

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

Carrum Technologies, LLC

Plaintiff,

v.

BMW of North America, LLC, BMW
Manufacturing Co., LLC, and Bayerische
Motoren Werke AG

Defendants.

C. A. No. 18-1645-RGA

DEMAND FOR JURY TRIAL

FILED UNDER SEAL

SECOND AMENDED COMPLAINT

Plaintiff Carrum Technologies, LLC (“Carrum”) hereby asserts the following claims for patent infringement against BMW of North America, LLC, BMW Manufacturing Co., LLC, and Bayerische Motoren Werke AG (collectively, “BMW”).

NATURE OF THE ACTION

1. This is an action for infringement of U.S. Patent Nos. 7,512,475 and 7,925,416 (collectively, “the Asserted Patents”).
2. This action arises under the Patent Laws of the United States, 35 U.S.C. § 1 et seq.

PARTIES

3. Plaintiff Carrum is a limited liability company organized under the laws of this state, with its principal place of business at 221 River Street Floor 9, Hoboken, NJ, 07030.

4. Defendant BMW of North America, LLC (“BMW NA”), is a limited liability company organized under the laws of this state, with its principal place of business at 300 Chestnut Ridge Road, Woodcliff Lake, New Jersey 07677.

5. Defendant BMW Manufacturing Co., LLC (“BMW Manufacturing”) is a limited liability company organized under the laws of this state, with its principal place of business at 1400 Highway 101, South Greer, South Carolina, 29651.

6. Defendant Bayerische Motoren Werke AG (“BMW AG”) is a German company with a principal place of business at Petuelring 130, 80809 Munich, Germany. BMW AG designs and manufactures motor vehicles, parties, and other products for sale both in Europe and for export and sale around the world.

JURISDICTION AND VENUE

7. This action arises under the patent laws of the United States of America. This Court has jurisdiction over the subject matter of this action under 28 U.S.C. §§ 1331 and 1338(a).

8. This Court has personal jurisdiction over BMW NA and BMW Manufacturing because they are limited liability companies organized under the laws of this state. In addition, on information and belief, BMW routinely engages in the marketing and sale in Delaware of its products that infringe the Asserted Patents.

9. This Court has personal jurisdiction over BMW AG because it has committed acts within Delaware giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over BMW

AG would not offend traditional notions of fair play and substantial justice. BMW AG, direct and/or through subsidiaries or intermediaries (including distributors, retailers, or others), has offered to sell and sold in this District products that BMW AG has manufactured and that infringe the patents-in-suit.

10. BMW AG has placed, and continues to place, infringing products into the stream of commerce, via an established distribution channel, with the knowledge and/or understanding that such products are sold in the United States, including in Delaware and this District.¹

11. Additionally, BMW AG is subject to jurisdiction in the United States, and specifically in Delaware, under Fed. R. Civ. P. 4(k)(2).

12. Venue is proper in this judicial district under 28 U.S.C. §§ 1391(b) and (c), and 1400(b) for at least the reasons set forth above.

BACKGROUND

13. Adaptive cruise control (also known as “ACC”) is an increasingly common feature on newer vehicles and represents a significant advance in cruise control technology. ACC allows the vehicle to maintain a set speed when appropriate, while automatically reducing the speed when traffic conditions make the set speed unsafe. The Asserted Patents address a critical deficiency in previous iterations of

¹ BMW has two dealerships in Delaware that sell vehicles likely manufactured by BMW AG in Germany. *See* Union Park BMW, <https://www.unionparkbmw.com/> (April 23, 2021) (offering for sale the 2, 3, 4, 5, and 7 series); *see also* i.g. Burton BMW of Milford, <https://www.igburtonbmw.com/new-inventory/index.htm> (April 23, 2021) (offering for sale the 2, 3, 4, and 5 series as well as the M3 and M8).

ACC technology, namely, the ability of ACC systems to operate safely and comfortably in a curve.

14. In basic cruise control systems, the driver activates cruise control at a desired speed. The vehicle will maintain the set speed indefinitely, even if upcoming traffic or road conditions render the set speed unsafe. If the vehicle is about to encounter slower traffic, or a curve that cannot be safely handled at the cruising speed, the driver must manually disengage the cruise control and apply the brakes. As a result, basic cruise control systems are of limited use to the driver except when the road is straight and lightly trafficked.

