IN THE UNITED STATES DISTRICT COURT FOR THE EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

RFCYBER CORP.,

Plaintiff,

V.

VOLKSWAGEN AG and
VOLKSWAGEN GROUP OF
AMERICA, INC.,

Defendants.

S

Case No.

JURY TRIAL DEMANDED

S

Defendants.

S

Defendants.

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, RFCyber Corp. ("RFCyber" or "Plaintiff"), files this Complaint against Volkswagen AG and Volkswagen Group of America, Inc. (collectively "Volkswagen" or "Defendant"), for patent infringement under 35 U.S.C. § 271 and alleges as follows:

THE PARTIES

- 1. RFCyber is a Texas corporation with a place of business at 7700 Windrose Avenue, Suite G300, Plano, Texas 75024. RFCyber is the owner of all right, title, and interest in and to, or is the exclusive licensee with the right to sue for U.S. Patent Nos. 8,118,218, 8,448,855, 9,189,787 (collectively, the "Patents-in-Suit" or "Asserted Patents").
- 2. Defendant Volkswagen AG is a German corporation with its principal place of business located at Berliner Ring 2, 38440 Wolfsburg, Germany. Upon information and belief, VW does business in Texas and in the Eastern District of Texas, directly or through intermediaries.
- 3. Upon information and belief, Defendant Volkswagen Group of America, Inc. ("Volkswagen of America") is a corporation organized and existing under the laws of New Jersey. On information and belief, Volkswagen of America is a wholly-owned subsidiary of Volkswagen

AG and is responsible for importing, making, marketing, distributing, offering for sale, and selling automotive vehicles and related mobile applications from Volkswagen-managed brands (e.g., VW, Audi— including Audi of America, Inc.—Porsche, etc.) in the United States. On information and belief, Volkswagen of America is further responsible for importing, making, marketing, distributing, offering for sale, and selling electric vehicle chargers and related mobile applications for Volkswagen-managed brands (e.g., Electrify America) in the United States. On information and belief, Volkswagen of America has hundreds of employees based in and does business across the State of Texas, including at the port in Houston, a parts distribution center in Fort Worth, and a South Central Region office in Irving.

JURISDICTION AND VENUE

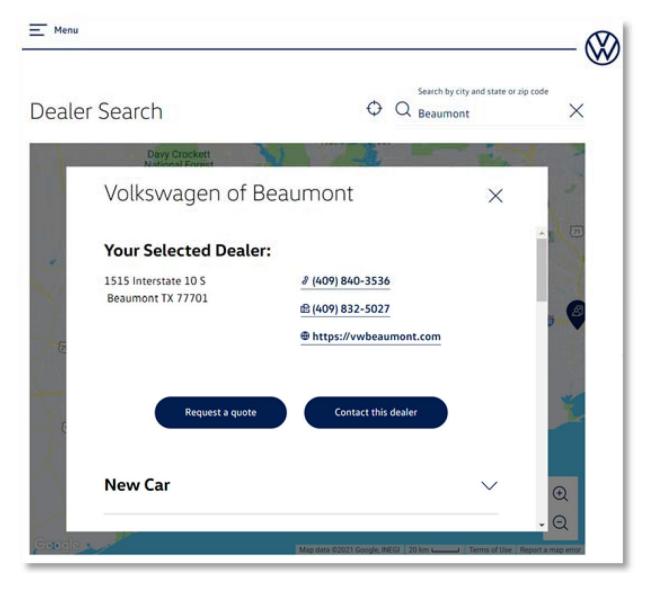
- 4. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq*. This Court has subject matter jurisdiction over this action pursuant to 28 U.S.C. §§ 1331, 1332, 1338, and 1367.
- 5. This Court has specific and personal jurisdiction over Defendants consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute. Upon information and belief, Defendants have sufficient minimum contacts with the forum because Defendants have physical locations and transact substantial business in the State of Texas and in this Judicial District. Further, Defendants have directly or through subsidiaries or intermediaries, committed and continue to commit acts of patent infringement in the State of Texas and in this Judicial District as alleged in this Complaint, as alleged more particularly below.
- 6. Venue is proper in this Judicial District pursuant to 28 U.S.C. §§ 1400(b) and 1391(b) and (c) because Defendants are subject to personal jurisdiction in this Judicial District, has committed acts of patent infringement in this Judicial District, and have a regular and

established place of business in this Judicial District. Defendants, through their own acts, make, use, sell, and/or offer to sell infringing products within this Judicial District, regularly do and solicit business in this Judicial District, and have the requisite minimum contacts with the Judicial District such that this venue is a fair and reasonable one.

- 7. Volkswagen has regular and established places of business, at which it has committed acts of infringement and placed the accused products into the stream of commerce, throughout the State of Texas and in the Eastern District of Texas, including at, *e.g.*, Volkswagen of Beaumont, Brandon Tomes VW of McKinney, Patterson Volkswagen of Tyler, Gorman-McCracken Volkswagen, Orr Volkswagen of Texarkana, Audi McKinney, and Audi Plano, Porsche Plano, and Porsche McKinney.
- 8. Upon information and belief, each of these authorized Volkswagen, Audi, or Porsche dealers in this District are regular, continuous, and established physical places of business of Defendants Volkswagen, being established, ratified, and/or controlled by Volkswagen as authorized dealers, which are the exclusive places of business at which Volkswagen offers for sale, sells, and provides authorized maintenance, warranty, and recall services for the Volkswagen, Porsche, and Audi automotive vehicles and components that infringe the patents asserted in this matter.
- 9. Upon information and belief, Volkswagen granted each of these authorized Volkswagen, Porsche and Audi dealers in this District the exclusive right to offer for sale, sell, and service the infringing Volkswagen, Porsche and Audi vehicles in this District, at these particular geographical locations, and has further conditioned these authorized dealers' continued offering for sale, sale, and service of the infringing Volkswagen, Porsche and Audi vehicles in this District on these authorized dealers' continued presence in this District, at these particular geographical

