject matter jurisdiction over the asserted causes of actions before this Court is proper and founded upon 28 U.S.C. §§ 1331 and 1338.

9. This Court has personal jurisdiction over Ford because, among other things, Ford has infringed and caused infringement of Plaintiffs' patents in Maryland and within this judicial district.

10. Venue is proper in this Court under 28 U.S.C. §§ 1391 and 1400(b) because acts of infringement have been committed in this judicial district, injuries complained of herein occurred in this judicial district, and Ford is subject to personal jurisdiction in this judicial district.

PATENTS IN SUIT

11. Paice and Abell are co-owners by assignment of all right, title, and interest in and to United States Patent No. 7,237,634 (“the ’634 patent”). The ’634 patent is entitled “Hybrid Vehicles” and lists Alex J. Severinsky and Theodore Louckes as inventors. The U.S. Patent Office issued the ’634 patent on July 3, 2007. A true and correct copy of the ’634 patent is attached hereto as Exhibit A.

12. Paice and Abell are co-owners by assignment of all right, title, and interest in and to United States Patent No. 7,104,347 (“the ’347 patent”). The ’347 patent is entitled “Hybrid Vehicles” and lists Alex J. Severinsky and Theodore Louckes as inventors. The U.S. Patent Office issued the ’347 patent on September 12, 2006. A true and correct copy of the ’347 patent is attached hereto as Exhibit B.

13. Paice and Abell are co-owners by assignment of all right, title, and interest in and to United States Patent No. 7,559,388 (“the ’388 patent”). The ’388 patent is entitled “Hybrid Vehicles” and lists Alex J. Severinsky and Theodore Louckes as inventors. The U.S. Patent Office issued the ’388 patent on July 14, 2009. A true and correct copy of the ’388 patent is attached hereto as Exhibit C.

14. Paice and Abell are co-owners by assignment of all right, title, and interest in and to United States Patent No. 8,214,097 (“the ’097 patent”). The ’097 patent is entitled “Hybrid Vehicles” and lists Alex J. Severinsky and Theodore Louckes as inventors. The U.S. Patent Office issued the ’097 patent on July 3, 2012. A true and correct copy of the ’097 patent is attached hereto as Exhibit D.

15. Paice and Abell are co-owners by assignment of all right, title, and interest in and to United States Patent No. 7,455,134 (“the ’134 patent”). The ’134 patent is entitled “Hybrid

Vehicles” and lists Alex J. Severinsky and Theodore Louckes as inventors. The U.S. Patent Office issued the ’134 patent on November 25, 2008. A true and correct copy of the ’134 patent is attached hereto as Exhibit E. The ’634, ’347, ’388, ’097, and ’134 patents are referred to collectively as the “Paice patents.”

PAICE BACKGROUND

16. Paice is the brainchild of inventor Dr. Alex Severinsky, a Soviet immigrant who received a Ph.D. in electrical engineering in 1975. He came to the United States with his wife and young son in 1978, shortly before America struggled through the second oil embargo. Having escaped standing in long lines to buy food in the Soviet Union, Dr. Severinsky marveled that people in the U.S. were lining up for gasoline. He soon began looking for ways to reduce America’s dependence on foreign oil. He studied a range of methods of vehicle propulsion and concluded that a powertrain utilizing both internal combustion engine and electric motor power had the greatest potential for reducing fuel consumption without sacrificing vehicle performance. In 1992, Dr. Severinsky formed Paice (Power Assisted Internal Combustion Engine), which was then accepted to the University of Maryland’s technology incubator program.

17. Since 1992, Paice has been engaged in developing and promoting innovative hybrid electric vehicle technology that improves fuel efficiency and lowers emissions while maintaining superior driving performance. As a result of its inventive endeavors, Paice holds a number of foundational patents related to hybrid vehicles.

18. Paice has been awarded a total of 28 U.S. and foreign patents. Paice’s first patent, U.S. Patent No. 5,343,970 (“the ‘970 patent”), was issued in 1994, based on a filing date in 1992, and claims the use of high voltage (approximately 500V or greater) and low current in hybrid vehicles. The patents at issue in this suit come from a family of 12 U.S. patents directed to a

broad suite of hybrid vehicle technologies including methods of control to maximize vehicle performance, fuel economy, and emissions efficiency (sometimes collectively referred to herein as “method of control”). These patents stem from continuation and continuation-in-part applications that were originally filed in 1998.

19. Dr. Severinsky surrounded himself with some of the auto industry’s finest engineers. Robert Templin, a U.S. auto industry icon and chief engineer of Cadillac and technical director of General Motor’s Research Laboratory, was among the first to recognize the profound impact that Paice’s technology could have on the worldwide auto industry. Mr. Templin’s endorsement of Paice’s technology gave Abell the confidence to support Paice’s technology. Mr. Templin was a member of the Paice Board of Directors for more than a decade until his death in 2009.

20. Dr. Severinsky was assisted in developing the inventions of the patents in suit by the late Mr. Theodore Louckes, an automotive engineer who spent 40 years at General Motors. At General Motors, Mr. Louckes served as Chief Engineer of Oldsmobile and was instrumental in the introduction of the first high-volume twin overhead cam 4-valve engine for the U.S. industry (GM's Quad 4) and the first passenger car turbocharged engine in 1962. Mr. Louckes led the development of the Paice prototype and served as Paice’s Chief Operating Officer from 1998 through 2005.

21. In October 1999, following a full year of work with Lockheed Martin, and with financial support from Abell, Paice successfully demonstrated the fundamental teachings of Paice’s patented technology in a prototype at a Roush Industries engineering and testing facility in Michigan. Roush is considered one of the leading automotive testing companies in the world. In dynamometer (a test bed used to evaluate vehicles) tests of Paice’s prototype modeling of a

Cadillac Coupe deVille, gas mileage improved from 24 miles per gallon with a V8 engine to 44 miles per gallon with a Paice hybrid electric design utilizing a 4-cylinder engine. Paice made these improvements while maintaining all aspects of vehicle performance at consistent levels, and greatly reducing emissions.

22. Between 1999 and 2004, Paice worked with multiple automobile companies and their suppliers to introduce the potential advantages associated with a hybrid system using Paice's patented technology and to persuade them to license its technology. During this period, Paice presented its hybrid vehicle teachings at conferences where it appeared on the same conference panels with Toyota and Ford, and also authored technical papers published by the Society of Automotive Engineers (SAE). In addition, as the U.S. Government placed added emphasis on reducing oil consumption and increasing energy security following the events of 9/11, Paice twice testified at Congressional hearings alongside Ford and other auto companies in 2001 and 2002.

23. Paice's hybrid patents are the most important in the automotive industry. Griffith Hack, an Australian law firm specializing in intellectual property, conducted an independent study of the most dominant hybrid vehicle patents in the world. Griffith Hack analyzed more than 58,000 hybrid vehicle technology patents and their inter-relationships. It published a white paper in 2009 (updated in 2010), which concluded that the top hybrid vehicle patents were those held by Paice, ahead of those held by leading hybrid vehicle manufacturers such as Toyota, Ford and Honda. Griffith Hack performed its analysis independently; Paice had absolutely no knowledge of the Griffith Hack study until it was published in 2009. Acknowledging Paice's cutting-edge work, the Griffith Hack study concluded that Paice owns four of the world's ten most dominant hybrid vehicle patents – U.S. Patent No. 6,209,672 (ranked #1), U.S. Patent No.

5,343,970 (ranked #2), U.S. Patent No. 6,338,391 (ranked #4), and U.S. Patent No. 6,554,088 (ranked #7) – more than Toyota, Ford and Honda combined. The asserted patents in this complaint all issued from applications in the ‘672 patent family.

24. Dr. Severinsky has received widespread recognition for his hybrid innovation. He was awarded the prestigious Thomas A. Edison Patent Award from the American Society of Mechanical Engineers in 2009. The award recognizes the significance of Paice’s hybrid vehicle inventions. It is one of the highest honors an engineer can receive. In addition, Dr. Severinsky was inducted into the University of Maryland Clark School of Engineering’s Innovation Hall of Fame in 2008 for his pioneering work in developing hybrid vehicle technology.

**HISTORY OF PAICE’S EFFORTS TO PROTECT ITS PATENTED
INTELLECTUAL PROPERTY**

25. Between 1999 and 2004, while Paice was endeavoring to market and license its new patented hybrid vehicle technology to Ford and other major automobile companies, Ford was also collaborating with Toyota on hybrid vehicle technology.

26. When Toyota introduced its second generation Prius hybrid vehicle in 2004 without permission or license from Paice, Paice became convinced that Toyota had employed its patented technology.

27. In June 2004, Paice filed a complaint against Toyota alleging that the second generation Prius (introduced in January 2004) infringed Paice’s high-voltage (‘970) and method of control (‘672/’088) patents. That case went to trial in December 2005, resulting in a jury verdict in Paice’s favor on December 20, 2005, finding infringement of the ‘970 patent by certain Toyota products. The 2005 verdict was affirmed by the trial court and the court of appeals. Paice then filed additional lawsuits alleging infringement of the Paice patents by additional Toyota products.