15. ACC attempts to overcome these limitations of basic cruise control. It uses sensors to detect cars that are in the path of the host vehicle. If another car is in the same lane as the host vehicle, but traveling at a slower speed, the ACC will detect the obstacle. Then, the ACC will automatically release the throttle and/or apply the brake, to slow down the host vehicle to an appropriate speed. The ACC will then cause the host vehicle to follow behind the target vehicle at a set distance until the target speeds up, at which point the ACC will accelerate the host vehicle and (if appropriate) resume the cruising speed. The most advanced ACC systems can function safely even in highway stop-and-go traffic conditions, without the need for the driver to manually accelerate or brake.

16. However, like basic cruise control, early ACC systems struggled to perform well when the road curves. This was for two basic reasons.

17. First, early ACC systems did not brake as the vehicle entered a curve. If the vehicle entered the curve too fast, the driver and passengers would experience uncomfortable lateral acceleration (causing the feeling of being jerked to the outside edge of the car as it is turning). In a particularly tight curve, a host vehicle utilizing an early ACC system may lose traction, veer into other lanes, or run off the road altogether. Thus, with early ACC systems, the driver had to determine whether the set speed was too fast for an upcoming curve and, if so, manually brake or disengage the ACC system.

18. Second, in a curve, early ACC systems had difficulty determining whether an object detected by the sensor was in the vehicle's path. On a straight road, if a sensor detects an object directly in front of the host vehicle, the object necessarily presents a potential obstacle. Not so if the road is curved. The object might be a roadside street sign that presents no threat but that appears to be directly in front of the host vehicle as the road curves. Or, the object might be a car or truck in an adjacent lane of traffic, which briefly appears to be in front of the host vehicle due to the curvature of the road. Early ACC systems would incorrectly determine that these objects were within the path of the host vehicle, resulting in unnecessary, uncomfortable, and potentially dangerous braking.

19. Plaintiff Carrum owns the Asserted Patents—U.S. Patent Nos. 7,512,475 (“’475 patent”) and 7,925,416 (“’416 patent”) —which were designed to solve these

problems. True and correct copies of the '475 patent and the '416 patent are attached to this Complaint as Exhibits 1 and 2, respectively.²

20. The Asserted Patents disclose “a system and method for enabling a vehicle having adaptive cruise control to reduce its speed in a turn according to the vehicle’s position within the turn as well as ignoring objects detected during the turn that are not in the vehicle’s path.” Ex. 1, at 1; Ex. 2, at 1. The described ACC system “determin[es] whether the vehicle is in a turn in the vehicle’s path by detecting change in the vehicle’s lateral acceleration.” *Ibid.* Lateral acceleration is the sideways acceleration generated by the centrifugal force acting on the car when it turns. Excessive lateral acceleration can create discomfort or even cause the vehicle to lose control in a curve.

21. Lateral acceleration is a function of the vehicle’s speed and the curvature of the road.³ Thus, if an ACC system knows both the vehicle speed and the rate of change of lateral acceleration, it can better detect when the vehicle is entering a curve and predict the upcoming curvature of the road.

22. For example, assume the vehicle travels on a highway at a constant speed. The vehicle should experience no lateral acceleration when the vehicle is traveling in its lane on a straight highway. If lateral acceleration increases, the ACC system can infer that the vehicle is starting to enter a curve. If lateral acceleration

²The '416 patent is based on a divisional application relating to the '475 patent.

³ Lateral acceleration also depends on the forces of friction between the vehicle’s tires and the road.

continues to increase (assuming the vehicle maintains a constant speed), that suggests the curve is tightening further. Eventually, lateral acceleration should reach a peak and then begin to decrease. The point at which lateral acceleration starts to decrease (keeping speed constant) reflects the moment that the curve begins to straighten out.

23. The various claims of the Asserted Patents disclose systems and methods which use lateral acceleration data to improve an ACC system's performance in a curve. For instance, the Asserted Patents disclose methods for using lateral acceleration data to determine that the vehicle is in a turn and/or to predict the vehicle's path within the turn. By combining the lateral acceleration information with other data (for instance, the vehicle's speed or yaw rate), an ACC system can determine whether the vehicle has entered a curve at an excessive speed, and if so, to reduce the speed to a safe and comfortable level. Additionally, the lateral acceleration data allows an ACC system to better predict the host vehicle's path on a curved road, which allows an ACC system to determine whether a detected object falls within or outside of the lane of travel. The Asserted Patents thus solve the twin problems that plagued early ACC systems relating to performance in a curve.

