

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE PATENT TRIAL AND APPEAL BOARD

---

FORD MOTOR COMPANY  
Petitioner

v.

PAICE LLC & THE ABELL FOUNDATION  
Patent Owner

---

Case IPR2015-00795  
Patent 7,104,347

---

**DECLARATION OF NEIL HANNEMANN  
IN SUPPORT OF THE PATENT OWNER'S RESPONSE**

## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	QUALIFICATIONS AND EXPERIENCE.....	3
III.	LEGAL UNDERSTANDING .....	6
IV.	DEFINITION OF A PERSON OF SKILL IN THE ART .....	9
V.	THE '347 PATENT.....	10
VI.	CLAIM CONSTRUCTIONS .....	13
VII.	ANALYSIS AND OPINIONS .....	14
A.	The prior art references selected by Ford and Dr. Davis do not disclose using road load compared to a setpoint to determine when to operate the engine.....	14
1.	Introduction to Ibaraki '882 .....	14
2.	Ibaraki '882 does not compare road load to setpoint .....	17
3.	Ibaraki '882 does not disclose a setpoint that is “substantially less than MTO” .....	37
B.	Koide does not teach or render obvious a torque-based control strategy .....	40
C.	Frank does not disclose road-load-based hysteresis .....	40
D.	The proposed combination of Kawakatsu and Ibaraki '882 does not disclose or render obvious “wherein the total torque available at the road wheels from said internal combustion engine is no greater than the total torque available from said first and second electric motors combined” .....	43
E.	Vittone does not disclose controlling the engine by limiting a rate of change of torque output of the engine .....	45

1.	Introduction to Vittone.....	45
2.	Vittone does not disclose road load or torque required from the engine to propel the hybrid vehicle and/or to drive one or more of the first or the second motors to charge the battery.....	47
3.	Vittone does not disclose limiting a rate of change of engine torque output .....	51
4.	A person of ordinary skill in the art would not have been motivated to combine Ibaraki '882 with Vittone.....	52
F.	Combining Yamaguchi with Ibaraki '882 does not remedy the defects identified above with respect to Ibaraki '882 .....	53
G.	Combining Ibaraki '882 with Ibaraki '626 does not remedy the defects identified above with respect to Ibaraki '882 .....	54
H.	Lateur's cruise control is not a road-load-based control strategy .....	55
VIII.	CONCLUSION.....	56

**DECLARATION EXHIBITS**

<b>Exhibit Number</b>	<b>Exhibit Name</b>
Ex. 2301	Table of Ford's IPR Petitions
Ex. 2302	Gregory Davis Deposition Transcript (Feb. 25, 2015)
Ex. 2303	The Oxford Essential Dictionary, American Ed. (1998) (excerpt)
Ex. 2304	Appendix A (Jan. 15, 2014)
Ex. 2305	Declaration of Daniel A. Tishman in Support of Patent Owners' Motion for Pro Hac Vice Admission
Ex. 2306	Declaration of Neil Hannemann
Ex. 2307	Neil Hannemann CV
Ex. 2308	Gregory W. Davis, Deposition Tr. (IPR2015-00722, IPR2015-00784, IPR2015-00787, IPR2015-00790, IPR2015-00791, IPR2015-00794, IPR2015-00795) (January 13, 2016)
Ex. 2309	Hybrid Power Unit Development for Fiat Multipla Vehicle," by A. Caraceni, G. Cipolla, and R. Barbiero, SAE Publication 981124 (1998) ("Caraceni")
Ex. 2310	Ex. 1661 from IPR2015-00790
Ex. 2311	Jeffery L. Stein, Deposition Tr. (IPR2014-00875) (Mar. 3, 2015)
Ex. 2312	Gregory W. Davis, Deposition Tr. (IPR2014-00571, IPR2014-00579) (January 13, 2015)
Ex. 2313	Gregory W. Davis Deposition Tr. (IPR2014-01416) (June 3, 2015)

...

I, Neil Hannemann, hereby declare the following:

## **I. INTRODUCTION**

1. I have been retained by counsel for Paice LLC and the Abell Foundation (collectively, “Paice” or “Patent Owner”) to investigate and analyze certain issues relating to the validity of claims of U.S. Patent No. 7,104,347 (“the ’347 patent”).

2. Specifically, for purposes of this declaration, I have been asked to analyze the arguments made by Ford Motor Company (“Ford” or “Petitioner”) in the matter of the *Inter Partes* Review of the ’347 patent, Case No. IPR2015-00795. I have reviewed Ford’s petition, along with the declaration of Ford’s expert, Dr. Davis, and the documents cited therein. I have reviewed the Patent Trial and Appeal Board’s (“the Board”) decision to institute, as well as the Board’s claim constructions. My analysis is based on the Board’s claim constructions, unless I specifically note otherwise.

3. I understand that the Board has instituted review of the following claims of the ’347 patent (the “challenged claims”): 1, 3-5, 14, 16, 19, 20, and 22. The Board did not institute review of claim 2.

4. I understand that Ford and Dr. Davis argue that the challenged claims are obvious over various combinations of U.S. Patent No. 5,789,882 to Ibaraki et al. (Ex. 1303) (“Ibaraki ’882”), U.S. Patent 5,934,395 to Koide (Ex. 1317) (“Koide”),

# Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

## API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

## LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

## FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

## E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.