28. In July 2010, Toyota and Paice resolved their infringement disputes when Toyota agreed to a global license of all Paice U.S. and foreign patents. Although the terms of the license are confidential, Paice believes the license to be fair and reflective of the value of its patented technology.

THE PAICE AND FORD RELATIONSHIP

29. Paice and Ford had an extensive relationship that spanned more than a decade. The two companies first began discussing Paice's patented hybrid vehicle technology in 1999. Within a span of a couple of weeks in August 1999, Paice had a series of meetings with Chief Executive Officer Jacques Nasser, Chief Technology Officer Neil Ressler, Chairman Bill Ford Jr., Board member Bill Ford Sr. and Head of North American Truck Gurminder Bedi. The swiftness of these meetings with high-level Ford executives shows Ford's intense interest in Paice's hybrid technology. Other top Ford executives who met with Paice include Executive Director of Alternative Propulsion Division John Wallace and Head of Advanced Powertrain Engineering Jim Clarke.

30. In October 1999, Paice successfully demonstrated its groundbreaking technology through extensive testing of a Paice prototype at Roush Industries. When Ford learned the details of the testing and the Paice prototype, Ford was eager to move forward with Paice. The parties in November 1999 entered into a now-expired nondisclosure agreement enabling Ford to evaluate Paice's proprietary technology. Ford representatives identified in the agreement included CTO Neil Ressler and Chief Engineer of the Ford Escape Hybrid, Dr. Prabhakar Patil. This agreement was promptly executed and launched a period of extensive work whereby Paice taught Ford all aspects of Paice's patented technology.

31. At the same time, Paice also presented Ford executives (including Chairman Ford, CEO Nasser and CTO Ressler) with a comprehensive proposal for a pre-production development and licensing program. In its proposal to Ford, Paice stated that it was willing to license its technology for a royalty of \$150 per vehicle.

32. On December 2, 1999, Chairman Bill Ford acknowledged Paice's licensing proposal in a personal letter to Paice:

Thank you for sending the packet of material on PAICE. Your vote of confidence in this project is appreciated, and so are your warm feelings for Ford. I am looking forward to getting a report on PAICE from Neil Ressler. The door is always open to new ideas, and I want to thank you for keeping Ford in mind.

33. Shortly thereafter on December 8, 1999, at Ford's request, Paice repeated the demonstration of its proof of concept prototype for Ford's engineers at Roush Industries' testing facilities in Livonia, Michigan. Observing the tests were key Ford engineers including Dr. Prabhakar Patil (Chief Engineer for the Ford Escape Hybrid) and Dr. Michael Tamor (Manager of Hybrid Systems Design), among others.

34. Shortly after the demonstration, Dr. Tamor requested additional details about Paice's hybrid vehicle technology. In a letter to Dr. Tamor dated December 16, 1999, Ted Louckes (COO of Paice) noted that Paice had provided the following technical documents teaching Ford key aspects of Paice's technology:

Assumptions for our lump sum parameter model of the parallel-serial version of the PAICE drive in a benchmark vehicle

A breakdown of assumptions for the accessories load

Dynamometer set-up diagram and load data imposed by the dynamometer, both the road load, and the inertia weight

Functional diagrams of the Paice drive and its components and accessories being tested on the dynamometer, and the wiring diagram

Underwriters Laboratories Report on safety of use of the high-voltage battery system.

Mr. Louckes also emphasized that Paice gave Ford copies of Paice's patent filings:

I realize the patent filings given to you at the meeting are very general. One suggestion I would like to make is we assist ... in proving your inputs into our lump sum model to obtain technical results for torque, speed and current along with any other data at any point in the drive function.

35. At that time, Mr. Louckes also made clear that the Paice patented technology did not require a specific type of high voltage battery system. Although Paice believed that a lead-acid system was the most cost-effective, any other type of battery chemistry could be used (e.g. nickel-metal hydride or lithium-ion).

36. Shortly thereafter, Paice and Ford entered into a second confidentiality agreement, whereby Ford acknowledged that Paice held patents and Ford said it would respect those rights, but Ford said it would not be liable for additional claims relating to theft of trade secrets. Ford acknowledged that it was not free to infringe Paice's patents, but Ford would be free to share Paice's unpatented teachings with others. Unbeknownst to Paice, Ford was actually collaborating with Toyota in this timeframe, and it now appears that Ford demanded this "no trade secret liability" agreement so that it could share Paice's technology teachings with Toyota and component suppliers.

37. As a result of the meetings between Ford's senior management and Paice in 1999, Paice embarked on two years (2000 – 2001) of extensive modeling and component design work on hybrid versions of Ford vehicles. In addition to numerous meetings between Paice and Ford engineers, executives and engineers from multiple departments within Ford communicated regularly and met internally to review Paice's proprietary technologies, including its fundamental methods of control to maximize performance, fuel economy, and emission efficiency.

Notwithstanding Paice's protracted efforts to teach Ford the details of Paice proprietary

technology, Ford ultimately refused to enter into a license agreement and instead simply took Paice's technology for itself. This first became apparent in April 2003, when Dr. Severinsky was stunned to see at the New York Auto Show the Escape Hybrid prototype, which he concluded was using Paice's technology. (A more detailed account of the Paice and Ford hybrid effort is presented in the section "PAICE AND FORD HYBRID EFFORTS" below.)

**EARLY COLLABORATIVE EFFORT BETWEEN FORD AND TOYOTA ON
HYBRIDS**

38. When Toyota introduced its first hybrid vehicle in the U.S. in the year 2000, Ford was dealing with challenges relating to fuel economy. Driven by the success of the Ford Explorer and Expedition SUVs and the F-150 pick-up truck, Ford was selling more trucks than cars, but the EPA ranked its fleet worst in fuel economy among the top six automakers. Ford was under pressure to develop a high mileage vehicle and the brewing crisis around its SUVs prompted Bill Ford to announce in April 2000 that Ford had a plan to address the excessive fuel consumption of standard SUVs. Mr. Ford promised that by 2003 Ford would start selling a no-compromise, hybrid version of a high-volume SUV. He also set a goal for Ford to improve SUV fuel economy by 25 percent by 2005.

39. Ford had begun working on a hybrid version of Ford's Escape SUV in early 1999 – more than one year before Bill Ford's announcement. In late 1998, Dr. Patil was tapped to head the Ford Escape Hybrid program, Ford's first effort to build a commercial hybrid vehicle. Having previously failed to develop a high mileage vehicle, Ford turned to Toyota for its hybrid technology. Dr. Patil went for a test drive in the first generation Toyota Prius with the then-Chairman of Ford, Alex Trotman. As the two had suspected, the Prius sacrificed too much in performance. Although Mr. Trotman insisted that Ford's hybrid do better than Toyota's, Ford had made the decision by the start of engineering work in 1999 to adopt the Toyota Prius

topology¹ and technology for the Ford Escape Hybrid. This was a number of months before Ford began its collaboration with Paice. Ford's initial intention was to simply purchase all or substantially all of the Toyota Prius first generation hybrid powertrain to be rebranded as the Ford Escape Hybrid system.

40. By the time Ford began discussions with Paice, Ford's engineers recognized that the first generation Toyota Prius sacrificed too much performance, including acceleration, drivability and hill-climbing. Ford's engineers also had growing concerns that the Toyota Prius topology had limitations related to the scalability of the Toyota Prius design and the significant cost premium (projected to be \$5,500) of the Escape Hybrid over the non-hybrid Escape. These concerns led to Ford's desire to work closely with Paice in 2000 and 2001 and learn all it could from Paice.

41. Notwithstanding their concerns, Ford worked with Toyota in integrating Toyota's first generation hybrid technology into the Escape Hybrid. Also during this time Ford was working to establish a joint venture with Toyota for a new hybrid vehicle. In November 2001, Ford announced that Ford and Toyota had selected the type of hybrid and technology for its first jointly-developed hybrid vehicle. Ford and Toyota envisioned that this jointly-developed system would not be applied to existing models, but would be used in an upcoming new hybrid model. Toyota, at the same time, also had hundreds of engineers in Japan working on a complete overhaul of its first generation Prius, because the first generation Prius design was not commercially viable.

¹ In the automotive industry, the selection, arrangement and interconnection of the physical components (such as electric motors, power inverters, internal combustion engine and gear assemblies) of a hybrid vehicle design is often referred to as the hybrid vehicle's "topology" or "architecture."