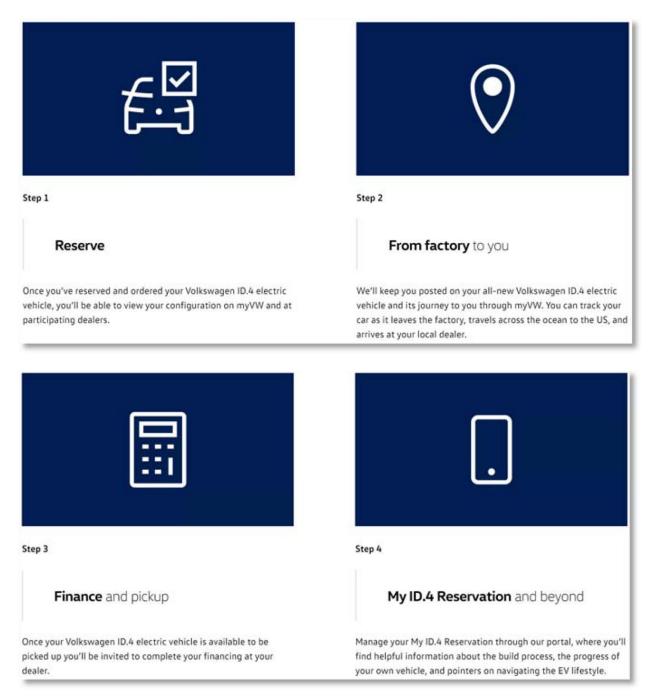
locations, so that the infringing Volkswagen and Audi automobiles and components are offered for sale, sold, and/or distributed in this District.

10. Volkswagen ratifies and holds these authorized Volkswagen, Porsche and Audi dealers out as the regular and established places of business of Volkswagen in this District by listing each of them in Volkswagen's sales directories and on Volkswagen's website(s), including, *e.g.*, as shown below:



11. Volkswagen further ratifies and holds these authorized Volkswagen, Porsche, and Audi dealers out as the regular and established places of business of Volkswagen in this District

by offering for sale on Volkswagen's website(s) the automobiles comprising and running accused products at the physical, geographical locations of these authorized Volkswagen, Porsche and Audi dealers, including, *e.g.*, as shown below:



12. Volkswagen further ratifies and holds these authorized Volkswagen, Porsche, and Audi dealers out as the regular and established places of business of Volkswagen in this District

by requiring these authorized dealers to feature and use Volkswagen names, branding, trademarks, and/or trade dress, in each of these authorized dealers' names, including Volkswagen of Beaumont, Brandon Tomes VW of McKinney, Patterson Volkswagen of Tyler, Gorman-McCracken Volkswagen of Longview, Orr Volkswagen of Texarkana, Audi McKinney, and Audi Plano, as well as in the marketing and advertising materials that these authorized dealers use and make to offer for sale and sell the automobiles and components in this District, such as on each authorized dealer's website hosted and shown to consumers in this District. Upon information and belief Volkswagen supplies and requires these dealers to purchase Volkswagen-branded trade dress from Volkswagen and/or suppliers chosen by Volkswagen.

13. Volkswagen further ratifies and holds these authorized Volkswagen, Porsche, and Audi dealers out as the regular and established places of business of Volkswagen in this District by controlling in whole or in part the name, geographical location, layout, structure, marketing, branding, and overall look and feel of these exclusive places to test drive and purchase the infringing Volkswagen and Audi automobiles and components, including, *e.g.*, as shown below:





Audi dealers out as the regular and established places of business of Volkswagen in this District by requiring these businesses to store, display, distribute, and/or offer for sale marketing materials, brochures, product specifications, service information, warranty information, financing information, and various other literature, as well as Volkswagen authorized service, parts, and accessories, for the automobiles and components, including, *e.g.*, as shown below. Upon information and belief, Volkswagen further requires that such dealers use (and hold out) financing provided by Volkswagen (*e.g.*, VW financial services).





- Audi dealers out as the regular and established places of business of Volkswagen in this District by establishing, authorizing, and requiring these places of business to offer to consumers in this District, at the time of sale and/or distribution of the automobiles and components, Volkswagen financial services and products, Volkswagen warranties, Volkswagen service from Volkswagen certified and/or trained technicians, Volkswagen parts, and Volkswagen accessories.
- 16. Volkswagen further ratifies and holds these authorized Volkswagen, Porsche, and Audi dealers out as the regular and established places of business of Volkswagen in this District by establishing, authorizing, and requiring consumers in this District to visit and use these authorized dealers in order to obtain authorized Volkswagen service, obtain scheduled maintenance under any Volkswagen Care plan, make repairs pursuant to any Volkswagen

warranty, or obtain any recall/campaign work for all new Volkswagen automobiles and components, including the automobiles and components.

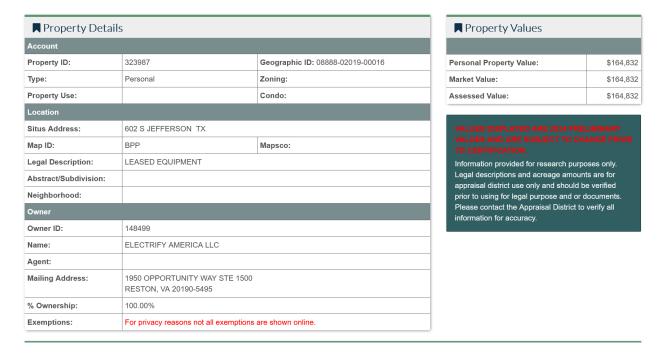
- Audi dealers out as the regular and established places of business of Volkswagen in this District by recruiting, hiring, training, offering compensation and benefits to, controlling, and/or labeling as authorized or certified Volkswagen employees and agents, some or all of the employees or agents employed in this District by these authorized dealers—including for example, Volkswagen certified brand advisors, Volkswagen certified geniuses or experts, Volkswagen certified technicians, and Volkswagen certified service advisors.
- Audi dealers out as the regular and established places of business of Volkswagen by providing these dealers sales promotions, financing for dealership improvements directed by Volkswagen, and modernized processes and IT systems that reduce the time needed for administrative tasks in providing after-sales certified Volkswagen services, and by sharing customer data with these dealers to provide customized Volkswagen services.
- 19. Volkswagen has established and ratified and holds these authorized Volkswagen, Porsche, and Audi dealers out as the regular and established places of business of Volkswagen by directing and controlling these authorized dealers' actions, sales, and services in the foregoing manner, and has consented to these authorized dealers acting on Volkswagen's behalf and being the exclusive places of business whereby the automobiles and components are distributed, offered for sale, sold, and serviced in order to place these infringing articles into the stream of commerce in this District, and these authorized dealers have consented to act on Volkswagen's behalf

pursuant to the foregoing terms of control and direction in order to be able to provide these Volkswagen and Audi automobiles, components, and services to consumers in this District.

