IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION

WESTPORT FUEL SYSTEMS CANADA INC.,	
Plaintiff,	**Civil Action No. _____**
v.	**JURY TRIAL DEMANDED**
MERCEDES-BENZ USA, LLC,	
Defendant.	

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Westport Fuel Systems Canada Inc. ("Westport") files this Complaint for patent infringement against Defendant Mercedes-Benz USA, LLC ("MBUSA" or "Defendant") and alleges as follows:

THE PARTIES

1. Plaintiff Westport is a British Columbia Corporation, having a principal place of business at 1750 West 75th Avenue, Suite 101, Vancouver, British Columbia, Canada V6P 6G2.

2. Defendant Mercedes-Benz USA, LLC ("Defendant") is a corporation organized and existing under the laws of the State of Delaware with a principal place of business at 1 Mercedes Benz Dr., Sandy Springs, GA 30328-4312. Defendant may be served with process through its registered agent, CT Corporation System, 900 Old Roswell Lake Parkway, Suite 310, Roswell, GA, 30076, USA.

NATURE OF THE ACTION

3. This is a civil action for infringement of Westport's U.S. Patent No. 6,298,829 ("the '829 Patent"), a true and correct copy of which is attached as Exhibit 1, and U.S. Patent No. 6,575,138 ("the '138 Patent"), a true and correct copy of which is attached as Exhibit 2

(collectively, "the Westport Patents"). This action arises under the Patent Act of the United States, 35 U.S.C. § 101 *et seq*.

4. Each of the Westport Patents was fully examined by the United States Patent and Trademark Office ("PTO") and issued after such examination. The Westport Patents are valid and enforceable.

5. The '829 Patent was duly and legally issued on October 9, 2001.

6. The '138 Patent was duly and legally issued on June 10, 2003.

7. Each of the named inventors assigned the Westport Patents to Westport Research Inc. Westport Research Inc. later assigned the Westport Patents to Westport Power Inc., which later changed its name to Westport Fuel Systems Canada Inc. Westport owns the right, title and interest in each of the Westport Patents, including the right to sue for past infringement.

JURISDICTION AND VENUE

8. This Court has original jurisdiction over the subject matter of this patent litigation action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

9. This Court has general jurisdiction over Defendant because Defendant maintains its principal place of business in this District. This Court also has specific jurisdiction over Defendant due to at least Defendant's substantial business activities in this District. Specifically, Defendant conducted business and committed acts of patent infringement in this District, and the State of Georgia. Defendant committed acts of infringement in this District by, among other things, designing, developing, manufacturing, importing, offering to sell, or selling products that infringed the Westport Patents.

10. Venue is proper in this Court pursuant to 28 U.S.C. § 1400(b) on the grounds that Defendant committed acts of infringement in and has a regular and established place of business

in this District. Defendant is "headquartered in Atlanta,"[1] and committed acts of infringement in this District by, among other things, designing, developing, manufacturing, importing, offering to sell, or selling products that infringed the Westport Patents.

11. Westport filed a lawsuit against Mercedes in the Eastern District of Texas, which was dismissed without prejudice for lack of proper venue. *Westport Fuel Systems Canada Inc. v. Ford Motor Co. et al*, Case No. 2:21-cv-00453 (lead case) (S.D. Tex. 2021) ("Texas Mercedes Case"). In that lawsuit, Mercedes took the position that the Northern District of Georgia is the appropriate venue for this dispute and sought transfer to this venue. *See Westport Fuel Systems Canada Inc. v. Ford Motor Co. et al*, Case No. 2:21-cv-00453 (lead case) (ECF 120) at 6 (S.D. Tex. 2021). Accordingly, Mercedes has agreed that venue for this dispute is proper in this venue.

FACTUAL BACKGROUND

12. Plaintiff Westport has been in the business of developing technology to use natural gas, and other alternative fuels, as fuel to reduce emissions from internal combustion engines since the 1990s. At the time of the invention, Westport was developing technology around gaseous fuel systems and in particular the use of those systems in medium and light duty internal combustion engines. One goal was to provide a gaseous fuel system that could provide power, efficiency and performance comparable to liquid fuel engines.