PAICE AND FORD HYBRID EFFORTS

42. In April 2000, Ford CEO Jacques Nasser and Executive Director of Ford's Alternative Propulsion Division John Wallace met with Paice after Dr. Tamor, Ford's Manager of Hybrid Systems Design, wrote a favorable report on the Paice technology.² Shortly thereafter, Mr. Clarke, Ford's head of Advanced Powertrain Engineering, wrote a letter to Paice on April 27, 2000 acknowledging the value Ford saw in Paice's technology, and asked that Paice develop a commercial concept on Ford's behalf, and at Paice's expense:

[Paice] proposals and stated deliverable objectives could result in significant increased fuel economy and are of great interest to Ford Motor Company.

I can assure you that your present high-level concept, cost, performance and PAICE targets represent a major advance towards future vehicle commercialization.

Paice must be developed to at least a pre-production prove-out level to be considered for production application.... As much as I would like to commit resources to assist you in your worthwhile endeavor, the demands of our current multi-national product developments efforts plus current budget constraints do not make that an option at this time.

43. The patents at issue in this suit describe a hybrid system, which enables the vehicle to be powered by one or more electric motors, the internal combustion engine or a combination of these – referred to as modes of operation. These patents teach the fundamental method of control for a hybrid vehicle, including: (1) a method of mode control using road load and (2) a method of engine control under which engine torque is above a setpoint. These patents teach how to control and operate electric motor(s) and the internal combustion engine to deliver a combination of increased fuel economy, reduced emissions and improved driving performance. Ford ultimately applied the Paice technology across its hybrid vehicle lineup.

² As previously noted, Dr. Tamor observed Paice's proof of concept prototype at Roush Industries in December 1999, and had requested and received from Paice technical documents teaching Ford key aspects of Paice's technology.

44. Ford's Escape Hybrid, like the Toyota Prius, uses an electronic continuously variable transmission (or "eCVT") in its hybrid powertrain. Hybrid vehicles that use an eCVT require larger traction and starter/generator motors (larger power rating, size and weight), as well as higher power electronic components and related cooling systems, as compared to other hybrid systems. These larger power components result in significant additional costs and packaging challenges, making Paice's technology all the more valuable.

45. Another aspect of eCVT-based hybrid topology is limited towing capacity. The range of output torque that is required for heavy towing capacity will easily exceed the range that is reasonably practical for an eCVT. Paice's patented technology provides critical benefits to all types of hybrid systems, whether or not an eCVT-based topology is used.

46. In June 2000, Mr. Clarke's Advanced Powertrain Engineering department sent Paice technical data and specifications for the Excursion, Ford's largest SUV, and asked Paice to develop a hybrid version of the platform. Ford said it selected the Excursion for the Paice program because of this vehicle's need for substantial fuel economy improvement.

47. Paice met with Mr. Clarke's team in August, September and October 2000 to review Paice's technology and in particular the progress Paice had made applying that technology to the Ford Excursion. Ford told Paice it was pleased with Paice's progress in the modeling and component design work, and these activities were yielding good results.

48. In December 2000, after Paice delivered extensive modeling and component design work on the hybrid version of the Excursion, Mr. Clarke met with the entire Paice team. He reported that the Paice modeling, which demonstrated an 80% improvement in fuel economy, was very attractive to Ford. Mr. Clark then advised Paice that it would be necessary to measure its technology against Ford's smaller Escape Hybrid SUV currently under development. Mr.

Clarke explained that the Toyota Prius-based Escape Hybrid program that Ford was then pursuing had significant issues – “the design carries a \$5,500 cost premium and fuel economy gains were only modest.” He further described the Toyota Prius-based Escape Hybrid as a “PR event.” Mr. Clarke thought that the Paice technology could deliver the improvements necessary to make the Escape Hybrid a commercial success.

49. Mr. Clarke also noted that several hybrid efforts were underway at Ford, but indicated that the fuel economy gains offered by these programs were modest and that they were otherwise not commercially attractive.

50. In January 2001, Paice presented Ford with detailed computer-modeling results for the Paice Escape Hybrid vs. the non-hybrid Escape. Mr. Clarke told Paice that it would need to prove it met Ford levels (MPG and performance) in Ford’s Toyota Prius-based Escape Hybrid and then size-up to a larger vehicle. Mr. Clarke commented, “If we are going to sit down with current [Ford hybrid electric vehicle team members] and tell them that their ‘baby is ugly’ we must have a story to tell.” Mr. Clarke thought Paice should also meet with Ford’s Head of North American Truck Mr. Bedi. Mr. Clarke also reviewed in detail the Toyota Prius engine and control system with Paice. He noted that Ford had concluded that the hybrid system contributed little to the fuel economy improvement in the first generation Toyota Prius technology, and believed the Paice technology was the key to real fuel economy improvement.

51. Following the January 2001 meeting, Mr. Clarke once again expressed Ford’s interest in Paice’s system control concept in a letter dated January 19, 2001:

*The purpose of this memo is to advise you of our interest in the PAICE Corporation’s approach to hybrid drive and the **system control concept** associated with PAICE Drive. Accordingly, we will support the design phase outlined by your company with the necessary technical information for this phase. Upon completion of the design phase and confirmation that the deliverables have been met, we are prepared to join PAICE in the*

prototype phase which will provide drivable Excursion vehicles with PAICE Drive for evaluation and test by Ford Motor Company.

52. Paice immediately began meeting with prospective automotive parts suppliers to initiate planning for the build out of the prototype Ford requested. Paice also continued to negotiate a memo of understanding with JATCO (Nissan's transmission affiliate) regarding its participation in the Paice/Ford hybrid prototype.

53. Ford had established an in-house venture fund that had flexibility to invest in and support startups with promising new technologies. Ford had directed Paice to approach this fund as a possible source of funding for the Paice/Ford prototype (Ford said it was not in a position to fund it internally). In early February 2001, the Ford Technology Venture Fund informed Paice that it intended to make a substantial equity investment in Paice. In mid-February 2001, Mr. Clarke advised Paice that Ford, the Ford Technology Venture Fund and the Office of the General Counsel needed to define the business arrangement between Ford and Paice. Mr. Clarke asked who owned the intellectual property and commented that Ford preferred to pay for the technology up-front. According to Mr. Clarke, Ford would consider royalties, but they could not be open-ended. Mr. Clarke's "open-ended" declaration was underscored when he told Paice that Ford "would not sign up for a never-ending \$500 a vehicle." Mr. Clarke advised that Ford was interested in the Paice technology, but before moving forward into the organization it was necessary to: (1) define the business agreement between Paice and Ford and (2) prove that the Paice system had merits over other hybrid systems.

54. In early March 2001, Paice sent Mr. Clarke an overview of several recent meetings held between Ford and Paice engineers to further discuss Paice's patented technology. During those meetings, Paice detailed the "Paice Advantages," including the vehicle dynamic performance (high power electric motors and fuel-efficient internal combustion engine

engagement) and fuel economy improvement (engine controlled to only operate in high efficiency mode and high voltage to allow the electrical system to operate at high efficiency).

55. On March 19, 2001, Paice sent Ford its draft of a Business Relationship between Ford and Paice. Although Paice stated the financial terms could take a number of forms, it proposed a key role for Paice as the supplier of the Paice Drive Controller, which would include proprietary Paice control algorithms. Paice proposed an initial fee of \$350 per unit.

56. A day after Paice sent its business proposal to Mr. Clarke (and its Business Plan to the Technology Venture Fund), Ford commented to Paice:

Ford is evaluating three hybrid electric vehicle concepts. One is Paice. The other two are directed at cost reducing the system in the Escape [Hybrid]. The focus is on system components other than the battery and the work was shared between two groups: Clarke's department and Tamor's department. These two joint studies could be described as second-generation Escape SUVs.

The only real advantage in the Paice system is cost and the only unique contributor to the cost posture is the planned use of lead-acid batteries. The other items covered on the "Paice Advantages" sheet are known technologies. **Ford could apply any of these at any time.**

Ford boasted that Paice's technology could be used by Ford "at any time." Ford made these statements even though Ford knew that Paice's technology is covered by patents and thus requires a license.

57. On March 27, 2001, Paice met with Advanced Powertrain Engineering (Mr. Clarke and his team) to begin discussions of the business arrangement between Paice and Ford, but made little progress. It was clear that Mr. Clarke had lost interest in Paice's business proposal. However, other departments at Ford continued independently communicating with Paice and asking Paice to conduct several rounds of expensive and time-consuming modeling and component design work on Ford vehicles.

58. Days later, on April 3, 2001, the U.S. Patent Office issued the '672 patent, which is the patent considered to be the most dominant hybrid vehicle patent in the world.³

59. In April 2001, Richard Parry-Jones, Head of Global Product Development, advised Paice that “the Escape approach and hardware should work up through Taurus. [Ford] needs a cost-effective system for larger vehicles. Paice at 800 volts has appeal and should be considered for Expedition and F-150.” Mr. Parry-Jones had responsibility over Research and Product Development and reported to the Ford CEO.