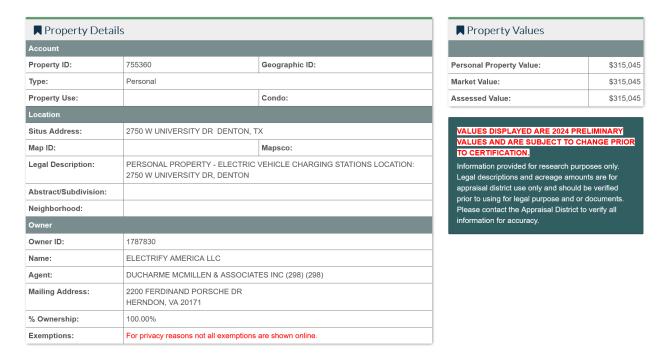
- 20. Volkswagen further has regular established places of business throughout this District at Electrify America Charging Stations, including at least 602 South Jefferson Avenue, Mt. Pleasant, Texas 75455; and 2750 West University Drive, Denton, Texas 76201.
- 21. Volkswagen ratifies and holds these Electrify America charging stations out as locations of Volkswagen. For example, on information and belief, Volkswagen establishes, authorizes, and requires these places to offer charging services to consumers in this District using infringing contactless systems and methods. Volkswagen requires these locations to purchase Electrify America-branded charging equipment from Volkswagen, and imposes requirements on the manner in which that information is maintained and offered to consumers, including the geographic region in which charging services are offered. On information and belief, Electrify America charging stations are installed and regularly serviced by employees and/or contractors of Volkswagen.
- 22. On information and belief, Volkswagen further ratifies, establishes, and holds out Electrify America charging stations as locations of Volkswagen by listing them as locations of Electrify America charging stations on the Electrify America website and App.¹
- 23. On information and belief, Volkswagen further ratifies, establishes, and holds out Electrify America charging stations as locations of Volkswagen by installing them with technicians employed or authorized by Volkswagen. On information and belief, Volkswagen contractually further requires that dealers buy or lease Electrify America-branded charging stations

¹ See e.g. https://www.electrifyamerica.com/locations/texas/

from Volkswagen, and maintains ownership of those charging stations as shown by the property tax records below:



https://esearch.titus-cad.org/Property/View/323987?year=2024&ownerId=148499



https://esearch.dentoncad.com/Property/View/755360?year=2024&ownerId=1787830

PATENTS-IN-SUIT

- 24. On February 21, 2012, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,118,218 (the "'218 Patent") entitled "Method and Apparatus for Providing Electronic Purse." A true and correct copy of the '218 Patent is attached as Exhibit A.
- 25. On May 28, 2013, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 8,448,855 (the "'855 Patent") entitled "Method and Apparatus For Funding An Electronic Purse." A true and correct copy of the '855 Patent is attached as Exhibit B.
- 26. On November 17, 2015, the United States Patent and Trademark Office duly and legally issued U.S. Patent No. 9,189,787 (the "'787 Patent") entitled "Method and Apparatus for Conducting E-Commerce and M-Commerce." A true and correct copy of the '787 Patent is attached as Exhibit C.
- 27. RFCyber is the sole and exclusive owner of all right, title, and interest to and in, or is the exclusive licensee with the right to sue for, the '218, '855, '787 Patents, and holds the exclusive right to take all actions necessary to enforce its rights to the Patents-in-Suit, including the filing of this patent infringement lawsuit. RFCyber also has the right to recover all damages for past, present, and future infringement of the Patents-in-Suit and to seek injunctive relief as appropriate under the law.

INFRINGEMENT ALLEGATIONS

28. The technologies of the Patents-in-Suit were variously invented by Liang Seng Koh, Hsin Pan, Futong Cho, and Fuliang Cho. The Patents-in-Suit generally cover apparatus and methods for enabling secure contactless payment with a portable device. In one exemplary embodiment, a smart card module including a secure element may emulate a payment card over near field communications ("NFC"). For example, users may select one of a plurality of payment

cards stored in a memory of the secure element, and carry out a transaction via NFC at a point of service ("POS"). In another embodiment, the device may securely conduct transactions over an open network with a payment server. By facilitating the settlement of charges using an NFC mobile device to read off data pertaining to an electronic invoice, the inventions of the Patents-in-Suit provide significant time-savings, particularly in situations where a payment process would otherwise involve more than one contact between a merchant and consumer.

29. Volkswagen has manufactured, used, marketed, distributed, sold, offered for sale, and exported from and imported into the United States devices and software that infringe the Patents-in-Suit. Volkswagen has distributed variants of the Volkswagen App, myAudi app, My Porsche App, and Electrify America App supporting Plug&Charge transactions, and Plug&Charge software included in Volkswagen automobiles, that have included functionality to emulate a payment card and settle a contactless transaction at least since 2020.² Volkswagen Plug&Charge functionality is operable on a range of Volkswagen automobiles, including at least the: Volkswagen ID.4; Audi e-tron; and Porsche Taycan. The Electrify America Android app running on a mobile device further includes the functionality to emulate a payment card and settle a contactless transaction. Upon information and belief, the Electrify America App and charging infrastructure is further operable to settle Plug&Charge transactions on and with compatible electric vehicles of any other manufacturer. The current and previous versions of the Volkswagen App, myAudi App, Electrify America App, automotive Plug&Charge software, charging stations, related server infrastructure, and devices or vehicles running that software, are non-limiting instances of the Accused Products. The Accused Products include, for example, the representative

² See e.g. https://newsroom.porsche.com/en/2020/products/porsche-taycan-model-year-2021-new-features-plug-charge-functions-on-demand-head-up-display-21882.html

Volkswagen ID.4 running automotive Plug&Charge software in conjunction with the Volkswagen App and/or Electrify America App. The Accused Products practice the claims of the Patents-in-Suit to improve the charging experience of their users, and to improve Volkswagen's position in the market.

Volkswagen announces the launch of Plug&Charge at Electrify America for the 2023 ID.4 electric SUV

Jan 31, 2024

- Starting in early 2024, the all-electric 2023 ID.4 EV will include the convenience of Plug&Charge at Electrify America DC fast charging stations
- 2023 ID.4 comes with a best in class, included DC fast charging package: three years of 30-minute DC fast charging sessions with Electrify America
- 2023 model has a starting MSRP of \$38,995 for 62 kWh ID.4 Standard and \$43,995 for 82 kWh ID.4 Pro and, when equipped with SK On battery components, offers potential Federal tax credit of up to \$7,500

Reston, VA — Today, Volkswagen of America announced that starting in early 2024, the all-electric 2023 ID.4 EV will include the convenience of Plug&Charge at Electrify America stations. After activating the feature in the Electrify America app, owners can make even better use of their included three years of 30-minute DC fast charging sessions plan.

https://media.vw.com/en-us/releases/1781

30. RFCyber has at all times complied with the marking provisions of 35 U.S.C. § 287 with respect to the Patents-in-Suit. On information and belief, any prior assignees and licensees have also complied with the marking provisions of 35 U.S.C. § 287.