13. To meet these performance standards, a fuel injection valve was needed that was capable of injecting a precise amount of fuel at high pressure into a combustion chamber at a very rapid rate. The injection valve needed to minimize fuel leakage when closed and remain securely closed when the valve thermally expanded and contracted during fluctuations in temperature

[1] https://group.mercedes-benz.com/careers/about-us/locations/location-detail-page-5206.html

typically found in an internal combustion engine.

14. In or around 1999, Alan B. Welch, Irawan Rahardja, and Mike Hebbes (collectively, the "Inventors") developed a new fuel injection valve and described the features of that valve in U.S. Provisional Application 60/159,791 (the "'791 Provisional), which was filed on October 15, 1999 and later assigned to Westport Research Inc. Through extensive research and development efforts, the Inventors found that direct actuation of a valve allowed for a rapid and controlled opening of that valve. To achieve the desired direct actuation, the Inventors conceived of a passive hydraulic link that transfers actuation force when the valve actuator is activated, but also compensates for thermal effects by allowing adjustment when the valve actuator is not activated.

15. The first use of a Westport fuel injection valve having the features described in the '791 Provisional was in a project with a major U.S. automobile manufacturer in the early 2000s to develop a small car engine powered by compressed natural gas. This project lasted 3-4 years but did not, to Westport's knowledge, result in any commercial applications.

16. Non-provisional U.S. Patent Application No. 09/522,130 (the "'130 Application") was filed on March 9, 2000 and claimed priority to the '791 Provisional. The '130 Application was duly examined by the Patent Office and issued as the '829 Patent, entitled "Directly Actuated Injection Valve," on October 9, 2001. The '829 Patent expired on March 9, 2020. The '829 Patent includes 32 claims.

17. On May 23, 2001, non-provisional U.S. Patent Application No. 09/863,187 (the "'187 Application") was filed as a continuation-in-part of the '130 Application. The '187 Application also claimed priority to the '791 Provisional. The '187 Application was duly examined by the Patent Office and issued as the '138 Patent on June 10, 2003. The term of the '138 Patent

was adjusted by 107 days under 35 U.S.C. § 154(b) and expired on June 24, 2020.The '138 Patent includes 41 claims.

18. Westport continued to develop injectors utilizing the now-patented passive hydraulic link and, around 2006, engaged with a major U.S. automobile manufacturer on a new project to develop a fuel system for a hydrogen-powered engine. This project ended in or around 2008 and, to Westport's knowledge, did not result in any commercial products.

19. Modern liquid fuel engine design has focused on many factors, including fuel efficiency, pollution control, noise reduction, and performance improvements. Many of these design factors depend on how liquid fuel is supplied to the combustion chambers in the engine. In particular, successfully meeting these design factors involves directly injecting a precise amount of fuel at high pressure into a combustion chamber at a very rapid rate. Although the fuel being injected is liquid fuel (gasoline or diesel), many of the technical challenges faced are the same faced by the Inventors in developing fuel injection valves for gaseous fuel engines. Therefore, it is not surprising that modern liquid fuel engines employ technology developed for use in gaseous fuel engines, including the technology claimed in the Westport Patents.

20. Robert Bosch LLC ("Bosch") filed a declaratory judgment action, *Robert Bosch, LLC v. Westport Fuel Systems Canada Inc.*, Case No. 1:22-cv-00370 (E.D. Va.), in April of 2022 ("the Bosch Case"). In its filings, Bosch represented that it would stipulate that it made, used, sold, offered for sale or imported the Mercedes fuel injectors that were at issue. Case No. 1:22-cv-00370, Sur-reply in Opposition to Westport's Motion to Dismiss, Dkt. No. 30-1. The Bosch Case has since been transferred to the Eastern District of Texas. *Robert Bosch, LLC v. Westport Fuel Systems Canada Inc.*, Case No. 2:23-cv-00038 (E.D. Tex.). After the Texas Mercedes Case was dismissed without prejudice due to venue, Bosch refused to stipulate that it made, used, offered for sale or

imported the Mercedes fuel injectors. Accordingly, Westport is filing this case to address the units that are not at issue in the Bosch Case.