60. In May 2001, Dr. Patil, Chief Engineer of the Escape Hybrid program, and his boss met with Paice at Mr. Parry-Jones' request. Dr. Patil advised Paice that: (1) he was aware that Paice had an upcoming meeting scheduled with Mr. Bedi, Head of North American Truck, and (2) Paice needed a broader audience than the research departments within Ford.

61. On June 1, 2001, Mark Nimphie, Head of Ford Global Technology Planning, led a meeting between Paice and a number of Ford personnel.⁴ Mr. Nimphie included representatives from three of Ford's research departments, as well as Escape Hybrid product engineers in the meeting. The purpose of the meeting was to request that Paice perform a comparative study of a Toyota Prius-based Escape HEV System vs. an HEV system utilizing the Paice preferred embodiment. (While the Paice patented technology is applicable across a wide range of hybrid vehicle powertrain topologies, the Ford team often referred to the Escape design using the Toyota Prius-type eCVT arrangement as the “Toyota Prius-based Escape” and Paice's preferred embodiment as described in its patents as the “Paice Escape.”) Paice's objective was to prove

³ As noted above, Griffith Hack, an Australian law firm specializing in intellectual property, conducted an independent study of the most dominant hybrid vehicle patents in the world, which concluded that the top hybrid vehicle patents were those held by Paice.

http://www.griffithhack.com.au/Assets/1908/1/GH_Ambercitechybridcarreport_Jan2011V4.pdf

⁴ Ford Global Technology Planning reported up to Richard Parry-Jones, Head of Global Product Development, and did not operate under Ford's research umbrella.

that its technology and design approach were significantly better than the Toyota Prius-based approach.

62. Ford specifically told Paice that, in order to analyze Paice's work, Ford needed to get specific information about Paice's drivetrain technology such as:

Information on gearing, configurations (for both the Prius and Paice systems) [including] differential gear ratio, transmission gearing, traction motor, engine, axle, etc.

63. While Paice was working on the Toyota Prius-based Escape vs. Paice Escape comparative study led by Nimphie's group at Ford, Paice also began working for the first time with the head of Ford North American Truck Gurminder Bedi.⁵ Of note, Mr. Bedi was one of the first from Ford to meet with Paice in August 1999, days after the initial Paice meetings with CEO Jacques Nasser, CTO Neil Ressler, Chairman Bill Ford Jr. and Board member Bill Ford, Sr. Mr. Bedi was aware of the problems that the Escape Hybrid team was having with the performance of the first generation Toyota Prius system. In addition, he recognized that the Paice technology and design approach could address the cost, performance and packaging problems that Ford was facing with the Toyota Prius-based system. Mr. Bedi requested a five-phase plan for development of a production prototype for the Expedition SUV, which used the same platform as the Ford F-150 pick-up truck. Paice met with Mr. Bedi on June 14, 2001 and had multiple meetings with senior managers in Mr. Bedi's group during that month. Representatives from the Escape Hybrid program also attended some of the meetings. At a July 3, 2001 meeting with Paice, Mr. Bedi's group relayed the following comments and questions:

There were questions about who would own the technology and acknowledgement that some level of ownership [by Ford] would be wise;

⁵ Gurminder Bedi had ultimate responsibility over the Escape Hybrid program and did not operate under the research umbrella.

Mr. Bedi's group would meet with Mr. Nimphie to review the modeling and component design work that was underway; and

A decision and approval [by Mr. Bedi's group] would take 30-60 days.

64. Also in June 2001, Ford executives Martin Leach and Mark Fields invited Paice to meet with representatives of Ford Europe in Cologne and Mazda in Hiroshima. In these meetings and the correspondence that followed, Paice technology was extensively discussed and modeling results for representative vehicles (the Mazda Tribute and Ford Europe Transit) were presented.

65. On July 30, 2001, at Ford's request, Paice sent to Mr. Nimphie's team at Ford Global Technology Planning modeling and component design work comparing two Toyota Prius-based Escape Hybrid system designs and a Paice Escape Hybrid system design. Because Paice did not have access to the control system used in the first generation Toyota Prius, Paice used its patented method of control for all three of these Escape Hybrid studies. The studies included:

- (1) Scaled up first generation Toyota Prius system (without Paice's high voltage technology);
- (2) Scaled up Toyota Prius system using Paice high voltage technology; and
- (3) Paice's recommended system and high voltage technology.

66. The vehicles modeled in the three Escape Hybrid studies were analyzed with towing capacities of both 1500 lb and 3500 lb. Also, 2-wheel drive and 4-wheel drive configurations were analyzed.

67. All three studies provided: (1) peak torque and peak power (kW) for the engine, (2) continuous and peak kW for the traction motor and the starter/generator motor and (3) eCVT gearing for the Toyota Prius-based Escape Hybrid drivetrains (ring, sun, generator ratio, motor

ratio and final drive ratio) and gearing for the Paice Escape hybrid drivetrain (2-speed transmission, motor ratio, generator ratio and final drive ratio).

68. The Paice technical studies were circulated by Nimphie's group to representatives of three Ford research departments -- Mr. Clarke's Advanced Powertrain Engineering, Dr. Tamor's Ford Hybrid Systems Design and Mr. Wallace's THINK (electric drive) Group -- as well as to the Ford Escape Hybrid production team.

69. On August 3, 2001, Mr. Nimphie told Paice that Ford was already committed to the Toyota Prius-based approach and that Ford was not going to pursue a second dual path hybrid approach with its added cost and risk. He noted that the Paice system appeared to present real advantages but that additional testing would be required to demonstrate those advantages.

70. On August 6, 2001, Paice provided additional testing using different engines per Ford's request. Paice highlighted that Paice's patented control system was used for *all* of the studies and the advantages of the Paice system would have been even more impressive if simulations of Ford's systems used Ford's first generation Prius-based technology. Because all studies used Paice's patented method of control, substantial improvement in fuel economy was demonstrated in each case. However, the studies for the Paice Escape hybrid used much smaller power electric motors (smaller size/weight) and allowed packaging for towing as was requested by Ford. The Paice Escape hybrid design demonstrated substantially lower cost -- the key in automotive marketability.

71. Paice and Ford were scheduled to meet on August 23, 2001, to review the extensive Paice modeling and packaging work on the Toyota Prius vs. the Paice approaches, but Ford abruptly cancelled the meeting on August 22nd, noting that Dr. Tamor was in Japan.

72. In direct contradiction to the message conveyed to Paice in August 2001, two Ford executives told Paice:

Paice approach is interesting. It appears it should be considered. Hybrids operating at High Voltage will be necessary to realize the real potential of hybrids.

There is consensus that the “Prius system” is not really the choice for product beyond the Escape. Dr. Tamor and company are looking at a range of technologies for the future.

73. Ford determined that (1) the Toyota Prius-based system could not be scaled above an Escape, (2) the Escape with the Toyota Prius-based system could not tow above 1000 lbs., and (3) the cost penalty of using the Toyota Prius-based system was very problematic.

74. Most importantly, Ford recognized the need to use Paice's technology across Ford's entire product line, regardless of the design approach selected.

FORD USES PAICE'S TECHNOLOGY BUT REFUSES TO TAKE A LICENSE

75. In October 2001, Dr. Gerhard Schmidt, VP of Ford Research, conducted a technical review of the Paice technology with Ford's subject matter experts. Dr. Schmidt came to Ford in the spring of 2001 after spending 21 years at BMW where he had held a wide range of leadership roles in engine research and development. A Ford representative advised Paice that Dr. Schmidt was amazed at what he had walked into and the lack of an orderly advanced engineering and research process at Ford.

76. Dr. Schmidt's review of Paice's technology was prompted by the recommendation of Dr. Ulrich Seiffert, former head of powertrain development at Volkswagen AG and Volkswagen's research and development director. Dr. Seiffert was keenly interested in the Paice technology and the potential it held for the auto industry.

77. Following Dr. Schmidt's review, however, Ford once again advised Paice that "Ford had chosen different HEV architectures and had no further interest in the Paice system."

Ford provided Paice with the following feedback:

The Paice System was found viable;

Ford is coming up to speed with the Toyota system [and it was] not worth the trip to switch to the Paice technology;

Ford has spent a lot of money on Toyota;

If Ford was starting now it might consider Paice;

Ford believes the Toyota system could be tweaked to achieve the Paice level; and

Ford wanted a single hybrid focus for now.

78. The comments relayed to Paice revealed important insights:

(1) Ford was using the Toyota Prius-based topology and technology and had been working closely with Toyota, and

(2) Ford thought it could integrate Paice's teachings into its Toyota Prius-based design -- allowing it to achieve Paice's results *without* paying for a license for the Paice technology.

79. In October 2001, the Ford Board of Directors voted Mr. Nasser out as CEO and appointed Bill Ford, Jr. Chairman and CEO.