24. BMW offers for sale vehicles that have ACC systems as either a standard or optional feature. This includes (but is not limited to) the BMW 2 series, 3 series, 4 series, 5 series, 6 series, 7 series, i3, i8, X1, X3, X4, X5 and X6.

25. On information and belief, BMW AG is the manufacturer of at least the 3 series and 4 series at the BMW AG Werk Munchen; the 3 series, 4 series, 5 series, 6

series, and 7 series at the BMW AG Werk Dingolfing; the 2 series, 3 series, 4 series, and X1 at BMW AG Werk Regensburg; the X1, i3, and i8 at BMW AG Werk Leipzig, whose website highlights its test track; and BMW AG Werk Wackersdorf where “components for all model series” are produced.⁴ On information and belief, BMW AG directly, through its subsidiaries, or through an established distribution channel, imports the infringing products into the United States.

26. On information and belief, BMW AG is also the designer of the infringing ACC systems and tests those infringing ACC systems at its plants and other facilities as part of its design and production process.⁵

27. BMW AG is the parent company of both BMW NA and BMW MC, companies organized under the laws of Delaware.⁶ BMW AG lists its investments in BMW NA and BMW MC in its Financial Statements in which only discloses “equity and earnings” for investments if they are not of “‘minor significance’ for the results of operations, financial positions, and net assets for BMW AG.” BMW AG disclosed that, as of December 31, 2020, it has €2,150,000,000 in equity in BMW MC and received €208,000,000 in profit from BMW MC in 2020. Similarly, BMW AG

⁴ See BMW AG Plant Map, available <https://www.bmwgroup-werke.com/en.html>.

⁵ See BMW Research and Technology Facility, available at: <https://www.bmwgroup.com/en/company/locations.html>.

⁶ See Financial Statements of BMW AG indicating 100% ownership of BMW NA and BMW MC. https://www.bmwgroup.com/content/dam/grpw/websites/bmwgroup_com/ir/downloads/en/2021/bericht/Financial-Statements-of-BMW-AG_2020.pdf

disclosed it has €769,000,000 in equity in BMW NA and received €309,000,000 in profit from BMW NA in 2020.

28. As explained in more detail below, the BMW vehicles that come equipped with ACC fall within the scope of one or more claims of each of the Asserted Patents. Despite utilizing the inventions disclosed in the Asserted Patents, BMW has never had (and does not currently have) a license to practice the Asserted Patents. The Accused Products in this case encompass all BMW vehicles (model year 2013-Present) with ACC systems.

29. BMW learned of the Asserted Patents no later than 2012. On August 7, 2012, BMW AG filed German Patent Application DE102012213933A1. That application cited the '475 Patent's German counterpart patent. On information and belief, while investigating this German counterpart patent for the purpose of its own patent application, BMW AG and its subsidiaries also learned of the other patents in the same patent family, including the Asserted Patents.

30. In the alternative, BMW (including BMW AG) learned of the Asserted Patents no later than the date Carrum filed the original Complaint in this action, in October 2018.

31. On information and belief, BMW AG's in-house legal counsel directs legal strategy for the entire BMW Group, including BMW NA and BMW MC. BMW Group's 2020 Annual Report declares that BMW AG "is the parent company of the BMW Group" and has "either direct or indirect control" over "all subsidiaries,"

including BMW NA and BMW MC. It further states that “BMW AG is also responsible for managing the group.” And, as BMW AG’s executives and board members have publicly declared, the United States is the BMW Group’s “second home” or “home away from home,” given its large sales volume and manufacturing presence in the United States. For that reason, BMW AG pays close attention to lawsuits filed in the United States related to the sale or manufacturing of BMW products in the United States, including patent infringement suits.

32. BMW NA and BMW MC (or their outside counsel) shared Carrum’s original complaint in this action with the parent company, BMW AG, on or shortly after the date Carrum filed the Complaint.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

34. Additionally, BMW NA filed six IPR petitions (three against each of the two Asserted Patents) in April 2019, and each of these IPR petitions names BMW AG as a “real party in interest” to the petitions. Each of these petitions not only identifies the Asserted Patents, but also specifically mentions Carrum’s lawsuit against BMW NA and BMW MC arising under the Asserted Patents. BMW NA would not have

listed its parent company, BMW AG, as the real party in interest to these IPR petitions without informing BMW AG of the Asserted Patents and of Carrum's original Complaint. BMW NA also would have shared drafts of these IPR petitions with its parent company before filing them and naming BMW AG as the "real party in interest."