COUNT I (Infringement of the '218 Patent)

- 31. Paragraphs 1 through 30 are incorporated herein by reference as if fully set forth in their entireties.
- 32. RFCyber has not licensed or otherwise authorized Volkswagen to make, use, offer for sale, sell, or import any products that embody the inventions of the '218 Patent.

- 33. Volkswagen infringes, contributes to the infringement of, and/or induces infringement of the '218 Patent by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '218 Patent including, but not limited to, at least the Accused Products.
- 34. Volkswagen has directly infringed and continues to directly infringe the '218 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '218 Patent. Upon information and belief, these products include the Accused Products that practice the methods and systems covered by the '218 Patent including, for example, Plug&Charge functionality implemented by the Volkswagen App and Plug&Charge software running on a Volkswagen ID.4, and as a further example, the Electrify America Android app running on a mobile device. For example, these products infringe at least Claim 1 of the '218 Patent.
- 35. For example, Volkswagen has and continues to directly infringe at least Claim 1 of the '218 Patent by making, using, offering to sell, selling, and/or importing into the United States products that implement a method for providing an e-purse, the method comprising: providing a portable device including or communicating with a smart card pre-loaded with an emulator configured to execute a request from an e-purse applet and provide a response, the e-purse applet is configured to expect, the portable device including a memory space loaded with a midlet that is configured to facilitate communication between the e-purse applet and a payment server over a wireless network, wherein the e-purse applet is downloaded and installed in the smart card when the smart card is in communication with the payment server, the portable device further includes a contactless interface that facilitates communication between the e-purse applet in the smart card

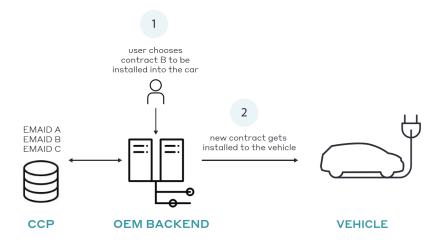
and the payment server over a wired network; personalizing the e-purse applet by reading off data from the smart card to generate in the smart card one or more operation keys that are subsequently used to establish a secured channel between the e-purse applet and an e-purse security authentication module (SAM) external to the smart card, wherein said personalizing the e-purse applet comprises: establishing an initial security channel between the smart card and the e-purse SAM to install and personalize the e-purse applet in the smart card, and creating a security channel on top of the initial security channel to protect subsequent operations of the smart card with the e-purse SAM, wherein any subsequent operation of the emulator is conducted over the security channel via the e-purse applet.

- 36. The Accused Products provide a portable device, such as the Volkswagen ID.4, including or communicating with a smart card pre-loaded with an emulator configured to execute a request from an e-purse applet and provide a response the e-purse applet is configured to expect. For example, the ID.4 includes or communicates with a smart card, such as an NFC module, and/or assembly of an NFC module, secure element, processor, microcontroller, and/or memory. On information and belief, the smart card (*e.g.*, NFC module, HCE environment, and/or other paying unit of an EV) of the ID.4 is pre-loaded with an emulator configured to execute a request from an e-purse applet, such as a payment card applet loaded in connection with Plug&Charge software of the ID.4, the Volkswagen App, and/or the Electrify America App, and provide a response that the applet is configured to expect. *See e.g.*, ISO 15118-1:2019(E) at 3.1.42 and 3.1.54.
- 37. For example, Accused Products, such as the ID.4, include a memory space loaded with a midlet, such as Volkswagen Plug&Charge software, that is configured to facilitate communication between the e-purse applet, such as a payment card credential or contract on the product, and a payment server, such as an Electrify America payment server, over a wireless

network. For example, on information and belief, the Volkswagen ID.4 comprises memory, such as RAM, ROM, Flash, and/or EEPROM, including in both the NFC module and secure element.

OEM Backend

- MO/EMP provides a new Contract Certificate to the Hubject CCP
- OEM gets informed by the CCP about new contracts for the EV
- OEM gets consent from user/owner to install new contract
- OEM overwrites contract in EV



CPO Backend

2 1 user defines user uninstalls contract B as default contract from vehicle 3 EMAID A **EMAID B** new contract is EMAID C installed to the vehicle Ð CCP **CPO CHARGE VEHICLE BACKEND** POINT

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.hubject.com/blog-posts/hubject-and-vw-release-whitepaper-on-plug-charge-multicontract-handling&ved=2ahUKEwjzobflv6KHAxU0LTQIHZu8ACYQFnoECA0QAQ&usg=AOvVaw2riRtN8U3oLBw2F9jcXdjI

- 38. The Accused Products further perform a method wherein the e-purse applet is downloaded and installed in the smart card when the smart card is in communication with the payment server. For example, on information and belief, the Volkswagen ID.4 running operates to download and install a payment card Applet (*e.g.*, contract and/or credential) when the NFC module is in communication with an Electrify America and/or Volkswagen payment server as depicted above. *See also* ISO 15118-1:2019(E) at 3.1.49, 7.5.2.
- 39. The Accused Products further include a contactless interface that facilitates communication between the e-purse applet in the smart card and the payment server over a wired network. For example, on information and belief, the payment unit of the Volkswagen ID.4 includes a contactless NFC and/or RFID interface that facilitates communication between a payment card certificate and a payment server over a wired network, *e.g.*, via a point of sale connected to an Electrify America charging station. *See* ISO 15118-1:2019(E) at 3.1.42.
- 40. The Accused Products further personalize the e-purse applet (e.g., payment card credential and/or contract stored in secure memory of an ID.4) by reading off data from the smart card to generate in the smart card one or more operation keys that are subsequently used to establish a secured channel between the e-purse applet and an e-purse security authentication module (SAM) external to the smart card. For example, on information and belief, Volkswagen Plug&Charge software establishes operations keys that operate to establish secure connections between a stored payment card and an authentication module at a server of the card issuer and/or

merchant when adding a given card to the device for the first time, and/or subsequently during transactions.

Volkswagen protects virtual key sharing app with Trustonic Application Protection

Brings trust to virtual key sharing app and opens up new possibilities for connected cars and end-users

22 February 2019 – Volkswagen is working with mobile cyber security leader Trustonic to enable customers to use smartphones to access their vehicles, and to securely share their digital car keys to grant access to others via a smartphone app. Volkswagen is using the Trustonic Application Protection (TAP) platform to secure the mobile app and ensure that sensitive information and key transfer requests are securely displayed to, and approved by, a real authenticated user on a trusted device and not by hackers or malware simulating a user or device.