80. In addition to work between Ford and Toyota on the Ford Escape Hybrid, in November 2001, Ford announced that Ford and Toyota had selected the type of hybrid vehicle and technology for its first jointly-developed hybrid vehicle. Ford and Toyota envisioned that this jointly developed system would not be applied to existing models, but would be used in an upcoming new hybrid model. As part of these collaborations, Paice believes that Ford and Toyota discussed the merits of Paice's patented technology in the 2000 to 2002 timeframe.

81. In December 2001, a month after the announcement of the possible Toyota/Ford joint hybrid development initiative, Paice testified before the U.S. Senate Commerce, Science and Transportation Committee. The hearing focused on automobile fuel economy and the Federal Corporate Average Fuel Economy (CAFE) program. Paice sat side-by-side in the Senate hearing with Ford, Toyota, GM, Honda, DaimlerChrysler, NHTSA, PNGV, Sierra Club, Centers for Auto Safety, Union of Concerned Scientists and the Department of Commerce. Both Ford and Toyota testified. Senators John Kerry and John McCain were among the committee members present. Following Paice's presentation made by inventor Ted Louckes, Senator Kerry engaged Mr. Louckes in a constructive exchange regarding the importance of hybrid technology. He also asked the other automaker representatives present "if it is as good as [Mr. Louckes] says it is, why aren't the Big Three chasing these guys like bandits?" In reality, Paice had already spent more than a year sharing the details of its hybrid technology with Ford.

82. When Senator Kerry asked the automakers on the panel about Paice, the Ford representative (Susan Cischke) noted that Ford was going to introduce the Escape Hybrid in 2003 and that "we will continue to look at ways of adding new technology." The Toyota representative (James Olsen) said that his company tended to be "an intensely not-invented-here company" and already had hybrids in Japan. Read today, Paice's complete oral and written testimony concerning its technology and how it could be implemented demonstrate just how visionary and ahead of their time Dr. Severinsky, Mr. Louckes and Paice were.

83. In November 2002 – after nearly four years of engineering on the Escape Hybrid – Ford reversed course and made the decision not to buy the first generation Prius technology from Toyota. Phil Martens, Ford's Vice President of Vehicle Programs and Processes, said this was a defining moment and took away Ford's safety net. By 2002, Toyota had moved beyond its

poorly performing first generation Prius, and was nearing completion of an improved Prius II model. Ford had concluded that it could not be saddled with Toyota's first generation Prius technology while its rival was busy creating the next generation hybrid.

84. Mr. Martens said it was critical for Ford engineers to develop their own software to control a gasoline-electric hybrid powertrain so that Ford could fully develop hybrids independently. Even though Ford was no longer planning to use Toyota's first generation hybrid technology, it was still going to rely on the eCVT-based topology used in the Toyota Prius. Ford still needed to acquire critical components from Aisin, the Toyota-controlled affiliate that had supplied these hybrid powertrain components for the first generation Prius to Toyota. When Aisin announced that it was developing a gas-electric hybrid powertrain system for the Ford Escape SUV similar to the Prius, it stressed that the deal would not be happening without Toyota's blessing.

85. In the spring of 2003, Mr. Martens concluded the Ford hybrid team was in serious trouble. The Escape Hybrid was already more than one year behind schedule. To address the team's lack of product launch experience, Mr. Martens brought on Mary Ann Wright, who had launched Sable, Taurus and Lincoln vehicles.

86. In April 2003, Dr. Severinsky was stunned when he saw the debut of advanced prototypes of the Ford Escape Hybrid and the second generation Toyota Prius at the New York Auto Show. Dr. Severinsky wrote a letter that very day to Dr. Patil of the Escape Hybrid program and included the modeling and analysis Paice had done in July and August 2001 comparing the Toyota- Prius-based Escape to the Paice Escape. Dr. Severinsky observed in his letter to Dr. Patil that Ford's motor sizes and characteristics were similar to Paice's modeling and

analysis on the Toyota Prius-based Escape. Dr. Severinsky also deduced that, based on the presented fuel economy, Ford was using Paice's method of control.

87. When Dr. Severinsky realized the second generation Toyota Prius had adopted Paice's patented hybrid technology, he felt vindicated even though Toyota was using Paice's technology without permission. In fact, Dr. Severinsky concluded that the second generation Toyota Prius was using Paice's patented method of control and its high voltage concepts (500V) to achieve the performance necessary for a commercially viable hybrid vehicle, and was also using the same topology that Paice had designed for Ford's Toyota Prius-based Escape. Dr. Severinsky went on to tell Dr. Patil "it would appear Toyota tricked you" – suggesting that Toyota had not shared with Ford its intention of using higher voltage in its second generation. Ford later adopted Paice's high voltage concept in its second generation hybrid.

88. In May 2003, as a follow-up to the NY Auto Show, Paice contacted Dr. Schmidt to emphasize Ford's need for a second generation vehicle:

I am certain you agree that the Toyota announcements at the New York Auto Show clearly demonstrate their commitment to hybrid technology and to an aggressive pursuit of continuing improvements to HEV operating systems. With adoption of a full hybrid concept, the second-generation Prius, which incorporates higher voltage and sophisticated methodology to assure optimum energy management, Toyota was approaching the characteristics found in the Paice Hyperdrive system. With Toyota now moving beyond the original Prius operating concept and the hardware utilized in that system, Ford should be receptive to a second-generation product.

Dr. Schmidt replied:

We greatly appreciate your enduring enthusiasm for hybrid electric vehicles, and share your belief that Ford must become a leader in this technology. However, please note that the first-generation hybrid system for the Escape HEV had long since been selected at the time the technical team evaluated the PAICE proposal, and that the PAICE system was indeed treated as a prospective second-generation technology. Also, the direction that Toyota has taken was understood, at least in broad terms, at that time. As before, we do not anticipate that the PAICE concept

will be appropriate to our needs. If this appraisal should change in any way, we would, of course, initiate the discussion you propose.

Again thank you for your interest.

89. In September 2003, Ford conducted the first media drive of the Escape Hybrid. Ford acknowledged their “no compromise” Escape Hybrid had fallen behind schedule and would not be ready until late summer 2004.

90. Amid all of this, Ford continued to try to learn all it could about Paice’s technology. In an email exchange between Paice and Dr. Schmidt in October 2003, Dr. Schmidt advised Paice that although he was not able to meet with Paice during the November SAE conference on Cost Effective Hybrid Electric Powertrains, he would be happy to meet with Paice in Q1 2004. In the meantime, he recommended that Paice should meet with Dr. Tamor, Manager of Hybrid Systems Design, and others.

91. At the November 2003 SAE Conference in Troy, Michigan on hybrid vehicles, Paice was selected to be on a conference panel together with Toyota and Ford to make presentations on hybrid electric powertrain technology.

92. Paice had numerous face-to-face meetings and correspondence between November 2003 and February 2004 with Ford engineers and managers. Paice prepared a Paice Hyperdrive IP Summary per Ford’s request. The summary included: (1) an overview of Paice personnel, (2) engineering business relationships and (3) availability of Paice technology and support. A copy of the summary was shared with Dr. Tamor and others.

93. At that time, Paice representatives advised Ford of the following:

The Paice Hyperdrive is a method of mode control via road load and method of engine control;

Paice's technology can be scaled up to cover an entire range of light vehicles⁶ and assures the greatest fuel economy improvement without loss of customer attributes or vehicle mission;

Paice is willing to share its patented technology through a licensing arrangement. Paice also offered significant know-how.

94. In January 2004, the second generation Toyota Prius was introduced in the US.

95. In March 2004, Bruce Blythe (Ford Chief Strategy Officer) commented to Paice that he was troubled that the Escape Hybrid would not represent an industry benchmark. Mr. Blythe directed Chuck Centivany (Ford Director of Strategic Planning) to meet with Paice to review the Paice technology. After an in-depth review of Paice's technology Mr. Centivany commented that if Toyota had a Prius 1 and now a Prius 2, the Ford Escape is generally thought of as a "1.5 vintage." The Escape Hybrid used a method of control that provided performance similar to the second generation Prius (a method of control that was developed by Paice and is now licensed by Toyota), but did not adopt Paice's patented high voltage.

96. On April 6, 2004, Paice received Ford's next response:

Ford, after careful consideration with Ford Advanced Research and the Office of General Counsel, had decided it was more appropriate to focus on the maturation and refinement of the Escape System rather than embark on a parallel effort to validate the Paice concept.

At this point, Ford had learned Paice's technology at a detailed level. Paice had provided Ford with key functionality of Paice's method of control and results of intricate modeling that taught Ford all aspects of Paice's patented technology. Furthermore, of utmost importance, Ford understood that it must use Paice's patented technology across all vehicle lines to achieve the performance necessary to build a commercially viable hybrid.

⁶ The term "light vehicles" encompasses cars, SUVs and pickup trucks.