35. Thus, as of approximately October 2018, BMW AG has been aware of the status of litigation between Carrum and BMW AG's wholly-owned subsidiaries.

CLAIMS FOR RELIEF

36. Carrum has not obtained discovery about BMW's infringement. Nor has the Court construed the meaning of any claims or terms in the Asserted Patents. The allegations provided below are illustrative and without prejudice to Carrum's final infringement contentions provided under the Court's scheduling order and local rules. In providing these allegations, Carrum does not imply any particular claim constructions or otherwise limit the precise scope of the claims. Carrum's claim construction contentions regarding the meaning and scope of the claim terms will be provided under the Court's scheduling order and local rules.

COUNT ONE: Infringement of the '475 patent

37. Carrum incorporates all of the preceding paragraphs of this Complaint as if fully set forth herein.

38. On March 31, 2009, the United States Patent and Trademark Office lawfully issued the '475 patent, entitled "Automatic Lateral Acceleration Limiting and

Non-Threat Target Rejection.” Carrum is the sole owner and assignee of the ’475 patent.

39. BMW has directly, literally under 35 U.S.C. § 271(a), and/or equivalently under the doctrine of equivalents, infringed the ’475 patent by practicing the patented method and by making, using, selling, offering for sale, and/or importing in or into the United States, without authority, the Accused Products. The Accused Products meet each and every element of one or more claims of the ’475 patent.

40. By way of illustration only, the ACC-equipped 2018 BMW X5 practices every step in the method described by claim 5 of the ’475 patent. On information and belief, the ACC systems available in other BMW models (and vehicles of other model years) function in materially the same manner, and so those vehicles also infringe claim 5 of the ’475 patent.

41. The BMW X5 has “an adaptive cruise control system capable of controlling a vehicle speed and obtaining a vehicle lateral acceleration.” Ex. 1, col. 8. The BMW X5’s ACC system will automatically maintain a set speed unless the system detects “a slower vehicle ahead of you,” in which case “the system automatically reduces the speed” in order to maintain a set distance.⁷ The BMW X5’s ACC system is also capable of obtaining the vehicle lateral acceleration.⁸

⁷ 2016 BMW X5 Owner’s Manual, at 145. Note that references in this complaint to the Owner’s Manual cite to the 2016 manual, which is the latest version that is publicly available. On information and belief, the ACC system for later model years functions in materially the same manner.

⁸ See, e.g., BMW X5 xDrive40e iPerformance, “Dynamic Stability Control,” available at <https://www.bmwtechinfo.com/>.

42. The 2018 BMW X5 “measur[es] a lateral acceleration from a lateral acceleration sensor,” and “detect[s] a change in vehicle lateral acceleration based on a change in the measured lateral acceleration.” Ex. 1, col. 8. The BMW X5 has a vehicle control module known as “Integrated Chassis Management” (“ICM”). The ICM includes a variety of vehicle dynamics sensors, including a “lateral acceleration sensor.”⁹ A lateral acceleration sensor capable of measuring lateral acceleration will also necessarily detect any change in the measured lateral acceleration.

43. The 2018 BMW X5 can also “determin[e] when the vehicle is in a turn based on the detected change in the vehicle lateral acceleration.” Ex. 1, col. 8. The ICM provides the ACC system “with the dynamic handling characteristics of the vehicle,” including lateral acceleration data.¹⁰ Based on the lateral acceleration data, the ACC system detects that the vehicle is in a curve.¹¹

44. Additionally, “if [the] vehicle is in a turn,” the 2018 BMW X5 can “reduc[e] the vehicle speed according to the determination that the vehicle is in the turn and the detected change in the vehicle lateral acceleration.” Ex. 1, col. 8. In the

⁹ BMW X5 xDrive40e iPerformance, “Dynamic Stability Control,” available at <https://www.bmwtechinfo.com/>.

¹⁰ BMW X5 xDrive40e iPerformance, “Integrated Chassis Management,” available at <https://www.bmwtechinfo.com/>; BMW 2018 X5 xDrive40e iPerformance, “Active cruise control with Stop & Go function,” available at <https://www.bmwtechinfo.com/>.