"The smartphone is becoming the vehicle key of the future and our We Connect service is the interface for this today in the new Volkswagen Passat," comments Alf Pollex, Head of Infotainment and Connected Car at Volkswagen AG. "The user installs the We Connect app on their smartphone which is then authorized via the Infotainment system with a Transaction Number. The Mobile Key will be compatible with Android-based Samsung devices. No mobile network connection is required to use the smartphone as a mobile key. All the user needs to do is place the smartphone near the door handle, in the same way as the current keyless locking and starting system 'Keyless Access' opens the Passat today. To start the engine, the smartphone is placed in a new compartment with an interface in front of the Passat's gear knob. It is also possible to send the mobile key to friends or family via the app so that they can also use their smartphone as a key for the car."

By protecting the virtual key application using TAP, Volkswagen is making use of Trustonic's Trusted User Interface (TUI) feature, based on GlobalPlatform technology, to securely display information to the user. TUI ensures that only the authenticated user of the device can confirm the key transfer, and to do so safely in isolation from the device's main operating system during the confirmation.

"Connected car innovations like Volkswagen's project are exciting, but the risk of malicious hacking or malware attacks, including the possibility of vehicle theft, have serious ramifications," adds Ben Cade, CEO at Trustonic. "Trustonic Application Protection is enabling the Volkswagen Digital Key team to develop their key sharing app with the strongest user authentication and advanced app protection, and to use features like our Trusted User Interface to give customers a frictionless user experience."

https://globalplatform.org/latest-news/volkswagen-protects-virtual-key-sharing-app-with-trustonic-application-protection/

41. The Accused Products further practice a method wherein personalizing the e-purse applet (e.g., configuring the payment card certificate) comprises establishing an initial security channel between the smart card and the e-purse SAM to install and personalize the e-purse applet in the smart card. For example, on information and belief, Plug&Charge software of the ID.4 operates to establish a security channel with at least an Electrify America and/or Volkswagen

server after a user enters details for a given payment card, and operates to install and personalize the credential in the payment unit.

- 42. The Accused Products create a security channel on top of the initial security channel to protect subsequent operations of the smart card within the e-purse SAM, wherein any subsequent operation of the emulator is conducted over the security channel via the e-purse applet. For example, on information and belief, once a payment card applet is installed, operation of the emulator is conducted via operation of the e-purse applet using a further security key installed during the provisioning process. *See e.g.*, ISO 15118-1:2019(E) at 3.1.49, 7.5.2.
- 43. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '218 Patent, as provided by 35 U.S.C. § 271(b), by inducing infringement by others, such as Volkswagen's customers and end-users, in this District and elsewhere in the United States. For example, Volkswagen's customers and end-users directly infringe, either literally or under the doctrine of equivalents, through their use of the inventions claimed in the '218 Patent. Volkswagen induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting that they use the Accused Products in an infringing manner, including technical support, marketing, product manuals, advertisements, and online documentation. Because of Volkswagen's inducement, Volkswagen's customers and end-users use Accused Products in a way Volkswagen intends and directly infringe the '218 Patent. Volkswagen performs these affirmative acts with knowledge of the '218 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '218 Patent.

- 44. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '218 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement by others, such as customers and end-users, in this District and elsewhere in the United States. Volkswagen's affirmative acts of selling and offering to sell the Accused Products in this District and elsewhere in the United States and causing the Accused Products to be manufactured, used, sold, and offered for sale contributes to others' use and manufacture of the Accused Products such that the '218 Patent is directly infringed by others. The accused components within the Accused Products are material to the invention of the '218 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Volkswagen to be especially made or adapted for use in the infringement of the '218 Patent. Volkswagen performs these affirmative acts with knowledge of the '218 Patent and with intent, or willful blindness, that they cause the direct infringement of the '218 Patent.
- 45. Because of Volkswagen's direct and indirect infringement of the '218 Patent, RFCyber has suffered, and will continue to suffer, damages in an amount to be proved at trial.
- 46. Because of Volkswagen's direct and indirect infringement of the '218 Patent, RFCyber has suffered, and will continue to suffer, irreparable harm for which there is no adequate remedy at law, unless Volkswagen's infringement is enjoined by this Court.

COUNT II (Infringement of the '855 Patent)

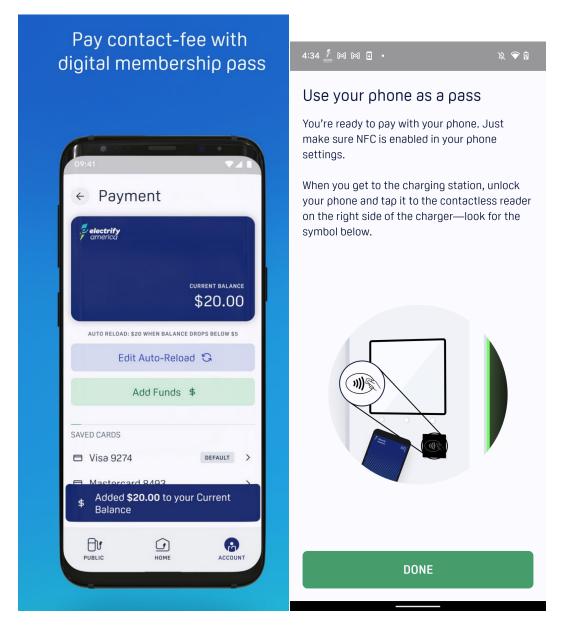
- 47. Paragraphs 1 through 30 are incorporated herein by reference as if fully set forth in their entireties.
- 48. RFCyber has not licensed or otherwise authorized Volkswagen to make, use, offer for sale, sell, or import any products that embody the inventions of the '855 Patent.