PAICE AND FORD LITIGATION

97. On December 28, 2005, Ford filed a Complaint for Declaratory Judgment and Demand for Jury Trial against Paice in Detroit, Michigan – seven days after the jury in Paice’s case against Toyota reached a verdict of infringement on claims 11 and 39 of the ‘970 patent. Ford was apparently worried that Paice would pursue an action against Ford -- and Ford wanted to control venue. Ford filed its complaint in Detroit, but chose not to serve the complaint on Paice, so no scheduling was fixed. On May 19, 2006, District Judge Battani ordered that Ford show cause why the case against Paice should not be dismissed for failure to timely serve the complaint. Ford ultimately effected service, over seven months after filing the complaint.

98. Paice is a small company and its resources were devoted to its litigation with Toyota when Ford filed its declaratory judgment complaint. In addition, Paice has always preferred licensing to litigation, and had never threatened Ford with suit. In October 2006, these factors led Paice to file a motion to dismiss the Ford complaint for declaratory judgment for lack of subject matter jurisdiction, or in the alternative to transfer venue to the district where the Toyota litigation was pending. One month later, Ford opposed Paice’s motion to dismiss and included in its motion papers a declaration from Dr. Tamor stating in part:

In December 1999, I, along with a few other Ford employees, met with several representatives from Paice to discuss the possibility of using Paice’s Hyperdrive System, and of taking a license out under Paice’s patents for its hybrid electric vehicles.

Between December 1999 and April 2004 we met several times with Paice’s representatives to discuss the feasibility and desirability of utilizing Paice’s Hyperdrive System and patents in Ford’s hybrid vehicles.

Ford designed and currently sells two hybrid electric vehicles, the Ford Escape and the Mercury Mariner. Both use a power split transaxle, with a planetary gear system, that Ford buys from Aisin AW. It is my understanding that Toyota also uses a power split transaxle with a planetary gear system, and that Aisin had and/or has a significant role in Toyota’s product.

99. In February 2007, Judge Battani dismissed Ford's case relying on the fact that Paice had always offered to license Ford and had never threatened Ford with litigation.

100. In May 2010, as Paice's litigation against Toyota progressed, Paice turned its attention back to Ford and filed a complaint against Ford alleging infringement of the '970 patent. Ford entered into a patent license agreement with Paice on July 15, 2010 that covered Paice's first patent, the '970. The parties were not able to resolve Ford's infringement of Paice's later patents (the '672/'634 family), including the patents at issue in this suit, and instead entered into a litigation standstill agreement until January 1, 2014. The agreement gave Ford the unilateral right to select arbitration in lieu of litigation. Ford, however, has decided not to arbitrate, forcing Paice once again to litigate its patents against a large and powerful corporation.

101. On July 19, 2010, Paice and Toyota entered into a global settlement on all Paice US and foreign patents. The terms of the settlement are confidential, but Paice believes the license that Toyota signed is fair and reflective of the value of the Paice technology.

FORD AND ITS HYBRIDS – 2004 - PRESENT

102. For 2004, NHTSA reported that the average fuel economy ratings (CAFE) of Ford's US car and light truck line-up were 26.7 MPG for domestic passenger cars and 21.1 MPG for light trucks, near last among the top six automakers for the fifth year. As a result, Ford continued to draw criticism from environmental advocates.

103. In January 2005, Ford announced that its second-generation hybrid technology would debut in the Ford Fusion. (The Ford Fusion Hybrid went on sale four years later in March 2009.)

104. In mid-2005, Ford's hybrid programs were negatively affected by two factors: (1) Ford's financial deterioration as evidenced by the May 2005 downgrade in its credit rating to

non-investment grade and (2) shortages of crucial hybrid parts from component manufacturers for its Ford Escape Hybrid. Ford believed that it was being squeezed by its Japanese suppliers, many of which were affiliates of Toyota and Honda.

105. In October 2005, Ms. Wright was overseeing a team of engineers developing a second-generation hybrid powertrain as well as lining up suppliers for high-volume hybrid production. At that time, Wright announced:

*We have a whole new battery architecture, a new engine, a new transmission and a **new high-voltage system.***

106. Paice first taught Ford the importance of using Paice's high voltage and method of control technologies across all vehicle lines as early as December 8, 1999, when Ford observed Paice's prototype at Roush Industries engineering and testing facilities. Toyota further demonstrated the profound value of Paice's technology when it unveiled the second generation Prius at the 2003 NY Auto Show.

107. Shortly after Ms. Wright's announcement about Ford's second generation hybrid technology, Bill Ford promised that by 2010, half of all Ford, Lincoln, and Mercury models would be available with hybrid powertrains. Mr. Ford went on to say the company would produce 250,000 hybrids by 2010. Days after Mr. Ford's announcement, Wright resigned as chief engineer of the Escape Hybrid. Her resignation followed the resignations of Dr. Patil and Mr. Martens weeks earlier. Days before Mr. Martens' resignation Mr. Ford described Martens as the key to Ford's turnaround as he was the executive who would head the overall technology push. The departures of these key executives further hampered the ability of the company to advance its hybrid programs in a timely manner.

108. Further challenging its hybrid programs, Ford was in serious financial trouble in early 2006. The trouble culminated in the Ford Board's decision to explore bankruptcy, merger

with other car companies, selling portions of the company to private equity, selling foreign brands (Jaguar, Land Rover and Volvo) and several other options.

109. In September 2006, Alan Mulally, a former Boeing executive, became CEO of Ford. Bill Ford remained Executive Chairman. In December 2006, one month after Mr. Mulally presented his plan to save the Company to the Ford Board, he travelled to meet with Toyota and its honorary Chairman, Shoichiro Toyoda.

110. The purposes of Mr. Mullaly's visit to Chairman Toyoda were:

To find out if Toyota was willing to allow its suppliers to sell Ford more of the parts it needed to produce hybrids;

To see if Toyota was willing to work with Ford to develop new powertrain technologies; and

To see if Toyota was open to an even closer collaboration with Ford, i.e. - an alliance.

The answer was a polite but firm, "No" in each case.⁷

111. When Congress passed the Energy Dependence and Security Act in December 2007, it established a new CAFE target for the automotive industry of 35 miles per gallon by 2020. Such fuel-economy gains would only be possible through a broader rollout of hybrids, electric vehicles and substantial weight reduction and downsizing. The new CAFE legislation also authorized the U.S. Department of Energy (DOE) to provide low-interest loans to automakers, both foreign and domestic, to help cover the cost of creating the manufacturing infrastructure necessary to produce these more advanced products. (In June 2009, Ford became the first automaker to receive a DOE loan.)

⁷ As noted above, Toyota had previously provided Ford with technical support and Toyota's first tier suppliers were supplying Ford with components. In 2004, Toyota and Ford announced a series of license agreements that reflected this cooperation.

112. Mr. Mulally, like Bill Ford, recognized how important it was for Ford to have a strong hybrid line-up to meet the CAFE requirement. He also realized that it would be necessary to address the hybrid component shortage created in part by Toyota.

113. In June 2008, Ford introduced its second-generation hybrid, the Fusion, to the press. (The Fusion went on sale in March 2009.). Ford also announced it would double both hybrid production and the hybrid models it offered in 2009.

114. Ford did not advertise the operating voltage of the Fusion Hybrid, but did state that its system included an advanced “variable voltage converter,” capable of selectively boosting the operating voltage above the base level of the battery, which was rated at 275V, thus decreasing energy losses in the electronic controls for the motors and generators.

115. In December 2008, the EPA released its official mileage for the new Ford Fusion Hybrid. With 41 MPG in the city and 36 MPG on the highway, it was a blow to archrival Toyota, roundly beating the Camry Hybrid to claim the title of most fuel-efficient mid-sized sedan in America. Ford’s mileage gains were the direct result of Ford’s use of Paice’s patented technology.

116. Also in January 2009, Bill Ford announced an aggressive new electrification strategy, detailing plans to bring a new hybrid, a plug-in hybrid and two battery-powered electric vehicles to market by the end of 2012. Two months later, in March 2009, the second generation hybrid, the Fusion, went on sale.

117. In June 2009, Ford became the first automaker to receive a loan from the US Department of Energy retooling program. The \$5.9 billion loan gave Ford the capital it needed to make good on Bill Ford’s promise to introduce a family of electric and hybrid-electric vehicles.

118. In January 2010, Ford quality ratings were the highest of any non-luxury brand. The Ford Hybrid Fusion was named the 2010 North American Car of the Year. And Ford announced it would invest \$450 million to build the C-Max HEV and PHEV at the Wayne Michigan Assembly Plant.

119. In August 2011, following a meeting between Mr. Mulally and Toyota CEO Akio Toyoda, Ford and Toyota embarked on a joint program with a co-located team to develop a hybrid system for rear-wheel drive SUVs and pickup trucks. These larger vehicles carry higher profit margins and have the potential for significant fuel economy improvement when fitted with a hybrid powertrain. Based on the earlier studies Paice was asked to conduct, Ford's interest in a system for these vehicles was apparent. However, given other corporate priorities, financial constraints, and the selection of the Toyota Prius-type system for the Escape Hybrid, Ford was not in a position to develop a rear-wheel drive hybrid system for larger vehicles until the joint program with Toyota.