¹¹ See, e.g., BMW X5 xDrive40e iPerformance, “Dynamic Stability Control,” available at <https://www.bmwtechinfo.com/>.

BMW ACC system, “[d]epending on the lateral acceleration, the set speed is adjusted during cornering. At the end of the bend, the required speed is reset.”¹²

45. Finally, the 2018 BMW X5’s “step of reducing the vehicle speed” includes “reduc[ing] the speed if the vehicle lateral acceleration exceeds a predetermined limit.” Ex. 1, col. 32-34. The BMW X5’s ACC system contains a function known as “Curve Speed Limiter,” which automatically reduces vehicle speed if the vehicle exceeds a specified threshold for lateral acceleration.

46. BMW has directly infringed the ’475 patent by using the method described therein. For instance, on information and belief, BMW extensively tests its ACC systems prior to installing them on new vehicle models. Specifically, on information and belief, BMW AG designs and extensively tests ACC systems before installing them on new vehicles. Without practicing the patented method during vehicle tests, BMW would not have had the confidence in the safety or reliability of the system needed to install it on the vehicles it sells to the public.

47. Additionally, BMW, including BMW AG, has actively induced infringement of the patent under 35 U.S.C. § 271(b). On information and belief, at least as of the date upon which it learned of the ’475 patent (which was no later than

¹² See, e.g., BMW X5 xDrive40e iPerformance, “Dynamic Stability Control,” available at <https://www.bmwtechinfo.com/>; see also, e.g., Canterbury BMW, “The New BMW X5: The Epitome of Power and Dynamism, Now With Maximum Efficiency as Standard,” available at <http://www.canterburybmw.com.au/com/en/insights/newsandevents/latest-news/epitome-of-power-and-dynamism.html> (BMW X5 ACC “consistently identifies longitudinal and lateral acceleration of the car and, when required, reduces the speed of the vehicle by intervening in engine management and the brake system in order to avoid any impairment of comfort in a bend”).

2012, or at the latest upon the filing of the original Complaint in October 2018), BMW induced, with specific intent, infringement of the '475 patent by its customers under 35 U.S.C. § 271(b). And BMW AG actively induced infringement by BMW NA and/or MC under 35 U.S.C. § 271(b). BMW encouraged and facilitated infringing uses of the Accused Products through the creation and dissemination of promotional and marketing materials, instructional materials, product manuals, and/or technical materials to its customers and cars, parts, promotional and marketing materials, instructional materials, product manuals, and/or technical materials to BMW NA and MC.

COUNT TWO: Infringement of the '416 patent

48. Carrum incorporates all of the preceding paragraphs of this Complaint as if fully set forth herein.

49. On April 12, 2011, the United States Patent and Trademark Office lawfully issued the '416 patent, entitled "Automatic Lateral Acceleration Limiting and Non-Threat Target Rejection." The '416 patent is based on a divisional application relating to the '475 patent. Carrum is the sole owner and assignee of the '416 patent.

50. BMW has directly, literally under 35 U.S.C. § 271(a), and/or equivalently under the doctrine of equivalents, infringed the '416 patent by practicing the patented method and by making, using, selling, offering for sale, and/or importing in or into the United States, without authority, the Accused Products. The Accused Products meet each and every element of one or more claims of the '416 patent. Specifically,

BMW AG has directly, literally under 35 U.S.C. § 271(a), and/or equivalently under the doctrine of equivalents, infringed the '416 patent by practicing the patented method and by making, using, selling, offering for sale, and/or importing in or into the United States, without authority, the Accused Products, more specifically the 2 series, 3 series, 4 series, 5 series, 6 series, 7 series, X1, i3, and i8.

51. By way of illustration only, the 2018 BMW X5 comes equipped with an ACC system that meets every element of claim 10 of the '416 patent. On information and belief, the ACC systems available in other BMW models (and vehicles of other model years) function in materially the same manner, and so those vehicles also infringe claim 10 of the '416 patent.

52. The 2018 BMW X5 has “an adaptive cruise control system” for “use in controlling a vehicle at a vehicle speed.” Ex. 2, col. 8. The BMW X5 has an ACC system which controls the vehicle speed.¹³

53. The 2018 BMW X5 has “a controller in communication with said adaptive cruise control system and capable of determining when the vehicle is in a turn, said controller operative to reduce the vehicle speed according to a vehicle position in the turn.” Ex. 2, col. 8-9. The ICM is in communication with the ACC system and operates to reduce the vehicle speed according to the vehicle’s position within the curve.¹⁴

¹³ 2016 BMW X5 Owner’s Manual, at 145.