SUBJECT MATTER OF THE WESTPORT PATENTS

21. The Westport Patents disclose and claim high pressure fuel injection valves for automobile combustion engines.

22. In general, the Westport Patents are directed to high pressure fuel injection valves that include a passive hydraulic link that provides a load path between an actuator and valve that does not rely on a change in hydraulic pressure to generate an actuation force. *See, e.g.*, Exhibit 1, '829 Patent at 7:10-42. The passive hydraulic link also operates without any mechanical connection between the actuator and the valve, which allows for the correction for differential thermal expansion, wear, and dimensional variability and tolerance. *Id*. at 7:43-51.

23. The technology disclosed and claimed in the Westport Patents was developed to address challenges faced with the direct injection of high pressure gaseous fuel into the combustion chamber of an internal combustion engine. *See id*. at 1:20-55. These challenges include preventing leakage of fuel between injection events, operating at higher opening and closing forces, and actuating in a rapid and controllable manner. *See id.* at 1:38 to 2:24.

24. The claimed inventions of the Westport Patents resolve the technical problems related to rapid, high pressure fuel injection by providing, among other features, a passive hydraulic link that transfers actuation forces through a hydraulic fluid that has a substantially constant thickness during actuation, but between actuations, the thickness can adjust to changes in the dimensional relationship between components. *Id*. at 17:32-43 and Exhibit 2, '138 Patent at 17:43-53.

25. The claimed elements and claimed combinations of the Westport Patents were not

well understood, routine, or conventional to a skilled artisan in the relevant field at the time of their invention.

COUNT I: INFRINGEMENT OF THE '829 PATENT

26. Paragraphs 1-23 are incorporated by reference as if fully set forth herein.

27. On information and belief, Defendant has directly infringed, literally and/or by the doctrine of equivalents, individually and/or jointly, the '829 Patent, by making, using, performing, testing, leasing, selling, offering for sale and/or importing into the United States vehicles that embody products that infringe the '829 Patent including, but not limited to, the Mercedes-Benz Sprinter Van with a 4 cylinder or 6 cylinder diesel engine (collectively "MBUSA Diesel Vehicles").

28. As an exemplary claim, Claim 1 of the '829 Patent is reproduced below:

1. An injection valve for injecting fuel into a combustion chamber of an internal combustion engine, said injection valve comprising:

(a) a valve housing comprising:

a fuel inlet port;

an interior chamber fluidly connected to said fuel inlet port;

a nozzle comprising a nozzle orifice providing a fluid passage from said interior chamber to said combustion chamber;

(b) a valve needle disposed within said valve housing wherein said valve needle is movable between a closed position at which a sealing end of said valve needle contacts a valve seat to fluidly seal said interior chamber from said nozzle orifice, and an open position at which said sealing end of said valve needle is spaced apart from said valve seat whereby said interior chamber is fluidly connected with said

nozzle orifice, wherein valve needle lift equals the distance traveled by said sealing end away from said valve seat;

(c) a needle spring associated with said valve needle, wherein said needle spring applies a closing force to said valve needle for biasing said valve needle in said closed position;

(d) an actuator assembly associated with said valve needle, wherein said actuator assembly may be activated to apply an opening force to said valve needle stronger than said closing force, for moving said valve needle to said open position; and

(e) a hydraulic link assembly comprising a passive hydraulic link having a hydraulic fluid thickness through which said opening and closing forces are transmitted, whereby said hydraulic fluid acts substantially as a solid with said thickness being substantially constant while said actuator assembly is activated and wherein said thickness of said hydraulic link is adjustable while said actuator is not activated in response to changes in the dimensional relationship between components of said injection valve to maintain a desired valve needle lift upon activation of said actuator assembly.

