

Exhibit F3

EXHIBIT F3 - U.S. PATENT 9,123,186
Infringement Claim Chart

U.S. Patent 9,123,186		Ford Infringing Activities ¹
Row	Claim 1	Ford Vehicles Equipped with Phone As A Key
1A	A method, comprising: (a) receiving, by a microprocessor executable vehicle control system, a request from a vehicle occupant to perform a vehicle task, function or operation;	Ford has made, used, sold, offered for sale, and/or imported and is currently making, using, selling, offering for sale, and/or importing vehicles, vehicle systems (including in-vehicle multimedia systems), mobile applications (including the FordPass App), and hardware and software components thereof, including non-transitory computer readable media that stores microprocessor-executable instructions and hardware and software components that enable Ford Phone As A Key feature, in certain makes and models from the 2020 model year to the present, including those listed in Exhibit F2 (“the ’186 Accused Instrumentalities”). The vehicle control system of the ’186 Accused Instrumentalities receives a request from a vehicle occupant to perform a vehicle task, function or operation, such as starting the vehicle engine. For example, the vehicle control system is responsible for a wide range of functions relating to the vehicle’s operation, safety, and performance, including controlling the rights and privileges of users to control and operate the vehicle as described, for example, in Rows 1B-1E. As one example, the ’186 Accused Instrumentalities include a Phone As A Key feature that permits the use of a mobile device to function as a key to the vehicle that can permit start of the vehicle engine. <u>Exemplary Sources</u>² https://www.ford.com/support/how-tos/fordpass/phone-as-a-key/how-do-i-set-up-phone-as-a-key-with-the-fordpass-app/
1B	(b) determining, by the microprocessor executable vehicle control system, that the vehicle	The vehicle control system of the ’186 Accused Instrumentalities determines that the vehicle occupant has been authenticated successfully. This determination occurs, for example, through recognition of a mobile device that has been paired with the vehicle and determined to have Phone As A Key privileges associated with a user account. During the setup of a Phone As A Key, the mobile device is

¹ These allegations are exemplary and AutoConnect reserves the right to supplement them as the case progresses through discovery and the claim construction process.

² The sources identified herein are merely exemplary.

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occupant has been authenticated successfully;	paired with the vehicle control system, which creates a unique encrypted link between the mobile device and the vehicle control system that can be used for secure communication between the device and vehicle when the device is recognized. In addition, the vehicle and device are linked to an account on the FordPass App with user account credentials during the Phone As A Key creation process. To be granted control of vehicle tasks such as unlocking the vehicle or starting the engine, the vehicle control system assesses authentication of the vehicle occupant through recognition of the vehicle occupant's mobile device via an established Bluetooth link with the vehicle and assesses whether the vehicle occupant's user credentials in the FordPass App are recognized. Set up Phone As A Key Steps 1. Log in to the FordPass App on your mobile device. 2. Navigate to the Home screen. 3. Select Setup Phone as a Key. 4. Tap Set Up Now. Note: The User Authentication screen should display. 5. Select Continue. 6. Authenticate your request using one of the following methods (this may vary based on your security settings): • Facial recognition • Fingerprint scanning • Passcode/Personal Identification Number (PIN) Note: If you do not have a method of security set up on your device, FordPass will request for you to create a passcode in your Settings app. 7. After authentication is complete, name your key. Note: Special characters are not allowed and the maximum key length is 16 characters. 8. Tap Next. Note: Your key should begin to download. 9. Select Copy and Continue to save your Temporary Bluetooth Passcode. Note: A pairing notification will appear and prompt you to enter your code. 10. Paste or manually enter your code. 11. Select Pair or OK. Note: A success page confirming completion will appear. <u>Exemplary Sources</u>