120. The Ford/Toyota partnership was terminated after 23 months. Each company subsequently announced plans to develop hybrids for their SUVs and pickup trucks. Ford signaled that a hybrid system for these vehicles is under development, saying that "Ford is moving forward on its own with development of a rear-wheel-drive hybrid system for Ford pickups and SUVs." Paice believes this system will also incorporate the teachings described in Paice's earlier studies presented to Ford per Ford's request.

121. Ford introduced its third generation hybrids – the C-MAX Hybrid, the Fusion Hybrid, the MKZ Hybrid, the C-MAX Plug-In Hybrid, and the Fusion Plug-In Hybrid– in 2012. With these third generation hybrids, for the first time, Ford no longer sourced hybrid components from Toyota-controlled affiliates.

122. Today, Toyota and Ford are the leaders in use of hybrid technology in the automotive industry in the United States. Toyota sold its first Prius in the U.S. in 2000. By mid-2013, it had sold over two million Toyota and Lexus hybrids in the U.S. Toyota currently offers 12 hybrid models for sale in the U.S. market. Ford introduced its first hybrid vehicle – the Escape Hybrid – in October 2004 and now offers five hybrid models for sale in the U.S. While Toyota still leads the U.S. hybrid vehicle market, Ford has gained considerable ground in hybrids over the last year. Ford’s success is due to the use of Paice’s patented technology.

123. When Ford undertook its final comprehensive review of the Paice technology in March 2004, and felt that it learned what it needed, Ford advised Paice as follows:

Ford, after careful consideration with Ford Advanced Research and the Office of General Counsel, has decided it was more appropriate to focus on the maturation and refinement of the Escape system rather than embark on a parallel effort to validate the Paice concept.

This statement is grossly inaccurate. As detailed above, the truth is that Ford built its new hybrid system by relying heavily on the hybrid vehicle inventions it learned from Paice. ***Ford had concluded that to build a commercially viable hybrid, it must use Paice’s fundamental patented technology and teachings.***

124. Paice acted in good faith in all of its business dealings with Ford over the period of their relationship, teaching multiple departments within Ford all aspects of Paice’s hybrid vehicle technology. From 1999 to 2004, Paice taught Ford how to implement Paice’s patented hybrid vehicle technology through extensive engineering work and communications. Paice responded promptly and completely to Ford’s ongoing requests for information, modeling and component design work. At the same time, unknown to Paice, Ford was collaborating with Toyota on its Ford Escape Hybrid and pursuing other hybrid alternatives with Toyota.

125. Ford used Paice's technology –in the design of its own vehicles and also in its collaborations with Toyota. Paice's technology has indeed proven to be the “game changer” that Ford told Paice it was looking for many years ago. Toyota, the market leader, took a global license to all of Paice's patents. It is simply unfair to Paice, and to Toyota, to permit Ford to “free ride” and use this key technology without compensation. Ford too must acknowledge Paice's critical contributions to Ford's success with its hybrid vehicles and provide Paice with just returns on its technology investment.

126. Ford has been aware of Paice's patents and Ford's use of Paice's patented technology for many years. It should have come as no surprise then, when on October 3, 2013, Paice gave formal written notice to Ford of its infringement of the asserted patents. Paice has met with Ford to discuss settlement and licensing of the Paice patents, but the negotiations have been short and one-sided. As noted above, Ford declined the ability to arbitrate the present dispute provided in the parties' 2010 license and arbitration agreements. Ford's decision not to arbitrate and not to negotiate leaves Paice with no choice but to once again litigate against a large, powerful corporation.

127. As a result, Ford has and will continue to infringe Paice's patents by, for example, selling unlicensed hybrid vehicles throughout the United States unless it is enjoined.

128. In view of the facts alleged above, Ford has knowledge of Paice's patents and its products' infringement.

COUNT I

Ford's Infringement of U.S. Patent No. 7,237,634

129. Plaintiffs reallege and incorporate herein by reference the allegations in paragraphs 1-128 above. As described below, Ford has infringed and continues to infringe the '634 patent.

130. Ford has infringed and continues to infringe, for example, at least claim 16 of the '634 patent under 35 U.S.C. § 271(a), by making, using, offering for sale or selling within the United States, or importing into the United States hybrid vehicles (including any cars, sport utility vehicles, or light duty trucks) and/or components thereof, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, that infringe the '634 patent either literally or under the doctrine of equivalents.

131. In view of the facts alleged in the background sections above, Ford has knowledge of the asserted patents, including the '634 patent, and its products' infringement. In addition, Paice specifically identified the '634 patent in an assertion notice provided to Ford on October 3, 2013. Ford also received notice of infringement of the '634 patent by virtue of Plaintiffs' filing a complaint in this case.

132. Ford has actively induced and continues to induce the infringement by others, including its customers, of the '634 patent under 35 U.S.C. § 271(b) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, and providing materials and instructions for operation of the same, with the specific intent and knowledge that the hybrid vehicles, materials and instructions direct, teach, or assist others to infringe the '634

patent by using or operating the hybrid vehicles in a manner that directly infringes the '634 patent. For example, Ford provides materials as well as user manuals that tout the hybrid vehicle technology and instructions on how to operate Ford hybrid vehicles. Ford's customers directly infringe the '634 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '634 patent.

133. Ford has contributed and continues to contribute to the infringement by others, including its customers, of the '634 patent under 35 U.S.C. § 271(c) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles and components, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, for use in practicing the patented inventions of the '634 patent, knowing that the hybrid vehicles and components are especially made or adapted for use in infringement of the '634 patent, embody a material part of the inventions claimed in the '634 patent, and are not staple articles of commerce suitable for substantial non-infringing use. Ford's customers directly infringe the '634 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '634 patent.

134. As a result of Ford's past and continued unlawful infringement of the '634 patent, Plaintiffs have suffered and will continue to suffer damage. Plaintiffs are entitled to recover damages adequate to compensate for that infringement in an amount that will be ascertained at trial, but in no event less than a reasonable royalty.

135. Plaintiffs have no adequate remedy at law.

136. Ford's conduct has caused and, if not enjoined, will continue to cause irreparable damage to Plaintiffs.

137. As a result of Ford's wrongful conduct, Plaintiffs are entitled to injunctive relief.

COUNT II

Ford's Infringement of U.S. Patent No. 7,104,347

138. Plaintiffs reallege and incorporate herein by reference the allegations in paragraphs 1-128 above. As described below, Ford has infringed and continues to infringe the '347 patent.

139. Ford has infringed and continues to infringe, for example, at least claim 7 of the '347 patent under 35 U.S.C. § 271(a), by making, using, offering for sale or selling within the United States, or importing into the United States hybrid vehicles (including any cars, sport utility vehicles, or light duty trucks) and/or components thereof, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, that infringe the '347 patent either literally or under the doctrine of equivalents.

140. In view of the facts alleged in the background sections above, Ford has knowledge of the asserted patents, including the '347 patent, and its products' infringement. In addition, Paice specifically identified the '347 patent in an assertion notice provided to Ford on October 3, 2013. Ford also received notice of infringement of the '347 patent by virtue of Plaintiffs' filing a complaint in this case.

141. Ford has actively induced and continues to induce the infringement by others, including its customers, of the '347 patent under 35 U.S.C. § 271(b) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles, such as Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, and providing materials and instructions for operation of the same, with the specific intent and knowledge that the hybrid vehicles, materials and instructions direct, teach, or assist others to infringe the '347

patent by using or operating the hybrid vehicles in a manner that directly infringes the '347 patent. For example, Ford provides materials as well as user manuals that tout the hybrid vehicle technology and instructions on how to operate Ford hybrid vehicles. Ford's customers directly infringe the '347 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '347 patent.

142. Ford has contributed and continues to contribute to the infringement by others, including its customers, of the '347 patent under 35 U.S.C. § 271(c) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles and components, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, for use in practicing the patented inventions of the '347 patent, knowing that the hybrid vehicles and components are especially made or adapted for use in infringement of the '347 patent, embody a material part of the inventions claimed in the '347 patent, and are not staple articles of commerce suitable for substantial non-infringing use. Ford's customers directly infringe the '347 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '347 patent.

143. As a result of Ford's past and continued unlawful infringement of the '347 patent, Plaintiffs have suffered and will continue to suffer damage. Plaintiffs are entitled to recover damages adequate to compensate for that infringement in an amount that will be ascertained at trial, but in no event less than a reasonable royalty.

144. Plaintiffs have no adequate remedy at law.

145. Ford's conduct has caused and, if not enjoined, will continue to cause irreparable damage to Plaintiffs.

146. As a result of Ford's wrongful conduct, Plaintiffs are entitled to injunctive relief.

COUNT III

Ford's Infringement of U.S. Patent No. 7,559,388

147. Plaintiffs reallege and incorporate herein by reference the allegations in paragraphs 1-128 above. As described below, Ford has infringed and continues to infringe the '388 patent.