29. Upon information and belief, each MBUSA Diesel Vehicle utilizes either four or six fuel injection valves (the "Accused Instrumentalities") having a form factor as shown below in Figure 1:

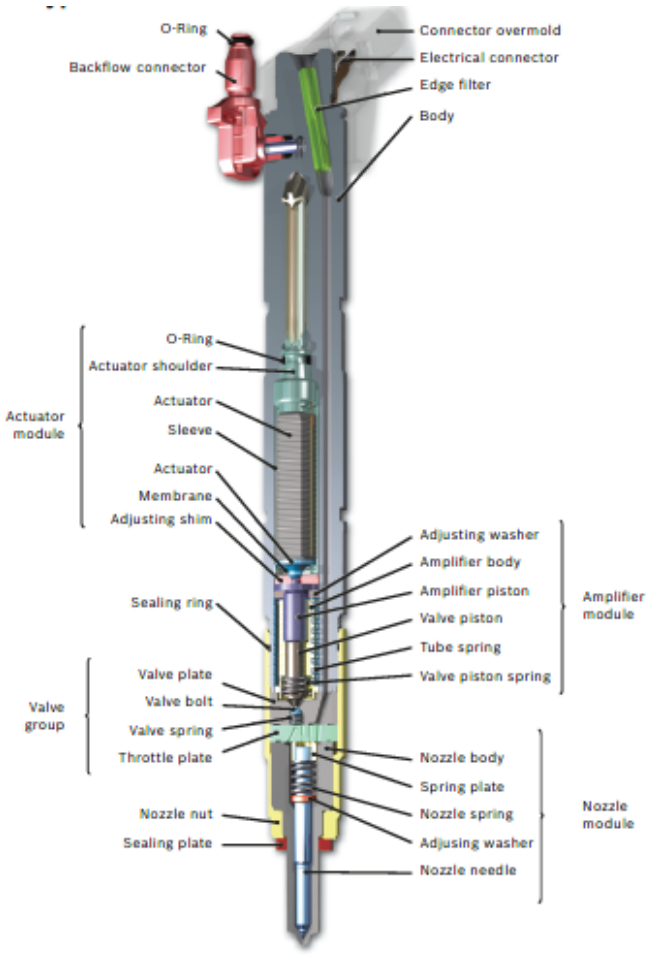

Figure 1

30. An exemplary claim chart detailing the correspondence of every element of claim 1 of the ’829 Patent with features of the Accused Instrumentalities used in the MBUSA Diesel Vehicles is attached hereto as Exhibit 3 and is incorporated herein by reference.

31. Defendant was not licensed or otherwise authorized by Westport to make, use, import, sell, or offer to sell any products covered by the ’829 Patent, and Defendant’s conduct is, in every instance, without Westport’s consent.

32. Westport reserves the right to modify its infringement theories as discovery progresses in this case and is not to be estopped for purposes of its infringement contentions or any claim

construction, express or implied, set forth within the attached claim chart. Westport intends the claim chart for the '829 patent (Exhibit 3) only to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rules of Civil Procedure. The claim chart does not represent Westport's preliminary or final infringement contentions or preliminary or final claim construction positions.

33. Defendant's infringement has damaged Westport and Westport is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

COUNT II: INFRINGEMENT OF THE '138 PATENT

34. Paragraphs 1-31 are incorporated by reference as if fully set forth herein.

35. On information and belief, Defendant directly infringed, and continues to directly infringe, literally and/or by the doctrine of equivalents, individually and/or jointly, the '138 Patent, by making, using, performing, testing, leasing, selling, offering for sale and/or importing into the United States vehicles that embody products and/or services that infringe the '138 Patent including, but not limited to, the MBUSA Diesel Vehicles.