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		https://www.ford.com/support/how-tos/fordpass/phone-as-a-key/how-do-i-set-up-phone-as-a-key-with-the-fordpass-app/ https://www.ford.com/support/vehicle/mustang-mach-e/2022/how-to-videos/video-library/fordpass/6314812509112?name=fordpass-using-phone-as-a-key
1C	(c) accessing, by the microprocessor executable vehicle control system, an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a vehicle task, function or operation, wherein the vehicle task, function or operation is one or more of the following: monitoring, controlling, and/or operating an engine control unit (“ECU”), transmission control unit (“TCU”), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment	The vehicle control system of the ’186 Accused Instrumentalities accesses an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a vehicle task, function or operation, wherein the vehicle task, function or operation is one or more of the following: monitoring, controlling, and/or operating an engine control unit (“ECU”), transmission control unit (“TCU”), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment system, and media and/or multimedia content. For example, the vehicle control system accesses a Ford account associated with the occupant that identifies rights and privileges of the occupant to control and operate the vehicle engine. The vehicle control system determines whether the account is permitted to operate the vehicle engine by determining whether the account has Phone As A Key privileges. For example, the vehicle control system determines whether the vehicle occupant’s account has an active Phone As A Key, or whether the vehicle occupant has been granted Phone As A Key privileges by another user. <u>Exemplary Sources</u> https://www.ford.com/support/vehicle/mustang-mach-e/2022/how-to-videos/video-library/fordpass/6314812509112?name=fordpass-using-phone-as-a-key https://www.ford.com/support/how-tos/fordpass/phone-as-a-key/how-do-i-set-up-phone-as-a-key-with-the-fordpass-app/

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	system, and media and/or multimedia content;	
1D	(d) determining, by the microprocessor executable vehicle control system, at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle; and	The vehicle control system of the '186 Accused Instrumentalities determines at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle. For example, the vehicle control system determines whether the mobile device associated with the user having Phone as a Key privileges is located in a zone inside the vehicle. It also determines whether the vehicle operating state is on or off. In describing operation of Phone As A Key, a Ford website indicates that the phone must be in the passenger cabin area for the vehicle start/stop button to be enabled. Ford vehicles with Phone As A Key also have Bluetooth transceiver(s) in the passenger compartment for operation of the Phone As A Key system. <i>See also</i> Rows 1B-1C. <u>Exemplary Sources</u> https://www.fordservicecontent.com/Ford_Content/vdirsnet/OwnerManual/Home/Content?variantid=6999&languageCode=en&countryCode=USA&Uid=G1886145&ProcUid=G1890125&userMarket=usa&div=l&vFilteringEnabled=False&buildtype=web
1E	(e) based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle, applying, by the microprocessor executable vehicle control system, the following rules: (i) when the account permits the vehicle occupant to perform the requested vehicle task, function or	In the '186 Accused Instrumentalities, based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle, the vehicle control system applies the following rules: (1) when the account permits the vehicle occupant to perform the requested vehicle task, function or operation, performing or causing to be performed the vehicle task, function or operation; and (2) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation. For example, the vehicle control system of the '186 Accused Instrumentalities, based on the identification of the mobile device and an associated user account, determines whether (1) that account holds Phone As A Key privileges, and (2) whether that the device is located within the zone of the vehicle interior, to allow or deny the occupant the ability to perform a requested vehicle task, such as starting the vehicle engine from a non-operating state.

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	operation, performing or causing to be performed the vehicle task, function or operation; and (ii) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation.	<i>See Rows 1B-1D.</i>
Row	Claim 8	Ford Vehicles Equipped with Phone As A Key
8A	A vehicle, comprising: a microprocessor executable vehicle control system operable to: receive a request from a vehicle occupant to perform a vehicle task, function or operation;	The '186 Accused Instrumentalities include vehicles with a microprocessor executable vehicle control system operable to receive a request from a vehicle occupant to perform a vehicle task, function or operation. <i>See Claim 1, Row 1A.</i>
8B	determine that the vehicle occupant has been authenticated successfully;	The '186 Accused Instrumentalities include vehicles with a microprocessor executable vehicle control system operable to determine that the vehicle occupant has been authenticated successfully. <i>See Claim 1, Row 1B.</i>
8C	access an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a	The vehicle control system of the '186 Accused Instrumentalities is operable to access an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a vehicle task, function or operation, wherein the vehicle task, function, or operation is one or more of the following: monitoring, controlling, and/or operating an engine control unit ("ECU"), transmission