- 49. Volkswagen infringes, contributes to the infringement of, and/or induces infringement of the '855 Patent by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '855 Patent including, but not limited to, at least the Accused Products.
- 50. Volkswagen has directly infringed and continues to directly infringe the '855 Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '855 Patent. Upon information and belief, these products include the Accused Products that practice the methods and systems covered by the '855 Patent. For example, Plug&Charge functionality implemented by the Volkswagen App and/or Electrify America App and Plug&Charge software running on a Volkswagen ID.4, and as a further example, the Electrify America Android app running on a mobile device. For example, these products infringe at least Claim 1 of the '855 Patent.
- 51. For example, Volkswagen has and continues to directly infringe at least Claim 1 of the '855 Patent by making, using, offering to sell, selling, and/or importing into the United States products that practice a method for funding an e-purse, the method comprising receiving a PIN from a user of a portable device, wherein the portable device is a near field communication (NFC) enabled device that includes a card module; initiating a request from a midlet embedded in the portable device after the PIN is verified, wherein the midlet sends the request to an e-purse applet; causing the e-purse applet to compose a response to the request; sending the response by the e-purse applet over a wireless network to a server administrating the e-purse, the server configured to verify the response against an account in a financial institution across a network, a fund transfer request is initiated by the server to the financial institution when the response is successfully

verified; receiving commands from the server in responding to the fund transfer request; and causing an emulator in the portable device to update a transaction log after an authenticity of the commands is verified by the e-purse applet wherein the e-purse in the portable device has been personalized by operations including: establishing an initial security channel between the card module and an e-purse security authentication module (SAM) external to the card module to install and personalize the e-purse applet in the card module, and creating a security channel on top of the initial security channel to protect subsequent operations of the card module with the e-purse SAM, wherein any subsequent transactions with the e-purse are conducted over the security channel.

- 52. The Accused Products practice a method of receiving a PIN from a user of a portable device, wherein the portable device is a near field communication (NFC) enabled device that includes a card module. For example, on information and belief, the Electrify America App receives a PIN from a user (*e.g.*, a passcode, FaceID, and/or touchID) when a user adds money to the App on an NFC-enabled Android device. For example, upon information and belief, the Electrify America App further receives a PIN to carry out a transaction with a charge station via NFC, and/or during a Plug&Charge transaction with a compatible vehicle running Plug&Charge software in conjunction with the Electrify America App (*e.g.*, the ID.4).
- 53. The Accused Products practice a method of initiating a request from a midlet embedded in the portable device after the PIN is verified, wherein the midlet sends the request to an e-purse applet. For example, on information and belief, in response to verifying a PIN, the Electrify America App initiates a request from the midlet to an e-purse applet (e.g., a software representation of a credential associated with a payment card and/or Electrify America Pass) when loading money to an Electrify America balance, and when conducting payment transactions (e.g.,

contactless transactions via the Electrify America Android App and/or via a Plug&Charge vehicle loaded with a payment credential and/or value in conjunction with the Electrify America App).



https://play.google.com/store/apps/details?id=com.ea.evowner&hl=en US

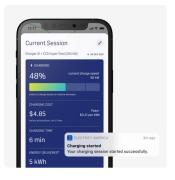
54. The Accused Products practice a method of causing the e-purse applet to compose a response to the request. For example, on information and belief, the payment card applet (e.g., software representation of an Electrify America Pass and/or other saved payment credentials provisioned to a phone and/or Volkswagen automobile) composes a response including the

transaction, user, and/or device information, such as one or more operations keys, device account numbers, tokenized card information, and/or cryptograms.



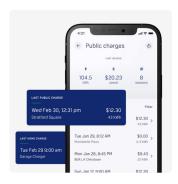
Contactless payment

Sign up for a membership in the app and pay for your charge by simply tapping the charger or swiping your phone's screen.



Track your progress

For compatible EVs, the app shows your <u>state of charge (SOC)</u> and sends you custom notifications about your session.



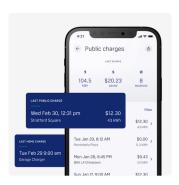
See your charge history

Keep track of your public charging sessions, including energy delivered and start times.

https://www.electrifyamerica.com/mobile-app/

55. The Accused Products practice a method of sending the response by the e-purse applet over a wireless network to a server administrating the e-purse, the server configured to verify the response against an account in a financial institution across a network, a fund transfer request is initiated by the server to the financial institution when the response is successfully verified. For example, on information and belief, the Electrify America App (and/or Plug&Charge software of an automobile operating in conjunction with the Electrify America App) sends a response by the payment applet, as discussed above, to a server administrating the e-purse (e.g., an Electrify America and/or Volkswagen server) over a wireless network, such a cellular network, Wireless WAN, Wireless MAN, Wireless PAN, Wireless LAN, and/or a Global Area Network. On information and belief, the payment and/or gateway server is configured to respond to the request, such as a request for funds to complete a transaction (e.g., to load money and/or carry out a charge transaction), when the response is verified.

- 56. The Accused Products practice receiving commands from the server in responding to the fund transfer request. For example, on information and belief, the Electrify America App receives commands in response to a fund transfer request, such as to authenticate a money load and/or EV charging transaction with a credential.
- 57. The Accused Products further practice causing an emulator in the portable device to update a transaction log after an authenticity of the commands is verified by the e-purse applet wherein the e-purse in the portable device has been personalized by operations including, for example, on information and belief, an emulator associated with card emulation functionality in the Electrify America App updates a transaction log once commands have been authenticated by an installed and configured payment card applet, such as based on operating keys, device account number, tokenized card information, and/or cryptograms.



See your charge history

Keep track of your public charging sessions, including energy delivered and start times.

https://www.electrifyamerica.com/mobile-app/

58. The Accused Products further practice establishing an initial security channel between the card module and an e-purse security authentication module (SAM) external to the card module to install and personalize the e-purse applet in the card module. For example, on

information and belief, the Electrify America App establishes an initial security channel (*e.g.*, a TLS/SSL channel) when provisioning payment card and/or pass credentials in the secure storage area of a mobile device. For example, on information and belief, Volkswagen Plug&Charge software operating in conjunction with the Electrify America App further establishes operations keys that operate to establish secure connections between a stored payment card and an authentication module at a server of the card issuer and/or merchant when adding a given card to the device for the first time, and/or subsequently during transactions.

- 59. The Accused Products further practice a method of creating a security channel on top of the initial security channel to protect subsequent operations of the card module with the e-purse SAM, wherein any subsequent transactions with the e-purse are conducted over the security channel. For example, on information and belief, the Electrify America App further creates a security channel on top of the initial security channel protected by another key or certificate (e.g., based on which the personalized payment credential is encrypted), to protect subsequent transactions to add money to the Electrify America App and/or complete Electric Charging transactions. For example, on information and belief, in Volkswagen Plug&Charge software running in an automobile in conjunction with the Electrify America App, once a payment card applet is installed, operation of the emulator is conducted via operation of the e-purse applet using a further security key installed during the provisioning process. See e.g., ISO 15118-1:2019(E) at 3.1.49, 7.5.2.
- 60. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '855 Patent, as provided by 35 U.S.C. § 271(b), by inducing infringement by others, such as Volkswagen's customers and end-users, in this District and elsewhere in the United States. For example, Volkswagen's customers and end-users directly infringe, either literally or

under the doctrine of equivalents, through their use of the inventions claimed in the '855 Patent. Volkswagen induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting that they use the Accused Products in an infringing manner, including technical support, marketing, product manuals, advertisements, and online documentation. Because of Volkswagen's inducement, Volkswagen's customers and end-users use Accused Products in a way Volkswagen intends and directly infringe the '855 Patent. Volkswagen performs these affirmative acts with knowledge of the '855 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '855 Patent.

61. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '855 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement by others, such as customers and end-users, in this District and elsewhere in the United States. Volkswagen's affirmative acts of selling and offering to sell the Accused Products in this District and elsewhere in the United States and causing the Accused Products to be manufactured, used, sold, and offered for sale contributes to others' use and manufacture of the Accused Products such that the '855 Patent is directly infringed by others. The accused components within the Accused Products are material to the invention of the '855 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Volkswagen to be especially made or adapted for use in the infringement of the '855 Patent. Volkswagen performs these affirmative acts with knowledge of the '855 Patent and with intent, or willful blindness, that they cause the direct infringement of the '855 Patent.

- 62. Because of Volkswagen's direct and indirect infringement of the '855 Patent, RFCyber has suffered, and will continue to suffer, damages in an amount to be proved at trial.
- 63. Because of Volkswagen's direct and indirect infringement of the '855 Patent, RFCyber has suffered, and will continue to suffer, irreparable harm for which there is no adequate remedy at law, unless Volkswagen's infringement is enjoined by this Court.

COUNT III (Infringement of the '787 Patent)

- 64. Paragraphs 1 through 30 are incorporated herein by reference as if fully set forth in their entireties.
- 65. RFCyber has not licensed or otherwise authorized Volkswagen to make, use, offer for sale, sell, or import any products that embody the inventions of the '787 Patent.
- 66. Volkswagen infringes, contributes to the infringement of, and/or induces infringement of the '787 Patent by making, using, selling, offering for sale, distributing, exporting from, and/or importing into the United States products and/or methods covered by one or more claims of the '787 Patent including, but not limited to, at least the Accused Products.
- Patent, either literally or under the doctrine of equivalents, without authority and in violation of 35 U.S.C. § 271, by making, using, offering to sell, selling, and/or importing into the United States products that satisfy each and every limitation of one or more claims of the '787 Patent. Upon information and belief, these products include the Accused Products that practice the methods and systems covered by the '787 Patent including, for example, Plug&Charge functionality implemented by the Volkswagen App and/or Electrify America App and Plug&Charge software running on a Volkswagen ID.4, and as a further example, the Electrify America Android app

running on a mobile device. For example, these products infringe at least Claim 1 of the '787 Patent.

- 68. For example, Volkswagen has and continues to directly infringe at least Claim 1 of the '787 Patent by making, using, offering to sell, selling, and/or importing into the United States products that comprise a portable device for commerce, the portable device comprising an emulator loaded in a smart card module for storing security values and updated transaction logs, and an e-purse applet to cause the portable device to function as an electronic purse (e-purse), wherein both of the emulator and e-purse applet are already personalized via a personalization process built on a first security channel so that the emulator is set to store a set of keys for subsequent data access authentication and the e-purse applet is configured to conduct a transaction with a network server over a second security channel; a first interface configured to perform field communication (NFC) with a reader to perform electronic commerce with the e-purse applet against a fund stored in the emulator; a second interface configured to perform mobile commerce with a payment server via an application against the fund stored in the emulator; and a purse manager midlet being executed in the portable device to act as an agent to facilitate communications between the e-purse applet and a payment server to conduct transactions therebetween.
- 69. The Accused Products comprise an emulator loaded in a smart card module for storing security values and updated transaction logs. For example, the Electrify America App runs on an Android device, comprises an NFC Module and secure element with an emulator for storing security values, such as device account number, operating keys, and/or a tokenized card and cryptogram, and for updating transaction logs, via the App:



Contactless payment

Sign up for a membership in the app and pay for your charge by simply tapping the charger or swiping your phone's screen.



Track your progress

For compatible EVs, the app shows your <u>state of charge (SOC)</u> and sends you custom notifications about your session.



See your charge history

Keep track of your public charging sessions, including energy delivered and start times.

https://www.electrifyamerica.com/mobile-app/

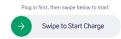
70. The Accused Products further comprise an e-purse applet, such as a payment card credential or pass within the Electrify America App, to cause the portable device (*e.g.*, the Android phone running the application) to function as an electronic purse. For example, applets within the Electrify America App cause Android devices to carry out a transaction, such as via NFC.

- How do I use my membership plan to start a charging session at an Electrify America charger?

As an Electrify America Pass or Pass+ member, if you've downloaded the Electrify America app and added a valid payment method to your account, you have two ways to start a charge by smartphone:

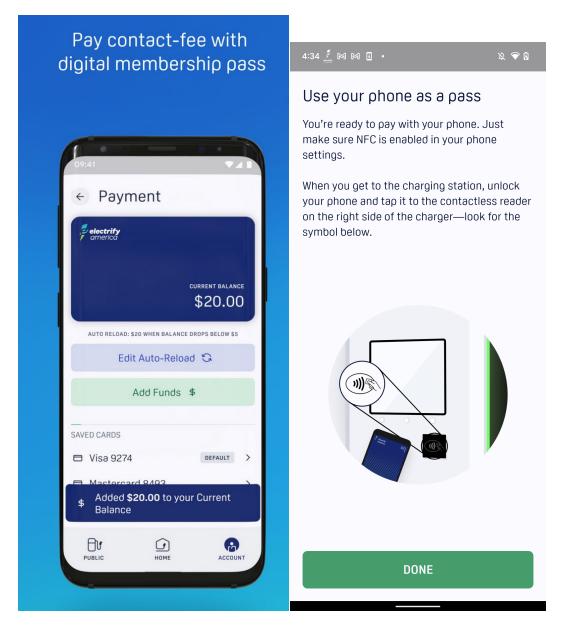
- 1. Using the digital membership pass, which requires tapping or holding the smartphone near the charger's RFID reader.
 - First, plug the connector into the vehicle. Follow all steps on the charger screen before tapping or holding your phone near the reader.
 - Android users: Ensure that NFC is turned on in your phone settings and that the smartphone screen is
 unlocked before tapping the smartphone to the reader—look for the symbol below. The Electrify America
 app does not need to be open.
 - iOS users: Open Apple Wallet or the Electrify America app. Tap the smartphone to the reader on the right side of the charger—look for the symbol shown here
- 2. Using "Swipe to Start Charge" from within the Electrify America app.
 - Ensure that your smartphone's location services are enabled, the Electrify America app is installed on your phone, and you are logged into your account.
 - Open the app and from the map screen (or your Favorites), select the charging station where you are located. You must be near the charger to start a charge.
 - Select the charger by referring to the Charger ID number at the top of the charger's screen, and swipe to start a charging session.
 - $\circ\,$ Hint: Look for the last two digits on the charger your vehicle is plugged into.