¹⁴ BMW X5 xDrive40e iPerformance, “Dynamic Stability Control,” available at <https://www.bmwtechinfo.com/>.

54. The 2018 BMW X5 has “at least one lateral acceleration sensor for generating a signal corresponding to a vehicle lateral acceleration, said lateral acceleration sensor in electrical communication with said controller and operative to detect a change in the vehicle lateral acceleration.” Ex. 2, col. 9. The BMW X5 contains lateral acceleration sensors, which are in communication with the ICM and which are inherently operative to detect a change in the vehicle lateral acceleration.¹⁵

55. The 2018 BMW X5 has “at least one object detection sensor for detecting an object in a vehicle path of the vehicle during the turn, said object detection sensor in electrical communication with said controller, wherein said controller includes control logic operative to determine whether the object is in the vehicle path during the turn and ignoring the object for braking purposes when the object is not determined to be in the vehicle path.” Ex. 2, col. 9. The BMW X5’s ACC system contains a radar-based object detection sensor which “detects the distance, angle and speed of moving objects.”¹⁶ This sensor communicates with the ICM, which contains control logic for selecting “the object” (if any) “relevant to distance control.”¹⁷ “On curves, Active Cruise Control” applies control logic “to determine whether vehicles in the radar’s field are in the same or a neighbouring

¹⁵ *Id.*

¹⁶ BMW 2018 X5 xDrive40e iPerformance, “Active cruise control with Stop & Go function,” available at <https://www.bmwtechinfo.com/>.

¹⁷ *Id.*

lane.”¹⁸ On information and belief, the vehicle ignores the object for braking purposes if the object is not determined to be in the vehicle’s path.

56. BMW has directly infringed the ’416 patent, including by making, selling, and offering for sale vehicles that contain the system disclosed in the ’416 patent. Further, BMW uses the patented system, as it extensively tests its ACC systems prior to installing them on new vehicle models. Specifically, on information and belief, BMW AG designs and extensively tests ACC systems before installing them on new vehicles. Without practicing the patented method during vehicle tests, BMW would not have had the confidence in the safety or reliability of the system needed to install it on the vehicles it sells to the public.

57. Additionally, BMW, including BMW AG, has actively induced infringement of the patent under 35 U.S.C. § 271(b). On information and belief, at least as of the date upon which it learned of the ’416 patent (which was no later than 2012, or at the latest upon the filing of the original Complaint in October 2018), BMW induced, with specific intent, infringement of the ’416 patent by its customers under 35 U.S.C. § 271(b). And BMW AG actively induced infringement by BMW NA and/or MC under 35 U.S.C. § 271(b). BMW encouraged and facilitated infringing uses of the Accused Products through the creation and dissemination of promotional and marketing materials, instructional materials, product manuals, and/or technical

¹⁸ BMW South Africa, “Active Cruise Control,” available at https://bmwdrivingexperience.co.za/products/automobiles/3/3seriesconvertible/con_cruise.asp.

materials to its customers and cars, parts, promotional and marketing materials, instructional materials, product manuals, and/or technical materials to BMW NA and MC.

PRAYER FOR RELIEF

58. Carrum respectfully requests the following relief:

- A. A judgment that BMW has infringed and continues to infringe one or more claims of the Asserted Patents, either literally or under the doctrine of equivalents;
- B. A judgment and order awarding Carrum damages in accordance with 35 U.S.C. § 284;
- C. A judgment and order requiring BMW to pay Carrum pre-judgment and post-judgment interest on the damages awarded;
- D. A judgment and order finding this case to be exceptional and awarding Carrum costs, expenses, reasonable attorney's fees, and such other relief as the Court deems just and proper pursuant to 35 U.S.C. § 285;
- E. A permanent injunction against BMW's direct infringement and/or BMW's active inducement of infringement of the Asserted patents, as well as against each of BMW's agents, employees, representatives, successors, and assigns, and those acting in privity or in concert with BMW; and
- F. Any other relief as the Court may deem just and proper.

JURY DEMAND

Carrum demands a trial by jury of all issues so triable.

June 2, 2022

Respectfully submitted,

/s/ Brian E. Farnan

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