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	vehicle task, function or operation, wherein the vehicle task, function, or operation is one or more of the following: monitoring, controlling, and/or operating an engine control unit (“ECU”), transmission control unit (“TCU”), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment system and media and/or multimedia content;	control unit (“TCU”), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment system and media and/or multimedia content. <i>See Claim 1, Row 1C.</i>
8D	determine at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle; and	The vehicle control system of the ’186 Accused Instrumentalities is operable to determine at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle. <i>See Claim 1, Row 1D.</i>
8E	based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating	The vehicle control system of the ’186 Accused Instrumentalities is operable to, based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle, apply the following rules: (i) when the account permits the vehicle occupant to perform the requested vehicle task, function or operation, performing or causing to be performed the vehicle task, function or operation; and

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	state of the vehicle, apply the following rules: (i) when the account permits the vehicle occupant to perform the requested vehicle task, function or operation, performing or causing to be performed the vehicle task, function or operation; and (ii) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation.	(ii) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation. <i>See Claim 1, Row 1E.</i>
Row	Claim 15	Ford Vehicles Equipped with Phone As A Key
15A	A tangible and non-transient computer readable medium comprising microprocessor executable instructions to perform functions, comprising: (a) receiving a request from a vehicle occupant to perform a vehicle task, function or operation, wherein the vehicle task, function or operation is one or more of the following: monitoring, controlling, and/or operating an engine control	The '186 Accused Instrumentalities include a tangible and non-transient computer readable medium comprising microprocessor executable instructions to perform functions that receive a request from a vehicle occupant to perform a vehicle task, function or operation, wherein the vehicle task, function or operation is one or more of the following: monitoring, controlling, and/or operating an engine control unit ("ECU"), transmission control unit ("TCU"), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment system, and media and/or multimedia content. <i>See Claim 1, Rows 1A and 1C.</i>

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	unit (“ECU”), transmission control unit (“TCU”), door setting, window setting, blind spot monitor, safety equipment, vehicle sensor, vehicle engine, head light control unit, power steering, display panel, switch state control unit, power control unit, brake control unit, alert to a user and/or remote monitoring entity of a potential problem with a vehicle operation, emission control, entertainment system, and media and/or multimedia content;	
15B	(b) determining that the vehicle occupant has been authenticated successfully;	The microprocessor executable instructions of the ’186 Accused Instrumentalities, when executed, cause the vehicle to determine whether the vehicle occupant has been authenticated successfully. <i>See Claim 1, Row 1B.</i>
15C	(c) accessing an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a vehicle task, function or operation;	The microprocessor executable instructions of the ’186 Accused Instrumentalities, when executed, cause the vehicle to access an account for the vehicle occupant, the account defining rights and privileges of the user with respect to controlling a vehicle task, function or operation. <i>See Claim 1, Row 1C.</i>
15D	(d) determining at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle; and	The microprocessor executable instructions of the ’186 Accused Instrumentalities, when executed, cause the vehicle to determine at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle.

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		<i>See Claim 1, Row 1D.</i>
15E	(e) based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle, applying the following rules: (i) when the account permits the vehicle occupant to perform the requested vehicle task, function or operation, performing or causing to be performed the vehicle task, function or operation; and (ii) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation.	The microprocessor executable instructions of the '186 Accused Instrumentalities, when executed, cause the vehicle to apply the following rules based upon the account corresponding to the vehicle occupant and the at least one of an area and/or zone occupied by the vehicle occupant and an operating state of the vehicle: (i) when the account permits the vehicle occupant to perform the requested vehicle task, function or operation, performing or causing to be performed the vehicle task, function or operation; and (ii) when the account does not permit the vehicle occupant to perform the requested vehicle task, function or operation, not performing or causing to be performed the vehicle task, function or operation. <i>See Claim 1, Row 1E.</i>