36. As an exemplary claim, Claim 1 of the '138 Patent is reproduced below:

1. An injection valve for injecting fuel into a combustion chamber of an internal combustion engine, said injection valve comprising:

(a) a valve housing comprising:

a fuel inlet port;

an interior chamber fluidly connected to said fuel inlet port; and

a valve seat for cooperating with a valve member to seal said interior chamber from said combustion chamber when said injection valve is closed;

(b) said valve member having one end disposed within said valve housing and an

opposite end extendable from said valve seat toward said combustion chamber, wherein said valve member comprises a sealing surface that fluidly seals against said valve seat when said injection valve is closed and that is liftable away from said valve seat when said injection valve is open;

(c) a biasing mechanism associated with said valve member, said biasing mechanism applying a closing force to said valve member when said valve member is in said closed position;

(d) an actuator assembly associated with said valve member, wherein said actuator assembly may be actuated to apply an opening force to said valve member stronger than said closing force, for moving said valve member to said open position; and

(e) a hydraulic link assembly comprising a passive hydraulic link having a hydraulic fluid thickness through which said opening and closing forces are transmitted, whereby said hydraulic fluid acts substantially as a solid with said thickness being substantially constant while said actuator assembly is actuated and wherein said thickness of said hydraulic link is adjustable while said actuator assembly is not actuated in response to changes in the dimensional relationship between components of said injection valve to maintain a desired valve lift upon actuation of said actuator assembly.

37. An exemplary claim chart detailing the correspondence of every element of claim 1 of the ’138 Patent with features of the Accused Instrumentalities used in the MBUSA Diesel Vehicles is attached hereto as Exhibit 4 and is incorporated herein by reference. Upon information and belief, each MBUSA Diesel Vehicle utilizes the Accused Instrumentalities having a form factor as shown above in Figure 1.

38. Defendant was not licensed or otherwise authorized by Westport to make, use, import, sell, or offer to sell any products covered by the '138 Patent, and Defendant's conduct is, in every instance, without Westport's consent.

39. Westport reserves the right to modify its infringement theories as discovery progresses in this case and is not to be estopped for purposes of its infringement contentions or any claim construction, express or implied, set forth within the attached claim chart. Westport intends the claim chart for the '138 patent (Exhibit 4) only to satisfy the notice requirements of Rule 8(a)(2) of the Federal Rules of Civil Procedure. The claim chart does not represent Westport's preliminary or final infringement contentions or preliminary or final claim construction positions.

40. Defendant has been aware of the '138 Patent since at least the filing date of this Complaint. Defendant's infringement has damaged and will continue to damage Westport. Westport is entitled to damages adequate to compensate for the infringement, but in no event less than a reasonable royalty as provided for in 35 U.S.C. § 284.

DEMAND FOR JURY TRIAL

Westport Fuel Systems Canada, Inc. respectfully requests a trial by jury of all triable issues.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Westport Fuel Systems Canada, Inc. respectfully requests that the Court enter judgment in its favor against Defendant, granting the following relief:

A. A judgment that Defendant has infringed, directly and/or indirectly, one or more claims of each of the Westport Patents;

B. An order awarding Westport all damages caused by Defendant's infringement of each of the Westport Patents (but in no event less than a reasonable royalty) pursuant to 35 U.S.C. §§ 154(d) and 284;

C. An order that this case is exceptional and that Westport shall therefore recover its attorneys' fees and other recoverable expenses, under 35 U.S.C. § 285.

D. A judgment and order requiring Defendant to pay Westport pre-judgment and post-judgment interest to the fullest extent allowed under the law, as well as their costs; and

E. Such other and additional relief as this Court deems just and proper.

Dated May 1, 2023.

Respectfully submitted,

/s/ Brannon McKay
Brannon McKay
Georgia bar No. 558603
Benjamin D. Bailey
Georgia Bar No. 117201
Clayton, McKay & Bailey PC
800 Battery Ave. SE, Suite 100
Atlanta, GA 30339
P: 713-410-6217
Email: brannon@cmblaw.com
Email: ben@cmblaw.com
Attorneys for Plaintiff

Miranda Y. Jones
Attorney-in-Charge
Texas Bar No. 24065519
Federal ID No. 1147635
MirandaJones@porterhedges.com
Eric D. Wade
Texas Bar No. 00794802
EWade@porterhedges.com
Sarah J. Ring
Texas Bar No. 24056216
SRing@porterhedges.com
PORTER HEDGES LLP
1000 Main Street, 36th Floor
Houston, TX 77002
Telephone: 713-226-6000
Facsimile: 713-228-1331

Attorneys for Plaintiff
Westport Fuel Systems Canada, Inc.