148. Ford has infringed and continues to infringe, for example, at least claim 1 of the '388 patent under 35 U.S.C. § 271(a), by making, using, offering for sale or selling within the United States, or importing into the United States hybrid vehicles (including any cars, sport utility vehicles, or light duty trucks) and/or components thereof, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, that infringe the '388 patent either literally or under the doctrine of equivalents.

149. In view of the facts alleged in the background sections above, Ford has knowledge of the asserted patents, including the '388 patent, and its products' infringement. In addition, Paice specifically identified the '388 patent in an assertion notice provided to Ford on October 3, 2013. Ford also received notice of infringement of the '388 patent by virtue of Plaintiffs' filing a complaint in this case.

150. Ford has actively induced and continues to induce the infringement by others, including its customers, of the '388 patent under 35 U.S.C. § 271(b) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, and providing materials and instructions for operation of the same, with the specific intent and knowledge that the hybrid vehicles, materials and instructions direct, teach, or assist others to infringe the '388

patent by using or operating the hybrid vehicles in a manner that directly infringes the '388 patent. For example, Ford provides materials as well as user manuals that tout the hybrid vehicle technology and instructions on how to operate Ford hybrid vehicles. Ford's customers directly infringe the '388 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '388 patent.

151. Ford has contributed and continues to contribute to the infringement by others, including its customers, of the '388 patent under 35 U.S.C. § 271(c) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles and components, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, for use in practicing the patented inventions of the '388 patent, knowing that the hybrid vehicles and components are especially made or adapted for use in infringement of the '388 patent, embody a material part of the inventions claimed in the '388 patent, and are not staple articles of commerce suitable for substantial non-infringing use. Ford's customers directly infringe the '388 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '388 patent.

152. As a result of Ford's past and continued unlawful infringement of the '388 patent, Plaintiffs have suffered and will continue to suffer damage. Plaintiffs are entitled to recover damages adequate to compensate for that infringement in an amount that will be ascertained at trial, but in no event less than a reasonable royalty.

153. Plaintiffs have no adequate remedy at law.

154. Ford's conduct has caused and, if not enjoined, will continue to cause irreparable damage to Plaintiffs.

155. As a result of Ford's wrongful conduct, Plaintiffs are entitled to injunctive relief.

COUNT IV

Ford's Infringement of U.S. Patent No. '097

156. Plaintiffs reallege and incorporate herein by reference the allegations in paragraphs 1-128 above. As described below, Ford has infringed and continues to infringe the '097 patent.

157. Ford has infringed and continues to infringe, for example, at least claim 1 of the '097 patent under 35 U.S.C. § 271(a), by making, using, offering for sale or selling within the United States, or importing into the United States hybrid vehicles (including any cars, sport utility vehicles, or light duty trucks) and/or components thereof, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, that infringe the '097 patent either literally or under the doctrine of equivalents.

158. In view of the facts alleged in the background sections above, Ford has knowledge of the asserted patents, including the '097 patent, and its products' infringement. In addition, Paice specifically identified the '097 patent in an assertion notice provided to Ford on October 3, 2013. Ford also received notice of infringement of the '097 patent by virtue of Plaintiffs' filing a complaint in this case.

159. Ford has actively induced and continues to induce the infringement by others, including its customers, of the '097 patent under 35 U.S.C. § 271(b) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, and providing materials and instructions for operation of the same, with the specific intent and knowledge that the hybrid vehicles, materials and instructions direct, teach, or assist others to infringe the '097

patent by using or operating the hybrid vehicles in a manner that directly infringes the '097 patent. For example, Ford provides materials as well as user manuals that tout the hybrid vehicle technology and instructions on how to operate Ford hybrid vehicles. Ford's customers directly infringe the '097 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '097 patent.

160. Ford has contributed and continues to contribute to the infringement by others, including its customers, of the '097 patent under 35 U.S.C. § 271(c) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles and components, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, for use in practicing the patented inventions of the '097 patent, knowing that the hybrid vehicles and components are especially made or adapted for use in infringement of the '097 patent, embody a material part of the inventions claimed in the '097 patent, and are not staple articles of commerce suitable for substantial non-infringing use. Ford's customers directly infringe the '097 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '097 patent.

161. As a result of Ford's past and continued unlawful infringement of the '097 patent, Plaintiffs have suffered and will continue to suffer damage. Plaintiffs are entitled to recover damages adequate to compensate for that infringement in an amount that will be ascertained at trial, but in no event less than a reasonable royalty.

162. Plaintiffs have no adequate remedy at law.

163. Ford's conduct has caused and, if not enjoined, will continue to cause irreparable damage to Plaintiffs.

164. As a result of Ford's wrongful conduct, Plaintiffs are entitled to injunctive relief.

COUNT V

Ford's Infringement of U.S. Patent No. '134

165. Plaintiffs reallege and incorporate herein by reference the allegations in paragraphs 1-128 above. As described below, Ford has infringed and continues to infringe the '134 patent.

166. Ford has infringed and continues to infringe, for example, at least claim 40 of the '134 patent under 35 U.S.C. § 271(a), by making, using, offering for sale or selling within the United States, or importing into the United States hybrid vehicles (including any cars, sport utility vehicles, or light duty trucks) and/or components thereof, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, that infringe the '134 patent either literally or under the doctrine of equivalents.

167. In view of the facts alleged in the background sections above, Ford has knowledge of the asserted patents, including the '134 patent, and its products' infringement. In addition, Paice specifically identified the '134 patent in an assertion notice provided to Ford on October 3, 2013. Ford also received notice of infringement of the '134 patent by virtue of Plaintiffs' filing a complaint in this case.

168. Ford has actively induced and continues to induce the infringement by others, including its customers, of the '134 patent under 35 U.S.C. § 271(b) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, and providing materials and instructions for operation of the same, with the specific intent and knowledge that the hybrid vehicles, materials and instructions direct, teach, or assist others to infringe the '134

patent by using or operating the hybrid vehicles in a manner that directly infringes the '134 patent. For example, Ford provides materials as well as user manuals that tout the hybrid vehicle technology and instructions on how to operate Ford hybrid vehicles. Ford's customers directly infringe the '134 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '134 patent.

169. Ford has contributed and continues to contribute to the infringement by others, including its customers, of the '134 patent under 35 U.S.C. § 271(c) by, among other things, manufacturing, selling, offering for sale within the United States and/or importing into the United States hybrid vehicles and components, such as the Ford C-Max Hybrid, Ford C-Max Plug-in Hybrid, Ford Fusion Hybrid, Ford Fusion Plug-in Hybrid, and the Lincoln MKZ Hybrid, for use in practicing the patented inventions of the '134 patent, knowing that the hybrid vehicles and components are especially made or adapted for use in infringement of the '134 patent, embody a material part of the inventions claimed in the '134 patent, and are not staple articles of commerce suitable for substantial non-infringing use. Ford's customers directly infringe the '134 patent by using (*e.g.*, driving) the Ford hybrid vehicles that embody the patented invention of the '134 patent.

170. As a result of Ford's past and continued unlawful infringement of the '134 patent, Plaintiffs have suffered and will continue to suffer damage. Plaintiffs are entitled to recover damages adequate to compensate for that infringement in an amount that will be ascertained at trial, but in no event less than a reasonable royalty.

171. Plaintiffs have no adequate remedy at law.

172. Ford's conduct has caused and, if not enjoined, will continue to cause irreparable damage to Plaintiffs.

173. As a result of Ford's wrongful conduct, Plaintiffs are entitled to injunctive relief.

JURY DEMAND

Pursuant to Federal Rule of Civil Procedure 38, Plaintiffs demand a trial by jury on all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs Paice and Abell respectfully request the following relief:

- 1) A judgment that the '634, '347, '388, '097, and '134 patents have been infringed by Ford;
- 2) Awarding Paice and Abell damages adequate to compensate for the infringement, pre- and post-judgment interest as allowed by law, costs, and all other damages permitted by 35 U.S.C. § 284;
- 3) Declaring that this case is an exceptional one under 35 U.S.C. § 285, and awarding Paice and Abell their reasonable attorneys' fees;
- 4) Permanently enjoining Ford and its officers, agents, servants, employees, affiliates, representatives, successors and assigns, attorneys, and any others acting in concert with Ford, from further infringement, inducement and contributory infringement of the '634, '347, '388, '097, and '134 patents.
Alternatively, Paice and Abell request a determination of an ongoing royalty taking into account the parties' changed post-verdict status if Ford decides to engage in willful post-verdict infringement;
- 5) Awarding Paice and Abell such further, necessary and proper relief as this Court may deem just and reasonable.

February 19, 2014

Respectfully submitted,

By: /s/ James P. Ulwick

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