https://www.electrifyamerica.com/mobile-faq/?loadOuter=0&loadInner=0

- 71. The Accused Products further comprise a portable device wherein both of the emulator (e.g., emulator of the NFC module) and e-purse applet (e.g., payment card applet) are already personalized via a personalization process built on a first security channel so that the emulator is set to store a set of keys for subsequent data access authentication and the e-purse applet is configured to conduct a transaction with a network server over a second security channel. For example, on information and belief, the emulator and applet of an Android device running the Electrify America App are personalized during installation so that the emulator stores a set of keys (e.g., keys associated with a card certificate, device account number, operating keys, and/or a tokenized card and cryptogram) for subsequent access and authentication during transactions.
- 72. The Accused Products further comprise a first interface configured to perform field communication (NFC) with a reader to perform electronic commerce with the e-purse applet against a fund stored in the emulator. For example, the Android devices running the Electrify America App comprises an NFC Module Controller, including an NFC interface to perform electronic commerce with a card reader.



https://play.google.com/store/apps/details?id=com.ea.evowner&hl=en US

73. The Accused Products further comprise a second interface configured to perform mobile commerce with a payment server via an application against the fund stored in the emulator. For example, on information and belief, the Android devices running the Electrify America App comprise a second interface to perform mobile commerce with a payment server, such as an Electrify America server, against a fund stored in the emulator, such as a balance of money added to the Electrify America App.

- 74. The Accused Products further comprise a purse manager midlet, such as the Electrify America App or other software, being executed in the portable device to act as an agent to facilitate communications between the e-purse applet and a payment server to conduct transactions therebetween. For example, on information and belief, the Android devices run the Electrify America App to facilitate communications between passes and/or payment cards (e.g., cards within an emulator and/or secure element of an NFC module) and a payment server (e.g., an Electrify America server) during transactions conducted via NFC and/or via the Electrify America application.
- 75. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '787 Patent, as provided by 35 U.S.C. § 271(b), by inducing infringement by others, such as Volkswagen's customers and end-users, in this District and elsewhere in the United States. For example, Volkswagen's customers and end-users directly infringe, either literally or under the doctrine of equivalents, through their use of the inventions claimed in the '787 Patent. Volkswagen induces this direct infringement through its affirmative acts of manufacturing, selling, distributing, and/or otherwise making available the Accused Products, and providing instructions, documentation, and other information to customers and end-users suggesting that they use the Accused Products in an infringing manner, including technical support, marketing, product manuals, advertisements, and online documentation. Because of Volkswagen's inducement, Volkswagen's customers and end-users use Accused Products in a way Volkswagen intends and directly infringe the '787 Patent. Volkswagen performs these affirmative acts with knowledge of the '787 Patent and with the intent, or willful blindness, that the induced acts directly infringe the '787 Patent.

- 76. Volkswagen has indirectly infringed and continues to indirectly infringe one or more claims of the '787 Patent, as provided by 35 U.S.C. § 271(c), by contributing to direct infringement by others, such as customers and end-users, in this District and elsewhere in the United States. Volkswagen's affirmative acts of selling and offering to sell the Accused Products in this District and elsewhere in the United States and causing the Accused Products to be manufactured, used, sold, and offered for sale contributes to others' use and manufacture of the Accused Products such that the '787 Patent is directly infringed by others. The accused components within the Accused Products are material to the invention of the '787 Patent, are not staple articles or commodities of commerce, have no substantial non-infringing uses, and are known by Volkswagen to be especially made or adapted for use in the infringement of the '787 Patent. Volkswagen performs these affirmative acts with knowledge of the '787 Patent and with intent, or willful blindness, that they cause the direct infringement of the '787 Patent.
- 77. Because of Volkswagen's direct and indirect infringement of the '787 Patent, RFCyber has suffered, and will continue to suffer, damages in an amount to be proved at trial.
- 78. Because of Volkswagen's direct and indirect infringement of the '787 Patent, RFCyber has suffered, and will continue to suffer, irreparable harm for which there is no adequate remedy at law, unless Volkswagen's infringement is enjoined by this Court.

DEMAND FOR JURY TRIAL

79. Plaintiff hereby demands a jury for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff prays for relief against Defendants as follows:

a. Entry of judgment declaring that Defendants infringe one or more claims of each of the Patents-in-Suit;

b. Entry of judgment declaring that Defendants' infringement of the Patents-in-Suit

is willful;

c. An order awarding damages sufficient to compensate Plaintiff for Defendants'

infringement of the Patents-in-Suit, but in no event less than a reasonable royalty, including

supplemental damages post-verdict, together with pre-judgment and post-judgment interest and

costs;

d. Enhanced damages pursuant to 35 U.S.C. § 284;

e. Entry of judgment declaring that this case is exceptional and awarding Plaintiff its

costs and reasonable attorney fees pursuant to 35 U.S.C. § 285;

f. An accounting for acts of infringement;

g. Such other equitable relief which may be requested and to which the Plaintiff is

entitled; and

h. Such other and further relief as the Court deems just and proper.

Dated: July 23, 2024

Respectfully submitted,

/s/ Alfred R. Fabricant

Alfred R. Fabricant

NY Bar No. 2219392

Email: ffabricant@fabricantllp.com

Peter Lambrianakos NY Bar No. 2894392

Email: plambrianakos@fabricantllp.com

Vincent J. Rubino, III NY Bar No. 4557435

Email: vrubino@fabricantllp.com

Richard M. Cowell NY Bar No. 4617759

Email: rcowell@fabricantllp.com

Jacob Ostling

NY Bar No. 5684824

Email: jostling@fabricantllp.com

FABRICANT LLP

411 Theodore Fremd Road, Avenue, Suite 206 South Rye, New York 10580 Telephone: (212) 257-5797 Facsimile: (212) 257-5796

ATTORNEYS FOR PLAINTIFF RFCYBER CORP.